# GOVERNOR HARRY W. NICE MEMORIAL BRIDGE IMPROVEMENT PROJECT

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IMPROVEMENT PROJECT

# ENVIRONMENTAL ASSESSMENT / DRAFT SECTION 4(f) EVALUATION






U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

Maryland Transportation Authority

July 30, 2009

**GOVERNOR HARRY W. NICE MEMORIAL BRIDGE**
**IMPROVEMENT PROJECT**
Charles County, Maryland and King George County, Virginia

Environmental Assessment (EA)/Draft Section 4(f) Evaluation

Submitted Pursuant to 42 U.S.C. 4332 (2) and
CEQ Regulations (40 CFR 1500 (et. seq.))

by the Maryland Transportation Authority

for the
US Department of Transportation – Federal Highway Administration and
in cooperation with
the US Army Corps of Engineers, the US Environmental Protection Agency, and
Virginia Department of Transportation

Ronald L Freeland 7/23/09

MARYLAND TRANSPORTATION AUTHORITY Date
Ronald L. Freeland, Executive Secretary

William A. Woody 7/30/2009

FEDERAL HIGHWAY ADMINISTRATION Date
for Nelson J. Castellanos, Division Administrator

The purpose of the Governor Harry W. Nice Memorial Bridge (hereinafter referred to as the Nice Bridge) Improvement Project is to provide a Potomac River crossing that is consistent with the US 301 approaches (a crossing that has two 12-foot lanes in each direction with a median separation and shoulders); to improve traffic operations and safety across the bridge; and to reduce traffic impacts during anticipated significant bridge maintenance and rehabilitation. The study area for the Nice Bridge extends a distance of approximately ten miles along US 301, from just north of the US 301/MD 234 intersection in Charles County, Maryland to just west of Route 206 in King George County, Virginia. Currently, the existing Nice Bridge has one travel lane in each direction with no physical lane separation or shoulders. This study evaluates several alternates (the No-Build Alternate and six build alternates), that address the transportation needs at the Nice Bridge. Build alternate impacts may include: parkland; forests; wetlands, waters of the US, and open water; floodplains; Chesapeake Bay Critical/Preservation Areas; historic properties; right-of-way acquisition; and noise.

# SUMMARY

## A. ADMINISTRATIVE ACTION

( ) Environmental Impact Statement
(**X**) Environmental Assessment
( ) Finding of No Significant Impact
(**X**) Section 4(f) Evaluation

## B. ADDITIONAL INFORMATION

Additional information concerning the project may be obtained by contacting the following individuals:

**Mr. Glen Smith**
Project Manager
Maryland Transportation Authority
2310 Broening Highway, Suite 125
Baltimore, Maryland 21224
Phone: (410) 537-5665

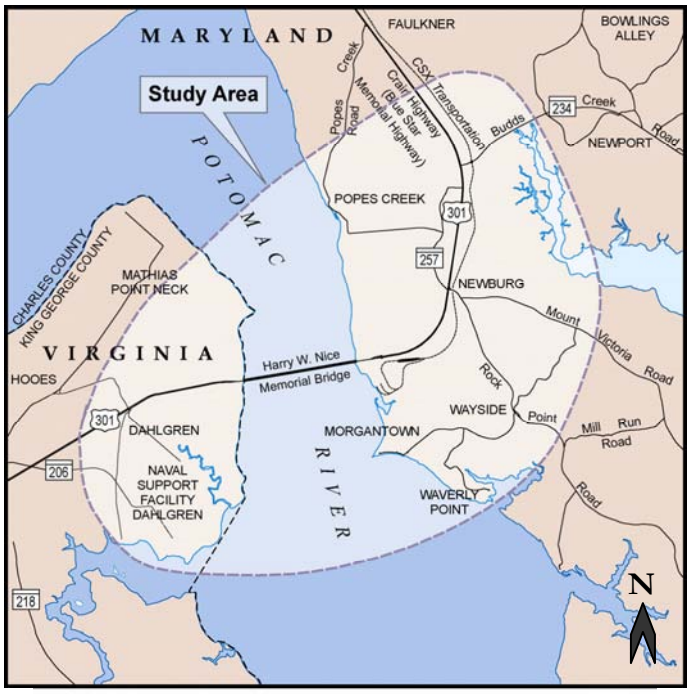
**Mr. Ian Cavanaugh**
Area Engineer
Federal Highway Administration
DelMar Division
10 South Howard Street,
Suite 2450
Baltimore, Maryland 21202
Phone: (410) 779-7147

## C. DESCRIPTION OF PROPOSED ACTION/PURPOSE AND NEED

This Environmental Assessment (EA)/Draft Section 4(f) Evaluation presents the results of engineering and environmental studies conducted to improve the Governor Harry W. Nice Memorial Bridge and US 301 approach roadways in Charles County, Maryland and King George County, Virginia. The Maryland Transportation Authority (Authority) may utilize federal monies from the Federal Highway Administration (FHWA) for the construction of this project. Therefore, the planning study and associated documentation have been performed and prepared in accordance with the National Environmental Policy Act (NEPA), and address additional Federal and State laws including: Section 404 of the Clean Water Act; Section 106 of the National Historic Preservation Act of 1966; Title VI of the 1964 Civil Rights Act; the Clean Air Act as amended in 1990; Executive Order (EO) 12898 *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*; Section 6(f) of the Land and Water Conservation Fund Act; Section 4(f) of the US Department of Transportation Act; the Maryland Environmental Policy Act (MEPA); the Uniform Relocation Assistance and Real Property Acquisition Act as amended in 1987; Smart Growth Priority Funding Areas Act of 1997; and the 1992 Maryland Economic Growth, Resource Protection, and Planning Act. Refer to Appendix H for the Environmental Assessment Form prepared in accordance with MEPA.

The study area limits for the Nice Bridge Improvement Project extend a distance of approximately ten miles along US 301, from just north of the US 301/MD 234 intersection in Charles County, Maryland to just west of Route 206 in King George County, Virginia. ***Figure S-1*** illustrates the study area in the context of the surrounding geographic region.

***Figure S-1:*** *Nice Bridge Study Area*




The purpose of the Nice Bridge Improvement Project is to:

- Provide a crossing of the Potomac River that is geometrically compatible with the US 301 approach roadways;
- Provide sufficient capacity to carry vehicular traffic on US 301 across the Potomac River in the design year 2030;
- Improve traffic safety on US 301 at the approaches to the Potomac River crossing and on the bridge itself; and
- Provide the ability to maintain two-way traffic flow along US 301 during wide-load crossings, incidents, poor weather conditions, and when performing bridge maintenance and rehabilitation work.

A new bridge crossing would address the following needs:

- Geometric inconsistencies;
- Capacity limitations of the existing two-lane bridge;
- Traffic operations and resulting safety issues on US 301;
- Adequate emergency evacuation capacity; and
- Other considerations including incident management, maintenance requirements, and transportation significance.

Throughout this document, the Governor Harry W. Nice Memorial Bridge will be referred to hereafter as the "Nice Bridge."

## D. ALTERNATES RETAINED FOR DETAILED STUDY

Fifteen preliminary alternates were analyzed to determine overall feasibility. Criteria used to screen the alternates included the ability to meet the purpose and need; impacts to socioeconomic, environmental and cultural resources; structural factors; and cost. The preliminary alternate screening process was documented in the *Combined Purpose and Need/Alternates Retained for Detailed Study* package (dated January 2008 and available on the project website at www.nicebridge.maryland.gov.

As a result of the preliminary screening process, the Alternates Retained for Detailed Study (ARDS) are:

- Alternate 1 (No-Build) - considers conditions in 2030 if a build alternate is not selected and includes extensive rehabilitation of the existing bridge;
- Alternate 2 (New Two-Lane Bridge to the South, Rehabilitate Existing Bridge);
- Alternate 3 (New Two-Lane Bridge to the South, Replace Existing Bridge);
- Alternate 4 (New Two-Lane Bridge to the North, Rehabilitate Existing Bridge);
- Alternate 5 (New Two-Lane Bridge to the North, Replace Existing Bridge);
- Alternate 6 (New Four-Lane Bridge to the South, Take Existing Bridge Out of Service);
- Alternate 7 (New Four-Lane Bridge to the North, Take Existing Bridge Out of Service).

Build Alternates 2 through 7 provide reasonable tie-in points with the existing and planned highway network, capacity for 2030 demand, the ability to maintain two-way traffic flow, improved safety on approach roadways and bridge, and the ability to comply with navigational channel guidelines. Each alternate also includes the replacement of the existing tollbooths with Open Road Tolling (ORT) provisions. (ORT permits the electronic collection of tolls without a reduction of vehicle speed.) The type of new structure, fixed or movable (i.e., draw span, swing span, etc.) is independent of size or location. Alternates that involve installation of a new bridge would require an alignment shift of the US 301 approach roadways to connect to the new structure.

Per Maryland Senate Bill 492, each of the build alternates includes a barrier separated bicycle/pedestrian path (bike/ped path) option. This option was incorporated per Senate Bill 492 and requests from members of the public.

***Alternate Comparison***

Each alternate (including the No-Build) was analyzed for natural, socioeconomic, noise, air, and cost impacts. A summary of these findings are included on the following pages and summarized in ***Table S-1***.

***Table S-1:*** *Summary of Environmental Impacts Without (and with*) Bike/Ped. Path Option*

| Resource | Unit | Alternates Retained For Detailed Study | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | No-Build | Alt. 2 | Alt. 3 | Alt. 4 | Alt. 5 | Alt. 6 | Alt. 7 |
| **Historic Properties** | | | | | | | | |
| Historic Standing Structures | no. | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| Recorded Archeology Sites[1] | no. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Community Resources** | | | | | | | | |
| Business Displacements | no. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Institutional Displacements[2] | no. | 0 | 1 | 1 | 2 | 2 | 1 | 2 |
| Residential Displacements | no. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Business Right-of-Way[3] | acres | 0 | 0 | 0 | 7.0 | 7.0 | 0 | 7.6(8.5) |
| Federal Right-of-Way | acres | 0 | 3.1(3.3) | 3.1 | 0 | 0 | 3.7 | 0 |
| Residential Right-of-Way | acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parkland and Recreational Facilities[4] | acres | 0 | 0 | 0 | 3.9 | 3.9 | 0 | 6.5 |
| Low-Income/Minority Populations | no. | 0 | 0 | 0 | 1 | 1 | 0 | 1 |
| **Natural Environmental Resources** | | | | | | | | |
| Prime Farmland Soils and Soils of Statewide Importance | acres | 0 | 4.8 | 5.1 | 6.9(7.2) | 7.5 | 4.6 | 8.2 |
| Streams | l.f. | 0 | 2,480 | 2,500 | 3,640 | 3,670 | 2,420 | 3,670 |
| Wetlands | acres | 0 | 0.7 | 0.7 | 0.1 | 0.2 | 0.7 | 0.1 |
| Potomac River Open Water Impacts-Piers[5] | acres | 0 | 0.3(0.4) | 0.7 | 0.3(0.4) | 0.7 | 0.5(0.6) | 0.5(0.6) |
| Potomac River Temporary Dredge Impacts | acres | 0 | 61(62) | 85 (88) | 62(63) | 85 (89) | 67(68) | 65(67) |
| Chesapeake Bay Critical Areas- MD) | acres | 0 | 14.5 | 14.5 | 24.4 | 24.5 | 14.2 | 24.2 (24.3) |
| Chesapeake Bay Preservation Areas-VA[6] | acres | 0 | 3.3(3.4) | 3.4(3.5) | 1.9(2.3) | 2.2(2.3) | 3.6 | 2.2 |
| 100-Year Designated Floodplains | acres | 0 | 5.9(6.3) | 7.7(7.8) | 8.1(8.4) | 8.5(8.7) | 6.4(6.5) | 8.4(8.6) |
| Submerged Aquatic Vegetation | acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rare, Threatened & Endangered Species[7] | no. | 0 | 0 | 0 | 0-1 | 0-1 | 0-1 | 0-1 |
| Forests | acres | 0 | 0.5 | 0.5 | 1.0 | 1.0 | 0.7 | 1.8(1.9) |
| Noise | NSAs | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| Air Indicators | --- | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Cost** | | | | | | | | |
| Total Estimated Costs in Millions | $ | $110-120 | $410-525 ($490-540) | $695-770 ($870-960) | $460-510 ($545-600) | $730-805 ($900-990) | $610-670 ($765-840) | $670-740 ($830-910) |

*Note:* Limit-of-disturbance does not include potential stormwater management areas, bridge pilings, and vehicle inspection stations.
**Impact numbers within parentheses ( ) represent the impact number for build alternates with bike/ped options that is different from build alternates without the bike/ped path option. In most cases, impact numbers for alternates with and without the bike/ped path option are the same.*

1 Additional testing will be conducted within the proposed limit-of-disturbance to determine the presence of, if any, unrecorded archeology sites.
2 Institutional displacements include the Naval Support Facility Dahlgren, Nice Bridge Campus Facilities and Potomac Gateway Welcome Center.
3 Business right-of-way (ROW) impacts consist of impacts to the Aqua-Land Marina and Campground.
4 Parkland/Recreational facility impacts are to Barnesfield and Dahlgren Wayside Parks and Potomac Gateway Welcome Center.
5 Potomac River open water impacts are limited to permanent impacts for bridge piers based on conceptual engineering.
6 Impacts are based on a 100-foot buffer of tidal area within the limit-of-disturbance of the Virginia portion of the study area.
7 Impacts are based on an encroachment onto the 50-foot buffer of Bald Eagle Concentration Zone area(s). No direct impacts to bald eagle nesting areas or any other rare, threatened, or endangered species (state or federal) habitat is anticipated.

## E. SOCIOECONOMIC RESOURCES AND LAND USE

***Communities/Right-of-Way (ROW) Impacts***

***Table S-1*** summarizes the permanent ROW and community impacts associated with each alternate. Most of the ROW impacts for the build alternates include linear strips of land along US 301. Additional ROW may be required for stormwater management areas, staging areas, or other construction related uses. No residential displacements are anticipated with any of the alternates. Institutional displacements may include Nice Bridge Campus Facilities, Potomac Gateway Welcome Center, and portions of the Naval Support Facility (NSF) Dahlgren. Alternates 2, 3, and 6 would impact NSF Dahlgren property. Alternates 4, 5, and 7 would impact the Authority-owned Nice Bridge Campus Facilities and the Potomac Gateway Welcome Center in Virginia. More detail on these impacts is provided below and in ***Chapter III***.

***Parks and Recreational Facilities***

The land located north of US 301 adjacent to the Potomac River in Virginia provides public park and recreational opportunities at three facilities: Dahlgren Wayside Park, Barnesfield Park and the Potomac Gateway Center. Use of these properties will only occur in compliance with Section 4(f) of the US Department of Transportation Act of 1966.

The Dahlgren Wayside Park is a 14.7-acre public park adjacent to the Potomac River and Barnesfield Park. Alternates 1, 2, 3, and 6 would not result in impacts to Dahlgren Wayside Park. The impacts to Dahlgren Wayside Park for Alternates 4 and 5 are 1.4 acres, and 2.2 acres for Alternate 7.

Barnesfield Park is a 146.5-acre public park located along the north side of US 301, just west of Roseland Road in King George County, Virginia. Alternates 1, 2, 3, and 6 would not result in impacts to Barnesfield Park. The impacts to Barnesfield Park for Alternates 4 and 5 are 0.4 acres and 2.2 acres for Alternate 7.

In 1985, the King George County Department of Parks and Recreation (DPR) received $240,000 from the Federal Land and Water Conservation Fund (LWCF) to improve ballfields, utilities, concessions, restrooms, playgrounds, parking, landscaping, and other support facilities at Barnesfield Park. As a result, Barnesfield Park is protected under Section 6(f) of the LWCF Act (16 USC 460). The Authority will continue to coordinate with Virginia DPR, Virginia Department of Conservation and Recreation (VDCR) and National Park Service (NPS) regarding the potential conversion of part of Barnesfield Park. If appropriate, the Authority and DPR would submit a request for land conversion document to the NPS through VA DCR. Any mitigation must be found to be satisfactory to VA DCR and NPS before the land conversion will be approved.

The Potomac Gateway Welcome Center (Welcome Center) is located on a 2.1-acre parcel between Roseland Road and Barnesfield Park north of US 301. Alternates 4, 5, and 7 would each require taking the 2.1 acres of the property. Alternates 1, 2, 3, and 6 would not impact the Welcome Center property.

Refer to ***Chapters III and V*** for additional information on potential impacts to parks and recreational facilities. Coordination with King George County and the US Department of Interior, NPS will continue throughout the planning phase of the project in order to comply with Section 4(f) and Section 6(f) requirements for mitigation from potential impacts.

***Environmental Justice***

In accordance with Executive Order (EO) 12898, *Federal Actions to Address the Environmental Justice in Minority and Low-Income Populations*, disproportionately high and adverse effects to environmental justice populations are not anticipated with any of the ARDS. One environmental justice community, the Aqua-Land Campground, was identified adjacent to the Nice Bridge. Alternates 4, 5, and 7 would result in the southbound lanes of US 301 being closer to the campground. These alternates would not result in any displacements or noise impacts. Therefore, none of the alternates are expected to result in disproportionately high and adverse effects to environmental justice populations.

***Military Facilities***

The Naval Support Facility (NSF) Dahlgren is located within the study area in King George County, south of US 301. Alternates 2, 3 and 6, which propose a new bridge south of the existing bridge, would impact NSF Dahlgren. The proposed ROW requirements would directly impact the fenced security clear zone established around NSF Dahlgren Building 1480. According to NSF Dahlgren, this would "significantly reduce the safe standoff distance for nine major operational, test and administrative facilities and approximately 1,300 employees who work in this area of the installation. Special facilities and equipment critical to the Navy's mission may not be encroached upon and are not able to be replicated or relocated at NSF Dahlgren." Refer to ***Chapter III*** and ***Appendix B*** for additional information and correspondence with the US Navy- NSF Dahlgren.

***Visual Quality***

The addition of a new bridge with any of the build alternates would change the visual characteristics of the surrounding area. The new bridge could alter or partially obstruct views of the existing Nice Bridge from upstream or downstream portions of the Potomac River depending on the build alternate. The aesthetic characteristics of a new bridge and grade of a new bridge including the roadway grade, would likely differ from the existing Nice Bridge.

***Economic Environment***

Two major employers in the area are NSF Dahlgren (over 1,300 employees) and the Morgantown Generating Plan (199 employees). The No-Build Alternate would affect local and regional business activities because of increased congestion and longer travel times for individuals that use the Nice Bridge, as well as, decreased mobility on the regional roadway network that would not support planned economic growth in the region. The proposed build alternates would benefit local and regional business activity by reducing traffic delays and improving mobility. There are no business displacements anticipated with any of the alternates. Institutional displacements could occur under the build alternates. Alternates 2, 3, and 6 could adversely affect operations at NSF Dahlgren. Alternates 4, 5, and 7 could adversely affect the Potomac Gateway Welcome Center.

## F. HISTORIC PROPERTIES

***Historic Structures***

The proposed No-Build and build alternates would each constitute an undertaking under the National Historic Preservation Act (NHPA). In accordance with Section 106 of the NHPA, the effects of the project on historic and archeological resources must be considered. It is anticipated that the only the historic property potentially effected by the proposed build alternates would be the Nice Bridge and its associated Administration Building. The existing Nice Bridge would be rehabilitated under Alternates 2 and 4, taken out of service under Alternates 6 and 7, and removed and replaced with a new structure under Alternates 3 and 5. Although a formal effects determination has not been made, it is likely that all the alternates, including the No-Build, would result in an adverse effect to the Nice Bridge and/or the Administration Building. A formal Section 106 effects determination and potential mitigation measures will be developed in consultation with the State Historic Preservation Officers (MD Historical Trust and VA Department of Historic Resources) following the identification of a preferred alternative.

***Archeology***

A total of 68 previously recorded archeological sites were identified within a 2 to 2.5-mile radius of the proposed limits of disturbance. Two sites warrant further investigation due to the high probability of resources. Site 44KG171 is the former location of the Barnesfield Plantation mansion and was originally within the area that is currently Dahlgren Wayside Park. Phase I archeological investigations in 1998 of this site resulted in the recovery of over 700 artifacts, with the assemblage including both domestic and architectural materials. Although not a previously recorded site, the location of the former Hooe family cemetery is also within the study area (it was relocated in the 1940s). The location of the cemetery is thought to be east of the Roseland Road/US 301 intersection. It cannot be determined with full certainty that all of the individuals were disinterred; as such it is possible that there are extant human remains still located at the site. Additional Phase I investigations, are being completed to further identify potential archeological sites.

Coordination with NSF Dahlgren indicates there is the potential for unexploded ordnances (UXOs) in portions of the study area. Land based UXO investigations are underway; however, investigations in the open water of the Potomac River will be initiated prior to construction, should a build alternate be selected.

For more information on historic properties, please refer to ***Chapter III*** and the technical reports on the CD attached to this document.

## G. NATURAL ENVIRONMENT

***Soils***

Prime Farmland Soils and Soils of Statewide Importance were identified within the study area. Impacts to these soils are anticipated to range from 4.6 to 8.2 acres and are limited to Virginia. Coordination with the US Department of Agriculture has been initiated consistent with the requirements of the Farmland Protection Policy Act (FPPA).

***Waters of the US including wetlands***

Stream impacts within the study area range from approximately 2,420 linear feet to 3,670 linear feet, mostly consisting of small streams and drainage swales. Minimization efforts to reduce impacts to these resources will be investigated, and a more refined calculation of impacts will be performed as the project continues in planning and design phases.

Palustrine and riverine wetlands were identified and delineated within 250 feet of the centerline for each build alternate. Seven wetlands or waterways are located within the Maryland portion of the study area. Seventeen wetlands or waterways are located within the Virginia portion of the study area. Construction of any of the build alternates is anticipated to require less than one acre of wetlands (0.1 and 0.7 acre) between Maryland and Virginia.

The anticipated permanent tidal open water impacts to the Potomac River bed from installation of bridge piers range from 0.3 acre to 0.7 acre. Tidal open water impacts anticipated from dredging the Potomac River range from 61 acres to 89 acres.

In accordance with the Final Rule on Compensatory Mitigation for Losses of Aquatic Resources (33 U.S.C 332), the Authority prepared a Compensatory Mitigation Plan (CMP) (***Appendix D***). The CMP identifies appropriate sites for mitigation in Maryland, and proposes use of a bank site in Virginia. The CMP includes a monitoring plan and management plan for the Maryland site to ensure regulatory requirements are met for mitigation site success.

***Floodplains***

Federal Emergency Management Agency (FEMA)-designated 100-year floodplains in the study area are primarily located along the Potomac River and several tributaries. Approximately 5.9 to 8.6 acres of 100-year floodplains would be impacted. Any construction within the 100-year floodplain would require a Waterway Construction Permit from the Maryland Department of the Environment (MDE). In Virginia, the Department of Conservation and Recreation (VA DCR) is responsible for coordination of all state floodplain programs. The VA DCR Floodplain Management Program staff works with localities (in this case King George County) to establish and enforce floodplain management zoning. The Authority will continue to coordinate with the MDE and VA DCR/King George County regarding potential impacts to floodplains.

***Shorelines***

Maryland and Virginia shorelines experience erosion at some locations up to two feet per year. Dredging and/or vegetation removal necessary for the construction of a new bridge may increase the potential for shoreline erosion. The potential effects can be minimized through best management practices, an erosion and sediment control plan and by restoring the shore areas to existing condition following construction. In the CMP for the project, the Authority is proposing to provide out-of-kind mitigation through shoreline stabilization and/or tidal marsh creation. Please refer to ***Appendix D*** for additional information on the shoreline stabilization that is being proposed as mitigation for the project impacts.

***Forest Communities***

Forested areas were identified within the study area. The majority of forested lands are located within the inland portion of the study area and would not be significantly impacted by any of the

build alternates. Impacts to forests, depending on alternate, are anticipated to range from 0.5 to 1.9 acres. Forest impacts are limited to fragmented stands or small isolated groups of trees along US 301. Larger, more contiguous forest stands suitable for forest interior dwelling species (FIDS) are located outside the immediate study area. Therefore, there are no impacts to FIDS habitat anticipated from any of the Nice Bridge alternates.

***Rare, Threatened and Endangered Species***

Coordination with the US Fish and Wildlife Service (US FWS), Maryland Department of Natural Resources (MD DNR), VA DCR, Virginia Department of Game and Inland Fisheries (VA DGIF), and other interested parties indicated the presence of federal and state-listed rare, threatened and endangered (RTE) animal and plant species within the study area. The VA DCR, on behalf of the Virginia Department of Agriculture and Consumer Services, indicated no documented state-listed RTE plants or animals, and no State Natural Area Preserves under their jurisdiction will be impacted by the any of the build alternates.

Bald eagle (*Haliaeetus leucocephalus*) nests (Maryland and Virginia) and bald eagle concentration zones (Virginia only) were identified in the study area. Impacts to the bald eagle concentration zone, located along the shoreline north of the existing bridge, are anticipated to be less than one acre. No direct impacts to bald eagle nests are anticipated with any of the Nice Bridge alternates.

The US FWS has noted that peregrine falcons (*Falco peregrinus*) may have nested on the existing Nice Bridge. Peregrine falcons are protected under the Migratory Bird Act, which prohibits the taking of any migratory bird, or any part, nest, or egg, except as permitted by regulation. Any action that may result in disturbing this species will be coordinated with the US FWS.

There are three fish species protected under the Endangered Species Act or the Magnuson-Stevens Fishery Conservation and Management Act likely occur within the study area. These federally managed species of importance include the shortnose sturgeon (*Acipenser brevirostrum*), summer flounder (*Paralichthyus dentatus*), and bluefish *(Pomatomus saltatrix).*

The shortnose sturgeon (*Acipenser brevirostrum*), a federally protected species, has been documented as a transient species in the Potomac River. However, records do not indicate sturgeon spawning in study area waters; for more information, please refer to ***Chapter III*** and the *Biological Assessment for the Shortnose Sturgeon* located on the attached CD.

An Essential Fish Habitat (EFH) Evaluation was completed for juvenile and adult summer flounder and juvenile bluefish. The project is not likely to adversely affect EFH for these species. For more information, please refer to the ***Chapter III*** and *Nice Bridge Improvement Project EFH Evaluation* located on the attached CD.

***Critical Area***

Chesapeake Bay Critical Area (Maryland) and Chesapeake Bay Preservation Areas (Virginia) are located along the shorelines of the Potomac River. Impacts to Maryland Critical Areas are anticipated to range from approximately 14.5 to 24.5 acres, and impacts to Virginia Chesapeake

Bay Preservation Areas are expected to range from 1.9 to 3.6 acres under the build alternates. However, linear roadway projects are exempt from complying with Virginia's Chesapeake Bay Preservation Areas legislation. In Maryland, these impacts will be evaluated and addressed in accordance with the Critical Area regulations, including the completion and submission of Maryland's Critical Area Commission Project Application Checklist, as appropriate.

## H. NOISE

Three noise sensitive areas (NSAs) were identified in the study area. These include Dahlgren Wayside Park and the Aqua-Land Marina and Campground. NSA 3 at Dahlgren Wayside Park would experience design year noise levels equal to or exceeding the impact criteria for each of the proposed alternates. Feasibility and reasonableness of noise abatement was investigated for NSA 3. However, it is the Authority's policy to make final decisions on the construction of Type I (new highways or improvement of existing highways) noise abatement during the final design phase of project development, after final horizontal and vertical engineering alignments are determined and detailed engineering evaluations can be made. It should be noted the Authority would also consider non-sound barrier options for noise abatement, such as landscaping.

## I. AIR QUALITY

The air quality analysis was conducted for carbon monoxide (CO), Fine Particulate Matter ($PM_{2.5}$) and Mobile Source Air Toxics (MSAT). The analysis indicates that CO impacts would result in no violations of the State/National Ambient Air Quality Standards (S/NAAQS) 8-hour concentration (9.0 parts per million (ppm) or the S/NAAQS 1-hour concentration (35 ppm) for the proposed alternates. For $PM_{2.5}$, it is anticipated that the Nice Bridge Improvement Project meets the Clean Air Act and 40 CFR 93.109 requirements. These requirements are met for particulate matter without a project-level $PM_{2.5}$ hot-spot analysis, since the project has <u>not</u> been found to be a project of air quality concern as defined under 40 CFR 93.123(b)(1). Per FHWA MSAT guidance, this project would be a *"minor widening project[s]"* … *"that serves to improve operations of highway ... without adding substantial new capacity or creating a facility that is likely to meaningfully increase emissions."* Therefore, the Nice Bridge Improvement Project would be considered a Project with Low Potential MSAT Effects.

## J. HAZARDOUS MATERIALS

The Authority prepared an Initial Site Assessment (ISA) of the project area. Twenty-nine properties with the potential for environmental concern were identified. One site, NSF Dahlgren has a high potential contaminant value and is anticipated to be impacted by one or more of the proposed alternates. Therefore, a Preliminary Site Assessment (PSA) will be conducted prior to any ground disturbing activities in the vicinity of this site to determine the extent of hazardous materials concerns (currently underway).

## K. SECTION 4(F)

A Draft Section 4(f) Evaluation was completed in accordance with the US Department of Transportation Act of 1966 to assess the likely effects of the proposed action upon Section 4(f) resources, and evaluate alternates that avoid or minimize impacts caused by the project to those resources. The project would involve the use of land from up to three publicly-owned public parks, and likely involve the use of the historic Nice Bridge and associated Administration Building. ***Table S-2*** below summarizes the results of the Section 4(f) Evaluation. Refer to ***Chapter V*** for more information on the Draft Section 4(f) Evaluation.

***Table S-2:*** *Summary of the Section 4(f) Evaluation by Alternates Retained for Detailed Study**

| | Alternate 1 | Alternate 1-Modified | Alternate 2 | Alternate 3 | Alternate 4 | Alternate 5 | Alternate 6 | Alternate 7 |
|---|---|---|---|---|---|---|---|---|
| Section 4(f) Resource Avoidance? | No | Yes | No | No | No | No | No | No |
| Impact to historic Nice Bridge? | Initially, No; Long-term, Yes (Modification) | No | Initially, No; Long-term, Yes (Modification) | Yes: Replacement | Initially, No; Long-term, Yes (Modification) | Yes: Replacement | Yes[1] | Yes[1] |
| Impact to Potomac River Bridge Administration Building? | No | No | Yes: 0.1 acre | Yes: 0.1 acre | Yes: 0.5 acre, demolition | Yes: 0.5 acre, demolition | Yes: 0.1 acre | Yes: 0.5 acre, demolition |
| Impact to Barnesfield Park | No | No | No | No | Yes: 0.4 acres | Yes: 0.4 acres | No | Yes: 2.2 acres |
| Impact to Dahlgren Wayside Park | No | No | No | No | Yes: 1.4 acres | Yes: 1.4 acres | No | Yes: 2.2 acres |
| Impact to Potomac Gateway Welcome Center | No | No | No | No | Yes: 2.1 acres | Yes: 2.1 acres | No | Yes: 2.1 acres |
| Likely pursue Section 4(f) *de minimis* finding? | No | N/A | No | No | Yes: Barnesfield Park | Yes: Barnesfield Park | No | Yes: Barnesfield Park |

* Note: The limits of disturbance used to calculate the park impacts include the bicycle/pedestrian path option, thereby providing the maximum impact value for each alternate.

## L. SUPPORTING TECHNICAL REPORTS

The technical analysis supporting the Nice Bridge Improvement Project Environmental Assessment/Draft Section 4(f) Evaluation is documented in the following 13 technical reports. Copies of the technical reports are available on the CD attached with this document.

- Air Quality Technical Report
- Biological Assessment for the Shortnose Sturgeon
- Combined Purpose and Need and Alternates Retained for Detailed Study Package
- Essential Fish Habitat Assessment
- Hazardous Waste Report: Initial Site Assessment
- Historic Resources Survey and Determination of Eligibility Report, Volumes I & II (Maryland)
- Indirect and Cumulative Effects Analysis
- Maryland Archeological Phase IA Memorandum
- Natural Resources Technical Report

- Noise Quality Technical Report and Addendum
- Socioeconomic and Land Use Technical Report
- Virginia Archeological Phase IA Memorandum
- Virginia Historic Resources: Survey and Identification Report
- Wetland Delineation Report

## M. PERMITS AND APPROVAL REQUIRED

The following permits and approvals will be required for the project prior to the commencement of the construction of a build alternate:

- National Environmental Policy Act including the final environmental document;
- Section 106 of the National Historic Preservation Act, including archeological investigations, a final Determination of Effects, and potentially a Memorandum of Agreement among the Authority, FHWA, and consulting parties;
- Section 4(f) of the US Department of Transportation Act of 1966 including approval of the Section 4(f) Evaluation
- Section 6(f) of the Land and Water Conservation Fund Act, including approval of mitigation measures;
- Maryland Critical Area Commission Approval;
- National Pollution Discharge Elimination System (NPDES) permit;
- Floodplain determination and assessment under Federal Executive Order 11988, US Department of Transportation Order 5650.2, National Flood Insurance Act of 1968;
- Section 10 Rivers and Harbors Act/Section 404 of the Clean Water Act;
- Section 401 of the Clean Water Act – Water Quality Certification;
- Section 9 Bridge Permit from the US Coast Guard;
- Maryland Reforestation Law;
- MDE Waterway Construction Permit;
- MDE Tidal and Non-tidal Wetlands and Waterways permits;
- Virginia Water Protection Permit, and
- Virginia Marine Resources Permit.

## N. PUBLIC HEARING

Public hearings are scheduled to be held 30 days after the availability of this Environmental Assessment/ Draft Section 4(f) Evaluation (EA). The purpose of these hearings is to allow the public an opportunity to review and provide comments on the EA. Comments received during the public hearings will become part of the project record.

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# I. PURPOSE AND NEED

This chapter summarizes the project purpose and the specific transportation issues that need to be addressed. The Purpose and Need Statement has been coordinated with the public and regulatory agencies; to ensure that there is a clear understanding of the project early in the process. In April 2008, the regulatory agencies concurred on the project's purpose and need in the *Combined Purpose and Need & Alternates Retained for Detailed Study Package*, January 2008, which is available on the CD of supporting documentation included with this EA/Section 4(f) Evaluation document. The document is also available on the project's website at www.nicebridge.maryland.gov.

## A. EXISTING CONDITIONS

US 301 is classified as a Rural Principal Arterial in the Charles County and King George County Comprehensive Plans. Rural Principal Arterial roadways, which include components of the Interstate Highway System, are designed to provide a rural network of continuous routes for interstate and intercounty service at the highest levels of mobility and speed. At the approaches to the Governor Harry W. Nice Memorial Bridge (Nice Bridge), this section of US 301 consists of a four-lane divided roadway with two travel lanes in each direction and outside shoulders (***Appendix A***). The 1.7-mile long Nice Bridge has one travel lane in each direction with no median separation and a narrow offset on each side (approximately one foot). The posted speed on the bridge varies from 40 to 50 miles per hour (mph). There is a four-lane toll plaza north of the Nice Bridge that provides one-way toll collection for southbound vehicles. The percentage of trucks crossing the bridge in 2006 approximated 14 percent of the vehicle mix with nearly 1,200 wide-load vehicle crossings. Due to the limited roadway width on the bridge, the bridge must be closed to two-way traffic flow during each wide-load crossing.

The Nice Bridge is an important transportation element, and is part of the National Highway System (NHS) and Strategic Highway Network (STRAHNET). Current NHS and STRAHNET design standards recommend that the cross section of approach roadways be carried across the bridge; currently these standards are not met at the Nice Bridge.

Provisions for bicyclists and pedestrians are limited on the approach roadways and are not present on the existing Nice Bridge. The Nice Bridge maintenance staff receives approximately one request per month to transport bicycles across the existing bridge. Advance notice from the bicyclist provides the Authority staff time to prepare, though not all bicyclists make arrangements prior to their trip.

On an average weekday, traffic on the Nice Bridge (northbound and southbound) operates at Level of Service (LOS) "D" for most of the day and LOS "E" during the PM peak period. Six LOS are defined and are designated from A to F, with LOS "A" representing the best operating conditions and LOS "F" the worst, or failing. Bridge traffic operates at LOS "E" for at least seven hours during an average summer weekend day. Currently, there are no significant queuing delays associated with weekday traffic flows; however, based on observations, normal weekend queues extend up to one-quarter mile, and on major holiday weekends, queues can extend to at least four miles in both directions.

The most frequent type of reported crash between January 2003 and December 2005 on the Nice Bridge was opposite direction crashes, which can be attributed to the lack of a median between vehicles traveling in opposing directions.

The Nice Bridge meets current American Association of State Highway and Transportation Officials (AASHTO) geometric design standards for horizontal alignment, vertical grades, transition areas, and sight distance, and has acceptable structural ratings. ***Table I-1*** lists the current roadway and bridge geometrics.

***Table I-1:*** *Existing Roadway Geometry along US 301 Within the Nice Bridge Study Area*

| **SEGMENTS** | **North Approach Roadway (Maryland)** | | **Bridge** | | **South Approach Roadway (Virginia)** | |
|---|---|---|---|---|---|---|
| **LIMITS** | **Orland Park Road to North Abutment** | | **North Abutment to South Abutment** | | **South Abutment to Barnesfield Road** | |
| **DIRECTION** | **Southbound** | **Northbound** | **Southbound** | **Northbound** | **Southbound** | **Northbound** |
| **Roadway Classification** | Rural Principal Arterial | | | | | |
| **Posted Speed** | 55 mph | | 40 – 50 mph | | 50 mph | |
| **Median Width** | Variable | Variable | No Median | | Variable | Variable |
| **Number of Lanes** | 2 | 2 | 1 | 1 | 2 | 2 |
| **Transition Length** | Approaching Toll Plaza: 350'; Toll Plaza to Bridge: 330' | Bridge to 2-lane section: >700' | None[1] | | 1050' | |
| **Number of Toll Lanes** | 4 | N/A[2] | N/A | N/A | N/A | N/A |
| **Lane Width** | 12' n. of plaza; 11' s. of plaza | 12' n. of plaza; 11' s. of plaza | 11' | 11' | 11 – 12' | 11 – 12' |
| **Shoulder Width/Offset** | 10' outside; 1' inside | 10' outside; 1' inside | 1' outside; No inside shoulder/offset | 1' outside; No inside shoulder/offset | 10' outside | 10' outside |
| **Wide Load Vehicle Waiting Area and Vehicle Inspection Area** | None | N/A | N/A | N/A | N/A | Opposite Roseland Road |
| **Maximum Vertical Grade** | +2.6% | -2.6% | ±3.75% | ±3.75% | -1.0% | +1.0% |

[1] None = there is no Wide Load Vehicle Waiting Area adjacent to the travel lane approaching the bridge.
[2] N/A: a waiting area is not applicable adjacent to the travel lane since the vehicles have already crossed the bridge.

## B. PURPOSE OF THE PROJECT

The purpose of the Nice Bridge Improvement Project is to:

- Provide a crossing of the Potomac River that is geometrically compatible with the US 301 approach roadways;
- Provide sufficient capacity to carry vehicular traffic on US 301 across the Potomac River in the design year 2030;
- Improve traffic safety on US 301 at the approaches to the Potomac River crossing and on the bridge itself; and
- Provide the ability to maintain two-way traffic flow along US 301 during wide-load crossings, incidents, poor weather conditions, and when performing bridge maintenance and rehabilitation work.

## C. PROJECT NEED

A new bridge crossing would address the following needs:

- Geometric inconsistencies;
- Capacity limitations of the existing two-lane bridge;
- Inefficient Traffic operations and resulting safety issues on US 301 and on the Nice Bridge;
- Other considerations including incident and evacuation management, maintenance requirements, and transportation significance.

### 1. Geometric Inconsistencies

Although the Nice Bridge meets current AASHTO geometric design standards, transportation improvements are needed to address geometric inconsistencies. Traffic operations are affected by bridge roadway features that are inconsistent with the US 301 approach roadways. These inconsistencies include the 3.75 percent grade on single lanes in each direction with no median separation, the lack of roadside shoulders or medians, and the reduction of lanes from four lanes on US 301 to two lanes on the Nice Bridge. As a result of these geometrical inconsistencies, the bridge is rated functionally obsolete.

### 2. Capacity Limitations

There is a need to eliminate the current bottleneck along US 301 created by the existing two-lane bridge. The four-lane toll plaza slows vehicle speeds but a single southbound lane over the Nice Bridge results in a Level of Service D and worse conditions during PM peak periods. Trucks account for 14 percent of the traffic on the Nice Bridge during an average weekday, and if the truck has an oversized load, the bridge must be closed to traffic.

#### a. Capacity Analysis

The bridge roadway capacity in one direction is approximately 1,325 vehicles per hour (vph). The capacity of the southbound toll plaza is 1,900 vph. While the toll plaza reduces the travel speed of vehicles, the four lanes can process more vehicles per hour than the capacity of the southbound bridge roadway. Therefore, it is the bridge and not the toll plaza that is the constraining factor to traffic flow.

The Highway Capacity Manual (Transportation Research Board, 2000) defines Level of Service (LOS) as "a qualitative measure describing operational conditions within a traffic stream, based on service measures such as speed and travel time, freedom to maneuver, traffic interruptions, comfort, and convenience." Analysis of the 2006 traffic counts found that on an average weekday, traffic on the Nice Bridge operates at LOS "D" for most of the day, and LOS "E" during the PM peak period. Nice Bridge traffic operates at LOS "E" for at least seven hours during an average summer weekend day.

On an average summer weekend day, the Nice Bridge operates at LOS "E" from 11 AM to 6 PM; with 3 PM as the peak hour and 1,526 total vehicles traveling on the bridge. For the average weekday, the Nice Bridge operates at LOS "E" from 4 PM to 6 PM. The peak hour on a weekday is 4 PM with 1,585 total vehicles traveling on the bridge.

On a projected 2030 No-Build average summer weekend day, the Nice Bridge is expected to operate at LOS "F" from 11 AM to 6 PM, and for the projected 2030 No-Build average weekday the bridge would operate at LOS "F" from 4 PM to 6 PM.

**b. Vehicle Classification**

Heavy vehicles (defined as single-unit trucks and larger) accounted for approximately seven percent of total traffic during the average summer weekend observation period. On an average weekday, trucks, or heavy vehicles, accounted for approximately 14 percent of the traffic on the Nice Bridge; this 14 percent exceeds the Maryland Statewide Average of four percent for other rural arterials. Due to the existing two lanes on the Nice Bridge, trucks carrying a wide-load require the bridge to be closed in both directions to other traffic.

**3. Traffic Operations and Safety**

The two-lane existing Nice Bridge acts as a bottleneck to the adjacent four-lane US 301 approach roadways resulting in poor traffic operations and increased safety concerns.

**a. Travel Demand Volumes**

Current and projected future capacity constraints at the Nice Bridge impact traffic operations and safety. Nearly 5.2 million vehicles used the Nice Bridge in 2006. As shown in ***Table I-2***, in 2006 the daily trips across the bridge averaged nearly 21,000 vehicles per day (vpd) on summer weekend days and 17,100 vpd on non-summer weekdays. Thus, there was approximately 20 percent more traffic on the Nice Bridge on an average summer weekend day than on a representative average weekday. Also, the total traffic volumes on the existing two-lane bridge approach the capacity of the bridge roadway (2,650 vph) during the existing peak hours. Currently, normal (non-holiday) weekend vehicle queues extend up to one-quarter mile at the bridge. Vehicle queues of at least four miles have been observed in both directions at the Nice Bridge during major holiday weekends.

Average daily traffic volume projections were made for no-build conditions in the year 2030 using a Regional Integrated Travel Demand Model. ***Table I-2*** also shows that in 2030, travel demand across the bridge is expected to be more than double the vehicle volume experienced in 2006.

**b. Peak Hour Traffic**

***Table I-3*** shows the two-way peak hour volumes at the Nice Bridge in 2006 and projected for 2030. The peak recorded hour is 3:00 PM to 4:00 PM during a typical summer weekend day and from 4:00 PM to 5:00 PM on an average weekday. The peak hour volume projections for 2030 indicate a 99 percent growth from existing peak hours on summer weekend days, and a 105 percent growth from existing peak hours on average weekdays.

***Table I-2:*** *Average Daily Traffic Volumes*

| 2006 Total Daily Traffic Volumes | | | |
|---|---|---|---|
| **Date** | **Northbound** | **Southbound** | **Total** |
| **Average Summer Weekend Day at the Nice Bridge** | | | |
| Saturday (June through August 2006) | 10,024 | 10,776 | 20,800 |
| Sunday (June through August 2006) | 11,674 | 8,426 | 20,100 |
| Saturday (2030) | 20,528 | 22,072 | 42,600 |
| Sunday (2030) | 23,870 | 17,230 | 41,100 |
| **Average Weekday at the Nice Bridge** | | | |
| Weekday (October 2004) | 8,670 | 8,430 | 17,100 |
| Weekday (2030) | 17,745 | 17,255 | 35,000 |

***Table I-3:*** *Two-Way Peak Hour Volumes*

| Date | Direction | Peak Hour | Peak Hour Volume |
|---|---|---|---|
| ***Average Weekend Day and an Average Weekday at the Nice Bridge (2006)*** | | | |
| Average Weekend Day | 2-way | 3:00 PM to 4:00 PM | 1,526 |
| Average Weekday | 2-way | 4:00 PM to 5:00 PM | 1,585 |
| ***Average Weekend Day and an Average Weekday at the Nice Bridge (No-Build 2030)*** | | | |
| Average Weekend Day | 2-way | 3:00 PM to 4:00 PM | 3,122 |
| Average Weekday | 2-way | 4:00 PM to 5:00 PM | 3,244 |

### c. Travel Demand Trends

Trips across the Nice Bridge consist of local trips with origins and destinations relatively close to the shores, and regional trips with origins and destinations in Maryland, Virginia, and beyond. An origin-destination (O-D) study was completed in 2001 and a follow-up survey conducted in 2004. The 2001 O-D study indicated that most of the typical summer weekend southbound Nice Bridge traffic is traveling from the Washington D.C. metro area to areas south of the O-D study area (e.g., south of Fredericksburg, King George, Dahlgren). On an average weekday, most of the travel is between Charles County, Maryland and King George County, Virginia. The 2004 follow-up survey confirmed the results of the 2001 O-D survey.

On a typical summer weekend day, 31 percent of the southbound traffic using the Nice Bridge comes from the Washington, D.C. metro area, 25 percent from Charles County, and 21 percent from the Baltimore region. Fifty-three percent of the traffic is traveling to areas south of the study area. On an average summer weekend day, 24 percent of the trips are recreation or tourism related and 35 percent have purposes other than those included in the survey.

On an average weekday, 31 percent of southbound traffic is from Charles County, 30 percent from the Washington, D.C. area, and 15 percent from the Baltimore region. Thirty-nine percent of this traffic is traveling to King George County, 24 percent to Fredericksburg, and 34 percent to south of the study area (e.g., south of Fredericksburg, King George, Dahlgren) to I-95 or US

Route 1. On an average weekday, most of the trips (nearly 80 percent) are between home and work.

**d. Crash History**

Crash data, in the study area along US 301 from MD 234 to VA 206, was analyzed from January 2003 to December 2005. During the study period, a total of 136 crashes occurred in the study area, which equates to 74.8 crashes per 100 million vehicle miles of travel (VMT). This rate is below the Maryland Statewide Average rate for rural arterials, which is 113 crashes per 100 million VMT. The probable cause for over 61 percent of the crashes was "failure to give full time/attention," which may be a result of drivers being distracted by the geometric conditions, volume of traffic, other vehicle occupants, in-vehicle electronic devices, scenery and/or unfamiliar roadways.

On the Nice Bridge, the most frequent type of crash (five out of 14, or 36 percent) was opposite direction, primarily resulting from the lack of a barrier between vehicles traveling in opposite directions. Three of the crashes (21 percent) were due to the driver's failure to give full time/attention. Four crashes (28 percent) reported on the bridge occurred in wet, icy, or other than dry conditions. Approximately 43 percent of the crashes on the Nice Bridge occurred between 2 AM and 7 AM, while 36 percent occurred between 5 PM and 6 PM.

On the approach roadways, the type of crash most often experienced was rear-end collisions (34 percent of all crashes). Approximately 13 percent of the crashes involved trucks, resulting in a truck crash rate of 9.3 crashes per 100 million VMT, which is higher than the Maryland Statewide Average rate of 8.8 crashes per 100 million VMT for similar facilities. Approximately 32 percent of the crashes occurred in the months of June, July, and August when traffic volumes are highest and 39 percent were reported on a Friday, Saturday, or Sunday.

***Northern Approach Roadway Crashes***

Of the crash types identified, the most frequent type of crashes occurring on the northern approach roadway was rear-end collision (***Table I-4***). This type of crash frequently occurs in congested areas. Four crashes (8 percent) were reported in the immediate vicinity of the toll plaza. Eighteen of the crashes (37 percent) were due to the driver's failure to give full time/attention. Fourteen of the crashes in this segment (22 percent) occurred on wet or snowy roadway surfaces. The split between crashes occurring on Monday through Thursday and crashes occurring on Friday, Saturday, or Sunday was also almost even (47 percent versus 53 percent, respectively).

***Table I-4:*** *Crash Types Occurring on the Northern Approach Roadway to the Nice Bridge**

| Crash Type | Number of Crashes | Percent of Total Crashes |
|---|---|---|
| Opposite Direction | 1 | 2 |
| Rear End | 14 | 29 |
| Sideswipe | 2 | 4 |
| Left Turn | 2 | 4 |
| Angle | 9 | 18 |
| Fixed Object | 6 | 12 |
| Other | 15 | 31 |
| **Total** | **49** | **100** |

* *From January 2003 to December 2005*

***Southern Approach Roadway Crashes***

There were 73 reported crashes on the southern approach roadway with rear-end crashes (38 percent) being the most common crash experience reported, potentially resulting from the reduction of travel lanes from two to one (***Table I-5***). Sixty-two of the crashes (85 percent) were due to the driver's failure to give full time/attention. Eight of the crashes in this segment (11 percent) occurred during wet or snowy roadway conditions, fifteen crashes (21 percent) occurred during nighttime hours. Twenty-seven of the crashes (37 percent) were reported on a weekend and the same percent were reported during the summer months.

***Table I-5:*** *Crash Types Occurring on the Southern Approach Roadway to the Nice Bridge**

| Crash Type | Number of Crashes | Percent of Total Crashes |
|---|---|---|
| Rear End | 28 | 38 |
| Sideswipe | 10 | 14 |
| Angle | 24 | 33 |
| Fixed Object | 6 | 8 |
| Other | 5 | 7 |
| **Total** | **73** | **100** |

* *From January 2003 to December 2005*

***Severity of Crashes***

Of the 136 crashes occurring in the study period, one resulted in a fatality (1 percent, or 0.5 per 100 million VMT), 54 were injury crashes (40 percent, or 30.1 per 100 million VMT) and 81 were property damage crashes (59 percent, or 44.5 per 100 million VMT). These values result in crash rates that are below the Maryland Statewide rate for fatal crashes (1.8 per 100 million VMT), injury crashes (54.7 per 100 million VMT), and property damage crashes (56.5 per 100 million VMT) for rural arterials.

## 4. Other Considerations

Other considerations the Authority must factor in determining a solution for the Nice Bridge project are bridge maintenance and the significance of the bridge and roadway on the national, regional and local roadway network. Based on the current condition of the bridge deck and the projected increase in traffic volumes, it is anticipated that the deck will require rehabilitation

between 2015 and 2020. This would affect evacuation, commerce, STRAHNET, and the traveling public due to overnight closures.

***Table I-6:*** *Overall Nice Bridge Study Area (MD 234 to VA 206) Crashes by Severity**

| Crash Severity | Number of Crashes | Percent of Total Crashes | Study Rate** | Statewide Rate* |
|---|---|---|---|---|
| Fatal Crashes | 1 | 1 | 0.5 | 1.8 |
| Injury Crashes | 54 | 40 | 30.1 | 54.7 |
| Property Damage Crashes | 81 | 59 | 44.5 | 56.5 |
| **Total Crashes** | **136** | **100** | **75.1** | **113.0** |

** From January 2003 to December 2005*

*** Crash rates are calculated as the number of crashes per 100 million vehicle miles of travel.*

### a. Emergency Evacuation Capacity

US 301 is an important emergency evacuation route for Southern Maryland the Washington D.C. area to points south. The capacity limitations of the bridge and resulting traffic operations hinder the efficiency of US 301 as an emergency evacuation route. This designation as an evacuation route requires that US 301 must be capable of serving local citizens during emergency evacuations and remain usable during reasonably foreseeable Homeland Security events. If the Nice Bridge should be rendered non-operational, people will have fewer evacuation options and experience longer evacuation times.

### b. Bridge Maintenance

The original bridge deck was rehabilitated in 1985, approximately 45 years after it was opened to traffic in 1940. Based on the need for bridge deck rehabilitation approximately every 40 years, it is anticipated that the deck will require rehabilitation between 2015 and 2020 due to the increased loadings from the growing number of annual vehicle crossings. In addition, the bridge is scheduled to undergo a complete cleaning and painting of the bridge steel, and any repairs that may be needed to the superstructure may be made at this time. The bridge was originally designed for an HS 20 (36 ton) loading; however, current design standards for new bridges is a HS 25 (45 ton) loading, which is a 25 percent heavier loading than HS 20. This revision in design standards presents the likelihood that some current bridge elements may be structurally deficient.

Depending on the type and method of construction, rehabilitation of the Nice Bridge could require long-term single lane closures or complete nighttime bridge closures. Due to the lack of nearby alternate routes and the single lane capacity of the bridge in each direction, substantial travel time delays within the areas where traffic would be diverted from could occur during rehabilitation. In addition, routine maintenance, such as repainting pavement markings, sign repair, and snow/ice clearing operations, affects the capacity of the bridge as these activities influence the availability of travel lanes.

### c. Transportation Significance

The Nice Bridge facility is part of the NHS and STRAHNET, indicating its importance as a transportation element for both the public and military facilities. Facilities that are part of the NHS and STRAHNET should be designed to the highest standards, including providing consistent bridge and approach roadway features. As previously mentioned, the existing features

of the Nice Bridge are not consistent with the approach roadways and the bridge has been designated as functionally obsolete due to the limited vehicular capacity.

The September 16, 2008 transportation priority letter from Charles County designated the expansion of the Nice Bridge as the seventh highest transportation priority by the Charles County Delegation and Commissioners ***(Appendix B)***. The letter states that the Nice Bridge is a major limiting factor in the path of evacuation from Southern Maryland and the Washington, D.C. metro area to points south. With its capacity currently limited to two lanes, this bridge would create a major bottleneck in the event of a natural disaster or a Homeland Security incident. In addition, the *2006 Charles County Comprehensive Plan* recommends increasing the capacity of the bridge to improve traffic flow, alleviate congestion, and provide an evacuation route of greater capacity; therefore, the Nice Bridge Improvement Project is consistent with the *2006 Charles County Comprehensive Plan*.

US 301 also provides the main access into and out of Naval Support Facility (NSF) Dahlgren. The Navy performs research, development, test, and evaluation operation critical to the defense of sailors, ships, facilities, and infrastructure at NSF Dahlgren. US 301 and the Nice Bridge provide important infrastructure that supports local and regional mobility for the Navy's operations and employees at NSF Dahlgren.

## D. CONCLUSION

In general, the Nice Bridge meets current AASHTO geometric design standards for horizontal alignment, vertical grades, transition areas, and sight distance and has acceptable structural ratings. As part of the NHS and STRAHNET, the Nice Bridge should provide consistent travelway features with the US 301 approach roadways. Transportation improvements are needed to address capacity limitations and traffic operation effects of the inconsistent bridge roadway features as compared to the US 301 approach roadways, including the 3.75 percent grade on single lanes in each direction, the lack of roadside shoulders or buffer areas, and the reduction of lanes from the four 11- to 12-foot lanes on US 301 to the two 11-foot lanes on the Nice Bridge. As a result of these geometrical inconsistencies, the bridge is rated functionally obsolete. The most frequent type of crash reported on the bridge was opposite direction, which can be attributed to only one lane in each direction, no separation of opposing flows of traffic and minimal offsets on the structure.

In addition, planned future maintenance and rehabilitation of the Nice Bridge deck could require long-term lane closures or complete nighttime bridge closures which would result in substantial travel time delays. Improvements to the Nice Bridge are needed to maintain a safe crossing (i.e., replace bridge deck, improve load rating of structural members) and to provide sufficient capacity to carry passenger vehicle and truck traffic on US 301 across the Potomac River in the design year 2030; improve traffic safety on US 301 at the approaches to the Potomac River crossing and on the bridge itself; and provide the ability to maintain the transportation significance of the bridge by improving two-way traffic flow during wide-load crossings, incidents, poor weather conditions, and when performing bridge maintenance rehabilitation work.

# II. ALTERNATES CONSIDERED

The identification, consideration, and analysis of alternates are keys to the National Environmental Policy Act (NEPA) process and the goals of objective decision making for the project. This chapter presents a summary of the preliminary screening of alternates and focuses on the seven alternates that were retained for detailed study. For a more complete discussion on the preliminary alternates and the evaluation screening process, please refer to the *Combined Purpose and Need & Alternates Retained for Detailed Study Package*, January 2008, available on the project's website at www.nicebridge.maryland.gov and on the enclosed CD.

## A. DESIGN GUIDELINES

***Table II-1*** presents the various design guidelines followed in developing the proposed alternate improvements for this study. These design guidelines were applied to all the build alternates to ensure an equal comparison.

***Table II-1:*** *Design Guidelines for Nice Bridge Improvement Project*

| **Design Guidelines** | |
|---|---|
| Design Speed | 60 mph |
| Maximum Grade | 3.0% for lengths less than 0.75 mile |
| Bridge Cross Slope | 2.0% |
| Travel Lane Width | 12 feet (two lanes in each direction of travel) |
| Median Shoulder | 4 feet |
| Outside Shoulder | 12 feet |
| Single 2-lane Bridge Width (parapet to parapet) | 40 feet |
| Single 4-lane Bridge Width (parapet to parapet) | 83 feet |
| Navigational Channel | Maintain existing 800-foot span across navigational channel at/along existing bridge alignment |
| Vertical Clearance | Maintain existing 135-foot minimum vertical clearance over navigational channel |
| Distance between Two Separate Bridges | 22-feet minimum (dependant upon construction method, inspection access and type of foundation selected) |
| Vertical Roadway Clearance | 17-feet 6-inches |
| Design Vehicle | Type HL-93 |
| Pier Accidental Collision Design | Collision Level of Importance – Critical<br>Impact Force – 8,800 kips (force)<br>Impact Energy – 45,900 kip-ft |
| Possible Main Span Types | Through Truss/Arch, Cast-in-place Segmental, or Cable Stay |
| Base Wind Load | 100 mph (main span will require wind studies and model testing) |
| 100-year Flood Elevation | 8 – referenced to the National Geodetic Vertical Datum of 1929 |
| Seismic Acceleration Coefficient | 0.06, Seismic Level of Importance – Critical |
| Design Storm and Stability Check Storm | Will require studies and model testing |

Maryland and Virginia stormwater management regulations and vessel collision protection methods were also considered during detailed studies for the retained alternates.

## B. PRELIMINARY ALTERNATES

Fourteen alternates, including the No-Build Alternate, were presented at the Alternates Public Workshops held in Maryland and Virginia on May 31, 2007 and June 7, 2007, respectively. Each alternate, including the No-Build, includes all infrastructure improvements listed in the Metropolitan Washington Council of Governments' (MWCOG) Transportation Improvement Plan (TIP). The approved Integrated Travel Demand model was applied to each alternate. Each alternate also includes the installation of Open-Road Tolling (ORT), which is a form of toll collection where vehicles are tolled at highway speed. No tollbooths are provided and tolls are typically collected via toll collection equipment mounted on overhead gantries that span the highway.

The preliminary alternates considered were:

Alternate 1: No-Build Alternate
Alternate 2: New Two-Lane Bridge to the South, Rehabilitate Existing Bridge
Alternate 3: New Two-Lane Bridge to the South, Replace Existing Bridge
Alternate 4: New Two-Lane Bridge to the North, Rehabilitate Existing Bridge
Alternate 5: New Two-Lane Bridge to the North, Replace Existing Bridge
Alternate 6: New Four-Lane to South, Take Existing Bridge Out of Service
Alternate 7: New Four-Lane to North, Take Existing Bridge Out of Service
Alternate 8: Off Existing Alignment
Alternate 9: Roadway Shift
Alternate 10: Tunnel
Alternate 11: Stacked Deck
Alternate 12: Three-Lane Bridge with Moveable Barrier
Alternate 13: Transportation Systems Management/Travel Demand Management – TSM/TDM
Alternate 14: Transit

Each alternate was qualitatively analyzed to determine overall feasibility. Criteria used to screen the alternates include meeting the purpose and need; impacts to socioeconomic, environmental and cultural resources; structural factors; and, cost. Alternates 8-14 were dropped from further consideration, for reasons stated below.

- Alternate 8 (Off Existing Alignment): does not meet the purpose and need, potentially the greatest number of environmental impacts, and potentially high construction and operation/maintenance costs.
- Alternate 9 (Roadway Shift): potential displacements, complex maintenance of traffic and potentially high construction and operation/maintenance costs.
- Alternate 10 (Tunnel): engineering constraints, high impact to economic development, and potentially high construction and operation/maintenance costs.
- Alternate 11 (Stacked Deck): lack of safety improvements, potentially high impacts due to construction activities, additional resource impacts if US 301 is realigned, and operating/maintenance costs.

- Alternate 12 (Three-lane bridge with movable barrier): does not provide a roadway section compatible with the approach roadways, potentially high operation costs, and potentially high construction impacts due to maintaining traffic on the bridge.
- Alternate 13 (TSM/TDM): does not meet the project's purpose and need as a standalone alternate.
- Alternate 14 (Transit): does not meet the project's purpose and need as a standalone alternate.

The remaining alternates (Alternates 1 – 7) were carried forward as the Alternates Retained for Detailed Study (ARDS). While not adequate as a standalone alternate, appropriate TSM/TDM strategies (Alternate 13) may be included with any of the ARDS.

An additional alternate was considered after the Public Workshops and Alternates Retained for Detailed Study evaluation. Alternate 15 consists of replacing the existing Nice Bridge with a new four-lane structure on existing alignment. This new bridge would meet current design standards and would consist of an 83-foot travel width (four 12-foot travel lanes, two in each direction, a 12-foot outside shoulder in each direction, a four-foot inside offset in both directions to a three-foot median barrier). The design would be compatible with the US 301 approach roadways. With retaining walls, this alternate could be constructed within existing Authority and VDOT right-of-way, and therefore would not impact Dahlgren Wayside Park or Barnesfield Park.

Although Alternate 15 would meet the purpose and need for the project and avoid impacts to the parks, it has been dropped from further consideration for the following reasons. Alternate 15 would require the existing bridge to be closed, demolished and a new bridge reconstructed. This would result in the closure of US 301 over the Potomac River for a period of several years. Closure of US 301 is not reasonable because: this roadway is an important transportation element as indicated by its inclusion on both the National Highway System and the Strategic Highway Network; the US Navy relies on US 301 for material transport; US 301 is a designated emergency evacuation route from southern Maryland and the Washington D.C. area to points south in the event of a natural disaster or Homeland Security incident; it is used for local and regional traffic; and closure of the roadway could result in impacts to the local and regional economy in both Charles County, Maryland and King George County, Virginia.

The existing intersection of US 301 and Roseland Road is a full movement intersection approximately 500 feet west of the Nice Bridge. In response to citizen concerns regarding safe access to US 301, the Authority evaluated the closure of this intersection and the relocation of Roseland Road, which would connect with Barnesfield Road. Barnesfield Road has an existing full movement intersection with US 301 approximately 2,500 feet west of the Nice Bridge. The relocation of Roseland Road would involve the construction of a new roadway through Barnesfield Park, resulting in impacts to parkland, streams, wetlands, and forests. This would require upgrading Barnesfield Road to VDOT standards and relocating the park entrance gate.

As part of the evaluation, it was determined the existing Roseland Road and US 301 intersection will operate satisfactorily under future build conditions. It was also determined the 500-foot

distance along US 301, between Roseland Road and the existing or future bridge, is insufficient for an appropriate acceleration lane for motorists turning left from Roseland Road to northbound US 301. However, motorists will have the option to turn right from Roseland Road, weave across southbound US 301 and execute a U-turn at the US 301 median break at Barnesfield Road to proceed northbound on US 301. The operational analysis indicates this movement can be satisfactorily conducted in the future build conditions.

Recent crash history does not support the need for relocating Roseland Road. Additionally, the sight distance at Roseland Road along US 301 is adequate per AASHTO standards so there is not a need for improving the sight distance at this intersection. For these reasons, the Authority, in coordination with FHWA-DelMar Division, King George County and VDOT, decided not to relocate Roseland Road and to provide all turn movements (except lefts from Roseland Road) at US 301 in each of the build alternates.

## C. ALTERNATES RETAINED FOR DETAILED STUDY

The Alternates Retained for Detailed Study (ARDS) are:

- Alternate 1 (No-Build)- considers what conditions will be like in the year 2030 if a build alternate is not selected and includes extensive rehabilitation of the existing bridge.
- Alternate 2 (New Two-Lane Bridge to the South, Rehabilitate Existing Bridge)
- Alternate 3 (New Two-Lane Bridge to the South, Replace Existing Bridge)
- Alternate 4 (New Two-Lane Bridge to the North, Rehabilitate Existing Bridge)
- Alternate 5 (New Two-Lane Bridge to the North, Replace Existing Bridge)
- Alternate 6 (New Four-Lane Bridge to the South, Take Existing Bridge Out of Service)
- Alternate 7 (New Four-Lane Bridge to the North, Take Existing Bridge Out of Service)

Each of the retained build alternates provide reasonable tie-in points with the existing and planned highway network, capacity for 2030 demand, the ability to maintain two-way traffic flow, improved safety on approaches and bridge, and the ability to comply with navigational channel guidelines. Each alternate also includes the replacement of the existing tollbooths with Open Road Tolling (ORT) provisions. (ORT permits the electronic collection of tolls without a reduction of vehicle speed.) The type of new bridge, fixed or movable (i.e., draw span, swing span, etc.) is independent of size or location. Alternates that involve installation of any new bridge crossing the Potomac require an alignment shift of the US 301 approach roadways to connect to the new structure. In addition, the profile grade of any new or replacement bridge crossing of the Potomac in the vicinity of the existing crossing will be less than the existing bridge grade while maintaining the existing vertical and horizontal clearance of the navigational channel. This results in a shift in the location of a new bridge abutment in Maryland approximately 900 feet east of the existing bridge abutment. This shift does not affect the location of the bridge abutment on the Virginia shore.

Each of the build alternates includes a barrier separated bicycle/pedestrian path (bike/ped path) option. This option was incorporated per Senate Bill 492 and requests from members of the public. Senate Bill 492 was passed by the State of Maryland legislature in May 2008. The bill,

entitled "Vehicular Crossing - Use by Pedestrians and Bicycles," allows for bicycle and pedestrian facilities on the Authority's bridges, tunnels, and roadways if ultimately authorized by the Authority Chairman. ***Figure II-1*** compares the alternates and each alternates is described in greater detail below.

**Alternate 1 (No-Build)** – This alternate considers what conditions would be like in the year 2030 if a build alternate is not selected. This alternate includes other programmed improvements as indentified in the Consolidated Transportation Plan (CTP), as well as the rehabilitation to the existing bridge in the 2015-2020 year time frame. These activities would include full deck replacement, complete cleaning and painting of the bridge steel, and any repairs that may be needed to the super or substructure. The No-Build Alternate is retained for detailed study as a baseline for comparison with the build alternates; it does not otherwise meet the project's purpose and need. A bicycle/pedestrian path option was not incorporated into the No-Build Alternate as the features of the existing Nice Bridge, including the lack of shoulders, would not be able to accommodate a bicycle/pedestrian path.

**Alternate 2 (New Two-Lane Bridge to South, Rehabilitate Existing Bridge)** – This alternate is retained as it meets the project's purpose and need. Although safety improvements via widening the existing bridge would not be possible, the new two-lane bridge (to the south of the existing bridge) would improve safety, with two 12-foot travel lanes, a 12-foot outside shoulder and a 4-foot offset to the inside parapet.

The bicycle/pedestrian path option for this alternate includes a barrier separated two-way, ten-foot path on the new bridge. A designated bicycle/pedestrian path on each shore guides bicycles and pedestrians between the two-way path on the new bridge and the opposite outside shoulder along the US 301 approach roadway.

**Alternate 3 (New Two-Lane Bridge to South, Replace Existing Bridge)** – This alternate is retained as it meets the project's purpose and need. This alternate provides increased capacity and safety on both the north and southbound crossings of the Potomac River as opposed to only one as in Alternate 2.

The bicycle/pedestrian path option for this alternate includes a barrier separated ten-foot bicycle/pedestrian path on each of the new bridges that connects to the respective outside shoulder along the US 301 approach roadways.

**Alternate 4 (New Two-Lane Bridge to North, Rehabilitate Existing Bridge)** – This alternate is retained as it partially meets the project's purpose and need. Although safety improvements via widening the existing bridge would not be possible, the new two-lane bridge (to the north of the existing bridge) would improve safety, with two 12-foot travel lanes, a 12-foot outside shoulder and a 4-foot offset to the inside parapet.

The bicycle/pedestrian path option for this alternate includes a barrier separated two-way ten-foot bikeway on the new bridge that connects to the outside shoulder along the adjacent US 301 approach roadway. A designated bicycle/pedestrian path on each shore guides bicycles and

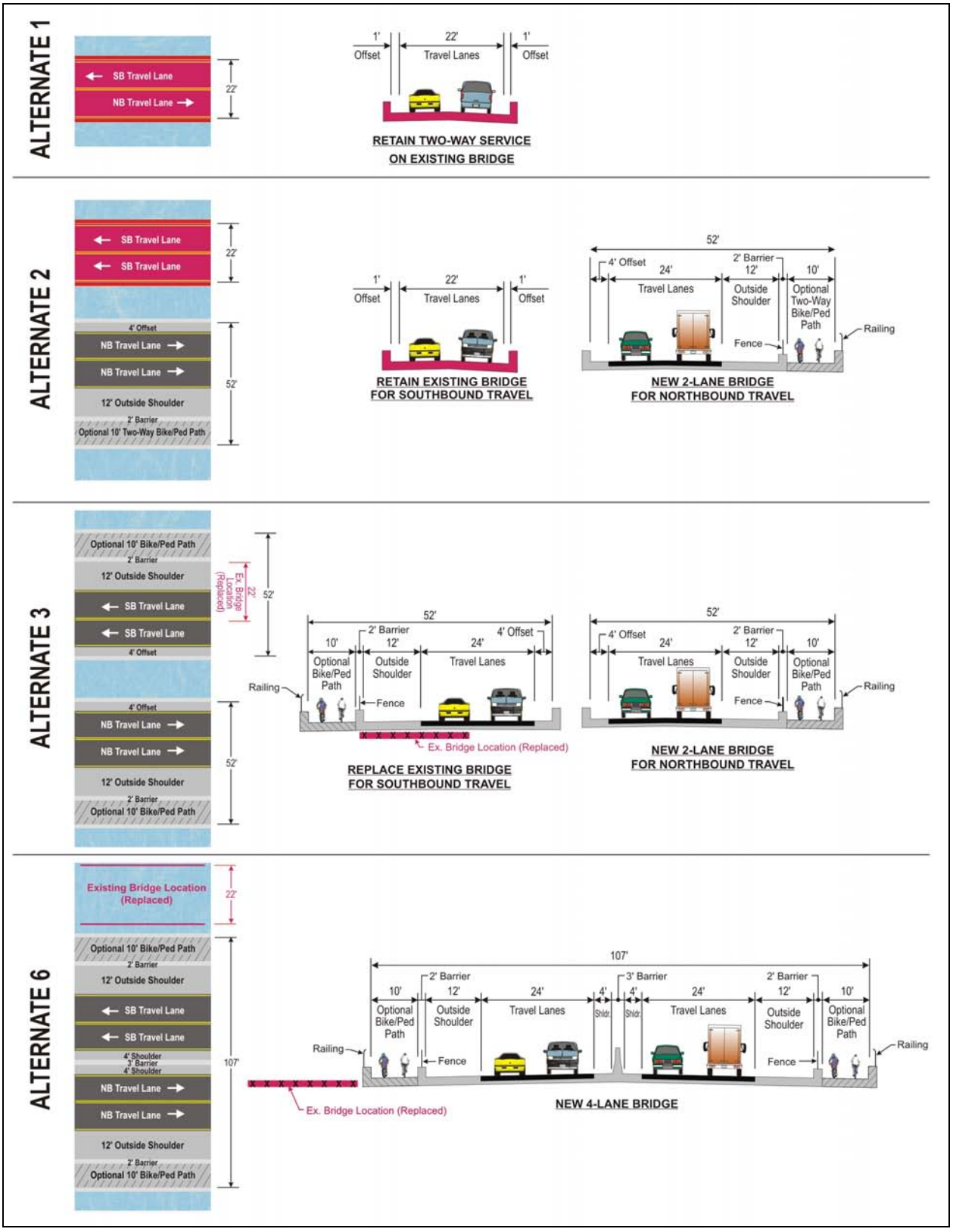



***Figure II-1**: Alternates Retained Comparison*

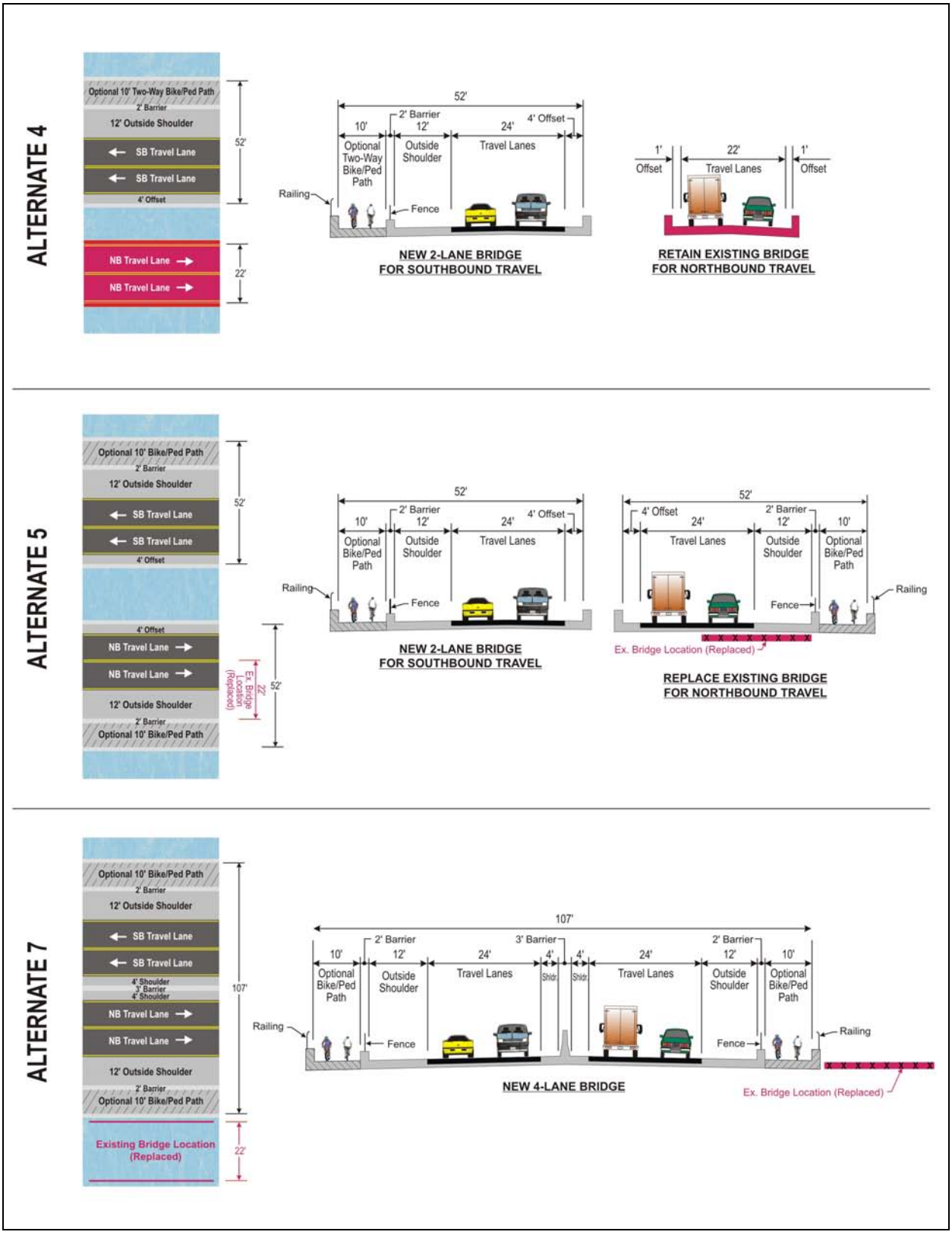



***Figure II-1**: Alternates Retained Comparison (continued)*

pedestrians between the two-way path on the new bridge and the opposite outside shoulder along the US 301 approach roadway.

**Alternate 5 (New Two-Lane Bridge to the North, Replace Existing Bridge)** – This alternate is retained as it meets the project's purpose and need. This alternate provides increased safety on both north and southbound crossings of the Potomac River.

The bicycle/pedestrian path option for this alternate includes a barrier separated ten-foot bicycle/pedestrian path on each of the new bridges that connects to the respective outside shoulder along the US 301 approach roadways.

**Alternate 6 (New Four-Lane Bridge to the South, Take Existing Bridge Out of Service)** – This alternate is retained as it meets the project's purpose and need. Alternate 6 consists of constructing a new four-lane parallel bridge for all traffic to the south of the existing bridge. This new bridge would consist of an 83-foot travel width (four 12-foot travel lanes - two in each direction, a 12-foot outside shoulder in both directions, a 4-foot offset to the inside parapet in both directions to a 3-foot median barrier). The existing bridge would be taken out of service.

The bicycle/pedestrian path option for this alternate includes a barrier separated ten-foot bicycle/pedestrian path on each of the new bridges that connects to the respective outside shoulder along the US 301 approach roadways.

**Alternate 7 (New Four-Lane Bridge to the North, Take Existing Bridge Out of Service)** – Alternate 7 is retained as it meets the project's purpose and need. Alternate 7 consists of constructing a new four-lane parallel bridge for all traffic to the north of the existing bridge. This new bridge would consist of an 83-foot travel width (four 12-foot travel lanes - two in each direction, a 12-foot outside shoulder in both directions, a 4-foot offset to the inside parapet in both directions to a 3-foot median barrier). The existing bridge would be taken out of service.

The bicycle/pedestrian path option for this alternate includes a barrier separated ten-foot bicycle/pedestrian path on each of the new bridges that connects to the respective outside shoulder along the US 301 approach roadways.

# III. EXISTING ENVIRONMENT AND ENVIRONMENTAL IMPACTS

This chapter provides information about the existing socioeconomic, historic and environmental resources and the potential effects that would be expected to occur with the implementation of one of the Alternates Retained for Detailed Study (ARDS). The No-Build Alternate is retained as it provides a baseline by which all environmental impacts of the ARDS are compared.

Environmental impacts with or without the bicycle/pedestrian (bike/ped) path option are similar; however, there is an additional cost for construction as well as for maintenance of the bike/ped path (please refer to ***Table S-1*** for additional information regarding cost estimates for all alternates, with and without bike/ped path options). The resources with greater differences in impacts between the alternates with and without bike/ped path options have been noted. In addition to the bike/ped path options, open road tolling is an element of each of the alternates (including the No-Build).

## A. SOCIOECONOMIC RESOURCES AND LAND USE

A socioeconomic inventory was conducted as part of the Nice Bridge Improvement Project. This inventory included the identification of social, economic, and land use resources located within the study area, specifically demographics; communities; community facilities; environmental justice; visual quality; employment; and land use. For more detailed information please refer to the *Nice Bridge Improvement Project Socioeconomic and Land Use Technical Report* located on the attached CD.

### 1. Demographics

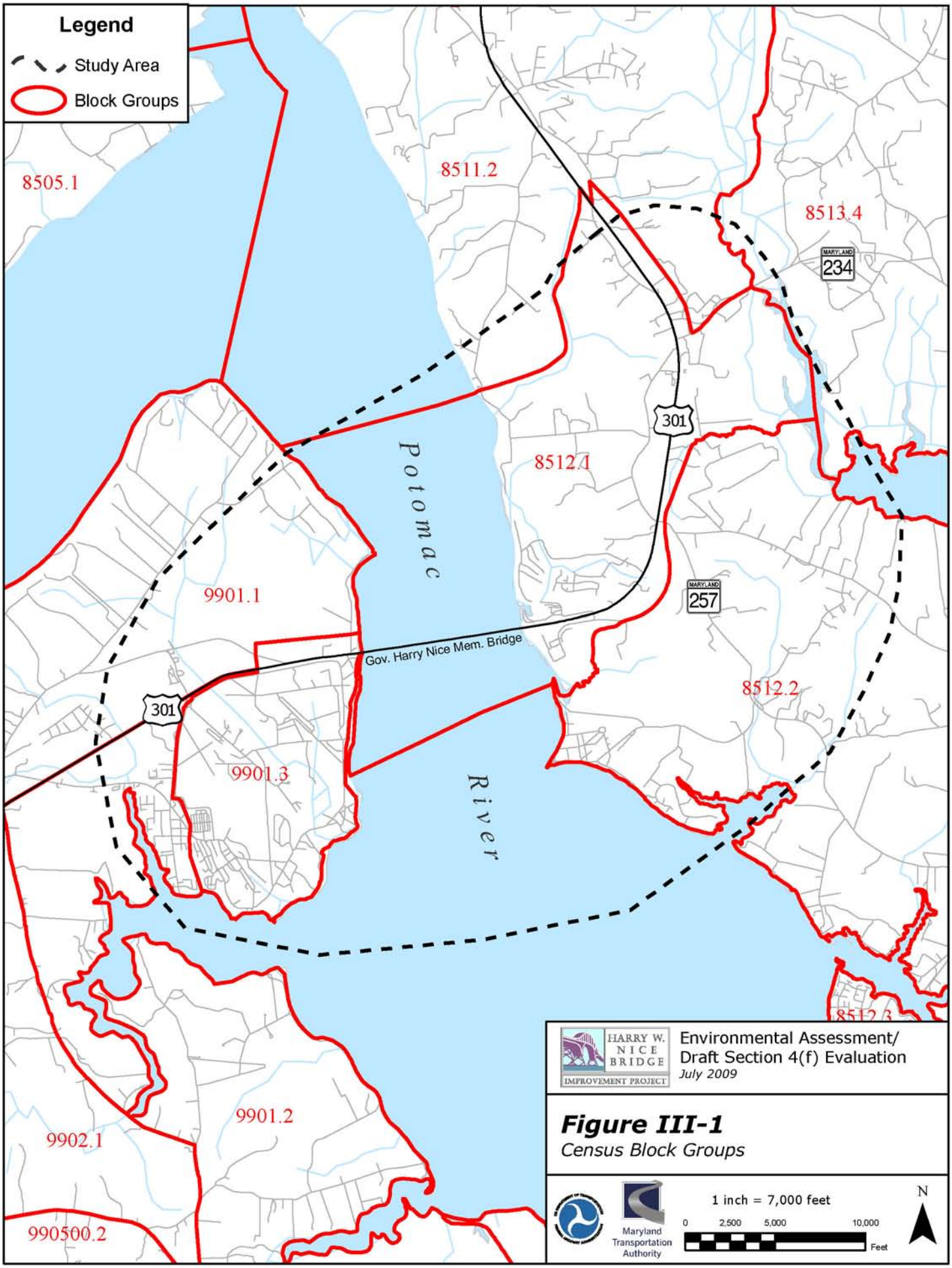
Data regarding population, race, economics, and other demographics, which are available through the United States Census Bureau's *Census 2000,* were compiled and evaluated. Data were collected at the block group level. The census tracts and block groups that encompass the study area are listed in ***Table III-1*** and depicted on ***Figure III-1***.

***Table III-1:*** *Census Tracts and Block Groups within the Study Area*

| Census Tracts | Block Groups |
|---|---|
| *Charles County, Maryland* | |
| 8511 | 2 |
| 8512 | 1, 2 |
| 8513 | 4 |
| *King George County, Virginia* | |
| 9901 | 1, 2, 3 |

*Source: US Census Bureau, 2000*

***Table III-2*** shows the population statistics for Charles County, King George County, and the study area. According to the US Census, the predominant race within Charles County, King George County, and the study area is Caucasian (69-79 percent). Of the minorities, the largest portion of the population is African American (26 percent, 19 percent, and 17 percent respectively). The percentage of the population over the age of 65 is 7.8 percent in Charles


Legend
Study Area
Block Groups
8505.1
8511.2
8513.4
8512.1
8512.2
9901.1
9901.3
9901.2
9902.1
990500.2
Potomac
River
Gov. Harry Nice Mem. Bridge
301
301
MARYLAND 234
MARYLAND 257
HARRY W. NICE BRIDGE
IMPROVEMENT PROJECT
Environmental Assessment/
Draft Section 4(f) Evaluation
July 2009
Figure III-1
Census Block Groups
Maryland Transportation Authority
1 inch = 7,000 feet
0 2,500 5,000 10,000
Feet
N

County, 9.6 percent in King George County, and 9.0 percent within the study area. The percentage of the population over the age of five with one or more disabilities reported is 12 percent in Charles County, 13 percent in King George County, and 14 percent within the study area.

***Table III-2:*** *Population Statistics for Charles County, King George County, and the Study Area*

| | Charles County, Maryland | | King George County, Virginia | | Study Area | |
|---|---|---|---|---|---|---|
| Total Population | 120,546 | | 16,448 | | 11,038 | |
| Population over the age of 65 | 7.8% | | 9.6% | | 9.0% | |
| Population with disabilities (over 5 years) | 12% | | 13% | | 14% | |
| **Racial Distribution** | **Total** | **Percent** | **Total** | **Percent** | **Total** | **Percent** |
| Caucasian | 82,587 | 69% | 13,055 | 79% | 8,717 | 79% |
| African-American | 31,411 | 26% | 3,148 | 19% | 1,917 | 17% |
| American Indian/Alaskan Native | 907 | 1% | 80 | 1% | 71 | <1% |
| Asian/Pacific Islander | 2,262 | 2% | 181 | 1% | 102 | <1% |
| Other | 869 | 1% | 76 | 1% | 79 | <1% |
| Two or More Races | 2,510 | 2% | 263 | 2% | 152 | 1% |
| Total Minorities | 37,959 | 31% | 3,748 | 23% | 2,321 | 21% |
| Population of Hispanic Origin[1] | 2,722 | 2% | 301 | 2% | 215 | 2% |

*Source: US Census Bureau, 2000*

[1] *Population of Hispanic origin can be of any race.*

## 2. Communities and Community Facilities

Summary: No residential displacements are anticipated under any of the alternates. The community facilities adjacent to the Nice Bridge and US 301 include: Barnesfield Park, Dahlgren Wayside Park, the Potomac Gateway Welcome Center, Aqua-Land Marina and Campground, and Naval Support Facility (NSF) Dahlgren. These facilities may be impacted by a build alternate.

### a. Existing Conditions

***Communities***

Communities and neighborhoods exist in a variety of different scales in and surrounding the Nice Bridge. These include the larger unincorporated areas such as Newburg, Maryland and Dahlgren, Virginia as well as individual residential developments of varying size. The residential communities are generally composed of single family homes, although apartment and townhome developments are present.

The Charles County portion of the study area includes the communities of Newburg and Morgantown. The Newburg community is comprised of numerous neighborhoods and residential areas, including: Aqua-Land, Cliffton on the Potomac, Ravens Crest, Popes Creek, and Allens Fresh. The Morgantown community is located southeast of US 301, and is comprised of the Wayside, Morgantown, and Waverly Point neighborhoods.

The Virginia portion of the study area includes the Dahlgren community. This community includes small shops and community services, and numerous residential neighborhoods,

including: Park Bridge on the Potomac (off Roseland Road), King George on the Potomac, Westbury, Monmouth Woods, Monmouth Village, Chatham Village, Mallards Landing, and Dahlgren Harbor Apartments.

***Community Facilities***

Community facilities and services located within or serving the study area include: public parks and recreational facilities, educational facilities, religious institutions, emergency services, health care facilities, military facilities, libraries, community recreation centers, government buildings, and public transportation. ***Figures III-2A and 2B*** depict the locations of the community facilities and services within and near the study area. Community facilities located adjacent to the Nice Bridge include:

- Barnesfield Park;
- Dahlgren Wayside Park;
- the Potomac Gateway Welcome Center;
- Aqua-Land Marina and Campground; and
- Naval Support Facility (NSF) Dahlgren.

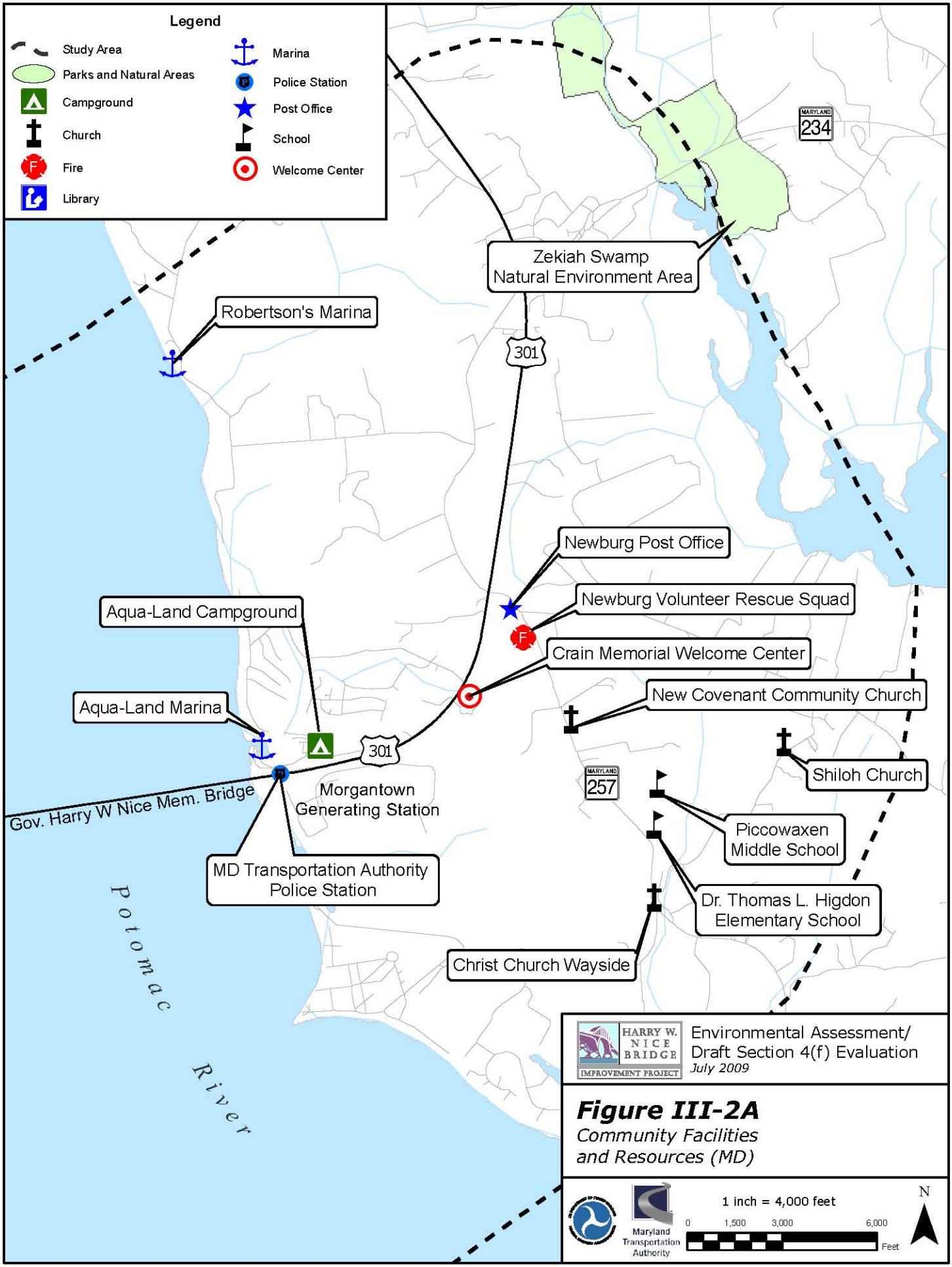
The land located north of US 301 adjacent to the Potomac River in Virginia provides public park and recreational opportunities at three facilities: Dahlgren Wayside Park, Barnesfield Park and the Potomac Gateway Center. These facilities are owned by King George County and are operated by the King George County Department of Parks and Recreation.

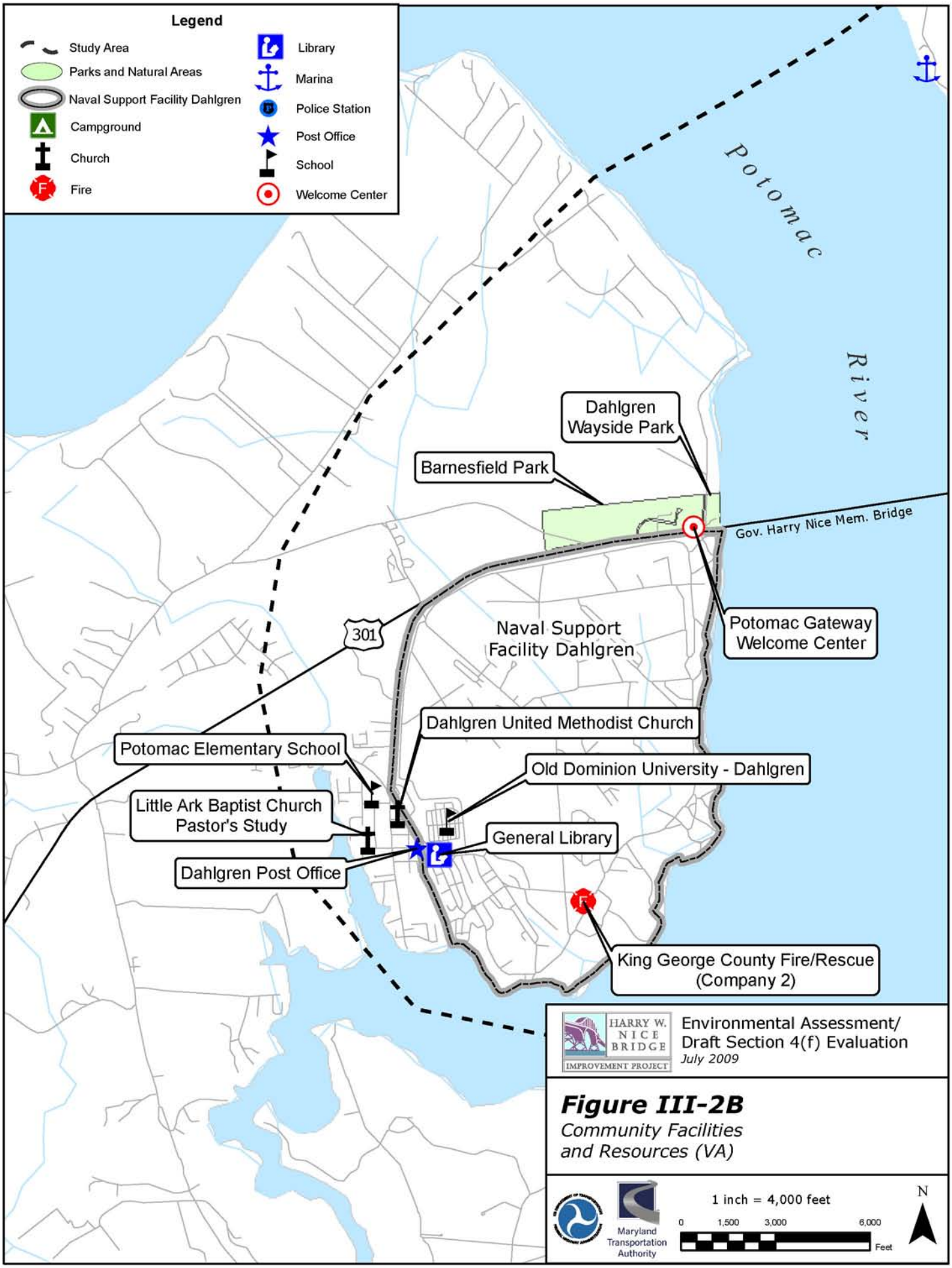
Aqua-Land Marina is a full-service marina servicing large power boats and sailing vessels. The privately-owned marina offers beach access, a boat ramp, rental boats, and a campground for recreational vehicles.

NSF Dahlgren is located in King George County, south of US 301. It was established in 1918 to proof and test naval weaponry for fleet use. The role of the NSF Dahlgren has expanded to include research, development, and test and evaluation operations critical to the defense of sailors, ships, facilities, and infrastructure. It now has a land area of 4,300 acres that includes several miles of Potomac River shoreline and a 20-mile downriver range for projectile testing.

The Morgantown Generating Station is located on 427 acres south of US 301 on the Potomac River in Charles County. The station converts coal and oil into electricity and serves approximately 1.5 million homes.

The Nice Bridge Administration Building is located adjacent to the toll plaza and houses the administrative offices and police operations. The Nice Bridge Maintenance Building is located east of the toll plaza. This building served as the original administration building for the Potomac River Bridge, and currently serves as the center for Nice Bridge maintenance operations and personnel. The Maintenance Building (also referred to as the historic Potomac River Bridge Administration Building) is eligible for the National Register as a contributing resource to the historic Nice Bridge. The maintenance building is further discussed in ***Chapter V***.


Legend
Study Area
Parks and Natural Areas
Campground
Church
Fire
Library
Marina
Police Station
Post Office
School
Welcome Center
Zekiah Swamp
Natural Environment Area
MARYLAND
234
Robertson's Marina
301
Newburg Post Office
Newburg Volunteer Rescue Squad
Aqua-Land Campground
Crain Memorial Welcome Center
Aqua-Land Marina
New Covenant Community Church
301
Shiloh Church
MARYLAND
257
Morgantown
Generating Station
Gov. Harry W Nice Mem. Bridge
Piccowaxen
Middle School
MD Transportation Authority
Police Station
Dr. Thomas L. Higdon
Elementary School
Christ Church Wayside
Potomac
River
HARRY W. NICE BRIDGE
IMPROVEMENT PROJECT
Environmental Assessment/
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July 2009
Figure III-2A
Community Facilities
and Resources (MD)
Maryland
Transportation
Authority
1 inch = 4,000 feet
0
1,500
3,000
6,000
Feet
N


Legend
Study Area
Parks and Natural Areas
Naval Support Facility Dahlgren
Campground
Church
Fire
Library
Marina
Police Station
Post Office
School
Welcome Center
Potomac River
Dahlgren Wayside Park
Barnesfield Park
Gov. Harry Nice Mem. Bridge
Potomac Gateway Welcome Center
301
Naval Support Facility Dahlgren
Dahlgren United Methodist Church
Potomac Elementary School
Old Dominion University - Dahlgren
Little Ark Baptist Church Pastor's Study
General Library
Dahlgren Post Office
King George County Fire/Rescue (Company 2)
HARRY W. NICE BRIDGE IMPROVEMENT PROJECT
Environmental Assessment/ Draft Section 4(f) Evaluation
July 2009
Figure III-2B
Community Facilities and Resources (VA)
Maryland Transportation Authority
1 inch = 4,000 feet
0 1,500 3,000 6,000
Feet
N

### b. Potential Effects

***Communities***

***Table III-3*** summarizes the business and residential property impacts that would result from each of the proposed alternates. These impacts would result from the proposed roadway widening and realignment.

***Table III-3:*** *Property Acquisitions by Alternate, Without (and With) Bike/Ped Path Options*

| Resource | Unit | Alt. 1- No Build | Alt. 2 | Alt. 3 | Alt. 4 | Alt. 5 | Alt. 6 | Alt. 7 |
|---|---|---|---|---|---|---|---|---|
| Business Displacements | no. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Institutional Displacements[1] | no. | 0 | 1 | 1 | 2 | 2 | 1 | 2 |
| Residential Displacements | no. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Business Right-of-Way[2] | acres | 0 | 0 | 0 | 7.0 | 7.0 | 0 | 7.6(8.5) |
| Federal Right-of-Way[3] | acres | 0 | 3.1(3.3) | 3.1 | 0 | 0 | 3.7 | 0 |
| Residential Right-of-Way | acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Low-Income/Minority Populations | no. | 0 | 0 | 0 | 1 | 1 | 0 | 1 |

[1] Institutional displacements include the Naval Support Facility Dahlgren, Nice Bridge Campus Facilities and Potomac Gateway Welcome Center.
[2] Business right-of-way (ROW) impacts consist of impacts to the Aqua-Land Marina and Campground.
[3] Federal ROW impacts are to the Naval Support Facility Dahlgren.

No residential displacements are anticipated under any of the alternates. However, the No-Build Alternate would ultimately affect the mobility in the study area by failing to address traffic capacity concerns, and the resulting traffic delays would make travel within the study area increasingly difficult and time consuming. In addition, quality of life for study area residents, and health and safety concerns related to emergency response times (police, fire, and emergency services) would be affected. The long term effects of this alternate may be more severe, as it is expected that the Nice Bridge will require major rehabilitation in the 2015–2020 time frame, which could result in long term bridge closures and delays.

Institutional displacements include the NSF Dahlgren, Nice Bridge Campus Facilities and the Potomac Gateway Welcome Center. Alternates 2, 3, and 6 would impact NSF Dahlgren property. Alternates 4, 5, and 7 would impact the Authority-owned Nice Bridge Campus Facilities and the Potomac Gateway Welcome Center in Virginia.

The build alternates with a northern bridge alignment (Alternates 4, 5, and 7) would impact the Aqua-Land Maria and Campground, as linear strip takes of right-of-way (ROW) would be required from this property (business ROW). Therefore, the long-term and short-term residents of the campground would have the southbound lanes of US 301 closer to their homes.

Private property owners affected by displacement or ROW acquisition will receive relocation assistance in accordance with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended* (Uniform Act) (***Appendix C***). All property owners with ROW

acquisition or easements obtained would be compensated according to the Uniform Act and paid fair market value for the affected property. Sufficient properties are available on the market to accommodate any persons displaced by this project.

For more detailed information regarding community impacts, please refer to the *Nice Bridge Improvement Project Socioeconomic and Land Use Technical Report* located on the attached CD.

***Community Facilities***

Effects on local community facilities are measured by direct impacts (acquisition of property) and other impacts (changes in proximity, usage or access). Temporary impacts to traffic operations are possible to all community facilities and services as a result of construction activities associated with the various build alternates. However, these impacts would be temporary and mitigated by a maintenance of traffic plan developed prior to construction. Because the build alternates propose a new bridge that is offset from the existing bridge, it is expected that the existing bridge could remain open throughout the majority of construction activities, thus minimizing impacts to community resources.

In general, Alternate 1 (No-Build) would result in the greatest impact to community facilities by requiring extended periods of bridge closure for expected rehabilitation activities in the 2015 to 2020 timeframe. Alternate 1 would negatively affect emergency response times and the usage of community resources through delays caused by vehicle accidents, wide load transport, or other traffic-related delays.

The build alternates would improve the ease of travel between Maryland and Virginia for travelers in the area and emergency vehicles responding to calls across state lines. However, temporary detours or delays could affect emergency response times while a new bridge is under construction. Coordination efforts with state, county, and local emergency services are ongoing and will continue throughout the Nice Bridge Improvement Project. To date, the Authority has received responses from the Charles County Department of Emergency Services, Charles County Sheriff's Office, Maryland State Police, King George County Department of Emergency Services, and Virginia State Police, who all offer general support to the build alternates (***Appendix B***).

Alternate 1 (No-Build) would not impact Barnesfield Park, Dahlgren Wayside Park or the Potomac Welcome Center. The alignments south of the existing Nice Bridge (Alternates 2, 3, and 6) would not result in impacts to the park facilities. Alternate 7 would result in the most impacts (approximately 6.5 acres). For more information on impacts to the parks and recreational facilities in the project area please refer to ***Chapter V, Draft Section 4(f) Evaluation***.

The build alternates with a northern bridge alignment (Alternates 4, 5, and 7) would impact the Aqua-Land Marina and Campground property but not its facilities.

Impacts to NSF Dahlgren property are not anticipated under Alternates 1, 4, 5, and 7. Alternates 2, 3 and 6 which propose a new bridge south of the existing Nice Bridge, would impact the NSF

Dahlgren. Approximately 3.1 acres of ROW would be required from the NSF Dahlgren under Alternates 2 and 3. Alternate 2 with the bicycle/pedestrian path option would require 3.3 acres from NSF Dahlgren. Alternate 6 would require 3.7 acres of ROW from the NSF Dahlgren, as the four-lane bridge alternate includes the largest footprint for construction. The proposed ROW requirements would impact the fenced security clear zone established around NSF Dahlgren Building 1480. According to the April 3, 2009 letter from the Department of Navy, Naval Support Activity South Potomac (***Appendix B***), "Any relocation of the existing installation perimeter fence line south of its current position will significantly reduce the safe standoff distance for nine major operational, test and administrative facilities and approximately 1,300 employees who work in this area of the installation. Special facilities and equipment critical to the Navy's mission may not be encroached upon and are not able to be replicated or relocated at NSF Dahlgren." Alternates 2, 3, and 6 would also place construction equipment and workers closer to the NSF Dahlgren fenceline and property, creating substantial security concerns.

There would be no effect to the Morgantown Generating Plant from any of the alternates.

Impacts are anticipated to the Nice Bridge Administration Building and the Maintenance Building owned by the Authority. Alternates 4, 6, and 7 would displace both buildings; however Alternates 2, 3 and 6 would require minor ROW from the frontage of both buildings.

***Section 6(f)***

In 1985, the King George County Department of Parks and Recreation (DPR) received $240,000 from the federal Land and Water Conservation Fund (LWCF) to improve ballfields, utilities, concessions, restrooms, playgrounds, parking, landscaping, and other support facilities at Barnesfield Park. As a result, Barnesfield Park is protected under Section 6(f) of the LWCF Act (16 USC 460). Coordination with DPR, the Virginia Department of Conservation and Recreation (VA DCR), and the National Park Service (NPS) confirmed Barnesfield Park's Section 6(f) protection status (please refer to ***Appendix H***).

The implementing regulations of Section 6(f) state that "once an area has been funded with LWCF assistance, it is continually maintained in public recreation use unless the NPS approves substitution property of reasonably equivalent usefulness and location and of at least equal fair market value" (36 CFR 59.3). There are several prerequisites for conversion of Section 6(f) property to other uses, including:

- All practical alternatives to the proposed conversion have been evaluated;
- The fair market value of the property to be converted has been established and the property proposed for substitution is of at least equal fair market value;
- The property proposed for replacement is of reasonably equivalent usefulness and location as that being converted;
- The property proposed for substitution meets the eligibility requirements for LWCF assisted acquisition; and
- In the case of assisted sites which are partially rather than wholly converted, the impact of the converted portion on the remainder shall be considered.

Alternates 4, 5, and 7 would result in conversion of land in Barnesfield Park from recreational to transportation use. Depending on the alternate, the impacts would range between 0.4 acre and 2.1 acres. The impacts would be in a wooded area of the park and would not affect the ballfields, playground, concessions, or other park facilities.

The alternates would have impacts that are less than five acres or 10 percent of the total park area. Therefore, per the *LWCF State Assistance Program Manual* (NPS, 2008), they may qualify as "small conversions" if the proposed replacement property is contiguous to Barnesfield Park. A small conversion would involve a simplified conversion request document. The appropriate level of conversion request would be determined after the most appropriate replacement property has been identified.

The Authority will continue to coordinate with DPR, VA DCR and NPS regarding the potential conversion of part of Barnesfield Park. If appropriate, the Authority and DPR would submit a request for land conversion document to NPS through VA DCR. Any mitigation measures must be found to be satisfactory to VA DCR and NPS before the land conversion would be approved.

### 3. Environmental Justice

Summary: One potential environmental justice community was identified, adjacent to the Nice Bridge, the Aqua-Land Campground, with temporary and permanent low-income residents. Alternates 4, 5, and 7 would result in the southbound lanes of US 301 being closer to the campground. These alternates would not result in any displacements or greater noise impacts. Therefore, none of the alternates are expected to result in a disproportionately high and adverse effects to environmental justice populations.

Executive Order (EO) 12898, "Federal Actions to Address the Environmental Justice in Minority and Low-Income Populations," was signed on February 11, 1994. The EO requires the assessment of disproportionately high and adverse human health and environmental effects on minority and low-income populations resulting from proposed federal actions. The EO reaffirms the provisions of Title VI of the Civil Rights Act of 1964 and related statutes, emphasizing the incorporation of those provisions with existing planning and environmental processes. EO 12898 adds low-income households to the list of populations that should be investigated to ensure that they are not excluded from the benefits of the project or subjected to discrimination caused by federal programs, policies, and activities. Executive Order 12898 defines minority persons as:

- African American- a person having origins in any of the black racial groups of Africa;
- Hispanic- a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture origin, regardless of race;
- Asian American- a person having origins in any of the original peoples of the Far East, South East Asia, the Indian subcontinent, or the Pacific Islands; and
- American Indian and Alaskan Native- a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition.

"Low-income" applies to individuals whose median household income is at or below the income level set by the Department of Health and Human Services (DHHS) poverty guidelines. The poverty guidelines issued by the DHHS are abstracted from the original poverty thresholds updated each year by the US Census Bureau. In 1999, the year from which the most recent US Census income data are based, the poverty level was $8,240 for the first person and $2,820 for each additional person.

### a. Minority Populations

As identified through the US Census data in ***Table III-2***, approximately 21 percent of the study area population is part of a minority group. This is below the average for Charles County (31 percent) and King George County (23 percent). Census Tract 8512, Block Group 2 (Maryland) has the highest minority population at 32 percent. This block group is located south/southeast of US 301. Census Tract 8513, Block Group 4 has the lowest minority population at 9 percent, located at the northeastern edge of the study area in Maryland.

### b. Low-income Populations

The median household income for the study area ($49,849) is similar to that of King George County ($49,882), and less than that of Charles County ($62,199) (***Table III-4***). Approximately 6.4 percent of the study area reported income in 1999 below the poverty level. The study area average of population in poverty is greater than that of Charles County (5.4 percent) and King George County (5.8 percent).

***Table III-4:*** *Household Income and Poverty Data*

| | | | |
|---|---|---|---|
| Charles County, Maryland | $62,199 | 6,518 | 5.4% |
| King George County, Virginia | $49,882 | 917 | 5.8% |
| Study Area (average) | $49,849 | 707 | 6.4% |
| Census Tract 8511, BG 2 | $50,625 | 142 | 14.9% |
| Census Tract 8512, BG 1 | $47,417 | 8 | 0.8% |
| Census Tract 8512, BG 2 | $39,219 | 66 | 5.4% |
| Census Tract 8513, BG 3 | $72,742 | 238 | 6.6% |
| Census Tract 9901, BG 1 | $49,961 | 97 | 5.8% |
| Census Tract 9901, BG 2 | $48,594 | 110 | 7.1% |
| Census Tract 9901, BG 3 | $40,385 | 46 | 4.6% |

*Source: US Census Bureau, 2000*

The block group with the highest percentage of persons living below the poverty level is Census Tract 8511, Block Group 2 (Maryland) (***Figure III-1***), where 14.9 percent of the population lives below the poverty level. This block group is located along the northern edge of the study area. Census Tract 8512, Block Group 1, located immediately north of US 301 in Maryland, has the lowest population in poverty at 0.8 percent.

### c. Additional Sources

In addition to Census data, further research was conducted through phone interviews with county planners in Charles and King George Counties. County planners were contacted regarding the locations of populations of minority or low-income persons that may exist within the delineated census blocks. In Charles County, one historically African-American and low-income community was identified on the eastern edge of the study area (Census Tract 8512, Block Group 2). In King George County, a cluster of homes were identified as potential low-income and/or minority households within the vicinity of the NSF Dahlgren, south of US 301 (Census Tract 9901, Block Group 2).

Although not specifically identified by Charles County planners, field reviews of the study area as well as public outreach have identified the Aqua-Land Campground as a low-income population (Census Tract 8512, Block Group 1). Many temporary or permanent residents at the campground are either unemployed or work sporadically.

For additional information regarding minority and low-income populations within the study area, please refer to the *Nice Bridge Improvement Project Socioeconomic and Land Use Technical Report* located on the attached CD.

### d. Potential Effects on Environmental Justice

Based on the information provided by US Census data, Charles and King George Counties, field reviews conducted by the Authority, and the minimal community and residential impacts anticipated with each of the ARDS, none of the proposed alternates are expected to result in a disproportionately high and adverse effect to environmental justice populations. With the exception of the Aqua-Land Campground, none of these areas are located within the proposed limits of disturbance for any of the proposed alternates. The build alternates with a northern bridge alignment (Alternates 4, 5, and 7) would impact the Aqua-Land Marina and Campground property by moving the southbound lanes of US 301 closer to residents than the existing US 301 alignment. These alternates would not result in any displacements or noise impacts. Therefore, none of the alternates are expected to result in disproportionately high and adverse effects to environmental justice populations.

### e. Title VI Statement

It is the policy of the Authority to ensure compliance with the provisions of Title VI of the Civil Rights Act of 1964 and related civil rights laws and regulations that prohibit discrimination on the grounds of race, color, sex, national origin, age, or physical or mental handicap in all the Authority program projects funded in whole or in part by the Federal Highway Administration (FHWA). The Authority will not discriminate in highway planning, highway design, highway construction, right-of-way acquisitions, or the provision of relocation advisory assistance. This policy has been incorporated in all levels of the transportation planning process to ensure that proper consideration may be given to the social, economic and environmental effects of all transportation projects. Alleged discriminatory actions should be addressed for investigation to the Equal Opportunity and Diversity Division, to the attention of Mr. Louis Jones, Chief, Equal Opportunity and Diversity Division, Maryland Transportation Authority, 2310 Broening Highway, Suite 150, Baltimore, MD 21224.

## 4. Visual Quality

Summary: The addition of a new bridge with any of the build alternates would change the visual characteristics of the surrounding area. The new bridge could alter or partially obstruct views of the existing Nice Bridge from upstream or downstream portions of the Potomac River depending on the alternate location. The aesthetic characteristics of a new bridge and grade of a new bridge including the roadway grade would likely differ from the existing Nice Bridge.

The US 301 highway is a four-lane roadway with a median of varying sizes. The study area within Charles County contains residential areas surrounded by forest, and the Morgantown Generating Power Plant immediately south of the existing Nice Bridge. Some agricultural land is present in this area, as well. The residents located along the Potomac River and on high terrain can see the Nice Bridge, while those located further from the water have an obstructed view. Within King George County, views from NSF Dahlgren, residential subdivisions, and parkland are largely blocked from view with the exception of residents located along Roseland Road.

The Nice Bridge is a metal cantilever bridge, meaning that it was constructed using horizontal supports in the middle of the bridge, rather than supports at the ends. The bridge has a vertical clearance of 135 feet over the main ship channel of the Potomac River. The main span of the channel forms the highest point in the roadway, with 3.75 percent grade approaches. The bridge is a dominant feature in the visual landscape and is visible from a distance of several miles both up and downstream. The photos below illustrate the views of the Nice Bridge from the Maryland and Virginia shorelines and residential areas upstream.



*Photo III-1:View of Nice Bridge from Aqua-Land Marina and Campground, in Charles County, Maryland, looking southwest.*



*Photo III-2: View of Nice Bridge from Roseland Road, in King George County, Virginia, looking southeast with the Morgantown Generating Station in the background.*

The bridge and approach roadway characteristics would remain the same under Alternate 1 (No-Build), while each of the build alternates would alter the visual landscape by constructing a new bridge. The proposed typical section of the new bridge is the same for Alternates 2 and 4, which would provide a new two-lane bridge while maintaining the existing bridge. Alternates 3 and 5 would also have similar typical sections, as each would include the construction of two new two-

lane bridges (one in each direction), with one span replacing the existing bridge. Alternates 6 and 7 also propose a similar typical section, each including constructing a new four-lane bridge and taking the existing bridge out of service.

The addition of a new bridge would change the visual characteristics of the surrounding community. Although specific views would vary from property to property, the new bridge could alter or partially obstruct views of the existing Nice Bridge from upstream or downstream portions of the Potomac River since the grade of a new bridge would differ from the existing Nice Bridge.

Aesthetic treatments for a new Nice Bridge would be considered during bridge design if a build alternate is selected. If one of the build alternates is selected, aesthetic treatments could be incorporated into the ultimate design of the bridge to make it more visually pleasing to adjacent homes, businesses, and roadway commuters, and more consistent with the overall visual setting of the surrounding communities.

## 5. Economic Environment

Summary: The No-Build Alternate would affect local and regional business activities because of increased congestion and longer travel times for individuals that use the Nice Bridge, as well as decreased mobility on the regional roadway network that would not support planned economic growth in the region. The proposed build alternates would benefit local and regional business activity by reducing traffic delays and improving mobility. Alternates 4, 5, and 7 could adversely affect operations at NSF Dahlgren, a major employer in the region.

The following is a discussion of the economic environment within and adjacent to the Nice Bridge study area. For more detailed information, please refer to the Nice *Bridge Improvement Project Socioeconomic and Land Use Technical Report* located on the attached CD.

### a. Employment Characteristics

***Table III-5*** shows median household, median family, and per capita income data for Charles County, King George County, and the study area. Within the study area, these characteristics are very similar to that of King George County, while lower than Charles County.

***Table III-5:*** *Income Characteristics*

| Characteristic | Charles County | King George County | Study Area[2] |
|---|---|---|---|
| Median Household Income (1999)[1] | $62,199 | $49,822 | $49,849 |
| Median Family Income (1999)[1] | $67,602 | $55,160 | $55,901 |
| Per Capita Income (1999) | $24,285 | $21,562 | $21,484 |

*Source: US Census Bureau, 2000*

[1] A household is defined by the US Census as a place (structure) where one or more persons reside on a regular basis. A family is defined as two or more persons related by birth, marriage, or legal adoption that occupy a place on a regular basis.

[2] Figures shown were determined by calculating the average of the Median Household Income or Median Family Income values for each census tract in the study area.

Based on US Census 2000 data, of the employed residents of Charles County, approximately 71 percent were employed within the State of Maryland (40.2 percent of those employed in Charles County, and 30.8 percent commuting to another Maryland county for work). Of the employed residents of King George County, approximately 88.1 percent worked within the Commonwealth of Virginia, with 54 percent working in King George County, and 34.1 percent commuting to another Virginia county for work. Approximately 84.3 percent of the residents within the study are employed in their home state of Maryland or Virginia, with 60.4 percent working within their county of residence, and 23.9 percent commuting to another county for work.

The top industries in Charles County, King George County, and the study area are presented in ***Table III-6***, along with unemployment rates.

***Table III-6:*** *Employment Characteristics*

| Characteristic | Charles County | King George County | Study Area |
|---|---|---|---|
| Primary Occupations of Residents | • Public Administration (18%)<br>• Educational, Health, and Social Services (16%)<br>• Retail Trade (12%)<br>• Professional, Scientific, Management (11%)<br>• Other (43%) | • Public Administration (21%)<br>• Professional, Scientific, Management (13%)<br>• Retail Trade (12%)<br>• Other (54%) | • Public Administration (15%)<br>• Retail Trade (13 %)<br>• Educational, Health, and Social Services (18%)<br>• Other (54%) |
| Percent of Labor Force Unemployed | 2.3% | 2.7% | 2.3% |

*Source: 2000 Census Data*

Two major employers in the area are NSF Dahlgren (over 1,300 employees) and the Morgantown Generating Plan (199 employees).

### b. Effects on Local and Regional Business Activity

Alternate 1 (No-Build) would have a negative effect on local and regional business activities as increased congestion would lead to longer travel times for individuals that use the Nice Bridge. Travel demands in this area are expected to exceed the current capacity of the bridge by 2030, which would result in longer peak travel periods due to a lack of nearby options for crossing the Potomac River. The decreased mobility on the regional roadway network would not support planned economic growth in the region, and as a result, a decrease in the rate of new business development may occur. The No-Build Alternate would also affect existing businesses as increased traffic and congestion could limit the geographic base of a particular business, and customers could look to other more convenient options. Congestion and bridge closures for maintenance operations expected under the No-Build Alternate would also make commercial transport less predictable.

All of the proposed build alternates would benefit local and regional business activity by reducing traffic delays and improving mobility throughout the region. The improved mobility would support economic growth by maintaining the ability of residents and travelers along

US 301 to support local businesses, and make the area more desirable for future business ventures. The proposed improvements would also create more predictable travel times, which would benefit commercial transport fleets and freight delivery services.

Congestion and delays caused by Alternate 1 would affect operations at NSF Dahlgren by hindering transport of material critical to the facility and travel for employees who work there. Alternates 2, 3, and 6 would encroach upon the NSF Dahlgren property. The April 3, 2009 letter from the Department of Navy, Naval Support Activity South Potomac (***Appendix B***), states these alternates would be a "substantial and direct impact on NSF Dahlgren community and facilities…and the approximately 1,300 employees who work in this area of the installation."

Alternates 4, 5, and 7 would impact the Aqua-Land Marina and Campground, located immediately north of US 301 and the Nice Bridge in Charles County, but this impact would consist of a linear ROW strip take parallel to US 301, impacting an open gravel parking area. No buildings or structures on the Aqua-Land property would be impacted by the proposed alternates.

## 6. Land Use

Summary: The build alternates would result in the conversion of institutional, commercial, forested, and parkland to transportation use. However, the overall land use in the study area would not substantially change because the project is within an existing transportation corridor.

### a. Existing and Future Land Use

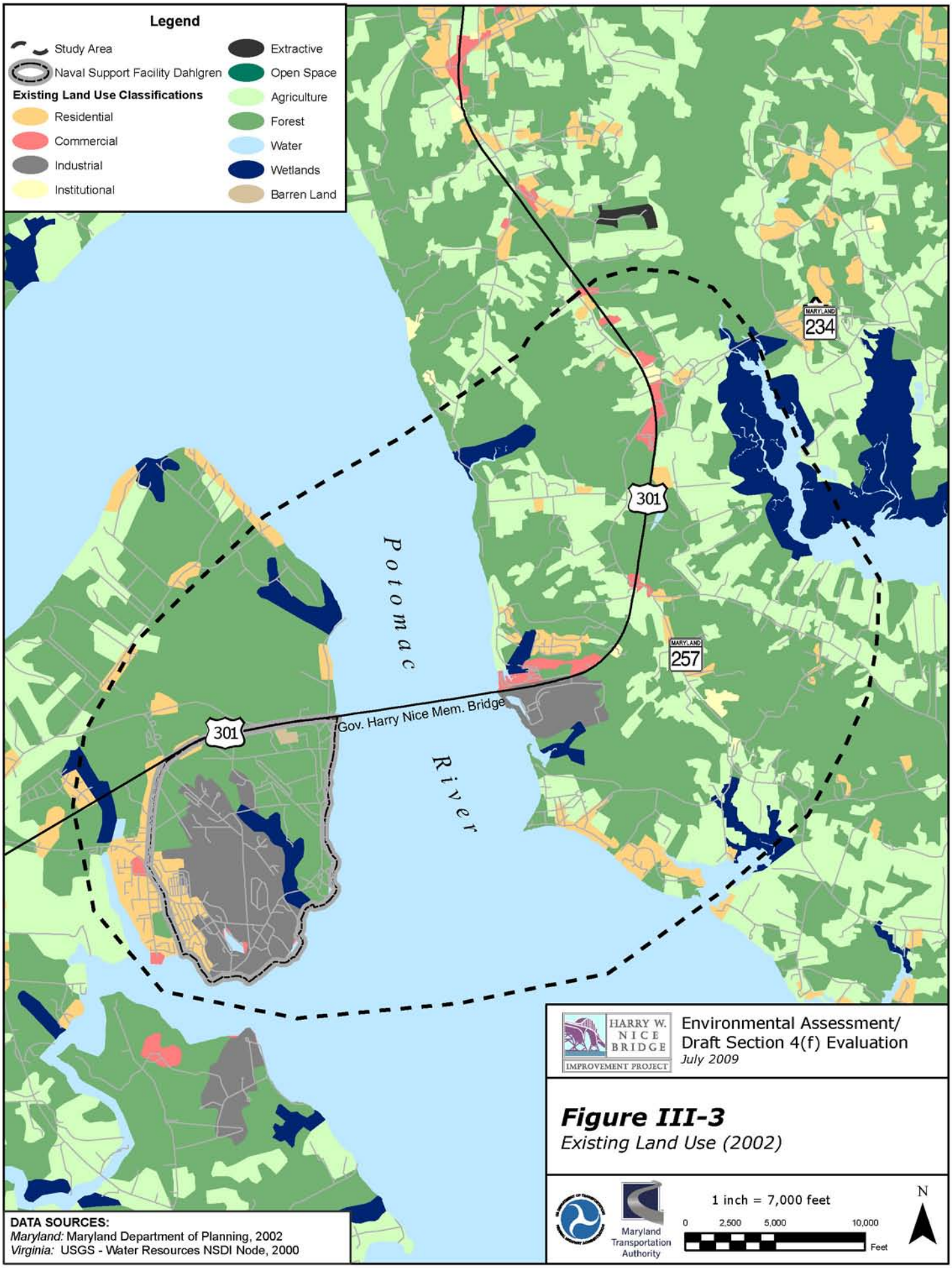
The existing land use for the study area was determined using land use/land cover maps generated by the Maryland Department of Planning (MDP) and King George County (***Figure III-3***). The study area encompasses approximately 16,981 acres of land, not including the Potomac River or other water bodies (***Table III-7***).

***Table III-7:*** *Existing Study Area Land Use*

| Land use Category | Acres | Percent |
|---|---|---|
| Forest | 9,155 | 53.9% |
| Agriculture | 3,537 | 20.8% |
| Industrial | 1,432 | 8.4% |
| Wetlands | 1,410 | 8.3% |
| Residential | 1,150 | 6.8% |
| Commercial | 215 | 1.3% |
| Institutional | 82 | 0.5% |
| Total | 16,981 | 100.0% |

*Source: MDP/King George County Mapping, 2002*

The *2006 Charles County Comprehensive Plan* discusses the land use implementation strategies for the Maryland portion of the study area. According to this plan, US 301 is designated as a Highway Corridor District. This designation protects and improves the visual appearance along key highway corridors and ensures that buffering, landscaping, lighting, signage, and proposed structure are consistent and of a quality that contributes to the character of Charles County.


Legend
Study Area
Naval Support Facility Dahlgren
Existing Land Use Classifications
Residential
Commercial
Industrial
Institutional
Extractive
Open Space
Agriculture
Forest
Water
Wetlands
Barren Land
Potomac River
Gov. Harry Nice Mem. Bridge
301
301
MARYLAND 234
MARYLAND 257
DATA SOURCES:
Maryland: Maryland Department of Planning, 2002
Virginia: USGS - Water Resources NSDI Node, 2000
HARRY W. NICE BRIDGE
IMPROVEMENT PROJECT
Environmental Assessment/
Draft Section 4(f) Evaluation
July 2009
Figure III-3
Existing Land Use (2002)
Maryland Transportation Authority
1 inch = 7,000 feet
0 2,500 5,000 10,000
Feet
N

South of US 301, future land use in the vicinity of the Nice Bridge is designated as an Employment and Industrial Park District. This designation reserves areas for development of employment or industrial clusters or parks. These districts are intended to provide locations for additional, upgraded, and diverse job opportunities for county residents. North of US 301, future land use in the vicinity of the Nice Bridge is designated as a Commercial and Business District. These districts are identified as areas where future commercial development should occur, typically in areas adjacent to existing commercial areas and major roads. Other portions of the study area in Charles County are designated as Agricultural Conservation Districts, where the County seeks to preserve the agricultural industry and land base necessary to support it. These districts are designed to prevent scattered, uncontrolled development over areas of open countryside.

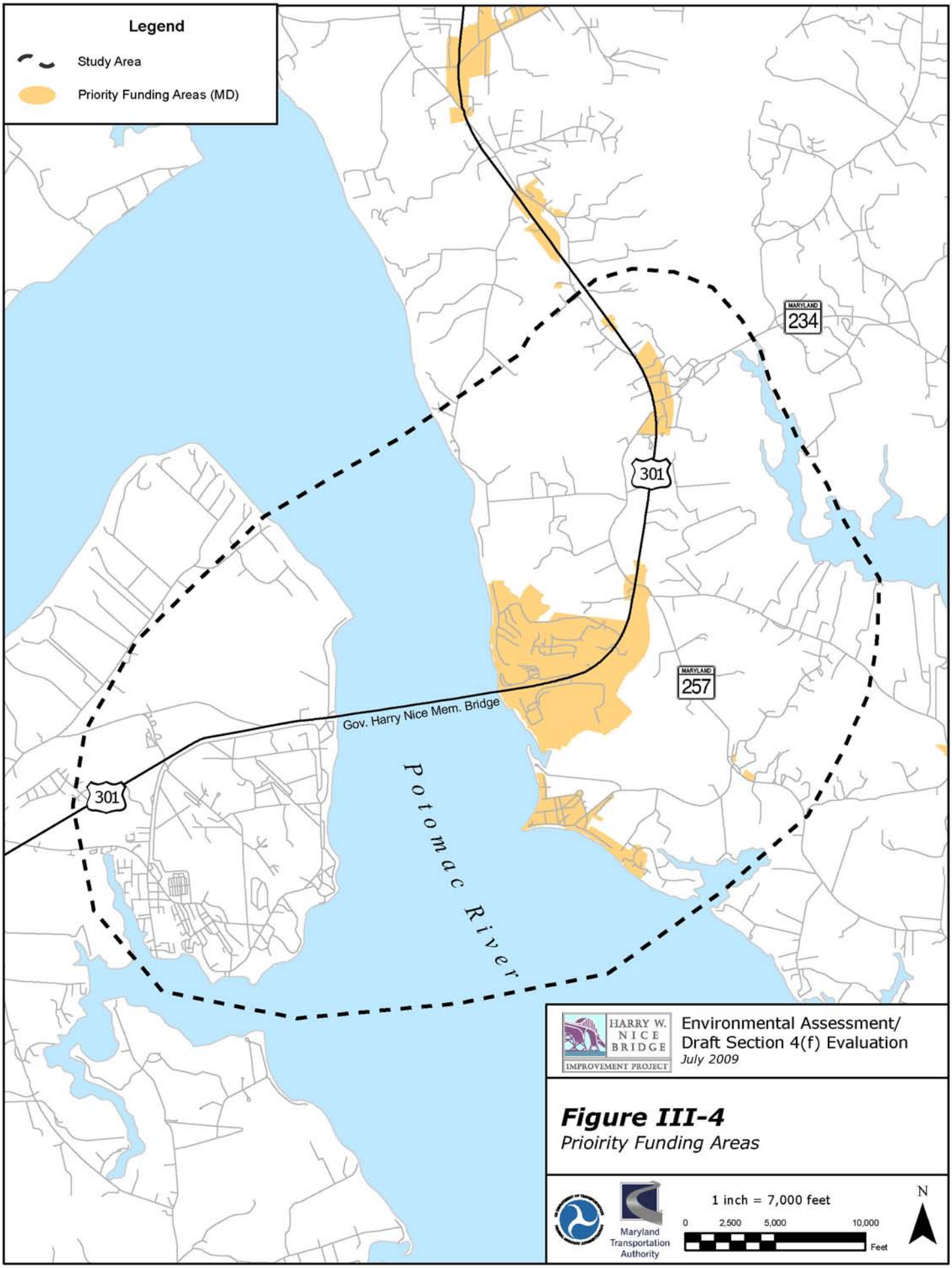
In the Virginia portion of the study area, the *King George County 2006 Comprehensive Plan* identifies the portions of the County within the study area as a mix of Rural Agricultural Districts and Retail Commercial Districts. Rural Agricultural Districts are intended to recognize the rural character of the County where a mixture of agricultural and low-density uses occur, and to permit additional development of a similar type, while closely controlling those activities that might be disruptive to farming and rural living. Generally, public water and sewer services are not planned for these districts. Retail Commercial Districts are intended to recognize existing light commercial uses, and to provide an opportunity to expand these and other retail opportunities within the county.

The 1997 Maryland General Assembly passed legislation known as the "Smart Growth and Neighborhood Conservation Act" (Smart Growth). Smart Growth directs the State of Maryland to target programs and funding to support established communities and locally designated growth areas, and to protect rural areas. A component of the Smart Growth legislation, the Priority Funding Areas (PFA) Act, provides a geographic focus for the State's investment in growth-related infrastructure by requiring all counties to identify and map PFAs that comply with the legislation. The remaining components complement this geographic focus by targeting specific State resources to preserve land outside PFAs, to encourage growth inside PFAs, and to ensure that existing communities continue to provide a high quality of life for their residents.

While the entire Nice Bridge study area is not located within a state-certified PFA, the proposed limits of disturbance in Maryland for each of the build alternates are located within a PFA (***Figure III-4***). Therefore, the project is consistent with the PFA law.

### b. Potential Effects on Land Use

Alternate 1 (No-Build) would result in no change of land use within the study area. The build alternates would result in the conversion of commercial, forested, and parkland to transportation use, refer to ***Table S-1*** and ***Table III-3***. However, the overall land use in the study area would not be substantially affected because all changes in land use that would result from the build alternates would occur within an existing transportation corridor. None of the build alternates would affect local development patterns because they would not result in new access within the corridor. The build alternates would support planned growth and redevelopment within the corridor by accommodating projected traffic volume increases.


Legend
Study Area
Priority Funding Areas (MD)
MARYLAND
234
301
MARYLAND
257
Gov. Harry Nice Mem. Bridge
301
Potomac River
HARRY W. NICE BRIDGE
IMPROVEMENT PROJECT
Environmental Assessment/
Draft Section 4(f) Evaluation
July 2009
Figure III-4
Prioirity Funding Areas
Maryland Transportation Authority
1 inch = 7,000 feet
0 2,500 5,000 10,000
Feet
N

## B. HISTORIC PROPERTIES

Summary: The only historic structure that may be adversely affected by the project is the Nice Bridge, which includes the Potomac River Bridge Administration Building. There are no historic structures located in Virginia which may be affected by the project. Two archeological sites were identified in the Phase IA survey that warrant further investigation: the Barnesfield Plantation mansion and the Hooe family cemetery.

Historic properties include historic structures and archeological sites protected under Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended. Section 106 requires that prior to approval of a project by a federal agency, the agency must consider the project's effects on any district, site, building, structure, or object that is included on or eligible for inclusion in the National Register of Historic Places (NRHP).

Historic property surveys were conducted in accordance with the NHPA 36 Code of Federal Regulations (CFR) Part 800 – Protection of Historic Properties; EO 11593 – Protection and Enhancement of the Cultural Environment; and relevant guidelines from the Maryland Historical Trust (MHT) and the Virginia Department of Historic Resources (VA DHR).

Pursuant to Section 106, resources listed, eligible, or potentially eligible for the NRHP within the Area of Potential Effect (APE) have been identified and evaluated. Measures to minimize or mitigate adverse effects must be developed in consultation with the State Historic Preservation Officer (SHPO) and other interested parties and may be memorialized in a Memorandum of Agreement (MOA).

Six Section 106 consulting parties have accepted an invitation to participate on the project. These include: Charles County Department of Planning and Growth Management, Northern Neck of Virginia Historical Society, Maryland Commission on Indian Affairs, King George County Planning Commission, the Town of Colonial Beach, and Mr. David Rose.

### 1. Historic Structures

#### a. Description of Historic Structures

There are four resources within the Area of Potential Effect (APE) that are eligible for listing on the NRHP:

- Governor Harry W. Nice Memorial Bridge (CH-376);
- Lee Graves site (CH-181);
- Marshall's Rest (CH 140); and
- Raven's Crest (CH-164).

Based on preliminary evaluation of properties and potential effect, only the Nice Bridge may be adversely affected by the project. There are no historic structures located in Virginia which may be affected by the project.

In 2001, the Nice Bridge (CH-376) was determined eligible for listing in the National Register under Criterion A for its significance as a physical representation of Maryland's Primary Bridge Program. The Potomac River Bridge Administration Building (CH-376), which currently houses maintenance service offices for the Authority, is eligible for listing on the National Register under Criterion A as a contributing resource to the Nice Bridge. The Potomac River Bridge Administration Building was erected in 1940 to house the administration, security, maintenance, and toll facilities for the Nice Bridge.

Four separate historic districts within the Naval Surface Warfare Center, Dahlgren Laboratory (VA DHR ID# 048-0104) were previously determined eligible for listing on the National Register in 1994 under National Register Criterion A for its association with military history, and Criterion C for distinctive architecture. A reassessment of resources associated with NSF Dahlgren located to the south of US 301 is currently being undertaken by NSF Dahlgren staff. Based on available information, there are no significant historic structures or archeological sites that would be affected by the project. The Authority will continue to coordinate with NSF Dahlgren staff regarding potential effects to historic districts at the facility.

Additional information regarding historic structures within the study area can be found in the *Nice Bridge Improvement Project Determination of Eligibility Report for Maryland* and *Historic Resources Survey and Identification Report for Virginia* located on the attached CD.

### b. Effects to Historic Structures

The effects to the Nice Bridge and associated Administration Building from each alternate are described below. It is likely that no other historic resources would be adversely affected by any of the proposed alternates.

Under the No-Build Alternate, the existing Nice Bridge (CH-376) would undergo minor short-term improvements as part of normal maintenance and safety operations, as well as scheduled rehabilitation in the 2015 – 2020 year timeframe. Rehabilitation of the bridge would include full deck replacement, complete cleaning and painting of bridge steel, and any repairs that may be needed to the super or substructure elements. Over time, these improvements may result in an adverse effect to the historic characteristics of the Nice Bridge.

Alternates 2 and 4 would include rehabilitating the existing Nice Bridge similar to the improvements required under Alternate 1; therefore it is likely that there would be an adverse effect to the Nice Bridge structure over time. Alternate 2 would also require approximately 0.1 acre of land from the historic boundary of the Administration Building; however, because there would be no impacts to the character defining features of the historic building, it is likely that there would be no adverse effect to the Nice Bridge property per Section 106 from Alternate 2. However, the realignment of US 301 approach roadway to the north under Alternate 4 would require the contributing Administration Building to be demolished, likely resulting in an overall adverse effect under this alternate.

Alternates 3 and 5 would include a new two-lane parallel bridge, and replacement of the existing Nice Bridge with a new structure. These activities would likely cause an adverse effect to the Nice Bridge. There likely would be 0.1 acre of impact to the Administration Building historic boundary.

Under Alternates 6 or 7, the construction of a new four-lane bridge parallel to the existing structure would occur. With these alternates, there are two scenarios for impacts to the Nice Bridge. Under the first scenario, the existing Nice Bridge would be taken out of service and then demolished, resulting in an adverse effect. Under the second scenario, the existing bridge would be taken out of service but would remain standing. Initially this scenario would likely result in no adverse effect to the historic character-defining features of the bridge. Over time, however, it would be an unreasonable public expenditure to maintain the bridge since it would serve no transportation function, and in the long term the structure would deteriorate. Thus, it is assumed (as a worst-case condition) for Alternates 6 and 7, this scenario would eventually result in an adverse effect on historic integrity through neglect. Alternate 6 would also require approximately 0.1 acre of land from the historic boundary of the Administration Building under both scenarios. With Alternate 7, the Administration Building would be demolished likely resulting in a permanent use of the historic property.

Although a formal effects determination has not been made, it is likely that all the alternates, including the No-Build, would result in an adverse effect to the Nice Bridge and/or the Administration Building.

### 2. Archeological Resources

Phase IA Archeological Assessments were conducted for both Maryland and Virginia. A formal Area of Potential Effects (APE) for archeological resources has not yet been determined for the Nice Bridge project. Therefore, for the purposes of the Phase IA background investigation and developing the historic context, a 2 to 2.5-mile radius around the proposed limits of disturbance of the alternates was used to review previous archeological surveys and identify previously recorded archeological sites.

#### a. Description of Archeological Resources

A total of 68 previously recorded resources were identified. In Maryland, a review of MHT files revealed that there are 34 previously identified archeological sites located within the 2-mile radius of the proposed limits of disturbance; no archeological resources were previously recorded within the 2-mile radius. In Virginia, VA DHR files revealed an additional 34 previously identified archeological sites located within a 2.5-mile radius of the limits of disturbance; one of these archeological resources (44KG171) was previously recorded within the study area.

Site 44KG171 is the site of the Barnesfield Plantation mansion and was originally within the area that is currently in Dahlgren Wayside Park. The original structure was built in the early eighteenth century (ca. 1715) and eventually burned by Union troops in 1861. Phase I archeological investigations in 1998 resulted in the recovery of over 700 artifacts, with the assemblage including both domestic and architectural materials. A variety of historic features were also encountered during this survey. These features ranged from brick architectural

foundations and a possible walkway to deeper and as yet undetermined features, possibly representing former wells, privies, or trash pits associated with the Barnesfield Mansion complex.

Although not a previously recorded archeological site, the location of the former Hooe family cemetery is also within the study area. The location of the cemetery space is thought to be east of the Roseland Road/US 301 intersection. Although the cemetery was relocated in the 1940s, it cannot be determined with full certainty that all of the individuals were disinterred. As such, there is the possibility that there are extant human remains still located at the site.

The Phase IA Archeological Assessment has also identified a variety of pre-contact (archeological remains of indigenous societies before contact with Europeans and resulting written records) and historic resources within and around the study area. Given the abundance of previously recorded prehistoric sites within a 2.5-mile radius, the probability that additional resources exist within the study area is considered high. This assessment is based on an evaluation of the physical characteristics of known site locations and the delineation of such settings within the study area.

### b. Potential Effects

Based on the findings of the Phase IA Archeological Assessment, a full Phase I Archeological Survey is being conducted. Because the exact location and boundaries of the previously recorded sites are not fully defined, additional archeological investigations are necessary to determine if these or any other archeological resources may be impacted by the project. Although a formal effects determination has not been made, it is likely that all the alternates, including the No-Build, would result in an adverse effect to the Nice Bridge and/or the Administration Building. The Phase I survey is identifying whether there are archeological deposits within the project's limits of disturbance which require further, more detailed studies. If appropriate, these detailed investigations would involve a Phase II survey (following identification of a preferred alternative) to determine the extent and character of archeological sites that may be eligible for the National Register.

Coordination with NSF Dahlgren indicates there is the potential for unexploded ordnances (UXOs) in portions of the study area. Land-based archeology and UXO investigations will begin Summer 2009; however, investigations in the open water of the Potomac River will be initiated prior to construction, should a build alternate be selected. Additional information regarding archeological resources within the study area can be found in the *Nice Bridge Improvement Project Phase IA Archeological Assessments for Maryland and Virginia* located on the attached CD.

## C. NATURAL ENVIRONMENTAL RESOURCES

This section presents the natural environmental resources in the study area. The specific resources considered include: physiography/topography and geology; soils; waters of the US including wetlands; surface water and water quality; floodplains; shoreline erosion; groundwater;

aquatic habitat/wildlife; terrestrial habitat/wildlife; rare, threatened and endangered species; unique and sensitive areas; and critical area.

The discussion of the above resources within the study area includes:

- Summary: a review of the resource, results of the analysis by alternate, and any mitigation or follow-up that is required; this information is present in a text box for quick reference;
- Existing Conditions: environmental resources as they currently exists in the study area;
- Potential Impacts: analysis results, by resource, for the various alternates; and
- Avoidance, Minimization and Mitigation Measures: a preliminary discussion of potential mitigation measures for those impacts that are unavoidable.

## 1. Physiography/Topography and Geology

Summary: Elevation within the study area ranges from one foot to 130 feet (Maryland portion) and one foot to 25 feet (Virginia portion). The depths of the Potomac River range from one to 15 feet along the shorelines and up to 80 feet in the shipping channel. No effects to the geology in the study area are anticipated with any of the alternates. Minimal impacts and/or changes to topography are anticipated in the study area with any of the build alternates. A sediment and erosion control plan in accordance with Maryland and Virginia laws will be prepared prior to construction.

### a. Existing Conditions

The study area is located entirely within the Coastal Plain Physiographical Province, and consists of nearly level, gently rolling and steep topography. Areas within the immediate vicinity of the existing Nice Bridge (both in Maryland and Virginia) are nearly level, with the majority of the higher elevations located north of US 301. Elevation within the study area ranges from one foot to 130 feet in the Maryland portion and one foot to 25 feet in the Virginia portion.

One geologic formation, the Calvert Formation (Tc), is located within the Maryland portion of the study area. The Calvert Formation consists of two members, Plum Point Marls and Fairhaven, which are mostly made up of inter-bedded dark fine-grained argillaceous sand, sandy clay, shell beds, and local silica-cemented sandstones. Other geologic units located within the Maryland side of the study area include Upland deposits (Qtu) of gravel and sand, and some silt and Lowland deposits (QI) of gravel, sand, silt and clay.

Coordination with the Virginia Department of Mines, Minerals and Energy - Division of Mineral Resources (VA DMME) indicates that the Virginia portion of the study area is principally underlain by unconsolidated silt, clay, sand, and gravel of the Sedgefield member of the Tabb formation. A recent study suggests that this formation has the potential to become acidic upon exposure at the surface, creating low pH runoff and causing premature failure of concrete and metal structures.

According to the *NOAA Potomac River: Lower Cedar Point to Mattawoman Creek Datum*, the depths of the Potomac River along the Maryland shoreline range from one to 15 feet. Similarly, depths along the Virginia shore are approximately four feet, increasing to depths of 15 feet as it slopes closer to the channel. Greater depths of ten to 15 feet are common closer to the shipping

channel on the eastern portion of the Potomac, with some depths reaching 80 feet. The substrate of the Potomac River channel and side slopes consist of "firmer muds and clays of moderate to high compaction, locally mixed with sand and other deposits" (Lippson et al. 1979, folio map 3).

#### b. Potential Effects

No effects to the geology in the study area are anticipated with the No-Build or build alternates. Other impacts could include an increase in erosion and acid runoff due to surface exposure in Virginia. The exposure of acidic conditions may result in negative effects to surface water quality and aquatic life. However, these potential impacts would be minimal as the majority of earthmoving would involve fill materials with limited cutting and excavation. Coordination with the VA DMME regarding the effect of existing geology on the build alternates will continue throughout the project design process.

Impacts to physiography/topography are not anticipated with the No-Build Alternate. Changes to topography are anticipated in the study area with any of the build alternates. If dredging activities are necessary for the construction of a new bridge, permanent changes would occur to the morphology (i.e., form and structure) of the Potomac River bottom, thereby affecting bathymetry (i.e., water depths) in the study area.

The build alternates could potentially affect the local topography from the earthmoving required along the shoreline and/or in the Potomac River, as well as the construction of earth berms to support roadway approaches. In addition, unpredictable changes in micro-topography could result in minor localized changes in shallow groundwater movement. These effects should be minimal and would be offset by proposed stormwater management (SWM) facilities.

#### c. Avoidance, Minimization and Mitigation Measures

A Erosion and Sediment Control Plan (ESCP) would include measures to prevent erosion in highly susceptible areas. It would be prepared and implemented in accordance with Maryland Department of the Environment (MDE) regulations. Sedimentation into streams would be controlled through the use of sediment traps and basins. In Virginia, construction of a new bridge, approach fills and site grading, will be conducted in accordance with Virginia Erosion and Sediment Control Law and Regulations (Title 10.1, Chapter 5, Article 4).

### 2. Soils

Summary: There are Prime Farmland Soils and Soils of Statewide Importance within the study area. The build alternates would displace Prime Farmland Soils and Soils of Statewide Importance in Virginia through erosion and sedimentation. Alternate 6 has the least amount of impacts with 4.6 acres, while Alternate 7 impacts has the largest (8.2 acres). Coordination with the Natural Resources Conservation Service will continue throughout the project regarding effects to Prime Farmland and Statewide Important Soils. A sediment and erosion control plan in accordance with Maryland and Virginia laws will be prepared prior to construction.

#### a. Existing Conditions

There are 35 soil series and 78 mapping units within the Nice Bridge study area. Additional information regarding the soil types found within the study area can be found in the *Nice Bridge Improvement Project Natural Environmental Technical Report* located on the attached CD.

Prime Farmland Soils are defined as "having the soil quality, growing season and moisture supply needed to economically produce sustained high yields of crops" (NRCS 1984). Soils of Statewide Importance are defined as "having early Prime Farmland quality and that economically produce high yields of crops when treated and managed according to acceptable methods" (NRCS 1984). ***Figure III-5*** illustrates the soil mapping units within the immediate vicinity of the build alternates.

### b. Potential Effects

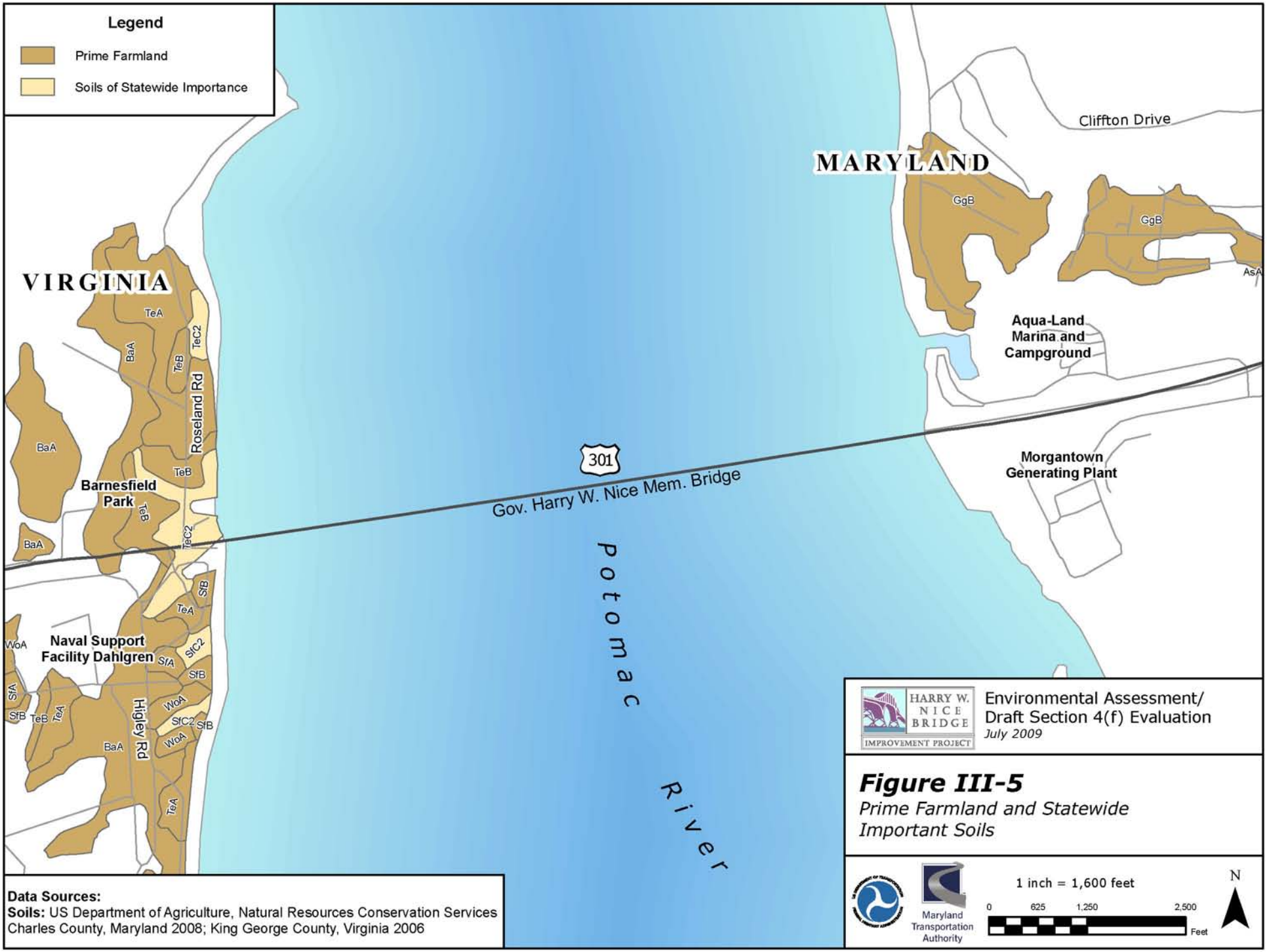
The No-Build Alternate would not result in any additional erosion and sedimentation. All of the build alternates would affect soils through earthmoving primarily by erosion and subsequent sedimentation and spoil storage during the construction phase. Each of the build alternates would impact Prime Farmland Soils and Soils of Statewide Importance in the Virginia portion of the study area only. Alternate 7 (both with and without the bicycle/pedestrian path option) would have the largest impact Prime Farmland and Soils of Statewide Importance with 8.2 acres. Alternates 6 would impact the least amount of Prime Farmland/Soils of Statewide Importance (approximately 4.6 acres for both with and without the bicycle/pedestrian path option). Please refer to ***Appendix H***, for the AD 1006 form submitted to Natural Resources Conservation Service (NRCS), pursuant to Farmland Protection Policy Act (FPPA).

Any erosion would be primarily caused by removal of existing vegetation, leading to increased exposure of soils to weather and runoff potential. Sites where surface water causes erosion, particularly along Potomac River shorelines, would have the greatest potential for erosion and sedimentation.

### c. Avoidance Minimization and Mitigation Measures

Construction of any of the build alternates would require consideration of certain soils, such as unstable or erodible soils, to determine compatibility with roadway and bridge construction. In addition, an ESCP would be developed and administered in order to minimize the soil erosion associated with unstable and erodible soils. In Maryland, the ESCP would be prepared during final design in accordance with the guidelines provided by MDE. It would include erosion and sediment control devices such as sediment traps, silt fences, sedimentation basins, interception channels, or seeding and mulching to minimize the impacts of soil erosion. Pre-design permeability testing would be needed within the vicinity of the roadway approaches to determine the effectiveness of infiltration as a SWM technique.

In Virginia, the ESCP will be prepared in accordance with VA DCR Erosion and Sediment Control (ESC) Handbook which outlines basic ESC concepts, ESC measure design, installation and maintenance, plan review procedures and administrative guidelines to support compliance with the appropriate ESC laws and regulations. The plan will also be developed to comply with King George County ESC requirements.


Legend
Prime Farmland
Soils of Statewide Importance
MARYLAND
VIRGINIA
Cliffton Drive
GgB
GgB
AsA
Aqua-Land Marina and Campground
Morgantown Generating Plant
301
Gov. Harry W. Nice Mem. Bridge
Potomac River
Roseland Rd
Barnesfield Park
Naval Support Facility Dahlgren
Higley Rd
TeA
BaA
TeB
TeC2
SfB
SfA
SfC2
WoA
Data Sources:
Soils: US Department of Agriculture, Natural Resources Conservation Services Charles County, Maryland 2008; King George County, Virginia 2006
HARRY W. NICE BRIDGE
IMPROVEMENT PROJECT
Environmental Assessment/
Draft Section 4(f) Evaluation
July 2009
Figure III-5
Prime Farmland and Statewide Important Soils
Maryland Transportation Authority
1 inch = 1,600 feet
0
625
1,250
2,500
Feet
N

## 3. Waters of the US including Wetlands

Summary: Any of the build alternates would result in impacts to Waters of the US, wetlands and tidal open water. The total stream impacts range from 2,420 to 3,663 linear feet. The total wetland impacts range from 0.1 to 0.7 acre. Tidal open water impacts to the Potomac River would result from dredging and installing bridge piers. Coordination, approvals, and permits will continue with USACE, US Coast Guard, MD DNR, MDE, VDEQ, and VMRC. In accordance with the Final Rule on Compensatory Mitigation for Losses of Aquatic Resources, a Compensatory Mitigation Plan (CMP) has been prepared, please refer to Appendix D.

### a. Existing Conditions

Wetland identification and delineation efforts for the project were conducted within 250 feet of the centerline for each build alternate in accordance with the *US Army Corps of Engineers (USACE) Wetland Delineation Manual, Technical Report Y-87-1* (US Army Corp of Engineers Waterways Experiment Station, 1987). The wetland delineations for the Maryland and Virginia portions of the study area were conducted in November 2005 and December 2007, respectively. A portion of the Maryland delineation was initially conducted separate from the Nice Bridge Improvement Project, as part of the Nice Bridge Toll Plaza Improvement Study. The identified wetlands in the Maryland portion of the study area were reviewed by the regulatory agencies in 2006 and a Jurisdictional Determination (JD) was issued.

On June 2, 2008, the USACE provided an approved JD on the wetlands and Waters of the US (WUS) in the Virginia portion of the study area that are included in the *Governor Harry W. Nice Memorial Bridge Improvement Project Wetland Delineation* which is located on the attached CD.

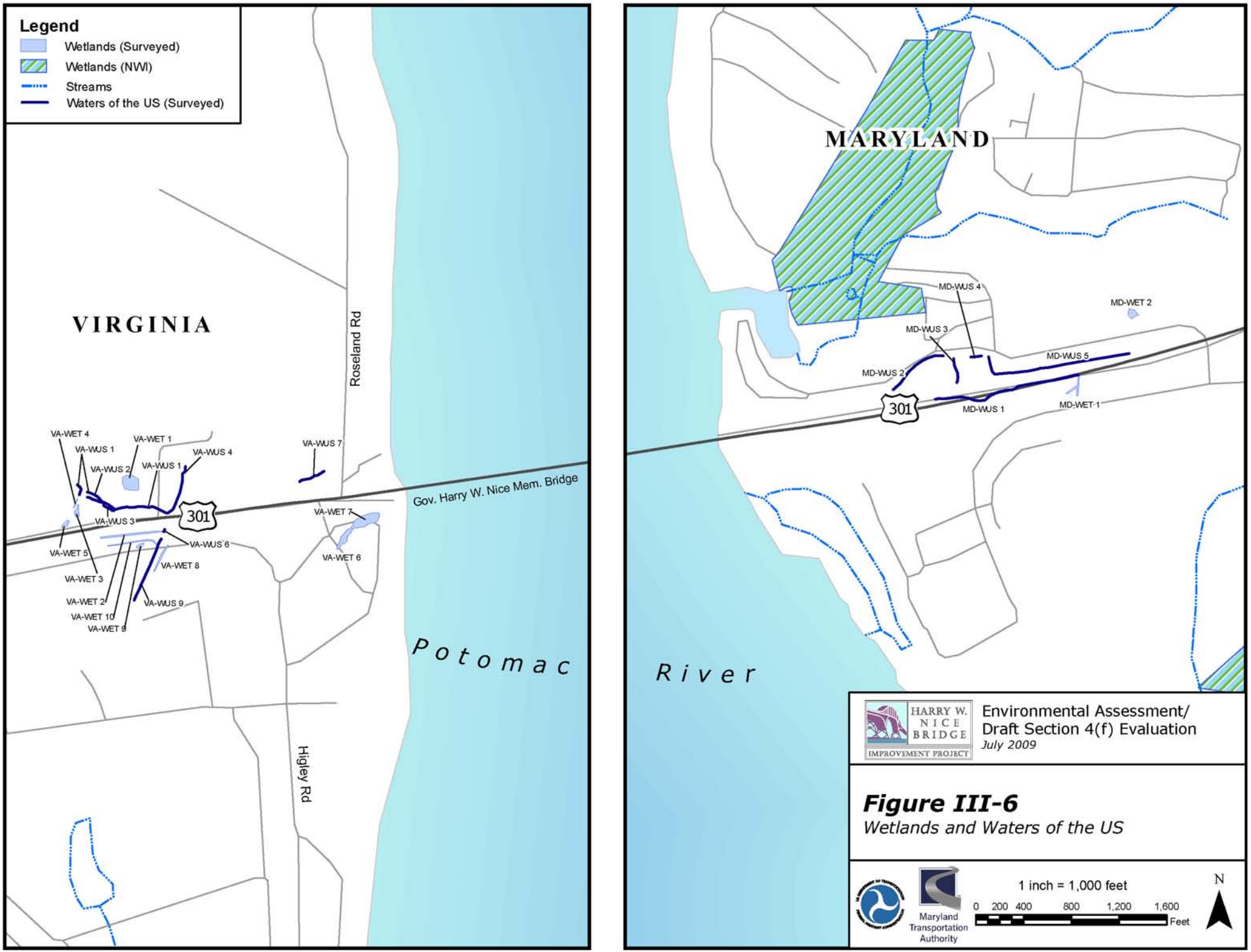
***Maryland***

A total of seven wetlands or waterways are located within the Maryland portion of the Nice Bridge study area (***Figure III-6 and Appendix D***). Five of the systems are classified as WUS, specifically as ephemeral drainage ditches. Two systems are classified as a vegetated wetland, one palustrine forested and one palustrine emergent. The mainstem of the Potomac River, not included as part of the Maryland November 2005 delineation, is also considered a tidal open water resource within the study area.

***Virginia***

A total of 17 wetlands or waterways are located within the Virginia portion of the Nice Bridge study area (***Figure III-6 and Appendix A***). The majority of the wetlands or waterways are located near the entrance to Barnesfield Park or within the NSF Dahlgren property. Seven of the 17 systems are classified as WUS and are either ephemeral or intermittent stream channels. There are ten vegetated wetland systems with five classified as palustrine forested, four as palustrine emergent, and one as estuarine emergent.

The US Department of Navy provided detail on one particular wetland system within NSF Dahlgren property, the “Kitts Marsh” wetland, located in the northeast corner of the facility. This two-tiered wetland was constructed in the late 1990s to improve water quality and enhance


Legend
Wetlands (Surveyed)
Wetlands (NWI)
Streams
Waters of the US (Surveyed)
VIRGINIA
MARYLAND
Roseland Rd
Higley Rd
Gov. Harry W. Nice Mem. Bridge
301
Potomac River
VA-WET 1
VA-WET 2
VA-WET 3
VA-WET 4
VA-WET 5
VA-WET 6
VA-WET 7
VA-WET 8
VA-WET 9
VA-WET 10
VA-WUS 1
VA-WUS 2
VA-WUS 3
VA-WUS 4
VA-WUS 6
VA-WUS 7
VA-WUS 9
MD-WET 1
MD-WET 2
MD-WUS 1
MD-WUS 2
MD-WUS 3
MD-WUS 4
MD-WUS 5
HARRY W. NICE BRIDGE
IMPROVEMENT PROJECT
Environmental Assessment/
Draft Section 4(f) Evaluation
July 2009
Figure III-6
Wetlands and Waters of the US
Maryland Transportation Authority
1 inch = 1,000 feet
0 200 400 800 1,200 1,600
Feet
N

wildlife habitat. Additional stormwater management features have been constructed above Kitts Marsh that now provide enhanced treatment of stormwater originating from a portion of NSF Dahlgren. Approximately 45 percent of that acreage is impervious surface. Kitts Marsh offers a valuable source of habitat and provides a vegetated visual buffer and wildlife viewing area for base employees. In addition, Kitts Marsh serves as an outdoor classroom where NSF Dahlgren staff instructs local students on water quality and habitat management.

### b. Potential Effects

Impacts to WUS, including wetlands, are shown for each of the alternates in ***Table III-8***. Alternate 1 (No-Build) would not impact any WUS or wetlands. The anticipated WUS and wetland impacts from the build alternates would result from dredging, placing pilings in the Potomac River, fill needed for roadway embankments, and construction of bridge abutments. Additional activities that may impact WUS and wetlands include stormwater management and temporary construction-related activities.

***Table III-8:*** *Impacts to Wetlands and Waters Within the Study Area Without (and With) Bike/Ped Path Options*

| State | Alt. 1 | Alt. 2 | Alt. 3 | Alt. 4 | Alt. 5 | Alt. 6 | Alt. 7 |
|---|---|---|---|---|---|---|---|
| ***Stream (WUS) Impacts (linear feet)*** | | | | | | | |
| MD | 0 | 2,390 (2,390) | 2,390 (2,390) | 3,370 (3,370) | 3,370 (3,370) | 2,370 (2,370) | 3,370 (3,370) |
| VA | 0 | 90 (90) | 110 (110) | 270 (270) | 300 (300) | 50 (50) | 300 (300) |
| ***Total*** | **0** | **2,480 (2,480)** | **2,500 (2,500)** | **3,640 (3,640)** | **3,670 (3,670)** | **2,420 (2,420)** | **3,670 (3,670)** |
| ***Wetland Impacts (acres)*** | | | | | | | |
| MD | 0 | 0.1 (0.1) | 0.1 (0.1) | 0.1 (0.1) | 0.1 (0.1) | 0.1 (0.1) | 0.1 (0.1) |
| VA | 0 | 0.6 (0.6) | 0.6 (0.6) | 0 (0) | 0.1 (0.1) | 0.6 (0.6) | 0 (0) |
| ***Total*** | **0** | **0.7 (0.7)** | **0.7 (0.7)** | **0.1 (0.1)** | **0.2 (0.2)** | **0.7 (0.7)** | **0.1 (0.1)** |
| ***Tidal Open Water Impacts: Potomac River (acres)*** | | | | | | | |
| Piers | 0 | 0.3 (0.4) | 0.7 (0.7) | 0.3 (0.4) | 0. 7 (0.7) | 0.5 (0.6) | 0.5 (0.6) |
| Dredging | 0 | 61 (62) | 85 (88) | 62 (63) | 85 (89) | 67 (68) | 65 (67) |

The anticipated permanent tidal open water impacts to the Potomac River bed from installation of bridge piers are estimated to range from 0.3 acre (0.4 acre with bike/ped path option) with Alternates 2 and 4 to 0.7 acre (with and without bike/ped path option) with Alternates 3 and 5. Tidal open water impacts anticipated with dredging the Potomac River range from 61 acres (62 acres with bike option) under Alternate 2 to 85 acres (89 with the bike/ped path option) under Alternate 5. The Kitts Marsh wetland (within NSF Dahlgren) would be negatively impacted by Alternates 2, 3 and 6.

### c. Avoidance, Minimization, and Mitigation Measures

In accordance with federal and state regulations, avoidance and minimization measures to reduce impacts to wetlands and other WUS are being implemented. During final design, the construction methods and the temporary impacts of construction and demolition (if needed) would be determined. Temporary impacts could result from the following activities: clearing for

a ten to twenty acre staging area near the river, a dredge material disposal site, transport of demolition and dredge material by barge or truck, cofferdams, a barge berthing/loading area along the shoreline, temporary construction haul roads, and utility relocations. The temporary impacts would be quantified in the various permit applications. These efforts will continue once a preferred alternate has been identified to further avoid and minimize impacts.

Impacts to the Potomac River would require a Maryland tidal license/permit and would need to be presented to the State Board of Public Works. Since the Potomac River is considered a navigable waterbody, permitting would require compliance with Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act and would require a US Coast Guard Permit. Impacts to Maryland nontidal and/or tidal wetlands may require a Maryland Nontidal Wetlands Permit, a Section 401 Water Quality Certificate, a Waterway Construction Permit from the MDE, a Section 404 permit from the USACE for the discharge of dredged or fill material into WUS, including wetlands. Impacts to Virginia nontidal and/or tidal wetlands may require Virginia Water Protection Permit, a Section 401 Water Quality Certificate, a Virginia Marine Resources Permit, a Section 404 permit from the USACE.

In accordance with the Final Rule on Compensatory Mitigation for Losses of Aquatic Resources (33 U.S.C 332), the Authority prepared a Compensatory Mitigation Plan (CMP) (***Appendix D***). The CMP identifies appropriate sites for mitigation in Maryland, and proposes use of a bank site in Virginia. The CMP includes a monitoring plan and management plan for the Maryland site to ensure regulatory requirements are met for mitigation site success.

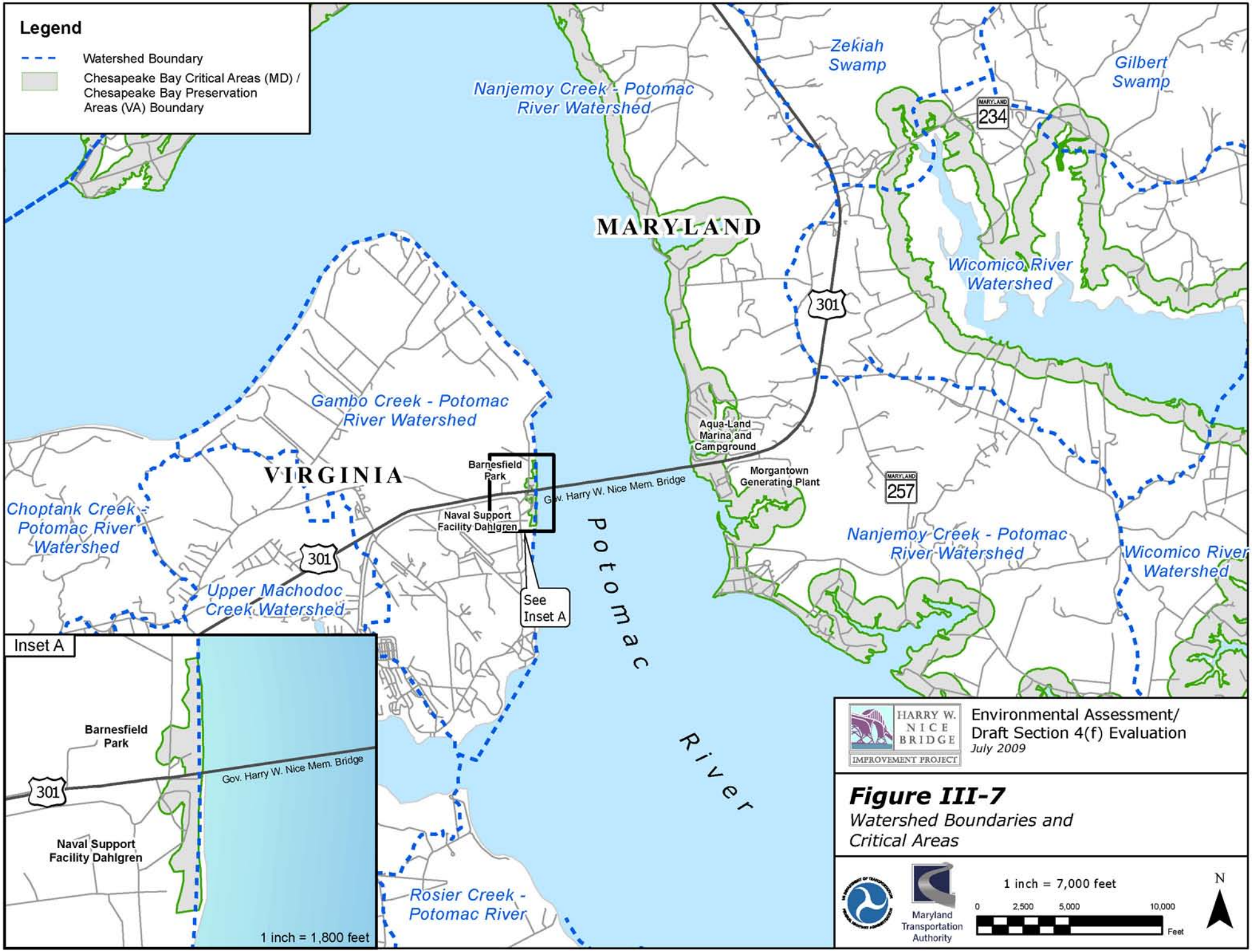
### 4. Surface Water and Water Quality

Summary: All of the build alternates have the potential to affect the surface water quality in the study area. Construction impacts may include increased turbidity due to sedimentation from erosion or dredging activities, pollution from disturbed sediments, and runoff from impervious surfaces. As the project progresses through planning and design, minimization measures will be further evaluated.

#### a. Existing Conditions

The Lower Potomac River Watershed (Federal HUC 02070011) drains the entire study area. The Lower Potomac River Watershed includes the tidal reach of the Potomac River Basin, extending from Little Falls near Chain Bridge in Washington, DC to the Potomac River's mouth at the Chesapeake Bay. In the Maryland subwatershed Nanjemoy Creek and the subwatershed Gambo Creek in Virginia are in the immediate vicinity of the Nice Bridge (***Figure III-7***). This section describes the general watershed characteristics, water quality, Total Maximum Daily Loads (TMDL), and other surface water characteristics within the Lower Potomac River Watershed.

MDE established standards for several stream water quality parameters based on their use classification (Code of Maryland Regulations (COMAR) 26.08.02.03-3 - *Water Quality*). The Potomac River is classified as Use II (supports estuarine and marine aquatic life and shellfish harvesting), and all tributaries from the Potomac River in Maryland are classified as Use I (water contact recreation and protection of aquatic life).


Legend
Watershed Boundary
Chesapeake Bay Critical Areas (MD) / Chesapeake Bay Preservation Areas (VA) Boundary
Zekiah Swamp
Gilbert Swamp
Nanjemoy Creek - Potomac River Watershed
MARYLAND
234
Wicomico River Watershed
301
Gambo Creek - Potomac River Watershed
Aqua-Land Marina and Campground
VIRGINIA
Barnesfield Park
Gov. Harry W. Nice Mem. Bridge
Morgantown Generating Plant
257
Choptank Creek - Potomac River Watershed
Naval Support Facility Dahlgren
Nanjemoy Creek - Potomac River Watershed
Wicomico River Watershed
301
Upper Machodoc Creek Watershed
See Inset A
Potomac River
Inset A
Barnesfield Park
Gov. Harry W. Nice Mem. Bridge
301
Naval Support Facility Dahlgren
Rosier Creek - Potomac River
1 inch = 1,800 feet
HARRY W. NICE BRIDGE IMPROVEMENT PROJECT
Environmental Assessment/ Draft Section 4(f) Evaluation
July 2009
Figure III-7
Watershed Boundaries and Critical Areas
Maryland Transportation Authority
1 inch = 7,000 feet
0 2,500 5,000 10,000
Feet
N

A Total Maximum Daily Loads (TMDL) is an estimate of the maximum amount of a pollutant, from point and non-point sources, that a waterbody can absorb without violating ambient water quality standards (MDE 2007). Both Maryland and Virginia have placed portions of the tidal Potomac River on their 303(d) Impaired Waters Lists, in compliance with the US Environmental Protection Agency (US EPA) Clean Water Act (CWA), for polychlorinated biphenyl (PCB) contamination. In some cases, PCB concentrations in the Potomac River and its tributaries exceeded state standards and requiring fish advisories to be issued.

The Virginia Department of Environmental Quality (VA DEQ) is in the process of developing bacterial TMDLs for three impairments. Gambo Creek subwatershed was identified in the 1998 303(d) list with these impairments.

A Tributary Strategy Team was appointed by Maryland Department of Natural Resources (MD DNR) for all of Maryland's watersheds, including the Potomac River, to help achieve reductions in nitrogen, phosphorus, and sediment to the Chesapeake Bay and its tributaries. This strategy team establishes nutrient criteria and goals for the Potomac River and its tributaries. Several water quality monitoring sites are located within the vicinity of the Nice Bridge study area, including one monthly fixed station at the existing Nice Bridge (Maryland).

According to the Maryland-designated Wild Scenic Rivers List, the Potomac River is only partially listed (within Montgomery and Frederick Counties only). Therefore, there are no wild or scenic rivers or their tributaries located within the study area.

### b. Potential Effects

Alternate 1, the No-Build Alternate, is expected to have no effect on the surface water quality within the Lower Potomac River Watershed. All of the build alternates have the potential to affect the surface water quality in the study area with construction of a new bridge and roadway approaches. Construction impacts may include increased turbidity due to sedimentation from erosion or dredging activities, pollution from disturbed sediments, and runoff from impervious surfaces. Impacts to water quality during dredging and in-water demolition could include a temporary increase in turbidity, and potential release of nutrients and contaminants from bottom sediments. Several sources of PCB are associated with roadways within the Lower Potomac River Watershed, but these are minimal and incorporated into the TMDL plan for urban stormwater sources of PCB. A summary of the water quality monitoring results can be found in the *Nice Bridge Improvement Project Natural Environmental Technical Report* located on the attached CD.

### c. Avoidance and Minimization Measures

Avoidance is not possible due to the width of the Potomac River. As the project progresses through planning and design, minimization measures will be further evaluated. Minimization efforts for the Potomac River and adjacent streams will address both direct and indirect impacts. Water quality minimization measures will primarily focus on modifications to dredging, bridge construction, and demolition activities. Minimization techniques for direct effects on waters may

include:

- Steeper roadway embankments;
- Fewer pilings (i.e., longer spans);
- Stormwater management controls;
- Erosion and sediment control procedures; and,
- Implementation of Best Management Practices (BMPs).

For Class I surface waters, in-stream work may not be conducted from March 1 through June 15, inclusive, during any year. Long-term impacts to water quality will be minimized to the extent possible through the use of MDE and VA DCR approved SWM plans.

## 5. Floodplains

Summary: The 100-year floodplains in the study area are along the Potomac River and adjacent tributaries. The build alternates have the potential to impact floodplains, with Alternates 4, 5 and 7 having the most impacts. Any construction within the 100-year floodplain would require a permit from the Maryland Department of Environment and coordination with the Virginia Department of Conservation and Recreation.

### a. Existing Conditions

The 100-year floodplains were identified within 1,000 feet of the alternates using the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (FIRM) and floodplain studies. The FEMA designated 100-year floodplains within the Maryland portion of the study area occur along the Potomac River and several tributaries, including Cliffton Creek, Popes Creek, Bunker Hill Branch, and Waverly Creek. Cliffton Creek and Popes Creek are located approximately 1,000 and 3,000 feet north of the Nice Bridge, respectively. Bunker Hill Branch and Waverly Creek are located approximately 4,000 and 6,000 feet south of the Nice Bridge, respectively. In Virginia, the 100-year floodplain occurs along Gambo Creek and the Potomac River. Refer to ***Appendix A*** (Alternates Plates) for the 100-year floodplains along the Maryland and Virginia shores related to the alternates.

Additional information on floodplains is located in the *Nice Bridge Improvement Project Natural Environmental Technical Report* located on the attached CD.

### b. Potential Effects

The significance of floodplain encroachment was evaluated with respect to the criteria in Executive Order 11988 (Floodplain Management) and US DOT Order 5650.2. Floodplain encroachments were also analyzed according to the Federal Aid Highway Program Manual, which recommends that longitudinal encroachment (encroachment that parallels the stream channel) be avoided whenever possible. Project alternates are not configured in such a manner that major longitudinal floodplain encroachments would occur. The majority of floodplain encroachments would be from transverse crossings for each of the alternates (encroachment from roadway development that crosses the valley widths of floodplains). ***Table III-9*** presents the potential encroachment into FEMA-designated 100-year floodplains for each alternate. Floodplain impacts are estimated fill areas associated with the construction of the Nice Bridge project. Final impacts to the 100-year floodplain will be determined based on hydrologic and hydraulic modeling, during design of floodplain crossing structures.

***Table III-9:*** *Floodplain Impacts by Alternate Without (and With) Bike/Ped Path Options*

| Alternates | Floodplain Impacts (acreage) | | |
|---|---|---|---|
| | ***Maryland*** | ***Virginia*** | ***Total*** |
| Alternate 1 – No-Build | 0 (0) | 0 (0) | **0 (0)** |
| Alternate 2 | 3.3 (3.4) | 2.7 (2.9) | **5.9 (6.3)** |
| Alternate 3 | 4.7 (4.8) | 3.0 (3.1) | **7.7 (7.8)** |
| Alternate 4 | 6.5 (6.6) | 1.6 (1.8) | **8.1 (8.4)** |
| Alternate 5 | 6.6 (6.7) | 1.9 (2.0) | **8.5 (8.7)** |
| Alternate 6 | 3.4 (3.4) | 3.0 (3.1) | **6.4 (6.5)** |
| Alternate 7 | 6.7 (6.7) | 1.8 (1.8) | **8.4 (8.6)** |

Alternate 1 (No-Build) would not result in any floodplain impacts. All of the build alternates would result in impacts to 100-year floodplains along the Potomac River. Alternate 7 would impact floodplains the most, 8.4 acres (8.6 acres with the ped/bike path option). An increase in impervious cover from a new bridge or bridges and approach roadways may cause additional drainage forces, specifically related to a storm event, to erode adjacent floodplains.

### c. Avoidance, Minimization and Mitigation Measures

Efforts to minimize impacts to 100-year floodplains are ongoing, and will continue throughout the planning and design process. Longitudinal crossings have been avoided because they would result in more floodplain fill, reducing conveyance and floodplain storage. Any construction within the 100-year floodplain would require a Waterway Construction Permit from MDE. To ensure that floodwater impacts due to roadway construction are minimized, drainage structures are required to maintain the current flow regime and prevent associated flooding (COMAR 26.17.04).

Minimization and mitigation efforts to impacted 100-year floodplains may also include:

- Extending new bridge spans over the 100-year floodplain;
- Reducing encroachments by using 2:1 minimum slopes for roadways; and
- Building retaining walls where applicable.

As part of the MDE Waterways Construction Permit application process, hydrologic and hydraulic studies would be performed for the preferred alternate to determine the effects of the proposed roadway fill on floodplain elevations once in the design phase. In Virginia, VA DCR is responsible for coordination of all state floodplain programs.

## 6. Shorelines

Summary: Maryland and Virginia shorelines experience erosion; in some locations up to two feet per year. Dredging and/or vegetation removal necessary for the construction of a new bridge may increase the potential for shoreline erosion. The potential effects can be minimized through best management practices, an erosion and sediment control plan and by restoring the shore areas to existing condition following construction.

### a. Existing Conditions

Approximately 11 percent, or 20 miles, of Charles County's shoreline (county-wide) experiences serious erosion rates of two feet per year or greater, particularly areas north of Popes Creek in Maryland. Portions of the Maryland shoreline adjacent to the existing Nice Bridge are protected

from erosion, slightly eroding (less than one foot per year) or slightly accreting (greater than foot per year). The Virginia portion of the Potomac River shoreline also experiences erosion and/or accretion. Some locations are eroding at a rate of approximately two feet per year, while other areas are experiencing rates of one foot of erosion per year. The Virginia shoreline adjacent to the existing bridge is not stabilized and is experiencing slow erosion.

#### b. Potential Effects

The No-Build Alternate (Alternate 1) would have no effect on shoreline erosion within the study area; erosion would be allowed to continue at its natural pace. Effects of the build alternates on the rate of shoreline erosion cannot be quantified. Dredging and/or vegetation removal necessary for the construction of a new bridge may increase the potential for shoreline erosion. Stabilized construction access and barge docking area may temporarily alter existing erosion and accretion patterns.

#### c. Avoidance, Minimization and Mitigation Measures

The potential of the build alternates to cause shoreline erosion cannot be predicted and therefore cannot be avoided. The potential effects can be minimized through best management practices and by restoring the shore areas to existing condition following construction. Minimization measures in both Maryland and Virginia will be included as part of the ESCP and temporary impact restoration permit conditions.

In the CMP for the project, the Authority is proposing to provide out-of-kind mitigation through shoreline stabilization and/or tidal marsh creation. Refer to ***Appendix D*** for additional information on the shoreline stabilization that is being proposed as mitigation for the project impacts.

### 7. Water Supply/Groundwater

Summary: The study area includes four aquifers in Maryland and eight aquifers in Virginia. Potential impacts from the build alternates would be similar and would be caused by runoff associated with the roadway approaches to a new bridge. Sediment and erosion control plans and stormwater best management practices implemented during construction would minimize changes in ground water quality.

#### a. Existing Conditions

Four major water-bearing aquifers underlie the Charles County portion of the study area. Sloping from west to east, they are the Patuxent, Patapsco, and Magothy formations of the Cretaceous system, and the Aquia Greenstone Formation of the Tertiary system. Replenishment of water in the underground aquifers is provided by precipitation falling in the outcropping area of the formation and filtering downward.

The *King George County 2006 Comprehensive Plan* lists eight aquifers and confining units located in the Fall Zone: Unconfined Aquifer, Nanjemoy – Marlboro Confining Unit, Aquia Aquifer, Middle Potomac Confining Unit, Middle Potomac Aquifer, Lower Potomac Confining Unit, Lower Potomac Aquifer, and Bedrock. Additional information on project area aquifers is located in the *Nice Bridge Improvement Project Natural Environmental Technical Report* located on the attached CD.

### b. Potential Effects

Project-related effects to groundwater are not anticipated with the No-Build Alternate. Impacts from the build alternates would be minor because they would not involve substantial excavation into groundwater aquifers. Any excavation during construction may encounter and/or affect areas with shallow groundwater depths. These activities may increase the potential for contamination being introduced into the groundwater system. Once construction of the new bridge and approach roadways is complete, runoff from the roadways would be expected. Runoff conditions can also introduce undesirable materials, including solid particles and chemicals, into the water table by way of permeation.

### c. Avoidance, Minimization and Mitigation Measures

Impacts to groundwater from bridge construction activities would be kept to a minimum through the implementation of BMPs, including stormwater management ponds and biofiltration systems. Both stormwater management ponds and biofiltration systems slow runoff velocities and filter out roadway contaminants, reducing the amount of contaminants entering streams, wetlands, and ultimately groundwater.

## 8. Aquatic Habitat and Wildlife

Summary: Primary impacts to aquatic biota from the build alternates would be impacts to stationary benthic organisms and fish mortality during construction of a bridge (including dredging) and demolition. All of the build alternates have the potential to affect the waterfowl concentration areas but direct impacts are unlikely. None of the alternates would affect SAV or oyster beds. Avoidance and minimization techniques will continue to be considered in the planning and design phases of the project.

### a. Existing Conditions

***Aquatic Biota***

Aquatic biota diversity within the Lower Potomac River and its tributaries, include a wide range of fish, shellfish, benthic species, and algae. According to the *Environmental Atlas of the Potomac Estuary* (1979), the study area is located within the mid-estuary zone with salinities between the low to mesohaline regions (three to seven parts-per-thousand (ppt) and seven to ten ppt, respectively), depending on the time of year. Located in a mid-temperate zone, the Potomac River serves as the northern and southern most range limits for many aquatic species. Subsequently, the area around the Nice Bridge includes the presence of five different categories of fish: freshwater (non-tidal water), estuarine (tidal waters with low salinity), anadromous/semi-anadromous (live at sea, spawn in fresh water), marine (sea), and catadromous (live in fresh water, spawn at sea).

MD DNR has documented anadromous and semi-anadromous fish species spawning in many of the streams within the study area. The documented species include yellow perch (*Perca flavescens)*, white perch (*Morone americana*), herring species (*Alosa sp.*), and striped bass (*Morone saxatilis*). Other likely anadromous or semi-anadromous species present in the study area may include alewife (*Alosa pseudoharengus*), American shad (*Alosa sapidissima*), hickory shad (*Alosa mediocris*), and gizzard shad (*Dorosoma cepedianum*). Some of the fish species

listed are found primarily in the mainstem of the Potomac River, where as others are typical of tidal and non-tidal tributaries to the Potomac River.

Marine fish species, typically present in the summer months, can be divided into two groups: estuarine-dependent and summer transient. The former requires that a portion of their life cycle occur within the estuary, acting mostly as a nursery. Species such as Atlantic menhaden *(Brevoortia trannus)* and bluefish (*Pomatomus saltatrix*) are considered estuarine-dependent. Summer transient species, such as cownose rays (*Rhinoptera bonasus*) or Atlantic needlefish (*Strongylura marina*), may periodically pass within the Potomac River in the summer where salinity levels are close enough to oceanic or coastal waters. Only one species within the study area, American eel (*Anguilla rostrata*), is considered a catadromous species. Unlike anadromous fish, this species lives most of their lives in fresh or estuarine waters and return to the ocean to spawn. The *Nice Bridge Improvement Project Natural Environmental Technical Report*, located on the attached CD, includes a comprehensive list of common species present in the Lower Potomac River.

Fisheries data were also obtained from the Potomac River Fisheries Commission (PRFC). Yearly harvest data for the study area, known as landings, include the finfish species, crabs, and oysters. Other than fish, aquatic biota consists of both freshwater and estuarine species including shellfish, benthic species, phytoplankton, and algae. Shellfish species of commercial value include blue crab (*Callinectes sapidus*), brackish water clam (*Rangia cuneata*), and eastern oyster (*Crassostrea virginica*). Soft-shell clams (*Mya arenaria*), once a viable commercial species, are present sporadically throughout the Lower Potomac River. For a complete list, please refer to the *Nice Bridge Improvement Project Natural Environmental Technical Report.*

***Submerged Aquatic Vegetation***

Submerged Aquatic Vegetation (SAV) includes seagrasses and aquatic plants which provide nursery and breeding habitat for many aquatic biota. SAV locations within the study area are commonly found in shallow, gentle-current water bodies with silt and sandy bottoms. SAV was present on both the Maryland and Virginia shores of the Nice Bridge in 1994 and 1995, and the Virginia side only from 1996 to 1999. No SAV was present on either shore from 2000 to 2006.

***Waterfowl Concentration Areas***

Based on correspondence with MD DNR, the waters of the Potomac River (one-half mile to the north and south of the Nice Bridge) have been identified as known historic waterfowl concentration areas. These areas may feature concentrations of one or more species of molting or nesting ducks or geese that have been observed during more than one year. Concentration area boundaries are approximate as the number of birds fluctuates year to year. Waterfowl common in the study area include, but are not limited to, diving ducks, such as common goldeneye (*Bucephala clangula*) and canvasback (*Aythya valisineria*), lesser and greater scaup (*Aythya affinis* and *Aythya marila*), and buffleheads (*Bucephala albeola*) (Charles County Department of Planning and Growth Management, June 2001). Recent MD DNR records for the known historic concentration area around the Nice Bridge include canvasback (*Aythya valisineria*), red-breasted mergansers (*Mergus serrator*), tundra swan (*Cygnus columbianus*), and scaup (*Aythya marila*) (MD DNR correspondence 2008, ***Appendix B***).

Records obtained from MD DNR identify the presence of double-crested cormorants (*Phalacrocorax auritus*) nesting on the existing Nice Bridge during breeding season. No other waterbird species is known to nest on the bridge. Coordination with MD DNR reveals that the cormorants have been nesting on the bridge for several years. MD DNR's management strategy includes encouraging the cormorants to use more natural structures, rather than bridges because droppings from the birds can cause corrosive damage bridges. The presence of the birds on the bridge can distract drivers leading to vehicular crashes. As part of their effort to entice this species to use natural sites, MD DNR has been working with the Authority to physically relocate unpopulated nests from the existing Nice Bridge. These efforts include breaking any nests apart, unless fledglings or eggs are present.

***Oyster Beds***

There are no oyster beds in the vicinity of the Nice Bridge. The nearest oyster beds are located approximately one mile north and south of the existing Nice Bridge. According to MD DNR, the portion of the Potomac River within the study area includes several natural oyster beds including Pascahanza, Lower Cedar Point, and Lower Cedar Point Addition.

### b. Potential Effects

***Aquatic Biota***

Alternate 1 (No-Build) would have no impact on aquatic biota. Primary impacts to aquatic biota from the build alternates would be impacts to stationary benthic organisms and fish mortality during construction of a bridge (including dredging) and demolition. Mortalities would result from a loss of natural habitat due to the placement of pilings and other in-stream structures. A temporary loss of bottom substrate habitat would occur from dredging. Bridge construction activities are not anticipated to result in long term impacts to commercial fish or shellfish species.

Short-term construction impacts from new bridge construction, principally dredging operations, could temporarily displace fish and benthic populations as increased sediment loads enter the river. Pile driving could also kill or injure fish in the immediate vicinity of the pile driving construction activity.

***Submerged Aquatic Vegetation***

Although historic data indicate SAV presence within the immediate vicinity of the Nice Bridge, current data (VIMS 2005-2007) indicate that SAV is not in the area. Therefore, there are no impacts anticipated with the No-Build or build alternates.

***Waterfowl Concentration Areas***

Alternate 1 (No-Build) would not impact waterfowl concentration areas within the study area. All of the build alternates have the potential to affect the waterfowl concentration areas but direct impacts are unlikely because the waterfowl can move and a new bridge would be constructed near the existing bridge.

***Oyster Beds***

No impacts to oyster beds are anticipated for any of the alternates. The closest oyster beds to the existing Nice Bridge are approximately one mile to the north and south and would therefore not be impacted by the construction of the new bridge alternates. However, dredging operations necessary for bridge construction can entrain and destroy oyster eggs and larvae, particularly during spawning and spat periods of the year (June through September). Larval oysters may become starved by ingesting sediment particles from increased sedimentation. This may also cause a delay in spat metamorphosis because the substrate may be covered with loose sediments and therefore may be unstable.

### c. Avoidance, Minimization and Mitigation Measures

***Aquatic Biota***

As the project continues, additional efforts would be made to identify construction methods to avoid and minimize aquatic biota mortality associated with dredging, pile construction and demolition. Dredging efforts for both bridge demolition and construction will require environmentally sensitive methods. If a build alternate is selected, the Authority would consider various minimization techniques including those used as part of the Woodrow Wilson Bridge Project during the design phase. The VA DGIF provided the following guidelines for the Authority to consider in minimizing impacts to aquatic biota:

- No in-stream work in the Potomac River, Gambo Creek and/or their tributaries from February 15 through June 30 of any year;
- Conduct in-stream activities during low or no-flow conditions;
- Using non-erodible cofferdams to isolate the construction area;
- Blocking no more than 50% of the streamflow at any given time;
- Stockpiling excavated material in a manner that prevents reentry into the stream;
- Restoring original streambed and stream bank contours;
- Revegetating barren areas with native vegetation; and
- Implementing strict erosion and sediment control measures.

Other minimization efforts will focus on methods for demolition of the existing bridge, if applicable. An environmentally sensitive approach will be considered wherever feasible and will include time of year restrictions to protect various aquatic species. For additional information, please refer to the *Nice Bridge Improvement Project Essential Fish Habitat Report* located on the attached CD.

Impacts to stream channels would require a Section 404 permit from the USACE, as well as a Section 401 water quality certification from MDE. A waterway construction permit from MDE would also be required for work in streams and floodplains.

***Submerged Aquatic Vegetation***

Any future design efforts will include yearly data reviews to determine if SAV has been reestablished adjacent to the Nice Bridge. Any minimization and mitigation efforts will be coordinated with appropriate State and Federal agencies and any necessary mitigation will be assessed at that time.

***Waterfowl Concentration Areas***
If possible, any build alternate would be located in a manner that avoids disturbance of waterfowl staging and concentration areas. Construction is typically restricted during the following time frames:

- Diving Ducks: no disturbance between November 15 through March 30; and
- Dabbling Ducks and Canada Geese: no disturbance between October 1 through March 31.

Further avoidance or minimization for nesting would only be necessary if either MD DNR's policy changes to favor bridges or if another colonizing species were to attempt to nest on the bridge. Coordination efforts will continue throughout the planning phase with MD DNR to determine if the status of waterbird colonies on the existing Nice Bridge has changed.

***Oyster Beds***
Sediment control devices to minimize the effects of sedimentation on oyster beds in the study area may include sediment traps, silt fences, sedimentation basins, and interception channels.

## 9. Terrestrial Habitat and Wildlife

Summary: The build alternates would impact forests; impacts range from 0.5 to 1.9 acres. Therefore, terrestrial habitats would also be impacted. No direct impacts to FIDS habitat or Important Bird Areas are anticipated with any of the alternates.

### a. Existing Conditions

***Forest Communities***
Two different forest cover types are found within the Maryland and Virginia portions of the study area: Oak-Pine and Oak-Hickory. The dominant and co-dominant canopy species are similar for both forest cover types, and include species such as eastern white pine (*Pinus strobus)*, northern red oak (*Quercus rubra*), shortleaf pine (*Pinus echinata*), Virginia pine (*Pinus virginiana*), post oak (*Quercus stellata*), black walnut (*Juglans nigra*), and red maple (*Acer rubrum*).

Within the project area, eleven forest stands were identified as part of the forest characterization study (***Table III-10*** and ***Appendix A***). Stands are defined as forested areas at least 10,000 square feet in size with a minimum width of 35 feet. All of the stands are comprised of dominant and co-dominant species from both the Oak-Pine and Oak-Hickory cover types.

Maryland DNR defines large and specimen trees as typically designated by their age, beauty, history, or community significance. There are no specimen (or champion) trees within the Maryland side of the study area. A review of the Virginia Big Tree Program database determined that no specimen or big trees, per Virginia's classification, are located within the study area.

***Terrestrial Wildlife***

The study area includes diverse terrestrial habitat including: deciduous forest, coniferous forest, and shrub-scrub land. Terrestrial and semi-aquatic species found in the study area are listed in ***Table III-11***. Some wildlife is limited to terrestrial habitat whereas others benefit from, or require, a combination of both terrestrial and aquatic habitats. A large number of wildlife described in this section spends a majority of their time associated with semi-aquatic or aquatic habitat such as the Potomac River, its tributaries, or vegetated wetlands.

***Table III-10:*** *Forest Stands*

| Forest Stand | Location | Average DBH* | Size | Dominant Species | Co-Dominant Species |
|---|---|---|---|---|---|
| MD -1 | North of US 301 | 16-20 inches | 15 acres | sweetgum<br>white oak<br>southern red oak | sweetgum<br>black cherry<br>hickory |
| MD-2 | North of US 301 and south of the Aqua-Land Access Road | 16-20 inches | > one acre | sweetgum<br>white oak<br>southern red oak | sweetgum<br>black cherry<br>hickory |
| MD-3 | North of US 301 within the vicinity of the Potomac Gateway Welcome Center | 16-20 inches | 7 acres | sweetgum<br>white oak<br>southern red oak | sweetgum<br>black cherry<br>hickory |
| VA-1 | North of US 301 and east of the Barnesfield Park entrance | 4-9 inches | 5 acres | young loblolly pine | sweetgum |
| VA-2 | East of Stand 1 (VA-1), and extending to the Potomac Gateway Welcome Center | 12-18 inches | 8 acres | sweetgum | southern red oak<br>red maple |
| VA-3 | 300 yards north of the Potomac Gateway Welcome Center | 4-9 inches | 1 acre | young loblolly pine | sweetgum |
| VA-4 | Adjacent to Stand 3 (VA-3) by Roseland Road | 4-9 inches | 4 acres | sweetgum | --- |
| VA-5 | Between Roseland Road and the Potomac River | 12-18 inches | 8.4 acres | sweetgum | --- |
| VA-6, VA-7, and VA-8 | 3 stands located within the Dahlgren property | Unknown | 3-20 acres | loblolly pine<br>sweet gum | oaks and other hardwood species |

***** *DBH = Diameter at Breast Height*

***Table III-11:*** *Wildlife Potentially Present Within the Study Area*

| Common name | Scientific Name | Common name | Scientific Name |
|---|---|---|---|
| white-tailed deer | *Odocoileus virginianus* | white-footed mouse | *Peromyscus leucopus* |
| Eastern rabbit | *Sylvilagus floridanus* | marsh rice rat | *Oryzomys palustris* |
| raccoon | *Pyrocon lotor* | meadow vole | *Microtus pennsylvanicus* |
| mink | *Mustela vison* | least shrew | *Cryptotis parva* |
| red fox | *Vulpes vulpes* | star-nosed mole | *Condylura cristata* |
| gray fox | *Urocyon cinereoargentus* | muskrat* | *Ondatra zibethica* |
| opossum | *Didelphis marsupialis* | nutria* | *Myocaster coypus* |
| gray squirrel | *Sciurus carolinensis* | beaver* | *Castor canadensis* |
| house mouse | *Mus musculus* | river otter* | *Lutra canadenis* |

* Semi-Aquatic Species: These four mammal species are listed under the terrestrial wildlife section, however, are often considered semi-aquatic species. *Source: Environmental Atlas of the Potomac Estuary* (1979)

Reptiles and amphibians common to the study would be found along the Potomac River, its tributaries, wetlands, and surrounding forest habitat area. Common reptiles and amphibians likely to be present in the study area are provided in ***Table III-12***.

***Table III-12:*** *Potential Reptiles and Amphibians Present Within the Study Area*

| Common Name | Scientific Name | Common Name | Scientific Name |
|---|---|---|---|
| Northern red-lined salamander | *Eurycea bislineata* | common snapping turtle | *Chelydra serpentine* |
| red salamander | *Pseudotriton rubber* | common musk turtle | *Sternotherus odoratus* |
| American toad | *Bufo americanus* | Eastern box turtle | *Terrapene c. Carolina* |
| fowlers' toad | *Bufo woodhousii fowleri* | black rat snake | *Elaphe obsolete obsolete* |
| Northern cricket frog | *Acris crepitans* | Northern water snake | *Nerodia sipedon sipedon* |
| bull frog | *Rana catesbeiana* | Eastern garter snake | *Thamnophis sauritus sauritus* |
| green frog | *Rana clamitans melanota* | Eastern worm snake | *Carphophis constrictor constrictor* |
| pickerel frog | *Rana palaustris* | | |

*Source*: *MD DNR MBSS County Assessment*

***Forest Interior Dwelling Species (FIDS)***

There are no areas that meet the MD DNR criteria for FIDS habitat within the Nice Bridge project area. However, existing forests within the project area may serve as resting and stopover areas for FIDS. A listing of FIDS likely to be found within the study area, including coastal waters, is provided in the *Nice Bridge Natural Environmental Technical Report* located on the attached CD.

The nearest Important Bird Area (IBA), the Lower Potomac IBA, is located north of to the study area and extends along the Potomac River shoreline in Virginia from Mathias Point to north of Fort Belvoir. Currently, this IBA area supports a significant community of piscivorous (i.e., fish-eating) bird species, including bald eagles.

***Invasive Species***

The Commonwealth of Virginia in Executive Order 13112 defines an "invasive species" as a species that is 1) non-native (or alien) to the ecosystem under consideration, and 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health. In accordance with Executive Order 13112, the potential for the establishment of invasive terrestrial or aquatic animal or plant species during construction of the proposed project would be minimized by following provisions in VDOT's Road and Bridge Specifications. These provisions require prompt seeding of disturbed areas with seeds that are tested in accordance with the Virginia Seed Law and VDOT's standards and specifications to ensure seed mixes are free of noxious species. While the project ROW proposed with the build alternates is vulnerable to the colonization of invasive plant species from adjacent properties, implementation of the stated provisions would reduce the potential for establishment and proliferation of invasive species.

### b. Potential Effects

***Forest Communities***

Alternate 1, the No-Build Alternate, would not impact any forests. Impacts to forests from the build alternates are summarized in ***Table III-13.*** Alternate 7 has the greatest amount impacts among the build alternates (1.8 acres without and 1.9 with the bike/ped path option). The majority of the impacts would consist of either small isolated forest patches or existing forest edge of forest stands along US 301.

***Table III-13:*** *Impacts to Forest Communities Without (and With) Bike/Ped Path Options*

| Alternates | MD Forest Impacts (acreage) | VA Forest Impacts (acreage) | Total Forest Impacts |
|---|---|---|---|
| Alternate 1 – No-Build | 0.0 (0.0) | 0.0 (0.0) | **0.0 (0.0)** |
| Alternate 2 | 0.0 (0.0) | 0.5 (0.5) | **0.5 (0.5)** |
| Alternate 3 | 0.0 (0.0) | 0.5 (1.1) | **0.5 (0.5)** |
| Alternate 4 | 0.7 (0.7) | 0.4 (0.4) | **1.0 (1.0)** |
| Alternate 5 | 0.7 (0.7) | 0.4 (0.4) | **1.0 (1.0)** |
| Alternate 6 | 0.0 (0.0) | 0.7 (0.7) | **0.7 (0.7)** |
| Alternate 7 | 0.7 (0.8) | 1.1 (1.1) | **1.8 (1.9)** |

***Terrestrial Wildlife***

The northern build alternates would impact more terrestrial habitat than the southern alternates. The majority of the terrestrial wildlife impacts would be associated with the loss of forest cover. In general, all the build alternates that would expand the existing US 301 alignment and would have minimal impact on the wildlife communities. Road widening generally creates new edge habitat; however, the existing habitat is not fragmented because the US 301 roadway already exists.

In Maryland, on the north side of existing US 301, the habitat consists of forested edge habitat and lawn-like conditions surrounding the toll plaza. In Virginia, forest cover is evident on both sides of US 301 but maintained grass is the predominant cover on the south side. For both Maryland and Virginia, it is anticipated that any of the build alternates, and subsequent widening of the US 301 roadway, would further impair the passage of wildlife between areas of adjacent habitat. The existing US 301 roadway currently serves as a barrier for most wildlife to move from one side of the highway to the other.

***Forest Interior Dwelling Species***

No direct impacts to FIDS habitat or Important Bird Areas are anticipated with any of the alternates.

### c. Avoidance, Minimization and Mitigation Measures

The project efforts to minimize impacts to forest communities have included:

- Reconnecting the new bridge with the approach roadways as soon as possible; and
- Sound bridge and roadway design practices minimizing the cutting and clearing of trees.

Within Maryland, the primary approach to mitigating forest loss would be through compliance with the Maryland Reforestation Law. Enacted in 1989 and amended in 1992, the Maryland Reforestation Law was created to preserve existing forested lands and protect Maryland forests from being cleared without replacement. When prudent minimization efforts have been considered and one acre or more of forest clearing is still required, replacement of the forests must occur on a one-to-one acre basis. The constructing agency is required to locate state or publicly-owned land of equivalent size to be reforested and coordinate reforestation efforts with MD DNR. Forest impacts within the Virginia portion of the study area would be coordinated with the Virginia Department of Forestry. However, forest impacts from highway projects are exempt from mitigation requirements in Virginia.

### 10. Rare, Threatened, and Endangered Species (RTE)

Summary: There are three fish species protected under the Endangered Species Act or the Magnuson-Stevens Fishery Conservation and Management Act: the shortnose sturgeon, summer flounder, and bluefish. No impacts to state-listed species are anticipated. Impacts within the Virginia bald eagle concentration zones are anticipated, especially with the northern alternates. Impacts to peregrine falcons could occur with the build alternates if there is any disruption to nests on the existing bridge during the breeding season. Avoidance and minimization techniques will be considered as the project moves forward during the planning and design phases. Coordination will also continue with the USFWS and the Maryland and Virginia.

#### a. Existing Conditions

Coordination with MD DNR (dated October 12, 2006) identified bald eagle nests in study area. The correspondence also identified habitat for rare, threatened, and endangered (RTE) species including: flier fish species (*Centrarchus macropterus*) and rainbow snake (*Farancia erythrogramma*). Coordination with the VA DGIF (dated November 20, 2007) indicated the presence of the state-threatened upland sandpiper (*Bartramia longicauda*) and the state-threatened loggerhead shrike (*Lanius ludovicianus*). Additional information regarding these species can be found in the *Nice Bridge Natural Environmental Technical Report*. A detailed survey may be required by MD DNR and/or the VA DGIF prior to any construction activities.

Based on agency coordination, bald eagle nests are located in both the Maryland and Virginia portions of the study area. In addition, there is a bald eagle wintering concentration zone along the Virginia shoreline. The zone consists of the width of the shoreline, extending north from the Nice Bridge around Mathias Point to Chotank Creek. Bald eagles are currently de-listed under Endangered Species Act; however, they are still recognized as an RTE species at the state level, and are protected by the federal Bald Eagle Protection Act (Eagle Act) (16 U.S.C. §§668-668d) and the Migratory Bird Treaty Act (MBT Act) (16 U.S.C. §§703-712). Currently, thirteen bald eagle nesting sites have been identified within the study area (four in Maryland and nine in Virginia). The closest nest is located over one-half mile north of the existing Nice Bridge toll plaza. The other nests are scattered throughout the study area in Maryland and Virginia.

The USFWS noted that peregrine falcons (*Falco peregrinus*) may have nested on the existing Nice Bridge. Peregrine falcons are protected under the MBT Act, which prohibits disturbing the nest(s) during breeding and nesting season. Peregrine falcon breeding and nesting season extends from approximately mid-April through August.

There are three fish species protected under the Endangered Species Act or the Magnuson-Stevens Fishery Conservation and Management Act that likely occur within the study area. These federally managed species of importance include the shortnose sturgeon (*Acipenser brevirostrum*), summer flounder (*Paralichthyus dentatus*), and bluefish *(Pomatomus saltatrix).*

***Biological Assessment of the Shortnose Sturgeon***

The National Marine Fisheries Service (NMFS) indicates that the shortnose sturgeon, a federally listed endangered species, is present within the study area and may use this area for over-wintering, foraging, or pre-spawning activities. In accordance with Section 7 of the Endangered Species Act, the Authority prepared a *Biological Assessment for the Shortnose Sturgeon*, located on the attached CD, to evaluate the potential impact of the Nice Bridge Improvement project on the shortnose sturgeon.

Habitat for foraging shortnose sturgeon also occurs within the study area. Shortnose sturgeon feed on benthic organisms in mud substrates or off plant surfaces. Most sturgeon feed in water depths of one to five meters, but may forage as deep as 25 meters (Dadswell 1984).

Spawning for shortnose sturgeon occurs in freshwater with spawning migrations beginning in April and May in Mid-Atlantic rivers (NMFS 1998). Spawning grounds occur in fast flow regions (40-60 cm/s) with gravel or rubble bottoms, and are generally well upstream and in freshwater (Dadswell 1984). The study area does not provide suitable habitat for sturgeon spawning; however, it is suitable for spawning migrations.

***Essential Fish Habitat Evaluation for Bluefish and Summer Flounder***

The Potomac River has been identified as Essential Fish Habitat (EFH) for the bluefish (juvenile) and summer flounder (juvenile and adult), as noted in ***Table III-14.*** Additional information regarding the bluefish and summer flounder can be found in the *Nice Bridge Improvement Project Essential Fish Habitat Report* located on the attached CD.

***Table III-14:*** *Summary of Essential Fish Habitat (EFH) in the Study Area*

| Species | Life Stage | | | | Habitat/Notes |
|---|---|---|---|---|---|
| | Eggs | Larvae | Juveniles | Adults | |
| bluefish *(Pomatomus saltatrix)* | | | X | | Open waters: Pelagic and bottom waters |
| summer flounder *(Paralichthys dentatus)* | | | X | X | Open waters: Demersal (bottom) waters and estuaries in flats, channels, salt marsh creeks, and eel grass beds<br><br>Emergent wetlands: Habitat of Particular Concern include native species of macroalgae, seagrasses, and fresh and tidal macrophytes |

*Source: Nice Bridge Essential Fish Habitat Assessment Report*

### b. Potential Effects

No impacts to either the flier fish or rainbow snake are anticipated. The flier fish has been primarily identified within Mill Creek, which would not be impacted by any of the build

alternates. However, protection measures would be in place to protect all fish species within close proximity to bridge construction.

None of the bald eagle nests are expected to be directly impacted by any of the proposed alternates. Impacts within the Virginia bald eagle concentration zones are anticipated, especially with the northern alternates. Coordination will continue in the planning and design phases with the USFWS and the VA DGIF.

Impacts to peregrine falcons could occur with the build alternates if there are any nests on the existing Nice Bridge during the breeding season. The noise level associated with construction of a new bridge in close proximity could impact the falcons, including interference with breeding activities.

As stated in the *Biological Assessment Report for the Shortnose Sturgeon*, impacts to the shortnose sturgeon's habitat due to construction could include increased turbidity (or churned up sediment in the water) as a result of sedimentation from erosion or dredging activities, pollution from disturbed sediments, and runoff from impervious surfaces. Increased turbidity could deplete dissolved oxygen within sturgeon habitat. Dissolved oxygen levels of five parts per million (ppm) or lower are known to cause stress in aquatic life, and levels of 2.5 milligrams per liter (mg/L) and lower are known to cause mortality in adult sturgeon. Sediment deposits and turbidity from dredging could also disrupt the shortnose sturgeon's foraging habitat. Since the study area has suitable foraging habitat for the species, any impacts to substrates or sediment deposition in the area could cover benthic organisms and affect foraging areas for the shortnose sturgeon.

The project is not likely to adversely affect the EFH for the juvenile bluefish, or the juvenile and adult summer flounder based on best available scientific data. Construction impacts to EFH could include increased turbidity due to sedimentation from erosion or dredging activities, pollution from disturbed sediments, and runoff from impervious surfaces. Increased turbidity can deplete dissolved oxygen within EFH. As a pelagic species, bluefish are not well adapted to inadequate oxygenated (hypoxic) conditions, and summer flounder are highly sensitive to dissolved oxygen levels of less than three ppm, as well as areas of significant pollution. Turbid water also limits vision in fishes, which can inhibit the predation success of bluefish and summer flounder. The project, in consultation with NMFS, would implement appropriate protection measures to minimize any potential effects to EFH within the project area.

The Maryland Nongame and Endangered Species Conservation Act (COMAR 08.03.08) requires the protection of state listed threatened and endangered species. The Virginia Endangered Species Act (§29.1-563 - §29.1-570) and the Virginia Endangered Plant and Insect Species Act (Chapter 39 §3.1-1020 - §3.1-1030) protect federally and state listed endangered or threatened species in Virginia. Two state agencies, the VA DGIF and the Virginia Department of Agriculture and Consumer Services (VA DACS) have legal authority for endangered and threatened species and are responsible for their conservation. A third state agency, the VA DCR Division of Natural Heritage produces an inventory of the Commonwealth's natural resources, and maintains a data bank of ecologically significant sights.

### c. Avoidance and Minimization Measures

Appropriate avoidance and minimization efforts would be employed to avoid both the bald eagle concentration zones and the peregrine falcon nesting areas, as well as to reduce the likelihood of adverse impacts to adjacent habitat systems outside the study area. These efforts would include employing BMPs to reduce sedimentation and erosion during all phases of the project.

Bald eagles are sensitive to human activities during their breeding and nesting season. If agitated by human activities, bald eagles may inadequately construct or repair their nest, expend energy defending the nest rather than tending to their young, or abandon their nest altogether. Disruption, destruction, or obstruction of roosting and foraging areas can also negatively affect bald eagles. In addition, the USFWS published the following general guidelines to avoid disturbing nesting bald eagles:

- Keeping a distance between the activity and the nest (distance buffers);
- Maintaining preferably forested (or natural) areas between the activity and around nest trees (landscape buffer); and,
- Avoiding certain activities during breeding season.

Additional USFWS guideline recommendations include:

- Protect and preserve potential roost and nest sites by retaining mature trees and old growth stands, particularly within one-half mile from water;
- Where bald eagles are likely to nest in human-made structures and such use could impede operation or maintenance of the structures or jeopardize the safety of the eagles, equip the structure with either (1) devices engineered to discourage bald eagles from building nests, or (2) nesting platforms that will safely accommodate bald eagle nests without interfering with structure performance; and,
- Do not intentionally feed bald eagles.

Coordination with the USFWS regarding the peregrine falcons will continue through the planning process in order to avoid, minimize, and mitigate any impacts that may occur to this peregrine falcon population.

The Nice Bridge Improvement Project would implement specialized protection measures to minimize any potential effects to shortnose sturgeon within the study area. Standard and specialized construction methods for avoidance and minimization will be finalized as the project design progresses. Specialized construction methods may include time-of-year restrictions, conditional blast design requirements, and blast pressure wave maximums.

Methods employed to avoid and minimize impacts to the bluefish and summer flounder are similar to avoidance and minimization efforts of the shortnose sturgeon. Standard and specialized construction methods for avoidance and minimization would be considered as the project design progresses. Potential water quality impacts due to construction and the increase in impervious surfaces related to the build alternates would be managed through implementation of erosion and sediment control BMPs (based on Maryland and Virginia stormwater management regulations) to reduce potential sedimentation within the study area.

## 11. Unique and Sensitive Areas

Summary: No impacts to Natural Heritage Areas, in either Maryland or Virginia, are anticipated for any of the alternates. Reforestation requirements will promote Green Infrastructure efforts in the study area.

### a. Existing Conditions

***Natural Heritage Areas***

Correspondence with MD DNR dated October 12, 2006 indicates that there are no Maryland Natural Heritage Areas (NHAs) or Virginia Natural Heritage Preserve Areas (NHPAs) within the study area.

***Green Infrastructure***

Based on the MD DNR Green Infrastructure Atlas, three corridors and one hub were identified within the study area. These include land in the following locations:

- Forested corridor associated with the headwaters of Cliffton Creek north of the Nice Bridge;
- Forested corridor associated with the headwaters of Pasquahanza Creek south of the Morgantown Generating Power Plant;
- Allens Fresh Run NHA Hub (part of Zekiah Swamp Natural Environmental Area); and,
- Popes Creek NHA (Riparian forest corridor associated with Popes Creek and its tributaries).

### b. Potential Effects

No impacts to Natural Heritage Areas or Green Infrastructure, in either Maryland or Virginia, are anticipated for any of the alternates. With no impacts anticipated, avoidance and minimization measures are not appropriate for this project. Any reforestation requirements due to tree and forest loss (described in ***Section III.C.9***) could consider locations that would promote Green Infrastructure efforts such as buffer enhancement, forest connectivity (FIDS habitat development), and reforestation near, or adjacent to, existing hubs and corridors.

## 12. Chesapeake Bay Critical Areas

Summary: Maryland and Virginia have laws protecting Chesapeake Bay Critical Areas or tidally influenced lands along the coastline of the Potomac River and other tidal water bodies in the study area. All of the build alternates have the potential to affect land within the Critical Areas, with the majority of the impacts in Maryland. Alternates 4, 5 and 7 would result in the most impacts to Critical Areas.

### a. Existing Conditions

Chesapeake Bay Critical Areas were designated to foster more sensitive land use and development activity along the shoreline of the Chesapeake Bay, its tributaries, and its tidal wetlands, and to ensure the implementation of appropriate long-term conservation measures to protect important habitats. Maryland and Virginia have separate statutes protecting tidal

coastlines. Although the official terms used to classify these areas are different, for the purpose of this study, they are discussed as "Critical Areas." Additional information can be found in the *Nice Bridge Improvement Project Natural Environmental Technical Report* located on the attached CD.

Critical Area in Maryland includes the tidal shorelines of the Potomac River, tributaries, and lands under these waters as well as all land within 1,000 feet of the landward edge of tidal waters. There is also a 100-foot buffer on the landward edge of tidal waters and wetlands for protection from development. Critical Areas within the Virginia portion of the study area include the associated tidal wetlands, 100-foot buffer and shoreline of the Potomac River and tributaries in the study area (***Figure III-7***).

### b. Potential Effects

The No-Build Alternate (Alternate 1) would have no impact on Critical Areas within the study area. Each of the build alternates would impact Critical Area in both Maryland and Virginia (***Table III-15)***.

***Table III-15:*** *Impacts to Critical Area Within the Study Area Without (and With) Bike/Ped Path Options (in acres)*

| State | Alt. 1 | Alt. 2 | Alt. 3 | Alt. 4 | Alt. 5 | Alt. 6 | Alt. 7 |
|---|---|---|---|---|---|---|---|
| MD | 0 (0) | 14.5 (14.5) | 14.5 (14.5) | 24.4 (24.4) | 24.5 (24.5) | 14.2(14.2) | 24.2 (24.3) |
| VA | 0 (0) | 3.3 (3.4) | 3.4 (3.5) | 1.9 (2.3) | 2.2 (2.3) | 3.6 (3.6) | 2.2 (2.2) |
| ***Total*** | **0(0)** | **17.8(17.9)** | **17.9(18.0)** | **26.3(26.7)** | **26.7(26.8)** | **17.8(17.8)** | **26.4(26.5)** |

In Virginia, public roads and their associated structures are conditionally exempt from the *Chesapeake Bay Preservation Area Designation and Management Regulations*, provided they are constructed in accordance with (i) regulations promulgated pursuant to the Erosion and Sediment Control Law (§10.1-560 et seq. of the Code of Virginia) and the Virginia Stormwater Management Act (§10.1-603. 1 et seq. of the Code of Virginia), (ii) an ESCP and a SWM plan approved by the VA DCR, or (iii) local water quality protection criteria at least as stringent as the above requirements. All build alternates would meet criteria necessary for exemption, including preventing or otherwise minimizing encroachment into Critical Areas and adverse effects on water quality.

### c. Avoidance, Minimization and Mitigation Measures

Coordination with the Maryland Critical Area Commission will continue throughout the duration of the planning and design process to minimize and mitigate impacts within the Critical Area and would include compliance with all applicable laws protecting Critical Area. Any impacts within the Critical Area (including wetlands, forested areas, and aquatic habitats) would require mitigation in accordance with the Critical Area Act. A Project Application would be prepared for the project with a request for Critical Area Commission approval. The project team will also follow the development of guidance from Federal Agencies in response to Executive Order 13508 of May 12, 2009, Chesapeake Bay Restoration and Protection to ensure that the Nice Bridge Improvement Project is in compliance with any new requirements.

## D. NOISE

Summary: The results of the noise analysis shows that NSA 3 (Dahlgren Wayside Park) would experience design year noise levels equal to or exceeding the impact criteria for all of the proposed alternates. Sound barriers were found to be feasible and reasonable for NSA 3 for Alternates 2, 3, 4, 5 and 7. It is the Authority's policy to make final decisions on noise abatement during the final design phase of project development. At that time, the Authority would also consider barrier and non-sound barrier options, such as landscaping, for noise abatement.

### 1. Existing Conditions

There are currently no noise barriers within the Nice Bridge study area. Three Noise Sensitive Areas (NSAs) were delineated in the study area to encompass the noise-sensitive land uses potentially affected by the proposed improvements. A total of four receptors were identified to represent noise sensitive land uses within the three NSAs. Receptors are located in common use areas nearest to US 301 (***Figure III-8***).

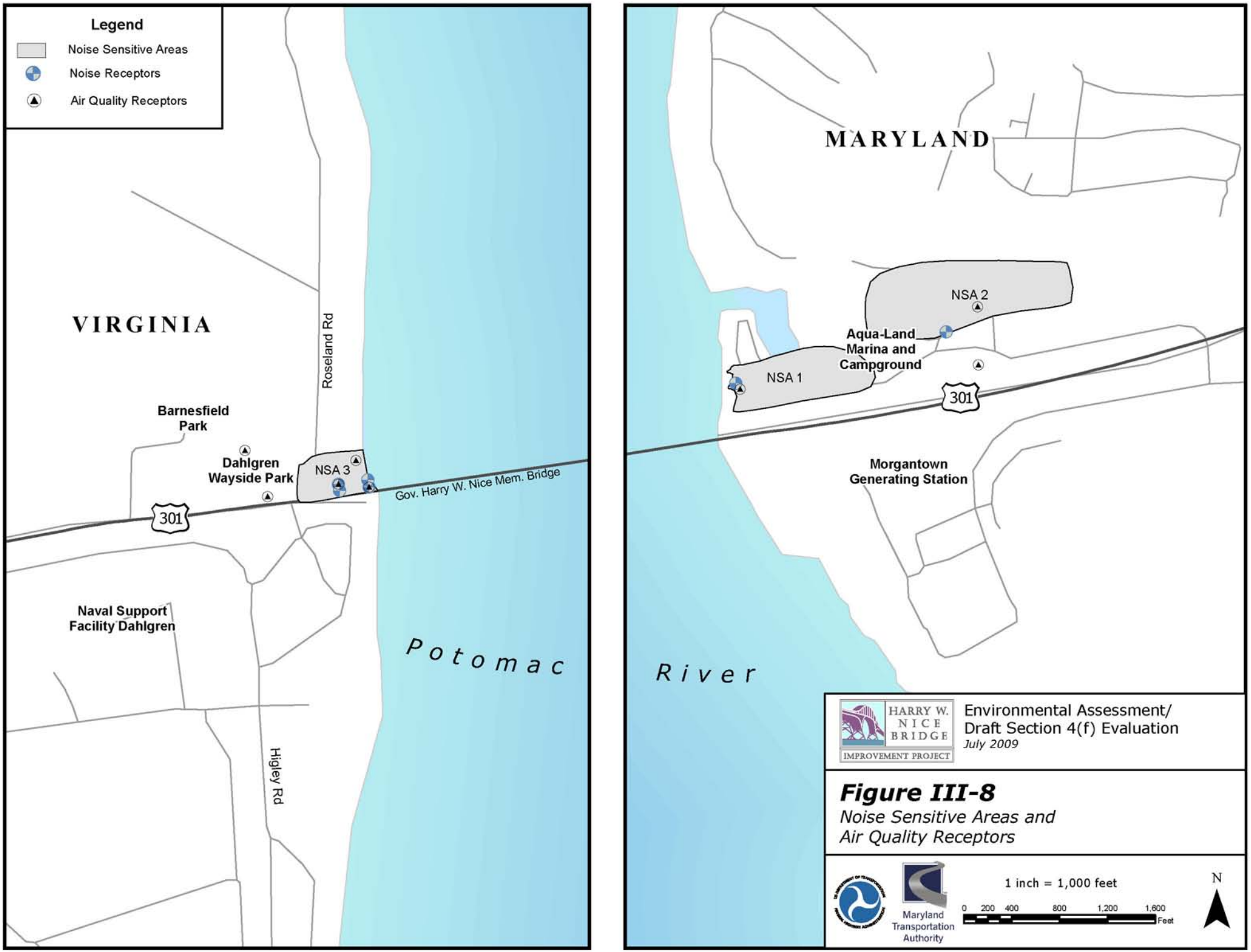
- NSA 1 (represented by Receptor 1-1) consists of the marina area within the Aqua-Land Marina and Campground.
- NSA 2 (represented by Receptor 2-1) consists of the campground (temporary and permanent residents) within the Aqua-Land Marina and Campground.
- NSA 3 (represented by Receptors 3-1 and 3-2) consists of the Dahlgren Wayside Park in Virginia. Receptors 3-1A and 3-2A replace Receptors 3-1 and 3-2 in Alternate 7 due to the northern alignment shift of this alternate.

For more detailed information about the noise analysis, please refer to the *Nice Bridge Improvement Project Noise Quality Technical Report* and *Addendum* located on the attached CD.

### 2. Impact Assessment

For purposes of this analysis, the Authority used the MD State Highway Administration's (SHA) Sound Barrier Policy methodology, dated May 11, 1998. The Nice Bridge Improvement Project is a Type I noise project as defined in 23 CFR 772. A Type I project provides evaluation of noise mitigation for projects that propose construction of a highway on new location or the physical alteration of an existing highway that significantly changes either the horizontal or vertical alignment, or increases the number of through-traffic lanes. The determination of traffic noise impacts is based on the relationship between the ambient noise levels, the predicted peak hour traffic noise levels, and the established noise abatement criteria in the study area. For this project, the applicable criteria are defined in 23 CFR 772 and subsequent memoranda. All receptors for NSA 1 were evaluated as Category C (i.e. commercial) and all receptors for NSA's 2 and 3 were evaluated as Category B (i.e. parks). Refer to the *Nice Bridge Improvement Project Noise Quality Technical Report* for additional information regarding criteria for each Category.

Existing noise levels at NSA 3 equal or exceed the MD SHA 66 dBA impact criterion established in the SHA Sound Barrier Policy used by the Authority in completing this noise analysis.


Legend
Noise Sensitive Areas
Noise Receptors
Air Quality Receptors
VIRGINIA
MARYLAND
Roseland Rd
Barnesfield Park
Dahlgren Wayside Park
NSA 3
Gov. Harry W. Nice Mem. Bridge
301
Naval Support Facility Dahlgren
Higley Rd
Potomac River
NSA 2
Aqua-Land Marina and Campground
NSA 1
Morgantown Generating Station
HARRY W. NICE BRIDGE
IMPROVEMENT PROJECT
Environmental Assessment/
Draft Section 4(f) Evaluation
July 2009
Figure III-8
Noise Sensitive Areas and
Air Quality Receptors
Maryland Transportation Authority
1 inch = 1,000 feet
0 200 400 800 1,200 1,600
Feet
N

Noise abatement or mitigation measures were investigated where the peak hour noise levels approached or exceeded the 67 dBA Federal Noise Abatement Criterion for Category B locations and 72 dBA for Category C locations. However, based on MD SHA's Sound Barrier Policy, 66 dBA is considered approaching the criteria for Category B and 71 dBA is considered approaching the criteria for Category C. Additionally, the policy calls for mitigation measures to be considered where build levels are at least 57 dBA and exceed the present ambient levels by 10 dBA or more.

The design year noise levels presented in ***Table III-16*** represent the noisiest hour(s) of the day in 2030. This hour usually coincides with the peak traffic hour. The combination of 2030 peak hour traffic and associated travel speeds resulted in the "worst-case" noise levels for this analysis.

***Table III-16:*** *Predicted Noise Levels for Existing, No Build and Design Year No-Barrier Conditions*

| NSA | Receptor | Receptor Location | | Design Year (2030) Noise Levels (dBA) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Existing [1] | No-Build [3] | Alt. 2 | Alt. 3 | Alt. 4 | Alt. 5 | Alt. 6 | Alt. 7 |
| 1 | 1-1 | Aqua-Land (Beach) | 58 | 58 | 61 | 62 | 63 | 63 | 60 | 65 |
| 2 | 2-1 | Aqua-Land (Campground) | 55 | 55 | 60 | 60 | 62 | 62 | 59 | 63 |
| 3 | 3-1 | Dahlgren Wayside Park (Beach) | 65 | 65 | 68 | 69 | displaced | displaced | 63 | displaced |
| | 3-2 | Dahlgren Wayside Park (Picnic Bench) | 67 | 67 | 71 | 71 | displaced | displaced | 67 | displaced |
| | 3-1A[2] | Dahlgren Wayside Park (Beach) | 62 | 62 | 66 | 67 | 70 | 70 | 63 | 74 |
| | 3-2A[2] | Dahlgren Wayside Park (Lawn Area) | 64 | 64 | 68 | 68 | 73 | 73 | 65 | displaced |
| | 3-3[2] | Dahlgren Wayside Park (Picnic Bench) | 64 | 64 | 68 | 68 | 72 | 72 | 65 | displaced |
| | 3-4[2] | Dahlgren Wayside Park (Picnic Bench) | 63 | 64 | 67 | 68 | 71 | 71 | 65 | displaced |
| | 3-5[2] | Dahlgren Wayside Park (Picnic Bench) | 62 | 63 | 67 | 67 | 70 | 70 | 64 | displaced |
| | 3-6[2] | Dahlgren Wayside Park (Picnic Bench) | 61 | 61 | 65 | 65 | 68 | 68 | 63 | 71 |
| | 3-7[2] | Dahlgren Wayside Park (Picnic Bench) | 59 | 59 | 64 | 64 | 66 | 66 | 62 | 69 |

Notes:
*Shaded cells denote noise impact.*
[1] Existing noise levels are predicted by model.
[2] Receptors added to model after calibration.
[3] No-Build traffic volumes capped at LOS D/E.

As indicated in ***Table III-16***, NSA 3 (Dahlgren Wayside Park) would experience No-Build design year noise levels equal to or exceeding the impact criteria. However, since the No-Build Alternate would not involve additional highway improvements or increase existing capacity,

noise abatement was not considered. ***Table III-16*** also shows that NSA 3 would experience design year noise levels equal to or exceeding the impact criteria for each of the proposed build alternates.

### 3. Reasonable and Feasible Noise Abatement

Feasibility and reasonableness of noise abatement was investigated for NSA 3 (Dahlgren Wayside Park). Sound barrier feasibility is defined as the engineering and acoustical ability to provide effective noise reduction. Reasonability is based on cost effectiveness of the barrier.

Sound barriers were found to be feasible and reasonable for NSA 3 for the following alternates:

- Alternate 2
- Alternate 3
- Alternate 4
- Alternate 5
- Alternate 7

It is the Authority's policy to make final decisions on the construction of Type I (new highways or improvement of existing highways) noise abatement during the final design phase of project development, after final horizontal and vertical engineering alignments are determined and detailed engineering evaluations can be made. It should be noted the Authority would also consider non-sound barrier options, such as landscaping, for noise abatement.

For additional information on the sound barrier characteristics and the noise analysis please refer to the *Nice Bridge Improvement Project Noise Quality Technical Report* located on the attached CD.

## E. AIR QUALITY

Summary: Carbon Monoxide (CO) concentrations would not exceed the S/NAAQS at any receptor locations for any of the alternates. The project is proposed to not be "a project of air quality concern" for particulate matter as defined under 40 CFR 93.123(b)(1) and it meets the CAAA and 40 CFR 93.109 requirements. The Nice Bridge Improvement Project would be considered "a project with low potential MSAT effects" because it is an example of a minor widening project where 2030 design year traffic is not projected to exceed 150,000 vehicles. The Metropolitan Washington Region is in moderate nonattainment for the 8-hour ozone ($O_3$) standard and has a deadline of June 15, 2010 to meet the standard. The approved State Implementation Plan (SIP) for the Region includes a mobile source emissions budget for $O_3$ precursors and a plan to improve air quality in the Metropolitan Washington Region to meet the NAAQS for $O_3$.

The purpose of this project-level air quality analysis was to evaluate the potential effects of the proposed alternates on the air quality, including carbon monoxide (CO), fine particulate matter 2.5 microns or smaller in size ($PM_{2.5}$), and Mobile Source Air Toxics (MSATs). The project-level air quality analysis was conducted in accordance with US EPA and FHWA guidelines, per the 1990 Clean Air Act Amendments (CAAA). Please refer to the *Nice Bridge Improvement Project Air Quality Technical Report* located on the attached CD for details on the technical analysis and its components.

### 1. Carbon Monoxide Micro-scale Evaluation

Carbon monoxide (CO) impacts were analyzed as the accepted indicator of vehicle-generated air pollution. The US EPA CAL3QHC (1993) dispersion model was used to predict CO

concentrations for air quality sensitive receptors for the analyzed Open to Traffic Year (2015) and Design Year (2030). The detailed analyses predicted air quality impacts at each receptor location from CO vehicular emissions for the No-Build and build alternates. Modeled one-hour and eight-hour average CO concentrations were added to background CO concentrations for comparison to the State and National Ambient Air Quality Standards (S/NAAQS).

Eight air quality receptors were used to represent air quality sensitive locations within the study area (refer to ***Figure III-8***). The air quality analysis evaluated worst-case CO concentrations in both 2015 and 2030 for three ARDS: Alternates 1 (No-Build), 6 and 7. These alternates represent the best and worst case conditions in terms of projected volume of traffic and distance of the traffic flow from the air quality receptors.

The analysis indicates the one-hour and eight-hour concentration of CO will not exceed the S/NAAQS of 35 ppm (parts per million) and 9.0 ppm, respectively, at any receptor locations for any of the alternates.

### 2. $PM_{2.5}$ Regional and Hot-Spot Conformity Determination

King George County, Virginia is not designated as a nonattainment area for $PM_{2.5.}$ However, Charles County, Maryland is in the Washington, DC-MD-VA $PM_{2.5}$ nonattainment area; therefore, a project-level $PM_{2.5}$ Conformity Determination is required.

The Nice Bridge Improvement Project is included in the Maryland Department of Transportation (MDOT) Consolidated Transportation Program (CTP). It will be included in the next update of the National Capital Region Constrained Long Range Plan (CLRP) and Transportation Improvement Plan (TIP) for Air Quality Conformity. Approval of the next update of the CLRP/TIP is expected in the summer 2010. The CLRP is a comprehensive plan of transportation projects and strategies that the National Capital Region Transportation Planning Board realistically anticipates can be implemented over the next 30 years. The TIP is a six-year program that describes the time-frame for federal funds to be obligated to state and local projects. On February 19, 2009, the US DOT determined that the CLRP and the TIP met the systems level PM2.5 conformity requirements of the CAA; therefore, the current conformity determination is consistent with the final conformity rule found in 40 CFR Parts 51 and 93.

Based on the preliminary review and analysis, it is proposed that the Nice Bridge Improvement Project (including all alternates and options) meets the CAAA and 40 CFR 93.109 requirements. A project-level hot-spot analysis is not required since the project is proposed to **not be a project of air quality concern**, as defined under 40 CFR 93.123(b)(1). Since the project meets the CAAA and 40 CFR 93.109 requirements, the project would not be expected to cause or contribute to a new violation of the $PM_{2.5}$ S/NAAQS, or increase the frequency or severity of a violation. Upon determination of a Preferred Alternate, the $PM_{2.5}$ analysis discussed herein will be updated and a final $PM_{2.5}$ Conformity Determination will be provided for Interagency Consultation.

### 3. Mobile Source Air Toxics Analysis (MSATs)

FHWA *Guidance on Air Toxic Analysis in NEPA Documents* requires analysis of US EPA identified Mobile Source Air Toxics (MSATs) under specific conditions. The US EPA designated six prioritized MSATs, which are known or probable carcinogens, or can cause

chronic respiratory effects. The six prioritized MSATs are Benzene; Formaldehyde; Diesel particulate matter/diesel exhaust organic gases; Acetaldehyde; Acrolein; and 1,3-Butadiene.

Traffic data for the Nice Bridge Improvement Project demonstrates that the peak 2030 average daily traffic (ADT) for the build condition will be 52,700. According to FHWA guidelines, the Nice Bridge Improvement Project would be considered a minor widening project because the design year traffic average annual daily traffic (ADT) is not projected to exceed 150,000. Projects in this category may require a qualitative MSAT analysis. Per FHWA guidance, this project would be a *"minor widening project[s]" … "that serves to improve operations of highway ... without adding substantial new capacity or creating a facility that is likely to meaningfully increase emissions."* The Nice Bridge Improvement Project would be considered a **project with low potential MSAT effects**.

The *Nice Bridge Improvement Project Air Quality Technical Report*, located on the attached CD, includes a basic analysis of the likely MSAT emission impacts of this project.

**4. Ozone (O3)**

The US EPA designated the Metropolitan Washington Region as moderate nonattainment for the 8-hour ozone ($O_3$) standard in April 2004. The Region has a deadline of June 15, 2010 to meet the 8-hour $O_3$ standard. The approved State Implementation Plan (SIP) for the Region includes a mobile source emissions budget for $O_3$ precursors (Volatile Organic Compounds (VOC) and Nitrogen Oxides ($NO_X$)) and a plan to improve air quality in the Metropolitan Washington Region to meet the NAAQS for $O_3$.

The SIP consists of a Reasonable Further Progress (RFP) Plan, 2002-2008; an attainment plan; an analysis of reasonably available control measures; an attainment demonstration; contingency plans for RFP and attainment; and mobile budgets for 2008, 2009, and 2010. The plan also presents a Base-Year Inventory for 2002 and projected inventories for 2008 and 2009. The plan is intended to show the progress being made to improve air quality in the Washington nonattainment area and the efforts underway to assure that all necessary steps are taken to reach the federal health standard for ground-level $O_3$ by 2009. The plan was prepared by the Metropolitan Washington Air Quality Committee (MWAQC).

**5. Construction Emissions**

The construction phase of the proposed project may impact the local ambient air quality by generating fugitive dust through activities such as demolition and materials handling. The MD SHA addressed this possibility by establishing "Specifications for Construction and Materials" which specifies construction procedures to be followed by contractors involved in site work. The Authority would follow these specifications during construction of any Nice Bridge improvements.

During the construction period, all appropriate measures would be incorporated to minimize the impact of the proposed transportation improvements on the air quality of the area (COMAR 26.11.06.03D). Specifically, applying water or appropriate liquids during demolition, land clearing, grading, and construction operations can minimize fugitive dust. At all times when in

motion, open-body trucks transporting materials should be covered, and all excavated material should be removed promptly.

Mobile source emissions can be minimized during construction by not permitting idling trucks or equipment during periods of unloading or other non-active use. The existing number of traffic lanes should be maintained, to the maximum extent possible, and construction schedules should be planned in a manner that would not create traffic disruption and increase air pollutants. Applying these measures would ensure that construction impacts of the project are minimized.

## F. CLIMATE

Summary: None of the alternates are expected to impact the climate of the area.

Climate data for the Nice Bridge study area were obtained from the National Climatic Data Center (NCDC), National Oceanic and Atmospheric Administration (NOAA), and the Maryland State Climatologist Office (MSCO).

### 1. Existing Conditions

The study area is located in the Mid-Atlantic Region of the United States, which exhibits a temperate, humid climate. Normal maximum temperatures are between 41° and 87° F, and the normal minimum temperatures are between 23° and 67° F. Normal average temperatures are between 32° and 76° F (MSCO, 2003). Yearly precipitation averages in the study area are 44 inches of rain and 17 inches of snowfall. The duration of the freeze-free period, on average, is 187 days per year.

### 2. Potential Effects

The No-Build Alternate (Alternate 1) would have no impact on climate. Although transportation emissions have been linked to warming temperatures, none of the build alternates are expected to bring new sources of motor vehicles to the bridge. Also, the construction of a new bridge would add additional capacity to US 301 resulting in fewer idling cars and trucks. Subsequently, there would be no measurable increase in the amount of emissions released, and therefore, no impact to climate. Please refer to the ***Section E***, Air Quality for additional information regarding air quality and emission factors in relation to the Nice Bridge project.

In the future, climate change could also have an effect on the infrastructure of the Nice Bridge through sea level rise and major storm events. However, a new bridge crossing would improve the emergency evacuation capacity of US 301 during major storm events.

## G. HAZARDOUS MATERIALS

Summary: One site, NSF Dahlgren, was identified in the Initial Site Assessment as having a potential high contaminant level within the potential project limits of disturbance. This site is recommended for a Preliminary Site Assessment.

### 1. Existing Conditions

An Initial Site Assessment (ISA) report was prepared to identify properties with the potential for environmental concern. The ISA included a database search of State and Federal hazardous waste inventories, a site history review using aerial photographs dating to 1972, file reviews at

MDE and VDEQ, and a field reconnaissance of the project area. For the purposes of the ISA report, the investigation area was defined as 200 feet outside the proposed limit of disturbance from the build alternates. For additional information please refer to *the Nice Bridge Improvement Project Initial Site Assessment* located on the attached CD.

Based on the field reconnaissance and background information, a total of 29 sites of potential concern were identified. The properties of potential concern within the investigation area were given a potential contaminant value of high, medium/high, medium, or low.

- The high value was assigned to those sites that were identified as a National Priorities List (NPL) site or an open Leaking Underground Storage Tank (LUST) case. Two sites were classified as high potential contaminant value.
- The medium/high value was assigned to sites that were identified by the environmental database, but details about the site were unavailable and current property operations are cause for concern. Medium/high value was also assigned to sites that appeared to have once been operated as gasoline service stations and information on the status of the USTs was not available. Four sites were classified with a medium/high potential contaminant value.
- Sites with the medium value include those that were listed on the environmental database as closed LUST cases, sites with current Underground Storage Tank (UST) operations on the property, or USTs removed or closed in place. Old gas stations that had tanks removed were given a medium value. Nineteen sites were classified with a medium potential contaminant value.
- Those sites with the low value were classified as such due to no listing on the environmental database, Aboveground Storage Tanks (AST) in good condition, or with no reported releases. Four sites were classified with a low potential contaminant value.

**2. Potential Effects**

Based on the ISA findings, *No Further Action* was recommended for sites that were not anticipated to be impacted, or were anticipated to be impacted but their contaminant value was considered medium or low. A total of 23 sites were recommended for No Further Action.

*No Further Action At This Time* was recommended for sites that were anticipated to be impacted with a potential contaminant value of medium/high, or a site with a high value that is not anticipated to be impacted. If it is determined that these sites would be impacted as the design progresses, preliminary site assessments may be necessary to further evaluate the concerns these sites may pose to the project. Five sites were recommended for No Further Action at this time.

One site, NSF Dahlgren, within the potential limits of disturbance would require a Preliminary Site Assessment (PSA). This site has a high potential contaminant value and would be impacted by one or more of the proposed alternates. The PSA would include a detailed field survey, an on-property interview, possible groundwater and/or soil sampling, and/or a geophysical investigation. These additional investigations will be conducted according to all applicable local, state, and federal regulations. The PSA would be conducted prior to any ground disturbing activities in the vicinity of this site to determine the extent of hazardous materials present (currently underway).

## H. INDIRECT AND CUMULATIVE EFFECTS (ICE) ANALYSIS

Summary: The ICE Analysis is a comprehensive, long-term assessment of the impacts associated with construction of a build alternate and other past, present and future planned development and transportation projects that might result in overall resource impacts within the ICE boundary. The Nice Bridge Improvement Project would not induce indirect development or land use changes, but may result in indirect effects to environmental resources caused by impacts that are further removed in time and space. Cumulative effects would be minor and are expected to occur in areas zoned for development. Cumulative effects to environmental resources will be regulated by existing applicable federal, state, and local legislation through individual avoidance, minimization and/or mitigation strategies.

In addition to the consideration of a project's "direct" impacts which have been described so far in this chapter, the Council on Environmental Quality (CEQ) regulations also require that the indirect and cumulative effects (ICE) of a project be examined (40 CFR § 1508.25 (c)). Indirect effects are defined as, "Effects which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems" (40 CFR § 1508.8(b)). Cumulative effects are defined as, "Impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR § 1508.7). For additional information please refer to the *Nice Bridge Improvement Project Indirect and Cumulative Effects Analysis Technical Report* located on the attached CD.

### 1. Resources

In determining which environmental resources should be considered in the ICE analysis, those resources that would be directly impacted by the proposed alternates were identified. The following resources were considered:

- Communities;
- Low-Income/Minority Populations;
- Parkland/Recreational Facilities;
- Historic Properties;
- Prime Farmland Soils/Soils of Statewide Importance;
- Wetlands;
- Surface Water (WUS)/Aquatic Habitat;
- 100-Year Floodplains;
- Forest/Terrestrial Habitat;
- Rare, Threatened, and Endangered Species (RTE); and
- Chesapeake Bay Critical Areas/Virginia Preservation Areas.

Also considered were invasive species and submerged aquatic vegetation. Noise and hazardous material are not resources considered in the ICE analysis. Air Quality is addressed in regional conformity and therefore not included in the ICE analysis.

### 2. ICE Analysis Boundaries

As described in the *ICE Technical Report*, located on the attached CD, the geographic limits for the ICE analysis reach beyond the Nice Bridge study area. The ICE boundary was established through a synthesis of resource sub-boundaries (study area, Area of Traffic Influence, census tracts, sub-watersheds, and Maryland Priority Funding Areas) into one overall ICE boundary. ***Figure III-9*** identifies the ICE boundary in relation to all of the resource sub-boundaries considered.

The year 1970 was selected as the past time frame based on major events within the area that influenced population and/or land use changes. The present/near future time frame was established by projecting out five years from the present (2008) to 2013. The future time frame was chosen based on the project's design year of 2030.

### 3. Land Use Scenarios

Three land use scenarios (past, present/near future, and future) were prepared for use in an overlay analysis and in identifying trends in land use from the past to present time frame. Additionally, future land use was identified by overlaying present/near future land use mapping with future land use mapping. ***Figures III-10A and 10B*** depict past land use, ***Figures III-11A and 11B*** present/near future land use, and ***Figures III-12A and 12B*** future land use within the ICE boundary, respectively.

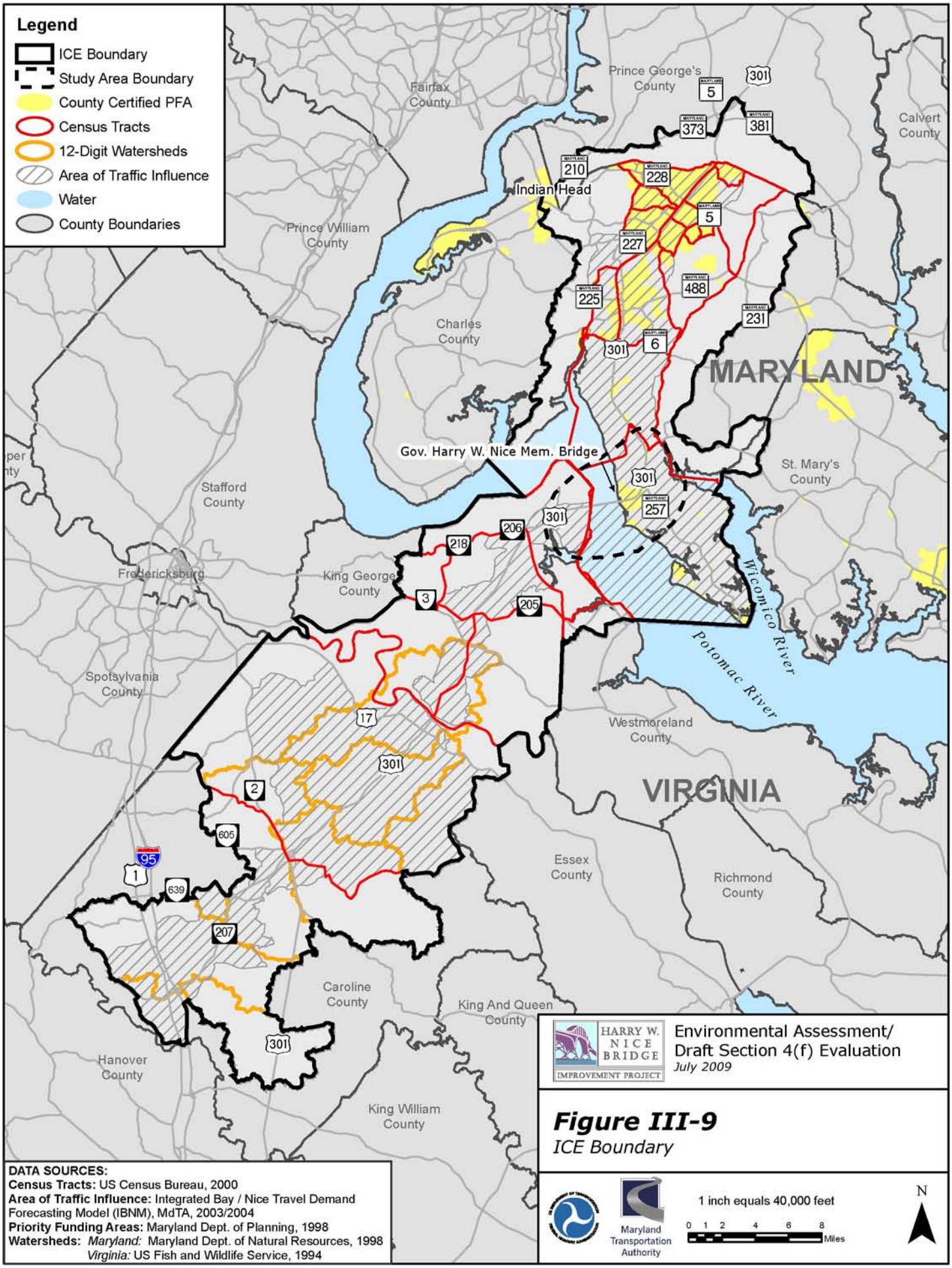
### 4. Indirect Effects

Indirect effects would be minor because there are no major developments and/or transportation projects that are contingent upon the selection of any of the Nice Bridge build alternates. Additionally, population in the area is increasing and is projected to do so through the year 2030. This increase is expected to occur regardless of the Nice Bridge improvements. However, indirect environmental impacts could occur as a result of the proposed build alternates (Alternates 2 through 7). These impacts would include those that are further removed in time or space that affect natural environmental resources due to increased impervious area, roadway and stormwater runoff, sedimentation, and erosion. Please refer to Section II.G.2 of the *Nice Bridge Improvement Project Indirect and Cumulative Effects Analysis Technical Report* for a more detailed assessment of potential indirect effects.

### 5. Cumulative Impacts

Population projections estimate increased growth in the ICE area between now and 2030. There are also many planned transportation and development projects that are slated to occur in the area between now and 2030, including the Nice Bridge Improvement Project. None of these other development or transportation projects are dependent on the construction of the Nice Bridge Improvement Project.

In general, resources within the ICE boundary have experienced cumulative effects over the past few decades from urban development. These cumulative effects have been more prominent in Maryland due to the greater development pressures that exist, compared to Virginia. It is expected that these trends would continue as additional growth occurs, however, these impacts are expected to be minor.




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## *Figure III-9*

*ICE Boundary*

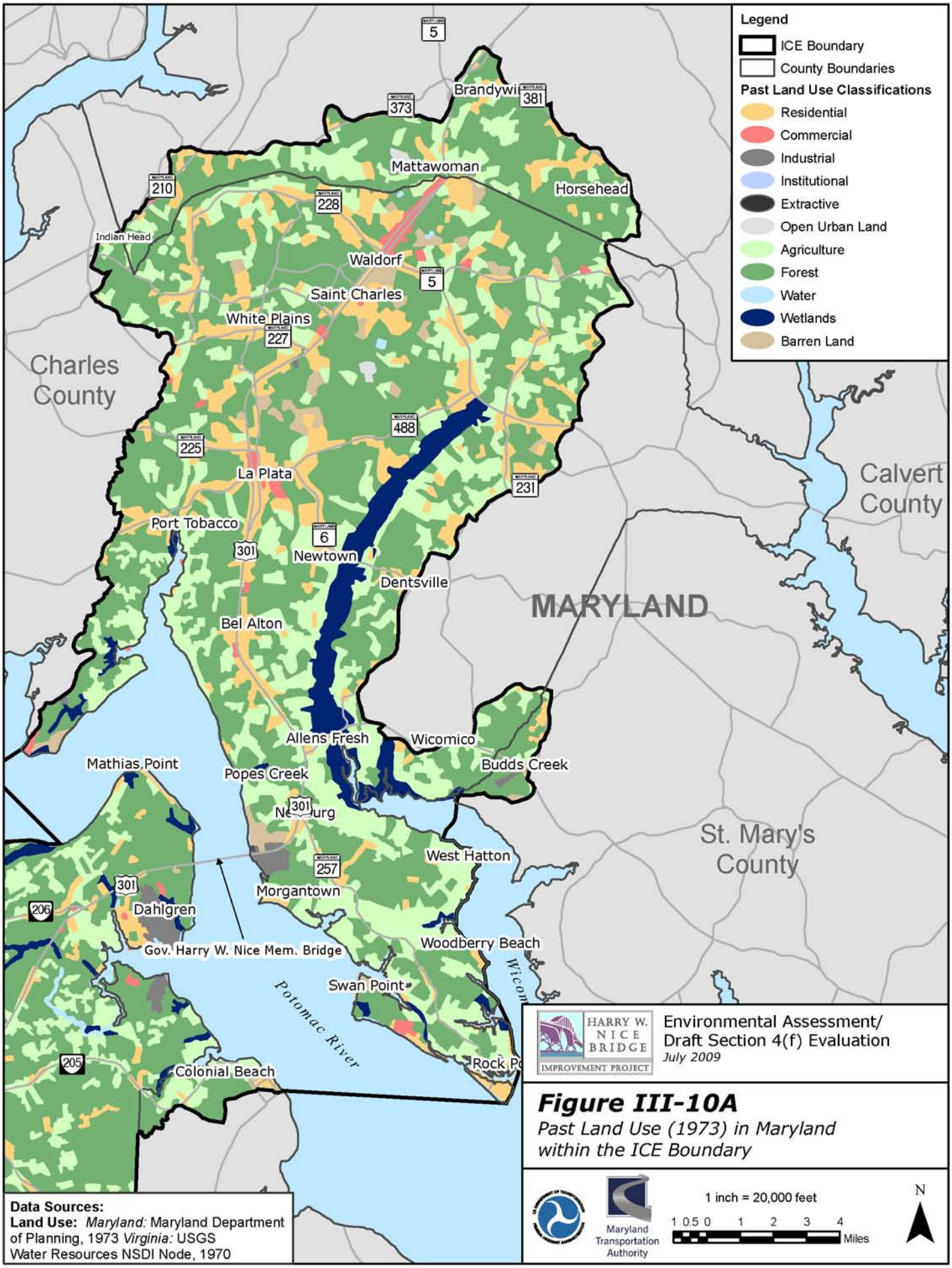
**DATA SOURCES:**
**Census Tracts:** US Census Bureau, 2000
**Area of Traffic Influence:** Integrated Bay / Nice Travel Demand Forecasting Model (IBNM), MdTA, 2003/2004
**Priority Funding Areas:** Maryland Dept. of Planning, 1998
**Watersheds:** *Maryland:* Maryland Dept. of Natural Resources, 1998
*Virginia:* US Fish and Wildlife Service, 1994

Maryland Transportation Authority

1 inch equals 40,000 feet

0 1 2 4 6 8 Miles

N




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## *Figure III-10A*

*Past Land Use (1973) in Maryland within the ICE Boundary*

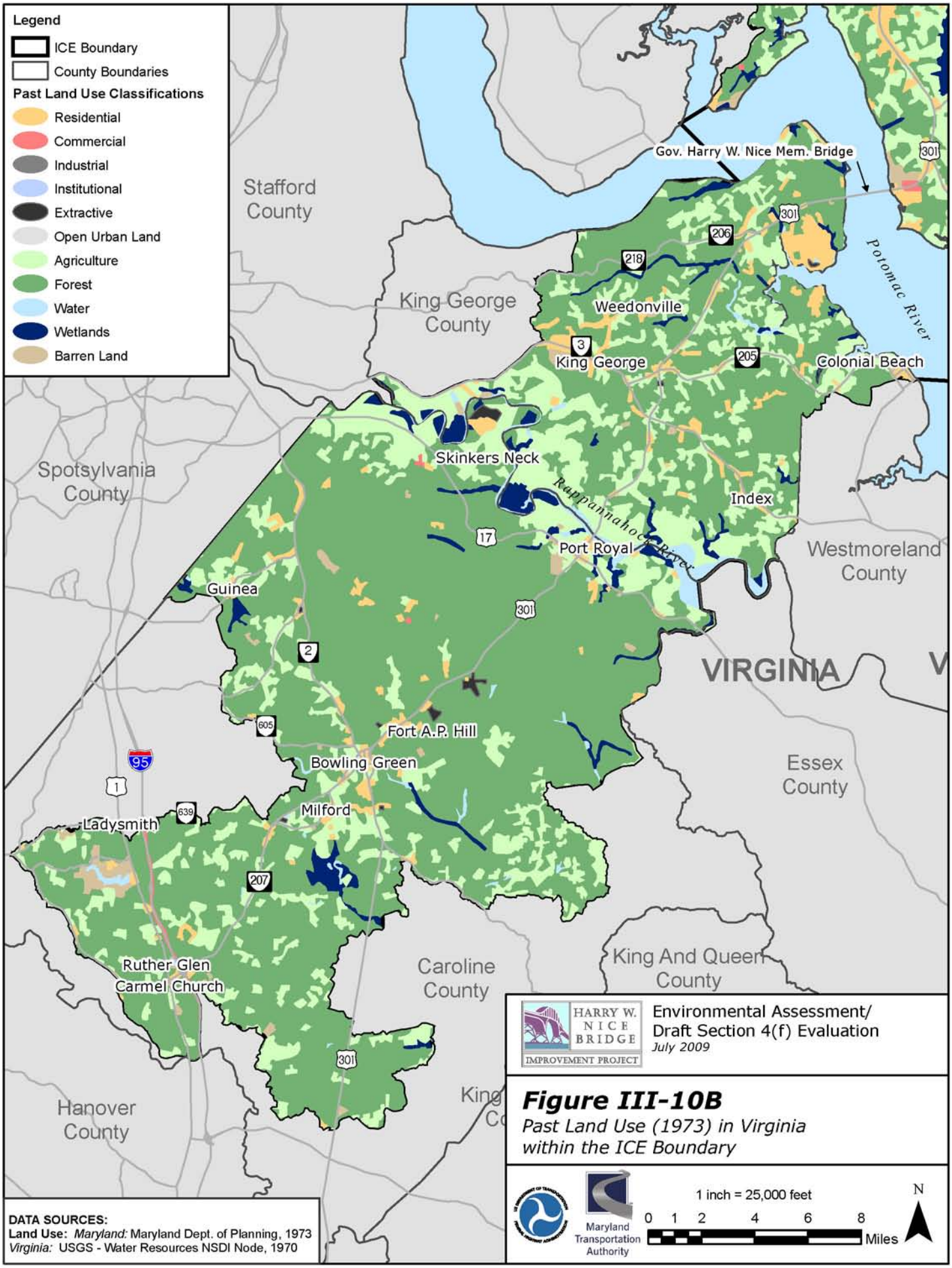
Maryland Transportation Authority

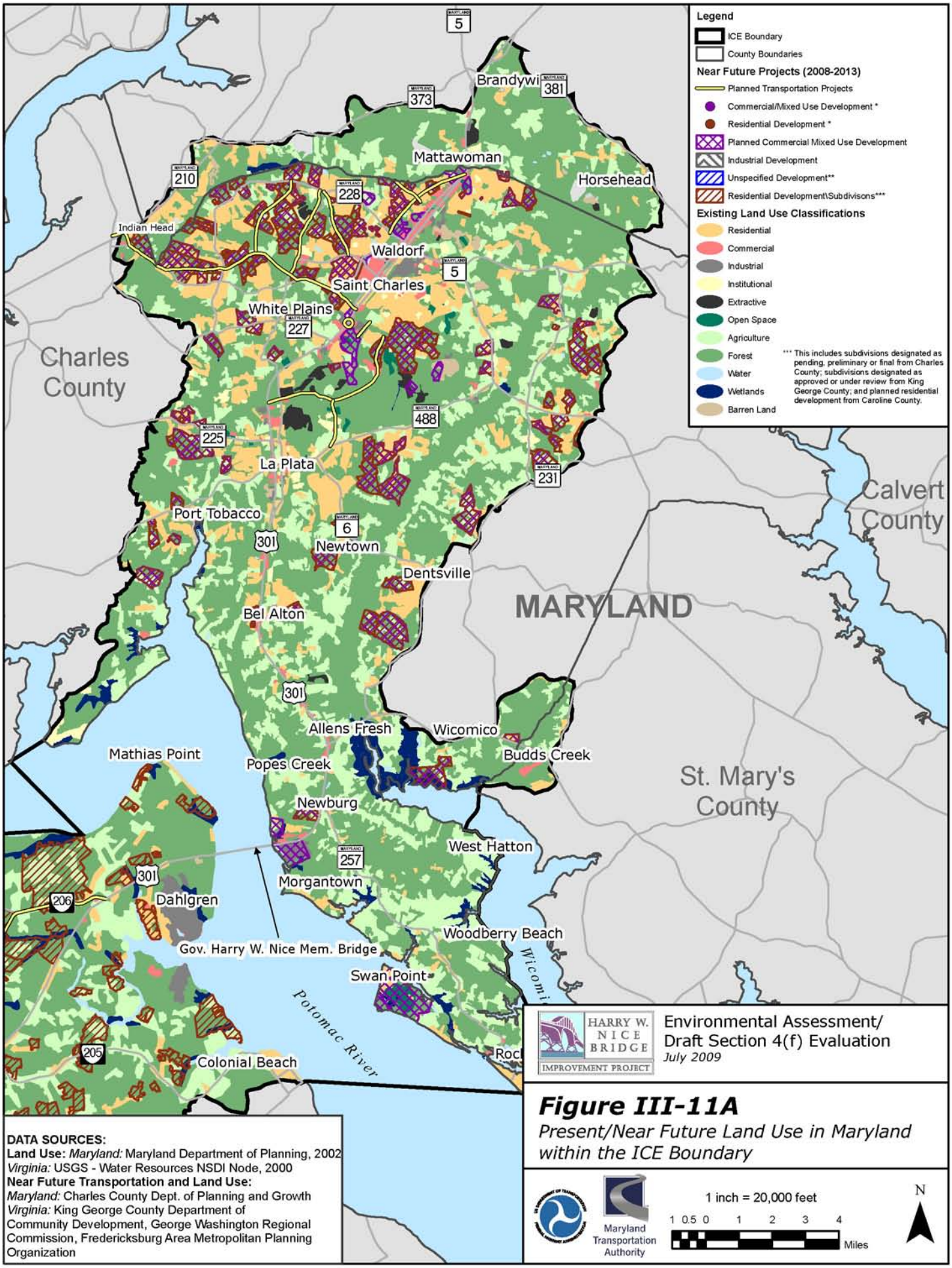
1 inch = 20,000 feet

1 0.5 0 1 2 3 4 Miles

N

**Data Sources:**
**Land Use:** *Maryland:* Maryland Department of Planning, 1973 *Virginia:* USGS Water Resources NSDI Node, 1970


Legend
ICE Boundary
County Boundaries
Past Land Use Classifications
Residential
Commercial
Industrial
Institutional
Extractive
Open Urban Land
Agriculture
Forest
Water
Wetlands
Barren Land
Stafford County
King George County
Spotsylvania County
Caroline County
Hanover County
King And Queen County
Essex County
Westmoreland County
VIRGINIA
Gov. Harry W. Nice Mem. Bridge
Potomac River
Rappahannock River
Weedonville
King George
Colonial Beach
Skinkers Neck
Index
Port Royal
Guinea
Fort A.P. Hill
Bowling Green
Milford
Ladysmith
Ruther Glen
Carmel Church
301
206
218
3
205
17
2
605
95
1
639
207
DATA SOURCES:
Land Use: Maryland: Maryland Dept. of Planning, 1973
Virginia: USGS - Water Resources NSDI Node, 1970
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Figure III-10B
Past Land Use (1973) in Virginia
within the ICE Boundary
Maryland Transportation Authority
1 inch = 25,000 feet
0 1 2 4 6 8
Miles
N




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## *Figure III-11A*

*Present/Near Future Land Use in Maryland within the ICE Boundary*

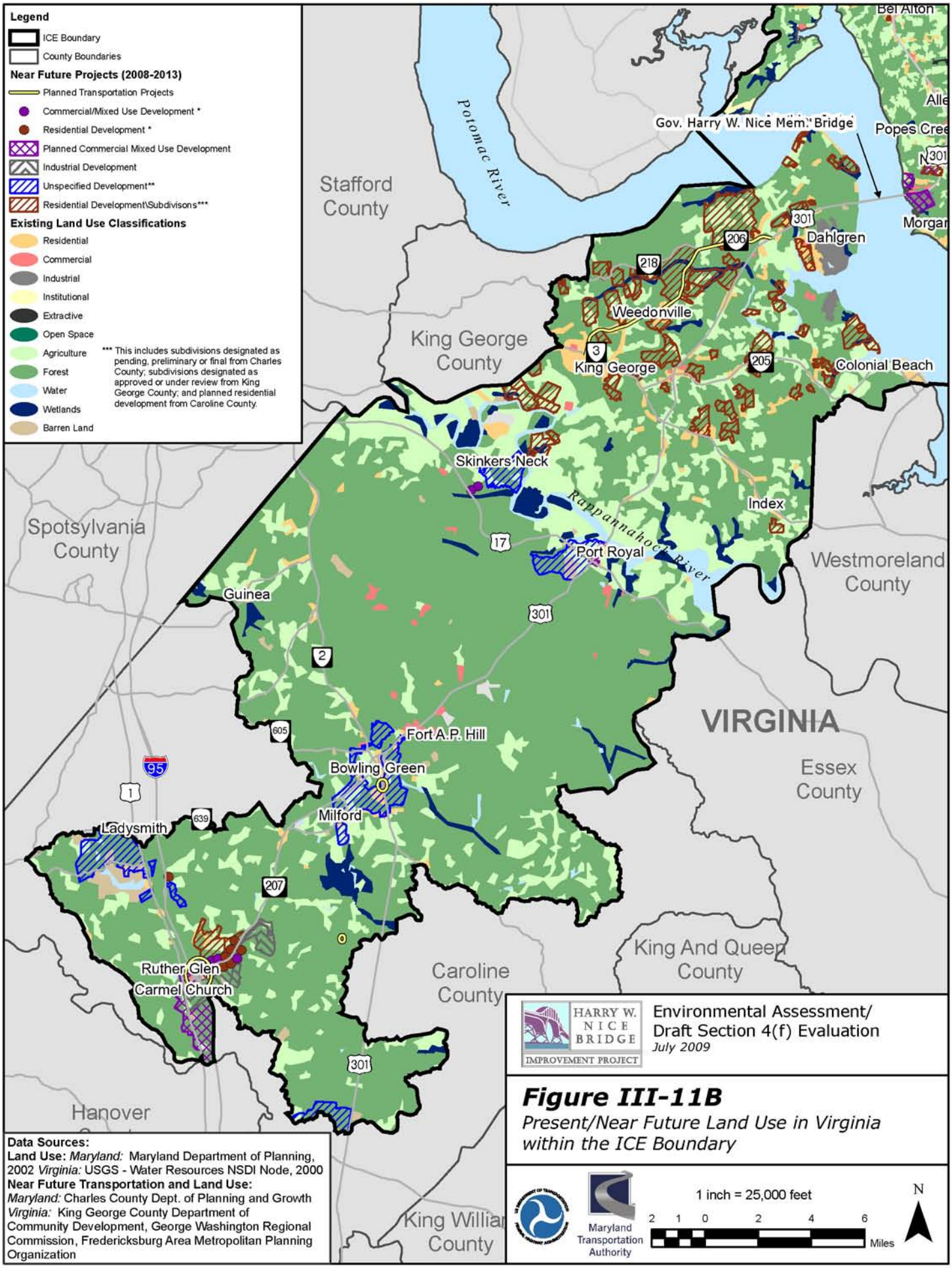
**DATA SOURCES:**
**Land Use:** *Maryland:* Maryland Department of Planning, 2002
*Virginia:* USGS - Water Resources NSDI Node, 2000
**Near Future Transportation and Land Use:**
*Maryland:* Charles County Dept. of Planning and Growth
*Virginia:* King George County Department of Community Development, George Washington Regional Commission, Fredericksburg Area Metropolitan Planning Organization

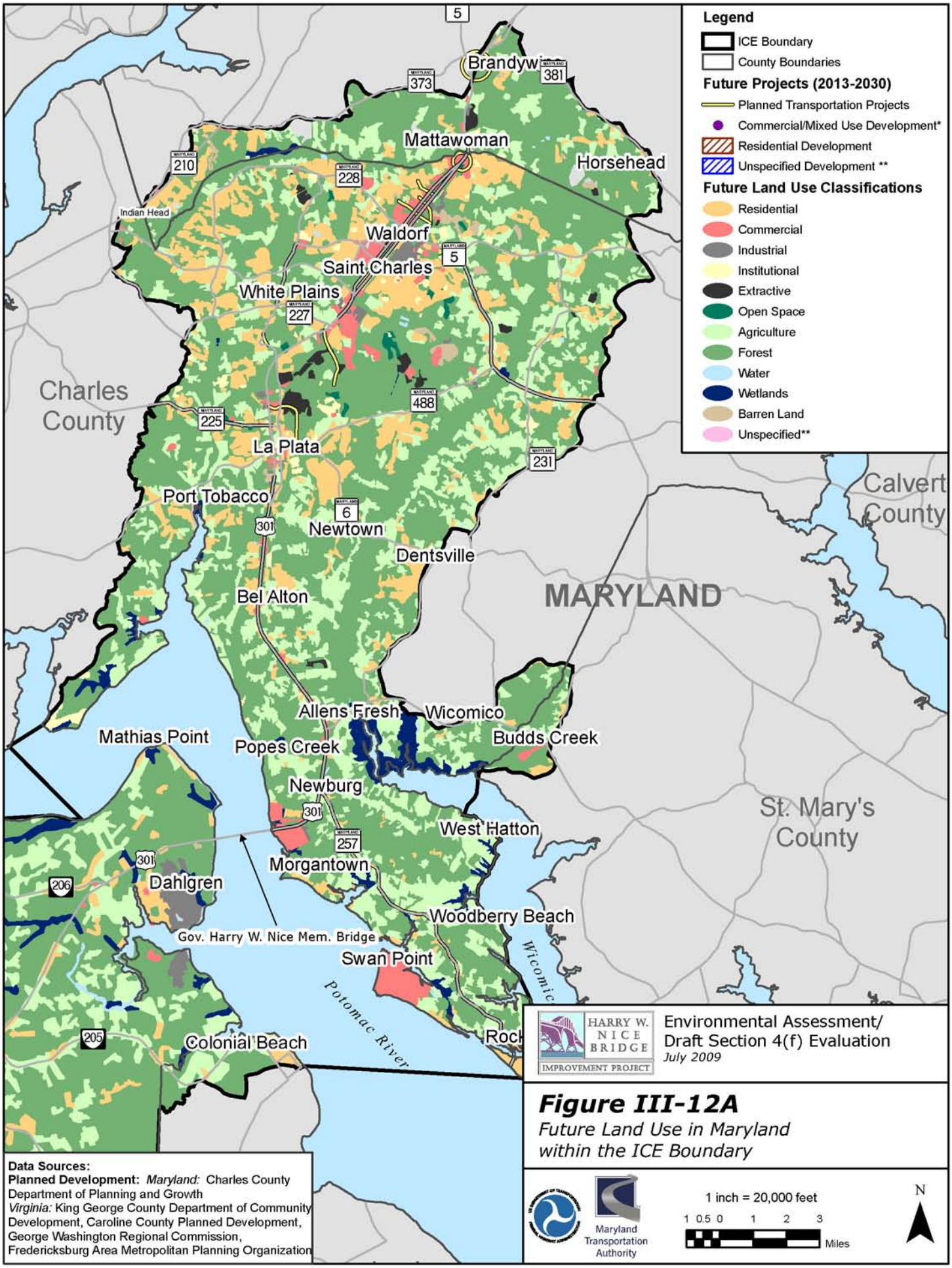
Maryland Transportation Authority

1 inch = 20,000 feet

1 0.5 0 1 2 3 4 Miles

N


Legend
ICE Boundary
County Boundaries
Near Future Projects (2008-2013)
Planned Transportation Projects
Commercial/Mixed Use Development *
Residential Development *
Planned Commercial Mixed Use Development
Industrial Development
Unspecified Development**
Residential Development\Subdivisons***
Existing Land Use Classifications
Residential
Commercial
Industrial
Institutional
Extractive
Open Space
Agriculture
Forest
Water
Wetlands
Barren Land
*** This includes subdivisions designated as pending, preliminary or final from Charles County; subdivisions designated as approved or under review from King George County; and planned residential development from Caroline County.
Potomac River
Gov. Harry W. Nice Mem. Bridge
Bel Alton
Popes Cree
Morgar
Stafford County
Dahlgren
Weedonville
King George County
King George
Colonial Beach
Skinkers Neck
Rappannahock River
Index
Spotsylvania County
Port Royal
Westmoreland County
Guinea
VIRGINIA
Fort A.P. Hill
Bowling Green
Essex County
Milford
Ladysmith
Ruther Glen
Carmel Church
King And Queen County
Caroline County
Hanover
King William County
301
206
218
3
205
17
2
605
95
1
639
207
Data Sources:
Land Use: Maryland: Maryland Department of Planning, 2002 Virginia: USGS - Water Resources NSDI Node, 2000
Near Future Transportation and Land Use:
Maryland: Charles County Dept. of Planning and Growth
Virginia: King George County Department of Community Development, George Washington Regional Commission, Fredericksburg Area Metropolitan Planning Organization
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Figure III-11B
Present/Near Future Land Use in Virginia within the ICE Boundary
Maryland Transportation Authority
1 inch = 25,000 feet
2 1 0 2 4 6
Miles
N




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## *Figure III-12A*

*Future Land Use in Maryland within the ICE Boundary*

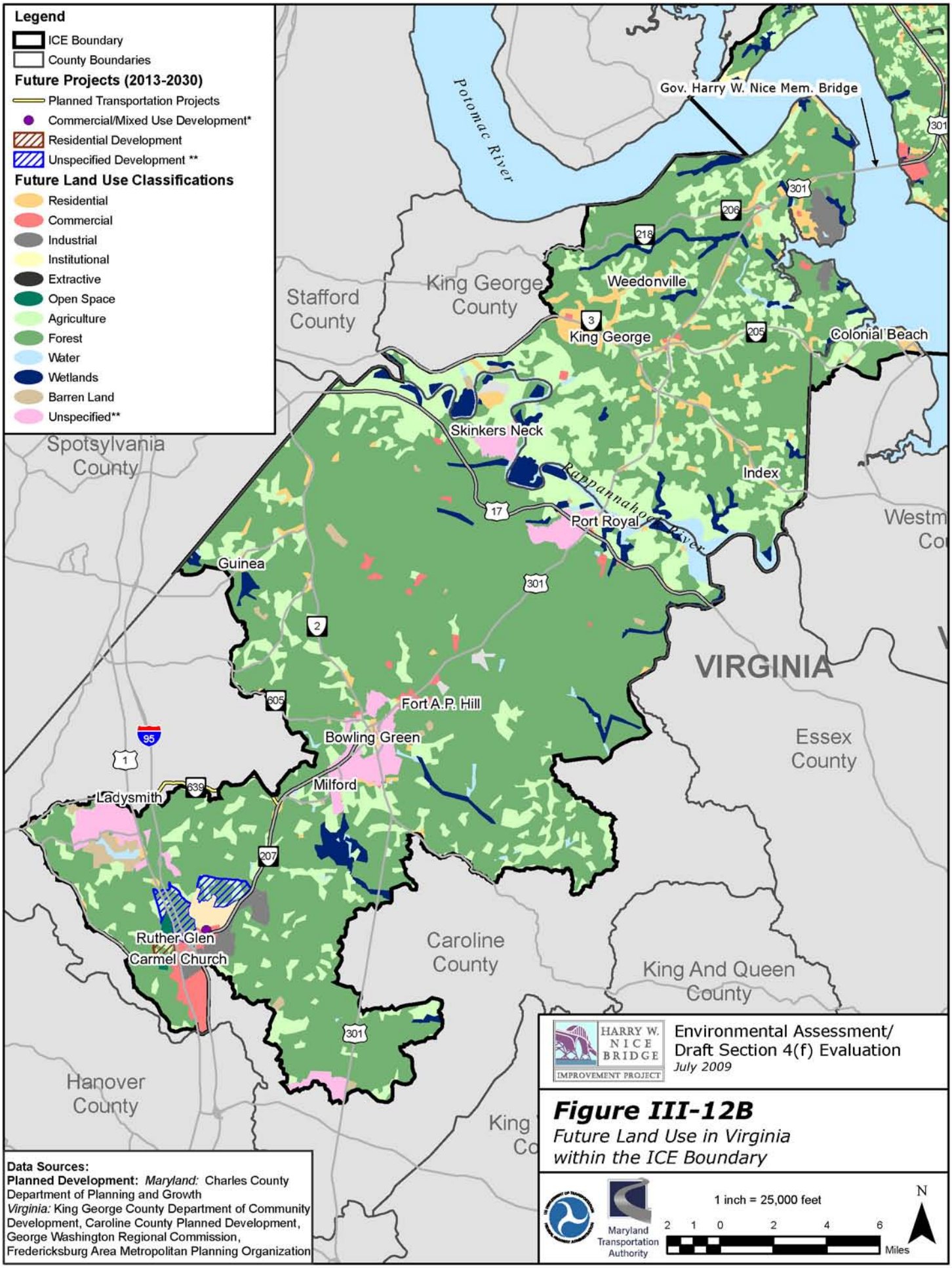
**Data Sources:**
**Planned Development:** *Maryland:* Charles County Department of Planning and Growth
*Virginia:* King George County Department of Community Development, Caroline County Planned Development, George Washington Regional Commission, Fredericksburg Area Metropolitan Planning Organization

Maryland Transportation Authority

1 inch = 20,000 feet

1 0.5 0 1 2 3 Miles

N


Legend
ICE Boundary
County Boundaries
Future Projects (2013-2030)
Planned Transportation Projects
Commercial/Mixed Use Development*
Residential Development
Unspecified Development **
Future Land Use Classifications
Residential
Commercial
Industrial
Institutional
Extractive
Open Space
Agriculture
Forest
Water
Wetlands
Barren Land
Unspecified**
Potomac River
Gov. Harry W. Nice Mem. Bridge
Stafford County
King George County
Weedonville
King George
Colonial Beach
Skinkers Neck
Index
Rappahannock River
Port Royal
Guinea
Spotsylvania County
VIRGINIA
Fort A.P. Hill
Bowling Green
Milford
Ladysmith
Ruther Glen
Carmel Church
Caroline County
King And Queen County
Essex County
Hanover County
Westm
Co
King
Co
301
206
218
3
205
17
2
605
95
1
639
207
Data Sources:
Planned Development: Maryland: Charles County Department of Planning and Growth
Virginia: King George County Department of Community Development, Caroline County Planned Development, George Washington Regional Commission, Fredericksburg Area Metropolitan Planning Organization
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Figure III-12B
Future Land Use in Virginia
within the ICE Boundary
Maryland Transportation Authority
1 inch = 25,000 feet
2 1 0 2 4 6
Miles
N

Although resource impacts are anticipated from the Nice Bridge project and other transportation and development projects planned for the area, the rate at which impacts would occur is less than what the area has seen in the past decades. Both Maryland and Virginia have laws and regulations in place to reduce the rate and extent of resource impacts from development pressures. Additionally, local jurisdictions responsible for growth management within the ICE boundary have zoning and other planning strategies in place to guide development into areas that can accommodate it while preserving more sensitive areas that might be otherwise vulnerable to growth. ***Table III-17*** is a summary of the existing federal, state and local legislation that will contribute to avoidance, minimization and mitigation of cumulative effects from the Nice Bridge and other projects in the area. Refer to Section II.G.2 of the *Nice Bridge Improvement Project Indirect and Cumulative Effects Analysis Technical Report* for a more detailed assessment of potential cumulative effects.

***Table III-17**: Regulations Contributing to the Avoidance, Minimization and Mitigation of Cumulative Effects*

| Resource | Laws/Regulations/Compliance |
|---|---|
| Communities | NEPA; Maryland Environmental Policy Act; Virginia Code sections 10.1-1188 et seq. |
| Low income/ Minority | Executive Order 12898; Title VI of the Civil Rights Act |
| Parks and Recreational Lands | Section 6(f) of the Land and Water Conservation Fund Act of 1965; Section 4(f) of the US Department of Transportation (DOT) Act of 1966 |
| Historic Properties | Section 106 of the National Historic Preservation Act of 1966 |
| Prime Farmland and Soils of Statewide Importance | Agricultural Conservation Districts as part of the *Charles County 1997 Comprehensive Plan;* Virginia State Agricultural Districts Enabling Statutes (Va. Code Ann. §§ 15.2-4300 to 15.2-4314 (2004)) and Virginia Local Agricultural Districts Enabling Statutes (Va. Code Ann. §§ 15.2-4400 to 15.2-4407 (2004)) |
| Waters of the US and wetlands | § 401 Certification from the USACE; Maryland Tidal and Nontidal Wetlands and Waterways Permits; Virginia Tidal Wetlands Act of 1972; Virginia Water Protection Permit; Virginia Marine Resources Permit |
| Water Quality | Section 404 of the Clean Water Act; § 401 Certification from the USACE |
| Floodplains | National Flood Insurance Program (44 CRF 59-79); Section 10 and 404 Permit Programs; Maryland and Virginia Waterway Construction Permit Program for non-tidal floodplains, Tidal and Nontidal Wetlands Permits, and Coastal Zone Management Programs; Charles County, Maryland Floodplain Management Ordinance; King George County Floodplain Management Overlay District |
| Submerged Aquatic Vegetation | Maryland Article-Natural Resources § 4-213 and § 4-1006.1 |
| Forests | Maryland Reforestation Act (Natural Resources Article, §5-103); Maryland Forest Conservation Act (Natural Resources Article §5-1601 - 1613) |
| Invasive Species | Natural Resources Article (§4-205.1, Annotated Code of Maryland) and Aquatic Nuisance Species Regulations (COMAR 08.02.19); Virginia Non-indigenous Aquatic Nuisance Species Act (§§ 29.1-571-577 of the Code of Virginia), Virginia Noxious Weed Law, (§§3.1-296.11-21 of the Code of Virginia), and the Virginia Pest Law, (§§3.1-188.20-31:2, of the Code of Virginia). |
| Rare, Threatened and Endangered Species | Virginia Natural Area Preserves Act of 1989 (Section 10.1-209 through 217, Code of Virginia) Virginia's Endangered Species Act (Section 29.1-564 through 570, Code of Virginia) and Virginia Endangered Plant and Insect Act (Section 3.1-1020 through 1030, Code of Virginia). |
| Critical Areas | Maryland's Critical Area Act; Virginia's Chesapeake Bay Preservation Designation and Management Regulations |

# IV. COORDINATION AND COMMENTS

Public involvement and agency coordination are two important components since the project's study area involves portions of two states (Maryland and Virginia). This was taken into consideration when developing the project's Public Involvement Plan and Interagency Coordination Plan.

The project team uses multiple strategies to engage citizens and resource and regulatory agencies in the project, including informational publications, meetings, and a website. Valuable input has been received from the public and agencies in both states via these strategies. Additional coordination with the regulatory and resource agencies occurs at project milestones and through on-going correspondence.

Public involvement and agency coordination will continue throughout the Nice Bridge Improvement Project to ensure all stakeholders have the opportunity to share their questions and comments.

## A. INTERAGENCY COORDINATION, MEETINGS, AND CORRESPONDENCE

### 1. Interagency Coordination

An Interagency Coordination Plan was developed to identify which resource and regulatory agencies would function as the lead, cooperating, and participating agencies for the project, in accordance with the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). The lead, cooperating, and participating agencies are identified in ***Table IV-1***. The Interagency Coordination Plan also identifies the agencies' roles and responsibilities, and project milestones, including agency meetings and coordination. Please refer to the Interagency Coordination Plan in ***Appendix F*** for additional information.

### 2. Interagency Meetings

The kick-off meeting (i.e. Scoping Meeting) with agencies for the Nice Bridge Improvement Project was held on October 12, 2006. Twenty federal, state, and local participating and cooperating agency representatives met with the project team at the Charles County Department of Social Services in La Plata, Maryland. Agency representatives were presented with the Purpose and Need, background information on the Nice Bridge study area, the Public Involvement Plan, and the project schedule. Several agencies asked the team to conduct further research on certain environmental issues. Other agencies provided input on additional environmental and community resources in the Nice Bridge study area.

The Nice Bridge project team met with agency representatives for a second time in the winter of 2007. A meeting was held on January 22, 2007 with representatives from Virginia resource and regulatory agencies at the Virginia Department of Transportation (VDOT) in Richmond, Virginia. The purpose of the meeting was to update Virginia agencies on the project since the fall 2006 Agency Scoping Meeting. The project team presented information on the concepts for alternates, the preliminary environmental inventory, and the agency coordination and public involvement processes. On February 21, 2007, the project team presented the same information

***Table IV-1:*** *Lead, Cooperating, and Participating Agencies*

| | | | |
|---|---|---|---|
| ***Lead Agencies*** | | | |
| Maryland Transportation Authority | | Federal Highway Administration | |
| ***Cooperating Agencies*** | | | |
| US Coast Guard | Maryland Department of the Environment | Virginia Department of Environmental Quality | National Oceanic and Atmospheric Administration - National Marine Fisheries Service |
| US Army Corps of Engineers | Virginia Department of Transportation | US Environmental Protection Agency | --- |
| ***Participating Agencies*** | | | |
| National Park Service | Maryland Historical Trust | Maryland Department of Planning | Virginia Dept. of Agriculture & Consumer |
| US Fish and Wildlife Service | Maryland Department of Natural Resources | Virginia Department of Conservation and Recreation | Virginia Department of Game and Inland Fisheries |
| US Department of Agriculture - Natural Resource Conservation | Maryland Department of Natural Resources - Critical Area Commission | Virginia Department of Historic Resources | Virginia Outdoors Foundation |
| US Navy/ Naval Support Facility Dahlgren | Maryland Department of Transportation | Virginia Marine Resources Commission | Virginia Department of Mines, Minerals, and Energy |
| Maryland State Highway Administration | Charles County Dept. of Planning & Growth Management | King George County Planning Commission | Virginia Dept. of Forestry |

to Maryland resource and regulatory agency representatives and federal agency representatives at the Interagency Review Meeting (IRM) held at the Maryland State Highway Administration.

The project team provided an update to federal and Maryland resource and regulatory agency representatives at an IRM in November 2007. Copies of the draft *Combined Purpose and Need and Alternates Retained for Detailed Study (ARDS) Package* were distributed to the agency representatives at the IRM. The package included the project's Purpose and Need and the ARDS report. The ARDS report describes the range of alternates considered initially for the project and descriptions and explanations for the alternates that were dropped from further consideration and those kept to be evaluated in detail. At the same time, the draft *Combined Purpose and Need and ARDS Package* was mailed to the Virginia agencies for review and comment.

In April 2008, the US Army Corps of Engineers (ACOE) and the US Environmental Protection Agency (EPA) published the final rule on wetland mitigation in the Federal Register (*Compensatory Mitigation for Losses of Aquatic Resources*). Coordination with environmental regulatory agencies was completed to ensure the new final rule mitigation requirements would be met for the project. On April 20, 2009, a field view was conducted with ACOE, the National Marine Fisheries Service (NMFS), the Maryland Department of the Environment (MDE), and the Maryland Department of Natural Resources (MD DNR)—Critical Areas to review project

impacts and potential sites for wetland mitigation. A total of five preliminary mitigation sites were reviewed. Each of these sites was included in the draft wetland Compensatory Mitigation Plan (CMP), which is included as ***Appendix D*** of this EA for additional agency comment and public review. The final CMP will be completed as part of the Section 404 (Clean Water Act) permit application process.

Meetings with agencies will continue to take place throughout the Nice Bridge Improvement Project to ensure that they are kept informed and up-to-date on the issues and processes of the project.

### 3. Interagency Correspondence

Letters were sent to agencies in September 2006 informing them the Authority had initiated a project planning study for the Nice Bridge Improvement Project. The letters requested agencies provide any information on resources within the Nice Bridge study area relevant to each agency's expertise and jurisdiction.

In March 2007, letters were sent to the project's identified regulatory and resource agencies, requesting they function as a participating agency on the project. Seven agencies were asked to be cooperating agencies (***Table IV-1***). Cooperating agencies are a subset of participating agencies, per SAFETEA-LU, and are agencies with jurisdiction by law or special expertise with respect to the project or its impacts.

In fall 2007, the participating and cooperating agencies, per SAFETEA-LU, were given an opportunity to comment on the draft *Combined Purpose and Need and ARDS Package.* The revised *Combined Purpose and Need and ARDS Package*, available on the project's website at www.nicebridge.maryland.gov and on the enclosed CD, was sent to cooperating agencies for concurrence in February 2008, and final agency concurrence was received in April 2008.

Agency correspondence can be found in ***Appendix B***.

### 4. Naval Support Facility Dahlgren Community

The Authority has conducted additional ongoing coordination with the Naval Support Facility (NSF) Dahlgren. The Nice Bridge project team coordinates with NSF Dahlgren communications staff to ensure that Nice Bridge project information is relayed throughout the base. The communications methods include an electronic newsletter and emails to the residents and employees of the base.

## B. FOCUS GROUP MEETINGS

The focus group for this project consists of approximately 19 members, listed in ***Table IV-2***, who represent businesses, communities, institutions (including local governments), and organizations in the study area.

***Table IV-2:*** *Nice Bridge Improvement Project Focus Group Members*

| Community/Business/Organization | |
|---|---|
| Tri-County Council for Southern Maryland | Cobb Neck Citizens Alliance |
| Town of Colonial Beach | One Stop Travel Plaza |
| King George County Planning Commission | Robertson's Crab House |
| Mirant Morgantown Power Plant | Oxon Hill Bike Club |
| Cliffton on the Potomac Community | Office of the 1st Congressional District of Virginia |
| Roseland Road Community | King George County Board of Supervisors |
| Great Mills Trading Post | Naval Support Facility Dahlgren |
| King George County Office of Community Development | Bryans Road Corporation |
| Charles County Department of Planning & Growth Management | Naval Support Facility Dahlgren |

The focus group setting involves two-way communication between the Nice Bridge project team and focus group members. The focus group members are provided with project information and, in turn, provide their local perspective. The project team also asks focus group members for input on information and materials to be shared with the public to ensure that information is disseminated as clearly and effectively as possible. Focus group members are asked to share the project information they receive with the communities, businesses, institutions, or organizations they represent, and report any feedback. There have been four Focus Group meetings to date (***Table IV-3***).

***Table IV-3:*** *Summary of Focus Group Meetings*

| Focus Group Meeting | Date | Location | Purpose |
|---|---|---|---|
| Focus Group Meeting #1 | December 5, 2006 | Dr. Thomas L. Higdon Elementary School Newburg, Maryland | Introductory meeting for the focus group where the project team presented background information on the project, the project's purpose and need, the project schedule, and the public involvement opportunities that would occur throughout the project. |
| Focus Group Meeting #2 | May 10, 2007 | Naval Support Facility Dahlgren Dahlgren, Virginia. | Discuss the preliminary alternates and the information to be presented at the May 31st and June 7th Alternates Public Workshops. Focus group members provided updates from their communities and organizations and offered input on the information and displays to be presented at the public workshops. |
| Focus Group Meeting #3 | January 24, 2008 | Dr. Thomas L. Higdon Elementary School Newburg, Maryland. | Presentation of the seven proposed alternates to be evaluated in detail and the related environmental studies being conducted to assess the alternates. Focus group members were also provided with a summary of comments received from the public at and following the spring 2007 Alternates Public Workshops. |
| Focus Group Meeting #4 | February 10, 2009 | Potomac Elementary School Dahlgren, Virginia | Presentation of the refined Alternates Retained for Detailed Study (ARDS) including draft provisions for a bikeway facility, information on the Draft EA, and information regarding the fall 2009 public hearings. |

## C. PROJECT INITIATION

In August 2006, a 3" x 10" public notice was placed in the following six regional and local newspapers in Maryland, Virginia, and Washington DC announcing the initiation of a project planning study for the Nice Bridge Improvement Project: The Baltimore Examiner, The Free-Lance Star, The Journal Press, The Maryland Independent, The Richmond Times-Dispatch, and The Washington Post. The public notice described the reasons the Authority was conducting the Nice Bridge Improvement Project and the environmental studies that would be conducted, and provided the Authority's contact information.

In addition to publishing the notice in newspapers, a Project Initiation mailer was also mailed to the residents and businesses within the study area. The mailer included the same information as the Project Initiation public notice, but also included a perforated mail reply page with a comment form, postage included, to be sent back to the Authority. The comment form was an opportunity for members of the public to express any questions or thoughts they had on the project as well as an option to be added to the project mailing list. The Authority received 88 completed comment forms from members of the public in response to the project initiation mailer.

## D. ALTERNATES PUBLIC WORKSHOP AND CITIZEN CORRESPONDENCE

The Authority held the Nice Bridge Improvement Project Alternates Public Workshops on May 31, 2007 at Dr. Thomas L. Higdon Elementary School in Newburg, Maryland, and June 7, 2007 at the Potomac Elementary School in Dahlgren, Virginia.

A 3" x 10" public notice was placed in the following nine regional and local newspapers in Maryland, Washington DC, and Virginia to announce the spring 2007 Alternates Public Workshops: The Baltimore Examiner, The Enterprise, The Free-Lance Star, The Journal Press, The Maryland Independent, The Richmond Times-Dispatch, The Westmoreland News, The Washington Hispanic, and The Washington Post. The notice included the dates, times, and locations of the workshops, and a summary of the information that would be presented at the workshops. The public notice encouraged members of the public to call, email, or mail comments to the Authority should they have any questions or need further information on the workshops. Please see ***Appendix E*** for copies of the public notices.

A 4" x 6" post card was also mailed to over 1,400 residents and businesses in the Nice Bridge study area announcing the spring 2007 workshops, including the dates, times, and locations of the workshops. Please see ***Appendix E*** for a copy of the post card.

Over 130 citizens attended the May 31st and June 7th workshops. The Authority held one workshop in Maryland and one workshop in Virginia to accommodate stakeholders in both states. Information on the preliminary alternates, the Purpose and Need, and the assessment of the surrounding natural environmental and social resources were presented. A nine-page brochure was also distributed to the public at the workshops. The brochure provided a summary of the project, a description of the preliminary alternates, the public involvement activities

conducted to date, and identification of the environmental resources in the study area. Please refer to ***Appendix E*** for a copy of the Alternates Public Workshop brochure.

The workshops were used to gather input from citizens. Project team members were on-hand at the workshops to answer questions and listen to and document comments from the public. Comment cards were distributed to members of the public as they entered the workshop. Attendees could either submit their comments at the workshop, or mail or email their comments to the Authority afterward.

A range of comments were received from the public during and following the workshops. The comments received were regarding the preliminary alternates, community access, natural environmental resources, community/business resources, design/aesthetics, existing bridge issues (traffic/tolls), and project schedule/funding. Please refer to the *Summary of Public Comments* in ***Appendix E***.

All comments received from the public were taken into consideration during the development of the Alternates Retained for Detailed Study (ARDS) following the spring 2007 Alternates Public Workshops.

As a follow-up to the public workshops, a project newsletter was distributed to 1,606 residents and businesses in the study area in April 2008 (***Appendix E***). The newsletter provided project updates including a summary of the spring 2007 Alternates Public Workshops and the refined list of alternates (seven) to be assessed in detail in the planning study.

## E. BRIEFINGS TO ELECTED OFFICIALS AND COMMUNITY/BUSINESS ORGANIZATIONS

The project team has met with and presented information to a variety of stakeholders from Maryland and Virginia, including elected officials and community/business organizations (***Table IV-4***). The purpose of the meetings with elected officials and community/business organizations is to provide background information on the Nice Bridge Improvement Project, answer questions, and gather input related to the project from the individuals and organizations.

## F. ENVIRONMENTAL JUSTICE OUTREACH

In compliance with Executive Order 12898, "Federal Actions to Address Environmental Justice in the Minority and Low-Income Populations," the team identified potential minority and/or low-income communities within the study area. One environmental justice community, the Aqua-Land Campground, was identified adjacent to the Nice Bridge. An Environmental Justice (EJ) Outreach Plan was developed to ensure people living in this community were kept informed and given the opportunity to comment on the Nice Bridge Improvement Project. Announcements for the spring 2007 Alternates Public Workshops were provided to the potential EJ community in May 2007. In the summer of 2007, copies of the brochure from the Alternates Public Workshops were also hand-delivered to the potential EJ community. On November 28, 2007, the project team conducted a community briefing to the Aqua-Land Campground to give a project update and provide an opportunity for the community to ask questions and provide feedback. The

project team will continue to coordinate and share project information with the potential EJ community throughout the planning study for the Nice Bridge Improvement Project.

***Table IV-4:*** *Briefings to Stakeholders*

| Stakeholder | Date |
|---|---|
| Southern Maryland Delegation, MD | January 23, 2009 |
| Delegate John Bohanan, MD | May 6, 2008 |
| Western Charles County Democratic Club | February 21, 2008 |
| Southern Maryland Delegation, MD | February 1, 2008 |
| Charles County Commissioners | December 4, 2007 |
| Aqua-Land Community, MD | November 28, 2007 |
| Cub Scouts Troop, La Plata, MD | October 17, 2007 |
| King George County Board of Supervisors, VA | September 4, 2007 |
| Western Charles County Business Association, MD | May 8, 2007 |
| King George County Chamber of Commerce, VA | March 12, 2007 |
| Southern Maryland Delegation, MD | February 16, 2007 |
| Naval Support Facility Dahlgren, VA | November 14, 2007 & September 14, 2006 |
| King George County Board of Supervisors, VA | August 15, 2006 |
| Charles County Commissioners, MD | July 24, 2006 |
| Charles County Chamber of Commerce | June 15, 2006 |

## G. PROJECT WEBSITE

The website for the Nice Bridge Improvement Project can be found at www.nicebridge.maryland.gov. The website's purpose is to serve as an information hub for the public and agencies. The website was created in 2006 during project initiation. People visiting the site will find a Home Page that includes background information on the project, a map of the study area, and links to a quick facts sheet and the spring 2008 project newsletter. The site also includes sections on the project's purpose and need, alternates, public involvement activities, project schedule, agency coordination, and related projects. Digital versions of the brochure and displays from the spring 2007 Alternates Public Workshop were posted to the website to serve people who wanted more information on or were unable to attend the workshops.

The website also functions as an additional means of gathering feedback from interested members of the public. A comment/contact form is featured on the website where people can request to be added to the project mailing list and submit a comment or question to the project team. Over 80 people submitted comments and/or requests to be added to the project mailing list through the website comment/contact form.

The project team ensures the website is maintained and updated on a regular basis to provide the most pertinent and useful information to the public.

# V. DRAFT SECTION 4(f) EVALUATION

## A. INTRODUCTION

Section 4(f) of the US Department of Transportation Act of 1966, 49 USC 303(c), as implemented through 23 CFR 774 by the Federal Highway Administration (FHWA), requires that the proposed use of land from any publicly-owned public park, recreation area, wildlife and/or waterfowl refuge, or any significant historic site may not be approved as part of a federally funded or approved transportation project unless:

a) The FHWA determines that there is no feasible and prudent avoidance alternative to the use of land from the property, and the action includes all possible planning to minimize harm to the property resulting from such use (23 CFR 774.3(a)); or
b) The FHWA determines that the use of Section 4(f) property, including any measures to minimize harm (such as avoidance, minimization, mitigation, or enhancements measures) committed to by the applicant, will have a *de minimis* impact on the property (23 CFR 774.3(b)).

This Draft Section 4(f) Evaluation has been prepared to assess the likely effects of the proposed action upon Section 4(f) resources, and evaluate alternates that avoid or minimize impacts caused by the proposed action (the Governor Harry W. Nice Memorial Bridge Improvement Project) to those resources. After consideration of comments received on this Draft Section 4(f) Evaluation, a Final Section 4(f) Evaluation will provide a final determination on whether feasible and prudent avoidance alternatives to the use exist, and whether all possible planning to minimize harm to the resources has been performed.

This draft evaluation also provides notification of FHWA's intent to pursue *de minimis* impact findings for some park and historic properties. The potential for *de minimis* impacts are currently based on best professional judgment and preliminary coordination with the officials with jurisdiction. Any final *de minimis* impact determinations would be based on impacts associated with a preferred alternate. The determination would be made following continued coordination with the officials with jurisdiction over the resource(s), as described in ***Section D***. Pursuant to 23 CFR 774.5(b)(2), all potential *de minimis* impacts are being presented for public review and comment with the Environmental Assessment (EA), in conjunction with the requirements of the National Environmental Policy Act (NEPA).

## B. PROPOSED ACTION

### 1. Purpose and Need

The purpose and need for the Governor Harry W. Nice Memorial Bridge Improvement Project is explained in detail in ***Chapter I*** of this document.

### 2. Description of Action

The proposed action currently consists of the project's Alternates Retained for Detailed Study (ARDS). The ARDS include the No-Build Alternate and six build alternates:

- Alternate 1: No Build;
- Alternate 2: New two-lane bridge to the south, rehabilitate existing bridge;

- Alternate 3: New two-lane bridge to the south, replace existing bridge;
- Alternate 4: New two-lane bridge to the north, rehabilitate existing bridge;
- Alternate 5: New two-lane bridge to the north, replace existing bridge;
- Alternate 6: New four-lane bridge to the south, take existing bridge out of service; and
- Alternate 7: New four-lane bridge to the north, take existing bridge out of service.

Each build alternate would also include an option to provide a barrier separated bicycle/pedestrian path. This option would not result in a difference in permanent use to any Section 4(f) properties under any alternate, and is therefore not analyzed further in this Draft Section 4(f) Evaluation. Descriptions of the ARDS and options, including environmental impact and cost estimates, are provided in ***Chapter II***; plan sheets of the ARDS are shown in ***Appendix A***.

## C. SECTION 4(f) RESOURCES

There are five Section 4(f) resources within the project area as shown on ***Figure V-1***:

- Governor Harry W. Nice Memorial Bridge, MIHP No. CH-376 (includes the Potomac River Bridge Administration Building as a contributing resource);
- Barnesfield Park;
- Dahlgren Wayside Park;
- Potomac Gateway Welcome Center; and
- Captain John Smith Chesapeake National Historic Trail.

(All figures and tables are located at the end of this evaluation.)

### 1. Governor Harry W. Nice Memorial Bridge (CH-376)

The Governor Harry W. Nice Memorial Bridge (Nice Bridge) was constructed between 1938 and 1940 and opened to traffic on December 15, 1940. Initially called the Potomac River Bridge, the Nice Bridge was renamed in April 1968 to honor Maryland Governor Harry W. Nice, whose administration oversaw the planning and construction of the bridge. The 1.7 mile bridge carries US 301 across the Potomac River connecting Charles County, Maryland and King George County, Virginia. The Nice Bridge, which is owned by the Authority and the subject of the project, is a metal cantilever bridge and is the only known example of such bridge in Maryland. ***Photos V-1*** and ***V-2*** provide views of the major bridge features. Very few significant alterations



*Photo V-1: Nice Bridge from the Virginia shore*



*Photo V-2: Nice Bridge from travel lanes*

have occurred to the Nice Bridge since construction; therefore, the bridge retains the integrity of all original components. The Nice Bridge is also associated with significant historical events because of its role in encouraging inter- and intrastate transportation and commerce. It was the first bridge to provide direct roadway access from Maryland into Virginia south of Washington, DC. Therefore, the Nice Bridge is eligible for listing on the National Register of Historic Places (NRHP) under Criterion A for its association with significant historical events and under Criterion C for its distinctive method of construction.

The Potomac River Bridge Administration Building (Administration Building), which is located adjacent to the north side of US 301, approximately 0.3 miles east of the Potomac River, is eligible for listing on the NRHP under Criterion A as a contributing resource to the Nice Bridge. The building was constructed in 1940 to house the administration, maintenance, and police functions of the Nice Bridge. The original building, which is now the existing maintenance building, consists of a one-story, T-shaped, brick block built in three distinct sections. Despite additions to the building circa 1960 and 1983, the building façade retains sufficient integrity dating to its period of construction to retain NRHP eligibility.



*Photo V-3: Potomac River Bridge Administration Building*

Additional information on the historic characteristics of the Nice Bridge and the Administration Building can be found in the Historic Properties Section of ***Chapter III***, as well as in the *Nice Bridge Improvement Project Determination of Eligibility Report for Maryland*. The Maryland Historical Trust (MHT) concurred with the determination of eligibility for the Nice Bridge and the Administration Building on August 29, 2008 (***Appendix B***).

**2. Publicly Owned Public Park Properties in Virginia**

The land located north of US 301 adjacent to the Potomac River in Virginia provides public park and recreational facilities. The properties in this area share a common history. The properties were acquired together in 1972 through the Federal Lands to Parks Program by the Virginia Department of Highways and Transportation, which is now the Virginia Department of Transportation (VDOT), and King George County, Virginia. There are three parcels that comprised the acquisition: Parcel A (now Barnesfield Park); Parcel B (now Dahlgren Wayside Park); and Parcel C (includes the Potomac Gateway Welcome Center). In 1984, the VDOT property was acquired by King George County.

There are several deed restrictions and covenants that originate from the 1972 Federal Lands to Parks acquisition which apply to all three parcels. These restrictions and covenants remain in place for all three parcels as part of the current land ownership arrangement and include:

- The land must remain available as a public park and recreational facility in perpetuity;

- The land may not be transferred except to another government agency with the purpose of maintaining park and recreational use and through the consent of the US Department of Interior (DOI); and
- At any time, the United States of America may choose to reacquire the relevant properties (or portions of the properties) if deemed necessary for national defense purposes.

In January 1980, a single site development plan was prepared for all three parcels under the name Barnesfield Park. The plan shows substantial development of ball fields, picnic sites, trails, parking lots, access roads, concessions and restrooms (**Figure V-2**). Today, much of the plan has been implemented, however, some elements remain incomplete (e.g., the pedestrian access from the ballfields to the Potomac River), while others have been added (e.g., the Potomac Gateway Welcome Center). Although all three parcels originated as one administrative unit, they are treated as separate Section 4(f) resources in this evaluation because they serve separate park and recreational objectives and, as described below, are maintained by two different agencies.

As part of the Draft Section 4(f) Evaluation, comments have been received from the official(s) with jurisdiction over each park resource. According to 23 CFR 774.17, the 'official with jurisdiction' is the official of the agency owning or administering the Section 4(f) resource. FHWA's Section 4(f) Policy Paper (March 1, 2005) states there may be instances where the agency owning or administering the land has delegated or relinquished its authority to another agency via an agreement on how some of its land will function or be managed. This is the case with Barnesfield Park, Dahlgren Wayside Park, and the Potomac Gateway Welcome Center, where activities on these lands require the consent of the US DOI, in addition to the property owner, based on the conditions of the 1972 Federal Lands to Parks transfer agreement and resulting covenants placed on the park properties.

### a. Barnesfield Park

Barnesfield Park is a 146.5-acre public park located along the north side of US 301, just west of Roseland Road in King George County, Virginia. Access to the park from US 301 is provided via Barnesfield Road.

Barnesfield Park provides many opportunities for active and passive recreation to the public. Amenities at the park include two football/soccer fields, two softball fields, one lighted baseball field, one Little League® baseball field, two playgrounds, two picnic shelters, one sand volleyball court, one asphalt surfaced basketball court, a wooded trail, and a ten-station fitness trail. Parking for 200 vehicles is available within the park. Concession, restroom, and maintenance buildings are also located on the property. **Photos V-4** and **V-5** provide views of some of the park amenities.

The park is owned by King George County and is operated by the King George County Department of Parks and Recreation (DPR). As described previously, the park was acquired in 1972 through the Federal Lands to Parks program, and as a result has several property restrictions and covenants that must be considered as part of any land conversion. The officials with jurisdiction are therefore King George County and the US DOI.



*Photo V-4: Barnesfield Park playground, picnic shelter*



*Photo V-5: Barnesfield Park ballfields*

In a letter dated February 12, 2007, DPR stated that "As Barnesfield Park and Dahlgren Wayside [Park] are currently the County's only park facilities…the significance of these facilities is extremely important. These facilities play a major role in the County's ability to meet the needs of those participating in [recreation] programs." Therefore, Barnesfield Park is considered a Section 4(f) resource.

In 1985, DPR received $240,000 from the Federal Land and Water Conservation Fund (LWCF) to improve ballfield, utility, concession, restrooms, playground, parking, landscaping, and support facilities at Barnesfield Park. As a result of this funding, all of Barnesfield Park is protected under Section 6(f) of the LWCF Act. Based on information from the National Park Service (NPS) in 2008, the LWCA funds were used to improve amenities located within Barnesfield Park only. A discussion on project compliance with Section 6(f) is provided in ***Chapter III***.

### b. Dahlgren Wayside Park

Dahlgren Wayside Park is a 14.7-acre public park located adjacent to the north side of US 301 along the Virginia bank of the Potomac River. Access to Dahlgren Wayside Park is provided from US 301 via Roseland Road.

Dahlgren Wayside Park provides the public opportunities for recreational activities including fishing, canoeing/kayaking, sunbathing, and picnicking. The park includes a sand beach along the Potomac River (450 feet long by 60 feet wide), a boat access for small watercraft, picnic tables, and a parking area. ***Photos V-6*** and ***Photo V-7*** show some of the amenities at Dahlgren Wayside Park.

The park is owned by King George County and is operated by the King George County DPR. As described previously, the park was acquired in 1972 through the Federal Lands to Parks program, and as a result has several property restrictions and covenants that must be considered as part of any land conversion. As stated in DPR's February 12, 2007 letter, the park has been identified as a significant public recreational facility for the County; therefore, it is considered a Section 4(f) resource. The officials with jurisdiction are King George County and the US DOI.



*Photo V-6: Dahlgren Wayside Park shoreline*



*Photo V-7: Dahlgren Wayside Park picnic areas*

### c. Potomac Gateway Welcome Center

The Potomac Gateway Welcome Center (Welcome Center) is located on a 2.1-acre parcel between Roseland Road and Barnesfield Park north of US 301. Access to the facility is provided by an entrance directly from US 301 west of the US 301/Roseland Road intersection.

The focal point of the property is the Welcome Center building, which was built in the early 1990's (***Photo V-8***). The building houses information for the public (e.g., brochures and maps about local attractions, exhibits highlighting events and activities) about King George County and Virginia's Northern Neck region. The Welcome Center also has restroom facilities.



*Photo V-8: Potomac Gateway Welcome Center*

The Welcome Center property was acquired by King George County from the United States in 1972, along with Barnesfield Park and Dahlgren Wayside Park. In 2008, the Virginia Tourism Corporation (VTC) acquired the property from King George County. However, ownership of the property was transferred with the consent of the US DOI, and the property maintains all of the deed restrictions and covenants placed on it as a result of the 1972 Federal Lands to Parks transfer. The officials with jurisdiction are therefore VTC and the US DOI.

In fall 2008, the Welcome Center was closed to the public as a result of the economic downturn and limited funding availability. It is currently anticipated that the Welcome Center will reopen once funding becomes available, however, a schedule for re-opening has not been set by VTC. The Welcome Center property has not been specifically identified as a significant park and recreation resource by VTC or by King George County. Nevertheless, the 2008 deed clearly states that the property continues to have a public park and recreational purpose, and DOI indicates that the Welcome Center is an approved element of the original Barnesfield Park property. Therefore, it is assumed to be a Section 4(f) resource for this evaluation.

### d. Captain John Smith Chesapeake National Historic Trail

The Captain John Smith Chesapeake National Historic Trail (Captain John Smith Trail) is America's first national historic water trail. Designated under the National Trails System Act (16 USC 1241-1251), the trail follows the route of Captain John Smith as he explored the Chesapeake Bay between 1607 and 1609. The Captain John Smith Trail was authorized by Congress in 2006, and is administered by the NPS, in coordination with Chesapeake Bay Gateways Network and the Chesapeake Bay Program.

The total length of the Captain John Smith Trail is approximately 3,000 miles and is based on Captain Smith's passage while surveying the banks of the Chesapeake Bay and its major tributaries in Virginia, Maryland and Delaware. The NPS is still planning and implementing amenities for the Captain John Smith Trail, though the route is already determined and the trail is available for use year round. A unique feature of the trail is the informational buoys deployed by the National Oceanic and Atmospheric Administration (NOAA) to monitor the condition of the Bay and provide information for passing boaters (***Photo V-9***). None of these buoys are in the vicinity of the Nice Bridge. One buoy is in place at the mouth of the Potomac, and another is proposed in the Potomac River approximately 20 miles upstream of the Nice Bridge.

There are approximately 150 miles of river trail upriver of the Nice Bridge, including the Potomac River up to Great Falls, and Aquia Creek up to Quantico. Access to the trail is available at two locations near the Nice Bridge. On the Maryland side, the Aqua-Land Marina (9610 Orland Park Rd, Newburg, MD, 20664) offers protected dock and boat ramp access to the Potomac River about 1,000 feet upriver of the bridge. Road access to this marina is via Orland Park Road, which intersects US 301 about 3,500 feet east of the Nice Bridge. A second access is via the maintained beach at Dahlgren Wayside Park upriver of the bridge, which provides canoe or raft access to the trail.



*Photo V-9: Captain John Smith Trail informational buoy*

Because the trail lies entirely within the tidal waters of the Potomac River, it is publicly managed by the Maryland Department of Natural Resources. However, the NPS administers the trail and is therefore the official with jurisdiction.

Pursuant to 23 CFR 774.13(f), certain trails, paths, and bikeways, including National Historic Trails established under the National Trails System Act, are excepted from Section 4(f) requirements unless the affected trail segment(s) are defined as historic sites. Because the trail segments near the Nice Bridge project are not considered historic sites, impacts to the Captain John Smith Trail do not require Section 4(f) approval. Therefore, the trail is not discussed further in this evaluation. Regardless of this exception, the project would bridge over the Trail and therefore would not impact its continuity or access.

## D. SECTION 4(f) USES

This section discusses the potential impacts to Section 4(f) resources that would be caused by the ARDS. **Table V-1** provides an overview of the impacts to each resource by alternate; **Figures**

**V-3 and V-4** show likely impacts to the Administration Building; and **Figures V-5 through V-10** show impacts to publicly owned public park properties in Virginia. All tables and figures are located at the end of this evaluation. Per 23 CFR 774, there are three general types of "use" which are described below.

- *Permanent use* is impact that involves permanent incorporation of the Section 4(f) property into the transportation facility. This type of use is the primary focus of discussion in this evaluation.
- *Temporary use* occurs when there is a temporary occupancy of a Section 4(f) resource that is adverse. At this time, insufficient project detail is available to identify temporary impacts to Section 4(f) resources; therefore, for the purpose of this evaluation, all Section 4(f) use is assumed to be permanent. Temporary use will be identified and analyzed to the extent possible in the Final Section 4(f) Evaluation, as appropriate.
- *Constructive use* occurs when a transportation project does not permanently or temporarily incorporate land from a Section 4(f) resource into the project, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired (23 CFR 774.15). Substantial impairment occurs only when the protected activities, features or attributes of the resource are substantially diminished. A resource that is experiencing a use as represented by permanent incorporation cannot also experience a constructive use. Therefore, if an alternate results in a permanent use of a Section 4(f) resource, a constructive use analysis is not appropriate for that resource under the alternate.

  It is not anticipated that there would be a constructive use of any resource under any alternate. Presently, the noise and visual settings of the park resources (and, inherently, the Nice Bridge) are influenced by public roads open to traffic (US 301 and Roseland Road), as well as the existing Nice Bridge and active navigational channel in the Potomac River. Therefore, although the noise analysis in the EA and in the *Noise Quality Technical Report* indicates that traffic noise levels at the park would increase as a result of all build alternates, the setting of these resources is already compromised by existing conditions. Because the project generally involves improvements to existing transportation facilities, a proximity impact from the project will not substantially alter the existing setting and the resources would continue to qualify for Section 4(f) protection.

A *de minimis* impact finding is appropriate when FHWA determines that the use of Section 4(f) land is so minimal that the protected resource will not be adversely affected. According FHWA *Guidance for Determining De Minimis Impacts to Section 4(f) Resources* (December 2005), *de minimis* impacts to parks are defined as those that do not "adversely affect the activities, features and attributes" of the resource provided that the official with jurisdiction over the resource agrees in writing. *De minimis* impact to historic properties are defined as "the determination of either 'no adverse effect' or 'no historic properties affected' in compliance with Section 106 of the National Historic Preservation Act (NHPA)."

The likely intent to pursue *de minimis* findings for some circumstances is presented in this section. For park properties, if appropriate following consideration of public comments and

identification of a preferred alternate, the Authority and FHWA will ask the official(s) with jurisdiction to concur (in writing) that the project will not adversely affect the activities, features, or attributes of the resource(s) for which a *de minimis* impact finding is being pursued. For historic properties, the Authority and FHWA will request written concurrence from the State Historic Preservation Officer (SHPO) that there would be no adverse effect or no effect to the property in accordance with 36 CFR Part 800. Should the official(s) with jurisdiction / SHPO concur with this position, FHWA will proceed with the *de minimis* impact determination concurrently with the Final Section 4(f) Evaluation.

The build alternates described in this section (Alternates 2-7) each have an option to construct a bicycle / pedestrian path. For each alternate, the 10-foot wide path would require no additional permanent impact to the park resources in Virginia. The path would only be added to a new bridge; therefore, it would also not result in additional impact to the historic Nice Bridge.

### 1. Alternate 1: No Build

Alternate 1 involves required bridge rehabilitation to keep the existing crossing in service. This alternate would avoid Section 4(f) use of Barnesfield Park, Dahlgren Wayside Park, and the Welcome Center. Based on the currently proposed short-term improvements for the Nice Bridge identified in the Consolidated Transportation Plan (CTP) (including minor roadway rehabilitation and bridge repair), there would likely be no adverse effect to the historic character-defining features of the Nice Bridge. However, the specific nature of long-term future improvements cannot be foreseen; therefore, it is assumed (as a worst-case condition) that degradation and subsequent required structural repairs to the Nice Bridge would have an adverse effect on historic integrity. For the purposes of this Draft Section 4(f) Evaluation, Alternate 1 is thus assumed to result in an adverse effect under Section 106 and a Section 4(f) use to the Nice Bridge. As with all alternates, coordination with FHWA and MHT would be required prior to making a formal determination of effect.

Because this alternate could likely result in an eventual use of the historic bridge, it is not considered an avoidance alternate in this evaluation. A No-Build alternate that avoids Section 4(f) use is included in ***Section E***. This alternate, Alternate 1-Modified, proposes rehabilitation of the Nice Bridge in accordance with AASHTO *Guidelines for Historic Bridge Rehabilitation and Replacement.*

### 2. Alternate 2: New Two-lane Bridge to the South; Rehabilitate Existing Bridge

Alternate 2 proposes the rehabilitation of the existing bridge structure and the construction of a new bridge parallel to and south of the existing structure. The existing bridge would be rehabilitated similar to the improvements required under Alternate 1; therefore, initially there would likely be no adverse effect to the historic character-defining features of the bridge. However, the specific nature of long-term future improvements cannot be foreseen. It is assumed (as a worst-case condition) that required structural repairs to the existing bridge would have an adverse effect on historic integrity. Alternate 2 would also require approximately 0.1 acre of land from the historic boundary of the Administration Building (**Figure V-3**). For the purposes of this Draft Section 4(f) Evaluation, Alternate 2 is thus assumed to result in an adverse effect under Section 106 and a Section 4(f) use to the Nice Bridge.

As shown in **Table V-1**, Alternate 2 would not result in permanent property impacts or Section 4(f) use of Barnesfield Park, Dahlgren Wayside Park, or the Welcome Center (**Figure V-5**).

### 3. Alternate 3: New Two-lane Bridge to South; Replace Existing Bridge

Alternate 3 proposes the construction of a new two-lane bridge parallel to the existing structure and replacement of the existing bridge structure. These activities would cause an adverse effect and permanent use of the Nice Bridge. There likely would be 0.1 acre of impact to the Administration Building historic boundary (**Figure V-3**).

Alternate 3 would not result in any permanent impacts or Section 4(f) use of Barnesfield Park, Dahlgren Wayside Park or the Welcome Center (**Figure V-6**).

### 4. Alternate 4: New Two-lane Bridge to the North; Rehabilitate Existing Bridge

Under Alternate 4, the existing bridge would be rehabilitated similar to the improvements required under Alternate 1; therefore, initially there would likely be no adverse effect to the historic character-defining features of the bridge. However, the specific nature of long-term future improvements cannot be foreseen. It is assumed (as a worst-case condition) that required structural repairs to the existing bridge would have an adverse effect on historic integrity. Furthermore, realignment of the US 301 approach roadway to the north would require the contributing Administration Building to be demolished, resulting in an overall adverse effect and permanent use of the Nice Bridge historic resource under this alternate (**Figure V-4**). For the purposes of this Draft Section 4(f) Evaluation, Alternate 4 is thus assumed to result in an adverse effect under Section 106 and a Section 4(f) use to the Nice Bridge.

Alternate 4 would result in 0.4 acre of permanent impact to Barnesfield Park (**Figure V-7**). The impacts would occur along the southern boundary of the park, where realignment of US 301 would be necessary to connect southbound US 301 to the proposed new bridge at a location north of the existing bridge. There would be no effect to Barnesfield Park recreational facilities, including the ballfields, concession areas, or parking lot. Early coordination with King George County indicates it is likely that Alternate 4 would not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection. Therefore it is likely that a *de minimis* impact determination would be pursued for Barnesfield Park. If appropriate, a formal determination of *de minimis* impact would be made following identification of a preferred alternate.

Due to the shift northward from existing alignment, Alternate 4 would impact the southern portion of Dahlgren Wayside Park, resulting in 1.4 acres of permanent use. The impacted area includes a portion of the park entrance road, a parking area, a portion of the picnic area, and a portion of the beach area.

Alternate 4 would result in permanent acquisition of the Welcome Center property (2.1 acres). The impact would be caused by the northward shift of the US 301 southbound lanes. The Welcome Center building would be demolished.

**5. Alternate 5: New Two-lane Bridge to the North; Replace Existing Bridge**

Under Alternate 5, construction of a new two-lane bridge parallel to the existing structure would occur and the existing Nice Bridge would be completely replaced, resulting in an adverse effect and permanent use of the historic structure. The contributing Administration Building would be demolished under Alternate 5 (**Figure V-4**).

Alternate 5 would result in impacts to Barnesfield Park (0.4 acre), Dahlgren Wayside Park (1.4 acres), and the Welcome Center (2.1 acres) that are identical to Alternate 4 (**Figure V-8**). Also like Alternate 4, there would be no effect to Barnesfield Park recreational facilities, including the ballfields, concession areas, or parking lot. Early coordination with King George County indicates it is likely that Alternate 5 would not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection. Therefore it is likely that a *de minimis* impact determination would be pursued for Barnesfield Park. If appropriate, a formal determination of *de minimis* impact would be made following identification of a preferred alternate.

**6. Alternate 6: New Four-lane Bridge to the South; Take Existing Bridge Out of Service**

Under Alternate 6, the construction of a new four-lane bridge parallel to the existing bridge would occur. There are two scenarios for impacts to the Nice Bridge. Under the first scenario, the existing bridge would be taken out of service and then demolished, resulting in an adverse effect and a permanent use of the historic resource.

Under the second scenario, the existing bridge would be taken out of service but would remain standing. Initially this scenario would likely result in no adverse effect to the historic character-defining features of the Nice Bridge. Over time, however, it would be an unreasonable public expenditure to maintain the bridge since it would serve no transportation function, and in the long term the structure would deteriorate. Thus, it is assumed (as a worst-case condition) that this scenario would eventually result in an adverse effect on historic integrity through neglect. Alternate 6 would also require approximately 0.1 acre of land from the historic boundary of the Administration Building under both scenarios (***Figure V-3***). For the purposes of this Draft Section 4(f) Evaluation, Alternate 6 is assumed to result in an adverse effect under Section 106 and a Section 4(f) use to the Nice Bridge.

Alternate 6 would not result in any impacts or Section 4(f) use of Barnesfield Park, Dahlgren Wayside Park, or the Welcome Center (***Figure V-9***).

**7. Alternate 7: New Four-Lane Bridge to the North; Take Existing Bridge Out of Service**

Alternate 7 would result in impacts to the existing Nice Bridge structure that are identical to Alternate 6, and would depend on whether the bridge is demolished or remains standing. However, unlike Alternate 6, the contributing Administration Building would be demolished under Alternate 7, resulting in a permanent use of this historic property (***Figure V-4***).

Alternate 7 would result in approximately 2.2 acres of land from Barnesfield Park. There would be no effect to recreational facilities at the park, including the ballfields, concession areas, or

parking lot. Early coordination with King George County indicates it is likely that Alternate 7 would not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection. Therefore it is likely that a *de minimis* impact determination would be pursued for Barnesfield Park. If appropriate, a formal determination of *de minimis* impact would be made following identification of a preferred alternate.

Alternate 7 would permanently impact approximately 2.2 acres of Dahlgren Wayside Park (17 percent of the total acreage of the park), including a portion of the park entrance road, a parking area, a portion of the picnic area and a portion of the beach area (**Figure V-10**). Alternate 7 would also result in permanent acquisition of the Welcome Center property (2.1 acres). The Welcome Center building would be demolished.

## E. AVOIDANCE ANALYSIS

This section describes five alternates that would not impact any currently identified Section 4(f) resources. Each alternate is analyzed in accordance with the definition of *feasible and prudent avoidance alternatives* found in 23 CFR 774.17. A summary comparison of all alternates is provided in **Table V-1** following this evaluation.

Per 23 CFR 774.3(b), an analysis of feasible and prudent avoidance alternates is not required for properties that would incur a *de minimis* impact. However, because the alternates could affect multiple Section 4(f) properties that are in close proximity to one another, a feasible and prudent avoidance analysis has been completed for all resources, including those for which a *de minimis* impact finding may be pursued.

### 1. Alternate 1–Modified: Rehabilitation Without Affecting the Historic Integrity of the Bridge

Similar to Alternate 1, Alternate 1-Modified would involve deck replacement and roadway improvements of the existing Nice Bridge. However, unlike Alternate 1, under Alternate 1-Modified any minor improvements would be made in accordance with the AASHTO *Guidelines for Historic Bridge Rehabilitation and Replacement*, to ensure the historic integrity of the bridge is maintained, while not jeopardizing the structural integrity of the bridge.

Alternate 1-Modified would have no impact to Section 4(f) resources and would have no direct impact to any natural or socioeconomic resources. However, the Nice Bridge would likely be closed during repairs, requiring a substantial detour for motorists during the rehabilitation activities. Although Alternate 1-Modified has less impact and would cost considerably less than the build alternates included in the ARDS, it would not meet any of the project Purpose and Need items described in ***Chapter I***. Therefore, Alternate 1-Modified is not considered prudent because it would be unreasonable to proceed with the alternate in light of the project's stated purpose and need. Alternate 1-Modified is being eliminated because it causes other severe problems of a magnitude that substantially outweighs the importance of protecting Section 4(f) resources in the project area.

### 2. Alternate 8: Off Existing Alignment

Section 4(f) use of all resources identified in the study area could be avoided by shifting the location of US 301 (including the proposed bridge) to the north or south of the existing Nice Bridge while leaving the existing bridge in place and in service for local traffic. Like Alternate 1-Modified, any minor improvements would be made in accordance with the AASHTO *Guidelines for Historic Bridge Rehabilitation and Replacement*, to ensure the historic integrity of the bridge is maintained. There are two sub-alternates under Alternate 8: Alternate 8-North and Alternate 8-South.

#### a. Alternate 8-North

Alternate 8-North would relocate US 301 to a new alignment that crosses the Potomac River approximately 2.5 miles north of the existing bridge. New four-lane bridge approach roadways would need to be constructed in MD and VA to move US 301 to a feasible alignment that follows existing roadways. The alignment would begin in Maryland near the intersection of US 301 and Pope's Creek Road. The new US 301 would follow Pope's Creek Road to the Potomac River, where a new bridge would be built in a southwest direction. On the Virginia shore, US 301 would meet Mathias Point Road and eventually connect with Route 624 (Owens Drive). The new US 301 would then reconnect with US 301 near the existing intersection of Route 216/US 301 south of Owens. Alternate 8-North would be approximately 9.9 miles long, with a crossing of the Potomac River that would be approximately 2.2 miles long. A new toll facility and administration complex would be required in Maryland. The alternate would cost approximately $1.9 billion.

Alternate 8-North would completely avoid impacts to all Section 4(f) resources in the Nice Bridge project area. However, assuming that the new roadway would require 75-feet of additional disturbance on each side of existing roadways, it is estimated that the alternate could displace more than 100 residences and businesses; and impact two major streams (Clifton Creek and Gambo Creek), approximately 4 acres of wetlands (based on National Wetlands Inventory mapping), and approximately 17 acres of agricultural land and 58 acres of forest. Alternate 8-North may also affect historic properties that lie along the potential alignment which have not been identified.

Alternate 8-North could cause indirect impacts to businesses along existing US 301 if the roadway is relocated. Businesses along the existing US 301, particularly in Maryland, would have less traffic passing by, resulting in a loss of patronage.

Alternate 8-North would also have land use implications in both Maryland and Virginia. Traffic would be diverted from the existing, heavily-traveled roadway to portions of Charles and King George Counties where the land is sparsely developed and rural in character. The increase in traffic through these areas could increase development pressure along the new alignment that is not consistent with the comprehensive planning goals of Charles or King George Counties. In Charles County, portions of the area to the north are classified as Agricultural Conservation District, and, according to the *Charles County Comprehensive Plan 2006*, the County "seeks to preserve [in this area] the agricultural industry and the land base necessary to support it." In King George County, the majority of the area to the north of US 301 is undeveloped forest classified as a Rural Development Area. According to the *King George County Comprehensive*

*Plan 2006*, Rural Development Areas "include most of the agricultural and environmentally sensitive areas as well as areas that are not appropriate for public utility service in the long term." Communities such as Pope's Creek in Maryland and Owens in Virginia would be affected.

**b. Alternate 8-South**

Alternate 8-South would relocate US 301 to a new alignment that crosses the Potomac River approximately 5.5 miles south of the existing bridge in Virginia, and approximately 1.5 miles south of the existing crossing in Maryland. New four-lane bridge approach roadways would need to be constructed to move US 301 to a feasible alignment which roughly follows existing roads. Furthermore, the alignment would be as close to the existing location of the Morgantown Generating Station, as well as Naval Support Facility (NSF) Dahlgren and the proving grounds south of Dahlgren as possible while completely avoiding these properties. Under this alternate, realigned US 301 would begin near the existing MD 257 / US 301 intersection near Newburg, follow Route 257 southeast to near Wayside, then turn west toward the Potomac River. A new bridge crossing would be constructed that travels south-southwest to the Virginia shore near Potomac Beach. US 301 would then roughly follow Route 619 (Stony Point Road) west to Route 205 (Ridge Road) before connecting with existing US 301 near Edge Hill. Alternate 8-South would be approximately 17.8 miles long, with a crossing of the Potomac River that would be approximately 4.4 miles long. A new toll facility and administration complex would be required in Maryland. The alternate would cost approximately $3.2 billion.

Alternate 8-South would completely avoid impacts to all Section 4(f) resources in the Nice Bridge project area. However, assuming that the new roadway would require 75-feet of additional disturbance on each side of existing roadways, it is estimated that the alternate would displace more than 200 residences and businesses; and impact five major streams (Pasquahanza Creek, Piccowaxen Creek, Waverly Creek, Gambo Creek and Williams Creek), and approximately nine acres of agricultural land and 72 acres of forest. Alternate 8-South may also affect historic properties that lie along the potential alignment which have not been identified.

Alternate 8-South would have land use implications that would be similar to Alternate 8-North, based on current comprehensive plans in both Charles and King George County. Communities such as Newburg and Morgantown in Maryland, and Potomac Beach and Edgehill in Virginia would be affected.

Although Alternates 8-North and 8-South would both avoid the Section 4(f) resources in the project area and would meet the purpose and need for the Nice Bridge Improvement Project, they would involve substantial realignment of the US 301 roadway. Both sub-alternates would cause severe social and natural environmental impacts to residences and business, streams, wetlands, floodplains, farmlands, forests, and the Potomac River in generally undisturbed locations.

Therefore, Alternates 8-North and 8-South are not considered prudent because each would 1) cause severe social, economic, or environmental impacts; 2) cause severe disruption to established communities; 3) cause severe impacts to environmental resources protected under other federal statutes (streams, wetlands, and floodplains); and 4) result in additional construction, maintenance, or operational costs of an extraordinary magnitude. Alternates 8-North and 8-South are being eliminated because they cause other severe problems of a

magnitude that substantially outweighs the importance of protecting project area Section 4(f) resources.

### 3. Alternate 10: Tunnel

Alternate 10, described in ***Chapter II***, involves constructing a four-lane tunnel under the Potomac River near the location of the existing bridge. For the purposes of this evaluation, Alternate 10 is assumed to be a total Section 4(f) avoidance alternate; therefore, the existing Nice Bridge would remain standing and maintained in accordance with AASHTO *Guidelines for Historic Bridge Rehabilitation and Replacement* to ensure continued historic integrity of the structure. If the bridge is taken out of service, the Authority would not be responsible for bridge maintenance.

Alternate 10 would completely avoid other Section 4(f) resources by passing under or south of the park properties in Virginia as well as the Administration Building. The alternate could also be designed to have no impact to residences or businesses, streams, wetlands, floodplains, agricultural land, or forest if potential impacts are limited to tunnel portal locations only within existing public right-of-way. Alternate 10 could disturb hazardous materials or potential unexploded ordinances that may exist in the Potomac River bottom and shore lines. The alternate would also have a particularly severe effect on the efficiency of operations at NSF Dahlgren, as well as broader local and regional commercial transportation and economic implications, because flammable and hazardous materials must be prohibited in tunnels.

Although Alternate 10 would meet the purpose and need for the project, the Potomac River bottom has questionable bearing capabilities for a tunnel; therefore, it is unknown whether a tunnel is feasible to design and build, or whether a tunnel could be built as a matter of sound engineering judgment. Alternate 10 would have a construction cost of approximately $1.9 billion. Alternate 10 is not considered prudent because it would 1) result in additional construction, maintenance, or operational costs of an extraordinary magnitude, and 2) result in other unique problems or unusual factors associated with potential hazardous materials and unexploded ordnance in the Potomac River, operations at NSF Dahlgren, and regional commerce. Therefore, Alternate 10 is being eliminated because it causes other severe problems of a magnitude that substantially outweighs the importance of protecting Section 4(f) resources.

### 4. Alternate 13: Transportation Systems Management / Travel Demand Management

Alternate 13, as described in ***Chapter II***, involves stand-alone Transportation Systems Management (TSM) / Travel Demand Management (TDM) improvements in conjunction with minor improvements to maintain service on the existing Nice Bridge (similar to Alternate 1-Modified). Alternate 13 would completely avoid all Section 4(f) resources. The existing Nice Bridge would be kept in service without modification to character-defining historic elements. No additional capacity or widening would occur to US 301 near the Administration Building or the park properties in Virginia. Alternate 13 would also have no impact to residences or businesses, streams, wetlands, floodplains, agricultural land, or forest. The alternate would have no cost to the Authority.

Although Alternate 13 would have minimal environmental impact and cost less than the build alternates that involve a new bridge, it does not meet the project purpose and need because it

does not provide a geometrically compatible crossing with approach roadways; does not meet capacity needs for 2030 or the ability to maintain two-way traffic flow; and would not improve safety on the existing bridge. Alternate 13 is not considered prudent because it 1) would be unreasonable to proceed with the alternate in light of the project's stated purpose and need; and 2) it results in unacceptable safety or operational problems. Therefore, Alternate 13 is being eliminated because it causes other severe problems of a magnitude that substantially outweighs the importance of protecting project area Section 4(f) resources.

### 5. Alternate 14: Transit

Alternate 14, as described in ***Chapter II***, would involve stand-alone transit improvements, such as bus operation, in conjunction with minor improvements to maintain service on the existing Nice Bridge. Like Alternate 1-Modified, any minor improvements would be made in accordance with the AASHTO *Guidelines for Historic Bridge Rehabilitation and Replacement*, to ensure the historic integrity of the bridge is maintained. Alternate 14 would completely avoid all Section 4(f) resources. The existing Nice Bridge would be kept in service without modification to character-defining historic elements. No additional capacity or widening would occur to US 301 near the Administration Building or the park properties in Virginia. Alternate 14 would also have no impact to residences or businesses, streams, wetlands, floodplains, agricultural land, or forest. The alternate would have no cost to the Authority.

Like Alternate 13, Alternate 14 would have minimal environmental impact and cost less than the build alternates that involve a new bridge. However, it does not meet the project purpose and need because it does not provide a geometrically compatible crossing with approach roadways; does not meet capacity needs for 2030 or the ability to maintain two-way traffic flow; and would not improve safety on the existing roadway approaches or the bridge. Alternate 14 is not considered prudent because it 1) would be unreasonable to proceed with the alternate in light of the project's stated purpose and need; and 2) it results in unacceptable safety or operational problems. Therefore, Alternate 14 is being eliminated because it causes other severe problems of a magnitude that substantially outweighs the importance of protecting project area Section 4(f) resources.

## F. LEAST OVERALL HARM ANALYSIS

Based on the preliminary avoidance analysis in ***Section E***, none of the avoidance alternates presented are considered feasible and prudent; however, the final determination that there is *no* feasible and prudent avoidance alternative to use of Section 4(f) resources has been reserved for the Final Section 4(f) Evaluation. Pursuant to 23 CFR 774.3(c)(1), if the avoidance analysis determines that there is no feasible and prudent avoidance alternate, then only the alternate that causes the least overall harm may be approved. At this time it is appropriate to assume that there may be no feasible and prudent avoidance alternate, and a least harm analysis is necessary. This section therefore provides a preliminary review of the multiple remaining alternates that use multiple Section 4(f) resources, including remaining alternates that would eliminate or reduce the use of individual Section 4(f) resources. ***Table V-1*** provides an overview of the impacts to environmental resource by alternate.

The FHWA regulations at 23 CFR 774.3(c)(1) provide seven factors for identifying the alternative with the least overall harm. ***Table V-2***, located at the end of this evaluation, presents a preliminary comparison of the alternates by each least overall harm evaluation factor. Because the Section 4(f) uses identified thus far may be further refined based on additional modifications to the design of the alternates or mitigation approach, identification of the Least Overall Harm Alternative has been reserved for the Final Section 4(f) Evaluation. Consistent with FHWA's December 2005 Guidance, the intent to pursue *de minimis* impact findings for individual Section 4(f) resources is factored into the least overall harm analysis.

1. **Alternate 1: No Build**

As described in ***Section D***, Alternate 1 would not result in a Section 4(f) use of the park properties in Virginia or the Administration Building in Maryland. Section 4(f) use of the Nice Bridge would be minimized because initially there would be no major modifications to the Nice Bridge structure; however, over time, the historic character-defining features of the bridge may be altered by required maintenance, resulting in an adverse effect and Section 4(f) use (***Table V-1***). The alternate would cost approximately $110-120 million.

Alternate 1 would have no impact to any natural or socioeconomic resources located in the project area. However, although Alternate 1 would result in less environmental impact and would cost less than the other build alternates, it does not meet the project purpose and need.

2. **Alternate 2: New Two-lane Bridge to the South; Rehabilitate Existing Bridge**

Alternate 2 would result in no permanent Section 4(f) use of Dahlgren Wayside Park, Barnesfield Park, or the Welcome Center, but would likely result in an eventual use of the Nice Bridge (***Section D*** and ***Table V-1***). Alternate 2 would impact environmental resources not protected by Section 4(f), as shown in ***Table V-1***. The alternate would meet the purpose and need for the project and would cost approximately $410-540 million.

Alternate 2 would require 3.3 acres of right-of-way from Naval Support Facility (NSF) Dahlgren, resulting in a negative effect to the facility and its mission. Unique and essential national and defense research capabilities are housed in an exclusive building adjacent to the Nice Bridge. According to the US Navy, the fence line may not be moved closer to these operations without jeopardizing their military mission. Furthermore, special facilities and equipment critical to the Navy's mission may not be encroached upon, and replicating or relocating these unique mission capabilities within NSF Dahlgren is not practicable.

The unique mission capabilities located at NSF Dahlgren, VA and operated by the Naval Surface Warfare Center Dahlgren Division (NSWCDD) must meet or exceed requirements provided in the Balanced Survivability Assessment (BSA) criteria. These assessments are conducted by the Defense Threat Reduction Agency (DTRA). An assessment utilizing the BSA criteria at NSF Dahlgren emphasizes that the standoff distance between the Nice Bridge and the multiple unique and critical facilities located at NSF Dahlgren cannot be decreased.

Any relocation of the existing NSF Dahlgren perimeter fence line south of its current position will significantly reduce the safe standoff distance for nine major operational, test, and administrative facilities and approximately 1,300 employees who work in this area of the

installation. Specifically, the required right-of-way for Alternate 2 would reduce the existing clear zone and make NSF Dahlgren buildings that much closer to a public right-of-way. The diminution of the security zone resulting from this alternate has a substantial and direct impact on the NSF Dahlgren community. Furthermore, during construction activities, Alternate 2 would place construction workers and equipment closer to the installation fence line and property, introducing a substantial security issue.

**3. Alternate 3: New Two-lane Bridge to South; Replace Existing Bridge**

Alternate 3 would cause permanent use of the Nice Bridge (excluding the Administration Building), but would avoid use of Dahlgren Wayside Park, Barnesfield Park and the Welcome Center (***Section D*** and ***Table V-1***). Alternate 3 would also impact environmental resources not protected by Section 4(f) as shown in ***Table V-1***. Alternate 3 would require 3.1 acres of right-of-way from NSF Dahlgren that would result in the same negative effects as Alternate 2. The alternate would meet the purpose and need for the project and would cost approximately $695-960 million.

**4. Alternate 4: New Two-lane Bridge to the North; Rehabilitate Existing Bridge**

Alternate 4 would result in permanent use of Dahlgren Wayside Park and the Welcome Center. It would also result in use of the Nice Bridge historic property through demolition of the Administration Building and eventual use of the Nice Bridge itself. It is likely that a d*e minimis* impact determination for Barnesfield Park would be pursued (***Section D*** and ***Table V-1***).

Alternate 4 would impact environmental resources not protected by Section 4(f) as shown in ***Table V-1***. There would be no right-of-way required from NSF Dahlgren. Alternate 4 would meet the purpose and need for the project and would cost approximately $460-600 million.

**5. Alternate 5: New Two-lane Bridge to the North; Replace Existing Bridge**

Alternate 5 would require demolition of the Nice Bridge as well as all impacts to Section 4(f) resources that would occur under Alternate 4 (***Section D*** and ***Table V-1***), including the likely pursuit of a *de minimis* impact finding for Barnesfield Park. Alternate 5 would also impact environmental resources not protected by Section 4(f) as shown in ***Table V-1***. There would be no right-of-way required from NSF Dahlgren. Alternate 5 would meet the purpose and need for the project and would cost approximately $730-990 million.

**6. Alternate 6: New Four-lane Bridge to the South; Take Existing Bridge Out of Service**

Depending on the scenario, Alternate 6 would either cause immediate permanent use of the Nice Bridge (excluding the Administration Building), or would eventually result in a use of the bridge if it remains standing but is taken out of service. Impacts to Dahlgren Wayside Park, Barnesfield Park and the Welcome Center would be avoided (***Section D*** and ***Table V-1***). Alternate 6 would impact environmental resources not protected by Section 4(f) as shown in ***Table V-1***, including 3.7 acres of right-of-way from NSF Dahlgren and the same negative effects to the facility as described under Alternate 2. Alternate 6 would meet the purpose and need for the project and would cost approximately $610-840 million.

### 7. Alternate 7: New Four-lane Bridge to the North; Take Existing Bridge Out of Service

Depending on the scenario, Alternate 7 would either cause immediate permanent use of the Nice Bridge, or would eventually result in a use of the bridge if it remains standing but is taken out of service. The Administration Building would be demolished regardless of the scenario. There would be permanent impacts to Dahlgren Wayside Park and the Welcome Center (***Section D*** and ***Table V-1***). It is likely that a *de minimis* impact determination for Barnesfield Park would be pursued.

Alternate 7 would impact environmental resources not protected by Section 4(f), as shown in ***Table V-1***. Alternate 7 would not require right-of-way from NSF Dahlgren. The alternate would meet the purpose and need for the project and would cost approximately $670-910 million.

### 8. Alternate 9: Roadway Shift

Alternate 9 would consist of shifting US 301 to either the north or south of the existing alignment in order to minimize impacts to Section 4(f) and other environmental resources located on either shore. There are two sub-alternates under Alternate 9-Maryland (MD) North and Alternate 9-Maryland (MD) South.

#### a. Alternate 9-MD North

Alternate 9-MD North would shift the US 301 alignment north on the MD shore and terminate on the Virginia shore south of the existing alignment. A new bridge would be constructed over a portion of the existing bridge.

This alternate may require some modification to the historic Nice Bridge that would result from building a new bridge over the existing structure. The Administration Building would be demolished, similar to Alternates 4, 5, and 7. There would be no permanent use of the park properties in Virginia.

Alternate 9-MD North would impact environmental resources not protected by Section 4(f) as shown in ***Table V-1***. The alternate would result in impacts to NSF Dahlgren that would be identical to the impacts of Alternate 2 (3.1 acres). Alternate 9-MD North would meet the purpose and need for the project and would cost approximately $500 million.

#### b. Alternate 9-MD North

Alternate 9-MD South is similar to Alternate 9-MD North, except that the US 301 alignment would shift to the south on the MD shore and terminate on the Virginia shore north of the existing alignment.

This alternate may require some modification to the historic Nice Bridge that would result from building a new bridge over the existing structure. The Administration Building would not be impacted, similar to Alternates 2, 3, and 6. Impacts to the park properties in Virginia would be identical to Alternate 4. It is likely that a *de minimis* impact finding would be pursued for Barnesfield Park.

Alternate 9-MD South would impact environmental resources not protected by Section 4(f), as shown in ***Table V-1***. The alternate would result in no direct right-of-way impacts to NSF Dahlgren. Alternate 9-MD South would meet the purpose and need for the project and would cost approximately $500 million.

Alternate 9 would only result in minor reductions to Section 4(f) and other environmental impacts compared to the ARDS. Both of the Alternate 9 sub-alternates would require complex construction techniques to build a new bridge over the existing bridge. Shifting the northbound or southbound lanes across the existing bridge would also create difficult conditions for maintenance of traffic during construction.

**9. Alternate 11: Stacked Deck**

Alternate 11 would involve construction of a new structure over the existing structure. Each level would carry traffic in a single direction. Access ramps on the Maryland and Virginia shores would be constructed to carry travelers to the upper structure. The existing bridge would be retained, but the alternate would result in modifications to the historic bridge structure that would likely result in an adverse effect and permanent use of the Nice Bridge. Assuming that upper deck access ramps are constructed to avoid use of Section 4(f) resources, there would be no permanent use of the park properties in Virginia.

Alternate 11 would impact environmental resources not protected by Section 4(f). Although these impacts would be caused primarily by upper deck access ramps as opposed to the US 301 mainline, the impacts would be similar to Alternate 2, including impacts to NSF Dahlgren (***Table V-1***). Alternate 11 would cost approximately $890 million.

Alternate 11 would only result in minor reductions to Section 4(f) and other environmental impacts (including NSF Dahlgren) compared to the ARDS. The alternate would not likely include improvements to shoulders on the existing bridge and therefore would not improve safety on the existing bridge and approach roadways. The alternate may also counter driver expectancy of typical roadway approaches to a bridge crossing. It therefore does not meet the project purpose and need to improve safety at the existing bridge and approach roadways.

**10. Alternate 12: Three-lane Bridge with Movable Barrier**

This alternate would include rehabilitating and widening the existing bridge and approach roadways to accommodate a third lane. The third lane would be located south of the existing lanes to minimize impacts to Section 4(f) resources. The existing bridge would be retained, but the alternate would result in modifications to the historic bridge structure that would likely result in an adverse effect and permanent use of the Nice Bridge. Impacts would be avoided to the Administration Building, Dahlgren Wayside Park, Barnesfield Park, and the Welcome Center.

Alternate 12 would impact environmental resources not protected by Section 4(f). These impacts, shown in ***Table V-1***, would be associated with the construction of an additional lane on US 301, and would be minimized compared to the build alternates included in the ARDS (which would include construction of two lanes). The alternate would require approximately 1.0-2.0 acres of right-of-way from NSF Dahlgren, resulting in other negative effects to the facility similar to those described for Alternate 2. Alternate 12 would cost approximately $220 million.

Alternate 12 would not provide sufficient lane capacity to meet the projected travel demand over the Nice Bridge, particularly during summer weekends. Furthermore, the alternate would not provide a roadway section that is compatible with the existing roadway approaches in both Maryland and Virginia. Therefore the alternate would not meet the purpose and need.

**11. Alternate 15: Replace Existing Bridge on Existing Alignment**

Alternate 15 would demolish the existing historic bridge and rebuild a new four-lane bridge in its place. Alternate 15 would cause permanent use of the Nice Bridge (excluding the Administration Building) but would avoid the park properties in Virginia.

Alternate 15 would impact environmental resources not protected by Section 4(f) (**Table V-1**). These impacts would be associated with the construction of two additional lanes on the US 301 bridge approach roadway south of the existing alignment. The impacts would be minimized compared to the build alternates included in the ARDS because the roadway would tie to the location of the existing bridge. The alternate would not require right-of-way from NSF Dahlgren.

Alternate 15 would meet the purpose and need for the project and would cost approximately $620 million. Although the alternate would result in minimal Section 4(f) and environmental impact, it would result in closure of the existing bridge crossing for many months. Closing the bridge crossing would require travelers to detour more than 100 miles to the next nearest Potomac River crossing at the Woodrow Wilson Bridge (I-95) near Washington, DC. The bridge closure would also have severe negative effects on regional economic conditions and operations at NSF Dahlgren, as well as many other businesses in Charles and King George Counties that rely on mobility over the existing bridge.

## G. ALL POSSIBLE PLANNING TO MINIMIZE HARM

"All possible planning" as defined in 23 CFR 774.17 includes all reasonable measures to minimize harm and mitigate for adverse impacts and effects. All possible planning does not require analysis of feasible and prudent avoidance alternatives. The avoidance analysis occurred in the context of searching for alternates that avoid Section 4(f) properties altogether, pursuant to 23 CFR 774.17. For this Draft Section 4(f) Evaluation, possible planning to minimize harm has been performed and is documented in this section; however, the final determination of whether all possible planning has occurred has been reserved for the Final Section 4(f) evaluation, after consideration of comments on the Draft Section 4(f) Evaluation.

As stated in 23 CFR 774.17, a *de minimis* impact determination inherently includes the requirement for all possible planning to minimize harm because impacts have already been reduced to a *de minimis* level.

At this stage of the project, the design of the alternates has not been refined to the extent that many minimization measures could be included. To date, the distance between the existing Nice Bridge and the proposed new bridges to the north has been minimized to reduce the amount of encroachment that Alternates 4, 5, and 7 would have on Barnesfield Park and Dahlgren Wayside

Park. Other minimization measures that will be evaluated in the upcoming stages of the project include increasing side slopes, reducing median widths, and providing retaining walls or mechanically stabilized embankments (MSE). These measures will be evaluated in the Final Section 4(f) Evaluation, and, if reasonable, included in the project design.

For Section 4(f) uses that cannot be avoided or further minimized, mitigation would be considered. Mitigation would be commensurate with the severity of the impact on the Section 4(f) resource. In addition, all Section 4(f) mitigation would be determined through consultation with the officials having jurisdiction over each resource. At this stage of the project, the design of the alternates is not complete. Therefore, only conceptual mitigation concepts are presented. Specific mitigation measures will be coordinated with the appropriate officials with jurisdiction over the impacted resources and presented in the Final Section 4(f) Evaluation.

Mitigation for the Section 4(f) use of the Nice Bridge (including the Administration Building) would be specified in a Memorandum of Agreement (MOA) if the project results in adverse effects to the resource. The MOA would be prepared in accordance with Section 106 of the National Historic Preservation Act, as amended. Potential mitigation measures would be developed in coordination with the State Historic Preservation Officer (Maryland Historical Trust) and, as appropriate, the Advisory Council on Historic Preservation (ACHP). The MOA would be prepared following this Draft Section 4(f) Evaluation and the identification of a preferred alternative if the project results in adverse effects to historic properties. Specific mitigation measures described in the MOA would be documented in the Final Section 4(f) Evaluation. Mitigation for the removal of the historic Nice Bridge could include documentation appropriate for the the Historic American Engineering Record (HAER) and Historic American Bridge Survey (HABS) programs, which are administered through the NPS. This could produce a comprehensive, multidisciplinary record of the Nice Bridge (including detailed historical narratives, measured drawings, and photographs) which may be maintained in a special collection at the Library of Congress.

Mitigation for publicly owned public parks and recreational facilities typically includes a variety of actions such as parkland replacement, enhancing existing parkland, or providing new or replacement park amenities or facilities. Any or all of these types of measures could be considered for Section 4(f) mitigation for parkland impacts. Compliance with the requirements of Section 6(f) of the LWCF Act would be required for any land acquired from Barnesfield Park. Section 6(f) requires that any land converted from this park property must be replaced with land of equal or greater recreational and monetary value.

## H. COORDINATION

### 1. Officials with Jurisdiction

#### a. US Department of Interior / National Park Service (NPS)

US DOI/NPS serves multiple jurisdictional roles for the park properties in Virginia, including oversight of any land conversion that may be required from Barnesfield Park in accordance with Section 6(f) of the LWCF Act, and approval of any land transfer in accordance with covenants

and restrictions stipulated in deeds for those properties (***Section C***). To date, NPS has responded to the Authority's request for information regarding Section 6(f) applicability to park properties (November 28, 2008). Per NPS statements, Barnesfield Park is the only property in the Nice Bridge study area that is subject to requirements of Section 6(f) of the LWCF Act. Additional coordination will occur with US DOI/NPS when this Draft Section 4(f) Evaluation is circulated to the US DOI in accordance with Section 4(f) regulations. Comments received from US DOI will be addressed as appropriate in the Final Section 4(f) Evaluation. It is also anticipated that US DOI may be asked to concur that the project would not adversely affect Barnesfield Park for the purposes of pursuing a *de minimis* impact finding, as appropriate.

#### b. King George County

King George County (along with US DOI) is an official with jurisdiction over Barnesfield Park and Dahlgren Wayside Parks. Preliminary information regarding these facilities, such as amenities and the parks' significance in the County, was received from DPR on February 12, 2007 (***Appendix B***). The Authority met with King George County officials, including the Department of Parks and Recreation (DPR), on February 17, 2009 to discuss potential impacts to and mitigation opportunities for the parks. At this meeting, King George County agreed that the ARDS would likely have no adverse effect to Barnesfield Park, and agreed with the Authority's intent to pursue a *de minimis* finding for impacts to this resource. DPR stated that an individual Section 4(f) Evaluation would be more appropriate for Dahlgren Wayside Park. The Authority will continue to coordinate with the County regarding Barnesfield Park and Dahlgren Wayside Park, and request concurrence that the there would be no adverse effect to these resources as appropriate if a *de minimis* impact finding is pursued. All comments from King George County will be addressed as appropriate in the Final Section 4(f) Evaluation.

#### c. Virginia Tourism Corporation

Coordination with the Virginia Tourism Corporation (VTC), an official with jurisdiction (along with DOI) over the Welcome Center, has included identification of the property as a Section 4(f) resource through review of the 2008 property deed. The Authority will continue to coordinate with VTC regarding this property.

### 2. State Historic Preservation Officer

In a letter dated August 29, 2008, the Maryland Historical Trust (MHT) concurred that the Nice Memorial Bridge and the Administration Building are eligible for listing on the National Register of Historic Places. Coordination will continue with MHT to evaluate effects to these resources caused by the alternates. The Authority will circulate this Draft Section 4(f) Evaluation to MHT, and all comments will be addressed in the Final Section 4(f) Evaluation. At this time there are no Section 4(f) resources in Virginia under the jurisdiction of VDHR; however, coordination with VDHR will also continue in conjunction with development of an MOA, per Section 106.

### 3. Localities

The project is located within Charles County, Maryland and King George County, Virginia. Elected Officials and staff from both counties have been extensively involved with the project.

### a. Charles County

The Charles County Department of Public Facilities provided information that there are no public parks or recreation areas located within the Charles County portion of the Nice Bridge study area. The Charles County Department of Planning and Growth Management (DPGM) reviewed the *Maryland Historical Resources Survey and Determination of Eligibility Report* and concurred with the determinations of eligibility on June 6, 2008. This Draft Section 4(f) Evaluation will be circulated to the Department of Planning and Growth Management. All comments received will be addressed as appropriate in the Final Section 4(f) Evaluation.

### b. King George County

As described earlier in this section, the Authority has coordinated with the King George County DPR. This Draft Section 4(f) Evaluation will also be circulated to King George County. All comments received will be addressed as appropriate in the Final Section 4(f) Evaluation.

## 4. US Department of Agriculture (USDA) and Housing and Urban Development (HUD)

Consultation with the USDA and HUD is not warranted because the project would not use land from the National Forest System or land where HUD funding has been utilized, respectively.

## 5. Other

### a. US Navy/Naval Support Facility (NSF) Dahlgren

The Authority has worked with NSF Dahlgren staff regarding previous archeological and historic structures investigations completed at the facility. NSF Dahlgren recently performed additional historic property studies; once the studies are approved by the Virginia State Historic Preservation Officer (VDHR), the historic properties survey will be updated, if appropriate. In April 2009, the US Navy provided additional information describing the likely adverse effect to NSF Dahlgren that would result from any alternate that requires right-of-way from the facility. This information has been included in this evaluation. Additional comments will be addressed as appropriate in the Final Section 4(f) Evaluation.

### b. Virginia Department of Conservation and Recreation (VDCR)

VDCR is interested in LWCF Act land conversions (i.e. park to transportation) at Barnesfield Park and clarified the conversion process to the Authority should parkland be impacted by the Nice Bridge Improvement Project (November 20, 2007). The Authority will continue to coordinate with VDCR regarding Barnesfield Park. Comments received will be addressed as appropriate in the Final Section 4(f) Evaluation or in the Section 6(f) discussion (located in **Chapter III** of the EA).

### c. Public at Large

The public will be asked to comment on the protected activities, features, or attributes of the property affected by the Nice Bridge Improvement Project. Depending on the alternate, it is likely that the Authority would pursue a *de minimis* impact finding for Barnesfield Park, and as such, the official with jurisdiction (King George County DPR and US DOI) will make its determination after the public comment period. The public will have the opportunity to comment on the Section 4(f) Evaluation thirty days prior to and fifteen days after the Nice Bridge Improvement Project Public Hearings (one in Maryland and one in Virginia). All

comments received will be considered in the Final Section 4(f) Evaluation and for any *de minimis* determinations.

***Table V-1:*** *Comparison of Alternate Impacts*

| | Alternate 1 | Alternate 1-Modified | Alternate 2 | Alternate 3 | Alternate 4 | Alternate 5 | Alternate 6 | Alternate 7 |
|---|---|---|---|---|---|---|---|---|
| Section 4(f) Resource Avoidance? | No | Yes | No | No | No | No | No | No |
| Impact to historic Nice Bridge? | Initially, No; Long-term, Yes (Modification) | No | Initially, No; Long-term, Yes (Modification) | Yes: Replacement | Initially, No; Long-term, Yes (Modification) | Yes: Replacement | Yes[1] | Yes[1] |
| Impact to Potomac River Bridge Administration Building? | No | No | Yes: 0.1 acre | Yes: 0.1 acre | Yes: 0.5 acre, demolition | Yes: 0.5 acre, demolition | Yes: 0.1 acre | Yes: 0.5 acre, demolition |
| Impact to Barnesfield Park | No | No | No | No | Yes: 0.4 acres | Yes: 0.4 acres | No | Yes: 2.2 acres |
| Impact to Dahlgren Wayside Park | No | No | No | No | Yes: 1.4 acres | Yes: 1.4 acres | No | Yes: 2.2 acres |
| Impact to Potomac Gateway Welcome Center | No | No | No | No | Yes: 2.1 acres | Yes: 2.1 acres | No | Yes: 2.1 acres |
| Likely pursue Section 4(f) *de minimis* finding? | No | N/A | No | No | Yes: Barnesfield Park | Yes: Barnesfield Park | No | Yes: Barnesfield Park |
| Community or Military Facility Impacts? | No | No | Yes: 3.1 acres from NSF Dahlgren | Yes: 3.1 acres from NSF Dahlgren | No | No | Yes: 3.7 acres from NSF Dahlgren | No |
| Business ROW? | No | No | No | No | Yes: 7.0 acres | Yes: 7.0 acres | No | Yes: 7.6(8.5) acres |
| Wetland Impacts? | No | No | Yes: 0.7 acres | Yes: 0.7 acres | Yes: 0.1 acres | Yes: 0.2 acres | Yes: 0.7 acres | Yes: 0.1 acres |
| Stream Impacts? | No | No | Yes: 2,500 lf | Yes: 2,500 lf | Yes: 3,600 lf | Yes: 3,700 lf | Yes: 2,400 lf | Yes: 3,700 lf |
| Open water dredge impacts? | No | No | Yes: 62 acres | Yes: 88 acres | Yes: 63 acres | Yes: 89 acres | Yes: 68 acres | Yes: 67 acres |
| Floodplain Impacts? | No | No | Yes: 6.3 acres | Yes: 8.6 acres | Yes: 8.4 acres | Yes: 8.7 acres | Yes: 6.5 acres | Yes: 8.6 acres |
| Forest Impacts? | No | No | Yes: 0.5 acres | Yes: 0.5 acres | Yes: 1.0 acres | Yes: 1.0 acres | Yes: 0.7 acres | Yes: 1.9 acres |
| Unique Problems? | No | No | No | No | No | No | No | No |
| Meets Purpose and Need? | No | No | Yes | Yes | Yes | Yes | Yes | Yes |
| Approximate Cost | $110-120 million | N/A | $410-540 million | $695-960 million | $460-600 million | $730-990 million | $610-840 million | $670-910 million |
| If avoidance, feasible and prudent?[2] | N/A | No | N/A | N/A | N/A | N/A | N/A | N/A |

[1] The existing Nice Bridge would be taken out of service with these alternatives. If demolished, an immediate adverse effect would result. If left standing, an adverse effect would eventually result from neglect.
[2] Only applied to avoidance alternates.

***Table V-1:*** *Comparison of Alternate Impacts (Continued)*

| | Alternate 8 | Alternate 9 | Alternate 10 | Alternate 11 | Alternate 12 | Alternate 13 | Alternate 14 | Alternate 15 |
|---|---|---|---|---|---|---|---|---|
| Section 4(f) Resource Avoidance? | Yes | No | Yes | No | No | Yes | Yes | No |
| Impact to historic Nice Bridge? | No | Yes: Modification | No | Yes: Modification | Yes: Modification | No | No | Yes: Replacement |
| Impact to Potomac River Bridge Administration Building? | No | Yes: *MD North* - Demolition *MD South* - 0.1 acre | No | No | No | No | No | No |
| Impact to Barnesfield Park? | No | MD North: No MD South: 0.4 acres | No | No | No | No | No | No |
| Impact to Dahlgren Wayside Park? | No | MD North: No MD South: 1.4 acres | No | No | No | No | No | No |
| Impact to Potomac Gateway Welcome Center? | No | MD North: No MD South: 2.1 acres | No | No | N | No | No | No |
| Likely pursue Section 4(f) *de minimis* finding? | N/A | MD North: No MD South: Barnesfield Park | No | No | No | N/A | N/A | No |
| Community or Military Facility Impacts? | No | Yes: *MD North* – 3.1 acres | No | Yes: 3.1 acres from NSF Dahlgren | Yes: 1.0-2.0 acres from NSF Dahlgren | No | No | Yes: Extended bridge closure |
| Business ROW? | Yes: 100-200 properties displaced | Yes: *MD North* -4.4 acres *MD South* – 11.9 acres | No | Yes: 4.0 acres | Yes: 2.0-3.0 acres | No | No | Yes: 2.0-3.0 acres |
| Wetland Impacts? | Yes: 4 acres (based on NWI) | Yes: 0.2-0.7 acre | No | Yes: 0.7 acres | No | No | No | No |
| Stream Impacts? | Yes: 2-5 major crossings | Yes: 2,500-3,700 lf | No | Yes: 2,500 lf | Yes: 1,000-1,500 lf | No | No | Yes: 1,000-1,500 lf |
| Open water dredge impacts? | Yes: 100-200 acres | Yes: 60-80 acres | No | Yes: 60-80 acres | Yes: 60-80 acres | No | No | Yes: 60-80 acres |
| Floodplain Impacts? | Yes: Mapping not available | Yes: 6.5-8.6 acres | No | Yes: 6.3 acres | Yes: 1.0-3.0 acres | No | No | Yes: 1.0-3.0 acres |
| Forest Impacts? | Yes: 58-72 acres | Yes: 2.6-3.0 acres | No | Yes: 2.6 acres | Yes: 2.0-2.5 acres | No | No | Yes: 2.0-2.5 acres |
| Unique Problems? | No | No | Yes: Hazardous Materials | No | No | No | No | No |
| Meets Purpose and Need? | Yes | Yes | Yes | Yes | No | No | No | Yes |
| Approximate Cost | $1.9-3.2 billion | $500 million | $1.9 billion | $890 million | $220 million | $0 | $0 | $620 million |
| If avoidance, feasible and prudent?[2] | No | N/A | No | N/A | N/A | No | No | N/A |

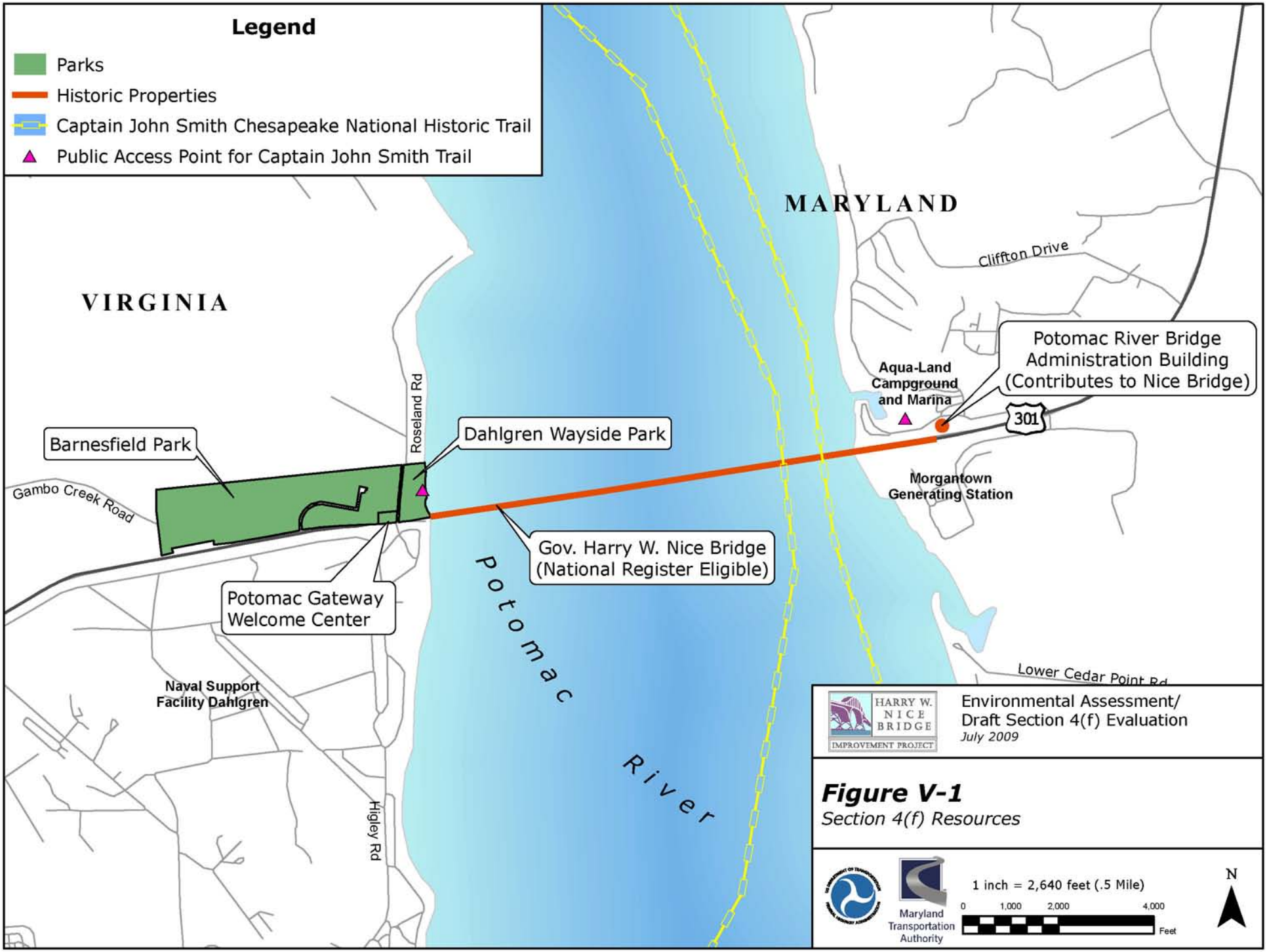
[1] The existing Nice Bridge would be taken out of service with these alternatives. If demolished, an immediate adverse effect would result. If left standing, an adverse effect would eventually result from neglect.
[2] Only applied to avoidance alternates.

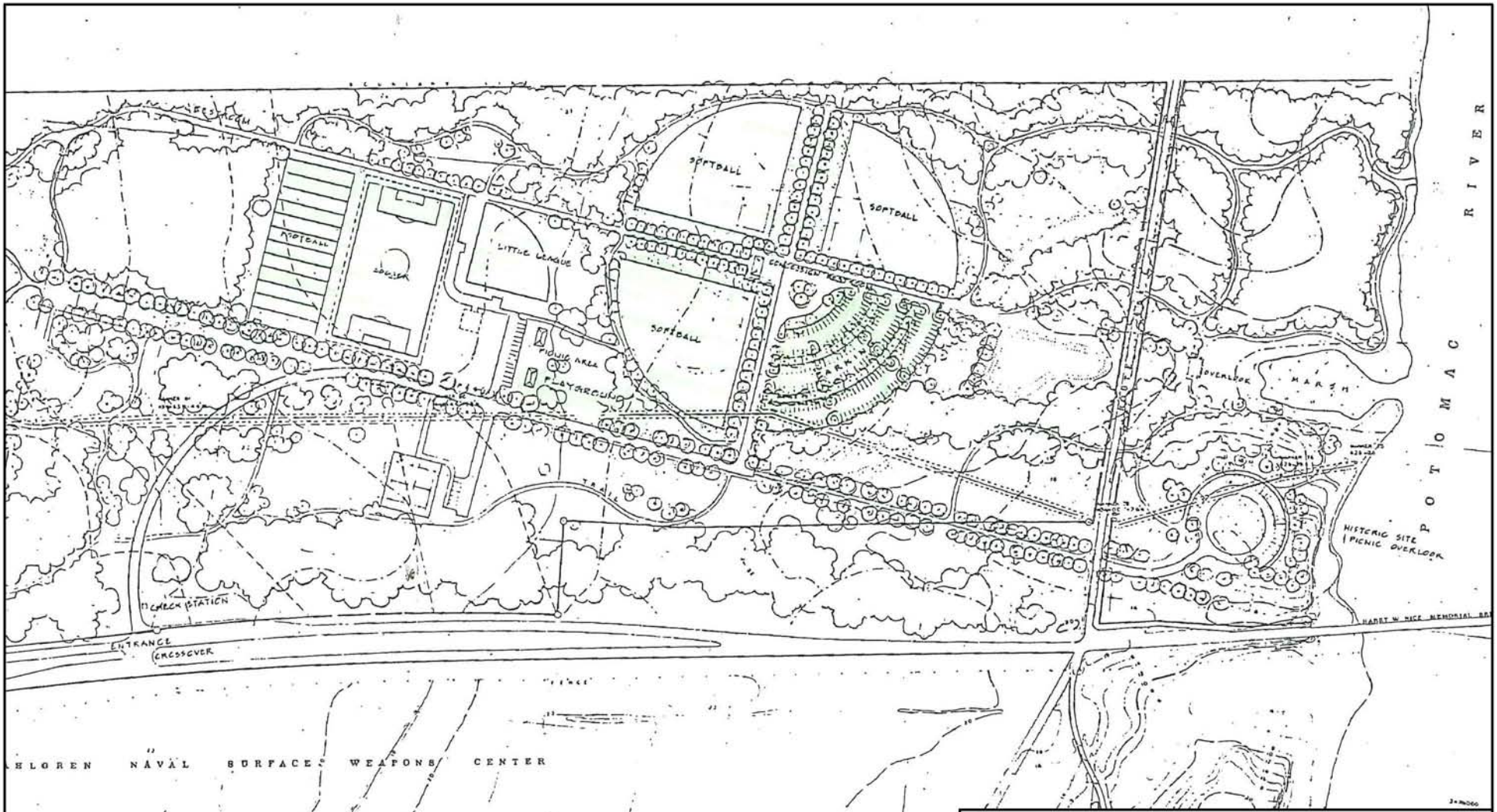
***Table V-2:*** *Preliminary Least Overall Harm Analysis*

| 23 CFR 774.3(c) Factor | Alternate 1 | Alternate 2 | Alternate 3 | Alternate 4 | Alternate 5 | Alternate 6 | Alternate 7 |
|---|---|---|---|---|---|---|---|
| i. The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property | Mitigation not appropriate given limited impacts to Nice Bridge | Recordation of Nice Bridge; Likely no adverse impact to other Section 4(f) resources | Recordation of Nice Bridge; Likely no adverse impact to other Section 4(f) resources | Recordation of Nice Bridge; Replacement parkland / amenities for Barnesfield and Dahlgren Wayside | Recordation of Nice Bridge; Replacement parkland / amenities for Barnesfield and Dahlgren Wayside | Recordation of Nice Bridge; Likely no adverse impact to other Section 4(f) resources | Recordation of Nice Bridge; Replacement parkland / amenities for Barnesfield and Dahlgren Wayside |
| ii. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes or features that qualify each Section 4(f) property for protection | Limited harm only to Nice Bridge over time | Limited harm only to Nice Bridge over time | Severe impact (demolition) of historic Nice Bridge | Limited harm only to Nice Bridge over time; Use of Dahlgren Wayside and Welcome Center | Severe impact (demolition) of historic Nice Bridge; Use of Dahlgren Wayside and Welcome Center | Limited harm only to Nice Bridge over time | Limited harm only to Nice Bridge over time; Largest use of Dahlgren Wayside and Welcome Center |
| iii. The relative significance of each Section 4(f) property | All resources in the project area are currently considered to be equally significant. Therefore, balancing the effects of one resource to another is not appropriate based on the current available information. | | | | | | |
| iv. The views of the officials with jurisdiction over each Section 4(f) property | SHPO has not yet provided an effect determination for the Nice Bridge | SHPO has not yet provided an effect determination for the Nice Bridge | SHPO has not yet provided an effect determination for the Nice Bridge | SHPO has not yet provided an effect determination for the Nice Bridge; King George County has preliminarily agreed that there would be no adverse effect to Barnesfield Park | SHPO has not yet provided an effect determination for the Nice Bridge; King George County has preliminarily agreed that there would be no adverse effect to Barnesfield Park | SHPO has not yet provided an effect determination for the Nice Bridge | SHPO has not yet provided an effect determination for the Nice Bridge; King George County has preliminarily agreed that there would be no adverse effect to Barnesfield Park |
| v. The degree to which each alternative meets the purpose and need for the project | Does not meet Purpose and Need | Meets purpose and need | Meets purpose and need | Meets purpose and need | Meets purpose and need | Meets purpose and need | Meets purpose and need |
| vi. After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f) | No adverse impacts to other environmental resources | Impacts to streams, wetlands, open water. Substantial impacts to NSF Dahlgren | Impacts to streams, wetlands, open water. Substantial impacts to NSF Dahlgren | Impacts to streams, wetlands, open water, and forests | Impacts to streams, wetlands, open water, and forests | Impacts to streams, wetlands, open water. Substantial impacts to NSF Dahlgren | Impacts to streams, wetlands, open water, and forests |
| vii. Substantial differences in cost among the alternatives | $0 | $510-640 million | $800-1,070 million | $515-655 million | $790-1,050 million | $700-940 million | $720-965 million |

***Table V-2:*** *Preliminary Least Overall Harm Analysis (Continued)*

| 23 CFR 774.3(c) Factor | Alternate 9 | Alternate 11 | Alternate 12 | Alternate 15 |
|---|---|---|---|---|
| i. The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property | Recordation of Nice Bridge; replacement parkland/ amenities for Barnesfield and Dahlgren Wayside | Recordation of Nice Bridge; Likely no adverse impact to other Section 4(f) resources | Recordation of Nice Bridge; Likely no adverse impact to other Section 4(f) resources | Recordation of Nice Bridge; Likely no adverse impact to other Section 4(f) resources |
| ii. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes or features that qualify each Section 4(f) property for protection | Use of historic Nice Bridge; Use of Dahlgren Wayside and Welcome Center | Use of historic Nice Bridge | Use of historic Nice Bridge | Use of historic Nice Bridge |
| iii. The relative significance of each Section 4(f) property | All resources in the project area are currently considered to be equally significant. Therefore, balancing the effects of one resource to another is not appropriate based on the current available information. | | | |
| iv. The views of the officials with jurisdiction over each Section 4(f) property | SHPO has not yet provided an effect determination for the Nice Bridge; King George County has preliminarily agreed that there would be no adverse effect to Barnesfield Park | SHPO has not yet provided an effect determination for the Nice Bridge | SHPO has not yet provided an effect determination for the Nice Bridge | SHPO has not yet provided an effect determination for the Nice Bridge |
| v. The degree to which each alternative meets the purpose and need for the project | Meets Purpose and Need | Does not meet Purpose and Need (safety) | Does not meet purpose and need | Meets Purpose and Need |
| vi. After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f) | Impacts to streams, wetlands, open water. Substantial impacts to NSF Dahlgren (*MD North subalternate*); complex maintenance of traffic | Impacts to streams, wetlands, open water. Substantial impacts to NSF Dahlgren | Impacts to streams, wetlands, open water. Substantial Impacts to NSF Dahlgren | Impacts to streams, wetlands, open water. Substantial impacts to NSF Dahlgren and regional commerce |
| vii. Substantial differences in cost among the alternatives | $500 million | $890 million | $220 million | $620 million |


Legend
Parks
Historic Properties
Captain John Smith Chesapeake National Historic Trail
Public Access Point for Captain John Smith Trail
MARYLAND
VIRGINIA
Cliffton Drive
Potomac River Bridge Administration Building (Contributes to Nice Bridge)
Aqua-Land Campground and Marina
301
Roseland Rd
Dahlgren Wayside Park
Barnesfield Park
Gambo Creek Road
Morgantown Generating Station
Gov. Harry W. Nice Bridge (National Register Eligible)
Potomac Gateway Welcome Center
Potomac River
Naval Support Facility Dahlgren
Higley Rd
Lower Cedar Point Rd
HARRY W. NICE BRIDGE IMPROVEMENT PROJECT
Environmental Assessment/ Draft Section 4(f) Evaluation
July 2009
Figure V-1
Section 4(f) Resources
Maryland Transportation Authority
1 inch = 2,640 feet (.5 Mile)
0 1,000 2,000 4,000
Feet
N




# BARNESFIELD PARK

KING GEORGE COUNTY, VIRGINIA

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

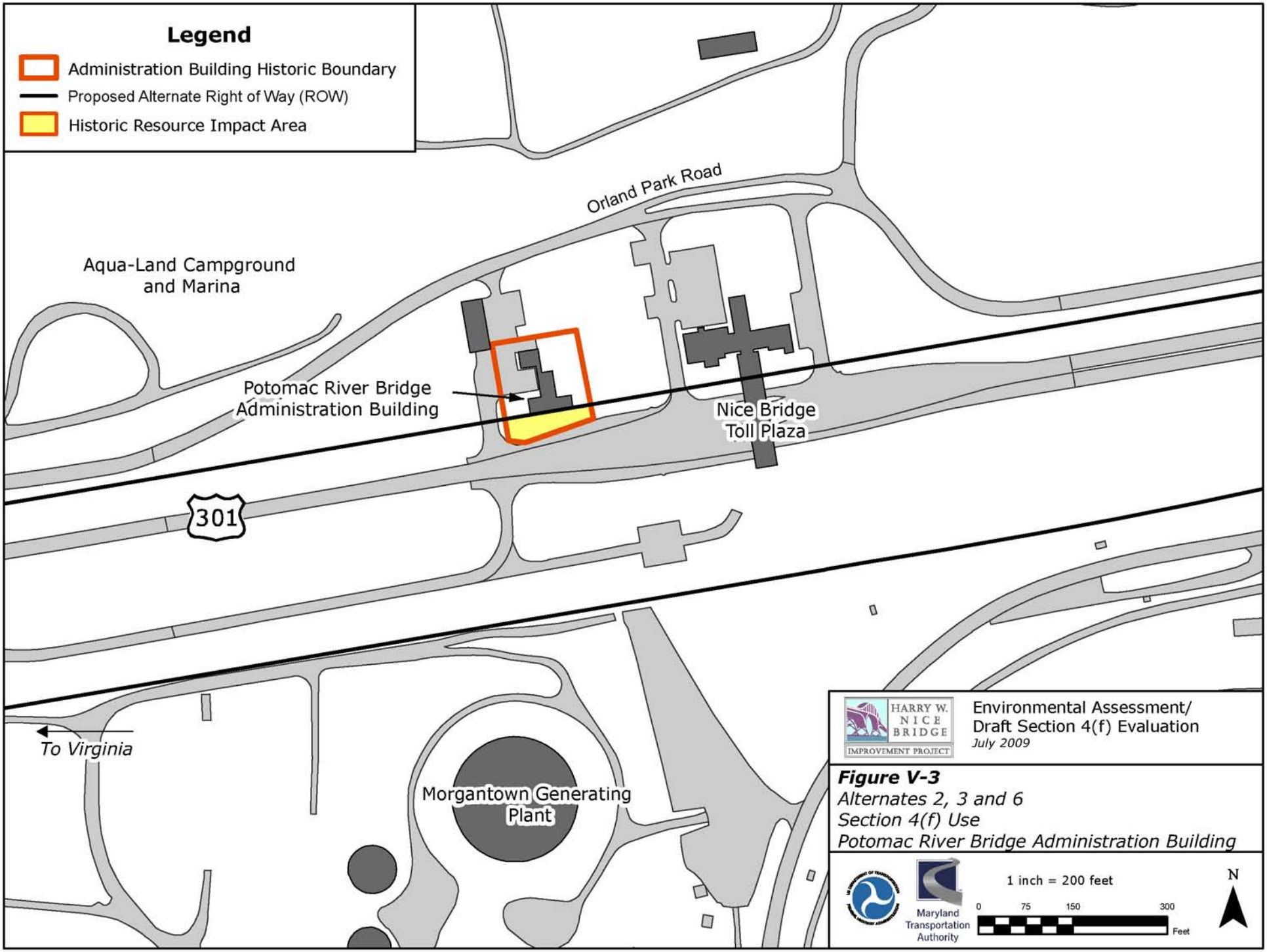
Environmental Assessment/
Draft Section 4(f) Evaluation
*July 2009*

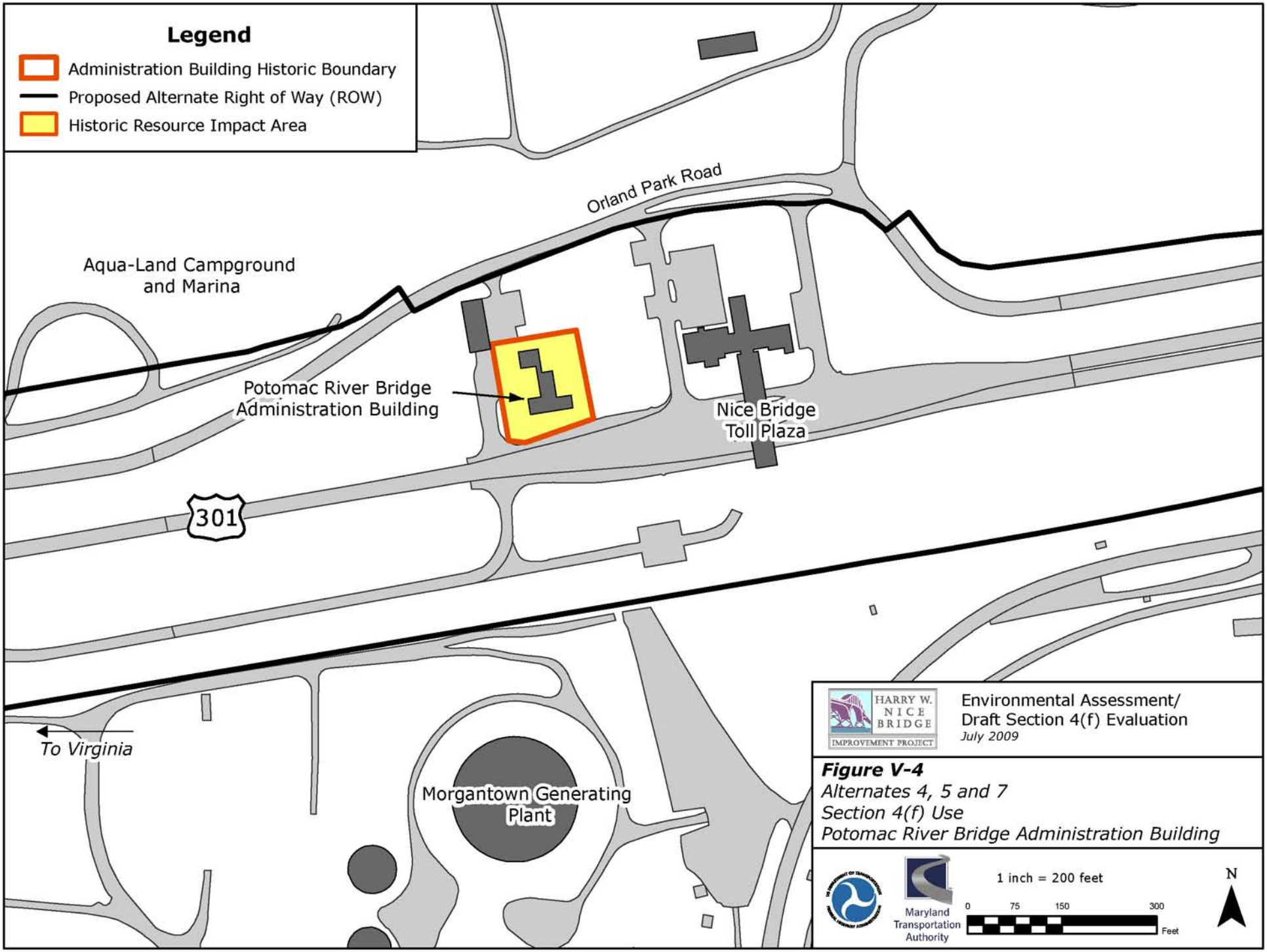
***Figure V-2***
*1980 Barnesfield Park Site Plan*

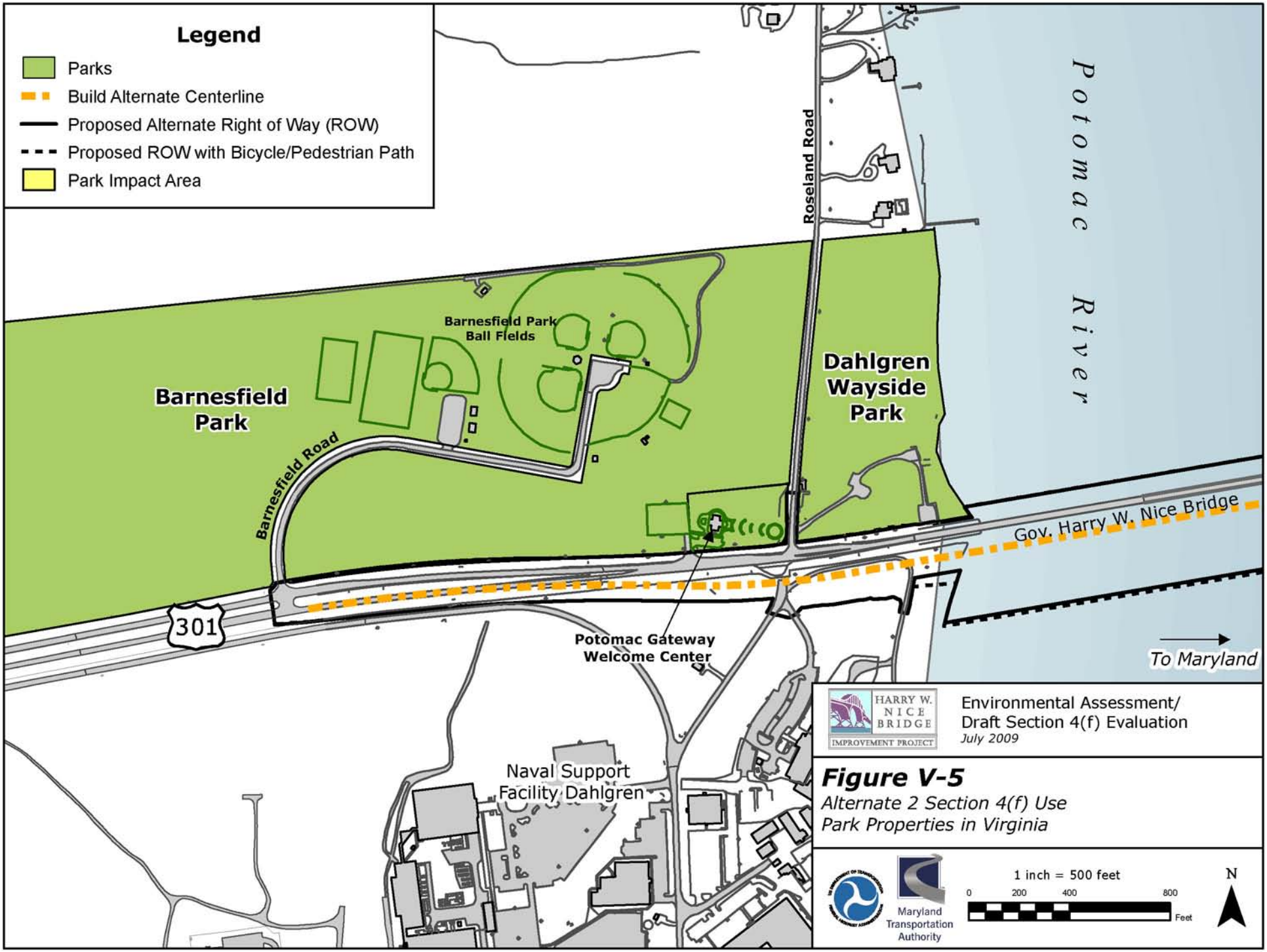
Maryland Transportation Authority

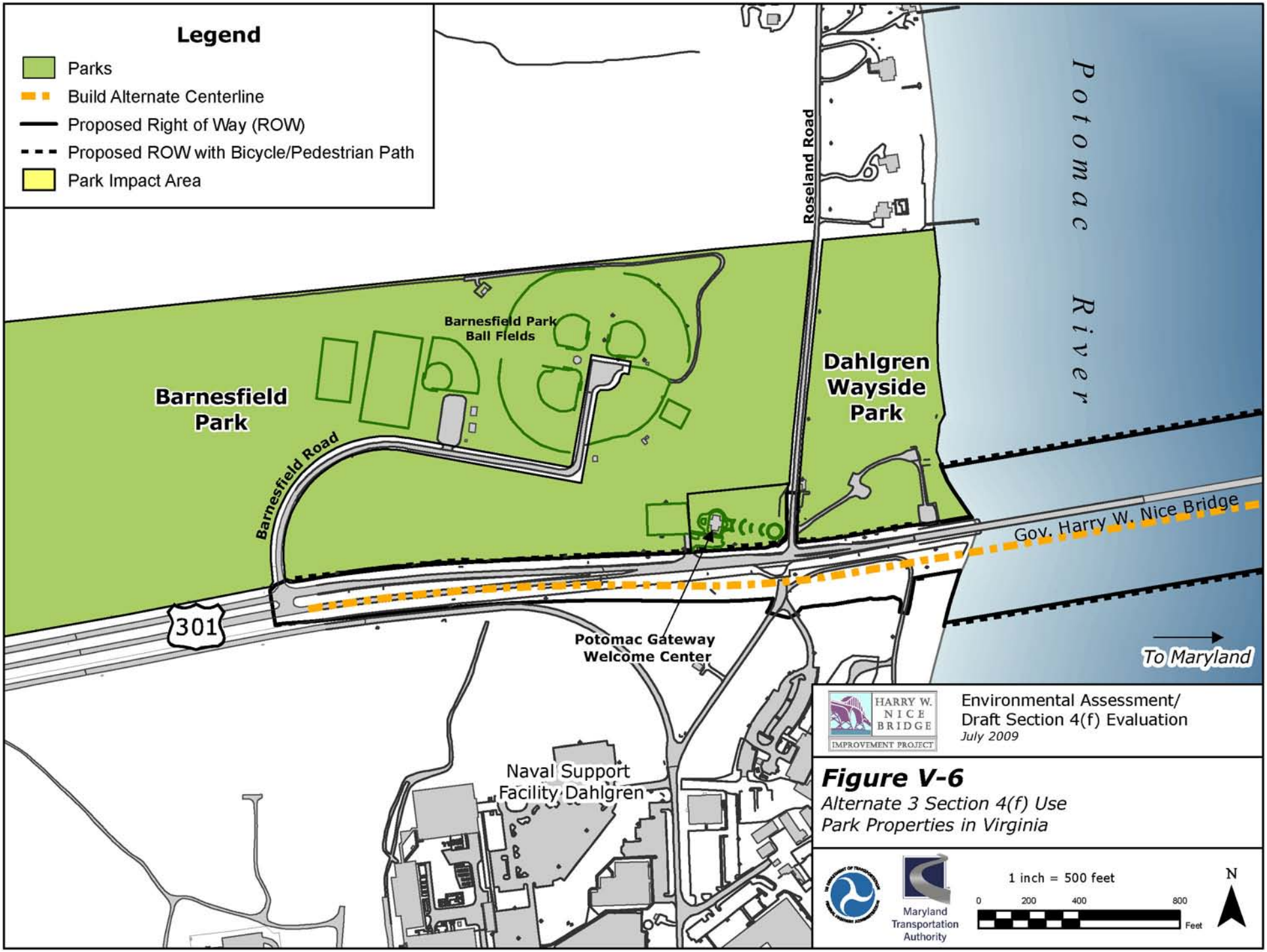
Figure Not to Scale

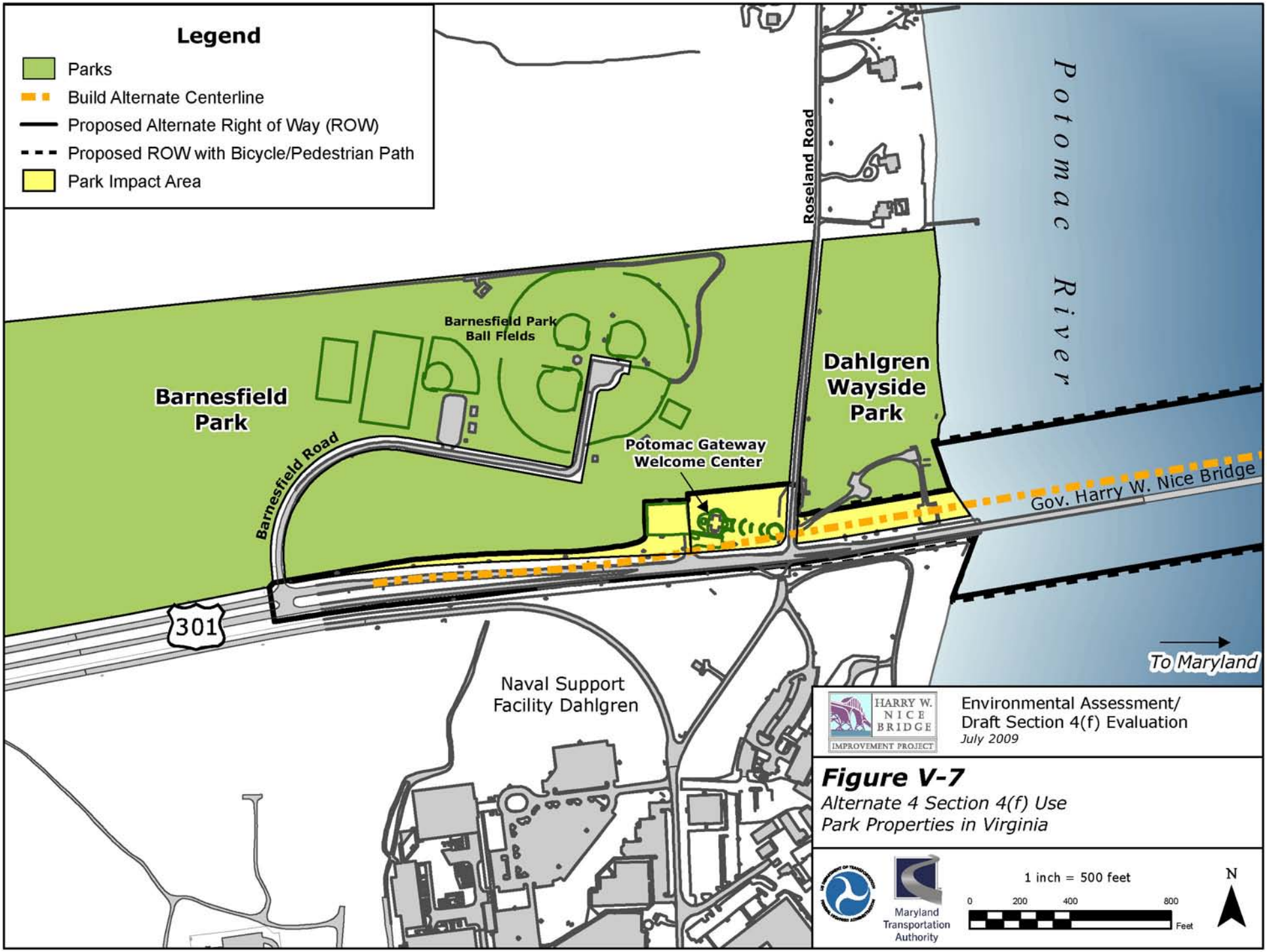
N

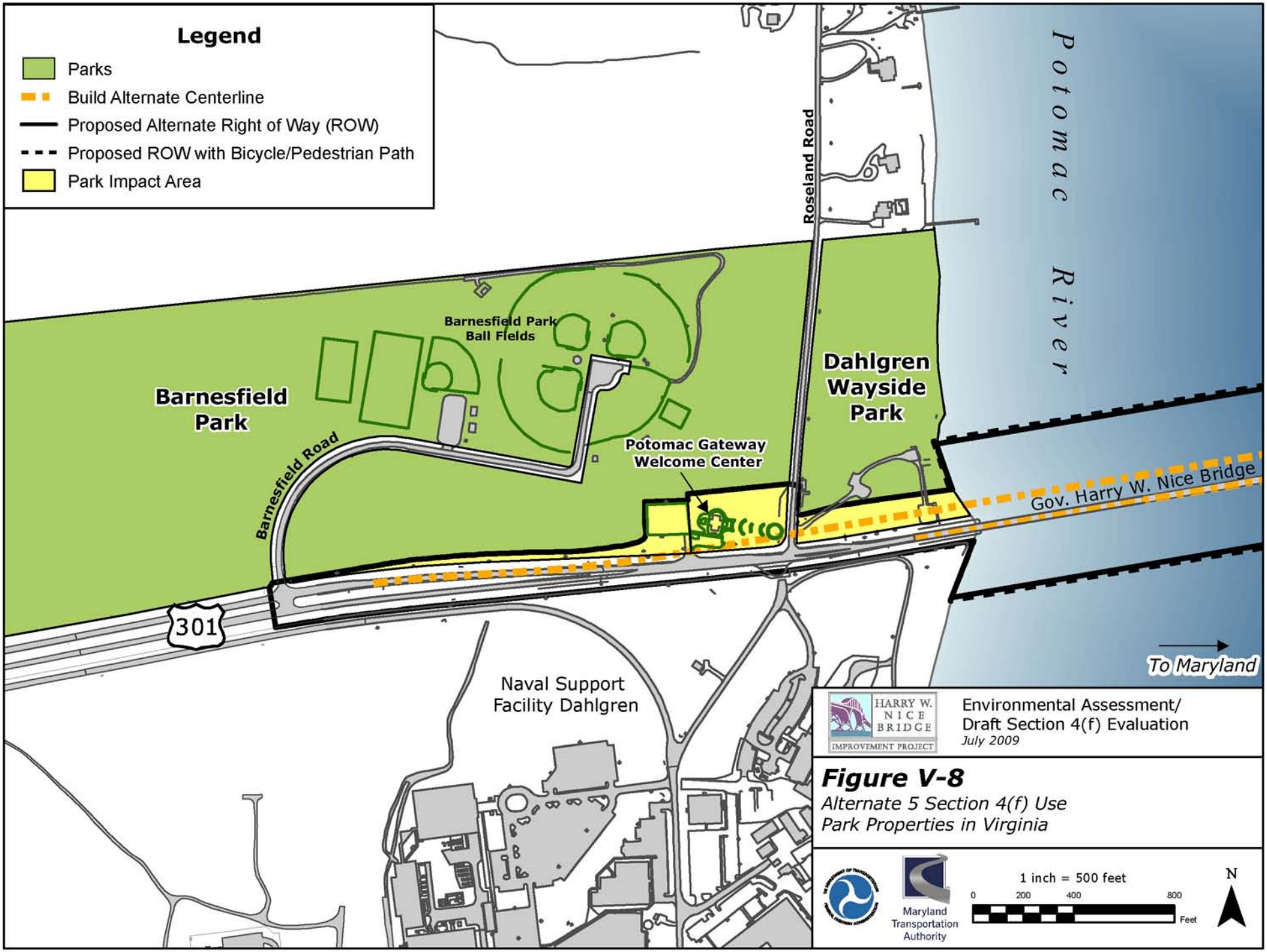

Legend
Administration Building Historic Boundary
Proposed Alternate Right of Way (ROW)
Historic Resource Impact Area
Orland Park Road
Aqua-Land Campground and Marina
Potomac River Bridge Administration Building
Nice Bridge Toll Plaza
301
To Virginia
Morgantown Generating Plant
HARRY W. NICE BRIDGE IMPROVEMENT PROJECT
Environmental Assessment/ Draft Section 4(f) Evaluation
July 2009
Figure V-3
Alternates 2, 3 and 6
Section 4(f) Use
Potomac River Bridge Administration Building
Maryland Transportation Authority
1 inch = 200 feet
0 75 150 300
Feet
N

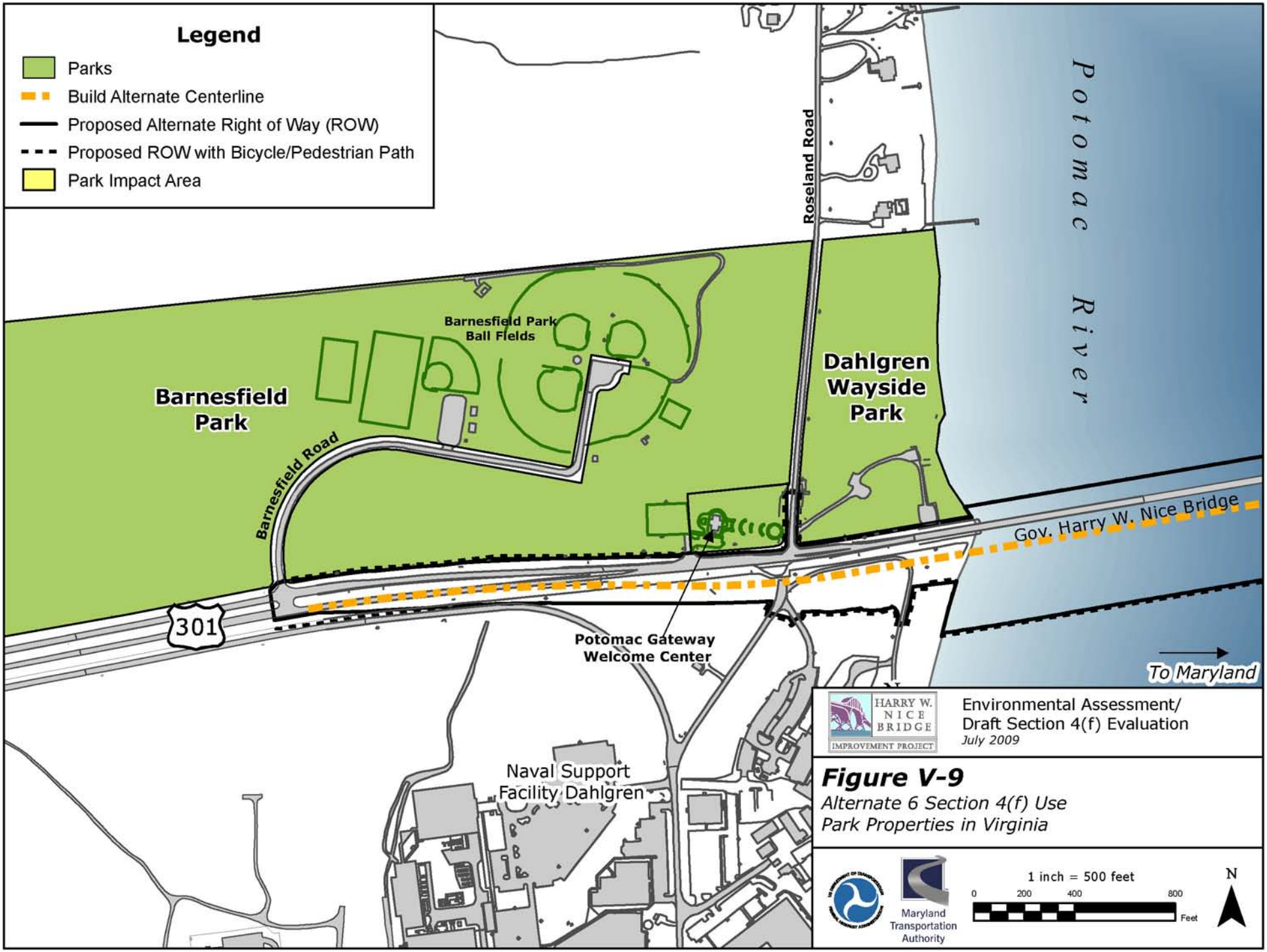

Legend
Administration Building Historic Boundary
Proposed Alternate Right of Way (ROW)
Historic Resource Impact Area
Orland Park Road
Aqua-Land Campground and Marina
Potomac River Bridge Administration Building
Nice Bridge Toll Plaza
301
To Virginia
Morgantown Generating Plant
HARRY W. NICE BRIDGE IMPROVEMENT PROJECT
Environmental Assessment/ Draft Section 4(f) Evaluation
July 2009
Figure V-4
Alternates 4, 5 and 7
Section 4(f) Use
Potomac River Bridge Administration Building
Maryland Transportation Authority
1 inch = 200 feet
0 75 150 300
Feet
N

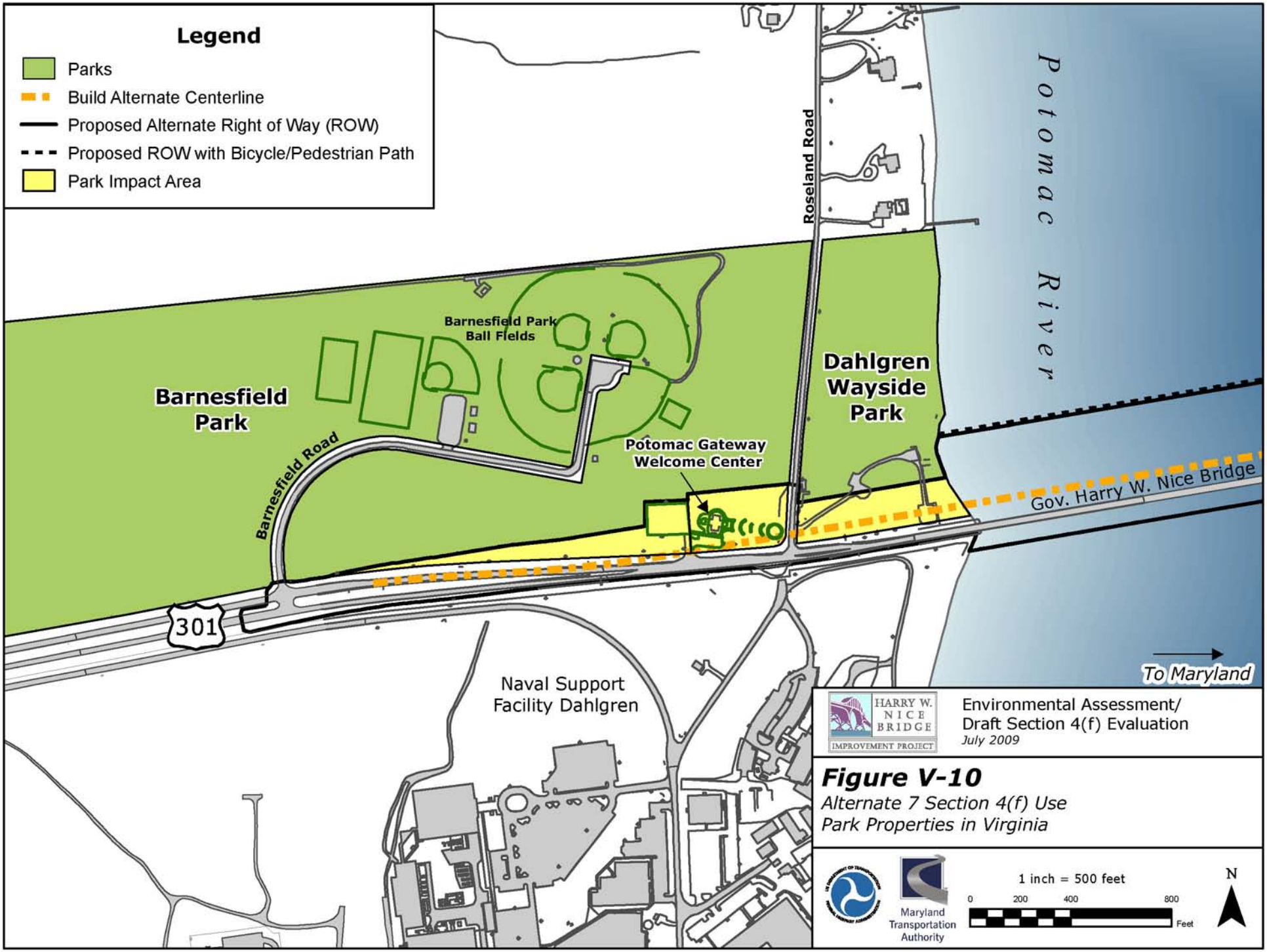

Legend
Parks
Build Alternate Centerline
Proposed Alternate Right of Way (ROW)
Proposed ROW with Bicycle/Pedestrian Path
Park Impact Area
Barnesfield Park Ball Fields
Barnesfield Park
Barnesfield Road
Roseland Road
Dahlgren Wayside Park
Potomac River
Gov. Harry W. Nice Bridge
301
Potomac Gateway Welcome Center
To Maryland
Naval Support Facility Dahlgren
HARRY W. NICE BRIDGE IMPROVEMENT PROJECT
Environmental Assessment/ Draft Section 4(f) Evaluation
July 2009
Figure V-5
Alternate 2 Section 4(f) Use
Park Properties in Virginia
Maryland Transportation Authority
1 inch = 500 feet
0 200 400 800
Feet
N


Legend
Parks
Build Alternate Centerline
Proposed Right of Way (ROW)
Proposed ROW with Bicycle/Pedestrian Path
Park Impact Area
Roseland Road
Potomac River
Barnesfield Park Ball Fields
Barnesfield Park
Barnesfield Road
Dahlgren Wayside Park
Gov. Harry W. Nice Bridge
301
Potomac Gateway Welcome Center
To Maryland
Naval Support Facility Dahlgren
HARRY W. NICE BRIDGE IMPROVEMENT PROJECT
Environmental Assessment/
Draft Section 4(f) Evaluation
July 2009
Figure V-6
Alternate 3 Section 4(f) Use
Park Properties in Virginia
Maryland Transportation Authority
1 inch = 500 feet
0 200 400 800
Feet
N


Legend
Parks
Build Alternate Centerline
Proposed Alternate Right of Way (ROW)
Proposed ROW with Bicycle/Pedestrian Path
Park Impact Area
Barnesfield Park Ball Fields
Barnesfield Park
Barnesfield Road
Roseland Road
Dahlgren Wayside Park
Potomac River
Potomac Gateway Welcome Center
Gov. Harry W. Nice Bridge
301
Naval Support Facility Dahlgren
To Maryland
HARRY W. NICE BRIDGE IMPROVEMENT PROJECT
Environmental Assessment/
Draft Section 4(f) Evaluation
July 2009
Figure V-7
Alternate 4 Section 4(f) Use
Park Properties in Virginia
Maryland Transportation Authority
1 inch = 500 feet
0 200 400 800
Feet
N


Legend
Parks
Build Alternate Centerline
Proposed Alternate Right of Way (ROW)
Proposed ROW with Bicycle/Pedestrian Path
Park Impact Area
Roseland Road
Potomac River
Barnesfield Park Ball Fields
Barnesfield Park
Barnesfield Road
Dahlgren Wayside Park
Potomac Gateway Welcome Center
Gov. Harry W. Nice Bridge
301
Naval Support Facility Dahlgren
To Maryland
HARRY W. NICE BRIDGE IMPROVEMENT PROJECT
Environmental Assessment/
Draft Section 4(f) Evaluation
July 2009
Figure V-8
Alternate 5 Section 4(f) Use
Park Properties in Virginia
Maryland Transportation Authority
1 inch = 500 feet
0 200 400 800
Feet
N


Legend
Parks
Build Alternate Centerline
Proposed Alternate Right of Way (ROW)
Proposed ROW with Bicycle/Pedestrian Path
Park Impact Area
Barnesfield Park
Barnesfield Park Ball Fields
Barnesfield Road
Roseland Road
Dahlgren Wayside Park
Potomac River
Gov. Harry W. Nice Bridge
301
Potomac Gateway Welcome Center
To Maryland
Naval Support Facility Dahlgren
HARRY W. NICE BRIDGE IMPROVEMENT PROJECT
Environmental Assessment/
Draft Section 4(f) Evaluation
July 2009
Figure V-9
Alternate 6 Section 4(f) Use
Park Properties in Virginia
Maryland Transportation Authority
1 inch = 500 feet
0 200 400 800
Feet
N


Legend
Parks
Build Alternate Centerline
Proposed Alternate Right of Way (ROW)
Proposed ROW with Bicycle/Pedestrian Path
Park Impact Area
Barnesfield Park Ball Fields
Barnesfield Park
Barnesfield Road
Roseland Road
Dahlgren Wayside Park
Potomac Gateway Welcome Center
Potomac River
Gov. Harry W. Nice Bridge
301
Naval Support Facility Dahlgren
To Maryland
HARRY W. NICE BRIDGE
IMPROVEMENT PROJECT
Environmental Assessment/
Draft Section 4(f) Evaluation
July 2009
Figure V-10
Alternate 7 Section 4(f) Use
Park Properties in Virginia
Maryland Transportation Authority
1 inch = 500 feet
0 200 400 800
Feet
N

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# VII. LIST OF PREPARERS

## FEDERAL HIGHWAY ADMINISTRATION

***Ian Cavanaugh***
Area Engineer
Education: B.S. Civil and Environmental Engineering
Professional Experience: 7 years
Responsibility: Document Review

***Bethaney Bacher-Gresock***
Environmental Protection Specialist
Education: B.S. Environmental Studies/Biology
Professional Experience: 8 years
Responsibility: Document Review

## MARYLAND TRANSPORTATION AUTHORITY

***Megan W. Blum***
Environmental Manager
Education: M. Public Policy (M.P.P)
B.S. Environmental Studies and Political Science
Professional Experience: 7 years
Responsibility: Document Review

***Glen Smith***
Project Manager
Professional Experience: 32 years
Responsibility: Document Review

***Melissa Williams***
Planning Manager
Education: M.E. Environmental Engineering
B.S. Agricultural and Biological Engineering
Professional Experience: 10 Years
Responsibility: Document Review

## RUMMEL KLEPPER & KAHL, INC.

***B. Eric Almquist***
Project Manager
Education: M.S. Forest Ecology
B.S. Agricultural Sciences; B.A. Government & Politics;
Professional Experience: 14 Years
Responsibility: Document Review and Preparation

***Alexis L. Bryk-Lucy***
Environmental Planner
Education: B.A. Environmental Studies and Geography
Professional Experience: 2 Years
Responsibility: GIS/Figure Preparation

***William M. Morgante***
Environmental Scientist
Education: M.S. Plant and Soil Science, B.L.A.
Professional Experience: 20 years
Responsibility: Natural Resources and Mitigation

***Erron L.G. Ramsey***
Project Planner
Education: B.A. Environmental Studies
Professional Experience: 10 Years
Responsibility: Document Preparation

***Justin Reel***
Project Scientist
Education: B.S. Biology
Professional Experience: 14 Years
Responsibility: Natural Resources and Mitigation

***Ryan Sless***
GIS Technician
Education: Technology Certification
Professional Experience: 5 Years
Responsibility: GIS/Figure Preparation

***Paul R. Wettlaufer***
Environmental Planner
Education: B.S. Civil Engineering
Professional Experience: 34 years
Responsibility: Natural Resources and Mitigation

**WILSON T. BALLARD COMPANY**

***Shawn Burnett***
Project Engineer
Education: M.S. Engineering Management
B.S. Civil Engineering
Professional Experience: 19 Years
Responsibility: Planning Design

***Jennifer Rohrer***
Environmental Specialist

| | |
|---|---|
| Education: | M.S. Environmental Science |
| | B.S. Fisheries Science |
| Professional Experience: | 5 Years |
| Responsibility: | Document Preparation and Review |

**A.D. MARBLE & COMPANY**

***Barbara Frederick***
Senior Architectural Historian

| | |
|---|---|
| Education: | B.A. Historic Preservation |
| Professional Experience: | 13 years |
| Responsibility: | Historic Structures Analyses |

***Brook Gabel***
Environmental Scientist

| | |
|---|---|
| Education: | B.S. Environmental Resource Management |
| Professional Experience: | 8 years |
| Responsibility: | Initial Site Assessment |

***James A. Kenworthy***
Archaeologist

| | |
|---|---|
| Education: | M.A. Anthropology |
| | B.A. Anthropology |
| Professional Experience: | 10 years |
| Responsibility: | Archeology Principal Investigator |

***Erik N. Schwenke***
Senior Environmental Scientist

| | |
|---|---|
| Education: | B.S. Environmental Science |
| Professional Experience: | 11 years |
| Responsibility: | Project Manager/Socioeconomic Analysis |

***Emma K. Young***
Architectural Historian

| | |
|---|---|
| Education: | M.A. Historic Preservation |
| Professional Experience: | 5 years |
| Responsibility: | Historic Structures Analysis |

**MCCORMICK TAYLOR, INC.**

***Scot D. Aitkenhead***
Environmental Scientist
Education: B.S. Wildlife Management
Professional Experience: 8 years
Responsibility: Natural Environmental Analyses

***Brian A. Bernstein, AICP***
Associate
Education: M.S. Ecology and Environmental Studies
B.S. Biology
Professional Experience: 20 years
Responsibility: Project Manager

***Kerri M. Corderman***
Public Involvement Specialist/Environmental Planner
Education: B.A. Sociology/Mass Communications
Professional Experience: 6 years
Responsibility: Public Involvement/Agency Coordination

***Russ S. Freistat***
Noise Specialist
Education: B.S. Environmental Analysis & Planning
Professional Experience: 7 years
Responsibility: Noise Analyses

***Kate Forsythe-Majchzak***
Senior GIS Analyst
Education: B.S. Geography
Professional Experience: 15 years
Responsibility: GIS Technical Analysis

***Jennifer J. Hannum***
Environmental Scientist
Education: B.A. Political Science
Professional Experience: 7 years
Responsibility: Natural Environmental Analysis

***Bob Maimone***
Environmental Planner
Education: B.S. Geography and Environmental Planning
Professional Experience: 11 years
Responsibility: Section 4(f) Analysis

***John T. Herndon, M.S.A.***
Graphic Artist

| | |
|---|---|
| Education: | M.A. Fine Arts |
| | B.F.A. Fine Arts |
| Professional Experience: | 10 years |
| Responsibility: | Cover Graphics |

***Michele L. Jones***
Environmental Specialist/GIS Analyst

| | |
|---|---|
| Education: | B.S. Earth Science |
| Professional Experience: | 7 years |
| Responsibility: | GIS Analyses |

***Jennifer L. Martin***
Environmental Specialist

| | |
|---|---|
| Education: | M.S. Environmental Sciences & Policy |
| | B.S. Environmental Analysis & Planning |
| Professional Experience: | 7 years |
| Responsibility: | Natural Environmental Analyses/Document Management |

# VIII. DISTRIBUTION LIST

## A. Federal Agencies

Mr. Ian Cavanaugh
Federal Highway Administration, DelMar Division
10 South Howard Street, Suite 2450
Baltimore, MD 21202

Ms. Barbara Rudnick
Office of Environmental Programs (3EA30)
U.S. Environmental Protection Agency
1650 Arch Street
Philadelphia, PA 19103-2029

Director, Office of Environmental Policy and Compliance
US Department of Interior
Main Interior Building (MS 2462)
1849 C St, NW
Washington, DC 20240

Mr. Steve Harman
U.S. Army Corps of Engineers
Baltimore District (CENAB-OP-RT)
P.O. Box 1715
10 S. Howard Street
Baltimore, MD 21201

Mr. John Nichols
U.S. Department of Commerce
NOAA/NMFS
Habitat Conservation Division
Chesapeake Bay Program Office
401 Severn Avenue, Suite 107A
Annapolis, MD 21403

Captain C.T. Hanft, US Navy Commanding Officer
Naval Support Activity South Potomac
6509 Sampson Road, Suite 217
Dahlgren, VA 22448-5108

Mr. Robert Zepp
U.S. Department of the Interior
Fish and Wildlife Service
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401

Mr. Jon Hall
National Resources Conservation Service
John Hanson Business Center
339 Busch's Frontage Road,
Suite 301
Annapolis, MD 21409-5543

Ms. Alice Allen-Grimes
Regulatory/U.S. Army Corps of Engineers
Norfolk District
803 Front Street
Norfolk VA, 23510-1096

Mr. Waverly Gregory
U.S. Coast Guard
Office of Bridge Administration; 5th District
LANTAREA Federal Building
431 Crawford Street
Portsmouth, VA 23704
Attn: Gary Heyer

Mr. John Simkins
Federal Highway Administration, VA Division
400 North 8th Street
Richmond, VA 23219-4825

## B. State Agencies

Mr. Greg Golden
Environmental Review Unit
Maryland Department of Natural Resources
580 Taylor Avenue
Tawes State Office Building, B-3
Annapolis, MD 21401

Mr. Elder Ghigiarelli
Maryland Department of the Environment
Wetlands and Waterways Program
1800 Washington Blvd., Suite 430
Baltimore, MD 21230-1708

Ms. Beth Cole
Maryland Historical Trust
100 Community Place
Crownsville, MD 21032

Ms. Julie Roberts
Maryland Department of Natural Resources
Critical Area Commission
1804 West Street, Suite 100
Annapolis, MD 21401

Ms. Bihui Xu
Maryland Department of Planning
301 W. Preston Street, Suite 1101
Baltimore, MD 21201-2305

Ms. Heather Murphy
Deputy Director
Office of Planning
Maryland Department of Transportation
7201 Corporate Center Drive
Hanover, MD 21076

Mr. Gregory Slater
Maryland State Highway Administration
707 North Calvert Street, C-411
Baltimore, MD 21202

Mr. Keith Tignor
Virginia Department of Agriculture and Consumer Services
PO Box 1163
Richmond, VA 23218

Mr. Robert S. Munson
Planning Bureau Manager
Virginia Department of Conservation and Recreation
203 Governor Street, Suite 326
Richmond, VA 23219

Mr. Steve Hardwick (Water Quality)
Virginia Department of Environmental Quality
629 East Main Street
P.O. Box 1105
Richmond, VA 23219

Mr. Thomas Faha
Northern Regional Office
Virginia Department of Environmental Quality
13901 Crown Court
Woodbridge, VA 22193

Mr. Dean Cumbia
Virginia Department of Forestry
900 Natural Resources Drive, Suite 800
Charlottesville, VA 22903

Ms. Amy Ewing
Virginia Department of Game and Inland Fisheries
4010 West Broad Street
Richmond, VA 23230-1104

Mr. Marc E. Holma
Virginia Department of Historic Resources
2801 Kensington Avenue
Richmond, VA 23221

Mr. Matthew Heller
Virginia Department of Mines, Minerals, and Energy
Division of Mineral Resources
900 Natural Resources Drive, Suite 500
Charlottesville, VA 22903

Mr. Dan Bacon
Virginia Marine Resources Commission
2600 Washington Avenue, 3rd Floor
Newport News, VA 23607-0756

Mr. Jason McGarvey
Virginia Outdoors Foundation
101 North 14th Street, 17th Floor
Richmond, VA 23219

Mr. Nick Nies
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219

Mr. Quintin Elliott
District Administrator
Virginia Department of Transportation
Fredericksburg District Office
87 Deacon Road
Fredericksburg, VA 22405-6105

### C. County/Local Agencies

Mr. Melvin Beall, Jr.
Charles County Department of Planning and Growth Management
P.O. Box 2150
La Plata, MD 20646

Mr. Jack Green
King George County Office of Community Development
Revercomb Administration Building
10459 Courthouse Drive, Suite 104
King George, VA 22485

Mr. Stephen Eckel
King George County Planning Commission
12341 Calvert Court
King George, VA 22485

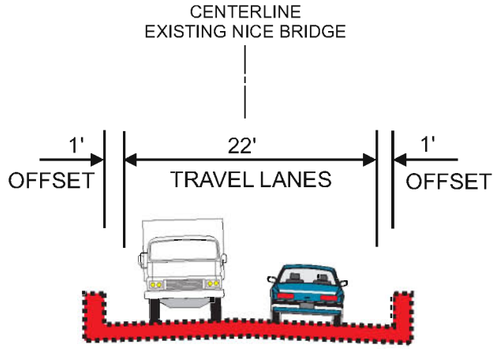
Mr. Tim Smith
King George County Department of Parks and Recreation
P.O. Box 71
King George, VA 22485

Mr. Lloyd P. Robinson
Director Transportation Planning
Fredericksburg Area Metropolitan Planning Organization
3304 Bourbon Street
Fredericksburg, VA 22408

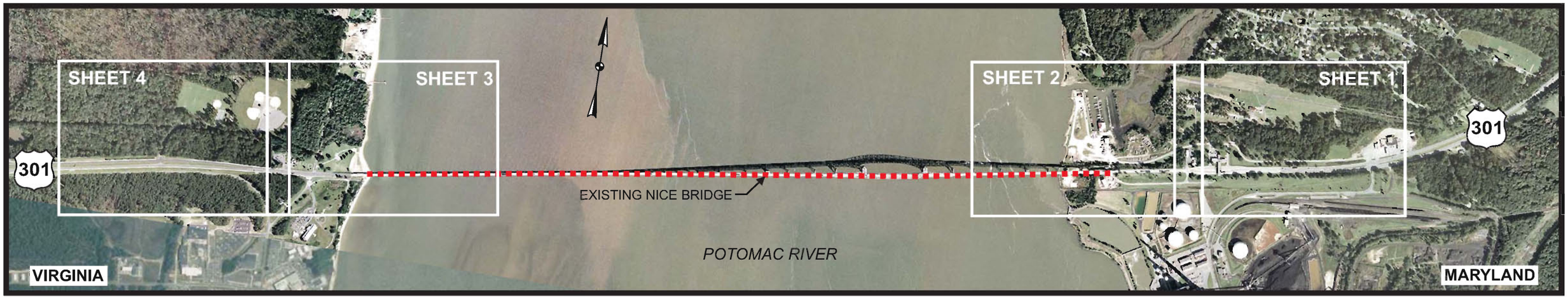
Mr. Wayne E. Clark, Executive Director
Tri-County Council for Southern Maryland
P.O. Box 745
Hughesville, MD 20632

Mr. Ronald Kirby, Director DTP
Metropolitan Washington Council of Governments
777 North Capitol Street, N.E.
Suite 300
Washington, D.C. 20002

Mr. Roy A. Knox,
Vice President of Administration and Finance
Virginia Tourism Corporation
901 East Byrd Street
Richmond, VA 23219




**RETAIN EXISTING BRIDGE FOR TWO-WAY TRAVEL**




***Nice Bridge Improvement Project***

Appendix A

Alternate 1 No-Build

Index Sheet

July 2009

Aqua–Land Campground

MD–WUS 2

MD–WUS 3

MD–WUS 4

MD–WUS 5

Nice Bridge Campus Facilities

NRE

Orland Park Road

301

MD–WET 1

MD–WUS 1

Morgantown Generating Plant

Match Line – See Plate 2

N

VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE D — National Register of Historic Places – Eligible Potential Displacement

# *Nice Bridge Improvement Project*

Appendix A

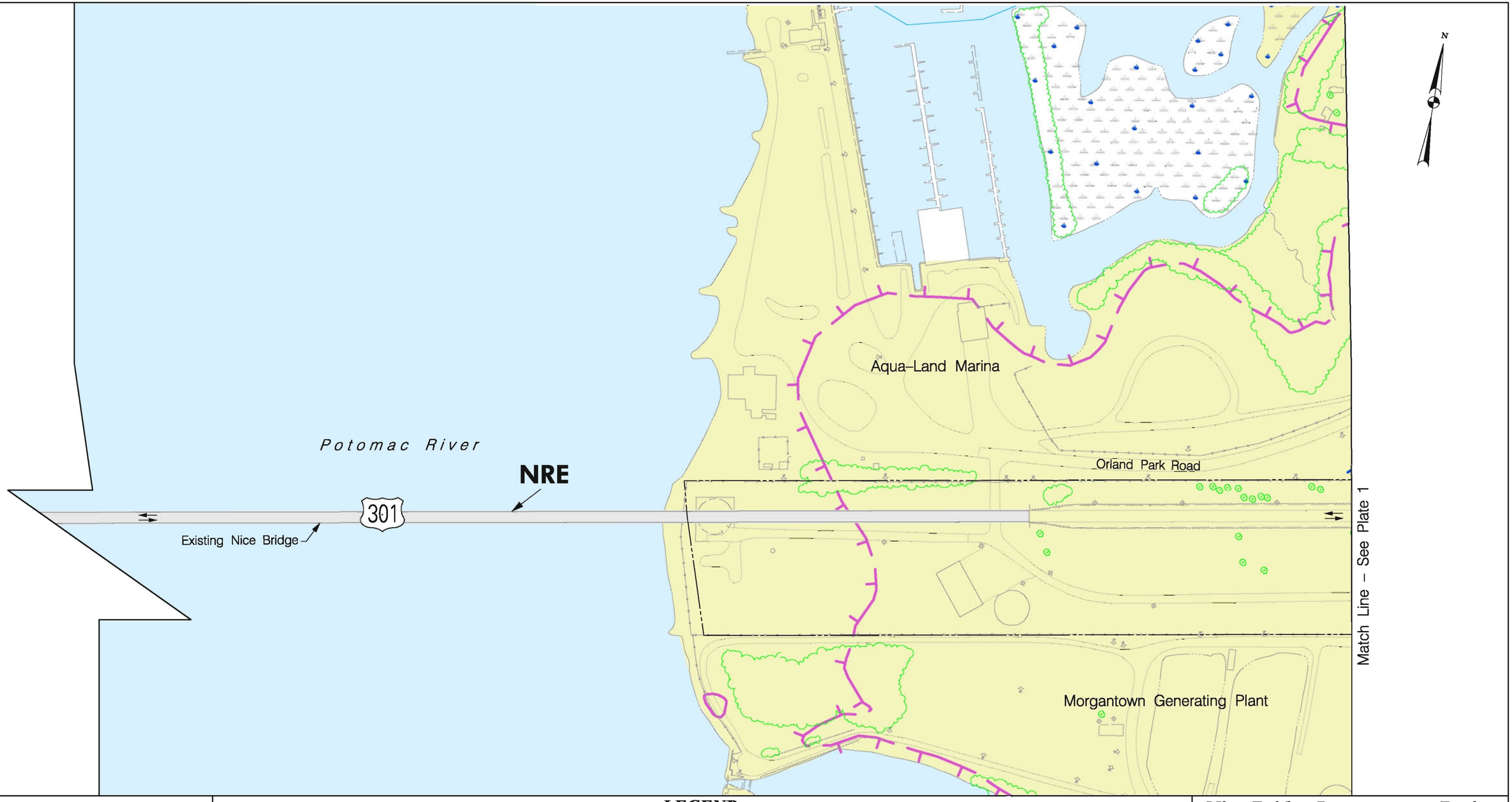
Plate 1

Alternate 1 (Sheet 1 of 4) July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\pHD-ALT1-1.dgn




VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
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- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE D — National Register of Historic Places – Eligible Potential Displacement

# *Nice Bridge Improvement Project*

Appendix A
Plate 2
Alternate 1 (Sheet 2 of 4) July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\pHD-ALT1-2.dgn

V I R G I N I A

M A R Y L A N D

Barnesfield Park

BASKETBALL COURTS

Roseland Road

VA–WUS 7

Dahlgren
Wayside Park

Potomac
Gateway
Welcome
Center

FP

US 301

NRE

301

Existing Nice Bridge

VA–WET 7

VA–WET 6

Naval Support
Facility Dahlgren

Potomac River

Match Line – See Plate 4

N

VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE — National Register of Historic Places – Eligible
- D — Potential Displacement

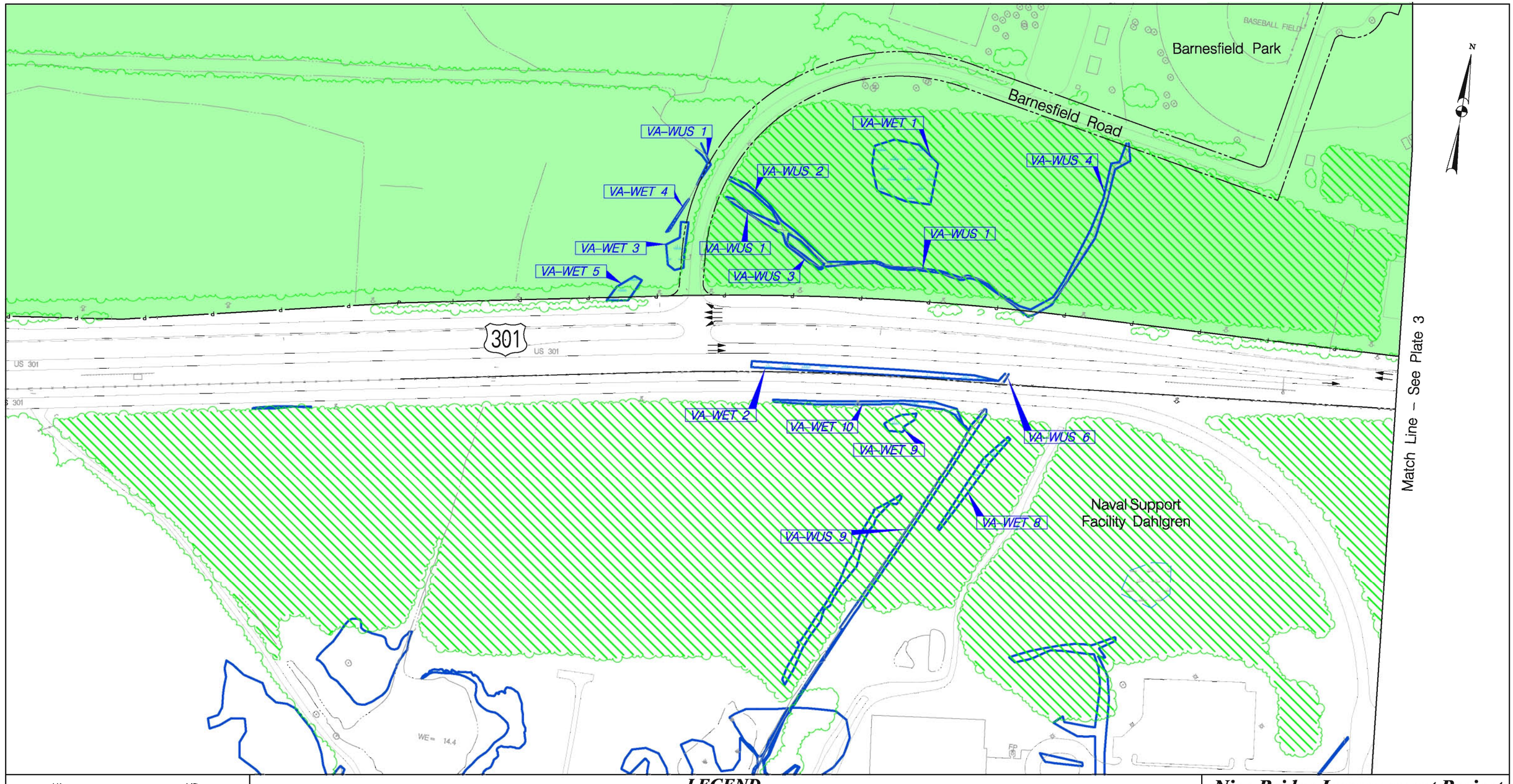
**Nice Bridge Improvement Project**

Appendix A
Plate 3
Alternate 1 (Sheet 3 of 4) July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\pMD-ALT1-3.dgn




VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE D — National Register of Historic Places – Eligible Potential Displacement

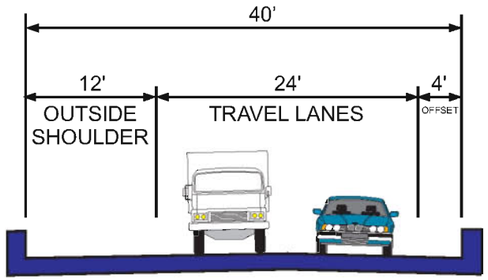
# *Nice Bridge Improvement Project*

Appendix A
Plate 4
Alternate 1 (Sheet 4 of 4) July 2009

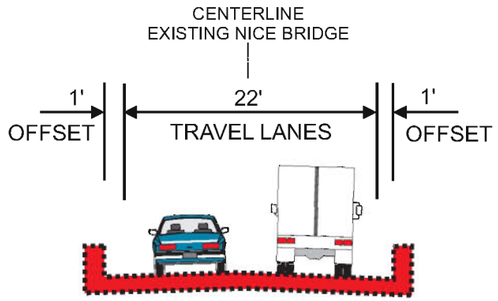
HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

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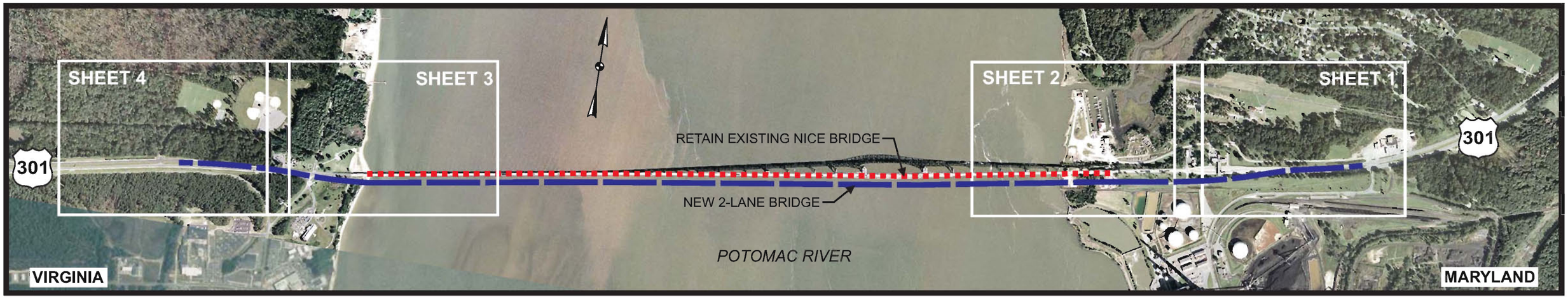


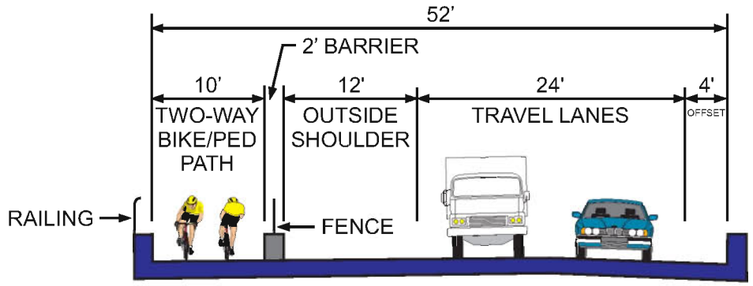

NEW 2-LANE BRIDGE FOR NORTHBOUND TRAVEL



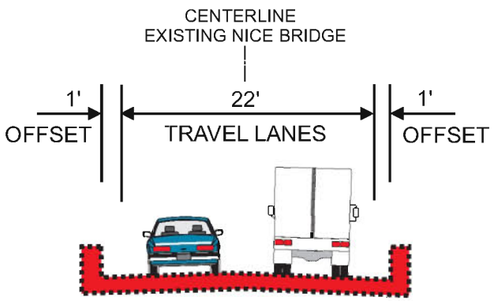

RETAIN EXISTING BRIDGE
FOR SOUTHBOUND TRAVEL

# ALTERNATE 2




NEW 2-LANE BRIDGE FOR NORTHBOUND TRAVEL
WITH TWO WAY BIKE/PED PATH




RETAIN EXISTING BRIDGE
FOR SOUTHBOUND TRAVEL

# ALTERNATE 2 OPTION

***Nice Bridge Improvement Project***

Appendix A
Alternate 2 and Option
Index Sheet

July 2009

Aqua–Land Campground

MD–WUS 2

MD–WUS 3

MD–WUS 4

MD–WUS 5

Nice Bridge Campus Facilities

NRE

Orland Park Road

301

MD–WET 1

MD–WUS 1

Morgantown Generating Plant

Match Line – See Plate 6

N

VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
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- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE D — National Register of Historic Places – Eligible Potential Displacement

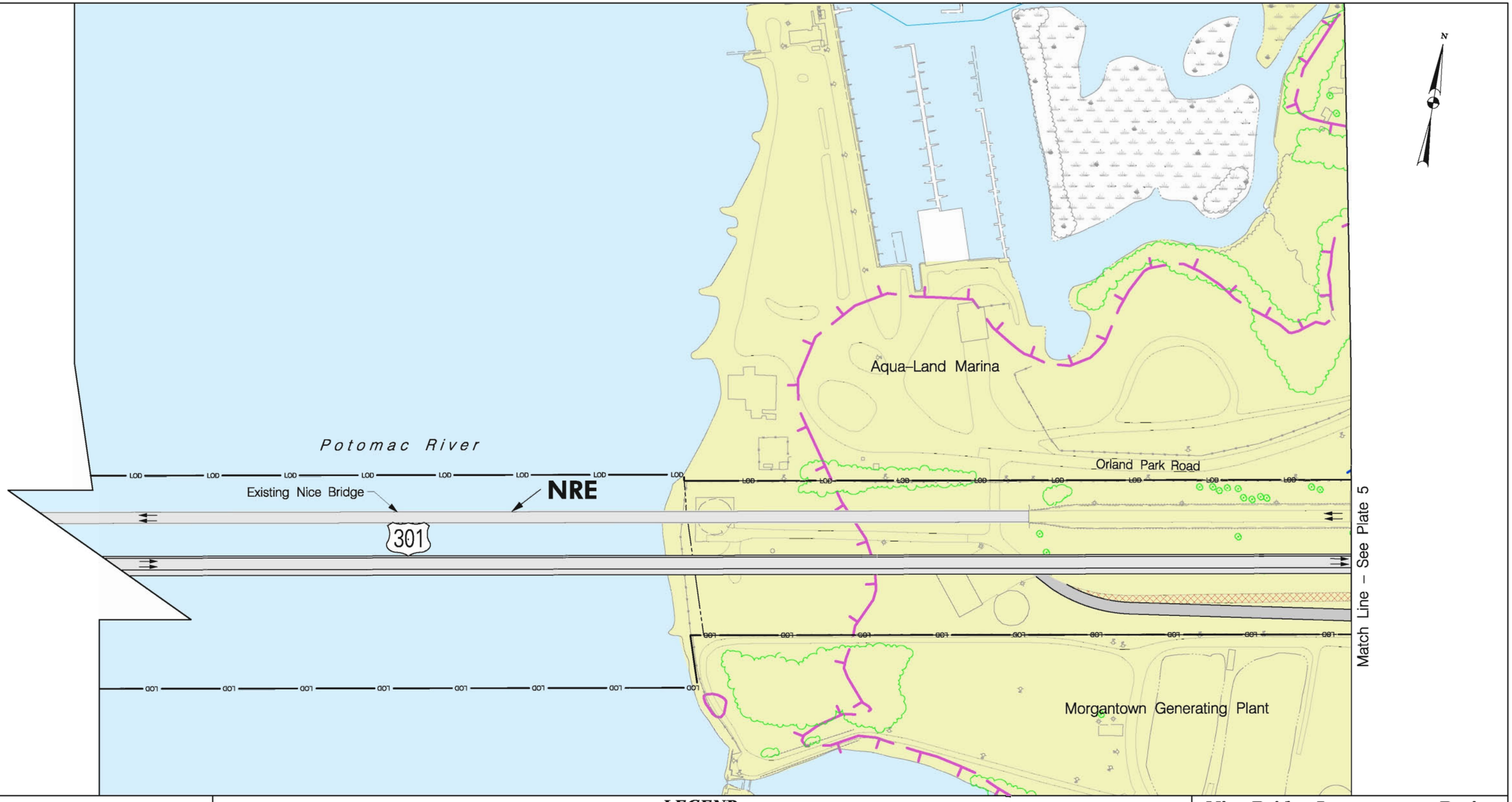
# *Nice Bridge Improvement Project*

Appendix A
Plate 5
Alternate 2 (Sheet 1 of 4) July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\pHD-ALT2-1.dgn




VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE / D — National Register of Historic Places – Eligible Potential Displacement

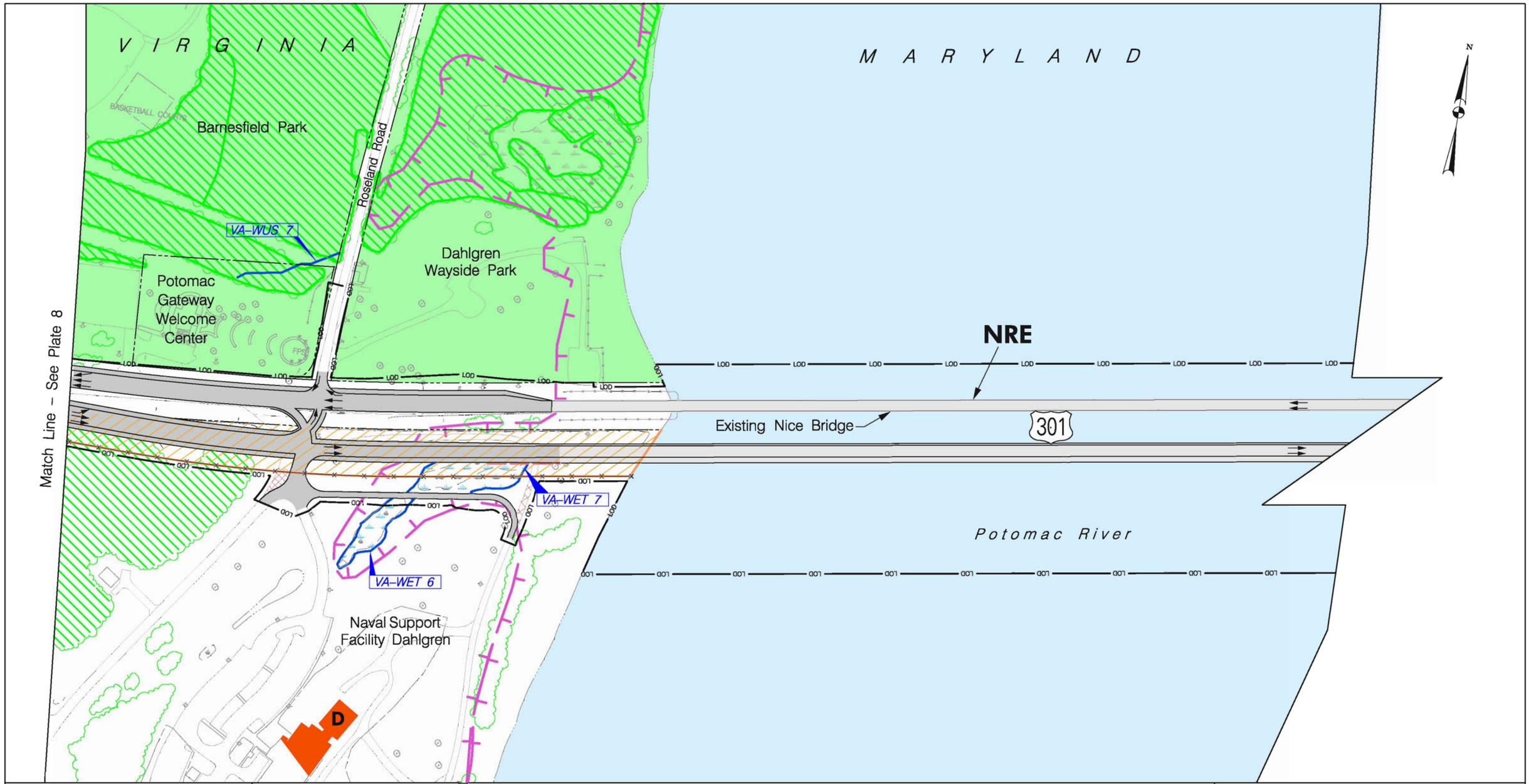
**Nice Bridge Improvement Project**

Appendix A
Plate 6
Alternate 2 (Sheet 2 of 4) July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\pHD-ALT2-2.dgn




VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE — National Register of Historic Places – Eligible
- D — Potential Displacement

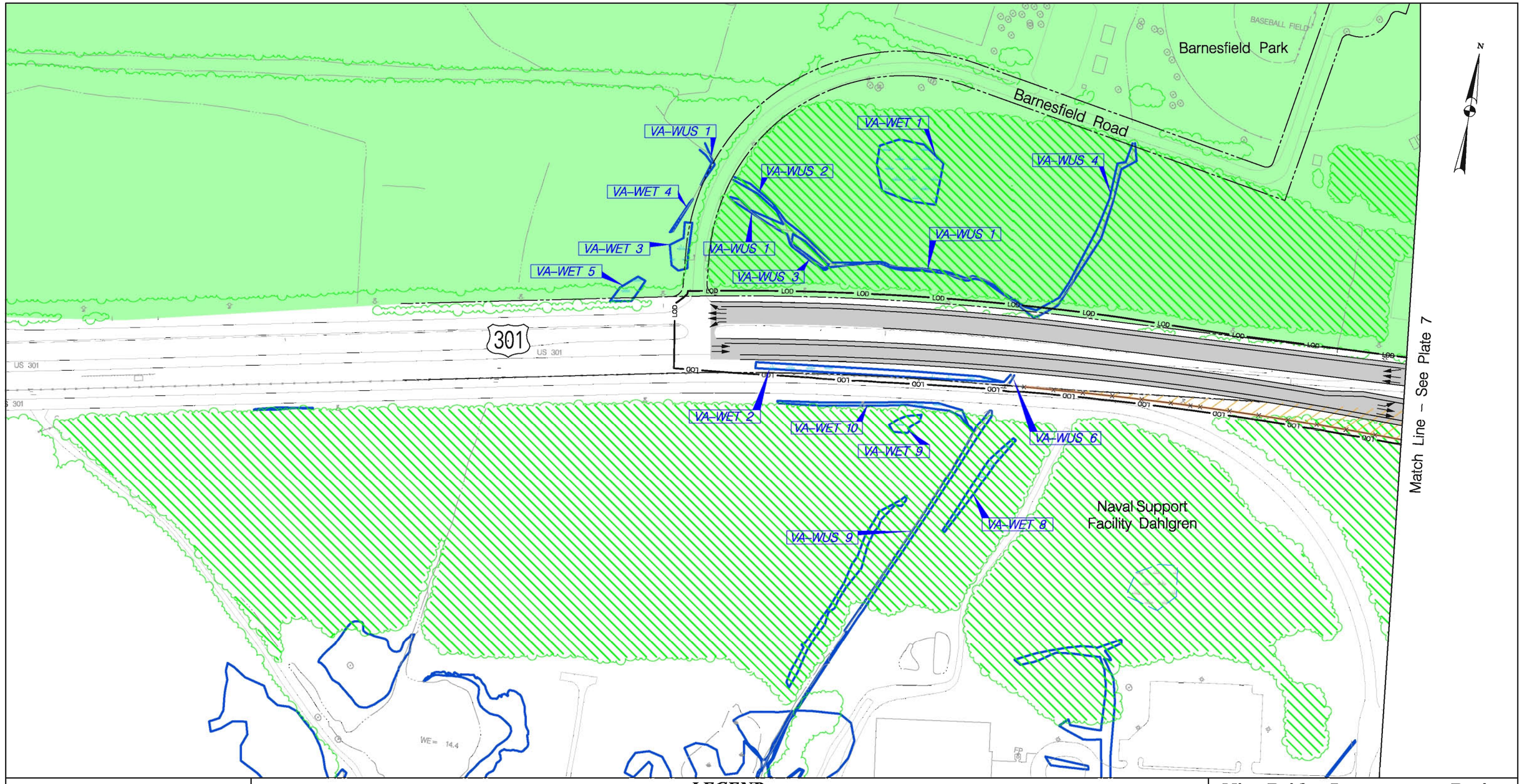
# *Nice Bridge Improvement Project*

Appendix A
Plate 7
Alternate 2 (Sheet 3 of 4) July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\pHD-ALT2-3.dgn




VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE D — National Register of Historic Places – Eligible Potential Displacement

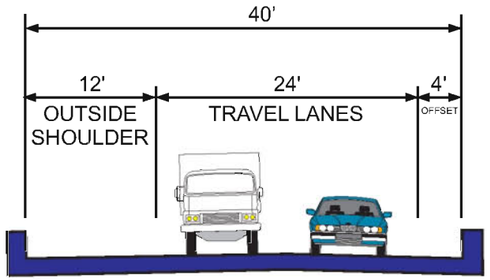
# *Nice Bridge Improvement Project*

Appendix A
Plate 8
Alternate 2 (Sheet 4 of 4) July 2009

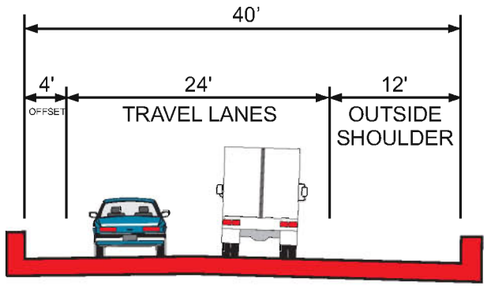
HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

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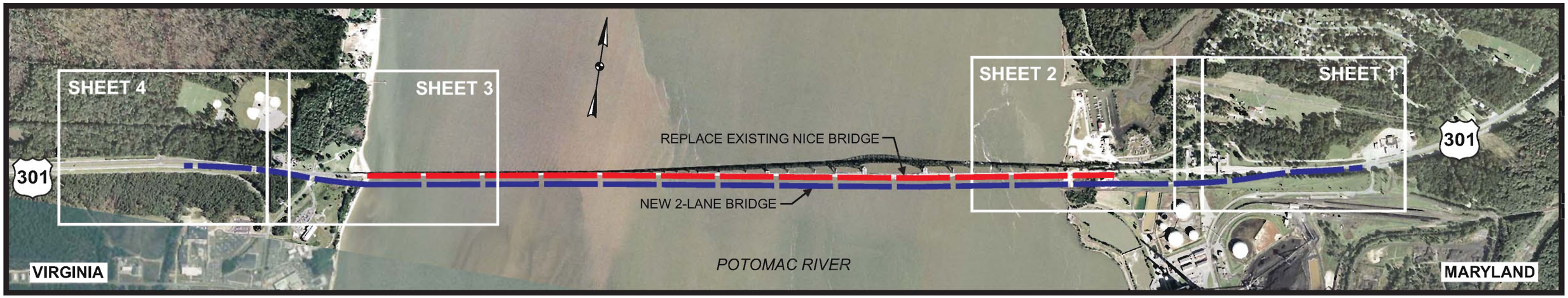


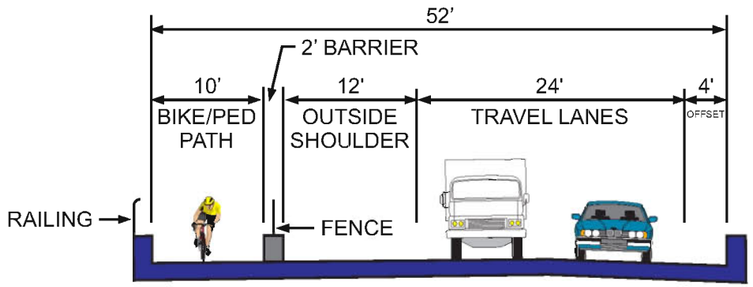

NEW 2-LANE BRIDGE FOR NORTHBOUND TRAVEL



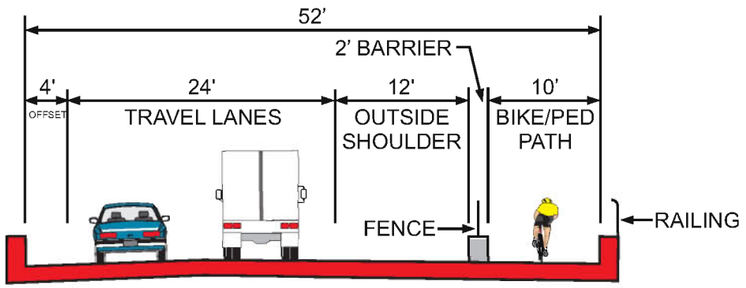

REPLACE EXISTING BRIDGE FOR SOUTHBOUND TRAVEL

# ALTERNATE 3




NEW 2-LANE BRIDGE FOR NORTHBOUND TRAVEL
WITH BIKE/PED PATH




REPLACE EXISTING BRIDGE FOR SOUTHBOUND TRAVEL
WITH BIKE/PED PATH

# ALTERNATE 3 OPTION

***Nice Bridge Improvement Project***

Appendix A
Alternate 3 and Option
Index Sheet

July 2009

Aqua–Land Campground

MD–WUS 2

MD–WUS 3

MD–WUS 4

MD–WUS 5

Nice Bridge
Campus Facilities

NRE

Orland Park Road

301

MD–WET 1

MD–WUS 1

Morgantown Generating Plant

Match Line – See Plate 10

N

VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE D — National Register of Historic Places – Eligible Potential Displacement

# *Nice Bridge Improvement Project*

Appendix A
Plate 9
Alternate 3 (Sheet 1 of 4) July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\bHD-ALT3-3.dgn

N

Aqua–Land Marina

Orland Park Road

NRE

Existing Nice Bridge

301

Potomac River

Morgantown Generating Plant

Match Line – See Plate 9

LOD

VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE D — National Register of Historic Places – Eligible Potential Displacement

# *Nice Bridge Improvement Project*

Appendix A
Plate 10
Alternate 3 (Sheet 2 of 4) July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\pHD-ALT3-4.dgn

V I R G I N I A

M A R Y L A N D

Barnesfield Park

BASKETBALL COURTS

Roseland Road

VA-WUS 7

Potomac Gateway Welcome Center

Dahlgren Wayside Park

LOD

Existing Nice Bridge

NRE

301

VA-WET 7

VA-WET 6

Naval Support Facility Dahlgren

D

Potomac River

Match Line – See Plate 12

N

VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE — National Register of Historic Places – Eligible
- D — Potential Displacement

# Nice Bridge Improvement Project

Appendix A

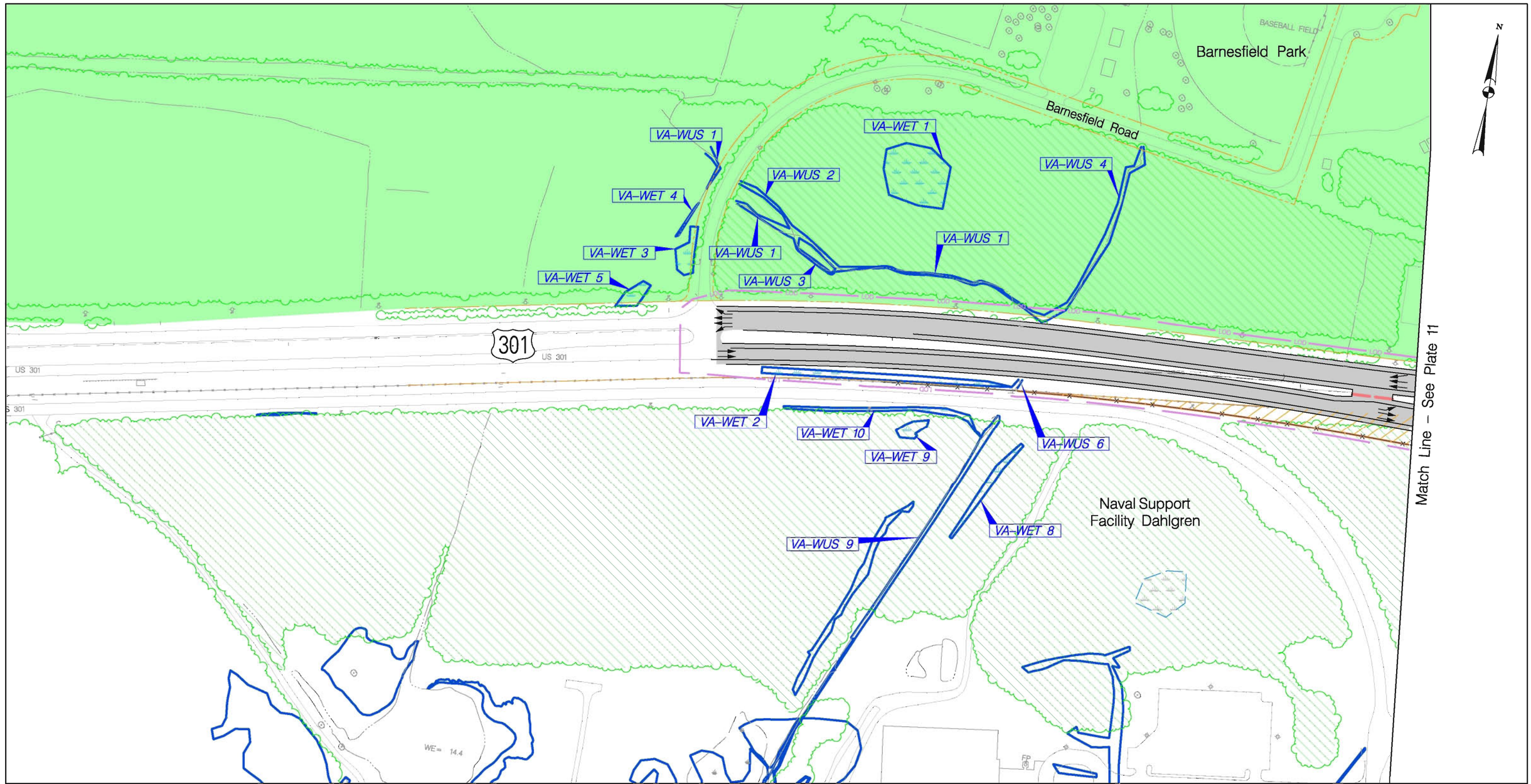
Plate 11

Alternate 3 (Sheet 3 of 4) July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\pl10-ALT3-1.dgn




VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE D — National Register of Historic Places – Eligible Potential Displacement

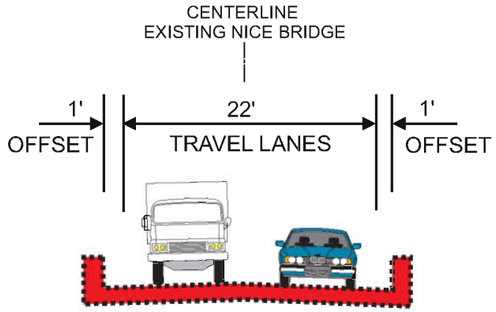
# *Nice Bridge Improvement Project*

Appendix A
Plate 12
Alternate 3 (Sheet 4 of 4) July 2009

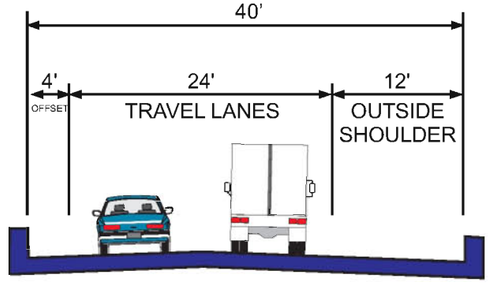
HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\pHD-ALT3-2.dgn

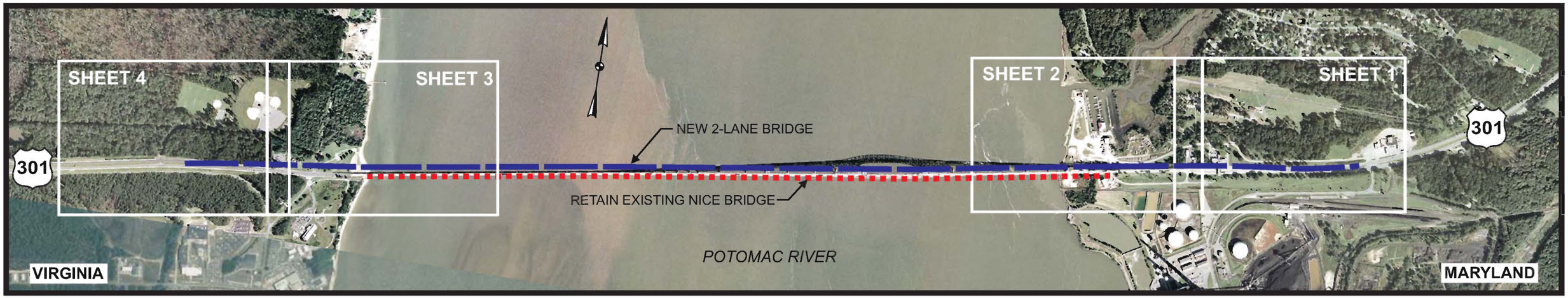


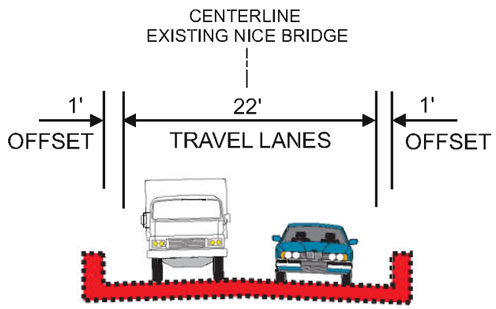

**RETAIN EXISTING BRIDGE FOR NORTHBOUND TRAVEL**



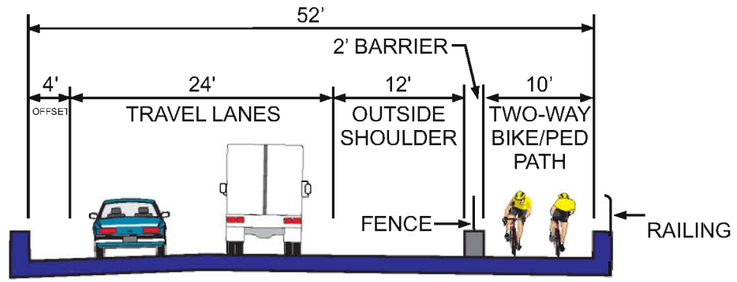

**NEW 2-LANE BRIDGE FOR SOUTHBOUND TRAVEL**

# ALTERNATE 4




**RETAIN EXISTING BRIDGE FOR NORTHBOUND TRAVEL**




**NEW 2-LANE BRIDGE FOR SOUTHBOUND TRAVEL WITH TWO-WAY BIKE/PED PATH**

# ALTERNATE 4 OPTION

***Nice Bridge Improvement Project***

Appendix A
Alternate 4 and Option
Index Sheet

July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

Match Line – See Plate 14

Aqua–Land Campground

MD–WUS 2

MD–WUS 3

MD–WUS 4

MD–WUS 5

Nice Bridge Campus Facilities

D

NRE

Orland Park Road

301

MD–WET 1

MD–WUS 1

H

FP

LOD

Morgantown Generating Plant

N

VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE — National Register of Historic Places – Eligible
- D — Potential Displacement

# *Nice Bridge Improvement Project*

Appendix A

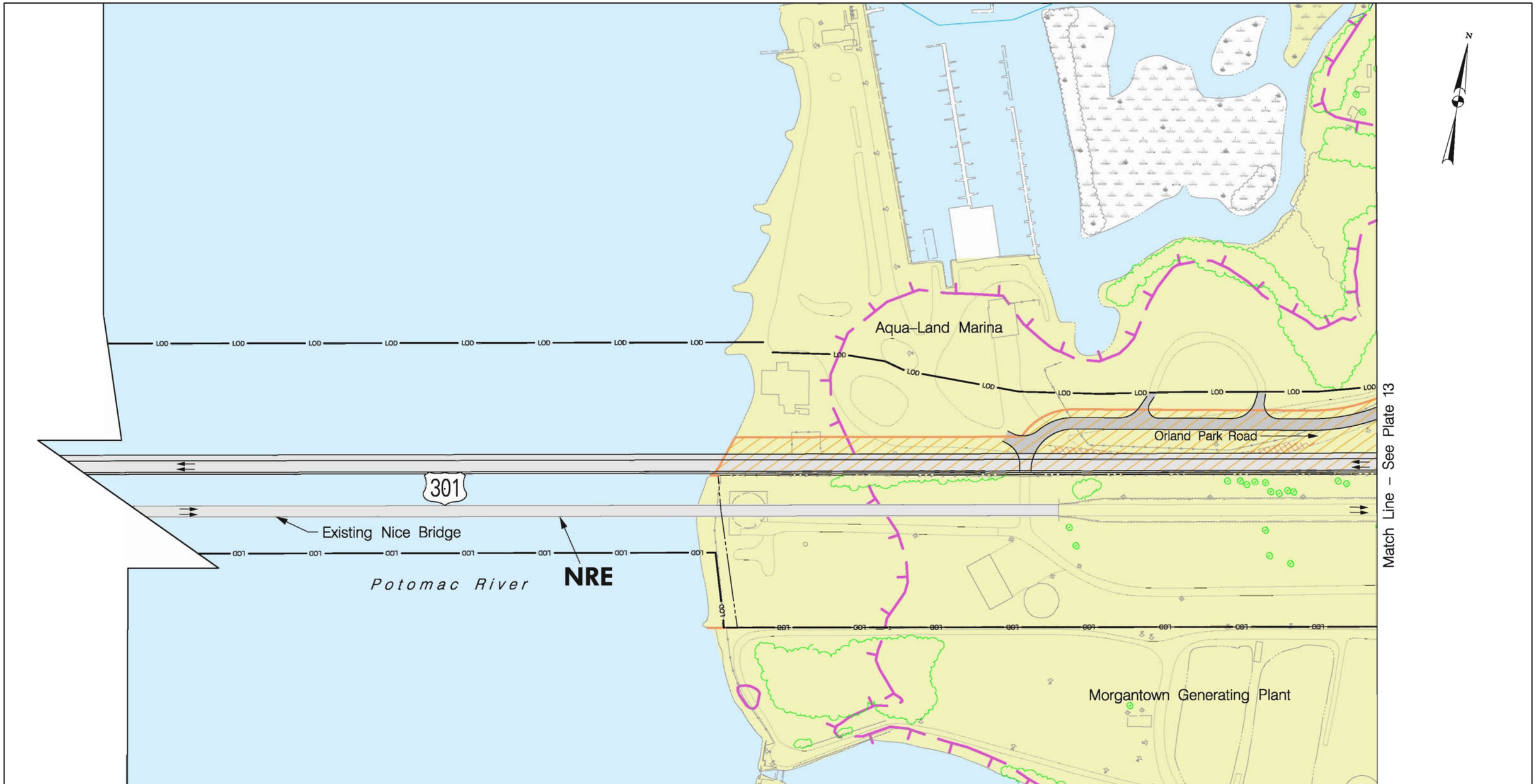
Plate 13

Alternate 4 (Sheet 1 of 4) July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\pHD-ALT4-1.dgn




VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE — National Register of Historic Places – Eligible
- D — Potential Displacement

# *Nice Bridge Improvement Project*

Appendix A
Plate 14
Alternate 4 (Sheet 2 of 4) July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\pHD-ALT4-2.dgn

VIRGINIA

MARYLAND

Barnesfield Park

BASKETBALL COURTS

Roseland Road

VA-WUS 7

Potomac Gateway Welcome Center

D

Dahlgren Wayside Park

LOD

Match Line – See Plate 16

301

Existing Nice Bridge

VA-WET 7

VA-WET 6

NRE

Potomac River

Naval Support Facility Dahlgren

N

VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE National Register of Historic Places – Eligible
- D Potential Displacement

# Nice Bridge Improvement Project

Appendix A

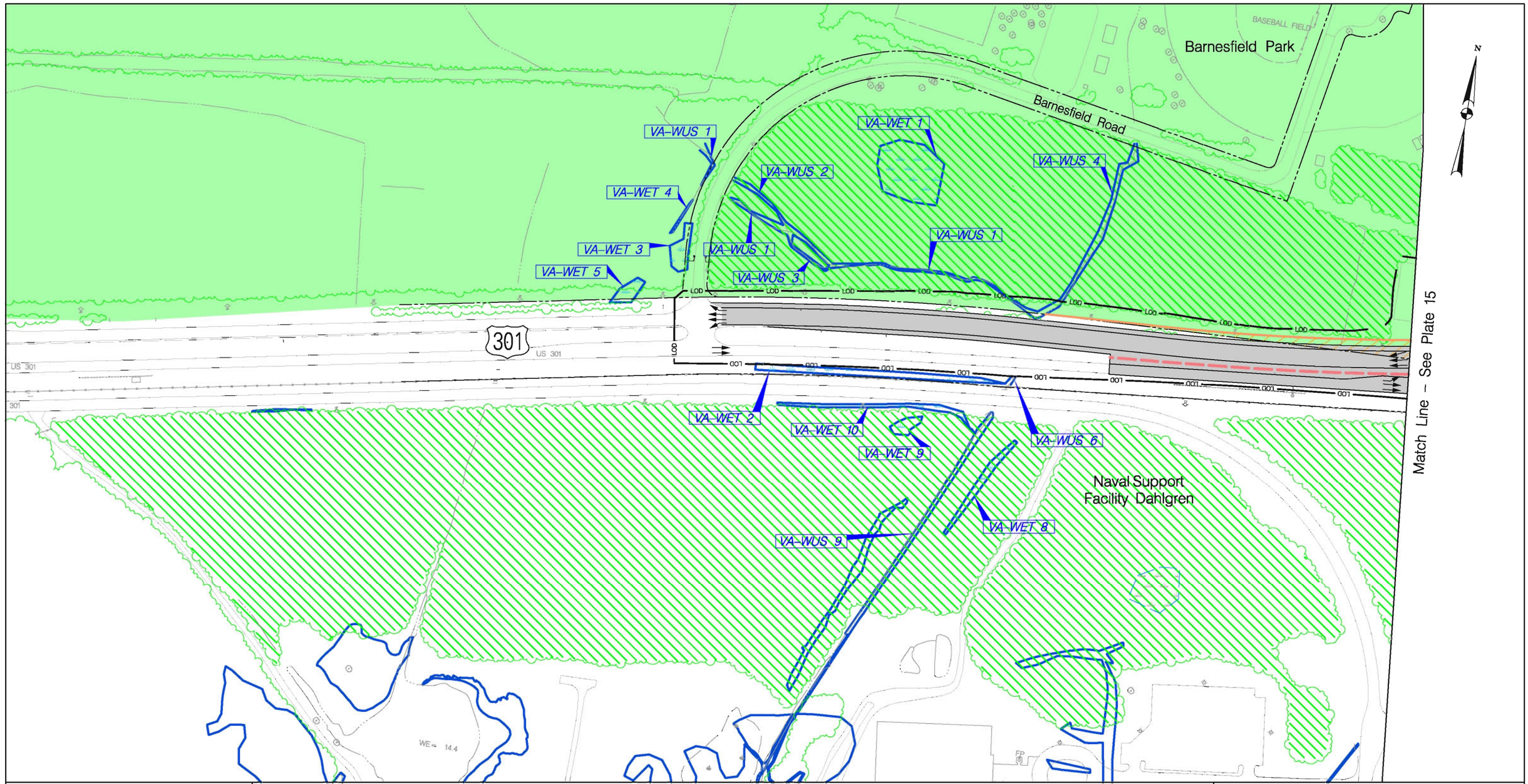
Plate 15

Alternate 4 (Sheet 3 of 4) July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\pHD-ALT4-3.dgn




VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE — National Register of Historic Places – Eligible
- D — Potential Displacement

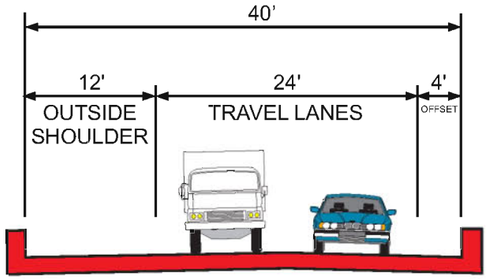
# *Nice Bridge Improvement Project*

Appendix A
Plate 16
Alternate 4 (Sheet 4 of 4) July 2009

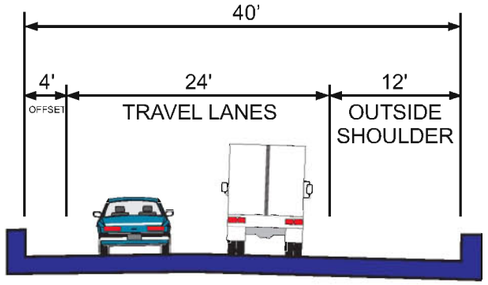
HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\pHD-ALT4-4.dgn

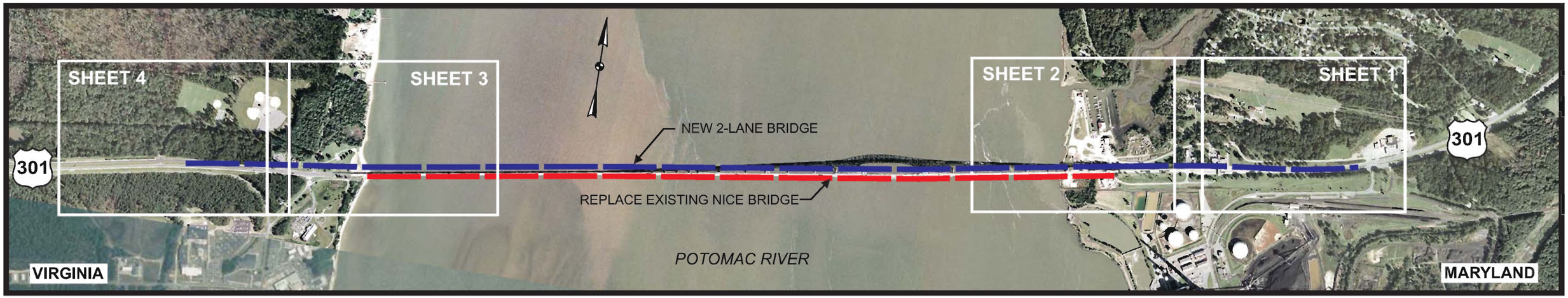


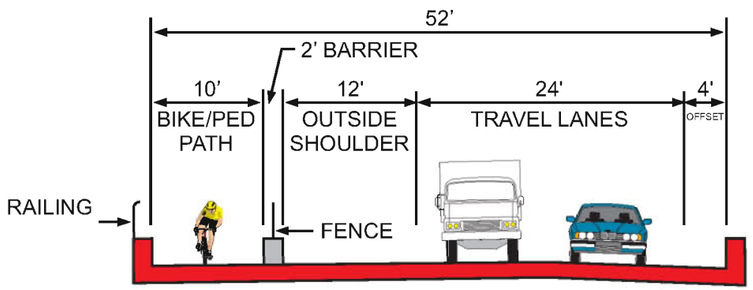

REPLACE EXISTING BRIDGE FOR NORTHBOUND TRAVEL



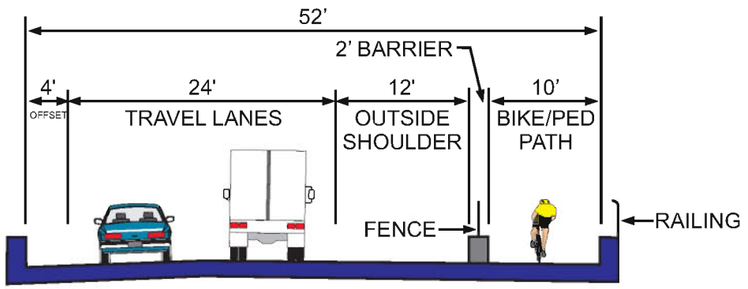

NEW 2-LANE BRIDGE FOR SOUTHBOUND TRAVEL

# ALTERNATE 5




REPLACE EXISTING BRIDGE FOR NORTHBOUND TRAVEL WITH BIKE/PED PATH




NEW 2-LANE BRIDGE FOR SOUTHBOUND TRAVEL WITH BIKE/PED PATH

# ALTERNATE 5 OPTION

***Nice Bridge Improvement Project***

Appendix A

Alternate 5 and Option Index Sheet

July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

Aqua–Land Campground

MD–WUS 2

MD–WUS 3

MD–WUS 4

MD–WUS 5

Nice Bridge Campus Facilities

D

D NRE

D

LOD

Orland Park Road

301

H

FP

MD–WET 1

MD–WUS 1

Match Line – See Plate 18

Morgantown Generating Plant

N

VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE D — National Register of Historic Places – Eligible Potential Displacement

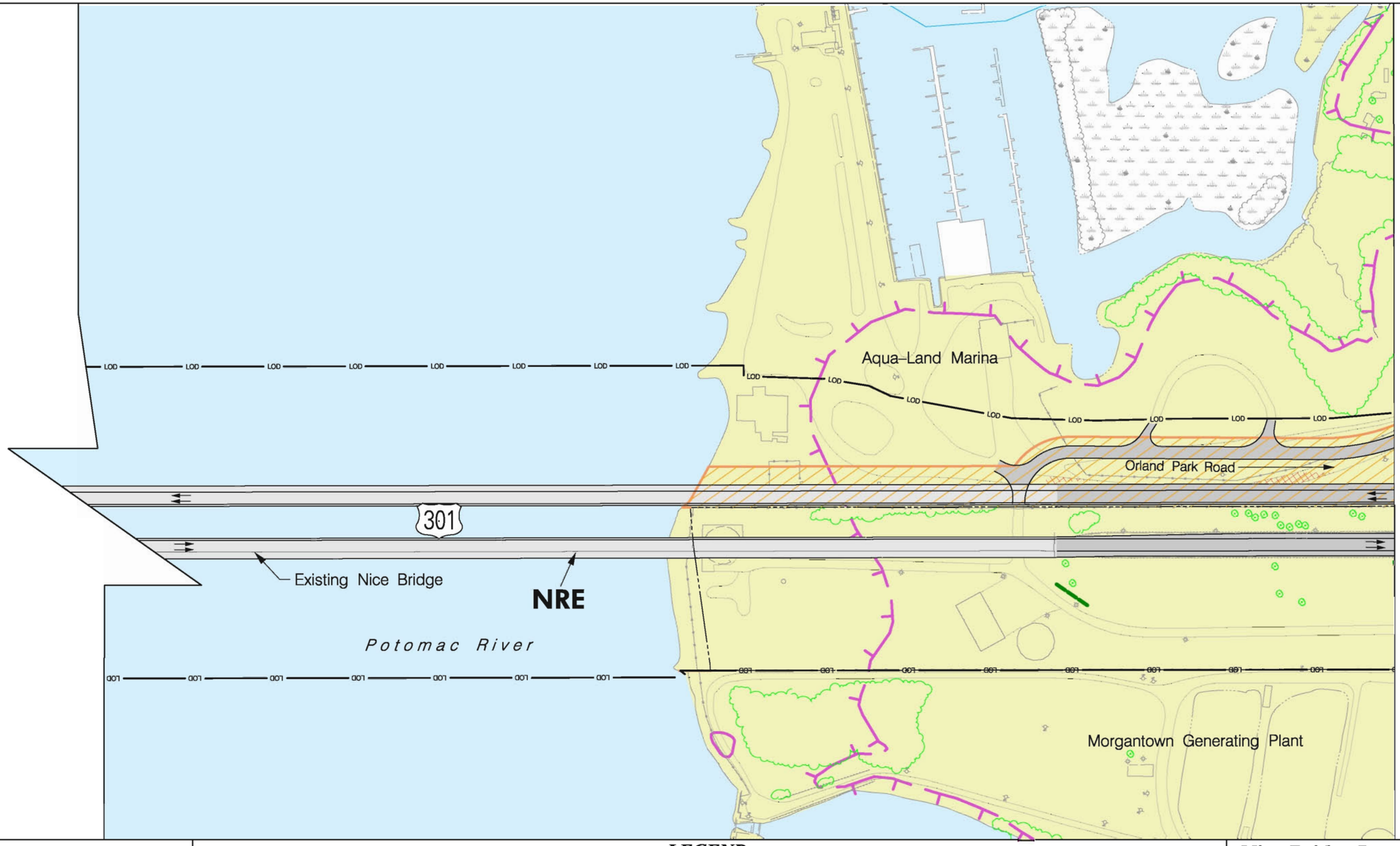
# *Nice Bridge Improvement Project*

Appendix A
Plate 17
Alternate 5 (Sheet 1 of 4) July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\bHD-ALT5-1.dgn




VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE / D — National Register of Historic Places – Eligible Potential Displacement

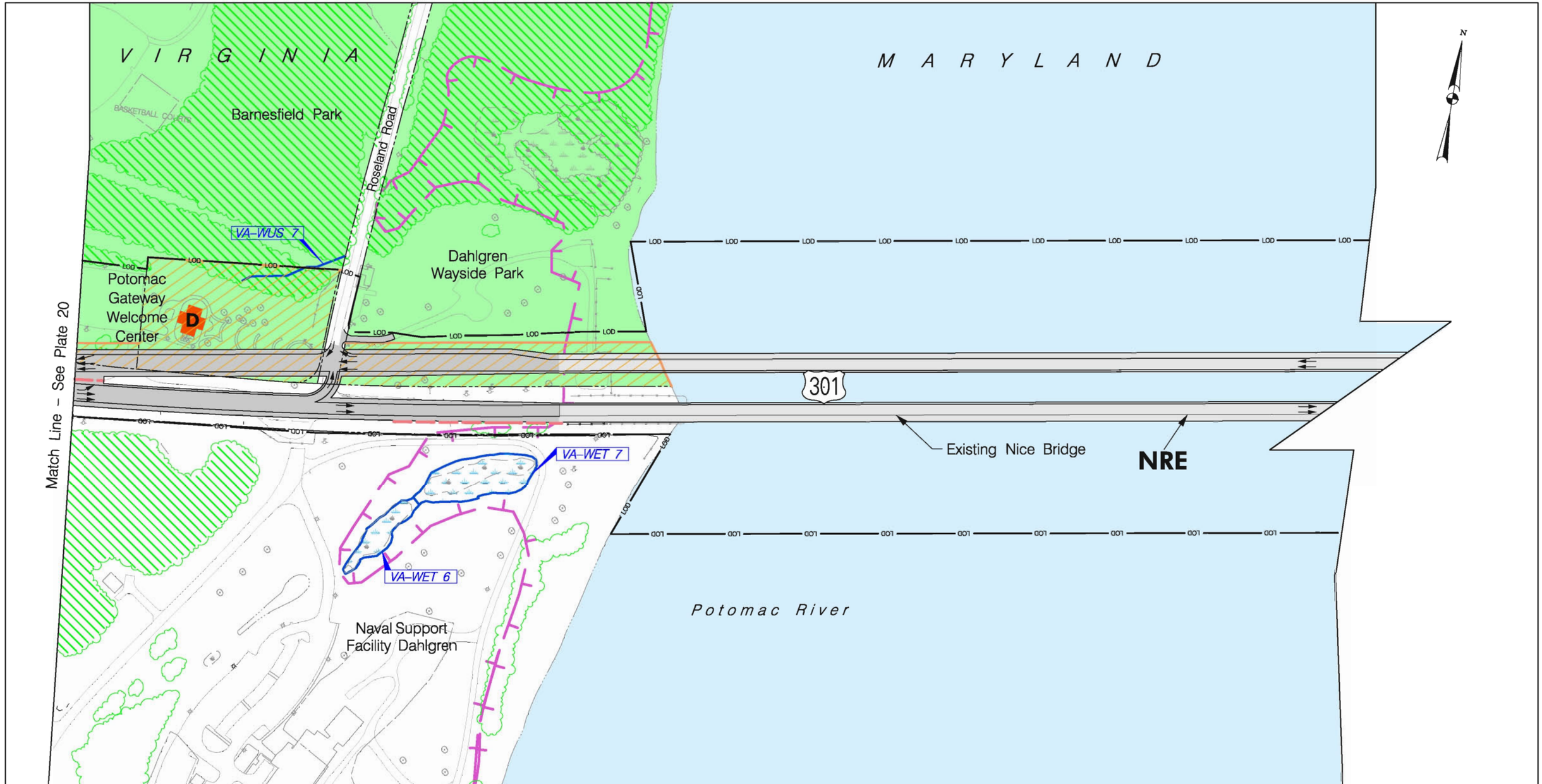
# *Nice Bridge Improvement Project*

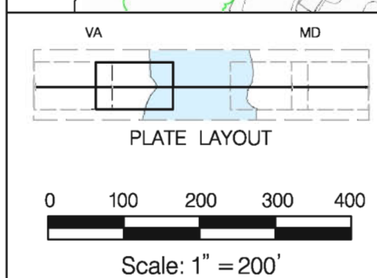
Appendix A
Plate 18
Alternate 5 (Sheet 2 of 4) July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\pHD-ALT5-2.dgn




## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE — National Register of Historic Places – Eligible
- D — Potential Displacement

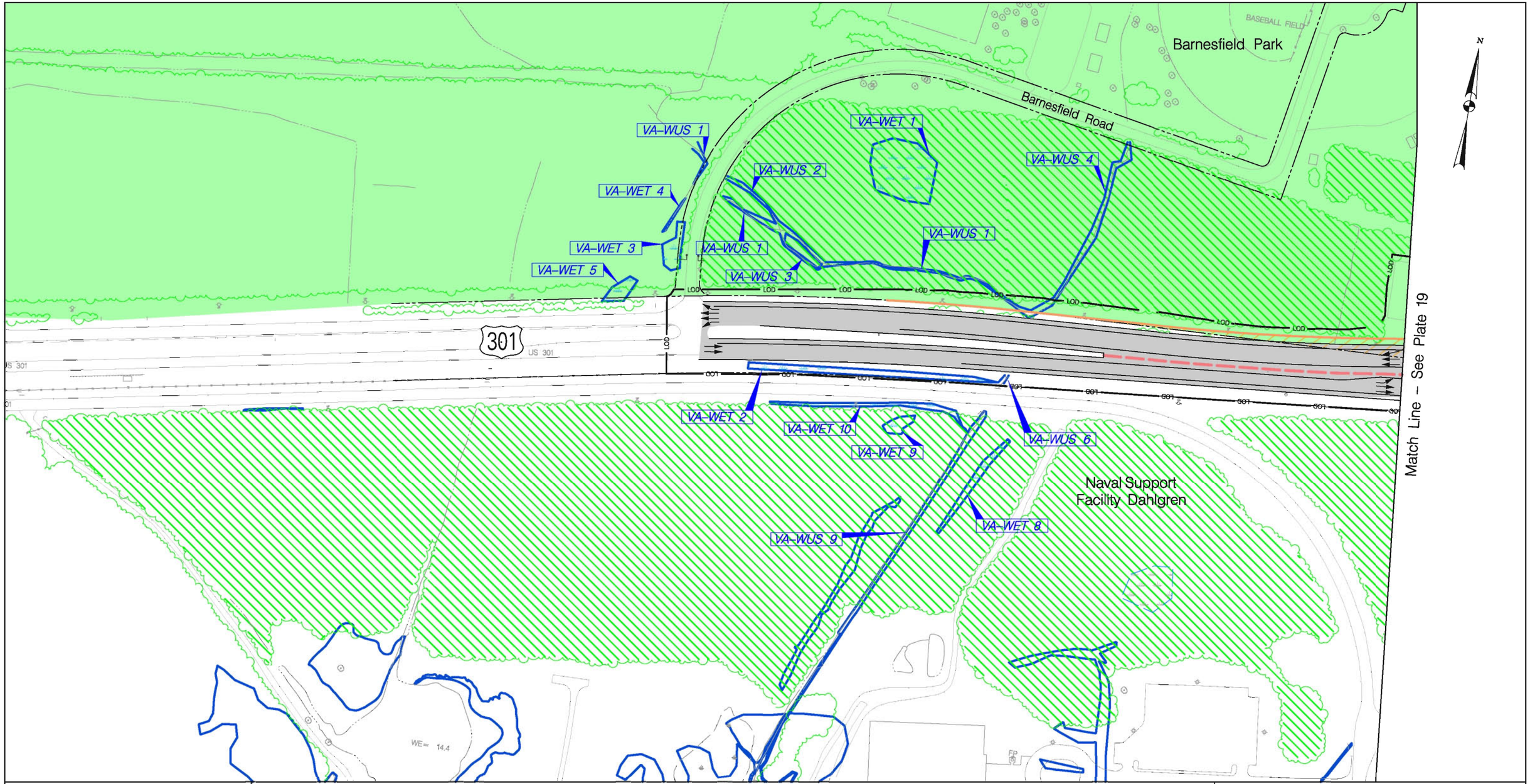
# *Nice Bridge Improvement Project*

Appendix A
Plate 19
Alternate 5 (Sheet 3 of 4) July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\pHD-ALT5-3.dgn




VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE D — National Register of Historic Places – Eligible Potential Displacement

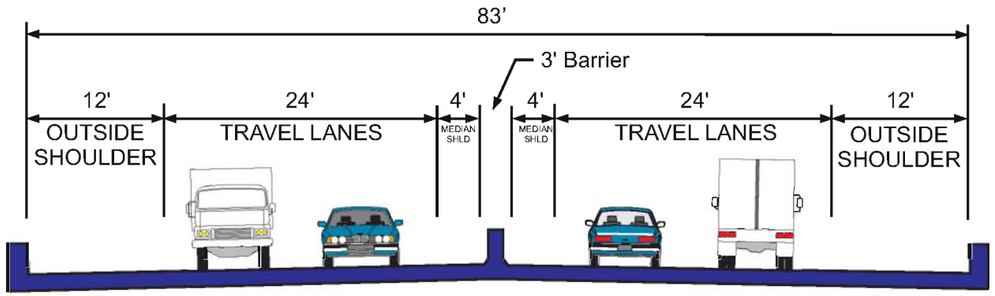
# *Nice Bridge Improvement Project*

Appendix A
Plate 20
Alternate 5 (Sheet 4 of 4) July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\pHD-ALT5-4.dgn

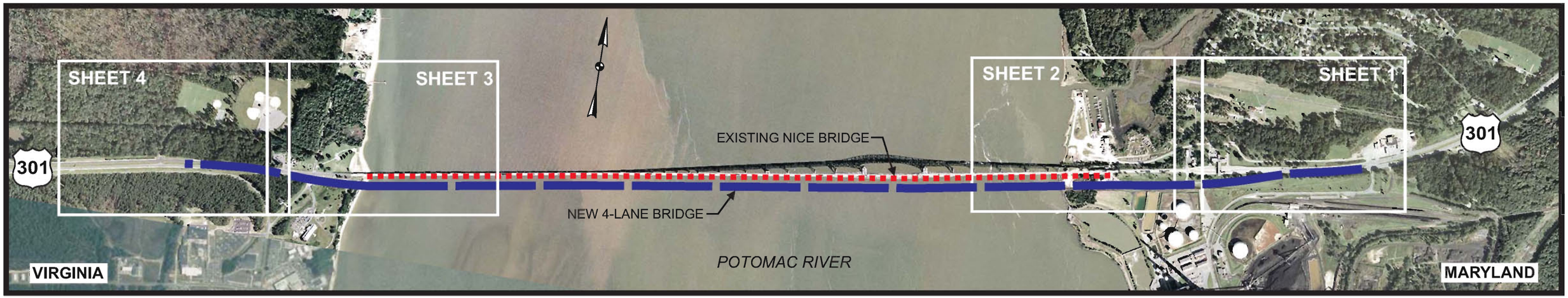


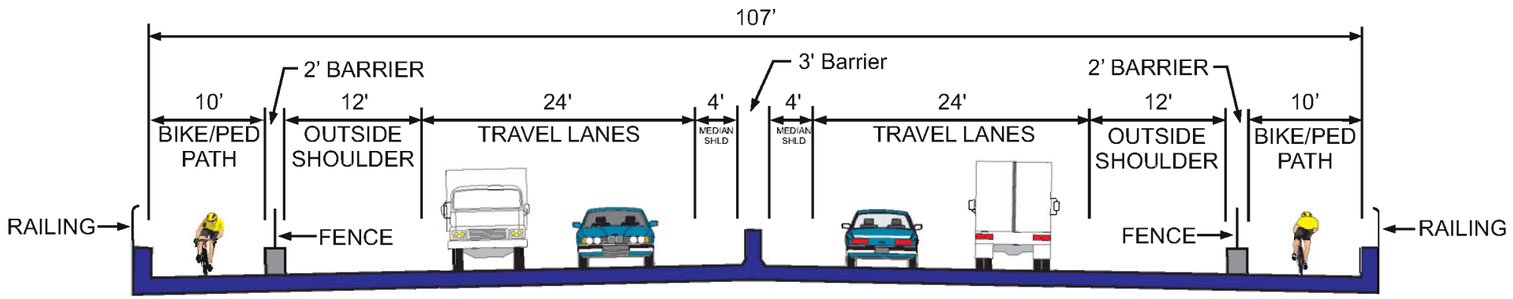

**NEW 4-LANE BRIDGE FOR TWO-WAY TRAVEL**




**(TAKEN OUT OF SERVICE)**

# ALTERNATE 6




**NEW 4-LANE BRIDGE FOR TWO-WAY TRAVEL WITH BIKE/PED PATHS**




**(TAKEN OUT OF SERVICE)**

# ALTERNATE 6 OPTION

***Nice Bridge Improvement Project***

Appendix A

Alternate 6 and Option Index Sheet

July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

Aqua–Land Campground

MD–WUS 2

MD–WUS 3

MD–WUS 4

MD–WUS 5

Nice Bridge
Campus Facilities

NRE

Orland Park Road

301

MD–WET 1

MD–WUS 1

Morgantown Generating Plant

Match Line – See Plate 22

N

VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE — National Register of Historic Places – Eligible
- D — Potential Displacement

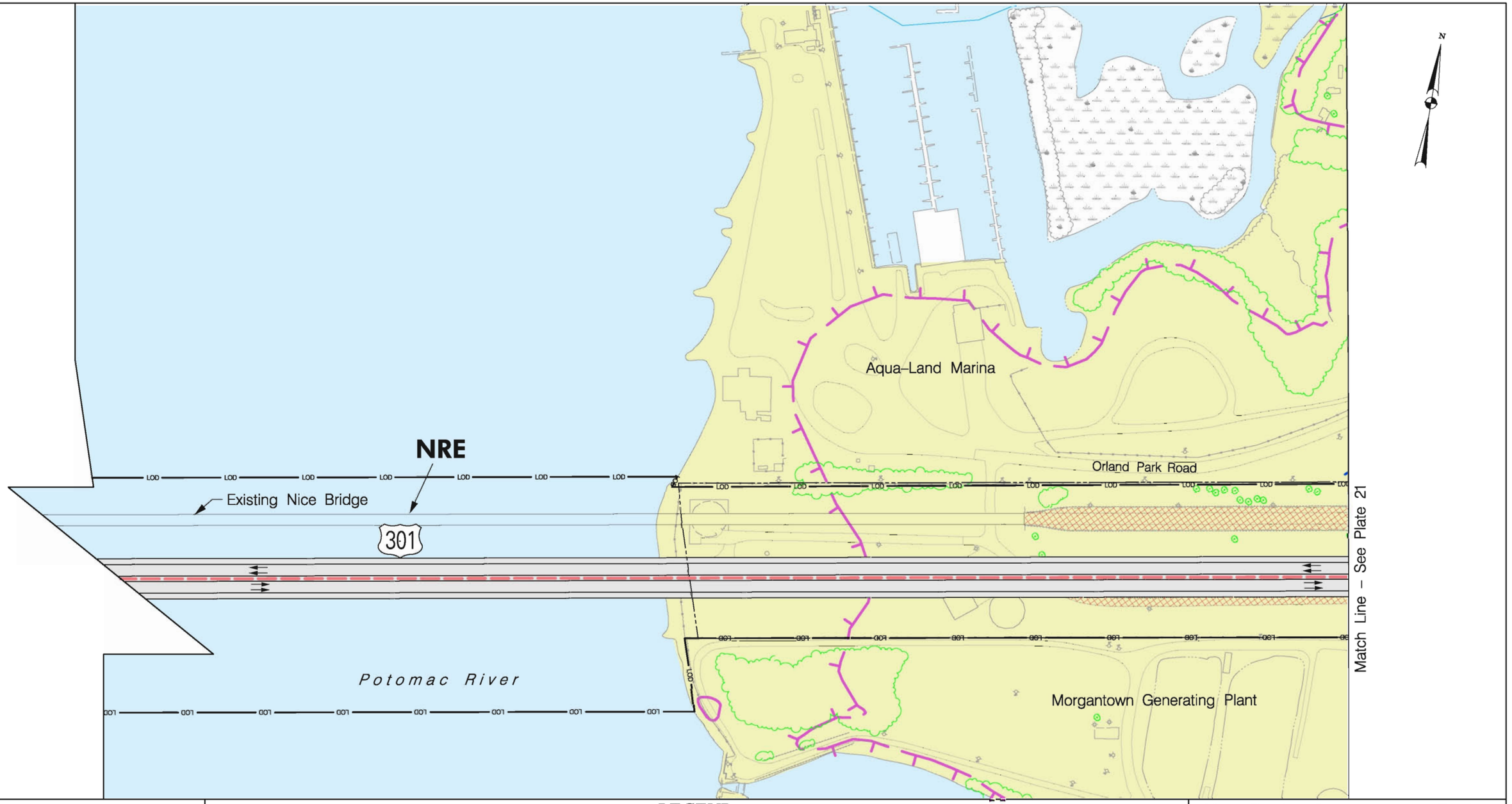
# *Nice Bridge Improvement Project*

Appendix A
Plate 21
Alternate 6 (Sheet 1 of 4) July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\pHD-ALT6-1.dgn




VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE — National Register of Historic Places – Eligible
- D — Potential Displacement

# *Nice Bridge Improvement Project*

Appendix A
Plate 22
Alternate 6 (Sheet 2 of 4) July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\ph0-ALT6-2.dgn

V I R G I N I A

M A R Y L A N D

Barnesfield Park

BASKETBALL COURTS

Roseland Road

VA-WUS 7

Potomac Gateway Welcome Center

Dahlgren Wayside Park

FPS

LOD

US 301

Match Line – See Plate 24

NRE

Existing Nice Bridge

301

VA-WET 7

VA-WET 6

Potomac River

Naval Support Facility Dahlgren

D

N

VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE — National Register of Historic Places – Eligible
- D — Potential Displacement

# *Nice Bridge Improvement Project*

Appendix A
Plate 23
Alternate 6 (Sheet 3 of 4) July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\pltD-ALT6-3.dgn

Barnesfield Park

BASEBALL FIELD

Barnesfield Road

VA-WUS 1

VA-WET 1

VA-WUS 2

VA-WUS 4

VA-WET 4

VA-WET 3

VA-WUS 1

VA-WUS 1

VA-WET 5

VA-WUS 3

LOD

301

US 301

S 301

VA-WET 2

VA-WET 10

VA-WUS 6

VA-WET 9

Naval Support
Facility Dahlgren

VA-WET 8

VA-WUS 9

WE= 14.4

FP

Match Line – See Plate 23

N

VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE D — National Register of Historic Places – Eligible Potential Displacement

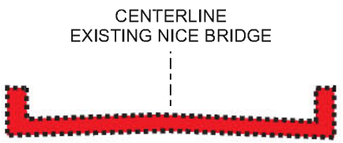
# *Nice Bridge Improvement Project*

Appendix A
Plate 24
Alternate 6 (Sheet 4 of 4) July 2009

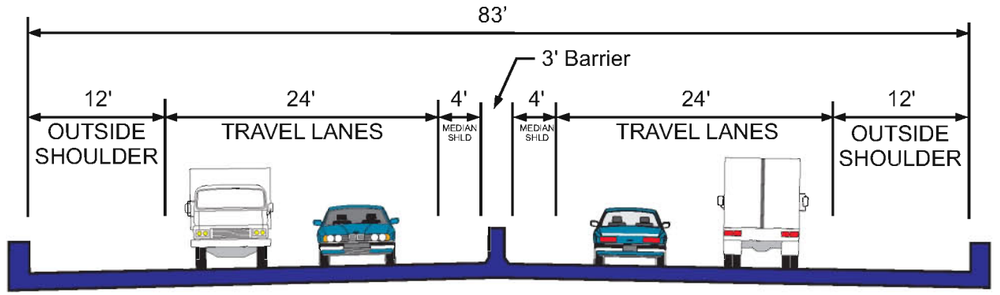
HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\pHD-ALT6-4.dgn

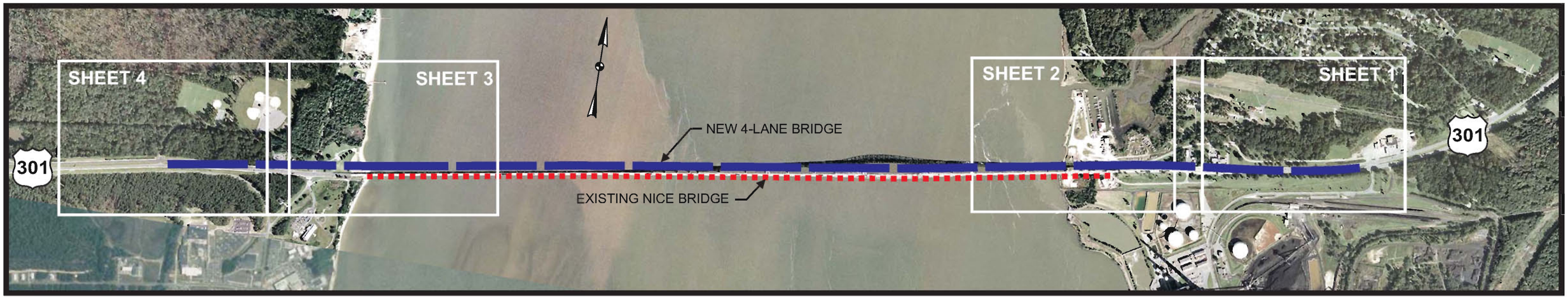


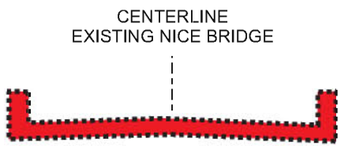

(TAKEN OUT OF SERVICE)



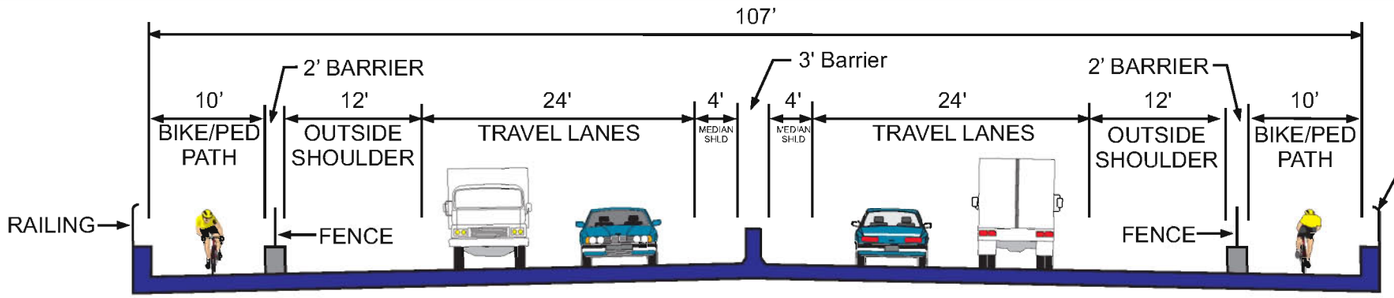

NEW 4-LANE BRIDGE FOR TWO-WAY TRAVEL

# ALTERNATE 7




(TAKEN OUT OF SERVICE)




NEW 4-LANE BRIDGE FOR TWO-WAY TRAVEL WITH BIKE/PED PATH

# ALTERNATE 7 OPTION

***Nice Bridge Improvement Project***

Appendix A
Alternate 7 and Option
Index Sheet

July 2009

Match Line – See Plate 26

Aqua–Land Campground

MD–WUS 2

MD–WUS 3

MD–WUS 4

MD–WUS 5

Nice Bridge
Campus Facilities

D

NRE

D

D

LOD

Orland Park Road

301

H

FP

MD–WET 1

MD–WUS 1

Morgantown Generating Plant

N

VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE / D — National Register of Historic Places – Eligible Potential Displacement

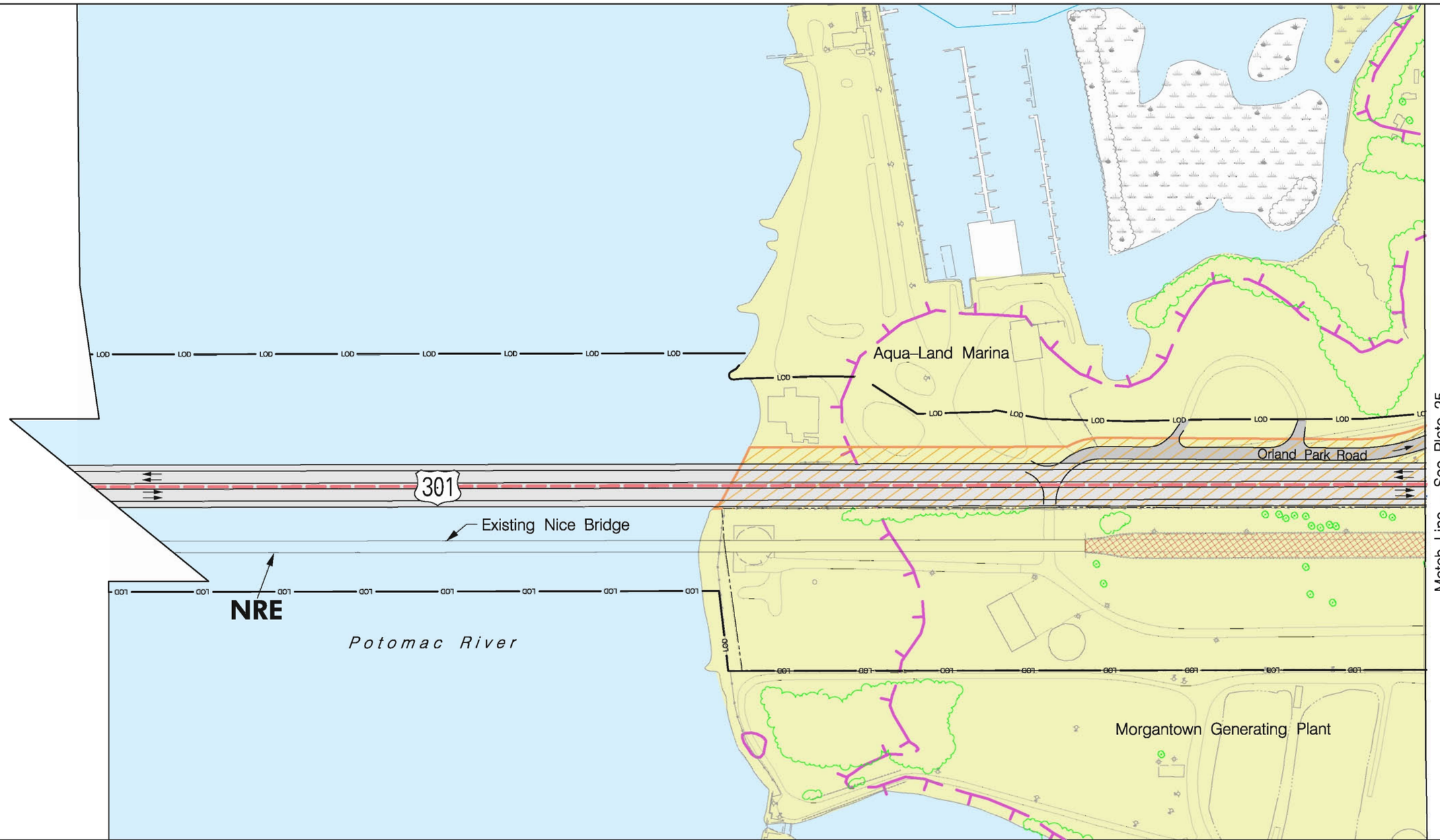
# *Nice Bridge Improvement Project*

Appendix A
Plate 25
Alternate 7 (Sheet 1 of 4) July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\pHD-ALT7-1.dgn




VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE — National Register of Historic Places – Eligible
- D — Potential Displacement

# *Nice Bridge Improvement Project*

Appendix A
Plate 26
Alternate 7 (Sheet 2 of 4) July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\pHD-ALT7-2.dgn

V I R G I N I A

M A R Y L A N D

Barnesfield Park

BASKETBALL COURTS

Roseland Road

Potomac Gateway Welcome Center

VA-WUS 7

Dahlgren Wayside Park

LOD

D

301

Existing Nice Bridge

NRE

Potomac River

VA-WET 7

VA-WET 6

Naval Support Facility Dahlgren

Match Line – See Plate 28

N

VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE — National Register of Historic Places – Eligible
- D — Potential Displacement

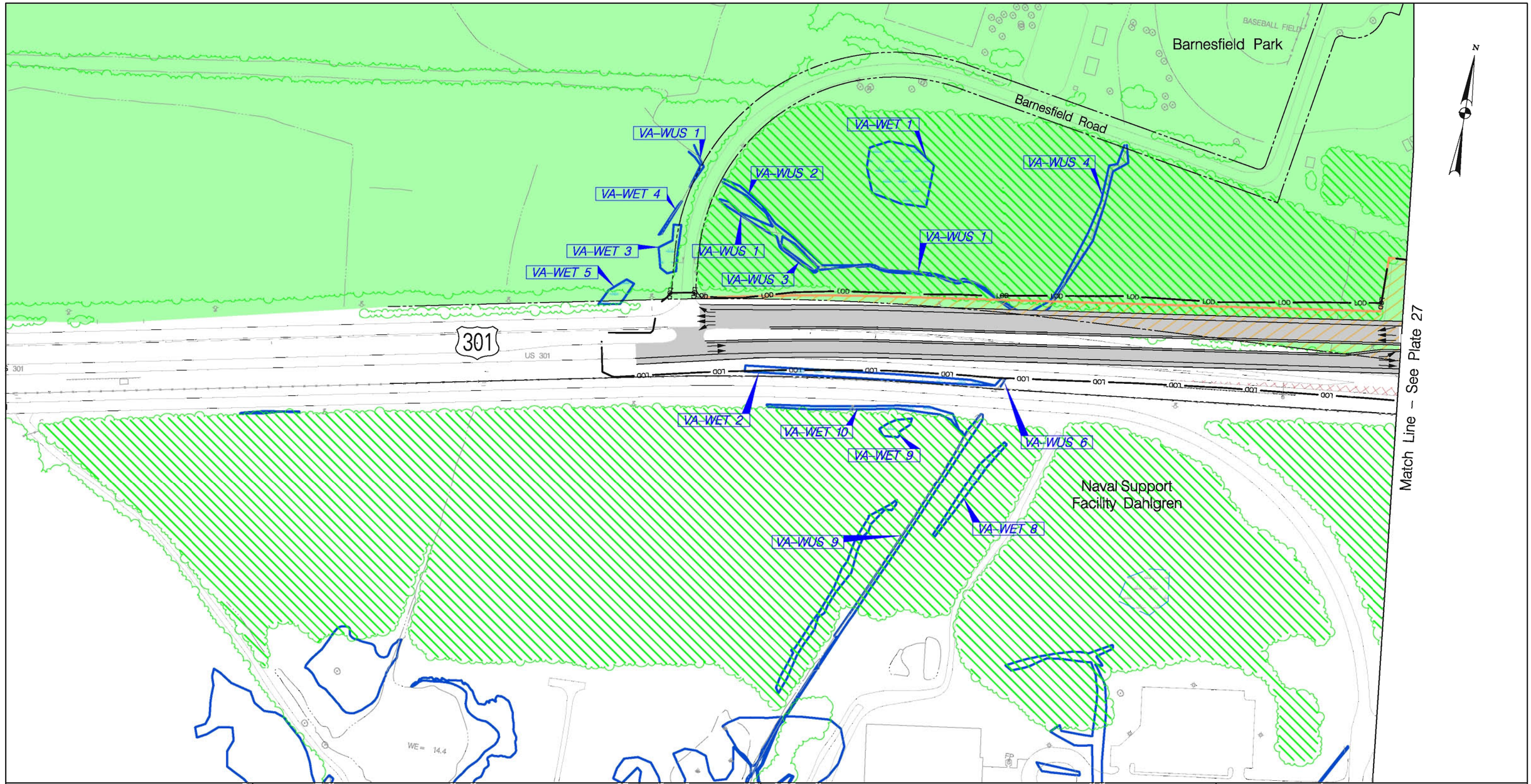
**Nice Bridge Improvement Project**

Appendix A
Plate 27
Alternate 7 (Sheet 3 of 4) July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\...ce Bridge Study\EA\Plates\pHD-ALT7-3.dgn




VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

## LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE — National Register of Historic Places – Eligible
- D — Potential Displacement

# *Nice Bridge Improvement Project*

Appendix A
Plate 28
Alternate 7 (Sheet 4 of 4) July 2009

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\EA\Plates\pHD-ALT7-4.dgn

MARYLAND DEPARTMENT OF NATURAL RESOURCES

Robert L. Ehrlich, Jr., *Governor*
Michael S. Steele, *Lt. Governor*
C. Ronald Franks, *Secretary*

September 19, 2006

Ms. Melissa Williams
Maryland Transportation Authority
Division of Capital Planning
2310 Broening Highway, Suite 150
Baltimore, Maryland 21224

Dear Ms. Williams:

This letter is in response to your letter of request, dated September 12, 2006, requesting information relative to the preliminary environmental inventory for the **Governor Harry W. Nice Memorial Bridge Improvement Study**. After reviewing the information provided with your request we offer the following items that we believe should be included in the subject study report:

**Chesapeake Bay Critical Area**

Portions of the study area are located within the Chesapeake Bay Critical Area. The study report should address requirements to meet all applicable State and local Critical Area regulations. These regulations include provisions for stormwater management, protection of certain resources (i.e. threatened and endangered species, anadromous fish, Forest Interior Dwelling Bird habitat, plant and wildlife habitat), additional setback requirements, and in some instances (lands with a Critical Area designation of Limited Development Area or Resource Conservation Area), also include limits on impervious surfaces and forest clearing. If the Critical Area designation is Intensely Developed Area, then the project will be required to meet the 10% Pollutant Reduction Rule. For more information on Critical Area requirements please contact Lisa Hoerger of the Critical Area Commission at 410-260-3478.

**Forests and Roadside Trees**

The Forest Conservation Act requires that before the issuance of a grading or sediment control permit, the applicant shall have an approved Forest Conservation Plan and Forest Stand Delineation (Nat. Res. Art. 5-1601--5-1613, Annotated Code of Maryland). The Act provides for the retention of forested areas in sensitive areas on the subject property.

Any tree that originates within a public road right-of-way is considered a roadside tree under the Maryland Roadside Tree Care Law (NRA 5-406) and Regulations (COMAR 08.07.02) and any plans to remove, trim, or plant trees within the public right-of-way are required to obtain a permit from the Maryland Department of Natural Resources Forest Service.

Please contact Marian Honeczy, 410-260-8511
Maryland Forest Conservation Act Coordinator

Tawes State Office Building • 580 Taylor Avenue • Annapolis, Maryland 21401
410.260.8DNR or toll free in Maryland 877.620.8DNR • www.dnr.maryland.gov • TTY users call via Maryland Relay

DNR-Forest Service, 580 Taylor Avenue, Tawes State Office Building,
Annapolis, Maryland 21401

**Rare, Threatened and Endangered Species**

The Department's Wildlife and Heritage Service has records for Federal or State rare, threatened or endangered plants or animals within the subject study area. For further information on the presence of rare, threatened or endangered species within the subject site please contact Ms. Lori A. Byrne of our Wildlife and Heritage Service at 410-260-8573.

**Department of Natural Resources Land**

The applicant should include in the study an evaluation of potential impacts to Department of Natural Resources owned land within the study area. The study area map indicates that the Zekiah Swamp Natural Environmental Area is within the study area. For additional information concerning DNR lands please contact Arnold Norden of the Department's Public Lands Policy and Planning Unit at 410-260-8406.

**Forest Interior Dwelling Bird Habitat**

The forested areas within the study area could contain Forest Interior Dwelling Bird habitat. Populations of many Forest Interior Dwelling Bird Species (FIDS) are declining in Maryland and throughout the eastern United States. The conservation of this habitat is strongly encouraged by the Department of Natural Resources. For more information on FIDS habitat please contact Lori A. Byrne of our Wildlife and Heritage Service at 410-260-8573.

**Historic Waterfowl Concentration Areas**

The subject study area includes an area designated as a Historic Waterfowl Concentration Area under the State's Critical Area law. Potential impacts to this area should be included in the study report. For more information on Waterfowl Concentration Areas please contact Lori A. Byrne of our Wildlife and Heritage Service at 410-260-8573.

**Anadromous Fish Spawning Areas**

Potential impacts to fishery resources should addressed within the study document The subject study area is within the drainage area of the Lower Potomac River and contains several tributaries to the Potomac River including Popes Creek, Cliffton Creek, Pasquahanza Creek, Waverly Creek and Allens Fresh Run. Our Fisheries Service has documented anadromous fish species spawning in many of these streams within the study area including: 1/ yellow perch (*Perca flavescens*); 2/ white perch (*Morone americana*); and herring species (*Alosa sp.*). Striped Bass and herring species have also been documented spawning in the Potomac River mainstem within the study area. Additionally, Table F3-3 (attached) lists fish species documented in the Lower Potomac River Basin by our Maryland Biological Stream Survey Program. Many of these species could be present in the Potomac River and tributaries within the study area.

Generally, no instream work is permitted in anadromous fish spawning streams during the period of March 1 through June 15, inclusive, during any year (expanded to February 15th where yellow perch are known to

spawn). The spawning periods for fish species likely to be found in the study area should be adequately protected by the instream work time restriction stated above, sediment and erosion control methods, and other Best Management Practices typically used for protection of stream resources are utilized.

**Natural Oyster Bars**

From the information provided with your request it appears that the Potomac River, within the study area, includes several natural oyster bars (NOB's) including Pascahanza, Lower Cedar Point and Lower Cedar Point Addition. The area within the boundaries of NOB's is specifically established, reserved, and protected from activities and impacts considered detrimental to oyster populations or destruction of the bottom. Oysters spawn and subsequently set their spat during the period June through September in estuarine sections of rivers and the Bay. During this period, dredge units can entrain and destroy oyster eggs and larvae. In addition, sediments resuspended by dredging activities may affect oysters. Potentially, larval oysters could be starved by ingesting sediment particles which are the same size as prey organisms. Larval oysters could also delay metamorphosis to spat because the substrate is covered with loose sediments and is therefore unsuitable. Oysters also become inactive during the colder months of the year and are more liable to burial (inability to clear themselves of deposited sediment) during this period of reduced activity.

The study report should address potential impacts to natural oyster bars within the study area. For additional information on natural oyster bars please contact Chris Judy of our Fisheries Service at 410-260-8259.

**Submerged Aquatic Vegetation**

The Virginia Institute of Marine Science (VIMS) Submerged Aquatic Vegetation (SAV) Mapping for 2005 indicates that SAV is present along the shoreline of the Lower Potomac River in the area between Lower Cedar Point and Waverly Point, and also in Allens Fresh, Pasquahanza Creek and Waverly Creek. The study report should address potential impacts to SAV within the study area.

**Green Infrastructure**

While it is important to look at threatened and endangered species, wetlands, forests, Critical Areas, etc. separately, the Department has spearheaded efforts to take all such factors into account for their collective interrelationships especially as necessary to sustain the irreplaceable natural biodiversity in the State. This integrated look at the complex natural relationships as they engage on the landscape has become known nationally as Green Infrastructure (GI).

Due to persistent development pressure, large contiguous blocks of natural lands are being fragmented. Studies have conclusively shown that there is a measurable direct relationship between increased isolation of natural areas and biodiversity lost within them. When forested areas, for example, become disconnected from others, Forest Interior Dwelling Species (FIDS) are not able to sustain their populations. Both the size of natural "Hubs" on the landscape and their interconnectivity via natural "Corridors" that species can traverse, are now known to be crucial to sustain biologically diverse natural populations.

Maryland's Green Infrastructure Assessment (GIA), an analysis which identifies the State's ecological hub and corridor network, also provides an ecological ranking system or "Eco-Rank" at a 30 meter resolution over the Maryland landscape. This ranking system quantifies the relative ecological values of the natural



resources, both for their specific ecological features and for their value to the regional ecological hub and corridor network. Every feasible effort should be made to preserve the cohesive quality of these natural areas as well as efforts to preserve their interconnectedness.

The study document should consider Green Infrastructure resources. Impacts should consider issues such as reducing the size of hubs, breaking corridor linkages, fragmenting forest and wetland blocks into isolated features and increasing edge habitat relative to interior habitat conditions. Mitigation approaches should consider conservation of unprotected green infrastructure resources in response to any losses or degradation of the existing green infrastructure resource. Additionally, restoration should be targeted to enhance and expand existing green infrastructure resources.

We recognize the ongoing tension between the needs for development and the impacts on the natural landscape. We can provide data, as well as analysis tools and concepts to increase awareness of the sensitivities that we have lightly touched on in this response in relation to the State's Green Infrastructure resources. You may find more information at the following website: http://www.dnr.state.md.us/greenways/gi/gi.html. For more information on the State's Green Infrastructure you may contact Christine Conn of our Watershed Services' Ecosystem Analysis Center at 410-260-8785.

Thank you for the opportunity to review and comment on the Governor Harry W. Nice Memorial Bridge Improvement Study Scoping. If you should have any questions concerning these comments you may contact me at 410-260-8331 or by email at rdintaman@dnr.state.md.us.

Sincerely,

Ray C. Dintaman

Ray C. Dintaman, Jr., Director
Environmental Review Unit

Attachment

Table F3-3. Species found in 1995 MBSS Study vs Qualitative Study, Lower Potomac Basin

Species Found In 1995 MBSS Study vs Qualitative Study
By Basin

BASIN NAME=LOWER POTOMAC

| Species | in MBSS Study | in Qual. Study |
|---|---|---|
| LEAST BROOK LAMPREY | X | X |
| SEA LAMPREY | X | X |
| AMERICAN EEL | X | X |
| CHAIN PICKEREL | X | X |
| REDFIN PICKEREL | X | X |
| EASTERN MUDMINNOW | X | X |
| BLACKNOSE DACE | X | X |
| COMMON SHINER | X | |
| CREEK CHUB | X | X |
| EASTERN SILVERY MINNOW | X | X |
| FALLFISH | X | X |
| FATHEAD MINNOW | X | |
| GOLDEN SHINER | X | X |
| IRONCOLOR SHINER | X | X |
| ROSYSIDE DACE | X | X |
| SATINFIN SHINER | X | X |
| SPOTTAIL SHINER | X | X |
| SWALLOWTAIL SHINER | X | X |
| CREEK CHUBSUCKER | X | X |
| WHITE SUCKER | X | X |
| BROWN BULLHEAD | X | X |
| MARGINED MADTOM | X | X |
| TADPOLE MADTOM | X | X |
| YELLOW BULLHEAD | X | X |
| PIRATE PERCH | X | X |
| BANDED KILLIFISH | X | X |
| MUMMICHOG | | X |
| MOSQUITOFISH | X | |
| WHITE PERCH | | X |
| BLACK CRAPPIE | X | X |
| BLUEGILL | X | X |
| BLUESPOTTED SUNFISH | X | X |
| FLIER | X | |
| GREEN SUNFISH | X | X |
| LARGEMOUTH BASS | X | X |
| PUMPKINSEED | X | X |
| REDBREAST SUNFISH | X | X |
| WARMOUTH | X | X |
| LEPOMIS HYBRID | X | |
| SWAMP DARTER | X | X |
| TESSELLATED DARTER | X | X |
| YELLOW PERCH | X | X |



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401

September 26, 2006

Melissa Williams
Planning Manager
Maryland Transportation Authority
2310 Broening Highway
Suit 150
Baltimore, MD 21224

*RE: Project Planning Study for the Governer Harry W. Nice Memorial Bridge*

Dear Ms. Williams,

This responds to your letter, received August 16, 2006, requesting information on the presence of species which are federally listed or proposed for listing as endangered or threatened within the above referenced project area. We have reviewed the information you enclosed and are providing comments in accordance with section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

The federally threatened bald eagle *(Haliaeetus leucocephalus)* nests within the project area or within the vicinity of the project. For further information regarding activity at this nest, Glenn Therres of the Maryland Wildlife and Heritage Division should be contacted at (410) 260-8572. Any construction or forest clearing activities within one-quarter mile of an active nest may impact bald eagles. If such impacts may occur, further section 7 consultation with the U.S. Fish and Wildlife Service may be required.

Except for occasional transient individuals, no other federally proposed or listed endangered or threatened species are known to exist within the area. Should additional information on the distribution of listed or proposed species become available, this determination may be reconsidered.

This response relates only to federally-protected threatened or endangered species under our jurisdiction. For information on the presence of other rare species, you should contact Lori Byrne of the Maryland Wildlife and Heritage Division at (410) 260-8573.

An additional concern of the Service is wetlands protection. Federal and state partners of the Chesapeake Bay Program have adopted an interim goal of no overall net loss of the basin's remaining wetlands, and the long term of increasing the quality and quantity of the basin's wetlands resource base. Because of this policy and the functions and values wetlands perform,

the Service recommends avoiding wetland impacts. All wetlands within the project area should be identified, and if construction in wetlands proposed, the U.S. Army Corps of Engineers, Baltimore District should be contacted for permit requirements. They can be reached at (410) 962-3670.

We appreciate the opportunity to provide information relative to fish and wildlife issues, and thank you for your interest in these resources. If you have any questions or need further assistance, please contact Craig Koppie (410) 573-4534.

Sincerely,

Mary Ratnaswamy

Mary J. Ratnaswamy, Ph.D.
Program Supervisor, Threatened and Endangered Species

cc: Lori Byrne, Maryland Wildlife and Heritage Division, Annapolis, MD

**Sacchet, Kerri**

**From:** ProjectReview ProjectReview [ProjectReview.Richmond_PO.DGIF@dgif.virginia.gov]
**Sent:** Friday, September 29, 2006 3:51 PM
**To:** gsmith2@mdta.state.md.us; Sacchet, Kerri
**Cc:** Jeff Cooper; John Kauffman; trevor_clark@fws.gov
**Subject:** ESSLog# 22977_Nice Memorial Bridge Improvement Study andScoping Meeting

**Attachments:** JPEG; EagleGuidelines.pdf

22977_eagles.jpg (131 KB) EagleGuidelines.pdf (41 KB)

We have reviewed the subject project to study alternatives for improving traffic flow and volume on the Nice Bridge in King George County, VA and Charles County, MD. The Virginia Department of Game and Inland Fisheries (VDGIF), as the Commonwealth's wildlife and freshwater fish management agency, exercises enforcement and regulatory jurisdiction over those resources, inclusive of state or federally endangered or threatened species, but excluding listed insects. We are a consulting agency under the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), and we provide environmental analysis of projects or permit applications coordinated through the Virginia Department of Environmental Quality, the Virginia Marine Resources Commission, the Virginia Department of Transportation, the U. S. Army Corps of Engineers, the Federal Energy Regulatory Commission, and other state or federal agencies. Our role in these procedures is to determine likely impacts upon fish and wildlife resources and habitats, and to recommend appropriate measures to avoid, reduce, or compensate for those impacts.

According to our records, Federal Threatened State Threatened bald eagle has been documented in the project area. Documentation of this species in the study area includes bald eagle nesting locations and the Potomac River Winter Concentration Zone (see attached .jpg*). Until a work plan is proposed, we are unable to determined what, if any, impacts upon this species may result from this project. Due to the proximity of this project to known eagle locations, we recommend further coordination with this agency for recommendations as to how to avoid, reduce or compensate for impacts upon this listed species. Further, we recommend coordination with Trevor Clark in the US Fish and Wildlife Service's Annapolis, MD office at 410-573-4527 or trevor_clark@fws.gov. We have attached the "Bald Eagle Protection Guidelines for Virginia" for your review. This document outline what recommendations may be made by this agency and/or the USFWS regarding protection of this species during this project. Recommendations may include activity restrictions/modifications, time of year restrictions and/or other conservation recommendations we believe are warranted to protect bald eagle resources from harm.

The Potomac River and its tributaries in the study are have been designated Anadromous Fish Use Areas. Again, until we have further information, we are unable to determine what, if any impacts, upon this resource may result from this project. Further coordination with this Agency is recommended to protect this resource. We may recommend time of year restrictions on instream work, particular work methods or other conservation recommendations.

Amy Martin, VDGIF Environmental Services Biologist, will attend the October 12th meeting to provide input as well as gather information related to this project. As the project moves forwards and greater detail on the type of work proposed, we will be able to provide more detailed comments regarding the protection of wildlife resources in the project area. Please contact Amy at 804-367-2211 or amy.martin@dgif.virginia.gov if you need further assistance.

*The attached map contains sensitive information on the location of bald eagles within the study area. This map and/or the data contained within it should not be reproduced or distributed for any reason other than Nice Memorial Bridge Improvement Study scoping without prior approval from VDGIF.

Thank you

Amy Martin

Virginia Department of Game and Inland Fisheries Environmental Services Section

1

COMMONWEALTH of VIRGINIA

L. Preston Bryant, Jr.
Secretary of Natural Resources

**Department of Historic Resources**
2801 Kensington Avenue, Richmond, Virginia 23221

Kathleen S. Kilpatrick
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
TDD: (804) 367-2386
www.dhr.virginia.gov

October 5, 2006

Ms Melissa Williams
Maryland Transportation Authority
2310 Broening Highway
Suite 150
Baltimore, Maryland 21224

Re: Governor Harry W. Nice Memorial Bridge Improvement Project
King George County, Virginia
DHR File # 2006-1393

Dear Ms Williams:

We have received your invitation to the scoping meeting for the above referenced project. It is our understanding that the Maryland Transportation Authority and the Virginia Department of Transportation (VDOT) proposes to conduct improvements to the Governor Harry W. Nice Memorial Bridge which carries US Route 301 across the Potomac River between Charles County, Maryland, and King George County, Virginia. We apologize for not being able to attend the scoping meeting for this project. However, please do not let our absence be construed as disinterest. The undertaking has the potential to affect historic properties in Virginia. Due to its location on the banks of the Potomac River, we anticipate there may be archaeological resources present. We look forward to continued consultation between your office, VDOT, and the Department of Historic Resources (DHR).

If you have any questions regarding our comments, please call me at (804) 367-2323, Ext. 114.

Sincerely,

Marc Holma, Architectural Historian
Office of Review and Compliance

Cc: Ms Helen Ross, VDOT

Administrative Services
Courthouse Avenue
sburg, VA 23803
Tel: (804) 863-1624
Fax: (804) 862-6196

Capital Region Office
2801 Kensington Ave.
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391

Tidewater Region Office
14415 Old Courthouse Way, 2nd Floor
Newport News, VA 23608
Tel: (757) 886-2807
Fax: (757) 886-2808

Roanoke Region Office
1030 Penmar Ave., SE
Roanoke, VA 24013
Tel: (540) 857-7585
Fax: (540) 857-7588

Winchester Region Office
107 N. Kent Street, Suite 203
Winchester, VA 22601
Tel: (540) 722-3427
Fax: (540) 722-7535

MARYLAND DEPARTMENT OF NATURAL RESOURCES

Robert L. Ehrlich, Jr., *Governor*
Michael S. Steele, *Lt. Governor*
C. Ronald Franks, *Secretary*

October 11, 2006

Ms. Melissa Williams
Capital Planning Division
Maryland Transportation Authority
2310 Broening Highway, Suite 150
Baltimore, MD 21224

**RE: Environmental Review for Governor Harry W. Nice Memorial Bridge, Project Planning Study from North of Route 234 to Dahlgren, VA area, Charles County, Maryland.**

Dear Ms. Williams:

The Wildlife and Heritage Service (WHS) database indicates that there are the following records for rare, threatened or endangered plants and animals and protected habitats known to occur on, or in close proximity to, the study area within its Maryland portion.

**Bald Eagle nests**

The WHS has records for four Bald Eagle nests within the study area, known to be recently active. The approximate locations of these nests are indicated on the attached map. The bald eagle is listed as a threatened species by the state and the federal government. State law requires that appropriate protection measures be incorporated into actions by state agencies. To protect these nest sites the following guidelines should be implemented:

1. Establish a protection area of ¼- mile radius around the nest tree. Within this area, establish three zones of protection: Zone 1 extends from the nest tree to a radius of 330 feet, Zone 2 extends from 330 feet to 660 feet in radius, and Zone 3 extends from 660 feet to ¼- mile (1320 ft.)
2. No land use changes, including development or timber harvesting should occur in Zone 1.
3. Construction activities, including clearing, grading, building, etc., should not occur within Zones 1 and 2 and ideally no closer than 750 feet from the nest.
4. No construction or timber harvesting activities should occur within the 1/4 mile protection zone during the eagle nesting season, which is from December 15 through June 15.

These general guidelines are used by our biologists for bald eagle nest site protection. Specific protection measures depend on the site conditions, planned activities, nest history and other factors. For more specific technical assistance regarding your project relative to bald eagle protection contact the WHS.

Tawes State Office Building • 580 Taylor Avenue • Annapolis, Maryland 21401
410.260.8DNR or toll free in Maryland 877.620.8DNR • www.dnr.maryland.gov • TTY users call via Maryland Relay

**Natural Heritage Areas**

There is a Natural Heritage Area (NHA) known as Allen's Fresh NHA occurring partially within the study area. Activities within NHAs are regulated so that the structure and species composition of the area are maintained. This NHA is known to support state-listed endangered Long's Bittercress (*Cardamine longii*), and Deciduous Holly (*Ilex decidua*) and Spongy Lophotocarpus (*Sagittaria calycina*), both state rare species. In addition, the wetlands at Allen's Fresh are designated in state regulations as Wetlands of Special State Concern (WSSCs). WSSCs are regulated by Maryland Department of the Environment (MDE), and therefore your project may need review by MDE for any permits associated with this WSSC.

Another NHA that occurs in the study area is the Popes Creek NHA. Activities within NHAs are regulated so that the structure and species composition of the area are maintained. The Popes Creek NHA is designated as such for the presence of exemplary wetlands communities, known Forest Interior Dwelling Birds (FIDS) habitat, and because it supports nesting Bald Eagles. Popes Creek itself is also designated in state regulations as a Wetland of Special State Concern, along with its tributaries which also occur on the study area, including: Huckleberry Branch, Glasva Branch, Drinks Run and Ellenboro Hill Run. WSSCs are regulated by MDE, and therefore your project may need review by MDE for any permits associated with this WSSC.

**RT&E Animal Records**

In Mill Run (draining to Piccowaxen Creek) in the study area, the WHS has a record for the state-listed threatened Flier (*Centrarchus macropterus*). This record indicates that in 1994 this site had the highest number of individuals found during that year's survey efforts for the Flier. This fish species could still occur here or in other areas of appropriate habitat in the study area.

The WHS database also has records for the state-listed endangered Rainbow Snake (*Farancia erythrogramma*) known to occur in the vicinity of the study area. This species could potentially occur in the study area, in areas of appropriate habitat.

**Waterfowl Concentration Areas**

The open waters that are part of the study area, to the north and to the south of the existing Nice Bridge on the Maryland side of the Potomac River, are known historic waterfowl concentration areas. For further technical assistance regarding waterfowl concentration areas, please contact Larry Hindman of the WHS at (410) 221-8838.

**Colonial Waterbirds**

WHS records indicate that there is a waterbird colony located under the existing Nice Bridge during the breeding season. Double-crested Cormorants have been documented as nesting here. Waterbird colonies in the Chesapeake Bay Critical Area are generally protected during their breeding season within a ¼-mile radius of their colony location.





**Forest Interior Dwelling Bird Habitat**

Our analysis of the information provided suggests that the forested area on or adjacent to the project site contains Forest Interior Dwelling Bird habitat. Populations of many Forest Interior Dwelling Bird Species (FIDS) are declining in Maryland and throughout the eastern United States. The conservation of FIDS habitat is strongly encouraged by the Department of Natural Resources. The following guidelines will help minimize the project's impacts on FIDS and other native forest plants and wildlife:

1. Avoid placement of new roads or related construction in the forest interior. If forest loss or disturbance is absolutely unavoidable, restrict development to the perimeter of the forest (i.e., within 300 feet of the existing forest edge), and avoid road placement in areas of high quality FIDS habitat (e.g., old-growth forest). Maximize the amount of remaining contiguous forested habitat.
2. Do not remove or disturb forest habitat during May-August, the breeding season for most FIDS. This seasonal restriction may be expanded to February-August if certain early nesting FIDS (e.g., Barred Owl) are present.
3. Maintain forest habitat as close as possible to the road, and maintain canopy closure where possible.
4. Maintain grass height at least 10" during the breeding season (May-August).

Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at (410) 260-8573.

Sincerely,

Lori A. Byrne

Lori A. Byrne,
Environmental Review Coordinator
Wildlife and Heritage Service
MD Dept. of Natural Resources

ER #2006.2049.ch
Cc: K. McCarthy, DNR
L. Hoerger, CAC
Brian Bernstein, KCI Technologies Inc.
Attachment

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

L. Preston Bryant, Jr.
Secretary of Natural Resources

*Street address:* 629 East Main Street, Richmond, Virginia 23219
*Mailing address:* P.O. Box 10009, Richmond, Virginia 23240
Fax (804) 698-4500 TDD (804) 698-4021
www.deq.virginia.gov

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

October 16, 2006

Mr. Dennis Simpson
Division of Capital Planning.
Suite 150
2310 Broening Highway
Baltimore, MD 21224

RE: Governor Harry W. Nice Memorial Bridge Improvement Study

Dear Mr. Simpson:

Thank you for giving VDEQ's Division of Air Program Coordination the opportunity to review the above-referenced project. King George county is currently in attainment with the ozone and particulate matter national ambient air quality standards. State air pollution regulations which may be applicable to the construction of the project are listed below.

- Fugitive Dust and Emission Control (9 VAC 5-50-60 et seq.)
- Open Burning Restrictions (9 VAC 5-40-5600 et seq.)

Please feel free to contact me at (804) 698-4407 with any additional questions.

Sincerely,

Sonya Lewis-Cheatham
Office of Air Data Analysis

**CHARLES COUNTY GOVERNMENT**
Department of Public Facilities

MICHAEL T. MUDD, Director

October 17, 2006

Dennis N. Simpson
Maryland Transportation Authority
2310 Broening Highway
Suite 150
Baltimore, Maryland 21224

Subject: Harry W. Nice Memorial Bridge
Improvement Study

Dear Mr. Simpson:

As per your request, we have reviewed MTA's study area for the Nice Bridge improvement project. Currently, Charles County Government/ Department of Public Facilities does not have a public park or recreation facilities within the study area.

Should your office have any specific questions, please feel free to contact our office directly at 301-932-3470.

Sincerely,

Tom Roland
Chief of Parks & Grounds

TCR/bdd/simpson

*1001 Radio Station Rd. La Plata, Maryland 20646 301-932-3440 or 301-870-2778 Fax: 301-932-3449*
*EQUAL OPPORTUNITY COUNTY JUST SAY NO TO DRUGS*

**Sacchet, Kerri**

**From:** Glen Smith [gsmith2@mdta.state.md.us]
**Sent:** Monday, October 23, 2006 10:24 AM
**To:** Dennis Simpson; Bernstein, Brian; Jen Lozinski; Sacchet, Kerri; Malmone, Bob; Shawn Burnett
**Subject:** FW: Nice Memorial Bridge Scoping Review

FYI

---

**From:** Rayfield,Bettina [mailto:bcrayfield@deq.virginia.gov]
**Sent:** Monday, October 23, 2006 10:17 AM
**To:** Glen Smith
**Cc:** Nicholas.Nies@vdot.virginia.gov
**Subject:** Nice Memorial Bridge Scoping Review

October 23, 2006

Mr. Dennis N. Simpson
Deputy Director
Division of Capital Planning
Maryland Transportation Authority
2310 Broening Highway
Suite 150
Baltimore, Maryland 21224

**E: Nice Memorial Bridge Improvement Study**

Dear Mr. Simpson:

Virginia has permitting authority for activities covered by a Virginia Water Protection (VWP) Permit for activities landward of the low water line in accordance with *Virginia v. Maryland*, No. 129, Orig. and Guidance Memorandum 02-2016.

Based on the National Wetland Inventory (NWI) maps, wetlands and streams are located within your Study Area. Impacts to wetlands or streams, including filling, excavating, or altering, within Virginia may require a VWP permit. NWI maps do not substitute onsite surface water delineations. Virginia requires that delineations shall be conducted in accordance with the USACE "Wetland Delineation Manual, Technical Report Y-87-1, January 1987, Final Report" (Federal Manual).

One stream/estuary within the study area is identified as a Virginia Impaired Waters (Williams Creek). One stream/estuary within the study area is identified as a shellfish water (Gambo Creek) and has a current Virginia Department of Health (VDH) Shellfish Condemnation.

The Virginia Department of Transportation has vast experience with the application and management of VWP permits. DEQ recommends that you use their expertise and administrative procedures (Inter-Agency Coordination Meetings) in obtaining a VWP permit.

If you should have any questions, or need additional information, please feel free to contact me at 804.698.4204 or bcrayfield@deq.virginia.gov.

Sincerely,

10/23/2006

Bettina Rayfield
Environmental Specialist II

---

The information contained in this communication (including any attachments) may be confidential and legally privileged. This email may not serve as a contractual agreement unless explicit written agreement for this purpose has been made. If you are not the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication or any of it's contents is strictly prohibited. If you have received this communication in error, please re-send this communication to the sender indicating that it was received in error and delete the original message and any copy of it from your computer system.

10/23/2006

OCT. -27' 06(FRI) 08:07 DMME/MIN RESOURCES TEL:434 951 6366 P.001

GEORGE P. WILLIS
ACTING DIRECTOR

DIVISIONS
ENERGY
GAS AND OIL
MINED LAND RECLAMATION
MINERAL MINING
MINERAL RESOURCES
MINES
ADMINISTRATION

**COMMONWEALTH OF VIRGINIA**

*Department of Mines, Minerals and Energy*
Division of Mineral Resources
Fontaine Research Park
900 Natural Resources Drive, Suite 500
Charlottesville, Virginia 22903-0667
(434) 951-6341
www.dmme.virginia.gov

October 26, 2006

Maryland Transportation Authority
2310 Broening Highway, Suite 150
Baltimore, Maryland 21224
Attention: Denis Simpson

Re: Harry W. Nice Memorial Bridge Project
King George County, Virginia

Dear Mr. Simpson:

The Virginia Department of Mines, Minerals and Energy has reviewed the map and letter that you provided for the above-referenced project. Based on a review of regional geologic mapping, it appears that the Virginia side of the project site is principally underlain by unconsolidated silt, clay, sand and gravel of the Sedgefield member of the Tabb formation. A recent study suggests that this formation has the potential to become acid upon exposure at the surface, creating low pH runoff and causing premature failure of concrete and metal structures. As a result, a site-specific evaluation may be warranted to determine the potential for problems for your project. Our records show two inactive sand and gravel pits in the vicinity. For additional information regarding one of these operations (#90179AA), please call our Division of Mineral Mining at (434) 951-6310. Similar mineral resources may exist in the area.

Please contact me if further information is required.

Sincerely,

Matt Heller, P.G.
Geologist Manager

EQUAL OPPORTUNITY EMPLOYER
TDD (800) 828-1120 --- Virginia Relay Center

RECEIVED
APR 0 9 2006
DIVISION OF CAPITAL PLANNING

**COMMONWEALTH of VIRGINIA**

L. Preston Bryant, Jr.
Secretary of Natural Resources

*Marine Resources Commission*
*2600 Washington Avenue*
*Third Floor*
*Newport News, Virginia 23607*

Steven G. Bowman
Commissioner

April 5, 2007

Mr. Dennis N. Simpson
Maryland Transportation Authority
Division of Capital Planning
2310 Broening Highway
Suite 150
Baltimore, Maryland 21224

Re: Nice Bridge Improvement Project

Dear Mr. Simpson:

We are in receipt of your letter dated March 19, 2007, inviting the Virginia Marine Resources Commission (VMRC) to act as a participating agency in the NEPA planning process for the Governor Harry W. Nice Memorial Bridge Improvement Project.

Please be advised that the Virginia Marine Resources Commission, pursuant to Section 28.2-101 of the Code of Virginia, has regulatory authority over any encroachments upon the Potomac River, appurtenant to the shore of the Commonwealth of Virginia. Accordingly, since your planned improvements to the Nice Bridge will likely require a permit from our agency, the VMRC accepts your invitation to participate in the NEPA review process.

Although your letter was specifically addressed to Mr. Jay Woodward of the VMRC, please note that I will be serving as your point-of-contact.

Should you have any questions regarding this matter, please feel free to contact me at (757) 247-8028 or ben.mcginnis@mrc.virginia.gov.

Sincerely,

Benjamin A. McGinnis
Environmental Engineer

BAM/moj
HM
cc: Mr. Jay Woodward

*An Agency of the Natural Resources Secretariat*
Web Address: www.mrc.virginia.gov
Telephone (757) 247-2200 (757) 247-2292 V/TDD Information and Emergency Hotline 1-800-541-4646 V/TDD

Preston Bryant, Jr.
etary of Natural Resources

Joseph H. Maroon
Director

# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street
Richmond, Virginia 23219-2010
(804) 786-6124

April 19, 2007

Dennis Smith
2310 Broening Highway
Suite 150
Baltimore, MD 21224

RE: DCR 07-066: Governor Harry W. Nice Memorial Bridge Improvement Project

Dear Mr. Smith:

The Department of Conservation and Recreation (DCR) among it's many functions, administers the Virginia Scenic Rivers and the Virginia Byways programs. Additionally, DCR is responsible for developing the Virginia Outdoors Plan (VOP), the state's comprehensive outdoor recreation and open space plan. Further, DCR administers the Land & Water Conservation Fund, in Virginia, for the U.S. Department of the Interior, National Park Service.

According to the information currently in our files, the Barnesfield Park in King George County, Virginia is a Land & Water Conservation Fund (LWCF) protected park. The Land and Water Conservation Fund Program was established in 1965 for the purpose of the acquisition and development of outdoor recreation areas to be maintained in perpetuity in accordance with Section 6 (f) (3) of the Land and Water Conservation Fund Act of 1965, as amended. Section 6 (f) (3) states that No property acquired or developed with assistance under this section shall, without the approval of the Secretary [of Interior], be converted to other than public outdoor recreation uses. The Secretary shall approve such conversion only if he finds it to be in accord with the then existing comprehensive statewide comprehensive outdoor recreation plan and only upon such conditions as he deems necessary to assure the substitution of other recreation properties of at least equal fair market value and of reasonably equivalent usefulness and location. The conversion process allows for flexibility within the Land and Water Conservation Program. However, conversions are not a standard practice or a vested right in the program. Conversions are remedies to situations that have no other feasible alternative. Therefore, every reasonable effort should be made to avoid impacting the metes and bounds area of Barnesfield Park. Be aware that the Secretary of the Interior can reject any conversion request and/or proposed replacement property. The metes and bounds map that is submitted and approved by both the Virginia Department of Conservation and Recreation and the National Park Service serves as the basis for determining the area protected under the 6 (f) (3) Provision. If a conversion process is needed for the Harry W. Nice Bridge Improvement Project, note that 1) King George County must contact DCR for instructions regarding the conversion process, 2) suitable replacement property must be found that is satisfactory to the Department of Conservation and Recreation and the National Park Service. In addition, I also advised that King George County should be contacted for information regarding other existing and/or proposed recreation facilities within the Study



Area. Be aware that the LWCF program is an active program and properties will continue to be added and placed in protection through future grant rounds.

Further, DCR's Division of Natural Heritage has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in our files, a bald eagle concentration zone (*Haliaeetus leucocephalus*, G5/S2S3B,S3N/LT/LT) has been documented in the project area. Bald eagles are often found in the midst of large wooded areas near marshes or other bodies of water (Byrd, 1991). Bald eagles feed on fish, waterfowl, seabirds (Campbell et. al., 1990), various mammals and carrion (Terres, 1980). Threats to this species include human disturbance of nest sites (Byrd, 1991), habitat loss, biocide contamination, decreasing food supply and illegal shooting (Herkert, 1992). Please note that this species is currently classified as threatened by the United States Fish and Wildlife Service (USFWS) and the Virginia Department of Game and Inland Fisheries (VDGIF). Due to the legal status of bald eagle, DCR recommends coordination with USFWS and VDGIF to ensure compliance with protected species legislation.

Under a Memorandum of Agreement, DCR represents the Virginia Department of Agriculture and Consumer Services (VDACS) in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

Additionally, our files do not indicate the presence of any State Natural Area Preserves under DCR 's jurisdiction in the project vicinity.

Any absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. New and updated information is continually added to Biotics. Please contact DCR for an update on this natural heritage information if a significant amount of time passes before it is utilized.

The Virginia Department of Game and Inland Fisheries maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters, that may contain information not documented in this letter. Their database may be accessed from http://www.dgif.virginia.gov/wildlife/info_map/index.html, or contact Shirl Dressler at (804) 367-6913.

In closing, DCR would like to be included in the NEPA process for this project. Thank you for the opportunity to comment on this project.

Best Regards,

Robert S. Munson
Planning Bureau Manager
DCR-DPRR

Literature Cited

Byrd, M.A. 1991. Bald eagle. In Virginia's Endangered Species: Proceedings of a Symposium. K. Terwilliger ed. The McDonald and Woodward Publishing Company, Blacksburg, Virginia. Pp. 499-501.

Campbell, R.W., N.K. Dawe, I. McTaggart-Cowan, J.M. Cooper, G.W. Kaiser, and M.C.E. McNall. 1990. The Birds of British Columbia. Vol. 1. Nonpasserines: Introduction and loons through waterfowl. Royal British Columbia Museum, Victoria, British Columbia, Canada.

Herkert, J. R., editor. 1992. Endangered and threatened species of Illinois: status and distribution. Vol. 2: Animals. Illinois Endangered Species Protection Board. iv + 142 pp.

Terres, J.K. 1980. The Audubon Society encyclopedia of North American birds. Alfred A. Knopf, New York.

Martin O'Malley
*Governor*

Anthony G. Brown
*Lt. Governor*

Margaret G. McHale
*Chair*

Ren Serey
*Executive Director*

**STATE OF MARYLAND**
**CRITICAL AREA COMMISSION**
**CHESAPEAKE AND ATLANTIC COASTAL BAYS**
1804 West Street, Suite 100. Annapolis, Maryland 21401
(410) 260-3460 Fax: (410) 974-5338
www.dnr.state.md.us/criticalarea/

November 5, 2007

Ms. Megan Blum
Maryland Transportation Authority
2310 Broening Highway Suite 150
Baltimore, MD 21224

Re: Nice Bridge Improvement Project Purpose and Needs Study

Dear Ms. Blum,

Thank you for forwarding the draft combined Purpose and Need (P&N) / Alternates Retained for Detailed Study (ARDS) package for the Nice Bridge Improvement Project. As the Environmental Resources section of the ARDS indicates, it is anticipated that 10.1 to 14.0 acres within the Critical Area will be impacted by the build alternates, which includes areas noted for the presence of Federal and State listed species and a waterbird colony. In addition, there are aquatic resources including submerged aquatic vegetation (SAV), anadromous fish species, and natural oyster bars that may be impacted by the proposal.

Please be advised that under COMAR 27.02, development in the Critical Area resulting from state and local agency programs must be reviewed and approved by the Critical Area Commission. As the project moves into Stage 2, please be in contact with me regarding our review and approval process. I am including our checklist of items that will need to be secured and forwarded to us prior to Commission review.

I look forward to working with you as the project progresses. Please contact me with any questions at 410-260-3476.

Sincerely,

Julie Roberts
Natural Resources Planner

Cc: 59-07

Enclosure

TTY for the Deaf
Annapolis: (410) 974-2609 D.C. Metro: (301) 586-0450

## *Critical Area Commission*
## *Project Application Checklist*

*State Agency Actions Resulting in Development on State-Owned Lands in the Critical Area*
(COMAR 27.02.05)

**General Instructions**
The following checklist contains a list of items for consideration by the Critical Area Commission during its review of each State project affecting the Critical Area. While some items will not apply to the project of concern, the responsible Agency should review and be able to discuss aspects of each relevant item. This checklist should be completed and sent, with all other completed information, to the Critical Area Commission staff contact prior to Commission review. Please be aware of the following general guidelines:

(1) **The completed checklist, maps, and all other pertinent project materials must be submitted to Critical Area staff contact *at least 1 month prior to scheduled review by the Project Subcommittee* at the Critical Area Commission=s monthly meeting.**

(2) **The sediment and erosion control plan must be finalized prior to scheduling the project for review by the Project Subcommittee.**

(3) **All other resource/environmental permits and other release documents must be obtained or must be in their final stages (i.e., public comment period completed, permit conditions in final form) prior to scheduling the project for review by the Project Subcommittee.**

If there are any questions with any aspect of this form or with the Commission=s review process, please do not hesitate to call the Commission staff contact at (410) 260-3460.

**General Mapping Features**
Please include the following features on all site plans:

___ **Vicinity map**
___ **Scale**
___ **Project Name and Location**
___ **Critical Area boundary**
___ **Project boundary/Limits of disturbance**
___ **Orientation**
___ **Tract or lot lines**
___ **Development area boundaries (Intensely Developed Areas - IDAs, Limited Development Areas - LDAs, Resource Conservation Areas - RCAs if information is available)**
___ **One hundred-year floodplain boundary**
___ **Dredging activity and spoil site**
___ **Topography**
___ **Vegetative cover:**
- ___ Existing forest
- ___ Forest clearing
- ___ Afforestation/reforestation areas
- ___ Mitigation areas (Buffer impacts)

___ **Agricultural lands**
___ **Surface mining sites and wash plants**
___ **Soil**:
- ___ Type
- ___ Area of hydric soils
- ___ Area of highly erodible soils

___ **Existing and proposed structures** (buildings, roads, other paved or impervious areas, parking lots, lots, storm drains, septic, stormwater management systems, shore erosion control structures).
___ **Natural parks**

**Habitat Protection and other Sensitive Area Mapping Features**
Please show the following Habitat Protection Area features on all site plans, if relevant to the particular project site:

___ **Buffers**:
- ___ Minimum 100 ft. from tidal waters, tidal wetlands and tributary streams
- ___ Expanded Buffer to include 15% slopes, hydric soils and highly erodible soils
- ___ 25 ft. from nontidal wetlands
- ___ Plant and Wildlife Habitat (Colonial water bird nesting sites, historic waterfowl staging and concentration areas, riparian forest, forest interior dwelling bird habitat, areas of state or local significance, and natural heritage areas)

___ **Tidal Wetlands**
___ **Nontidal Wetlands**
___ **Plant and Wildlife Habitats** (same as above)
___ **Threatened and Endangered Species** (including species in need of conservation)
___ **Anadromous Fish Propagation Waters**

**General Project Information**

Please include the following text information, if applicable to the site, in the project application materials. This information may be included in the form of letters, reports, or site plan notes.

____ **Project name and location**

____ **Project description** (brief narrative including project type, i.e. industrial, port-related, etc.)

____ **Total acreage in Critical Area**

____ **Total forest area cleared**

____ **10% calculations** (Please enclose worksheet) **or impervious surface information**

____ **State agency sponsoring project**

____ **Anticipated timeline** (Include project milestones, approximate start and completion dates)

____ **Whether project is on State-owned land, locally-owned land or privately-owned land**

____ **Method of stormwater control**

____ **Soil erosion and sediment control measures and implementation strategy**

____ **Mitigation required for clearing of forest area** (1:1 ratio outside the 100-foot Buffer, 1.5:1 if between 20%-30% clearing, and 3:1 ratio inside the 100-foot Buffer or if above 30% clearing)

____ **Afforested area** (site must have a minimum of 15% forest cover if not IDA)

**Minimum Documentation Requirements**

The following permits and documents should be secured or must be in their final stages (i.e., public comment period completed, permit conditions in final form), if applicable to the site, prior to scheduling the project for review by the Project Subcommittee:

____ **Maryland Department of the Environment** (MDE)
- ____ Stormwater Management
- ____ Sediment and erosion control plan*
- ____ Tidal wetlands permits
- ____ Nontidal wetlands permits
- ____ Water Quality Certification

____ **Army Corps of Engineers (ACOE) Tidal Wetlands Permit (404)**

* All applicants are required to obtain their sediment and erosion control plans from MDE prior to review by the CBCAC.



**State / Federal Agency Recommendations**

Review and comment from the appropriate MDE, DNR, and ACOE units shall be provided, if applicable to the site, for the following resources and habitats:

____ **Threatened and Endangered Species**

____ **Riparian Forests**

____ **Natural Heritage Areas**

____ **Submerged Aquatic Vegetation**

____ **Other Aquatic Species** (Shellfish, etc.)

____ **Plant and Wildlife Habitat**

____ **Forest Interior Dwelling Birds** (FIDs)

____ **Colonial water birds**

____ **Anadromous Fish Propagation Waters**

____ **Historic Waterfowl Staging and Concentration Areas**

**Site Visits**

Site visits should be arranged by the responsible agency in advance of Commission review. At a minimum, the site visit should include the Commission staff contact.

**PLEASE MAIL OR FAX THE ABOVE INFORMATION TO:**

**CRITICAL AREA COMMISSION**
**1804 WEST STREET, SUITE 100**
**ANNAPOLIS, MARYLAND 21401**
**(410) 260-3460**
**Fax (410) 974-5338**

COMMONWEALTH of VIRGINIA

L. Preston Bryant, Jr
Secretary of Natural Resources

**Department of Historic Resources**
2801 Kensington Avenue, Richmond, Virginia 23221

Kathleen S. Kilpatrick
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
TDD: (804) 367-2386
www.dhr.virginia.gov

November 19, 2007

Ms Megan Blum
Maryland Transportation Authority
2310 Broening Highway
Suite 150
Baltimore, Maryland 21224

Re: Purpose and Need/Alternatives Study for the Governor Harry W. Nice Memorial Bridge Improvement Project
King George County, Virginia
DHR File # 2006-1393

Dear Ms Blum:

We have received the above information for our consideration. The Department of Historic Resources (DHR), which in Virginia is the State Historic Preservation Office (SHPO), looks forward to working with the Federal Highway Administration (FHWA), Maryland Transportation Authority, and other federal, state, and private consulting parties on this undertaking pursuant to Section 106 of the National Historic Preservation Act, as amended, and its implementing regulation 36 CFR Part 800.

We want to take this opportunity to remind you that although Virginia does not have any resident federally recognized Indian tribes, there are federal tribes outside of the Commonwealth that claim areas of the state as their ancestral territory and still maintain cultural affiliation. Therefore, in accordance with 36 CFR Part 800.2(c)(2) it is necessary to identify federally recognized tribes outside of Virginia that may be interested in the undertaking and invite them to participate in consultation. In recognition of the special government to government relationship, outreach to the tribes should be done by FHWA.

If you have any questions regarding our comments, please call me at (804) 367-2323, Ext. 114.

Sincerely,

Marc Holma, Architectural Historian
Office of Review and Compliance

| Administrative Services | Capital Region Office | Tidewater Region Office | Roanoke Region Office | Northern Region Office |
|---|---|---|---|---|
| 10 Courthouse Avenue | 2801 Kensington Ave. | 14415 Old Courthouse Way, 2nd Floor | 1030 Penmar Ave., SE | 5357 Main Street |
| Petersburg, VA 23803 | Richmond, VA 23221 | Newport News, VA 23608 | Roanoke, VA 24013 | PO Box 519 |
| Tel (804) 863-1624 | Tel: (804) 367-2323 | Tel: (757) 886-2807 | Tel: (540) 857-7585 | Stephens City, VA 22655 |
| Fax: (804) 862-6196 | Fax: (804) 367-2391 | Fax: (757) 886-2808 | Fax: (540) 857-7588 | Tel: (540) 868-7031 |
| | | | | Fax: (540) 868-7033 |

**Megan Blum**

**From:** Heller, Matthew [matt.heller@dmme.virginia.gov]
**Sent:** Monday, November 19, 2007 9:46 AM
**To:** Megan Blum
**Subject:** Nice Memorial Bridge Project

**Follow Up Flag:** Follow up
**Flag Status:** Red

**Attachments:** nice bridge.doc

nice bridge.doc
(127 KB)

Hi Megan,

Please consider our earlier comments (electronic copy of letter attached) related to this project. I have no additional comments based on the October 2007 draft.

Sincerely,
Matt Heller

<<nice bridge.doc>>

Matthew J. Heller, P.G.
Manager, Geologic Mapping
Virginia Department of Mines, Minerals and Energy Division of Mineral Resources 900 Natural Resources Drive, Suite 500 Charlottesville, Virginia, 22903
Phone: (434) 951-6351
Fax: (434) 951-6366

<http://www.dmme.virginia.gov/divisionmineralresources.shtml>

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L. Preston Bryant, Jr.
Secretary of Natural Resources

Joseph H. Maroon
Director

# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street
Richmond, Virginia 23219-2010
(804) 786-6124

**MEMORANDUM**

DATE: November 20, 2007

TO: Megan Blum, Maryland Transportation Authority

FROM: Robert S. Munson, Planning Bureau Manager, DCR-DPRR

Subject: DCR 07-157: Maryland Transportation Authority, Harry W. Nice Bridge Improvement Project

Division of Planning and Recreational Resources

The Department of Conservation and Recreations (DCR) Division of Planning and Recreational Resources has previously commented on this project with both the consultants and MTA regarding the LWCF Conversion process. However, we will briefly reiterate that information for your use:

Barnesfield Park in King George County, Virginia is a Land & Water Conservation Fund (LWCF) protected park. Therefore any alternative that impacts the 6(f) boundary of Barnesfield Park in King George County will constitute a conversion of use under the Land & Water Conservation Act.

The Land and Water Conservation Fund Program was established in 1965 for the purpose of the acquisition and development of outdoor recreation areas to be maintained in perpetuity in accordance with Section 6 (f) (3) of the Land and Water Conservation Fund Act of 1965, as amended. Section 6 (f) (3) states that No property acquired or developed with assistance under this section shall, without the approval of the Secretary [of Interior], be converted to other than public outdoor recreation uses. The Secretary shall approve such conversion only if he finds it to be in accord with the then existing comprehensive statewide comprehensive outdoor recreation plan and only upon such conditions as he deems necessary to assure the substitution of other recreation properties of at least equal fair market value and of reasonably equivalent usefulness and location. The conversion process allows for flexibility within the Land and Water Conservation Program. However, conversions are not a standard practice or a vested right in the program. Conversions are remedies to situations that have no other feasible alternative. Therefore, every reasonable effort should be made to avoid impacting the metes and bounds area of Barnesfield Park. Be aware that the Secretary of the Interior can reject any conversion request and/or proposed replacement property. Conversions must be approved prior to any land disturbing activities. The metes and bounds map that is submitted and approved by both the Virginia Department of Conservation and Recreation and the National Park Service at the time of Project grant award serves as the basis for determining the area protected under the 6 (f) (3) Provision. If a conversion process is needed for the Harry W. Nice Bridge Improvement Project, note that 1) King George County must agree to going through a conversion process, 2) King George County must request (not VDOT or MTA) the conversion from the Department of Conservation and Recreation, 3) suitable replacement property must be found that is satisfactory to the Department of Conservation and Recreation and the National Park Service.

*State Parks • Soil and Water Conservation • Natural Heritage • Outdoor Recreation Planning*
*Chesapeake Bay Local Assistance • Dam Safety and Floodplain Management • Land Conservation*

Division of Natural Heritage

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in our files, a bald eagle concentration zone (*Haliaeetus leucocephalus*, G5/S2S3B,S3/NL/LT) has been documented in the project area. Bald eagles are often found in the midst of large wooded areas near marshes or other bodies of water (Byrd, 1991). Bald eagles feed on fish, waterfowl, seabirds (Campbell et. al., 1990), various mammals and carrion (Terres, 1980). Threats to this species include human disturbance of nest sites (Byrd, 1991), habitat loss, biocide contamination, decreasing food supply and illegal shooting (Herkert, 1992). Please note that this species is currently classified as threatened by the Virginia Department of Game and Inland Fisheries (VDGIF). Due to the legal status of bald eagle, DCR recommends coordination with VDGIF to ensure compliance with protected species legislation.

Under a Memorandum of Agreement, DCR represents the Virginia Department of Agriculture and Consumer Services (VDACS) in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

Additionally, our files do not indicate the presence of any State Natural Area Preserves under DCR 's jurisdiction in the project vicinity.

Any absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. New and updated information is continually added to Biotics. Please contact DCR for an update on this natural heritage information if a significant amount of time passes before it is utilized.

The Virginia Department of Game and Inland Fisheries maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters, that may contain information not documented in this letter. Their database may be accessed from http://www.dgif.virginia.gov/wildlife/info_map/index.html , or contact Shirl Dressler at (804) 367-6913.

Division of the Chesapeake Bay Local Assistance

Public roads and their appurtenant structures are conditionally exempt from the *Chesapeake Bay Preservation Area Designation and Management Regulations* provided they are constructed in accordance with (i) regulations promulgated pursuant to the Erosion and Sediment Control Law (§10.1-560 et seq. of the Code of Virginia) and the Stormwater Management Act (§10.1-603. 1 et seq of the Code of Virginia), (ii) an erosion and sediment control plan and a stormwater management plan approved by the Virginia Department of Conservation and Recreation, or (iii) local water quality protection criteria at least as stringent as the above requirements.

The exemption of public roads is further conditioned on the following:

Optimization of the road alignment and design, consistent with other applicable requirements, to prevent or otherwise minimize encroachment into Resource Protection Areas and adverse effects on water quality; and
Local governments may choose to exempt all public roads as defined in §9 VAC 10-20-40 of the *Chesapeake Bay Preservation Area Designation and Management Regulations* or only those public roads constructed by the Virginia Department of Transportation.

The Bay Act regulations are implemented at the local level. As such, the Bay Act and the *Chesapeake Bay Preservation Area Designation and Management Regulations* (§9 VAC 10-20-110), strictly control land disturbance in Resource Protection Area (RPA) and Resource Management Areas (RMA).

The RPA includes tidal wetlands, tidal shores, non-tidal wetlands connected by surface flow and contiguous to tidal wetlands or perennial water bodies, and a 100-foot vegetated buffer area located adjacent to and landward of the aforementioned features and along both sides of any water body with perennial flow. These areas are subject to local Bay Act requirements to minimize land disturbance, preserve indigenous vegetation, minimize impervious surfaces, control stormwater runoff and implement erosion and sediment control plans for land disturbances greater than 2,500 square feet. Activities in the RPA are further restricted to water dependent or redevelopment related activities.

Provided the above requirements are adhered to, the project would be consistent with the Chesapeake Bay Preservation Act and Regulations.

Division of Soil and Water

Projects involving land-disturbing activities equal to or greater than 10,000 square feet, or equal to or greater than 2,500 square feet in all areas subject to the Chesapeake Bay Preservation Act, must comply with the Virginia Erosion and Sediment Control Law and all applicable regulations adopted in accordance with that law. Projects involving land-disturbing activities equal to or greater than one acre, or equal to or greater than 2,500 square feet in all areas of the jurisdictions designated as subject to the Chesapeake Bay Preservation Area Designation and Management Regulations adopted pursuant to the Chesapeake Bay Preservation Act, must comply with the Virginia Stormwater Management Act and all applicable regulations adopted in accordance with that law. If you have project specific questions please contact the Virginia Department of Conservation Tappahannock Regional Office at (804) 443-6752.

Virginia Erosion and Sediment Control Law and Regulations:
http://www.dcr.virginia.gov/soil_&_water/documents/eslawrgs.pdf

Virginia Stormwater Management Act:
http://www.dcr.virginia.gov/soil_&_water/documents/vaswmlaw.pdf

Virginia Stormwater Management Program (VSMP) Permit Regulations:
http://www.dcr.virginia.gov/soil_&_water/documents/vaswmregs.pdf

The remaining DCR divisions have no comments regarding the scope of this project. Thank you for the opportunity to comment.

cc: Amy Ewing, VDGIF

Literature Cited

Byrd, M.A. 1991. Bald eagle. In Virginia's Endangered Species: Proceedings of a Symposium. K. Terwilliger ed. The McDonald and Woodward Publishing Company, Blacksburg, Virginia. Pp. 499-501.

Campbell, R.W., N.K. Dawe, I. McTaggart-Cowan, J.M. Cooper, G.W. Kaiser, and M.C.E. McNall. 1990. The Birds of British Columbia. Vol. 1. Nonpasserines: Introduction and loons through waterfowl. Royal British Columbia Museum, Victoria, British Columbia, Canada.

Herkert, J. R., editor. 1992. Endangered and threatened species of Illinois: status and distribution. Vol. 2: Animals. Illinois Endangered Species Protection Board. iv + 142 pp.

Terres, J.K. 1980. The Audubon Society encyclopedia of North American birds. Alfred A. Knopf, New York.

**UNITED STATES DEPARTMENT OF COMMERCE**
**National Oceanic and Atmospheric Administration**
NATIONAL MARINE FISHERIES SERVICE
Habitat Conservation Division
Chesapeake Bay Program Office
410 Severn Ave., Suite 107A
Annapolis, Maryland 21403

November 20, 2007

MEMORANDUM TO: Megan Blum
Division of Capital Planning
Maryland Transportation Authority

FROM: John Nichols

SUBJECT: Nice Memorial Bridge Improvement Project

National Marine Fisheries Service (NMFS) has reviewed the draft Combined Purpose and Need; and, Alternates Retained for Detailed Study (ARDS) package, dated October 2007, for the Governor Harry W. Nice Memorial Bridge Improvement Study, located in Charles County, Maryland, and King George County, Virginia. We offer our concurrence on the ARDS package, with the following comments pertaining to the Environmental Overview & Impact Assessment section of the package.

**Essential Fish Habitat (EFH)**
The Environmental Overview & Impact Assessment section for the ARDS package makes no mention of consultation responsibilities under the Magnuson-Stevens Fishery Conservation & Management Act (MSA) for this project. MSA consultation responsibilities were explained by myself to a Federal Highway Administration (FHA) representative during the October 12, 2006 Scoping Meeting for this proposal. I will summarize these responsibilities again in the following paragraphs.

Section 305(b)(2) of the MSA requires all federal agencies to consult with NMFS on any action authorized, funded, or undertaken by that agency that may adversely affect EFH. Included in this consultation process is the preparation of an EFH assessment. In the case of the subject proposal, either the FHA, or the Corps of Engineers should be identified as the action agency, and that agency will be responsible for submitting an EFH assessment to NMFS for our review. MSA allows the action agency to delegate preparation of the EFH assessment to an alternate agency, or an environmental consulting firm, with relevant expertise. MSA also allows the action agency to combine EFH consultation with an existing regulatory review process (e.g., NEPA review). An EFH assessment prepared under NEPA review may be incorporated into the environmental document (e.g., Environmental Impact Statement (EIS), or Environmental Assessment (EA)), provided the EFH assessment is clearly presented as a separate and distinct section of the EIS/EA.

During our phone conversation of November 20, 2007, I gave you a brief overview of the EFH consultation process, and indicated that an Individual EFH Consultation is appropriate for this project. I facsimiled a package to you containing information on EFH consultation, including an EFH Summary Designation for the Potomac River estuary. Also, additional information on MSA and EFH is available on the NMFS Northeast Region Habitat Web Site, http://www.nero.noaa.gov/hcd.

The Potomac River EFH Summary Designation indicates those federally managed species which have designated EFH for the tidal Potomac River, including the project site. Based on the ecology and salinity tolerances of those species, only juvenile and adult summer flounder, and juvenile bluefish are likely to occur in the project area. The latter species should be the primary focus of the EFH assessment prepared for this project. Also note that there are numerous important prey species in the project area which are consumed by summer flounder and bluefish, including anadromous species such as alewife, blueback herring, American shad, and white perch (Lippson et al., 1978). Impacts to these prey species should also be covered in the assessment.



Once the action agency has submitted the EFH assessment for this project, NMFS has 30 days in which to review and provide comments on the assessment. If NMFS provides EFH Conservation Recommendations as a result of our review, the action agency must provide NMFS will a detailed written response to these recommendations, including a description of the measures adopted for avoiding, mitigating, or offsetting the impact of the project on EFH. In the case of a response that is inconsistent with NMFS' recommendations, the action agency must explain its reasons for not following the recommendations, including scientific justification for any disagreements with NMFS over the anticipated effects of the proposed action, and the measures needed to avoid, minimize, or offset such effects.

Finally, the EFH Worksheet provided with the facsimiled package addresses many of the issues and questions pertinent to making EFH determinations, and should be helpful in the preparation of the EFH assessment for this project.

**BRIDGE CONSTRUCTION ISSUES**
NMFS is concerned about the potential use of large-diameter hollow steel piles for support of a new or expanded bridge, or other temporary structures, particularly with regard to shock-waves that are produced from power-driving such pilings into position. Power-driving of larger-diameter hollow steel piles produces high energy shock waves that can kill or seriously injure finfish in the immediate vicinity of the pile driving activity. Use of such pilings may be necessary for securing adequate support of a structure where thick overlying layers of fine-grain and/or unconsolidated sediments occur.

Fish mortality from power-driving of hollow steel piles has been documented for other projects, such as the Woodrow Wilson Bridge Project in Alexandria, Virginia. Fish mortality observed during Wilson Bridge construction operations occurred during driving of piles with a 66-inch, or greater diameter, which generated a maximum force of 360,000 ft-lbs. Highest shock wave levels occurred within 150 feet of the driving operation. Power-driving of hollow steel piles under 66-inch diameter (e.g., down to 48-inch diameter) was also treated with concern, although maximum driving force was one-half that generated for piles exceeding 66-inch bore.

Protecting of finfish during pile-driving operations should be required for this project if large-diameter hollow steel piles are used, particularly during the migratory period for anadromous fish (i.e., February 15 – June 15). We recommend that your staff consult methods used during the Wilson Bridge construction operations for mitigating the effects of shock waves from power-driving of large hollow steel piles. Such methods include the use of a large hollow steel pile, or "can", to encase the pile being driven, coupled with a compressed air bubble curtain, also contained within the "can". The combination of the "can" and bubble curtain was found to reduce shock wave levels up to 95% immediately outside the "can", to levels well below those lethal to fish (i.e., from 55 psi to 1 psi). Additional information on these measures can be obtained from the following references.

1) Potomac Crossing Consultants
6711A Oxon Hill Road
Oxon Hill, MD 20745
Mike Baker, Cell Phone # (202) 438-7499; or, bakerm@wwbgee.com

2) Potomac Crossing Consultants, January 2003. Supplemental Shortnose Sturgeon Biological Assessment, Woodrow Wilson Bridge Project. *Prepared for*: Section 7, Endangered Species Act Consultation with National Marine Fisheries Service

Shock wave mitigating measures, as described above, should be used for power-driving any hollow steel piles with diameters of 48 inches or greater, to provide conservative protection for migratory and resident finfish.

Shock waves from subaqueous blasting during demolition operations can also result in significant fish mortality. If subaqueous blasting may be used for demolition purposes during this project, measures should be employed to mitigate the effects of resulting shock waves on finfish. Again, we recommend that you consult with procedures used during Woodrow Wilson Bridge demolition operations to determine appropriate measures which should be used for this project.

**SECTION 7 CONSULTATION**

NMFS has determined that the endangered shortnose sturgeon (*Acipenser brevirostrum*) is present in the tidal Potomac River, including project area. The project area may be used by this species for foraging, over-wintering, or pre-spawning activities. You should contact Julie Crocker of our Protected Resources Division in Gloucester, MA; (978) 281-9328, ext. 6530, or Julie.Crocker@NOAA.GOV, for determining Section 7 Consultation responsibilities under the Endangered Species Act for this project.

If you have any additional questions, contact me at (410) 267-5675; or, John.Nichols@NOAA.GOV.

Lippson, Alice J., M.S. Haire, A.F. Holland, F. Jacobs, J. Jensen, R.L. Moran-Johnson, T.T. Polgar, and W.A. Richkus. 1978. Environmental Atlas of the Potomac Estuary. Martin Marietta Corporation. *Prepared for*: Power Plant Siting Program, MD Department of Natural Resources. Chap. 8: Fishes.



**Megan Blum**

**From:** Amy.Ewing@dgif.virginia.gov
**Sent:** Tuesday, November 20, 2007 11:32 AM
**To:** Megan Blum
**Cc:** Jeff.Cooper@dgif.virginia.gov; Bob.Greenlee@dgif.virginia.gov; Scott.Herrmann@dgif.virginia.gov
**Subject:** ESSLog# 22977_Nice Memorial Bridge
**Follow Up Flag:** Follow up
**Flag Status:** Red
**Attachments:** 22977_Nice_Memorial_Bridge_11202007.pdf

We have reviewed the alternatives analysis for the proposed Nice Memorial Bridge (Route 301) improvements across the Potomac River in King George County. There are currently 7 alternatives being evaluated. These range from the addition of a 2-lane bridge to the north or south of the existing bridge and rehabbing the existing bridge for continued use to building an entirely new 4 lane bridge and abandoning use of the existing bridge all together.

According to our records, a number of state threatened bald eagle nests as well as a concentration zone are known from the proejct area. We recommend no construction activities within 1, 320 feet of a nest from December 15 through July 15 of any year. Any impacts within this buffer zone should be coordinated with us whether they are proposed to occur during this time period (breeding season) or not. We recommend that no permanent habitat impacts occur within this buffer zone at any time of year. Further, we recommend no construction activities or habitat impacts within 750 feet of the Potomac River shoreline that is designated a concentration zone at any time during the year. We have attached a map of these resources for your review. This map contains sensitive data and should not be reproduced or distributed without our consent.

The Potomac River and Gambo Creek have been designated Anadromous Fish Use Areas. We recommend no instream impacts in these waters and/or their tributaries from February 15 through June 30 of any year. We recommend conducting any in-stream activities during low or no-flow conditions, using non-erodible cofferdams to isolate the construction area, blocking no more than 50% of the streamflow at any given time, stockpiling excavated material in a manner that prevents reentry into the stream, restoring original streambed and streambank contours, revegetating barren areas with native vegetation, and implementing strict erosion and sediment control measures. Due to future maintenance costs associated with culverts, and the loss of riparian and aquatic habitat, we prefer stream crossings to be constructed via clear-span bridges. However, if this is not possible, we recommend countersinking any culverts below the streambed at least 6 inches, or the use of bottomless culverts, to allow passage of aquatic organisms. We also recommend the installation of floodplain culverts to carry bankfull discharges. We recommend close coordination with our agency regarding building a new bridge across the Potomac. We will need to better understand the proposed construction methods and instream impacts in order to make final recommendations regarding the protection of this important fishery resource. Our recommendations, in addition to the time of year restriction, may include use of turbidity curtains during pile driving, monitoring of fish behavior and/or mortalities, development of a contingency plant to address adverse impacts upon species known from the Potomac, and other conservation measures.

To minimize overall impacts to wildlife and our natural resources, we offer the following comments about development activities: We recommend that the applicant avoid and minimize impacts to undisturbed forest, wetlands, and streams to the fullest extent practicable. Avoidance and minimization of impact may include relocating stream channels as opposed to filling or channelizing as well as using, and incorporating into the development plan, a natural stream channel design and wooded buffers. We recommend maintaining undisturbed wooded buffers of at least 100 feet in width around all on-site wetlands and on both sides of all perennial and intermittent streams. We recommend maintaining wooded lots to the fullest extent possible. We generally do not support proposals to mitigate wetland impacts through the construction of stormwater management ponds, nor do we support the creation of in-stream stormwater management ponds. We are willing to assist the applicant in developing a plan that includes open-space, wildlife habitat, and natural stream channels which retain their wooded buffers.

12/28/2007

We recommend that the stormwater controls for this project be designed to replicate and maintain the hydrographic condition of the site prior to the change in landscape. This should include, but not be limited to, utilizing bioretention areas, and minimizing the use of curb and gutter in favor of grassed swales. Bioretention areas (also called rain gardens) and grass swales are components of Low Impact Development (LID). They are designed to capture stormwater runoff as close to the source as possible and allow it to slowly infiltrate into the surrounding soil. They benefit natural resources by filtering pollutants and decreasing downstream runoff volumes.

We recommend that the preferred alternative be one that avoids impacts upon eagles and anadromous fish use areas to the greatest extent possible. We support an alternative that reduces the number of instream piers or support structures. This may include recommendations to remove the current structure if it is deemed no longer in service. Additionally, we recommend that future documentation reference coordination with our agency, the Virginia Department of Game and Inland Fisheries, with respect to the assessment of and coordination about impacts upon wildlife in Virginia. We noticed that the current document neither references the anadromous fish resources or coordination with our agency.

Thank you

Amy M. Ewing
Environmental Services Biologist
Virginia Dept. of Game and Inland Fisheries
4010 West Broad Street
Richmond, VA 23230
804-367-2211
amy.ewing@dgif.virginia.gov





**Megan Blum**

**From:** Monez, Jordan (VOF) [jmonez@vofonline.org]
**Sent:** Tuesday, November 20, 2007 4:33 PM
**To:** Megan Blum
**Cc:** Thomas, Estie (VOF); Little, Martha (VOF); Peters, John (VOF); Hutcherson, Kerry (VOF)
**Subject:** VOF Comments for Nice Bridge Project
**Follow Up Flag:** Follow up
**Flag Status:** Red

Hello,

Here are the comments from Virginia Outdoors Foundation for this project:

The Virginia Outdoors Foundation is currently working on an easement proposal on a 238 acre property within the Transportation Authority's proposed study area (indicated on the October 2007 map sent to VOF by MDTA). The proposals recommended for the project most likely will not approach the vicinity of the proposed easement. However, the Transportation Authority's Alternate 8 could very likely affect the easement by moving the road a significant distance from the existing alignment. It is noted that your team has recommended that Alternate 8 be dropped from the Alternates Retained for Detailed Studies.

If you would like more information, if would like a map of the proposed VOF easement location, if you think that the project may extend significantly past the shoreline along Route 301 or if Alternate 8 may be an option, please contact me.

Thank you,

Jordan West Monez
Virginia Outdoors Foundation
www.virginiaoutdoorsfoundation.org
101 N. 14th Street, 17th Floor
Richmond, VA 23221
804.786.9603_phone
804.786.9604_fax

**Megan Blum**

**From:** Dan Bacon [Dan.Bacon@mrc.virginia.gov]
**Sent:** Wednesday, November 28, 2007 10:29 AM
**To:** Megan Blum
**Subject:** Nice Bridge

**Follow Up Flag:** Follow up
**Flag Status:** Red

Just in case you didn't receive the comments from VMRC:

Please be advised that the Marine Resources Commission, pursuant to Section 28.2-1200 et seq of the Code of Virginia, has jurisdiction over any encroachments in, on, or over the beds of the bays, ocean, rivers, streams, or creeks which are the property of the Commonwealth. Accordingly, if any portion of the subject project involves any encroachments channelward of ordinary high water along natural rivers and streams above the fall line or mean low water below the fall line, a permit may be required from our agency. Any jurisdictional impacts will be reviewed by VMRC during the Joint Permit Application process. Thank you for the opportunity to comment.

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**Megan Blum**

**From:** Rudnick.Barbara@epamail.epa.gov
**Sent:** Thursday, November 29, 2007 4:25 PM
**To:** Megan Blum
**Subject:** Re: Nice Bridge Purpose and Need/Alternates Retained for Detailed Study Comments Due

Megan,

Thanks for the reminder. I reviewed the document, and have a few comments. In general, I think the range of alternatives is adequate, though inclusion of some of the TSM/TDM is recommended.

Table 17: I like the idea of the overview table, but think a couple of the criteria do not lend themselves well to H, M, L (without explanation). This includes: under P&N, Improve safety, ability to maintain 2-way traffic; under socio, consistent with local plans (Y/N instead?); under structural factors, it is unclear if L is negative or positive (the table generally uses L as low impact, therefore a positive)
Page III-8: It would be helpful if the reference to Table 18 included that the table in on page IV-8
Page IV-4: I suggest that it is premature to state that "It is anticipated that the build alternatives will not substantially impact SAV..." The EIS should do a complete analysis, without the prejudice of an expected outcome. SAV is a critical resource.
Table 18: I am uncertain why the table uses "0" in all columns for SAV. If it is unknown, there should be a different symbol. Construction and shading is likely to have some impact.

Inclusion of any TSM/TDM (such as van-pooling, park and rides, traveler information services) that could be combined with a build alternative, and implemented with cooperation of major employment centers such as Dehlgren, can be included in the alternatives analysis. As the traffic surveys showed that the majority (80%) of travel during the weekday was local, between home and work, there may be some ability to reduce the "bottleneck" by reducing the number of vehicles, through promoting or facilitating a ride-share program (road signage, employer websites).

Barbara
^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^

Barbara Rudnick
US EPA Region III (3EA30)
1650 Arch Street, Phila, PA 19103
(215) 814-3322/ Fax: (215) 814-2783

"Megan Blum" <mblum1@mdta.state.md.us> 11/28/2007 09:21 AM To <STEVE.HARMAN@usace.army.mil>, Barbara Rudnick/R3/USEPA/US@EPA, William Arguto/R3/USEPA/US@EPA, <bob_zepp@fws.gov>, <bill_schultz@fws.gov>, <Lloyd_Chapman@nps.gov>, <Jacki_Katzmire@nps.gov>, <John.Nichols@noaa.gov>, <rdintaman@dnr.state.md.us>, <ggolden@dnr.state.md.us>, <eghigiarelli@mde.state.md.us>, "B Cole" <BCole@mdp.state.md.us>, "T Tamburrino" <TTamburrino@mdp.state.md.us>, <bxu@mdp.state.md.us>,

1

<jon.hall@de.usda.gov>,
<gary.s.heyer@uscg.mil>,
<Waverly.W.Gregory@uscg.mil>,
<slhardwick@deq.virginia.gov>,
<eirons@deq.virginia.gov>,
<dean.cumbia@dof.virginia.gov>,
<dennis.gaston@dof.virginia.gov>,
<karen.snape@dof.virginia.gov>,
<Dan.Bacon@mrc.virginia.gov>,
<John.Simkins@fhwa.dot.gov>,
<KENNETH.MYERS@DOT.GOV>,
<YOLONDA.JORDAN@FHWA.DOT.GOV>,
<Keith.Tignor@vdacs.virginia.gov>,
<Beallc@charlescounty.org>,
<GrothJ@charlescounty.org>,
<eckelst@nswc.navy.mil>
cc
"Glen Smith"
<gsmith2@mdta.state.md.us>, "Melissa Williams"
<mwilliams9@mdta.state.md.us>,
"Cavanaugh, Ian"
<Ian.Cavanaugh@fhwa.dot.gov>, "King, Denise" <Denise.King@fhwa.dot.gov>,
<Earl.Robb@VDOT.Virginia.gov>, "Nies, Nick M."
<Nicholas.Nies@VDOT.Virginia.gov>,
<David.Ogle@VDOT.Virginia.gov>,
"Bernstein, Brian"
<BABernstein@mccormicktaylor.com>,
"Shawn Burnett" <sburnett@wtbco.com>
Subject
Nice Bridge Purpose and Need/Alternates Retained for Detailed Study Comments Due

Good afternoon,

This is a friendly reminder that comments on the Maryland Transportation Authority's Nice Bridge Improvement Project combined Purpose and Need/Alternates Retained for Detailed Study package were due on November 20, 2007. To date, we have received comments from several agencies. For those agencies that would still like to comment, please send your comments to me via email (mblum1@mdta.state.md.us), fax (410-537-5653), or mail (Maryland Transportation Authority-Point Breeze, 2310 Broening Highway, Suite 125, Baltimore, Maryland 21224) by the close of business on Friday, November 30, 2007.

After we address all of the comments, we will resubmit the package to the concurring agencies (FHWA, VDOT, USACE, US EPA, USCG, US FWS, NMFS, MDE, and VA DEQ) for their signature. We hope to have this package out the week of December 17, 2007, depending on the comments we receive.

If you would like the Final Purpose and Need/Alternates Retained for Detailed Study for your files (anticipated being available in January 2008), please let me know. We will also have it available on the project website (www.mdtransportationauthority.com, Capital Projects link, Nice Bridge Improvement Project, Alternates tab) as soon as it is available. The final document will include an errata sheet with all comments received from all agencies.



If you have any questions or comments regarding this email or any other matter regarding the Nice Bridge Improvement Project, please feel free to contact me.

Thank you,
Megan

Megan W. Blum
Environmental Manager, Capital Planning Division Maryland Transportation Authority-Point Breeze 2310 Broening Highway, Suite 125 Baltimore, MD 21224
(p) 410-537-1060
(f) 410-537-5653
mblum1@mdta.state.md.us

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**Megan Blum**

**From:** Hawtof, Steven I. [shawtof@GFNET.com]
**Sent:** Thursday, December 06, 2007 2:59 PM
**To:** Megan Blum
**Subject:** Combined P/N and Ards package

Megan,

I didn't find anything significant to comment on. I found some spelling and formatting things that have probably been corrected already.

I will say what they are below. Let me know if you need something formal and I will put it in a letter.

1. Page ES-4 delete comma after the word need in the second line in the Alternate 3 description
2. Page ES-4 include the word "meets" in the second line in the Alternate 5 between the words as it meets the
3. Page ES-5 There should be a space between the last sentence in Alternate 9 the heading for Alternate 10
4. Page II-1 In the first paragraph, three lines from the end of the paragraph, the word indicate should be indicates
5. Page II-2 first sentence at the top of the page, include the word "designations" between STRAHNET and indicate
6. Page II-7 first sentence in the first full paragraph, modify the sentence by removing the words "most of the" and replacing with "on a"
7. Page II-10 last sentence of only paragraph on the sheet, the word Bridge should not be capitalized. It should be bridge
8. Page II-14 third to last line in the first paragraph, place a comma after the word time/attention"
9. Page II-15 second line on "Crashes on the Bridge" section, place comma after crashes
10. Page II-17 first full paragraph, remove commas from the 4th line after the word "delays" and on the 5th line after the word "diverted" Remove the word "also" in the second to last line. It is redundant.
11. Page II-17 first sentence under part 4. Transportation Significance, the word indicate should be indicates and the next line could be reworded to say "transportation element for both the public…
12. Page II-17 last line, change the word affects to effects
13. Page II-18 second line in the first full paragraph, need comma after the word "closure" and before which
14. Page II-18 last line on the page, insert the word "and" between maintenance and rehabilitation
15. Page III-1 second paragraph, need a parenthesis after the word islands
16. Page III-1 second line of the last paragraph, US 301 should have a space
17. Page III-2 first bullet under Build Alternates 2 to 14, fifth line down, the word advantages should be singular
18. Page III-8 second bullet, second line, Parenthesis for See Figure 7 should not be underlined
19. Page IV-4 eighth bullet down, do not capitalize Striped Bass
20. Page IV-5 under 3. Chesapeake Bay Areas, second paragraph, it should read "Similarly, a portion…
21. Page V-5 under project webpage, list what the webpage is

Megan, as you can see, all in all, not much substance. Let me know if this is sufficient or you want a letter.

S

Steven Hawtof
Gannett Fleming, Inc.
4701 Mount Hope Drive

12/28/2007

**DEPARTMENT OF THE NAVY**
NAVAL SUPPORT ACTIVITY SOUTH POTOMAC
6509 SAMPSON ROAD
DAHLGREN, VIRGINIA 22448-5105

IN REPLY REFER TO

5700
Ser 00/309
10 Dec 07

Ms. Megan Blum
Environmental Manager
Maryland Transportation Authority
2310 Broening Highway, Suite 150
Baltimore, MD 21224

Dear Ms. Blum,

Thank you for the opportunity to comment on Maryland Transportation Authority's draft combined Purpose and Need (P&N)/Alternatives Retained for Detailed Study (ARDS) for the Nice Bridge Improvement Project. We also appreciate the extension on the comment period, which we requested in order to permit a thorough review of your document by both my staff, as well as the Naval Surface Warfare Center Dahlgren Division (NSWCDD). NSWCDD is the largest supported command at Naval Support Facility (NSF) Dahlgren, and the command that would be most affected by proposals outlined in the draft P&N/ARDS.

After carefully reviewing the Alternates Retained for Detailed Study, we strongly urge the Maryland Transportation Authority to remove from further consideration Alternates 2, 3 and 6, which propose construction of either a new two-lane bridge or a new four-lane bridge to the south of the current Nice Bridge span. We have determined that any of these alternates, which would require an easement of approximately 100-200 feet on Navy property adjacent to the south side of Hwy. 301, would impact NSWCDD mission critical safety and security zones. Most significantly, the mission for the Chemical Biological Research and Testing Lab would be compromised, as well as safety and security for the Warfare Systems Department Building 1490 facilities and employees.

In addition, physical security issues would be increased for employees of all commands at NSF Dahlgren due to closer drive-by traffic access along a new fence line, and shoreline security concerns would be generated from a closer bridge position. Environmental, safety and security issues have also been raised by potential movement and relocation of facilities.

5700
Ser 00/309
10 Dec 07

Finally, future growth or expansion of critical mission areas at the northeastern sector of Naval Support Facility Dahlgren could be severely inhibited.

In carefully weighing the potential impact of an expansion to the Nice Bridge to critical national defense programs supported by Navy and Joint commands at Dahlgren, we cannot support proposals that would require an easement on Navy property at this installation.

Sincerely,

J L Smith

J. L. SMITH
Commanding Officer

2

MDP
Maryland Department of Planning

Martin O'Malley
Governor
Anthony G. Brown
Lt. Governor

Richard Eberhart Hall
Secretary
Matthew J. Power
Deputy Secretary

December 11, 2007

Ms. Megan Blum
Environmental Manager
Division of Capital Planning
Maryland Transportation Authority
2310 Broening Highway
Suite 150
Baltimore, MD 21124

**Re: The Governor Harry W. Nice Memorial Bridge Improvement Project, Combined Purpose and Need & Alternates Retained for Detailed Study**

Dear Ms. Blum,

Thank you for providing the Maryland Department of Planning (MDP) with the opportunity to comment on the Combined Purpose and Need & Alternates Retained for Detailed Study (ARDS) for the Governor Harry W. Nice Memorial Bridge Project. We have reviewed the document and would like to offer the following comments for your consideration.

The recommended alternates retained for detailed study, except the no-build alternate provided as a baseline for comparison, would widen the existing two-lane bridge to four lanes to accommodate the projected 2030 travel demand and improve geometric compatibility and other bridge elements to meet the purpose and need of the project. While recognizing the purpose and need of the project, MDP encourages MdTA to evaluate potential traffic impacts on US 301 and pros and cons of the growth implications of the project and to study measures to mitigate the negative impacts. All build alternates retained for detailed study would improve travel efficiency for interstate traffic as well as the regional/local commuting between Southern Maryland and the Fredericksburg region of Virginia, two fast growing areas of both states. Strategies should be studied to help to damp growth pressures in both states' rural areas (e.g., by using Toll mechanisms effectively) and to encourage non-single-occupancy-vehicle (SOV) travel.

As alternatives to SOV travel, Transportation Demand Management (TDM) strategies should be part of the alternates retained for detailed study. For instance, in coordination with related agencies, MdTA may assess the need for Park and Ride lots along US 301 to encourage van-carpooling and transit if it would be feasible in the future. MdTA may also consider enhancing pedestrian/bicycle accommodation for the proposed new bridge, e.g., including sidewalks, a safety barrier between the curb-lane and the walkway/bikeway. Among all build alternates

301 West Preston Street • Suite 1101 • Baltimore, Maryland 21201-2305
Telephone: 410.767.4500 • Fax: 410.767.4480 • Toll Free: 1.877.767.6272 • TTY Users: Maryland Relay
Internet: www.MDP.state.md.us

retained for detailed study, Alternate 2 and Alternate 4 are the least pedestrian/bicycle friendly alternates since both alternates' new one direction two-lane bridge would provide only one 12-foot outside shoulder that presumably could be used by bicycles and pedestrians. To safely and friendly accommodate bicycle and pedestrian travels, Alternate 2 and 4 should include enhanced pedestrian/bicycle accommodation designs.

Although current law prohibits direct pedestrian/bicycle access onto MdTA's facilities, such law could be changed in the future so that MdTA could consider pedestrian/bicycle access to its facilities on a case-by-base basis. Governor Nice Bridge provides the only one connection opportunity between Southern Maryland and Virginia for bicyclists and pedestrians. The proposed bridge improvements should not preclude more bicycle/pedestrian friendly designs to better accommodate bicycles and pedestrians.

Thank you for consideration of these comments and we look forward to continued participation in the Nice Bridge project NEPA planning process. Should you have any questions with regard to the above comments, please do not hesitate to contact me at 410-767-4567 or by email, bxu@mdp.state.md.us.

Sincerely,

Bihui Xu, AICP
Manager
Transportation Planning

cc: Dennis N Simpson, Deputy Director, DCP, MdTA
Glen Smith, Project Manager, MdTA
Michael Jackson, Bicycle/Pedestrian Director, MDOT
Pat Goucher, Director, Infrastructure Planning, MDP
David Whitaker, Deputy Director, Infrastructure Planning, MDP



MDP

Maryland Department of Planning
Maryland Historical Trust

Martin O'Malley
Governor

Anthony G. Brown
Lt. Governor

Richard Eberhart Hall
Secretary

Matthew J. Power
Deputy Secretary

December 12, 2007

Ms. Megan Blum
Environmental Manager
Division of Capital Planning
Maryland Transportation Authority
2310 Broening Highway
Suite 150
Baltimore, MD 21124

Re: The Governor Harry W. Nice Memorial Bridge Improvement Project,
Combined Purpose and Need & Alternates Retained for Detailed Study
Charles County, Maryland and King George County, Virginia

Dear Ms. Blum,

Thank you for providing the Maryland Historical Trust (MHT) with a copy of the draft *Combined Purpose and Need & Alternates Retained for Detailed Study Package*. We have reviewed the documentation in accordance with Section 106 of the National Historic Preservation Act, as amended, and offer the following comments.

As you know the Governor Harry W. Nice Memorial Bridge was determined eligible for listing in the National Register of Historic Places in 2001. The bridge was constructed between 1938 and 1940 as part of the state's Primary Bridge Program that also included the construction of the Chesapeake Bay Bridge, the first Baltimore Harbor Tunnel, and the Susquehanna River Bridge at Havre de Grace. Perhaps more important, the Governor Harry W. Nice Memorial Bridge is the only known bridge in Maryland to have employed a cantilever system. Thus, the Governor Harry W. Nice Memorial Bridge is significant as a major example (perhaps Maryland's only example) of modern cantilevered bridge engineering, and is also important because of its strategic economic usefulness as part of the successful Primary Bridge Program of the Maryland State Roads Commission.

We are encouraged that the Alternates Retained for Detailed Study (ARDS) includes two alternatives that retain and rehabilitate the historic bridge to ensure its continued viable use within the highway system. Alternatives 2 and 4 rehabilitate the existing structure and supplement it with a new 2-lane bridge. Under Alternatives 6 and 7, all traffic is redirected onto a new 4-lane bridge and the historic bridge is taken out of service but may be retained. For all other build alternatives the historic bridge will be demolished.

We trust that the Maryland Transportation Authority (MdTA) will carefully examine all prudent and feasible alternatives that avoid adverse effects on historic properties and enable the viable use of this significant transportation resource. We look forward to working with the MdTA to achieve a safe and efficient crossing that effectively balances project needs and historic preservation issues.

*100 Community Place · Crownsville, Maryland 21032-2023*
*Telephone: 410.514.7600 Fax: 410.987.4071 Toll Free: 1.800.756.0119 TTY Users: Maryland Relay*
*Internet: www.marylandhistoricaltrust.net*

Ms. Megan Blum
The Governor Harry W. Nice Memorial Bridge Improvement Project
Combined Purpose and Need & Alternates Retained for Detailed Study
December 12, 2007

If you have any questions, please do not hesitate to contact me at ttamburrino@mdp.state.md.us / 410-514-7637.

Sincerely,

Tim Tamburrino
Preservation Officer

TJT
200703697

cc: Dan Johnson (FHWA)
Julie Schablisky (SHA)
Paul Wetlaufer (COE)
Joshua D. Phillips (Preservation Maryland)

**CHARLES COUNTY GOVERNMENT**
Planning and Growth Management

MELVIN C. BEALL, JR., P.E., *Director*

CHARLES COUNTY MARYLAND
Where Eagles Fly

January 7, 2008

Megan Blum, Environmental Manager
MTA Capital Planning Division
2310 Broening Highway, Suite 125
Baltimore, Maryland 21224

**Re: Harry W. Nice Bridge – Alternatives Retained for Detailed Study**

Dear Ms. Blum,

Thank you for the opportunity to allow Charles County to review and comment the Harry W. Nice Bridge – Alternatives Retained for Detailed Study. The Harry W. Nice Bridge is an intregal part of our transportation network and is crucial in meeting our longterm planning goals. The Department of Planning & Growth Management – Planning Division, reviewed the submitted study and have no comments. We have determined the study is consistent with the Joint Resolution between the Charles County Commissioners and the King George County Board of Supervisors signed on August 28, 2006, specifically regarding the immediate need to move forward with this project

We look forward to working with you on the future steps of the review process. If you have any questions or if you need to contact me, I can be reached at beallc@charlescounty.org or (301) 885-1324.

Sincerely,

Melvin C. Beall, Jr., P.E., *Director*

cc: Jason Groth – PGM
reading file

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TDD Transfer Number for the Hearing Impaired: 1-800-735-2258
www.charlescounty.org/pgm
*EQUAL OPPORTUNITY COUNTY*

## Purpose and Need/Alternatives Retained for Detailed Study

**Project Name & Limits: Nice Bridge Improvement Project**

**Having reviewed the attached Purpose and Need/Alternatives Retained for Detailed Study, the following cooperating agency (by signing this document):**

___ Federal Highway Administration
x U.S. Army Corps of Engineers
___ U.S. Environmental Protection Agency
___ U.S. Fish and Wildlife Service
___ U.S. Coast Guard
___ National Marine Fisheries Service
___ Maryland Department of the Environment
___ Virginia Department of Transportation
___ Virginia Department of Environmental Quality

___ Concurs (without comments) _x__ Concurs (w/ minor comments) ___ Does Not Concur

Comments / Reasons for Non-Concurrence: Rehab of the existing bridge should be feasible. If the existing bridge is demolished, MDTA should consider the environmental impacts of the demolition. MDTA should also consider the building of a new span with enough substructure to accommodate future widening of the deck, since it is expected that US 301 will be widened in 30 years.

***Note: Please do not provide "conditional" concurrence. You should either concur with the information as provided (without comments or with minor comments) or not concur until revisions are made or additional information is provided.***

Additional Information Needed:

Signature: _Steven Harman_____ Date: _3/2/2008_____

Please return this form to:

Ms. Megan Blum
Environmental Manager, Division of Capital Planning
Maryland Transportation Authority-Point Breeze
2310 Broening Highway, Suite 125
Baltimore, MD 21224
(f) 410-537-5853
mblum1@mdta.state.md.us

1/31/08

**From:** Corderman Kerri
**Sent:** Monday, March 10, 2008 10:04 AM
**To:** O'Brien, Caitlin E.
**Subject:** FW: ESSLog# 22977_Nice Memorial Bridge

---

**From:** Megan Blum [mailto:mblum1@mdta.state.md.us]
**Sent:** Tuesday, November 20, 2007 11:38 AM
**To:** Bernstein, Brian; Shawn Burnett
**Cc:** Glen Smith; Maimone, Bob; Kerri Corderman
**Subject:** FW: ESSLog# 22977_Nice Memorial Bridge

FYI...

---

**From:** Amy.Ewing@dgif.virginia.gov [mailto:Amy.Ewing@dgif.virginia.gov]
**Sent:** Tuesday, November 20, 2007 11:32 AM
**To:** Megan Blum
**Cc:** Jeff.Cooper@dgif.virginia.gov; Bob.Greenlee@dgif.virginia.gov; Scott.Herrmann@dgif.virginia.gov
**Subject:** ESSLog# 22977_Nice Memorial Bridge

We have reviewed the alternatives analysis for the proposed Nice Memorial Bridge (Route 301) improvements across the Potomac River in King George County. There are currently 7 alternatives being evaluated. These range from the addition of a 2-lane bridge to the north or south of the existing bridge and rehabbing the existing bridge for continued use to building an entirely new 4 lane bridge and abandoning use of the existing bridge all together.

According to our records, a number of state threatened bald eagle nests as well as a concentration zone are known from the project area. We recommend no construction activities within 1, 320 feet of a nest from December 15 through July 15 of any year. Any impacts within this buffer zone should be coordinated with us whether they are proposed to occur during this time period (breeding season) or not. We recommend that no permanent habitat impacts occur within this buffer zone at any time of year. Further, we recommend no construction activities or habitat impacts within 750 feet of the Potomac River shoreline that is designated a concentration zone at any time during the year. We have attached a map of these resources for your review. This map contains sensitive data and should not be reproduced or distributed without our consent.

The Potomac River and Gambo Creek have been designated Anadromous Fish Use Areas. We recommend no instream impacts in these waters and/or their tributaries from February 15 through June 30 of any year. We recommend conducting any in-stream activities during low or no-flow conditions, using non-erodible cofferdams to isolate the construction area, blocking no more than 50% of the streamflow at any given time, stockpiling excavated material in a manner that prevents reentry into the stream, restoring original streambed and streambank contours, revegetating barren areas with native vegetation, and implementing strict erosion and sediment control measures. Due to future maintenance costs associated with culverts, and the loss of riparian and aquatic habitat, we prefer stream crossings to be constructed via clear-span bridges. However, if this is not possible, we recommend countersinking any culverts below the streambed at least 6 inches, or the use of bottomless culverts, to allow passage of aquatic organisms. We also recommend the installation of floodplain culverts to carry bankfull discharges. We recommend close coordination with our agency regarding building a new bridge across the Potomac. We will need to better understand the proposed construction methods and instream impacts in order to make final recommendations regarding the protection of this important fishery resource. Our recommendations, in addition to the time of year restriction, may include use of turbidity curtains during pile driving, monitoring of fish behavior and/or mortalities, development of a contingency

plant to address adverse impacts upon species known from the Potomac, and other conservation measures.

To minimize overall impacts to wildlife and our natural resources, we offer the following comments about development activities: We recommend that the applicant avoid and minimize impacts to undisturbed forest, wetlands, and streams to the fullest extent practicable. Avoidance and minimization of impact may include relocating stream channels as opposed to filling or channelizing as well as using, and incorporating into the development plan, a natural stream channel design and wooded buffers. We recommend maintaining undisturbed wooded buffers of at least 100 feet in width around all on-site wetlands and on both sides of all perennial and intermittent streams. We recommend maintaining wooded lots to the fullest extent possible. We generally do not support proposals to mitigate wetland impacts through the construction of stormwater management ponds, nor do we support the creation of in-stream stormwater management ponds. We are willing to assist the applicant in developing a plan that includes open-space, wildlife habitat, and natural stream channels which retain their wooded buffers.

We recommend that the stormwater controls for this project be designed to replicate and maintain the hydrographic condition of the site prior to the change in landscape. This should include, but not be limited to, utilizing bioretention areas, and minimizing the use of curb and gutter in favor of grassed swales. Bioretention areas (also called rain gardens) and grass swales are components of Low Impact Development (LID). They are designed to capture stormwater runoff as close to the source as possible and allow it to slowly infiltrate into the surrounding soil. They benefit natural resources by filtering pollutants and decreasing downstream runoff volumes.

We recommend that the preferred alternative be one that avoidsimpacts upon eagles and anadromous fish use areas to the greatest extent possible. We support an alternative that reduces the number of instream piers or support structures. This may include recommendations to remove the current structure if it is deemed no longer in service. Additionally, we recommend that future documentation reference coordination with our agency, the Virginia Department of Game and Inland Fisheries, with respect to the assessment of and coordination about impacts upon wildlife in Virginia. We noticed that the current document neither references the anadromous fish resources or coordination with our agency.

Thank you

Amy M. Ewing
Environmental Services Biologist
Virginia Dept. of Game and Inland Fisheries
4010 West Broad Street
Richmond, VA 23230
804-367-2211
amy.ewing@dgif.virginia.gov

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MDP
Maryland Department of Planning
Maryland Historical Trust

Martin O'Malley, Governor
Anthony G. Brown, Lt. Governor

Richard Eberhart Hall, Secretary
Matthew J. Power, Deputy Secretary

March 12, 2008

Ms. Megan W. Blum, Environmental Manager
Division of Capital Planning
Maryland Transportation Authority
2310 Broening Highway
Suite 150
Baltimore, MD 21224

Re: US 301 / Governor Harry W. Nice Memorial Bridge over the Potomac River
Charles County, Maryland

Dear Ms. Blum:

Thank you for your recent letter requesting concurrence with the Maryland Transportation Authority's (MdTA) delineation of the Area of Potential Effects (APE) and proposed survey treatments for the above-referenced project. The Maryland Historical Trust (Trust) reviewed the submitted materials pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended and the Maryland Historical Trust Act of 1985 as amended, State Finance and Procurement Article §§ 5A-325 and 5A-326 of the Annotated Code of Maryland. We offer the following comments

Trust staff examined the following documents provided with your submittal:

- *Archeological Phase IA Technical Memorandum, Governor Harry W. Nice Bridge Improvement Project* (MdTA 2008) and
- *Historic Structures Technical Memorandum, Governor Harry W. Nice Bridge Improvement Project* (MdTA 2008).

The Trust generally agrees with the defined study area, designated archeological sensitivity zones, and proposed survey strategies. However, we note the following key issues that need to be addressed and resolved as project planning and Section 106 consultation proceeds for this undertaking.

**Study limits:** The overall study limits identified in the technical reports differ for archeology and architecture. For archeology, the study area illustrated in Figures 1 and 5 begins on US 301 just north of the intersection with MD 234 and continues to the east bank of the Potomac River. For historic structures, the study area illustrated on Figure 1 begins at the intersection of US 301 and MD 257 and extends to the west bank of the Potomac River. While the associated APE for archeology and architecture may differ to account for areas that may have visual effects, the basic study limits should be the same for both types of resources. The documents should be revised to reflect the same study limits, otherwise it appears that a substantial section of the area along US 301 between MD 257 and MD 234 has been eliminated from historic structures consideration.

**Underwater archeological resources:** Since the study area within Maryland includes the Potomac River crossing, the identification of historic properties must also address the potential of the APE to contain submerged archeological resources that may be affected by this project. The *Archeological Technical Memorandum* should be revised to include the Potomac River as part of the study area and add sections discussing the historic background, archeological sensitivity, and proposed survey strategy for identifying submerged archeological resources in the APE.

*100 Community Place • Crownsville, Maryland 21032-2023*
*Telephone: 410.514.7600 • Fax: 410.987.4071 • Toll Free: 1.800.756.0119 • TTY Users: Maryland Relay*
*Internet: www.marylandhistoricaltrust.net*

**Historic Properties in Virginia:** We assume that MdTA is also coordinating with the Virginia State Historic Preservation Office to seek their comments on the delineation of the APE, identification of historic and archeological properties, and input on potential interested parties for resources located in Virginia that may be affected by the undertaking. We would appreciate receiving copies of any correspondence related to historic preservation issues in Virginia, for our project records.

**Interested Parties:** MdTA's letter requested information regarding potential parties that may have an interest in the project's cultural resources issues and Section 106 consultation. Attachment A contains contact information for several local government, non-profit, and other organizations that may be wish to be notified and/or involved in the consultation for this undertaking.

If you have questions or need further assistance, please contact Tim Tamburrino at 410-514-7637 / ttamburrino@mdp.state.md.us or me at 410-514-7631 / bcole@mdp.state.md.us. Thank you for providing us this opportunity to comment.

Sincerely,

Elizabeth J. Cole
Administrator, Project Review and Compliance

EJC/TJT/200800277
Attachment A – List of Potential Interested Parties

cc: Dennis Simpson (MdTA)
Melissa Williams (MdTA)
Glen Smith (MdTA)
Marc Holma (VA SHPO)



**ATTACHMENT A**
**CONTACT INFORMATION FOR PARTIES**

**Charles County Department of Planning and Growth Management**
Cathy Hardy, Historic Preservation Planner
Department of Planning and Growth Management
Charles County Government
200 Baltimore Street
La Plata, MD 20646
301-396-5815
Fax 301-645-0638
E-mail: hardyc@charlescounty.org

**Southern Maryland Heritage Area**
Ms. Roz Racanello, Executive Director
Southern Maryland Heritage Area Consortium
Tri-County Council of Southern Maryland
PO Box 745
Hughesville, MD 20637
301-274-4083
301-274-1924 (fax)
E-mail: SoMdHeritage@tccsmd.org
Web page: www.SouthernMDisfun.com
*The mission of the Southern Maryland Heritage Area Consortium (SMHAC) is to enhance the economic activity of Southern Maryland through combining quality heritage tourism and small business development with preservation, cultural & natural resource conservation and education.*

**Maryland Commission on Indian Affairs - Maryland Department of Human Resources**
E. Keith Colston, Executive Director
311 W. Saratoga Street, Room 273
Baltimore, Maryland 21201
(410) 767-7631
1(800) 714-8813
E-mail: kcolston@dhr.state.md.us
*The Maryland Commission on Indian Affairs (MCIA) serves as the official statewide agency for American Indians and initiates and supports a wide range of activities that promote the welfare of Maryland's Indian people and further the understanding of American Indian history and culture. The MCIA also provides a forum for the concerns of Maryland's Indian communities and operates as a vital liaison between these communities and the State and Federal governments. For further information about MCIA, visit the website at* http://www.geia.sailorsite.net/index.htm.

**Preservation Maryland**
24 W. Saratoga Street
Baltimore, MD 21201
Contact: Tyler Gearhart, Executive Director
410-685-2886
FAX: 410-539-2182
E-mail: PM@preservemd.org
*Preservation Maryland, founded in 1931, is the state's oldest historic preservation organization. Its early activities were dedicated to preserving historic properties associated with well known people and events in Maryland's history. More recently, Preservation Maryland has concentrated on assisting with various preservation efforts at both the local and state levels through advocacy, outreach, and funding programs.*

**Charles County Heritage Commission**
c/o Southern Maryland Studies Center
Charles County Community College
P.O. Box 910
La Plata, MD 20646-0910
Contact: Sally Barley
301-934-0642
*The Charles County Heritage Commission is responsible for the development of archival collections for Southern Maryland. These collections are housed at the Charles County Community College.*

**Charles County Historical Trust, Inc.**
Box 11430 Edgehill Road
Newberg, MD 20664
Contact: David Rose
301-259-4393
*The Charles County Historical Trust, Inc. assists the Maryland Historical Trust in promoting and monitoring historic preservation activities in Charles County in its role as a county advisory organization.*

**Potomac River Heritage**
c/o Accokeek Foundation
3400 Bryan Point Road
Accokeek, MD 20607
Contact: Susan Van Buren
301-283-2113
Fax: 301-238-2049
*An organization dedicated to preserving the history and natural beauty of the Potomac River Heritage Area. A candidate heritage area.*

COMMONWEALTH of VIRGINIA

L. Preston Bryant, Jr.
Secretary of Natural Resources

**Department of Historic Resources**
2801 Kensington Avenue, Richmond, Virginia 23221

Kathleen S. Kilpatrick
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
TDD: (804) 367-2386
www.dhr.virginia.gov

17 March 2008

Ms Megan Blum
Maryland Transportation Authority
2310 Broening Highway
Suite 150
Baltimore, Maryland 21224

Re: Preliminary Cultural Resource Studies for the Governor Harry W. Nice Memorial Bridge Improvement Project
King George County, Virginia
DHR File # 2006-1393

Dear Ms Blum:

We have received your letter of 21 February 2008 discussing the preliminary results of the cultural resource studies for the replacement of the Governor Harry W. Nice Memorial Bridge. In your correspondence you mentioned that the Maryland Transportation Authority (MTA) is working with Patricia Albert, Naval Surface Warfare Center's (Dahlgren) NEPA and Cultural Resource Manager, in order to identify any further survey that may be required for architectural properties. It should be noted that the Department of Historic Resources (DHR) and Dahlgren have not agreed on appropriate National Register of Historic Places boundaries for the non-residential historic district there. Further consultation is necessary on this issue.

With respect to archaeological resources, we do not understand why the MTA proposes to limit archaeological investigations to the north of Route 301 while, in our opinion, it is just as likely that the south side of Route 301 has the potential for sites as well. We would recommend conducting archaeological survey south of Route 301 in addition to the planned survey work to the north of the roadway.

We would like to remind the Federal Highway Administration (FHWA) and MTA that although Virginia does not have any resident federally recognized Indian tribes, there are tribes outside of our borders that claim Virginia as part of their ancestral lands. Therefore, please ensure that a good faith effort is made to identify and contact such tribes about this undertaking pursuant to the requirements of Section 106 of the National Historic Preservation Act.

If you have any questions regarding our comments, please call me at (804) 367-2323, Ext. 114.

Sincerely,

Marc Holma, Manager
Office of Review and Compliance

Administrative Services
10 Courthouse Avenue
Petersburg, VA 23803
Tel: (804) 863-1624
Fax: (804) 862-6196

Capital Region Office
2801 Kensington Ave.
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391

Tidewater Region Office
14415 Old Courthouse Way, 2nd Floor
Newport News, VA 23608
Tel: (757) 886-2807
Fax: (757) 886-2808

Roanoke Region Office
1030 Penmar Ave., SE
Roanoke, VA 24013
Tel: (540) 857-7585
Fax: (540) 857-7588

Northern Region Office
5357 Main Street
PO Box 519
Stephens City, VA 22655
Tel: (540) 868-7031
Fax: (540) 868-7033

## Purpose and Need/Alternatives Retained for Detailed Study

**Project Name & Limits:** Nice Bridge Improvement Project

**Having reviewed the attached Purpose and Need/Alternatives Retained for Detailed Study, the following cooperating agency (by signing this document):**

- ✓ Federal Highway Administration
- ___ U.S. Army Corps of Engineers
- ___ U.S. Environmental Protection Agency
- ___ U.S. Fish and Wildlife Service
- ___ U.S. Coast Guard
- ___ National Marine Fisheries Service
- ___ Maryland Department of the Environment
- ___ Virginia Department of Transportation
- ___ Virginia Department of Environmental Quality

✓ **Concurs (without comments)** ___ **Concurs (w/ minor comments)** ___ **Does Not Concur**

Comments / Reasons for Non-Concurrence:

***Note: Please do not provide "conditional" concurrence. You should either concur with the information as provided (without comments or with minor comments) or not concur until revisions are made or additional information is provided.***

Additional Information Needed:

Signature: John B. Carmody Date: 4.1.08

Please return this form to:

Ms. Megan Blum
Environmental Manager, Division of Capital Planning
Maryland Transportation Authority-Point Breeze
2310 Broening Highway, Suite 125
Baltimore, MD 21224
(f) 410-537-5653
mblum1@mdta.state.md.us

1/31/08

MARTIN O'MALLEY
GOVERNOR

ANTHONY G. BROWN
LT. GOVERNOR

STATE OF MARYLAND
**MARYLAND STATE POLICE**

Barrack "H" La Plata
9500 Mitchell Road
La Plata, Maryland 20646
301-392-1200

COLONEL
TERRENCE B. SHERIDAN
SUPERINTENDENT

May 5, 2008

Mr. Glen Smith, Project Manager
Division of Capital Planning
Maryland Transportation Authority
2310 Broening Highway, Suite 150
Baltimore, Maryland 21224

Mr. Smith:

Thank you for including me in your project study pan for the Governor Harry W. Nice Bridge. As the Barrack Commander of the Maryland State Police, La Plata Barrack I believe that Alternate Plan 5 would be the best choice. This alternate provides the best choice for the continuing growth that has occurred in Southern Maryland and King George County. Alternate Plan 5 also appears to be the less disruptive. I strongly believe that there should be at least two lanes of traffic in each direction to keep up with future growth and traffic patterns.

I hope that I have answered your questions or addressed your concerns if not I can be reached at 301-392-1234.

Sincerely,

Lt. RLS

Randolph L. Stephens, Lieutenant
Commanding Barrack "H"
Department of State Police

RLS:tcj

*"Maryland's Finest"*

# Office of the Sheriff

Charles County, Maryland

Rex W. Coffey
Sheriff

Headquarters
6915 Crain Hwy - P.O. Box 189
La Plata, Maryland 20646-0189
301-609-6400

An Internationally Accredited Agency

May 5, 2008

Glen Smith, Project Manager
Division of Capital Planning
Maryland Transportation Authority
2310 Broening Highway, Suite 150
Baltimore, MD 21224

Dear Mr. Smith:

I would like to thank you for the opportunity to comment on the expansion or replacement of the Harry W. Nice Bridge.

Our expertise is not the creation or upgrading of our transportation infrastructure. With that said, as public servants we do hear the comments of our citizens about the bridge and the frustration sometimes felt by the lack of expansion over the years. Honestly, with few exceptions from time to time, the bridge serves our citizens and public safety well. There are times, generally in the summer months and particularly on Sunday afternoons and evenings, you do not want to depend on the bridge traveling northbound into Maryland because of the hour or two wait to cross the bridge.

Of course, since September 11, 2001, a lot of time, effort, and planning have been done to prepare for the possible evacuation of the Metropolitan area of Washington, D.C. The traffic capacity of the bridge has been a large obstacle. Fortunately, the Sheriff's Office has a great working relationship with the Transportation Authority Police assigned to the Harry W. Nice Bridge.

In closing, our comments regarding which option should be chosen are made in the broadest terms because of our lack of expertise. Alternate 6 and Alternate 7 appear to be most beneficial to the citizens of Charles County mainly because of the possibility of leaving the current bridge for recreational purposes. When a decision has been made by the Transportation Authority, we would be pleased to assist in any way possible to implement and proceed through the construction phase of the new infrastructure.

Once again, I would like to thank you and the Maryland Transportation Authority for allowing us to comment on this project. We wish you tremendous success and look forward to being a part of the final project in the future.

Sincerely,

Rex W. Coffey, Sheriff
Charles County, Maryland

Indian Head District Station
301-743-2222 (Metro) 301-753-8200

La Plata District Station
301-932-2222 (Metro) 301-870-3232

Waldorf District Station
301-932-7777 (Metro) 301-870-6060

# King George County, Virginia

DEPARTMENT OF EMERGENCY SERVICES
OPERATIONS DIVISION
8122 Kings Highway
King George, Virginia 22485
Telephone: (540) 775-4584
Fax: (540) 775-9060
www.king-george.va.us

DAVID W. MOODY,
FIRE/RESCUE CHIEF
dmoody@co.kinggeorge.state.va.us

STEVEN D. BASHAM
DEPUTY FIRE/RESCUE CHIEF
sbasham@co.kinggeorge.state.va.us

SHAWN M. McDERMOTT
CAPTAIN / OPERATIONS OFFICER
smcdermott@co.kinggeorge.state.va.us

May 16, 2008

Mr. Glen Smith
Project Manager, Division of Capital Planning
Maryland Transportation Authority
2310 Broening Highway
Suite 150
Baltimore, MD 21224

RE: Nice Bridge Improvement Project Alternates

Dear Glen Smith,

After reviewing your letter dated April 28, 2008, which outlines each alternate under consideration for the Nice Bridge Improvement Project, I am in favor of any one of the alternates listed in regards to emergency services, with the exception of Alternate #1 which is to do nothing. In my opinion, any upgrades and/or improvements that are completed would be substantially better than what currently exists and would improve the response effectiveness of emergency vehicles during an emergency. It is important to note that during any phase of construction or re-routing of traffic, it will be important to ensure that necessary actions are taken to ensure that emergency equipment from both Maryland and Virginia have appropriate accessibility during emergencies.

If you have any questions or concerns, please feel free to contact me at (540) 775-4584.

Sincerely,

David W. Moody
Fire/Rescue Chief

CHARLES COUNTY GOVERNMENT
***Department of Emergency Services***

*Charles County Commissioners*
Wayne Cooper, President
Edith J. Patterson, Ed.D., V.P.
Reuben B. Collins, II
Samuel N. Graves, Jr.
Gary V. Hodge

Paul W. Comfort, Esq.
County Administrator

**William D. Stephens,**
**Interim Director**

911 Fire EMS Communications
Animal Control
Emergency Medical Services
False Alarm Reduction Unit (FARU)
Homeland Security
Tactical Response Team

May 19, 2008

Mr. Glen Smith
Project Manager
Division of Capital Planning
Maryland Transportation Authority
2310 Broening Highway, Suite 150
Baltimore, Maryland 21224

Re: Nice Bridge Improvement Project

Dear Mr. Smith:

Thank you for the opportunity to review and comment on the various build alternates outlined in your letter of April 28, 2008.

While any improvement to the design and capacity of the Nice Bridge can only work to improve traffic flow and serviceability of the span, I am not professionally qualified to judge as to whether it is more appropriate to rehabilitate the existing bridge or take that span out of service. Therefore, I will limit my comments in that regard, and instead address issues that are critical to the delivery of public safety services in terms of improved emergency surface road and aviation access, as well as timely and efficient movement of the public during emergencies.

The Nice Bridge is considered by Charles County to be a part of our critical infrastructure in that it serves as a major travel route for both the provision and receipt of Fire/EMS mutual aid, and serves as a major north/south evacuation route in response to a wide variety of emergencies or disasters. In recognition of that usage, I ask that your agency work closely with our department during

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CHARLES COUNTY MARYLAND
Where Eagles Fly



the project design and construction phases to identify factors potentially affecting vehicular and aviation access, and to develop contingency plans facilitating both emergency access and evacuation considerations throughout the projects life.

Please contact me if you have any questions, or if you need additional information.

Sincerely,

W. D. Stephens,
Interim Director

Cc: Mr. Paul Comfort, County Administrator
Mr. Chuck Beall, Director, Planning and Growth Management
Mr. Duane Svites, Volunteer County Fire Chief

WDS/wds

COMMONWEALTH of VIRGINIA

Colonel W. S. (Steve) Flaherty
Superintendent

(804) 674-2000

DEPARTMENT OF STATE POLICE

9300 Brook Road, Glen Allen, Virginia 23060

June 3, 2008

Mr. Glen Smith, Project Manager
Division of Capital Planning
Maryland Transportation Authority
2310 Broening Highway, Suite 150
Baltimore, Maryland 21224

Ref: Nice Bridge Improvement Project

Dear Mr. Smith:

Let me start by sending my sincerest thanks to you and your staff for allowing the Virginia State Police and the key public service agencies, impacted by the planned renovations of the Nice Bridge, to provide feedback on proposed construction alternatives. It is always a pleasure to work with agencies that value the input of organizations that deliver services to the motoring public. Your initiation of this open dialogue speaks volumes to the degree of professionalism of you and your staff, as well as that of the Maryland Transportation Authority.

As the Commander of Division One, I requested First Sergeant William C. Blydenburgh, Area Commander of the State Police Office that patrols both Caroline County and King George County, to research this matter and to discuss the proposed construction options with local emergency services representatives. This was completed and based on the information gleaned it would appear that while all concurred that bridge work was needed, there was a consensus that any type of construction would most certainly disrupt the traffic flow in and along the Nice Bridge corridor. However, all players concurred that whatever option is

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chosen that the residual effects can be circumvented through advanced notice and planning. Additionally, those polled agreed the most viable option was Alternate 6 or Alternate 7, as this would alleviate the need to tie in the existing bridge and once completed would provide for better ingress and egress on both the Virginia side, as well as that of Maryland. I should mention here that to fully comprehend the potential impact on traffic this matter will need further research and it is my understanding, based on our earlier conversation, that this is being completed by the Virginia Department of Transportation. It is the suggestion of this office, and all involved, that you maintain contact with this agency, as well as VDOT, to develop a contingency plan that will ensure that delivery of emergency services is not disrupted by whatever construction option your agency chooses.

In closing, I have requested that First Sergeant Blydenburgh maintain continued contact with the individuals polled above as well as the local Virginia Department of Transportation representative so that any and all issues or perceived issues can be addressed either by this office or passed along to you.

I look forward to working with you on this very important endeavor and would like to extend the offer for you or any of your staff to feel free to contact this office at (804) 553-3457 or First Sergeant Blydenburgh at (804) 633-6799 if you should have any questions or need further assistance regarding this matter.

Sincerely,

Steven L. Chumley, Captain
Commander, Division One

SLC/jlb

Cc: First Sergeant William C. Blydenburgh

MDP

Maryland Department of Planning
Maryland Historical Trust

Martin O'Malley
Governor

Anthony G. Brown
Lt. Governor

Richard Eberhart Hall
Secretary

Matthew J. Power
Deputy Secretary

August 29, 2008

Ms. Megan Blum
Environmental Manager
Division of Capital Planning
Maryland Transportation Authority
2310 Broening Highway, Suite 150
Baltimore, MD 21124

Re: The Governor Harry W. Nice Memorial Bridge Improvement Project,
Historic Resources Survey and Determination of Eligibility
Charles County, Maryland

Dear Ms. Blum,

Thank you for providing the Maryland Historical Trust (Trust) with a copy of the *Maryland Historic Resources Survey and Determination of Eligibility Report (Volumes I and II)*. We have reviewed the documentation and are writing to provide comments in accordance with Section 106 of the National Historic Preservation Act and the Maryland Historical Trust Act of 1985, as amended, State Finance and Procurement Article §§ 5A-325 and 5A-326 of the Annotated Code of Maryland.

Volume I of the report provides a project description, discusses the project's research design and includes a thorough historic context. Volume II presents information on the historic resources located within the area of potential effects (APE). Five (5) resources were documented using Determination of Eligibility (DOE) forms, while six (6) resources received DOE Short Forms. An additional ten (10) resources had previous determinations of eligibility within the APE. As a result of the investigations, four (4) resources are eligible for listing in the National Register of Historic Places. Below we present our specific comments on the results of the historic resources survey.

The following resources are **eligible** for listing in the National Register of Historic Places:

- The Governor Harry W. Nice Memorial Bridge (MIHP No. CH-376);
- Potomac River Bridge Administration Building (a contributing resource to MIHP No. CH-376);
- Raven's Crest (MIHP No. CH-164);
- Marshall's Rest (MIHP No. CH-140).

While we agree with the Maryland Transportation Authority (MdTA) that the Raven's Crest property is eligible for listing in the National Register of Historic Places, we are unable to concur with the historic resource boundary. The boundary suggested by MdTA was an arbitrary 0.50 acre lot centered on the dwelling and excluded all other structures and landscape features. We have determined that the entire 155-acre parcel should be considered the historic resource boundary until an appropriate and justified refinement of the boundary can be completed. The larger boundary encompasses the significant riverside setting and conveys the relationship between the farmhouse, fields and Potomac River. The boundary also includes the smokehouse, crib barn, agricultural fields and at least one additional barn not identified in the survey form. For the purposes of MdTA's undertaking, we can proceed with the entire 155-acre boundary through the project planning process.

*100 Community Place • Crownsville, Maryland 21032-2023*
*Telephone: 410.514.7600 • Fax: 410.987.4071 • Toll Free: 1.800.756.0119 • TTY Users: Maryland Relay*
*Internet: www.marylandhistoricaltrust.net*



Also, your documentation lists the Lee Graves (MIHP No. CH-181) as eligible for listing in the National Register of Historic Places. Please note that Lee Graves was determined Not Eligible for listing in the National Register of Historic Places in 1999 as part of the US 301 South Corridor Transportation Study.

We agree with MdTA that the following resources are **not eligible** for listing in the National Register of Historic Places:

- Lower Cedar Point (MIHP No. CH-204);
- Conrad Posey Property (MIHP No. CH-746);
- Old Cedar Point Subdivision (CH-1001);
- Commercial Property at 12165 Rock Point Road;
- Commercial Property at 12179 Rock Point Road;
- Residence at 12155 Crain Highway (US 301);
- Commercial Property at 12190 Crain Highway (US 301);
- Agricultural Outbuilding at 12250 Crain Highway (US 301);

We have not made a determination of eligibility for the Wolleston Manor Historical Marker, for which MdTA prepared a Short Form DOE. As a marker to commemorate the people, events and places of special significance to the State, the Trust does not assess the National Register eligibility of the roadside signage itself. If the undertaking requires the relocation of the historical marker, please contact Nancy Kurtz, administrator of the roadside marker program at nkurtz@mdp.state.md.us or 410-514-7648.

As project planning progresses, please coordinate with our office to assess the effect of the undertaking on historic resources. We trust that the MdTA will carefully examine all prudent and feasible alternatives that avoid adverse effects on historic properties and enable the viable use of the historically significant Harry W. Nice Memorial Bridge. We look forward to working with the MdTA to achieve a safe and efficient crossing that effectively balances project needs and historic preservation issues.

We thank you for your cooperation and assistance and we look forward to assisting you to complete your historic preservation responsibilities for this undertaking. If you have questions or require additional information, please contact Tim Tamburrino at 410-514-7637 or ttamburrino@mdp.state.md.us. Thank you for providing us this opportunity to comment.

Sincerely,

J. Rodney Little
Director/State Historic Preservation Officer

JRL/TJT
200801408
cc: Dennis Simpson (MdTA)
Melissa Williams (MdTA)
Glen Smith (MdTA)
Marc Holma (VA SHPO)
Cathy Hardy (Charles County Department of Planning)

WAYNE COOPER, President
EDITH J. PATTERSON, Ed.D., Vice President
REUBEN B. COLLINS, II
SAMUEL N. GRAVES, Jr.
GARY V. HODGE

PAUL V. COMFORT, Esq.
County Administrator

JOYCE A. SCHMIDT
Chief of Staff

**County Commissioners of Charles County**
P.O. BOX 2150 ◆ LA PLATA, MARYLAND 20646
www.charlescounty.org
(301) 645-0550 ◆ METRO 870-3000 ◆ TOLL FREE (877) 807-8760
TDD 1-800-735-2258 or 7-1-1 ◆ FAX (301) 645-0561

September 16, 2008

The Honorable John D. Porcari
Secretary
Maryland Department of Transportation
7201 Corporate Center Drive
P.O. Box 548, Mail Stop 200
Hanover, MD 21075

Dear Secretary Porcari:

We appreciate the opportunity to present Charles County's transportation priorities for fiscal year 2010, in anticipation of our annual tour meeting with you on October 8, 2008. During the past year we have been working closely with the Maryland Department of Transportation and your modal administrations, and with our elected colleagues from neighboring jurisdictions through the Tri-County Council for Southern Maryland and the Commission to Study Southern Maryland Transportation Needs, to address our significant regional priorities.

In 2007 the Charles County Commissioners conducted a comprehensive review of our transportation needs, resulting in our adoption of the following, which remain the County's highest transportation priorities:

- Construction of a western Bypass of Waldorf, with controlled access, selecting the alignment with the least possible environmental impact on the Mattawoman Creek watershed;





- Construction of a Limited Upgrade of US Route 301 to facilitate traffic flow and relieve congestion at the most critical failing intersections, while minimizing the displacement of existing businesses along the highway; and

- Accelerated Mass Transit Improvements in the U.S. 301/MD 5 corridor, progressing from the definition of a transit corridor alignment and right-of-way preservation, and enhanced commuter bus service, to implementation of feasible high-capacity transit options such Bus Rapid Transit (exclusive bus lanes and grade separation) or Light Rail Transit, and culminating in the establishment of a fixed-rail transit system from Waldorf-White Plains to the Branch Avenue Metrorail Station in Prince George's County.

These remain the top priority transportation projects of Charles County, and have been endorsed by the Tri-County Council for Southern Maryland and the Commission to Study Southern Maryland Transportation Needs. In addition to our top priorities, we have attached a list of the County's additional priorities for the upcoming year, which are presented in categories that correspond to the divisions of MDOT that oversee these activities. These projects are needed to facilitate the ongoing implementation of our long-range comprehensive and sub-area plans. We request your commitment to these transportation system improvements.

The Charles County Commissioners support a comprehensive approach that integrates transportation and land use policy. Through the implementation of the 2006 Comprehensive Plan and the Waldorf Sub-Area Plan, we are working to encourage higher density, transit-oriented, pedestrian-friendly, mixed-use development in the urban core of the Development District that will enable us to focus future growth in Waldorf, and reduce sprawl and suburban development pressures in the County's rural areas. These policies will also support future investment in high capacity public transit. Our planned residential and commercial development densities have been designed to support future rail transit, as well as other alternative modes, including pedestrians and bicycles.

We have initiated a Waldorf Urban Design Study which will provide us with zoning and implementation tools to accomplish these land use objectives. We believe that only by coordinating our transportation priorities with land use decisions in a comprehensive and integrated strategy can we successfully meet our transportation needs for the next generation.

Thank you for your continued cooperation and support. We look forward to working with you and your staff. If you have any questions, please do not hesitate to contact Mr. Chuck Beall, Director of the Department of Planning & Growth Management, at 301-645-0324, or by E-Mail at beallc@charlescounty.org

Secretary Porcari
September 16, 2008
Page Three

Very Truly,

CHARLES COUNTY DELEGATION TO THE MARYLAND GENERAL ASSEMBLY

Thomas M. Middleton
Senator, District 28

Sally Jameson
Delegate, District 28

Murray D. Levy
Delegate, District 28

Peter Murphy
Delegate, District 28

Roy P. Dyson
Senator, District 29

John F. Wood
Delegate, District 29A

COUNTY COMMISSIONERS OF CHARLES COUNTY MARYLAND

Wayne Cooper, President

Edith J. Patterson, Vice President

Reuben B. Collins, II

Samuel N. Graves, Jr.

Gary V. Hodge

Attachment

cc: Mr. Neil Pedersen, SHA
Mr. Paul J. Wiedefeld, MTA
Mr. Glen Smith, MdT
Mr. Wayne Clark, Tri-County Council
Mr. Ray Hancock, Charles County
Mr. Chuck Beall, Charles County
Mr. Jason Groth, Charles County
Ms. Lisa Quill, Charles County

Mayor Gene Ambrogio, Town of La Plata
Mr. Daniel Mesa, Town of La Plata
Mayor Dennis Schessler, Town of Indian Head
Mr. Ryan Hicks, Town of Indian Head

ATTACHMENT 1

**Additional Priority Transportation Improvement Projects**

**STATE HIGHWAY ADMINISTRATION**

**Project Planning Priorities**

1. Initiate a project planning study for the Maryland Route 6 Connector in the Town of La Plata, now that SHA has completed its feasibility study for this project. This roadway would connect existing MD 6 at Willow Lane to U.S. 301, providing additional congestion relief within the Town of La Plata. This project is identified in the U.S. 301 Transportation Study Task Force's Final Report, supported by the U.S. 301 Policy Oversight Committee and included in the ongoing U.S. 301 South Corridor Study. The Maryland Route 6 Connector project has been placed as the County's top project planning study with the understanding that the U.S. Route 301 Waldorf Transportation Project (Waldorf Upgrade/Bypass), is already funded and included in the CTP program.

2. In coordination with Calvert County, we seek the widening of MD 231 to ease increasing levels of congestion. The need for this project is identified as a recommended State highway project in the County's 2006 Comprehensive Plan (Page 5-18). Also, the Maryland 231 project is on the regional transportation priority list prepared by the Regional Infrastructure Advisory Committee of the Tri-County Council for Southern Maryland. We understand that MD 231 is in the National Highway System. It is the only highway linking Charles County with Calvert County.

3. One of the implementation strategies for the 2001 Bryans Road/Indian Head Sub-Area Plan is the development of a new "Town Common" in the vicinity of MD Route 227 and Matthews Road to serve as the centerpiece of a proposed pedestrian-friendly town center for the Bryans Road community. Additional improvements include streetscape enhancements to MD Route 210 within the proposed Town Center. The County is seeking assistance with planning and implementation for this project, both in terms of technical design assistance and project funding.

**SHA District 5 Priorities**

4. Complete planning and design for a streetscape on MD 5 Business in Hughesville, inside the limits of the Hughesville Bypass. The County has completed a Revitalization Plan for the Village of Hughesville and the streetscape is a key element of the revitalization strategy. This streetscape will enhance the revitalization of the village and provide roadway and pedestrian enhancements.

5. Traffic congestion along Leonardtown Road (MD Business Route 5) between U.S. Route 301 and Post Office Road continues to inhibit the efficient movement of vehicles through this section of highway. Gridlock conditions occur during peak hours in this area. We request a re-evaluation of the turning movement queues at the U.S. 301 intersection to better coordinate traffic flows onto eastbound (southeast) Leonardtown Road. Eastbound traffic regularly backs up into the U.S. Route 301 intersection. We also ask that you re-evaluate the traffic signal timing synchronization of the traffic signals between Post Office Road and U.S. Route 301 to ensure maximum efficiency of traffic flows through these intersections. We are currently working with Mr. Dennis German and his project

team for a Community Enhancement project along MD 925 corridor. We appreciate SHA's assistance as we revitalize and improve this corridor of Waldorf.

Also, we are currently working with Mr. Greg Welker, District Engineer to pursue the addition of a turn lane from west-bound MD 5 Business onto northbound MD 925 (Old Washington Road). The property on this corner is currently vacant and would provide a much needed turn lane, further alleviating congestion at Leonardtown Road and Old Washington Road.

6. An additional travel lane is needed, in each direction, to relieve increasing congestion along U.S. 301 from south of Smallwood Drive to south of MD 227. The taper of the 6-lane section of U.S. 301 to 4 lanes south of Smallwood Drive creates increasing back-ups during peak and certain off-peak hours. Evaluation of the synchronization of the four U.S. 301 traffic signals in White Plains may also reduce congestion. These intersections are Billingsley Road, DeMarr Road, Theodore Green Boulevard, and MD 227.

**MARYLAND TRANSPORTATION AUTHORITY (MdTA)**

7. An expansion of the Governor Harry Nice Bridge to 4 lanes, consistent with the southbound and northbound approaches of U.S. 301 to the bridge, is necessary to reduce traffic congestion. This bridge is also a major limiting factor in the path of evacuation from Washington D.C. to points south. Should a natural disaster or an issue of Homeland Security arise, this bridge would create a major bottleneck, with the current two-lane capacity limitation. The County's 2006 Comprehensive Plan recommends increasing the capacity of the bridge to address this issue. Increased traffic capacity of the bridge would improve traffic flow, alleviate congestion, and provide an evacuation route of greater capacity. The Maryland Transportation Authority should accelerate construction of a new bridge as a toll facility, expedite selection of a 4-lane alternate, resolve right-of-way issues in cooperation with the State of Virginia, King George County, and the United States Navy, and start the project engineering phase of the project.

**MARYLAND TRANSIT ADMINISTRATION**

8. The County continues to seek funding for a transfer station for the County's VanGO service needed at the U.S. 301/Smallwood Drive Park and Ride facility. The transfer pavilion would facilitate transfer operations for the local transit system, minimizing confusion for passengers and providing an area for information services and convenience facilities for drivers. Additionally, the separation of local transfer operations from park and ride vehicles will improve safety and coordination between the two transit systems. We also continue to seek an increase of State funding to sustain existing operations.

9. Provide funding for new VanGo service in the Indian Head/Bryans Road area. Additional service frequency and coverage is required to minimize ride durations and make public transit a feasible alternative for individuals without access to an automobile who are seeking employment and transportation to work.

10. Provide funding for GPS systems on the transit vehicles to help track and monitor operations and provide greater responsiveness and service to riders.

11. Continue to implement the recommendations of the "MD 5/ US301/ MD228 Corridors Park and Ride Feasibility Study-Site Identification Report," October 2001. This report identifies locations for new park and ride facilities. New facilities in proximity to proposed transit stations and existing rail lines within Charles County are necessary to meet the growing demand for VanGO and commuter bus service guiding. In an effort to secure additional Park and Ride Facilities, Charles County is working with developers to secure additional Park and Ride lots through the Transit Oriented Development (TOD) Zone in the northern portion of Waldorf, fronting US 301. A portion of this site may also serve as a future light rail station.

Charles County eagerly anticipates the construction of the MD 925(Old Washington Road)/Smallwood Drive Park and Ride facility to alleviate overcrowded conditions at the US 301/Smallwood Drive Park and Ride lot. In addition to this planned new facility, the County continues to seek additional Park and Ride facilities to accommodate our growing number of commuter bus riders, as well as potential future rail station locations. As the fastest growing commuter bus system in the State, and realizing the escalating price of fuel, we continue to seek additional Park and Ride lots to facilitate the growth of this vital transit service.

12. As a result of the growth of the MTA Commuter Bus System and the associated issues raised by the riders, the Charles County Commissioners formed a Commuter Bus Advisory Group in early 2007. The Advisory Group conducted a bus rider survey of all bus routes in Southern Maryland to identify and evaluate the needs and concerns of passengers utilizing the service. Based on the overwhelming response to the survey, the predominant concern was the need for more commuter bus services, including more buses, more trips per day, and an expansion of the routes. The Advisory Group is currently finalizing their report, which we intend to share with MTA upon completion. The Commissioners wish to work cooperatively with MTA to enhance this rapidly growing service, and promote transit services through our forthcoming land use policies that seek to increase density in the urban core of Waldorf.

13. Charles County also seeks accelerated implementation of MTA's "Transit Service Staging Plan," the identification of a transit alignment in the U.S. 301/MD 5 corridor, and the preservation of right-of-way in the defined transit corridor. The Tri-County Council for Southern Maryland, the Commission to Study Southern Maryland Transportation Needs, the Prince George's County Council, and the Boards of County Commissioners of the three Southern Maryland counties have all endorsed the accelerated implementation of high-capacity transit services in the U.S. 301/MD 5 corridor, from White Plains to the Branch Avenue Metrorail Station. The Tri-County Council for Southern Maryland has identified this project as a top regional priority. We support light rail transit as a long-standing priority of the County and the region, and look forward to working with MTA to implement transit solutions for Charles County and Southern Maryland.

COMMONWEALTH of VIRGINIA

L. Preston Bryant, Jr.
Secretary of Natural Resources

**Department of Historic Resources**
2801 Kensington Avenue, Richmond, Virginia 23221-0311

Kathleen S. Kilpatrick
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
TDD: (804) 367-2386
www.dhr.virginia.gov

17 September 2008

Ms Megan Blum
Maryland Transportation Authority
2310 Broening Highway
Suite 150
Baltimore, Maryland 21224

Re: Archaeological Phase IA Memorandum for the Governor Harry W. Nice Memorial Bridge Improvement Project
King George County, Virginia
DHR File # 2006-1393

Dear Ms Blum:

We have received for our review and comment the report titled "Governor Harry W. Nice Memorial Bridge Improvement Project, Virginia Archeological Phase IA Memorandum" prepared by A.D. Marble & Company and the Maryland Transportation Authority.

Due to the potential for intact subsurface remains, we recommend that a Phase I archaeological survey be conducted for the preferred alignment to include areas of construction-related activities such as buried utilities, staging areas, and borrow sites. The survey must be conducted by a qualified archaeologist in accordance the *Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines* (48 FR 44716-42) and the Virginia SHPO's *Guidelines for Conducting Cultural Resource Survey in Virginia* (rev. 2003) or subsequent revisions and changes to this document. Two bound archival copies of the resulting report should be submitted to our office for review and approval prior to any ground disturbance. Once we have the results of the survey, we will be able to advise you whether any further investigations are warranted.

If you have any questions regarding our comments, please call me at (804) 367-2323, Ext. 114.

Sincerely,

Marc Holma, Manager
Office of Review and Compliance

Administrative Services
10 Courthouse Avenue
Petersburg, VA 23803
Tel: (804) 863-1624
Fax: (804) 862-6196

Capital Region Office
2801 Kensington Ave.
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391

Tidewater Region Office
14415 Old Courthouse Way, 2nd Floor
Newport News, VA 23608
Tel: (757) 886-2807
Fax: (757) 886-2808

Roanoke Region Office
1030 Penmar Ave., SE
Roanoke, VA 24013
Tel: (540) 857-7585
Fax: (540) 857-7588

Northern Region Office
5357 Main Street
PO Box 519
Stephens City, VA 22655
Tel: (540) 868-7031
Fax: (540) 868-7033

MDP

*Maryland Department of Planning*
*Maryland Historical Trust*

*Martin O'Malley*
*Governor*

*Anthony G. Brown*
*Lt. Governor*

*Richard Eberhart Hall*
*Secretary*

*Matthew J. Power*
*Deputy Secretary*

November 14, 2008

Ms. Megan W. Blum, Environmental Manager
Capital Planning Division
Maryland Transportation Authority
2310 Broening Highway
Suite 150
Baltimore, MD 21224

Re: US 301 / Governor Harry W. Nice Memorial Bridge Improvement Project
Charles County, Maryland

Dear ~~Ms Blum~~ Megan:

Thank you for your recent letter, dated 16 October 2008 and received by the Maryland Historical Trust (Trust) on 17 October 2008, regarding the above-referenced project. The letter included revised copies of the Maryland Transportation Authority's (MdTA) *Maryland Archeological Phase IA Memorandum*. The Trust reviewed the submitted materials pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended and the Maryland Historical Trust Act of 1985 as amended, State Finance and Procurement Article §§ 5A-325 and 5A-326 of the Annotated Code of Maryland. We offer the following comments

Trust staff examined the following technical memorandum provided with your submittal: *Maryland Archeological Phase IA Memorandum, Governor Harry W. Nice Bridge Improvement Project, Charles County, Maryland, King George County, Virginia* [MdTA October 2008 (Revised)]. The revised document adequately addresses the Trust's comments (dated 12 March 2008) on the draft memorandum and we concur with its conclusions and recommendations. We await further coordination with MdTA regarding the schedule for conducting the archeological studies and request copies of the scope(s) of work for the terrestrial and underwater surveys for review and comment, as project planning proceeds. For the underwater work, the Trust typically recommends a fifty foot lane spacing and use of side-scan sonar, magnetometer, and sub bottom profiler to ensure adequate survey coverage. We understand that the archeological work will need to be coordinated with appropriate investigations to address unexploded ordinance issues in the survey areas.

If you have questions or need further assistance, please contact Tim Tamburrino at 410-514-7637 / ttamburrino@mdp.state.md.us or me at 410-514-7631 / bcole@mdp.state.md.us. Thank you for providing us this opportunity to comment.

Sincerely,

Beth Cole

Beth Cole
Administrator, Project Review and Compliance

EJC/ 200803506

*100 Community Place • Crownsville, Maryland 21032-2023*
*Telephone: 410.514.7600 • Fax: 410.987.4071 • Toll Free: 1.800.756.0119 • TTY Users: Maryland Relay*
*Internet: www.marylandhistoricaltrust.net*

**CHARLES COUNTY GOVERNMENT**
Planning and Growth Management

MELVIN C. BEALL, JR., P.E., *Director*

CHARLES COUNTY MARYLAND
Where Eagles Fly

June 6, 2008

Ms. Megan Blum
Environmental Manager
Division of Capital Planning
Maryland Transportation Authority
2310 Broening Highway
Suite 150
Baltimore, MD 21224

Dear Ms. Blum,

Our office received your May 5th, 2008 letter and materials regarding the Nice Bridge Improvement Project. We would like to thank you for the opportunity to review and comment on this project.

We have reviewed Volume I and II of the Maryland Historical Resources Survey and Determination of Eligibility Report and concur with the determinations of eligibility for the historic resources mentioned in the report. However, Pasquahanza (CH-32), one of the four previously identified properties has not been evaluated for eligibility for listing on the National Register of Historic Places. Charles County Planning Staff feels that this site may be eligible for listing on the National Register of Historic Places. Therefore, we would like to request that this site be formally evaluated to determine if it is eligible for listing on the National Register.

Thank you again for the opportunity to review and comment on this project. We look forward to working with you to ensure that Charles County historic resources are minimally impacted by this project.

Sincerely,

Cathy Hardy
Community Planning Program Manager

cc: Beth Cole, Maryland Historical Trust

SAY NO TO DRUGS
Post Office Box 2150 * La Plata, Maryland 20646
Administration: (301) 645-0627 * Capital Services: (301) 645-0621 * Development Services (301) 645-0618 / (301) 870-3937
Permits: (301) 645-0692 / (301) 870-3935 * Planning: (301) 645-0689 / (301) 645-0540 / (301) 870-3896
TDD Transfer Number for the Hearing Impaired: 1-800-735-2258
www.charlescounty.org/pgm
*EQUAL OPPORTUNITY COUNTY*

Apr 14. 2008 8:38AM Town of Colonial Beach No. 5618 P. 2

Nice Bridge Improvement Project
Charles County, Maryland
King George County, Virginia
Section 106 Consulting Party Response Form

TO: Maryland Transportation Authority
2310 Broening Highway, Suite 125
Baltimore MD 21224
**Attention:** Ms. Megan Blum, Environmental Manager

FROM: ~~Mayor George W. Bono, Jr.~~
TOWN OF COLONIAL BEACH
18 N. Irving Avenue
Colonial Beach, VA 22443

Telephone/Fax Numbers: ~~804-224-7181~~
~~804-224-7185~~

X Yes, my organization would like to be a consulting party in the Section 106 process for the Nice Bridge Improvement Project. My organization, ~~TOWN OF COLONIAL BEACH~~ will be represented by ~~LINDA CRANDELL~~. (Please indicate below the mailing address and phone number of the representative if different than the above.)

___ No, my organization does not wish to participate as a consulting party for the Nice Bridge Improvement Project.

**Individual's or Organization's Demonstrated Interest**
*Please Check Appropriate Box(es)*
☐ 1. legal interest
☒ 2. economic interest
☐ 3. historic property(s) concerns

Do you know of another potential consulting party for this project?
Please list name and phone number below.

Received Time Apr 11. 9:29AM

Nice Bridge Improvement Project
Charles County, Maryland
King George County, Virginia
Section 106 Consulting Party Response Form

TO: Maryland Transportation Authority
2310 Broening Highway, Suite 125
Baltimore MD 21224
**Attention:** Ms. Megan Blum, Environmental Manager

FROM: STEVE WALKER
P.O. BOX 89
COLES POINT, VA 22442

Telephone/Fax Numbers: 804 472 3291

✓ Yes, my organization would like to be a consulting party in the Section 106 process for the Nice Bridge Improvement Project. My organization, NORTHERN NECK OF VIRGINIA HISTORICAL SOC. will be represented by STEVE WALKER. (Please indicate below the mailing address and phone number of the representative if different than the above.)

____ No, my organization does not wish to participate as a consulting party for the Nice Bridge Improvement Project.

**Individual's or Organization's Demonstrated Interest**
*Please Check Appropriate Box(es)*

- ☐ 1. legal interest
- ☒ 2. economic interest (TOURISM)
- ☒ 3. historic property(s) concerns

Do you know of another potential consulting party for this project?
Please list name and phone number below.

_____

_____

_____

Nice Bridge Improvement Project
Charles County, Maryland
King George County, Virginia
Section 106 Consulting Party Response Form

TO: Maryland Transportation Authority
2310 Broening Highway, Suite 125
Baltimore MD 21224
**Attention:** Ms. Megan Blum, Environmental Manager

FROM: Maryland Commission on Indian Affairs
301 W. Preston Street, Suite 1500
Baltimore, Md 21201

Telephone/Fax Numbers: 410-767-7631
410-333-7142

X Yes, my organization would like to be a consulting party in the Section 106 process for the Nice Bridge Improvement Project. My organization, MCIA will be represented by E. Keith Colston. (Please indicate below the mailing address and phone number of the representative if different than the above.)

____ No, my organization does not wish to participate as a consulting party for the Nice Bridge Improvement Project.

**Individual's or Organization's Demonstrated Interest**
*Please Check Appropriate Box(es)*

- ☒ 1. legal interest
- ☒ 2. economic interest
- ☒ 3. historic property(s) concerns

Do you know of another potential consulting party for this project?
Please list name and phone number below.

_____

_____

_____

Nice Bridge Improvement Project
Charles County, Maryland
King George County, Virginia
Section 106 Consulting Party Response Form

TO: Maryland Transportation Authority
2310 Broening Highway, Suite 125
Baltimore MD 21224
**Attention:** Ms. Megan Blum, Environmental Manager

FROM: Beth Clark
Planner II, Community Planning
Charles Co. Gov't.

Telephone/Fax Numbers: T: 301-645-0684
F: 301-645-0638

✓ Yes, my organization would like to be a consulting party in the Section 106 process for the Nice Bridge Improvement Project. My organization, Charles County Planning will be represented by Cathy Hardy *. (Please indicate below the mailing address and phone number of the representative if different than the above.)

____ No, my organization does not wish to participate as a consulting party for the Nice Bridge Improvement Project.

**Individual's or Organization's Demonstrated Interest**
*Please Check Appropriate Box(es)*
- ☐ 1. legal interest
- ☐ 2. economic interest
- ☐ 3. historic property(s) concerns

Do you know of another potential consulting party for this project?
Please list name and phone number below.

* Cathy Hardy, Community Planning Program Manager
Department of Planning & Growth Management
P.O. Box 2150
La Plata, MD 20646
301-396-5815
hardyc@charlescountymd.gov

Nice Bridge Improvement Project
Charles County, Maryland
King George County, Virginia
Section 106 Consulting Party Response Form

TO: Maryland Transportation Authority
2310 Broening Highway, Suite 125
Baltimore MD 21224
**Attention:** Ms. Megan Blum, Environmental Manager

FROM: King George County Planning Commission
c/o Jack Green, AICP
Director of Community Development
10459 Courthouse Drive, 104
King George VA 22485

Telephone/Fax Numbers: 540 775 7111
540 775 3189

X Yes, my organization would like to be a consulting party in the Section 106 process for the Nice Bridge Improvement Project. My organization, King George County Planning will be represented by Jack Green. (Please indicate below the mailing address and phone number of the representative if different than the above.)

____ No, my organization does not wish to participate as a consulting party for the Nice Bridge Improvement Project.

**Individual's or Organization's Demonstrated Interest**
*Please Check Appropriate Box(es)*
- ☑ 1. legal interest
- ☑ 2. economic interest
- ☑ 3. historic property(s) concerns

Do you know of another potential consulting party for this project?
Please list name and phone number below.

PLANCHEK INC.

April 2, 2008

Dear Ms Blum,

I received a letter from you dated March 27, 2008 extending an invitation to participate as a consulting party in the section 106 process for the project referenced above. I hereby make that request.

My professional background, involvement with the Maryland Historic Trust, in addition to owning a historic home near the project site, provides me with the experience and interest that will positively enhance the development process of this needed improvement.

In addition to participating with the Maryland Historic Trust for the past 20 years, I own a company, Planchek, Inc., that is contracted with Charles County government. Planchek provides plan review services for the issuance of building permits in Charles County. Additionally, we provide inspection services for Charles County to verify compliance with the buildings codes – residential and commercial. We have performed these services to Charles County since 1994. Prior to that venture, my wife and I operated an Architectural firm in the county.

My personal residence, Edge Hill Farm, is a property listed in the Maryland Historic Trust. Edge Hill Farm is located near the project site.

Please advise me of your decision in this matter in a timely manner so that I may adjust my schedule accordingly.

Thank you, for extending this offer to me and I look forward to hearing from you.

Sincerely,

David Rose, president
Planchek, Inc.,

Former President - Charles County Chapter of the Maryland Historic Trust

301-870-8710 / 240-210-4872

PLANCHEK, INC.
6C Industrial Park Drive
Waldorf, MD 20602 • 301-645-3302

Nice Bridge Improvement Proje
Charles County, Maryland
King George County, Virginia
Section 106 Consulting Party Respons

Theresa Gullion 4/17
SEC. 106
ECON DEV't AUTH'TY
(for B. David)
Interior
went into that comes
out of the group
but don't need to
participate directly
540. 775 8524

TO: Maryland Transportation Authority
2310 Broening Highway, Suite 125
Baltimore MD 21224
**Attention:** Ms. Megan Blum, Environmental Ma

FROM: King George County Planning Comm
c/o Jack Green, AICP
Director of Community Development
10459 Courthouse Drive, 104
King George, VA 22485

Telephone/Fax Numbers: 540 775 7111
540 775 3189

X Yes, my organization would like to be a consulting party in the Section 106 process for the Nice Bridge Improvement Project. My organization, King George County Planning will be represented by Jack Green. (Please indicate below the mailing address and phone number of the representative if different than the above.)

____ No, my organization does not wish to participate as a consulting party for the Nice Bridge Improvement Project.

**Individual's or Organization's Demonstrated Interest**
*Please Check Appropriate Box(es)*

- ☑ 1. legal interest
- ☑ 2. economic interest
- ☑ 3. historic property(s) concerns

Do you know of another potential consulting party for this project?
Please list name and phone number below.

**DEPARTMENT OF THE NAVY**
NAVAL SUPPORT ACTIVITY SOUTH POTOMAC
6509 SAMPSON ROAD STE 217
DAHLGREN, VIRGINIA 22448-5108

IN REPLY REFER TO
5090
Ser 00/084
APR 0 3 2009

Ms. Megan Blum
Capital Planning Division
Maryland Transportation Authority
2310 Broening Highway, Suite 125
Baltimore, MD 21224

Dear Ms. Blum:

This letter is to follow up the meeting minutes of February 17, 2009 and to provide additional comments for the Maryland Transportation Authority's (Authority's) preliminary Environmental Assessment/Section 4(f) Evaluation for the Governor Harry W. Nice Memorial Bridge (Nice Bridge) Improvement Project. Additional information in support of previous comments provided by Navy to the Authority (Letter Ser 00/268 dtd 17 Dec 08) is presented below for inclusion into the Environmental Assessment:

1. Comment: *c. Page S-6, Section E.2: The impacts to "property owned by the Federal Government (Naval Support Facility Dahlgren)" from Alternates 2, 3, and 6 are mentioned without elaboration.*

Comment: *(1) Unique and essential national and defense research capabilities are housed in an exclusive building adjacent to the proposed Nice Bridge Expansion. The fence line may not be moved closer to these operations without jeopardizing this military mission. Relocating these unique mission capabilities is not practicable.*

Additional Information: The Navy performs research, development, test and evaluation (RDT&E) operations critical to the defense of Sailors, ships, facilities and infrastructure. The unique mission capabilities located at Naval Support Facility (NSF) Dahlgren, VA and operated by the Naval Surface Warfare Center Dahlgren Division (NSWCDD) must meet or exceed requirements provided in the Balanced Survivability Assessment (BSA) criteria. These assessments are conducted by the Defense Threat Reduction Agency (DTRA). An assessment utilizing the BSA criteria emphasizes the standoff distance between the Nice Bridge and the multiple unique and critical facilities located at NSF Dahlgren cannot be decreased.



Also, an assessment states that NSWCDD must work with the installation host command, Naval Support Activity South Potomac, to avoid future encroachment on the site of these unique and critical facilities.

Special facilities and equipment critical to the Navy's mission may not be encroached upon and are not able to be replicated or relocated at NSF Dahlgren.

Any relocation of the existing installation perimeter fence line south of its current position will significantly reduce the safe standoff distance for nine major operational, test and administrative facilities and approximately 1,300 employees who work in this area of the installation. The easiest and least costly opportunity for achieving the appropriate levels of protection for military facilities against external threats is to incorporate sufficient standoff distance from the installation perimeter fence line.

2. Comment: *f. Page III-1a/II, Military Facilities: States that Alternate 6, the largest footprint for construction, would require 5.42 acres of ROW from NSF Dahlgren. Alternates 2 and 3 would require less than 5 acres of ROW. The last sentence in the second paragraph states, "None of these alternates would impact any buildings associated with this facility, however, each would impact circulation roads and fencing located within the base." The EA incorrectly concludes that none of the three alternates would impact NSF buildings.*

*The fact is that the required ROW for Alternates 2, 3 and 6 would reduce the existing clear zone and bring Building 1480 that much closer to a public right of way. The EA must recognize the diminution of the security zone resulting from Alternates 2, 3 and 6 as a substantial and direct impact on the NSF Dahlgren community, and consider the impacts on building, personnel, supportive infrastructure/facilities and operations relative to the de minimis impact on neighboring Section 4(f) resources - Barnesfield and Wayside Parks. Additionally, please refer to impacts described in c. paragraph (1) above.*

Additional Information: The Navy performs research, development, test and evaluation (RDT&E) operations critical to the defense of Sailors, ships, facilities and infrastructure.

5090
Ser 00/084
APR 03 2009

Special facilities and equipment critical to the Navy's mission may not be encroached upon and are not able to be replicated or relocated at NSF Dahlgren.

3. Comment: *(2) Direct Effects: During construction, Alternates 2, 3 and 6 would place construction workers and equipment closer to the installation fence line and property than would Alternates 4, 5 and 7. The EA should recognize and weigh this security issue.*

Additional Information: See first comment.

4. *1. Page V-16, Section 4(f) Evaluation: The first paragraph discusses possible land use impacts from relocating US 301 south of existing bridge: "Land use is less likely to be impacted in Virginia because the relocated portion of US 301 would pass through Naval Support Facility Dahlgren." Though relocation is not considered feasible, hence not in the ARDS, the statement appears to suggest that land use impacts on a military installation are weighed less than similar impacts on other communities. Recommend the statement above be deleted or modified consistent with fourth paragraph conclusion that impact on NSF Dahlgren would be "extraordinary."*

Additional Information: See first comment.

We remain available for further discussion regarding the Nice Bridge improvement project and potential impacts to NSF Dahlgren's infrastructure and mission capabilities. Feel free to contact my Public Affairs Officer, Mr. Gary Wagner, at (540) 653-8153 for further information or coordination.

Sincerely,

C. T. HANFT
Captain, U.S. Navy
Commanding Officer

Copy to:
Commandant, Naval District Washington

3

**Revised: June 10, 2005**
**State Highway Administration - Office of Real Estate**

# SUMMARY OF THE RELOCATION ASSISTANCE PROGRAM OF THE MARYLAND STATE HIGHWAY ADMINISTRATION

All State Highway Administration projects utilizing Federal funds must comply with the provisions of the Uniform Relocation and Real Property Acquisition Policies Act of 1970 (42 USC 4601) as amended by Title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (Public Law 100-17), Public Law 105-117 in 1997, and Title 49 CFR Part 24 in 2005. State-funded projects must comply with Sections 12-112 and Subtitle 2, Sections 12-201 to 12-212, of the Real Property Article of the Annotated Code of Maryland.

The State Highway Administration's Office of Real Estate administers the Relocation Assistance Program for the Maryland Department of Transportation.

The aforementioned Federal and State laws require that the State Highway Administration provide relocation assistance payments and advisory services to eligible persons who are displaced by a public project. There are two categories of residential occupants: 180-day owner-occupants and 90-day tenants and short-term owner-occupants. Non-residential occupants may be businesses, farms or non-profit organizations.

A displaced person that has owned and occupied a subject dwelling for at least 180 days prior to the initiation of negotiations for the property may receive a replacement housing payment of up to $22,500. The replacement housing payment is composed of three parts: a purchase price differential; an increased mortgage interest differential; and reimbursement for incidental settlement expenses.

The purchase price differential is the difference between the value paid by the State Highway Administration for the existing dwelling and the cost to the displaced owner of a comparable replacement dwelling, as determined by the State's replacement housing study.

The increased mortgage interest differential is a payment made to the owner at the time of settlement on the replacement dwelling to negate the effects of less favorable financing in the new situation. The payment is calculated by use of the "buy-down" mortgage method.

Reimbursable incidental expenses are necessary and reasonable incidental costs that are incurred by the displaced person in purchasing a replacement dwelling, excluding pre-paid expenses such as real estate taxes and insurance. The maximum reimbursable amount for these incidental expenses is based upon the cost of the comparable selected in the replacement housing study.

A displaced person who has leased and occupied a subject dwelling for at least 90 days prior to the initiation of negotiations for the property may receive a replacement rental housing payment of up to $5,250. The replacement rental housing payment is the difference between the monthly cost of housing for the subject dwelling, plus utilities, and the monthly cost of housing

for a comparable replacement rental unit, plus utilities, over a period of 42 months. Owner-occupants of 90-179 days prior to the initiation of negotiations for the subject dwelling are eligible for the same replacement rental housing payments as tenants.

As an alternative to renting, a displaced tenant-occupant may elect to apply the rental replacement housing eligibility amount toward the down payment needed to purchase a replacement dwelling.

The comparable properties used in calculating any replacement housing payment eligibility must comply with all local standards for decent, safe and sanitary (DS&S) housing and be within the financial means of the displaced person.

If affordable, comparable DS&S replacement housing cannot be provided within the statutory maximums of $22,500 for 180-day owner-occupants or $5,250 for 90-day tenants or short-term owners, the maximums may be exceeded on a case-by-case basis. This may only be done after the completion and approval of a detailed study that documents the housing problem, explores the available replacement options and selects the most feasible and cost-effective alternative for implementation.

In addition, eligible displaced residential occupants may be reimbursed for the expense of moving personal property up to a maximum distance of fifty (50) miles, using either an actual cost or fixed schedule method.

Actual cost moves are based upon the lower of at least two commercial moving estimates and must be documented with receipted bills or invoices. Other incidental moving expenses, such as utility reconnection charges, may also be paid in the same manner.

As an alternative method, the fixed schedule move offers a lump sum, all-inclusive payment based upon the number of rooms to be moved. Other incidental costs are not separately reimbursable with this method.

Non-residential displaced persons such as businesses, farms or non-profit organizations may also receive reimbursement for the expense of relocating and re-establishing operations at a replacement site on either an actual cost or fixed payment basis.

Under the actual cost method, a non-residential displaced person may receive reimbursement for necessary and reasonable expenses for moving its personal property, the loss of tangible personal property that is not moved, the cost of searching for a replacement site and a re-establishment allowance of up to $10,000.

The actual reasonable moving expenses may be paid for a move by a commercial mover or for a self-move. Payments for the actual reasonable expenses are limited to a 50-mile radius unless the State determines a longer distance is necessary. The expenses claimed for actual cost moves must be supported by firm bids and receipted bills. An inventory of the items to be moved must be prepared in all cases. In self-moves, the State will negotiate an amount for payment, usually lower than the lowest acceptable bid. The allowable expenses of a self-move may include amounts paid for equipment hired, the cost of using the business vehicles or equipment, wages paid to persons who participate in the move, the cost of actual supervision of

the move, replacement insurance for the personal property moved, costs of licenses or permits required and other related expenses.

In addition to the actual moving expenses mentioned above, the displaced business is entitled to receive a payment for the actual direct losses of tangible personal property that the business is entitled to relocate but elects not to move. These payments may only be made after an effort by the owner to sell the personal property involved. The costs of the sale are also reimbursable moving expenses.

If the business elects not to move or to discontinue the use of an item, the payment shall consist of the lesser of: the fair market value of the item for continued use at the displacement site, less the proceeds from its sale; or the estimated cost of moving the item.

If an item of personal property which is used as part of a business or farm operation is not moved and is promptly replaced with a substitute item that performs a comparable function at the replacement site, payment shall be the lesser of: the cost of the substitute item, including installation costs at the replacement site, minus any proceeds from the sale or trade-in of the replaced item; or the estimated cost of moving and reinstalling the replaced item.

In addition to the moving payments described above, a business may be eligible for a payment up to $10,000 for the actual reasonable and necessary expenses of re-establishing at the replacement site. Generally, re-establishment expenses include certain repairs and improvements to the replacement site, increased operating costs, exterior signing, advertising the replacement location, and other fees paid to re-establish. Receipted bills and other evidence of these expenses are required for payment. The total maximum re-establishment payment eligibility is $10,000.

In lieu of all moving payments described above, a business may elect to receive a fixed payment equal to the average annual net earnings of the business. This payment shall not be less than $1,000 nor more than $20,000. In order to be entitled to this payment, the State must determine that the business cannot be relocated without a substantial loss of its existing patronage; the business is not part of a commercial enterprise having more than three other establishments in the same or similar business that are not being acquired; and the business contributes materially to the income of a displaced owner during the two taxable years prior to the year of the displacement. A business operated at the displacement site solely for the purpose of renting to others is not eligible. Considerations in the State's determination of loss of existing patronage are the type of business conducted by the displaced business and the nature of the clientele. The relative importance of the present and proposed locations to the displaced business and the availability of suitable replacement sites are also factors.

In order to determine the amount of the "in lieu of" moving expense payment, the average annual net earnings of the business is to be one-half of the net earnings before taxes during the two taxable years immediately preceding the taxable year in which the business is relocated. If the two taxable years are not representative, the State may use another two-year period that would be more representative. Average annual net earnings include any compensation paid by the business to the owner, owner's spouse, or dependents during the period. Should a business be in operation less than two years, the owner of the business may still be eligible to receive the "in lieu of" payment. In all cases, the owner of the business must

provide information to support its net earnings, such as income tax returns, or certified financial statements, for the tax years in question.

Displaced farms and non-profit organizations are also eligible for actual reasonable moving costs up to 50 miles, actual direct losses of tangible personal property, search costs up to $2,500 and re-establishment expenses up to $10,000 or a fixed payment "in lieu of" actual moving expenses of $1,000 to $20,000. The State may determine that a displaced farm may be paid a minimum of $1,000 to a maximum of $20,000 based upon the net income of the farm, provided that the farm has been relocated or the partial acquisition caused a substantial change in the nature of the farm. In some cases, payments "in lieu of" actual moving costs may be made to farm operations that are affected by a partial acquisition. A non-profit organization is eligible to receive a fixed payment or an "in lieu of" actual moving cost payment, in the amount of $1,000 to $20,000 based on gross annual revenues less administrative expenses.

A more detailed explanation of the benefits and payments available to displaced persons, businesses, farms and non-profit organizations is available in the brochure entitled, "Relocation Assistance – Your Rights and Benefits," that will be distributed at the public hearing for this project and be given to all displaced persons.

Federal and State laws require that the State Highway Administration shall not proceed with any phase of a project which will cause the relocation of any persons, or proceed with any construction project, until it has furnished satisfactory assurances that the above payments will be provided, and that all displaced persons will be satisfactorily relocated to comparable decent, safe and sanitary housing within their financial means, or that such housing is in place and has been made available to the displaced persons.

In addition, the requirements of Public Law 105-117 provides that a person who is an alien and is not lawfully present in the United States shall not be eligible for relocation payments or other assistance under the Uniform Act. It also directed all State displacing agencies that utilize Federal funds in their projects to implement procedures for compliance with this law in order to safeguard that funding. To this end, displaced persons will be asked to certify to their citizenship or alien status prior to receiving payments or other benefits under the Relocation Assistance Program.

# DRAFT COMPENSATORY MITIGATION PLAN

*Governor Harry W. Nice Memorial Bridge Improvement Project*

**July 2009**

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## APPENDICES

**Appendix 1**. Unified Stream Methodology Data Forms
**Appendix 2**. Wetland Mitigation Site Evaluation Worksheet

## I. EXECUTIVE SUMMARY

The Maryland Transportation Authority (Authority) prepared this Draft Compensatory Mitigation Plan (CMP) in accordance with the Final Rule on Compensatory Mitigation for Losses of Aquatic Resources (33 U.S.C 332). Currently, seven potential bridge alternates exist. In Maryland, the greatest impact alternate includes impacts to 0.70 acre of tidal open waters, 0.08 acre of wetland, 353 lf of stream and temporary impacts to 88.5 acres of open waters. In Virginia, the greatest impact alternate includes impacts to 0.57 acre of wetland and 3,366 lf of stream. Compensation for the impacted wetland and stream resources would occur through permittee provided mitigation in Maryland and mitigation banking in Virginia. Therefore, the CMP includes no mitigation discussion for Virginia resources.

A wetland mitigation site search in Maryland focused on locating a mitigation site within the same watershed as the Nice Bridge (i.e. the Lower Potomac Tidal Watershed). The mitigation site needed to fulfill specific characteristics including low-lying farmlands adjacent to existing marsh and/or eroding shoreline. The Authority identified 23 sites that met these requirements. The property owners from these sites were contacted and the sites were visited. This resulted in identifying five preferred mitigation sites. A site tour of the five preferred sites with Federal and State Resource Agencies resulted in a preferred *type* of mitigation and a *ranking preference* for the sites. The Authority developed Performance Standards for *tidal marsh creation* and *shoreline stabilization*, and established guidelines for short and long-term monitoring and management to ensure that regulatory requirements are met for mitigation site success.

## II. INTRODUCTION

The Maryland Transportation Authority (Authority) is conducting a project planning study to evaluate improvements to the Governor Harry W. Nice Memorial Bridge (Nice Bridge). The Nice Bridge Improvement Project was initiated in 2006 and is currently in the alternate development and environmental analysis stage. During this stage, the proposed alternates are evaluated to determine their potential impacts on the surrounding environment. The purpose of this report is to propose compensatory mitigation for impacts to wetlands and waterways that would occur during construction. The Authority prepared this Draft Compensatory Mitigation Plan (CMP) in accordance with the Final Rule on Compensatory Mitigation for Losses of Aquatic Resources (33 U.S.C 332).

### A. Project Description and Background

The Nice Bridge opened in December 1940 and was originally called the Potomac River Bridge. Located along US 301 between Charles County, Maryland and King George County, Virginia, it was the first bridge to provide direct roadway access from Maryland into Virginia, south of Washington, D.C. The bridge is a toll facility owned and maintained by the Authority, and is 1.7 miles in length. An estimated 6.7 million vehicles traveled the Nice Bridge in 2006. The average weekend daily traffic count was 20,800 vehicles in 2006.

The Nice Bridge project area (***Figure 1***) extends from just north of MD 234 in Charles County, MD to just east of Route 206 in King George County, Virginia along US 301, and extends 3,000 feet upstream and downstream of the current structure.

## B. Purpose and Need

The purpose of the Nice Bridge Improvement Project is to address existing and future traffic conditions related to congestion, safety, and operations in the vicinity of the Nice Bridge. The existing two-lane bridge consists of 11-foot travel lanes and a one-foot offset to the barrier (parapet wall), and lacks a median separation and shoulders. This creates a bottleneck resulting in consistent traffic congestion and an increased risk of crashes.

Traffic patterns crossing the bridge are also affected by wide-load vehicles, maintenance activities, and the steep incline of the bridge. Due to the 11-foot lanes and lack of shoulders, the existing bridge is temporarily closed in one direction while the wide-load vehicles cross. Furthermore, the narrow width of the existing bridge requires partial or full closures of the roadway during bridge maintenance activities. The steep vertical grade of the bridge also contributes to traffic congestion because heavy trucks traveling on southbound US 301 are often unable to accelerate sufficiently up the grade of the bridge after leaving the toll plaza. Therefore, the trucks travel at lower speeds than the posted speed limit, which reduces the average speed and capacity of traffic on the Nice Bridge.

# III. IMPACTS TO NATURAL RESOURCES

The proposed build alternates would result in unavoidable impacts to state and federally regulated aquatic resources. Tidal open waters of the Potomac River, nontidal wetlands and streams would be impacted.

## A. Existing Natural Resources

An assessment of regulated resources within the project area was conducted to understand and quantify the potential impacts of the Nice Bridge Improvement Project as follows:

***Maryland Resource Assessments***

- *Waters of the United States Identification and Delineation Report: US 301 Nice Bridge Toll Plaza Improvements, Charles County, Maryland*, June 1, 2006.
- Functional Assessment conducted in March, 2009.

***Virginia Resources Assessments***

- *Wetland Delineation Report: Harry W. Nice Bridge Improvement Project*, April 4, 2008.
- Field Meeting Notes, *Nice Memorial Bridge Improvement Project Wetland Delineation Jurisdictional Determination*, April 7, 2008.

- US Army Corps of Engineers (USACE) Northern Virginia Regulatory Section Jurisdictional Determination Letter, NAO 2008-01741 (Potomac River), letter dated June 2, 2008, JD effective May 28, 2008.
- Functional Assessment conducted in March, 2009.

A jurisdictional determination has not been conducted for the Maryland resources; therefore, waters in Maryland will be referred to as "waterways." A jurisdictional determination was conducted for the Virginia resources, effective May 28, 2008 and waters in Virginia will be referred to as "Waters of the US."

**B. Functions and Values of Natural Resources**

A functional assessment of the potentially impacted wetland resources was performed on March 25, 2009 to determine resource function and value. This assessment was necessary to determine the mitigation necessary to compensate for lost functions and values. Methods and results of the functions and values assessment in Maryland and Virginia are discussed below.

***Maryland - Wetlands***

Wetlands were evaluated as either "high," "medium," or "low" quality based on the 13 wetland functions (eight) and values (five) listed in ***Table 1*** as defined by the USACE for Section 404 wetland permits (New England Functional Assessment Method).

***Table 1.*** *USACE Wetland Functions and Values*

| Functions | Values |
|---|---|
| • Groundwater Recharge/Discharge<br>• Floodflow Alteration<br>• Fish and Shellfish Habitat<br>• Sediment/Toxicant Retention<br>• Nutrient Removal<br>• Production Export<br>• Sediment/Shoreline Stabilization<br>• Wildlife Habitat | • Recreation<br>• Educational Scientific Value<br>• Uniqueness/Heritage<br>• Visual Quality/Aesthetics<br>• Endangered Species Habitat |

Other factors taken into consideration for the wetland quality evaluation included wetland size, connectivity to other wetland resources, and vegetation diversity. Two wetlands are identified within the Maryland portion of the project area (***Figure 1***), and functions and values results are shown in ***Table 2***.

***Table 2.*** *Wetlands Quality - Maryland*

| Resource ID | Type | Quality | Assessment |
|---|---|---|---|
| MD-WET-1 | PEM | Low | ***Functions: 1*** – floodflow alteration<br>***Values: 0*** (small, isolated, low species diversity, and high human disturbance (routinely mowed) |
| MD-WET-2 | PFO | Medium | ***Functions: 3*** – groundwater recharge, floodflow alteration, and wildlife habitat<br>***Values: 1*** (visual qualities/aesthetics) |

***Maryland - Waterways***

Six waterways were identified within the Maryland portion of the project area. The quality evaluation for ephemeral channels was performed for riparian buffers and channel condition. The quality evaluation for the tidal open water (i.e. Potomac River) was performed for channel condition, riparian buffers, instream habitat and channel alteration. See ***Table 3*** for the quality summary of the waterways.

***Table 3.*** *Quality Summary of Maryland Waterways*

| Resource ID | Type | Quality | Assessment |
|---|---|---|---|
| MD-Waterway-1 | Ephemeral | Low | No riparian buffer, mud bottom, periodically mowed |
| MD-Waterway-2 | Ephemeral | Low | Riparian buffer along 1/3 of length, mud & riprap bottom |
| MD-Waterway-3 | Ephemeral | Low | No riparian buffer, mud or riprap bottom, periodically mowed |
| MD-Waterway-4 | Ephemeral | Low | No riparian buffer, mud bottom, periodically mowed |
| MD-Waterway-5 | Ephemeral | Low | No riparian buffer, mud bottom, periodically mowed |
| MD- Waterway (Potomac River) | Tidal Open Water | High | Riparian buffer- suboptimal, instream habitat – optimal/suboptimal, good wildlife habitat including RTE habitat |

***Virginia - Wetlands***

Ten wetlands were identified within the Virginia portion of the project area. As previously mentioned, a Jurisdictional Determination was issued for these resources in 2008. A quality evaluation of the Virginia resources is based on the same parameters as the Maryland resources. ***Table 4*** details the quality of each wetland and the assessment behind the quality rating.

***Table 4.*** *Quality Summary of Virginia Wetlands*

| Resource ID | Type | Quality | Reasoning |
|---|---|---|---|
| VA-WET-1 | PFO | Low | ***Functions: 2*** – groundwater recharge and wildlife habitat ***Values: 0*** (downed trees throughout with questionable soils and plants) |
| VA-WET-2 | PEM | Low | ***Function: 1*** – groundwater recharge ***Values: 0*** (small, low species diversity, and high human disturbance with mowing) |
| VA-WET-3 | PFO | Medium | ***Functions: 5*** – groundwater recharge, floodflow alteration, sediment/toxicant retention, production export, and wildlife habitat ***Values: 2*** – uniqueness/heritage and visual quality/ aesthetics (wetland is small, but connected to a larger wetland system, has a mature and diverse vegetation community, and salamander eggs noted in the wetland during March 2009 Functional Assessment) |
| VA-WET-4 | PFO | Medium | ***Functions: 5*** – groundwater recharge, floodflow alteration, sediment/toxicant retention, production export, and wildlife habitat ***Values: 2*** – uniqueness/heritage, visual quality/aesthetics (wetland is small, but connected to a larger wetland system, has a mature and diverse vegetation community) |
| VA-WET-5 | PEM | Low | ***Functions: 1*** – groundwater recharge ***Values: 0*** (small, low species diversity, and high human disturbance with mowing within the utility easement) |
| VA-WET-6 | PEM | Medium | ***Functions: 5*** – groundwater recharge, floodflow alteration, sediment/toxicant retention, production export, and wildlife habitat ***Values: 0*** (medium size, diverse vegetation, but adjacent to roadway and frequent human disturbances in the buffer of the wetland with mowing) |
| VA-WET-7 | E2EM | Medium | ***Functions: 6*** – groundwater recharge, floodflow alteration, sediment/toxicant retention, production export, sediment/shoreline stabilization, and wildlife habitat ***Values: 0*** (medium size, and diverse vegetation, adjacent to roadway) |
| VA-WET-8 | PFO | Low | ***Functions: 2*** – groundwater recharge and floodflow alteration ***Values: 0*** (based on supplemental JD report, it is a small isolated VA DEQ wetland located near utility right-of-way) |
| VA-WET-9 | PFO | Low | ***Functions: 2*** – groundwater recharge and floodflow alteration ***Values: 0*** (based on supplemental JD report, wetland is small and adjacent to a roadway) |
| VA-WET-10 | PEM | Low | ***Functions: 2*** – groundwater recharge, floodflow alteration ***Values: 0*** (based on supplemental JD report, wetland is small and adjacent to a roadway) |

***Virginia - Waters of the US***

The quality of Virginia waterways was assessed using the Unified Stream Methodology (USM), adopted February 1, 2007. A collaborative effort between the USACE Norfolk District and the Virginia Department of Environmental Quality (VA DEQ), the USM method incorporates functions and values into a numerical rating score and is the standard method for mitigation replacement determination in Virginia. Primarily, the quality rating for Virginia ephemeral channels, using the USM Ephemeral Stream Assessment Form (***Appendix 1***), is based on vegetated buffer.

Four of the Virginia Waters of the US are ephemeral channels, and the remaining three Virginia Waters of the US are intermittent channels. The quality summary for Virginia Waters of the US is listed in ***Table 5***.

***Table 5****. Quality Summary of Virginia Waters of the US*

| Resource ID | Type | Quality |
|---|---|---|
| VA-Waters of the US-1 | Ephemeral | 0.65 |
| VA-Waters of the US-2 | Ephemeral | 0.65 |
| VA-Waters of the US-3 | Ephemeral | 0.75 |
| VA-Waters of the US-4 | Intermittent | 0.97 |
| VA-Waters of the US-6 | Intermittent | 0.71 |
| VA-Waters of the US-7 | Ephemeral | 0.30 |
| VA-Waters of the US-9 | Intermittent | Unknown[1] |

[1]*Resource located on Dahlgren property, and no other information is available at this time*
[2]*VA-WUS-5 and VA-WUS-8 were not considered jurisdictional by USACE*

## C. Impacts to Natural Resources

The proposed build alternates would result in unavoidable impacts to state and federally regulated aquatic resources. Anticipated impacts by alternate are listed in ***Table 6***. The worst case scenario, per resource, is listed in the "Max Impact" column.

***Table 6**. Waterway and Wetland Impacts by Alternate*

| Resource | Type | Quality/ USM Score | Unit | Max Impact | Alternates Retained For Detailed Study | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | No-Build | Alt. 2 | Alt. 2 with Bike | Alt. 3 | Alt. 3 With Bike | Alt. 4 |
| **Maryland Wetlands:** | | | | | | | | | | |
| MD-Wet 1 | PEM | Low | acres | 0.08 | 0 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| MD-Wet 2 | PFO | Medium | acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Total Impacts* | | | acres | 0.08 | 0 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| **Maryland Non-Tidal Waterways:** | | | | | | | | | | |
| MD-Waterway 1 | Ephemeral | Low | l.f. | 1,244 | 0 | 1,244 | 1,244 | 1,244 | 1,244 | 1,244 |
| MD-Waterway 2 | Ephemeral | Low | l.f. | 531 | 0 | 0 | 0 | 0 | 0 | 531 |
| MD-Waterway 3 | Ephemeral | Low | l.f. | 204 | 0 | 15 | 15 | 15 | 15 | 204 |
| MD-Waterway 4 | Ephemeral | Low | l.f. | 90 | 0 | 0 | 0 | 0 | 0 | 90 |
| MD-Waterway 5 | Ephemeral | Low | l.f. | 1,298 | 0 | 1,129 | 1,128 | 1,128 | 1,128 | 1,298 |
| *Total Impacts* | | | l.f. | 3,367 | 0 | 2,388 | 2,387 | 2,387 | 2,387 | 3,367 |
| MD-Tidal Waterway | | | | | | | | | | |
| Open Water Pier Impacts: | Perennial | High | acres | 0.70 | 0 | 0.30 | 0.40 | 0.70 | 0.70 | 0.30 |
| Open Water Dredge Impacts: | Perennial | High | acres | 88.49 | 0 | 60.75 | 62.43 | 84.73 | 88.12 | 61.68 |
| *Total Impacts* | | | acres | 89.19 | 0 | 61.05 | 62.83 | 85.43 | 88.82 | 61.98 |
| **Virginia Wetlands:** | | | | | | | | | | |
| VA-Wet 1 | PFO | Low | acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA-Wet 2 | PEM | Low | acres | 0.14 | 0 | 0.14 | 0.14 | 0.14 | 0.14 | 0 |
| VA-Wet 3 | PFO | Medium | acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA-Wet 4 | PFO | Medium | acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA-Wet 5 | PEM | Low | acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA-Wet 6 | PEM | Medium | acres | 0.06 | 0 | 0.02 | 0.02 | 0.02 | 0.02 | 0 |
| VA-Wet 7 | E2EM1N | Medium | acres | 0.41 | 0 | 0.41 | 0.41 | 0.41 | 0.41 | 0 |
| VA-Wet 8 | PFO1C | Low | acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA-Wet 9 | PFO1C | Low | acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA-Wet 10 | PEM1E | Low | acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Total Impacts* | | | acres | 0.61 | 0 | 0.57 | 0.57 | 0.57 | 0.57 | 0.00 |
| **Virginia Waters of the US:** | | | | | | | | | | |
| VA-WUS 1 | Ephemeral | 0.65 | l.f. | 83 | 0 | 36.24 | 36.27 | 44.19 | 44 | 74 |
| VA-WUS 2 | Ephemeral | 0.65 | l.f. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA-WUS 3 | Ephemeral | 0.75 | l.f. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA-WUS 4 | Intermittent | 0.97 | l.f. | 78 | 0 | 27.54 | 27.55 | 40.89 | 41 | 59 |
| VA-WUS 6 | Intermittent | 0.71 | l.f. | 22 | 0 | 21.75 | 21.75 | 21.75 | 22 | 0 |
| VA-WUS 7 | Ephemeral | 0.03 | l.f. | 136 | 0 | 0 | 0 | 0 | 0 | 136 |
| VA-WUS 9 | Intermittent | Unknown | l.f. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Total Impacts* | | | l.f. | 319 | 0 | 85.53 | 85.57 | 106.83 | 107 | 269 |

***Table 6 Cont'd.*** *Waterway and Wetland Impacts by Alternate*

| Resource | Type | Quality/ USM Score | Unit | Alternates Retained For Detailed Study | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Alt. 4 with Bike | Alt. 5 | Alt. 5 With Bike | Alt. 6 | Alt. 6 with Bike | Alt. 7 | Alt. 7 with Bike |
| **Maryland Wetlands:** | | | | | | | | | | |
| MD-Wet 1 | PEM | Low | acres | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| MD-Wet 2 | PFO | Medium | acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Total Impacts* | | | acres | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| **Maryland Waterways:** | | | | | | | | | | |
| MD-Waterway 1 | Ephemeral | Low | l.f. | 1,244 | 1,244 | 1,244 | 1,244 | 1,244 | 1,244 | 1,244 |
| MD-Waterway 2 | Ephemeral | Low | l.f. | 531 | 531 | 531 | 0 | 0 | 531 | 531 |
| MD-Waterway 3 | Ephemeral | Low | l.f. | 204 | 204 | 204 | 13 | 13 | 204 | 204 |
| MD-Waterway 4 | Ephemeral | Low | l.f. | 90 | 90 | 90 | 0 | 0 | 90 | 90 |
| MD-Waterway 5 | Ephemeral | Low | l.f. | 1,298 | 1,298 | 1,298 | 1,113 | 1,113 | 1,298 | 1,298 |
| *Total Impacts* | | | l.f. | 3,367 | 3,367 | 3,367 | 2,370 | 2,370 | 3,367 | 3,367 |
| MD-Waterway 6 (Potomac) | | | | | | | | | | |
| Open Water Pier Impacts: | Perennial | High | acres | 0.40 | 0.70 | 0.70 | 0.50 | 0.60 | 0.50 | 0.60 |
| Open Water Dredge Impacts: | Perennial | High | acres | 63.38 | 85.08 | 88.49 | 66.69 | 67.96 | 65.38 | 67.09 |
| *Total Impacts* | | | acres | 63.78 | 85.78 | 89.19 | 67.19 | 68.56 | 65.88 | 67.69 |
| **Virginia Wetlands:** | | | | | | | | | | |
| VA-Wet 1 | PFO | Low | acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA-Wet 2 | PEM | Low | acres | 0 | 0.14 | 0.14 | 0.09 | 0.09 | 0.02 | 0.02 |
| VA-Wet 3 | PFO | Medium | acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA-Wet 4 | PFO | Medium | acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA-Wet 5 | PEM | Low | acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA-Wet 6 | PEM | Medium | acres | 0 | 0 | 0 | 0.06 | 0.06 | 0 | 0 |
| VA-Wet 7 | E2EM1N | Medium | acres | 0 | 0 | 0 | 0.41 | 0.41 | 0 | 0 |
| VA-Wet 8 | PFO1C | Low | acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA-Wet 9 | PFO1C | Low | acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA-Wet 10 | PEM1E | Low | acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Total Impacts* | | | acres | 0.00 | 0.14 | 0.14 | 0.56 | 0.56 | 0.02 | 0.02 |
| **Virginia Waters of the US:** | | | | | | | | | | |
| VA-WUS 1 | Ephemeral | 0.65 | l.f. | 74 | 74 | 74 | 16 | 16 | 83 | 82 |
| VA-WUS 2 | Ephemeral | 0.65 | l.f. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA-WUS 3 | Ephemeral | 0.75 | l.f. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VA-WUS 4 | Intermittent | 0.97 | l.f. | 59 | 59 | 59 | 13 | 13 | 78 | 78 |
| VA-WUS 6 | Intermittent | 0.71 | l.f. | 0 | 22 | 22 | 22 | 22 | 0 | 0 |
| VA-WUS 7 | Ephemeral | 0.03 | l.f. | 136 | 136 | 136 | 0 | 0 | 136 | 136 |
| VA-WUS 9 | Intermittent | Unknown | l.f. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Total Impacts* | | | l.f. | 269 | 291 | 291 | 51 | 51 | 297 | 296 |

## IV. COMPENSATORY MITIGATION OPPORTUNITIES

The new Compensatory Mitigation Rule (The Rule) issued by the USACE and the US Environmental Protection Agency (US EPA) on April 10, 2008 set federal requirements for a mitigation preference hierarchy. The Rule defines that first preference shall be given to wetland and stream mitigation from available mitigation banks. In addition to the federal Rule, both Maryland and Virginia maintain legal conditions authorizing the use of wetland mitigation banks.

A desktop search, correspondence with the National Wetland Mitigation Banking Association and direct communications with local, state and federal resource agencies identified the mitigation banking and trust fund opportunities within the Lower Potomac River Watershed, Hydrologic Unit Code 02070011. The watershed encompasses 390.70 square miles (***Figure 2***).

### A. Banking

The Authority researched the availability of existing wetland and/or or stream mitigation banks in the Lower Potomac River Tidal Watershed. A web-based search, email and phone calls confirmed that two wetland mitigation banks occur within the project watershed in Virginia. The Prince William Environmental Bank, located in Prince William County, VA is anticipated to be approved by USACE in summer or fall 2009, and will offer both wetland and stream mitigation credits. The Buena Vista Mitigation Bank, located in King George County, VA is an USACE and Virginia Department of Environmental Quality (VDEQ) approved bank and currently has wetland credits available.

Communications with the National Wetland Mitigation Banking Association in Maryland confirmed that no Maryland mitigation banking opportunities occur within the Lower Potomac River Watershed.

### B. Trust Fund/In-Lieu Fee

The Rule next gives preference to Trust Funds or In-Lieu Fee Programs if mitigation banks do not exist. Maryland regulations address the establishment of Trust Fund programs, yet no active Trust Fund programs could be found in Maryland. Virginia has statutes addressing such establishment. The use of the Virginia Aquatic Resources Trust Fund as a mitigation option is at the discretion of the appropriate regulatory agencies. Generally, the Trust Fund consolidates fees from many projects with small impacts (less than one acre), to accomplish larger projects that have a greater chance of ecological success. The Nature Conservancy, with approval from USACE, implements projects involving the restoration of wetlands and streams or preservation of existing wetlands and streams. The Authority initiated contact with The Nature Conservancy in Virginia to pursue possible opportunities within the watershed under the Trust Fund.

In-lieu fee programs are used in Maryland but are generally used for smaller projects with smaller impacts than the Nice Bridge Improvement Project. In-lieu fee programs may exist in Virginia, however since approved mitigation banks were located, this option was not pursued.

### C. Permittee-Provided Mitigation

If banks, trust funds or in-lieu fee programs do not exist, The Rule next gives preference to permittee-provided on-site mitigation, followed by off-site mitigation, to compensate for aquatic resource impacts. The wetland permit issued for the project will specify the amount and type of mitigation required. If off-site mitigation is necessary, a mitigation site search within the watershed will be conducted to identify potential sites for the mitigation, then the regulatory agencies review and approve the site, and the site will be purchased (if necessary). After the construction documents are prepared, a contractor is hired to build the mitigation site, which is then monitored for a time period specified in the permit.

### D. Proposed Mitigation

In Maryland, in-lieu fee is not appropriate for the Nice Bridge Improvement Project, and wetland mitigation banks are not available in the watershed. Therefore, aquatic resource impacts in Maryland will require permittee-provided mitigation. As a result, the remainder of the CMP will focus on permittee-provided wetland/stream mitigation in Maryland.

Due to the current availability of wetland mitigation banks in Virginia, the Authority proposes to use one of the available Virginia banks to compensate for aquatic resource impacts.

## V. MITIGATION OBJECTIVES

From this point forward in the CMP, assuming the no-build alternate is not selected, text will address mitigation for Maryland resource impacts since all Virginia resource impacts will be mitigated via an established mitigation bank.

### A. Primary Objectives

The primary objective of Compensatory Mitigation is to replace the functions and values lost from the impacted aquatic resources. This discussion occurs under Section V.C. (Function and Value Mitigation for Impacts). Another objective is to comply with US EPA policy of "no-net-loss" of regulated wetland resources. Compliance with "no-net-loss" will occur by providing mitigation at required ratios to replacing lost functions and values.

To meet these objectives, the preferred mitigation site should be in-kind habitat replacement to provide the same functions and values as the lost resource. If in-kind mitigation is not possible or preferred, out-of-kind mitigation can provide most, all or different functions and values from the lost resource. The preferred mitigation site should be within the same watershed and in close proximity to the impacted resources to provide local compensation for lost functions and values. Proposed mitigation sites in Maryland are within the 8-digit MDE

watershed area and within eight miles of the Nice Bridge. Proposed mitigation sites (i.e. mitigation banks) in Virginia will be within the 8-digit United States Geological Survey (USGS) watershed.

**B. Watershed Needs**

The 1998 Maryland Clean Water Action Plan classified the Lower Potomac River Tidal Watershed as a watershed not meeting clean water and other natural resource goals, and targeted the watershed for restoration. This classification results from poor submerged aquatic vegetation (SAV) abundance and habitat index, poor tidal benthic index of biotic integrity (BIBI), and a high historic wetland loss of 42,383 acres. The VA DEQ 2002 305(b) report of the watershed identifies 20% of the watershed's length as failing to support designated uses due to polychlorinated biphenyls (PCBs), low oxygen, bacteria from nonpoint sources, poor tidal flushing, and eutrophication. The VA DEQ 2004 303(d) report identified the following impairments in the project area: nutrients, sediments, PCBs in fish tissue and poor biological community. In May 2005, US EPA approved a Total Maximum Daily Load (TMDL) specifically aimed at limiting fecal coliforms in two shellfish areas (Tall Timbers Cove and Whites Neck Creek) that are currently rated by MDE as "restricted" due to high coliform counts. A TMDL for PCB contamination was established on October 31, 2007 for the tidal Potomac River. Virginia DEQ is in the process of developing bacterial TMDLs for three impaired shellfishing areas in the Upper Machodoc Creek Watershed, a tributary to the Potomac River.

This watershed is also classified as Category 3, a pristine and/or sensitive watershed in need of protection (*Prioritizing Sites for Wetland Restoration, Mitigation, and Preservation in Maryland. May 18, 2006, MDE*). Indicators for Category 3 include migratory fish spawning areas, a high percentage of headwater streams in Interior Forest (28%), and a high percentage of forested watershed(s) (59%). The Popes Creek Natural Heritage Area is a Maryland State Designated Wetland of Special State Concern (WSSC) located less than three miles from Nice Bridge. This site provides habitat for forest interior dwelling birds and is not protected. *The Charles County Comprehensive Plan (1997)* identifies the Potomac River shoreline between Blossom Point and Windmill Point and between Port Tobacco River and Pope's Creek as having erosion rates greater than two feet per year. The Plan recommends restoration and protection of wetlands and streams within headwaters, and protection of WSSC and their buffers.

To identify the aquatic resource problems in the Potomac River Lower Tidal watershed, the Authority conducted desktop research, including gathering Geographic Information System (GIS) and other data from local grassroots, county and state organizations. This information provided insight on water quality, SAV, pollutants, erosion, unique wetlands and wildlife specific to the Nice Bridge area. The desktop research supports the "Site Selection" and "Baseline Information" components of The Rule.

In keeping with the biological deficiencies in the watershed, the Authority tailored its site search to identify sites that 1) expand existing tidal marsh to improve poor water quality and

increase biological diversity, 2) provide shoreline stabilization to areas identified with high rates of erosion, and 3) protect WSSC and other sensitive resources.

## C. Mitigation for Lost Functions and Values

The most significant wetland impacts anticipated for the Nice Bridge Improvement Project in Maryland are open water impacts to the Potomac River. As previously noted, pier construction would result in approximately 0.7 acre of permanent open water impact and dredging would result in approximately 88.5 acres of temporary open water impact. Dredging impacts are temporary because they would occur only during construction, and there would be no loss of open water resource. There is no impact to SAV since no SAV beds have been observed in the project area for over five years. In addition, permanent impacts in Maryland include a small emergent wetland and five ephemeral streams (see ***Tables 1, 3 and 7***).

***Table 7.*** *Impacts to Maryland Aquatic Resources*

| Resource Type | Impact Area | Type |
|---|---|---|
| Emergent Wetland | 0.08 Acre | Permanent |
| Open Water / Subaqueous Land (piers) | 0.70 Acre | Permanent |
| Open Water / Subaqueous Land (dredging) | 88.50 Acres | Temporary |
| Ephemeral Roadside Ditch | 3,367 lf | Permanent |

The CMP will outline the replacement of lost functions and values for resources impacted by the project, and propose shoreline stabilization and/or the creation of tidal marsh to mitigate the unavoidable resource impacts listed in ***Table 7***, should a build alternate be selected.

The functions and values of the impacted resources are detailed in ***Tables 2 and 3***. The emergent wetland is located in an open, mowed field, does not appear to be connected to the water table, and stormwater runoff is its primary water source (see ***Photo #1***). It provides



***Photo #1.*** Emergent Wetland



***Photo #2.*** Ephemeral roadside ditch at Nice Bridge

some function for flood storage during and after storm events, and habitat for limited fauna. The Potomac River provides ten out of the thirteen potential functions and is home to several resident and migrating species. Numerous types of recreation occur on the Potomac River, and it contains many Uniqueness/Heritage values including archeological sites, unique plants and geologic features.

The ephemeral roadside ditches (see ***Photo #2***) are riprap, dirt bottom and/or concrete channels draining uplands, and provide minor value for nutrient removal. These resource function and values will be considered during the alternate selection process and will result in the application of avoidance and minimization measures during design. Accordingly, the same functions and values were considered during the development of the CMP and their replacement/enhancement is a primary design goal at the proposed mitigation sites.

## D. Credit Determination

A summary of anticipated impacts and credits is listed in ***Table 8***. The Authority proposes to provide out-of-kind mitigation through shoreline stabilization and/or tidal marsh creation that adequately compensates for all functions and values from impacted resources. A justification for the proposed mitigation follows.

Shoreline stabilization sites would include an offshore breakwater to halt erosion from eroding bluffs. Six functions and values would be provided with shoreline stabilization: *fish and shellfish habitat* as habitat forms in rock structures, *sediment retention* as erosion along Potomac River bluffs is reduced, *production export* as areas shoreward of breakwater often colonizes with SAV, *sediment/shoreline stabilization*, *wildlife habitat*, and *uniqueness/heritage* as shoreline archeological sites, such as shell middens, are prevented from being washed away by erosion.

Marsh creation is proposed in areas where existing marshes can be easily expanded. At least nine functions and values would be provided with marsh creation as follows: *groundwater recharge* as the enlarged marsh has more capacity to contribute water to the aquifer, *floodflow alteration, fish and shellfish habitat, sediment/toxicant/pathogen retention* as an enlarged marsh has more capacity to trap sediments, *nutrient removal/retention/transformation, production export* as the enlarged marsh has more capacity to produce food for wildlife, *wildlife habitat, visual quality/aesthetics* and *threatened or endangered species habitat* as endangered species, such as the shortnose sturgeon, inhabit the potential mitigation area.

Temporary impacts to tidal open water related to the dredging operation would be minimized, and the effects to functions and values for this activity would be minimal. There are time-of-year restrictions for dredging, so temporary sedimentation effects would be minimized. SAV has not been in the Nice Bridge project area for at least five years, but an improvement in water quality could trigger SAV growth in the area.

While tidal marsh creation provides slightly more functions and values than shoreline stabilization, a greater “need” for shoreline stabilization was recognized during the Agency

field tour on April 20, 2009. The combined functions and values of marsh creation and shoreline stabilization provide eleven of the thirteen potential functions and values.

***Table 8.*** *Anticipated Impacts and Mitigation Requirements (worst case impacts)*

| Wetland/ Waters | Tidal/ Nontidal | Type | Impact | | Ratio | Required Mitigation | Mitigation Type |
|---|---|---|---|---|---|---|---|
| | | | SF/LF | Acres | | Acres | |
| Wetlands WET 1 | Nontidal | PEM | - | 0.08 | 1 : 1 | 0.08 | Out-of-kind, Tidal Wetland or Shoreline Stabilization |
| Waters (MD) | Nontidal | Drainage Ditches | 3,367 LF | - | 1 : 1 | - | In-kind drainage ditches |
| | Tidal | Tidal Open Water (Permanent) | - | 0.70 | 1 : 1 | 0.70 | Out-of-kind, Tidal Wetland or Shoreline Stabilization |
| | Tidal | Tidal Open Water (Temporary) | - | 88.5 | - | - | Out-of-kind, Tidal Wetland or Shoreline Stabilization |

## VI. SITE SELECTION

In consideration of the watershed needs of the Lower Potomac River Watershed, the site search focused on lands adjacent to the Potomac River and its tidal tributaries within ten miles of Nice Bridge (***Figure 2***) with the following characteristics:

1. Non-forested;
2. Farmland (with preference for prior converted cropland, land that has low productivity due to high water table, or land that requires little excavation to intercept the water table);
3. Low-lying land contiguous to water or existing marsh and suitable for marsh creation;
4. Eroding shoreline;
5. Waterfront having little or no vegetative buffer;
6. Sites that have an opportunity to provide high ecological benefit (e.g., nutrient retention, attenuation of storm surges, flood storage, water quality improvement, aquatic food chain support, wildlife habitat, habitat for Rare, Threatened and Endangered species (RTE);
7. Approximately two acres of tidal wetland mitigation to accommodate all mitigation needs on one site;
8. Sites that are on, or adjacent to, land that is managed for conservation;
9. Sites that are easily accessible by construction equipment;
10. Soils suitable for use as highway fill material (if the site requires significant excavation).

Through the use of aerial photography and GIS data mapping, the Authority identified 23 sites that met many of the above characteristics (***Figure 3***). Property owners were identified using MD Property View© 2008, and were contacted by letter (followed by phone calls) seeking approval to enter properties. Site visits were conducted on April 1 and 2, 2009 to assess the suitability of the sites, and to further explain the mitigation component of the project and confirm property owner interest.

A rating form (***Appendix 2***) was used to assess site suitability based on soils, amount of excavation required, slope, sources of hydrology, opportunity for water quality improvement, habitat value, site constraints (such as invasive species infestation or poor landscape position), and potential functions and values. A summary of the rating form results is provided in ***Table 9***. Sites dropped from further consideration include:

- Sites 1, 6, 7, 12, 20, and 21 (identified in Figure 3 as "Not Preferred") lacked appropriate site conditions for development of mitigation;
- Sites 3, 5, 8, 9, 10, 15, and 16 (identified in Figure 3 as "Inaccessible") were inaccessible or had existing land uses that conflicted with the mitigation goals and objectives;
- Site 17 (identified in Figure 3 as "Not Preferred") was heavily overrun with Phragmites and was rated as having a low probability of success for establishment of wetland vegetation;
- Sites 12, 22, and 23 (identified in Figure 3 as "Not Preferred") property owners were not interested after hearing more details about the proposed mitigation objectives;
- Sites 18 and 19 (identified in Figure 3 as "Inaccessible") are under the stewardship of the Maryland Environmental Trust (M.E.T.). M.E.T. did not want to participate in the Nice Bridge mitigation efforts so the property owners were not contacted.

These limitations resulted in the selection of five preferred sites: Sites 2, 4, 11, 13 and 14 (identified in Figure 3 as "Preferred").

***Table 9.*** *Summary of Mitigation Site Search Ranking Form*

| Site # | Soils Score | Estimated Excavation Depth Score | Existing Slope Score | Hydrology Score | Water Quality Opportunity Score | Habitat Value of Site Score | Constraints Score | Overall Functional Replacement Ranking | Mitigation Ranking Score |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1 | 3 | 3 | 2 | 2 | 1 | 2 | **15** |
| 2 | 1 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | **21** |
| 4 | 2 | 2 | 2 | 3 | 1 | 4 | 3 | 4 | **21** |
| 6 | 1 | 1 | 3 | 2 | 2 | 2 | 2 | 0 | **13** |
| 7 | 1 | 1 | 3 | 3 | 1 | 3 | 1 | 0 | **13** |
| 11 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | **21** |
| 12 | 1 | 2.5 | 2 | 3 | 1 | 4 | 3 | 3 | **19.5** |
| 13 | 2 | 3 | 3 | 3 | 2 | 4 | 3 | 3 | **23** |
| 14 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | **22** |
| 17 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 1 | **18** |
| 20 | 1 | 3 | 2 | 2 | 2 | 2 | 1 | 2 | **15** |
| 22 | 1 | 1 | 1 | 2 | 2 | 3 | 2 | 0 | **12** |
| 23 | 1 | 1 | 2 | 3 | 2 | 1 | 1 | 0 | **11** |

* Highlighted sites were preferred

## VII. MITIGATION OPPORTUNITIES

The remaining five sites the Authority is considering (Sites 2, 4, 11, 13, and 14) based on the rating form results are shaded in ***Table 9***. A field tour to these five sites was conducted with the regulatory agencies on April 20, 2009 to seek their concerns and preferences for a project mitigation site. Agencies generally favored shoreline stabilization over marsh creation due to the immediate environmental benefit for preventing further shoreline erosion. Shoreline stabilization will likely involve the construction of an off-shore breakwater. Due to the proximity of the proposed mitigation sites to Blossom Point, breakwater construction may require an underwater search for unexploded ordnance as well as continuous monitoring and technical support during construction.

### *Site #2 – Shoreline Stabilization*

**Existing Conditions** - Site 2 (Figure 4) is located directly on the Potomac River, approximately one mile south of Nice Bridge. The shoreline is at least 1500 feet long, the vertical bluffs are 15 to 20-feet high, and the property currently experiences erosion at a rate of one foot per year.

The soils adjacent to the waterfront are comprised of two soil series, Mattapeake fine sandy loam and Mattapex silt loam, on 0 to 2% slopes. The Mattapeake series soils are well-drained

soils found mostly on terraces above major rivers and streams. In a representative profile, the surface layer, about 14 inches thick, is brown to yellowish-brown fine sandy loam. The subsoil, from a depth of 14 inches to 40 inches, is brown or dark-brown silty clay loam that is sticky. The underlying material, from 40 to 60 inches, is stratified silt loam and fine sandy loam of mixed colors. This series is among the most suitable soils for farming in Charles County, and is rated "fair" for highway embankment. This is not a hydric soil.

The Mattapex series soils are chiefly in low-lying areas bordering major rivers. They formed in loamy deposits underlain by older, coarser sediment. In a representative profile, the surface layer, about 13 inches thick, is silt loam. It is grayish brown in the upper 7 inches and yellowish brown below. The subsoil, from a depth of 13 inches to 36 inches, is yellowish-brown silty clay loam or silt loam that is mottled with gray in the lower part. Underlying the subsoil, fine sandy loam mottled with yellowish-brown and gravelly loamy sand extends from 36 to 72 inches deep. This series is rated "fair" for highway embankment. It is not a hydric soil.

**Proposed Project -** The site would require armor stone, most likely in the form of a breakwater, to protect the shoreline against wave action. The type of shoreline stabilization employed would depend on more detailed investigation of fetch, wave height, and wave energy. A small inter-tidal beach area could be created and planted with Spartina. Specific project elements such as stone placement, stone sizes, grades, elevations, and planting widths will be based on site conditions, and these issues would be explored if the site is selected for mitigation. The vertical bluff would not need to be regraded, as the bluff would seek a natural angle of repose in a few years. An off-shore breakwater could be constructed entirely from the water since the site has good access from the Potomac River with adequate water depth.

The Charles County Soil Survey indicates that this location may contain American Indian shell middens. Shell middens generally take the form of distinctive mounds within a landscape and are always associated with tidal waterways. Shell middens are considered potentially important archeological sites because Native American artifacts are typically found within the shell middens. The lime content of the shells also enables a high degree of preservation of organic materials such as fish and animal bone which are another important data set in archaeological interpretation. Middens are generally mounded with the presence of oyster shells on the surface or in the face of an eroding bluff. GIS information shows an oyster bed off the shoreline at this site. Time-of-year restrictions would apply if construction were to occur within 1500 feet of an oyster bed prohibiting work between December 16 to March 14 and between June 1 to September 30.

**Ecological Benefits -** The project would benefit water quality by controlling erosion. The Chesapeake Bay will benefit from reduced sedimentation in the Potomac River traveling downstream. The improved water quality would benefit the aquatic fauna, and Spartina vegetation would enrich their food supply with beneficial nutrients and benthic organisms. An existing leased oyster bar immediately off-shore would also benefit from the improvement in water quality. During the April field tour, the Agencies favored proposed shoreline stabilization at this site due to the noticeable erosion. NMFS favored breakwater construction

on this site and recommended leaving the bank untouched so that it can reach its own angle of repose. This site was the last tour stop and Agencies stated that the "need" was most compelling at this site.

**Cost and Logistical Considerations -** Recent costs (year) for off-shore breakwater projects are $300 per linear foot of shoreline. This cost would be partially offset by constructing the offshore breakwater without encroaching on the property (i.e. the Authority would not be required to purchase any property, conservation easements, or construction easement). An off-shore breakwater site would be accessible by barge without the need for additional dredging. Potential costs include an underwater search for unexploded ordnance and/or continuous monitoring and technical support related to ordnance during construction.

There would be no need to regrade the bluff, or to access the site from the bluff. Therefore, the potential archeological site(s) would be avoided, and the breakwater would minimize further erosion of the archeological site. There would be little additional cost for Phragmites control since Phragmites could be easily managed.

***Site #4 – Marsh Creation***

**Existing Conditions -** Site #4 (***Figure 5***) is located on the upper headwaters of Piccowaxen Creek, a tidal tributary to the Potomac River. The low-lying land in the rear of the property is adjacent to a Phragmites-dominated marsh. The Creek flows through the property and frequently floods its banks. There is a small pond on the property which is silting-in as a result of the sediment transported during out-of-bank flooding of the Creek. Soils at the potential mitigation site consist of the previously-described Mattapex series, a silt loam soil that is non-hydric.

**Proposed Project -** The existing pond could be preserved, and the surrounding lowlands converted to a wetland, thereby providing approximately one acre of mitigation. The created wetland would have two potential sources of hydrology, from Piccowaxen Creek: tides and from the out-of-bank flows of a Mill Run tributary. The site would require minor excavation. This site is considered moderate to high probability for an archeological site, and would likely require some level of cultural resource investigation, or coordination with the Maryland Historical Trust. Moderate to high probability zones are typically defined by their proximity to water sources, presence of well-drained and level ground, and/or proximity to previously recorded archeological sites or architectural properties.

**Ecological Benefits -** The site would be excavated to create a wetland, and would, therefore, provide additional flood storage capacity. Phragmites eradication and plantings would add diversity to the vegetation in the marsh, thereby improving wildlife habitat and increasing wildlife diversity. The marsh would provide water quality benefits (sediment and nutrient retention) to Piccowaxen Creek during out-of-bank flows. During the Agency tour, the Agencies mildly endorsed this site for marsh creation. While they were supportive of a marsh creation abutting the existing marsh/pond/creek with its history of flooding, they were

concerned about the plentiful Phragmites nearby and its potential to overrun the creation project.

**Cost and Logistical Considerations -** Concerns regarding this site include potential for Phragmites invasion, and the existence of a bald eagle's nest on the property, which would potentially necessitate time-of-year restrictions on construction. Extensive Phragmites eradication would be necessary in the adjacent marsh. In addition, construction equipment access onto the property via the gravel driveway could result in damage to the shallow-buried culverts and timber bridge that convey Piccowaxen Creek beneath the driveway. Replacement of the culverts and timber bridge would be an added cost to the project. While there are concerns about using this site for marsh creation, it would be suitable as a site for Critical Areas buffer mitigation (i.e., plantings).

***Site #11- Shoreline Stabilization***

**Existing Conditions - S**ite #11 (***Figure 6***) is located on the Potomac River, four miles upstream of the mouth of Port Tobacco Creek. The shoreline of this property currently exhibits erosion rates of two feet per year, and the vertical bluff is currently as high as 20 feet. Soils consist of the previously-described Mattapex series, which is a non-hydric soil series. This is the only mitigation site in which the Authority has not discussed the mitigation options with the property owner or property representative.

**Proposed Project -** The site would require armor stone, most likely in the form of a breakwater, to protect the shoreline against wave action. The type of shoreline stabilization employed would depend on the results of a detailed investigation of fetch, wave height, and wave energy. The slopes would not need to be regraded as the bluff would seek a natural angle of repose in a few years. One low-lying area along the shoreline has a small marsh that could be expanded. Bathymetric information will be obtained to ensure that a breakwater could be constructed entirely from the Potomac River. The Charles County Soil Survey indicates that this location may contain American Indian shell middens, but these would not be impacted if the project can be constructed from the Potomac River.

**Ecological Benefits -** The project would provide water quality benefits by controlling erosion. There is a leased oyster bar immediately off-shore, which would benefit from the improved water quality, and habitat for aquatic fauna would also be enhanced by the improved water quality. During the Agency site tour, the Agencies were supportive of this site for shoreline stabilization along the two eroding bluffs. They also supported the creation of marsh in the lower elevation portion of the site.

**Cost and Logistical Considerations -** It is anticipated that an offshore breakwater could be constructed without encroaching on the property, and therefore, would not require any purchase of property, conservation easement, or construction easement. If conditions exist preventing breakwater construction from the River, construction easement costs would be necessary. An off-shore breakwater site would be accessible by barge without the need for additional dredging. Potential costs include an underwater search for unexploded ordnance

and/or continuous monitoring and technical support related to ordnance during construction. Any archeological shell middens would be avoided; therefore no further on-shore archeological studies would be needed, although archival research would be conducted regarding underwater archeology. Control of Phragmites could be managed easily, therefore, this would add minor costs to the project.

***Site # 13 – Marsh Creation***

**Existing Conditions** - Site #13 (Figure 7) is located on Neale Sound, a tidal tributary to the Potomac River. The site is currently leased for soybean farming. The soils are Mattapeake Silt Loam on 0 to 2% slopes, which is a non-hydric soil series.

**Proposed Project** - The site has potential for approximately 0.667-acre marsh creation, which would enhance the marsh that exists adjacent to Neale Sound. Marsh creation on this property would entail minimal excavation to achieve inundation by the Spring high tide or saturation by groundwater. Any topsoil would be salvaged and replaced. Because the water table is influenced by tides, it would be relatively easy to establish the elevations that would be suitable to sustain wetland hydrology. The excavation of the site would result in a steeper slope landward of the created marsh. The new slope would be planted with native species to provide an upland buffer. This site is also considered moderate to high probability for an archeological site, and would likely require some level of cultural resource investigation, or coordination with the Maryland Historical Trust.

**Ecological Benefits** - The site would have benefits that are typical of tidal marshes, such as nutrient retention, flood storage, wildlife habitat, and water quality. However, the acreage of created marsh would be minor compared to the size of the existing marsh; thus adding only incrementally to the environmental functions of the marsh. During the Agencies site tour, the Agencies were supportive of this site for marsh creation, noting that excavation was minor and that Phragmites were not too prevalent in the abutting marsh.

**Cost and Logistical Considerations** - The site is easily accessible by construction equipment, and would require minor excavation with spoils transported off-site. Minor Phragmites eradication in the existing marsh would be required to limit an invasion of Phragmites in the created marsh. Special measures may be needed to limit predation by voles and deer. The adjacent property owner also expressed an interest in making his property available for mitigation. Both properties would provide suitable locations to plant shrubs as mitigation to offset impacts to Critical Area buffers.

***Site # 14 – Marsh Creation and Shoreline Stabilization***

**Existing Conditions** - Site #14 (***Figure 8***) is located on Cuckold Creek, a tidal tributary to the Potomac River, directly across from Swan Point. Trees and shrubs have been cleared along this section of waterfront to provide unobstructed views of Cuckold Creek from the property owner's house. Middletown Branch runs along the western edge of the property. Most of the property (except the five acres surrounding the house) is currently in a

conservation easement held by the Maryland Agricultural Land Preservation Foundation (MALPF).

There is a narrow fringe marsh of Spartina and Iva, which is relatively stable, bordering Cuckold Creek downstream of the potentially historic house, and adjacent to a horse pasture. Cuckold Creek is currently closed to shell-fishing, by order of the Maryland Department of the Environment, due to high bacteria counts associated with the discharge of sewage treatment effluent upstream. The land that abuts Middletown Branch is severely eroded, and large concrete blocks have been placed as a breakwater.

The soils closest to the waterfront consist of two soils series: Keyport silt loam and Sassafras sandy loam, on 2 to 5% slopes. The Keyport soils are found at low elevations along Cuckold Creek. In a representative profile, the surface layer, about 11 inches thick, is dark grayish brown in the upper part and light yellowish brown below. From 11 to 16 inches thick (B-1 horizon), the subsoil is yellowish-brown heavy silt loam. The middle part, about 23 inches thick, is yellowish-brown silty clay or heavy silty clay loam mottled with light gray. The lower part of the subsoil, about 17 inches thick, is light-gray fine sandy loam mottled with yellowish brown. The underlying material, from 56 to 66 inches deep, is gravelly sandy loam of various colors. The soil is very strongly acid, non-hydric, and rated "poor" for highway embankment.

The Sassafras series soils are well-drained soils formed in loose deposits of sandy and loamy sediment of marine and alluvial origin. In a representative sample, the surface layer is sandy loam about 8 inches thick. This layer is grayish brown in the thinner upper part and brown in the lower part. The upper part of the subsoil (B-1 horizon), from 8 to 12 inches thick, is yellowish-brown fine sandy loam. The lower part, about 26 inches thick, is strong-brown sandy clay loam that is friable. The underlying material, from 38 to 60 inches deep, is loose loamy sand of various colors. The soil is strongly acid, non-hydric, and rated "good" for highway embankment.

**Proposed Project -** Little excavation would be needed to create a suitable elevation to expand the marsh along Cuckold Creek, and minimal Phragmites eradication would be needed. The expanded marsh would provide an important function of filtering nutrients from the nutrient-enriched Creek. The shoreline along Middletown Branch could be riprapped to protect the shoreline against wave action, and the 8 to 10 foot high, eroded, vertical bluffs would require re-grading to a 3:1 slope, followed by planting. This site is also considered moderate to high probability for an archeological site, and would likely require some level of cultural resource investigation, or coordination with the Maryland Historical Trust.

**Ecological Benefits -** The site would have benefits for nutrient retention, sediment retention, water quality, food chain support, wildlife habitat, and wave energy attenuation. The Agencies were not in favor of this site for shoreline stabilization for two reasons: 1) the trees along Middletown Branch should be saved for their habitat value; and 2) the jersey barrier revetments along the tip of the peninsula at Cuckold Creek and Middletown Branch already

provide sufficient stabilization. The Agencies stated that the low portion of the site along Cuckold Creek with existing marsh could be expanded to accommodate marsh creation.

**Cost and Logistical Considerations -** The site is accessible by construction equipment. Submerged aquatic vegetation has been documented in recent years along both the Cuckold Creek and the Middletown Branch shorelines of this property; therefore, the marsh creation and shoreline stabilization should occur landward of the existing shoreline. Consequently, it would be necessary to remove trees to construct the shoreline stabilization, and this would require coordination regarding impacts to Critical Areas. More research will be needed to determine whether the proposed mitigation project is consistent with any restrictions that may be imposed by the MALPF easement. This site could also be planted with shrubs to provide mitigation for Critical Areas buffer impacts.

***Conclusions***

Coordination with the Agencies provided needed direction on the suitability of these five sites for mitigation. Until the dredging impacts are finalized and funding is secured for the project, all five sites will be retained as potential mitigation sites to offset impacts to aquatic resources and Critical Areas buffers. Consequently, performance standards (Section IX) have been developed for each type of mitigation that could be advanced at these five sites.

## VIII. WORK PLAN

Once a final mitigation site is chosen, a conceptual mitigation design will be developed. The concept design will include a color illustrative site plan with proposed spot elevations and a proposed plant materials list. The concept plan will then be reviewed by the Agencies, their comments incorporated into the design, and the final design plans developed. Final design plans shall include a standard set of construction drawings, specifications, Erosion and Sediment Control plans, a sequence of construction, and invasive control plans.

## IX. PERFORMANCE STANDARDS

Performance standards for Emergent Tidal Marsh and Shoreline Stabilization have been developed and are presented below. These performance standards will be refined and/or modified to fit the unique parameters of the site chosen for mitigation.

### A. Performance Standards - Emergent Tidal Marsh

The success of emergent tidal marsh wetland creation sites will be dependent on the establishment of the correct hydrology, thereby leading to the successful establishment of the planned wetland vegetation communities. Performance standards are consistent with those outlined in the *Maryland Compensatory Mitigation Guidance* (IMTF, 1994). Soils will be monitored but will not be used to determine the success of tidal marsh creation sites. Hydric soils should result from the newly established tidal flow regime but it is unlikely they will form during the monitoring period. Similarly, functions and values of the created marshes

will not be assessed during the monitoring period; rather it is assumed that the functions and values typical of an emergent tidal marsh wetland will be present if the site is a success.

The performance standards outlined below only apply to emergent tidal marsh creation areas that will be regularly inundated (tides alternately flood and expose land surface at least once daily). If a different or additional hydrologic regime is determined during final design, the performance standards will be revised accordingly.

***Emergent Tidal Marsh Vegetation***

To ensure each emergent tidal marsh creation site is successful, planting densities will be consistent with the recommendations outlined in the *Maryland Compensatory Mitigation Guidance*. The initial planting will consist of a minimum of two emergent wetland species that will be planted one foot to two feet on center (43,560 to 10,890 plants per acre, respectively), depending on site conditions and final design. To track progress during the monitoring period, and to ultimately determine if the site achieves the vegetation performance standards, emergent tidal marsh plantings must achieve the percent coverage of wetland species outlined below. Species percent cover in each growing season can be met through a combination of originally planted material and native, non-invasive recruited emergent wetland species (i.e. Phragmites and Purple Loosestrife are unacceptable).

a. Second Growing Season – 45% coverage with wetland species
b. Third Growing Season – 70% coverage with wetland species
c. Fifth Growing Season – 85% coverage with wetland species

If monitoring of the emergent tidal marsh vegetation during any year reveals that vegetation densities are below the minimum requirements, replanting will be required during the following year. If success is not achieved at the end of Year 5, monitoring may be required for another one to five years. If the percent cover of invasive species during any of the milestone years exceeds 50%, an invasive species management plan shall be implemented to eradicate or reduce the coverage of the invasive species.

***Emergent Tidal Marsh Hydrology***

Planting zones for emergent tidal marsh creation sites will be graded to specific elevations to achieve a regularly flooded tidal inundation with tidal waters having free access to the entire site. To be consistent with the *Maryland Compensatory Mitigation Guidance* hydrology performance standard for a regularly flooded tidal wetland, the surface elevations for the tidal marsh will be between the mean high and mean low tide elevations. If normal high tides are observed to inundate the entire herbaceous emergent tidal marsh planting zone, and normal low tides expose the same zone, the site will be considered successful. Neap and spring tide monitoring will not be conducted because of tidal irregularities and scheduling.

## B. Performance Standards - Shoreline Stabilization

Shoreline stabilization efforts will be focused on areas experiencing severe erosion where degraded cliffs or bluffs with little ecological value occur. It is likely that stabilization efforts would consist of the creation of a tidal marsh area at the base of a bluff, in addition to grading and/or vegetative plantings to stabilize the bluff. Rock sills or similar structures may be used to ensure long-term stability and success depending on site conditions and final design. Performance standards for the shoreline stabilization areas are outlined in the following paragraphs.

***Shoreline Stabilization - Tidal Marsh Area Vegetation***

Success of the vegetated tidal marsh area will be dependent on the establishment of the appropriate soil medium (fill), hydrology and grading plan. Fill material for the marsh area shall consist primarily of sandy soil with no more than 10% of the fill substrate passing through a number 100 sieve to ensure a hospitable soil medium for the marsh grasses (Bosch et al, 2006). Planting densities will be consistent with the recommendations outlined in the *Maryland Compensatory Mitigation Guidance*. Plant quantities, percent cover requirements, and replanting requirements will be the same as those previously described for Emergent Marsh.

If a rock sill or similar structure is used on the channelward side of the marsh area, the performance standards will require that the structure be constructed to the specified design elevations and maintains structural integrity during the monitoring period.

***Shoreline Stabilization – Tidal Marsh Area Hydrology***

Planting zones for emergent tidal marsh creation sites will be graded to specific elevations to achieve a regularly flooded tidal inundation with tidal waters freely accessing the entire site. To be consistent with the *Maryland Compensatory Mitigation Guidance* hydrology performance standard for a regularly flooded tidal wetland, the surface elevations for the tidal marsh will be set between the mean high and mean low tide elevations. If normal high tides are observed to inundate the entire herbaceous tidal marsh planting zone and normal low tides expose the same zone, the site will be considered successful. Neap and spring tide monitoring will not be conducted because of tidal irregularities and scheduling.

***Cliff/Bluff Stabilization Area***

Performance standards for cliff/bluff stabilization areas will be both quantitative and qualitative. Survivability and percent cover will be utilized to evaluate vegetation success. The survivability standard shall be 85% survivability of the planted material at the end of Year 2. Percent cover in each growing season can be met through a combination of originally planted material and native, non-invasive recruited species.

a. Second Growing Season – 45% coverage
b. Third Growing Season – 70% coverage
c. Fifth Growing Season – 85% coverage

If vegetation monitoring during any of the milestone years reveals that vegetation densities are below the minimum requirements (above), replanting will be required during the following year. If success is not achieved at the end of year five, monitoring may be required for another five years. If the percent cover of invasive species during any of the milestone years exceeds 50%, an invasive species management plan shall be adopted to eradicate or reduce the coverage of the invasive species.

Qualitative performance standards for the bluff stabilization area will require that the area experience little to no continued erosion from landward runoff (e.g., gullies, rills), or undercutting from wave action.

## X. MONITORING REQUIREMENTS

Monitoring requirements for emergent tidal marsh and shoreline stabilization are outlined below and will be refined and/or modified to fit special parameters for the selected mitigation site.

### A. Monitoring Plans

A five-year monitoring period for the mitigation site will begin during the first growing season after mitigation construction is complete and the site is planted. All monitoring components (vegetation, soils, hydrology, stability, etc.) applicable to the site will be monitored annually toward the end of the growing season. Permanent monitoring stations will be established at the mitigation site at locations to be determined following final design. These stations will serve as focal points for photographic, soil (if applicable), hydrology (if applicable), and vegetation monitoring. Monitoring for the emergent tidal marsh creation areas and shoreline stabilization areas will be conducted as outlined below.

***Emergent Tidal Marsh Creation Monitoring***

Monitoring of emergent tidal marsh creation sites will be adopted from the Maryland State Highway Administration (MD SHA) *Mitigation Monitoring Protocols for Wetlands and Stream Restoration, Revised: August 2007* (MD SHA, 2007). Elements of this protocol that will be adopted include:

- Ground Level Photography;
- Vegetation;
- Hydrology;
- Soils;
- Wildlife.

*Ground Level Photography*

Photographic documentation will be conducted in late summer to establish a permanent record of the overall appearance and vegetation establishment, and will occur once a year in

conjunction with vegetation monitoring. Permanent locations will be established for year-to-year comparisons, and the number and placement of the locations shall be sufficient to show most of the mitigation site and document the planned vegetation communities. Additional photographs shall also be taken to document any unusual conditions, problem areas, wildlife usage, or other features and conditions worth noting.

*Vegetation*

Vegetation community, species composition, and vegetation cover type will be mapped and monitored in each tidal marsh creation area on an annual basis towards the end of the growing season. Vegetation community, species composition, and percent cover will be described using the sampling plot method described in the *USACE Wetland Delineation Manual* (Environmental Laboratory, 1987), and the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region* (USACE Interim Regional Supplement) (Environmental Laboratory, 2008). Sampling plots will be located so that one or more plots are located in each vegetation community and cover type.

Any bare soil areas greater than 0.01 acre in size will be mapped. Areas dominated by invasive species will also be mapped and described, noting percent cover, species, and degree of dominance. Field data will be recorded on the Wetland Determination Data Form from the USACE Interim Regional Supplement.

*Hydrology*

Hydrology will be measured annually at the permanent monitoring locations during a normal high and low tide. Following monitoring, local tidal gauge information will be checked to verify that tides were within the normal range. Visual documentation of tidal inundation will be recorded at each monitoring station and shall include photos taken from monitoring station center points in each cardinal direction. Hydrologic monitoring will be conducted concurrently with vegetation and soil monitoring. Field notes regarding hydrology will be recorded on mapping.

*Soils*

One soil boring will be performed and described at each tidal marsh sampling plot during each monitoring year visit. Additional borings may be performed in areas that appear to be problematic (e.g., poor vegetation coverage), as needed. The pits will be excavated to a minimum depth of 20 inches. The results of the sampling, including soil profile data and characteristics will be documented in accordance with the USACE Interim Regional Supplement. The Wetland Determination Data Form from the USACE Interim Regional Supplement will be used to record field data.

*Wildlife*

Any sightings or evidence of wading birds, songbirds, waterfowl, amphibians, reptiles, and other animal use (e.g., lodges, nests, tracks, and scat) within the tidal marsh will be noted during monitoring. The documentation will include the number, type, date, and hour of the sightings and/or evidence. Performed once a year, wildlife monitoring will help determine which type and species of wildlife use the wetland mitigation habitat. Problem areas such as

deer browse or beaver activity will also be noted. Field data will be recorded on the MD SHA Wetland Mitigation Monitoring System, Observational Field Summary Sheet.

***Shoreline Stabilization Monitoring***

Monitoring of the shoreline stabilization areas will focus on the tidal marsh and the bluff areas separately. Although similar monitoring protocols will be applied to both areas (e.g., ground level photography and vegetation), there will be some protocols that will be applied to one area but not the other. For example, if a rock sill or similar structure is a component of the tidal marsh area, there will be measurements and visual assessments of the structure's integrity, whereas this protocol will not be applicable to the bluff area. Monitoring protocols for the tidal marsh and bluff areas are outlined below.

***Shoreline Stabilization – Tidal Marsh Area Monitoring***

Monitoring of emergent tidal marsh creation sites will be adopted from applicable components of the *SHA Mitigation Monitoring Protocols for Wetlands and Stream Restoration, Revised: August 2007* (Maryland SHA, 2007). Applicable components of this protocol that will be adopted include:

- Ground Level Photography;
- Vegetation;
- Soils.

*Ground Level Photography*

Photographic documentation will be conducted to establish a permanent record of the overall appearance and vegetation establishment, and will occur once a year in conjunction with vegetation monitoring. Permanent locations will be established for year to year comparisons. The number and placement of the locations shall be sufficient to show most of the mitigation site and document the planned vegetation communities, and rock sill or other similar structure if applicable. Additional photographs shall also be taken to document any unusual conditions, problem areas, wildlife usage, or other features and conditions worth noting.

*Vegetation*

Vegetation community, species composition, and vegetation cover type will be mapped and monitored on an annual basis towards the end of the growing season. Vegetation community, species composition, and percent cover will be described using the sampling plot method described in the *USACE Wetland Delineation Manual*, and the USACE Interim Regional Supplement. A dominance test, however, will not be necessary for monitoring the shoreline stabilization emergent tidal marsh creation areas because these areas will not be applied towards wetland mitigation credit. Therefore, the dominance test outlined in the vegetation sampling methodology within the USACE Interim Regional Supplement will not be performed. Sampling plots will be located so that one or more plots are located in each vegetation community and cover type.

Any bare soil areas greater than 0.01 acre in size will be mapped. Areas dominated by invasive species will also be mapped and described, noting percent cover, species, and degree of dominance. Field data will be recorded on the Wetland Determination Data Form from the USACE Interim Regional Supplement.

*Soils*
Annual soil monitoring for the tidal marsh component of shoreline stabilization areas will not be necessary because these areas will not be applied towards wetland mitigation credit. Soil monitoring will occur during or immediately following construction to confirm that the specified soil medium was used for the fill material in the planned marsh area. A sieve analysis will be used to confirm that no more than 10% of the fill material passes through a number 100 sieve.

*Rock Sill or Similar Structure*
If a rock sill, or similar structure, is a component of the tidal marsh area, the first monitoring protocol to be implemented will be the completion and analysis of an as-built survey to confirm the structure was constructed to specified design elevations. During subsequent annual monitoring events, visual assessments of the structure for problem areas or severe rock displacement will be conducted to ensure its structural integrity is intact. No specific data form will be utilized for this assessment other than field notes.

***Shoreline Stabilization – Cliff/Bluff Area Monitoring***
Ground level photography and vegetation monitoring will follow the same protocol as the tidal marsh area outlined above. In addition to the quantitative vegetation assessment, the stability of the bluff area will be qualitatively assessed via visual observations to determine if the area is experiencing any erosion from landward runoff (e.g., gullies, rills) or undercutting from wave action. No specific data form will be utilized for this assessment other than field notes.

## B. Monitoring Reports

Annual monitoring reports will be submitted to the Regulatory Agencies by December 30th of each calendar year; five annual reports will be submitted over the monitoring period.

The following information will be included in each report:

1. The monitoring year, permit number, brief permit history, date the mitigation site was constructed, description of existing conditions, site location map, and methods used to assess success of the mitigation site.
2. Discussion of monitoring data collected (e.g., vegetation, hydrology, soils) along with comparisons to previous monitoring years and performance standards.
3. Copies of all field data sheets.
4. Photographic documentation.
5. Mapping depicting the location of vegetation community and cover types, including high and low tide interfaces and problem areas.

6. A description of problems observed within the mitigation site affecting the ability of the site to meet the performance standards, and recommendations for remedial measures.

## XI. MAINTENANCE PLAN

The sites shall be designed to be self-maintaining once established. However, prior to establishment of full vegetative cover in created wetlands and living shorelines, the vegetation is susceptible to disturbance and damage from dense wrack and debris deposited by tides, particularly after storm events. To prevent wrack and debris from entering the site during the first growing season, a turbidity curtain will be maintained around the site. The curtain will be maintained as needed to ensure it is in good working order and functioning as designed. Deficiencies in the turbidity curtain, its operation, or position will be corrected. Debris and wrack detrimental to plant growth deposited in the marsh during a turbidity curtain malfunction will be removed as needed.

After the first growing season, debris and wrack removal efforts will occur as needed until the percent cover of the marsh during the prior growing season reaches 85 percent or until Year 5, whichever occurs first. Debris and wrack removal shall occur as needed just prior to the growing season, and all debris and wrack detrimental to plant growth shall be removed from the marsh area.

## XII. ADAPTIVE MANAGEMENT PLAN

The Adaptive Management Plan will be implemented in the event that any of the Performance Standards are not met by Year 5.

Adaptive management may be necessary to address potential and unforeseen issues that may hinder the success of the mitigation site, and the Authority or its designee shall be responsible for implementing adaptive management. USACE and MDE will be consulted immediately when adaptive management is determined necessary, and corrective measures will be approved prior to implementation. The performance standards and monitoring criteria outlined in this CMP provide the basis to determine if the site is trending towards successful establishment of desired conditions. If monitoring indicates the site is not trending towards desired conditions, the following adaptive management steps will be implemented:

1. The Authority or its designee will notify USACE and MDE of the issues, probable causes, and suggested solutions.
2. USACE and MDE will work with the Authority or its designee to agree upon and approve corrective measures and a timeframe for completion.
3. The Authority or its designee will implement the corrective measures within the agreed upon timeframe.
4. If the Performance Standards are not met, the Authority will work with the Agencies to adjust the monitoring period/time frame as appropriate.

Some potential issues that may require adaptive management have been identified by the Authority. Invasive species, in particular, common reed (*Phragmites australis*) is common in the tidal marshes in the watershed. Due to the connected nature of tidal systems, it is likely that common reed may invade the marsh site. Should common reed or other invasive species cause the site to fail the performance standards, chemical and physical control shall be used to control the invasive species.

Erosion can damage the mitigation site, particularly during vegetative establishment. Eroded areas resulting from extreme events may require repair/regrading and replanting, and unanticipated erosion resulting from storm events and/or normal wave and boat wake energy may require the addition or modification of sill structures to protect the marsh area.

## XIII. SITE PROTECTION INSTRUMENT

Site protection instruments currently approved include: conservation easements, deed restrictions, restrictive covenants, or deeding the land to an organization or public agency. Acceptable methods of securing legal rights to undertake the mitigation project include recorded deeds, executed conservation easements, landowner agreements, or contracts of sale for the selected site. It is anticipated that the proposed mitigation site would be protected by a conservation easement that will ensure ongoing protection of the mitigation site. This would be the case whether the mitigation site is owned by the Authority or a private owner.

The site will not need a protection instrument if the site is owned by the State.

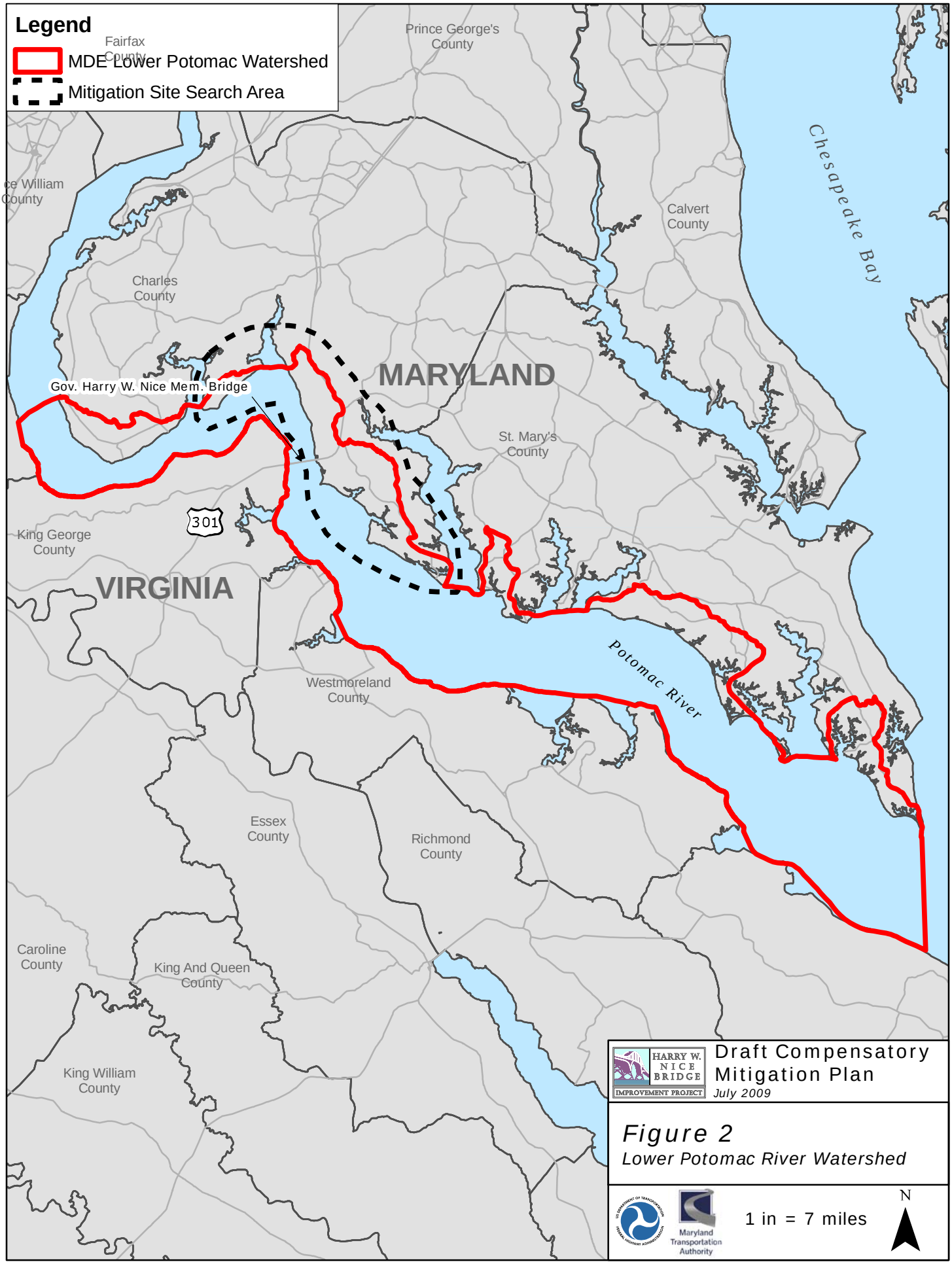
## XIV. FINANCIAL ASSURANCES

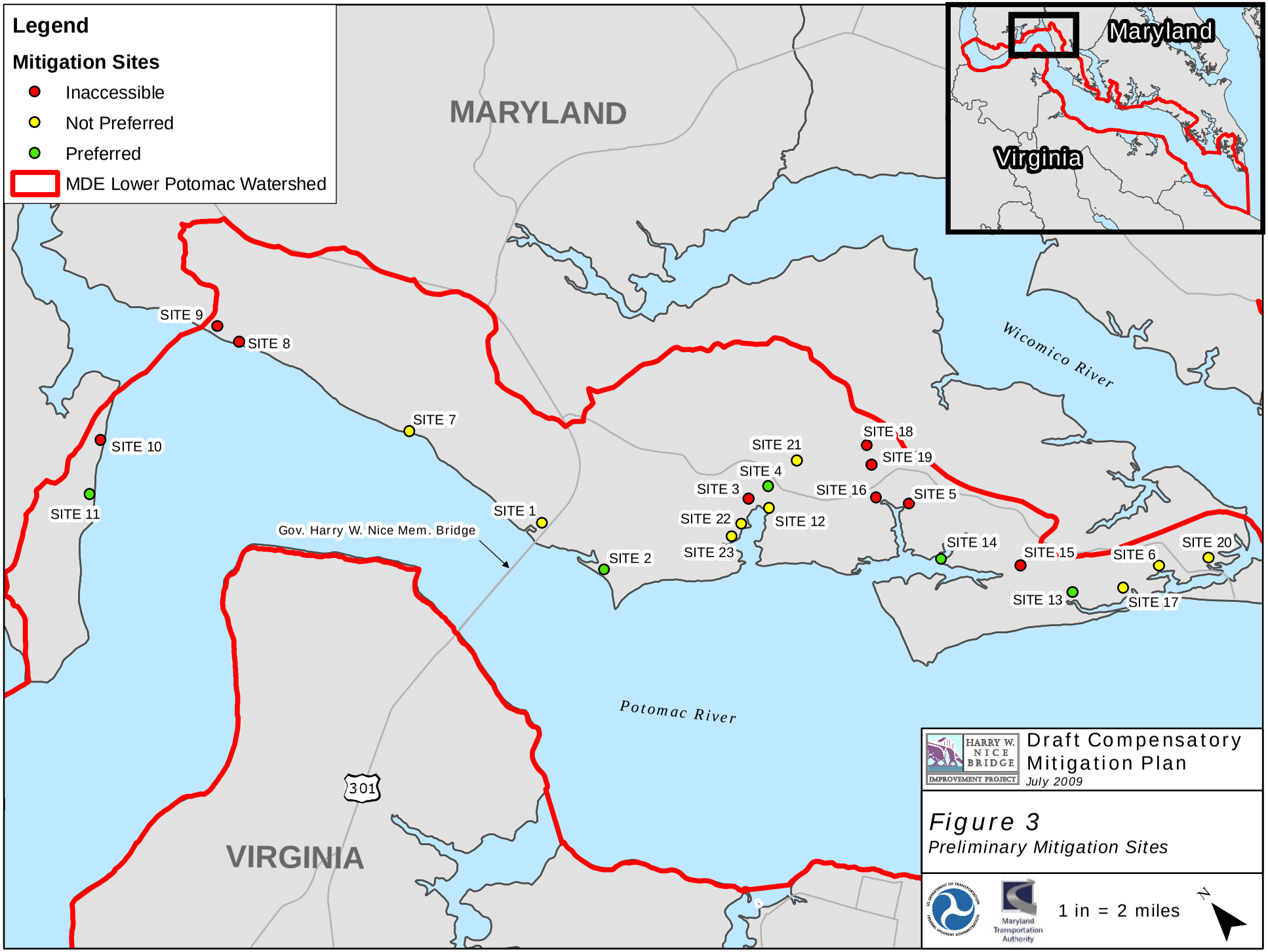
The Authority is an independent agency that is financially separate from the State's General Fund and the Transportation Trust Fund. Its projects and services are funded through tolls paid by customers, other user revenues, and the proceeds from toll revenue bonds issued by the Authority. Once design and construction funds are programmed, acquisition and construction of mitigation sites can begin, where possible.

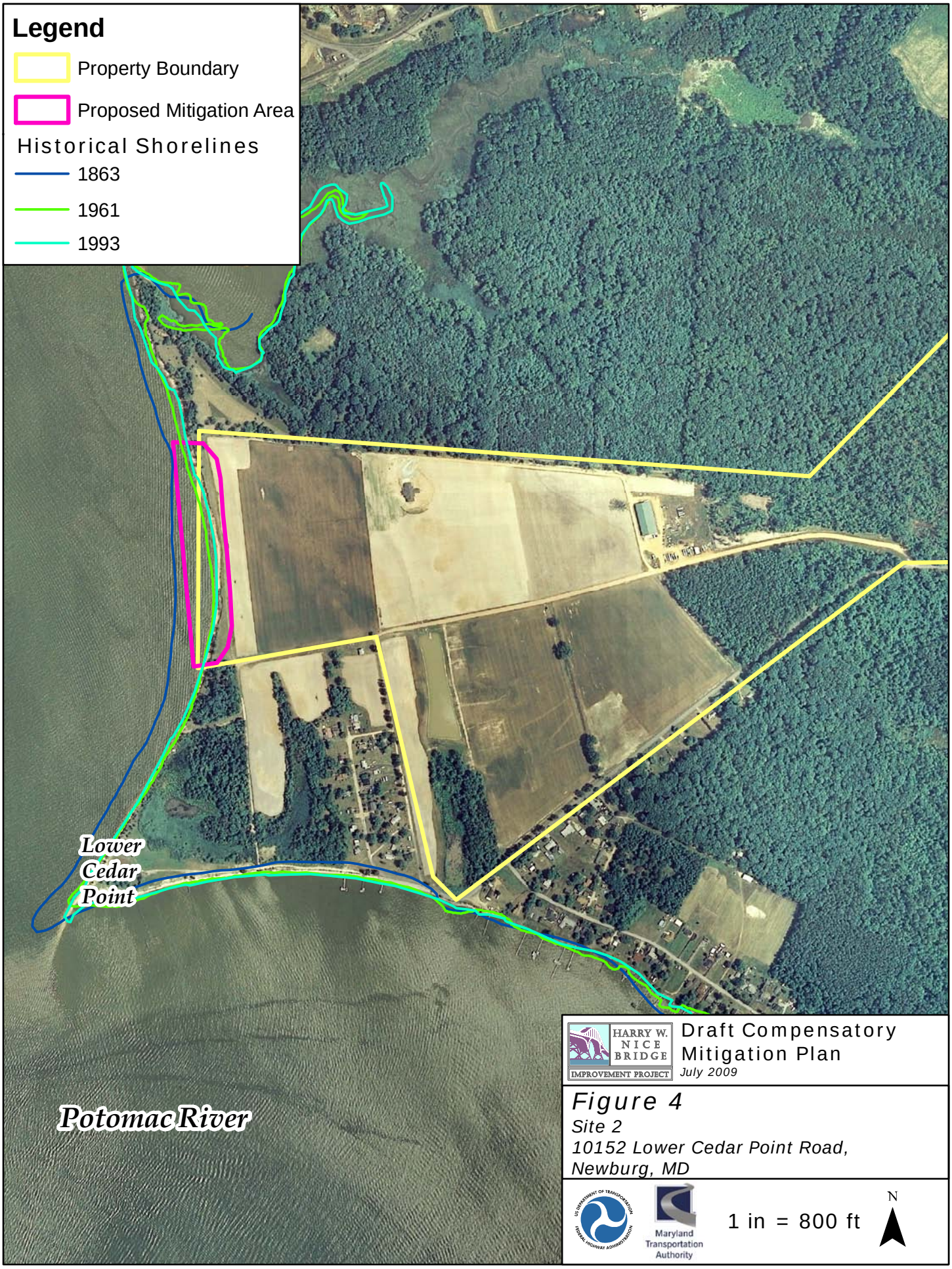
## XV. LONG-TERM MANAGEMENT PLAN

The Authority is committed to assuring the long term success of mitigation for the Nice Bridge Improvement Project. It will review project mitigation to assure the project meets performance standards as part of its annual site monitoring activities. Both shoreline stabilization and marsh creation sites will be designed and constructed to be self-sustaining systems within the five-year monitoring period and as such, should not require any long-term management. If the project meets performance standards, then no future action is proposed.

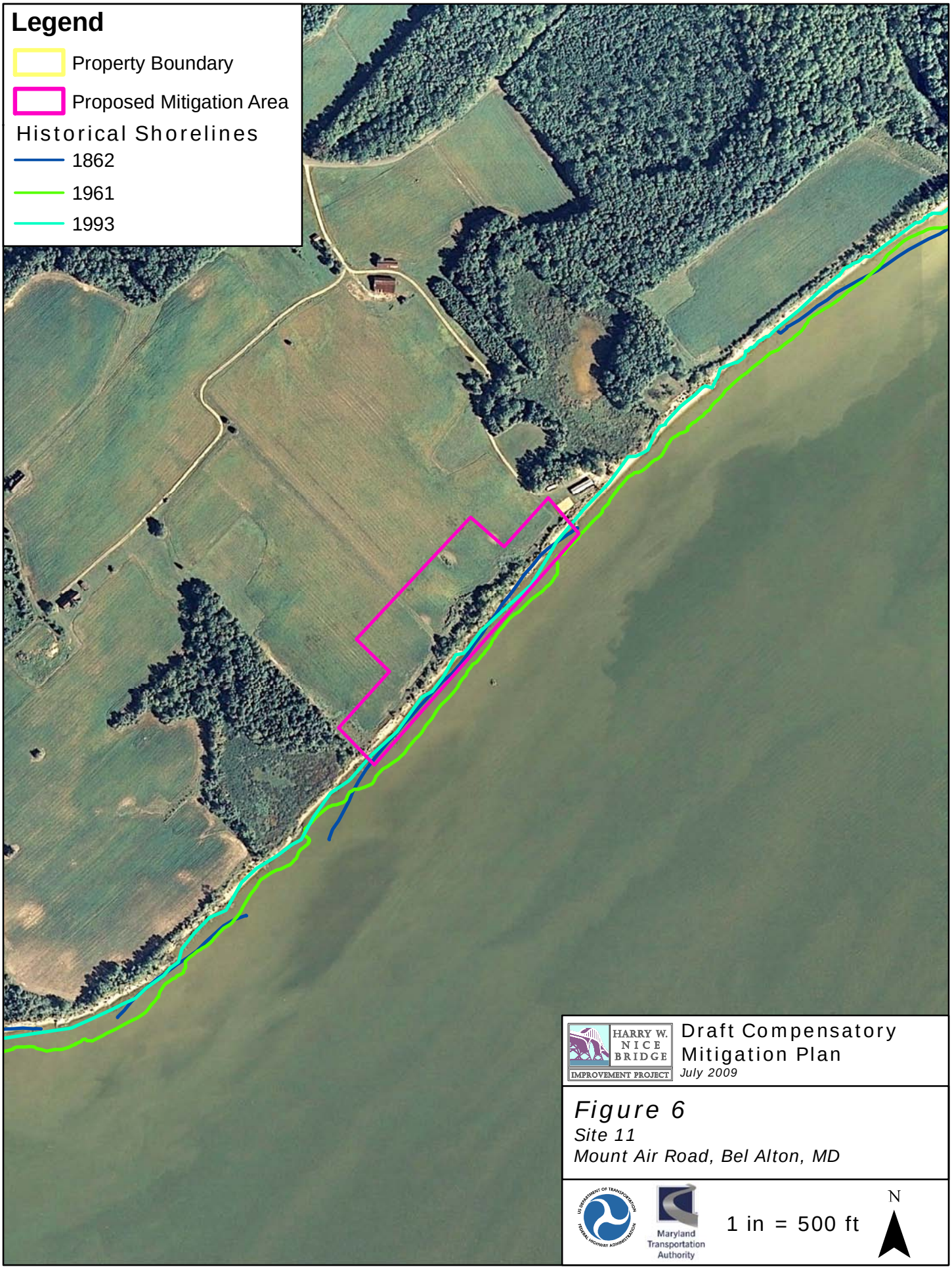

Legend
Nice Bridge Project Area
MARYLAND
POTOMAC
VIRGINIA
Cliffton Drive
Aqua-Land
Campground
and Marina
Gov. Harry W. Nice Memorial Bridge
301
Morgantown
Generating Plant
RIVER
Lower Cedar P
Naval Support
Facility Dahlgren
HARRY W. NICE BRIDGE
IMPROVEMENT PROJECT
Draft Compensatory
Mitigation Plan
July 2009
Figure 1
Nice Bridge Project Area
Maryland
Transportation
Authority
1 inch = 0.5 mile
N


Legend
MDE Lower Potomac Watershed
Mitigation Site Search Area
Fairfax County
Prince George's County
ce William County
Calvert County
Chesapeake Bay
Charles County
MARYLAND
Gov. Harry W. Nice Mem. Bridge
St. Mary's County
301
King George County
VIRGINIA
Potomac River
Westmoreland County
Essex County
Richmond County
Caroline County
King And Queen County
King William County
HARRY W. NICE BRIDGE
IMPROVEMENT PROJECT
Draft Compensatory Mitigation Plan
July 2009
Figure 2
Lower Potomac River Watershed
Maryland Transportation Authority
1 in = 7 miles
N


Legend
Mitigation Sites
Inaccessible
Not Preferred
Preferred
MDE Lower Potomac Watershed
MARYLAND
VIRGINIA
Maryland
Virginia
Wicomico River
Potomac River
Gov. Harry W. Nice Mem. Bridge
301
SITE 1
SITE 2
SITE 3
SITE 4
SITE 5
SITE 6
SITE 7
SITE 8
SITE 9
SITE 10
SITE 11
SITE 12
SITE 13
SITE 14
SITE 15
SITE 16
SITE 17
SITE 18
SITE 19
SITE 20
SITE 21
SITE 22
SITE 23
HARRY W. NICE BRIDGE IMPROVEMENT PROJECT
Draft Compensatory Mitigation Plan
July 2009
Figure 3
Preliminary Mitigation Sites
Maryland Transportation Authority
1 in = 2 miles
N


Legend
Property Boundary
Proposed Mitigation Area
Historical Shorelines
1863
1961
1993
Lower Cedar Point
Potomac River
HARRY W. NICE BRIDGE
IMPROVEMENT PROJECT
Draft Compensatory Mitigation Plan
July 2009
Figure 4
Site 2
10152 Lower Cedar Point Road, Newburg, MD
Maryland Transportation Authority
1 in = 800 ft
N


Legend
Property Boundary
Proposed Mitigation Area
HARRY W. NICE BRIDGE
IMPROVEMENT PROJECT
Draft Compensatory Mitigation Plan
July 2009
Figure 5
Site 4
Rock Point Road, Newburg, MD
Maryland Transportation Authority
1 in = 800 ft
N




HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Draft Compensatory Mitigation Plan

*July 2009*

*Figure 6*

*Site 11*

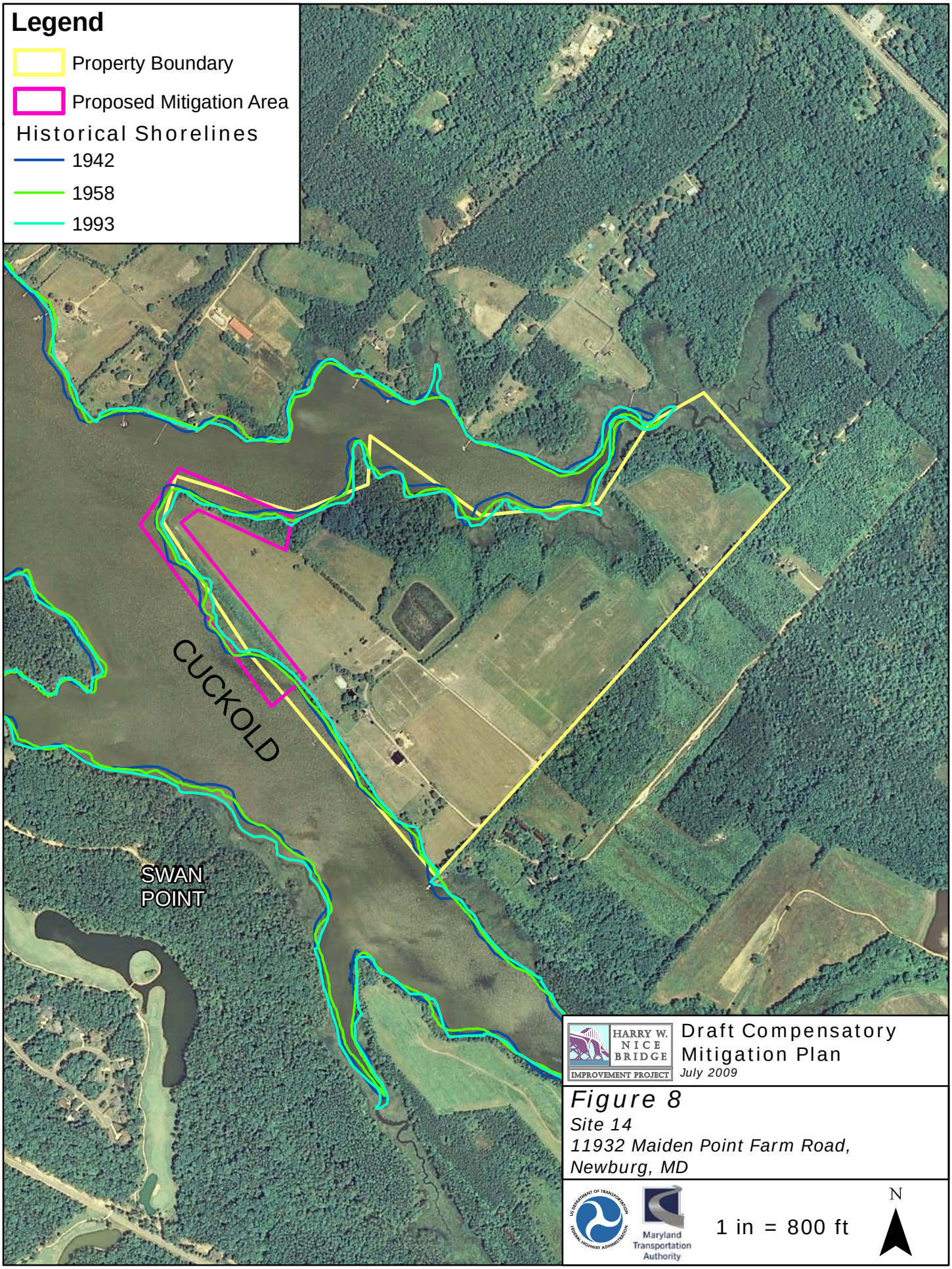
*Mount Air Road, Bel Alton, MD*

Maryland Transportation Authority

1 in = 500 ft

N


Legend
Property Boundary
Proposed Mitigation Area
HARRY W. NICE BRIDGE
IMPROVEMENT PROJECT
Draft Compensatory Mitigation Plan
July 2009
Figure 7
Site 13
16220 Wilson Road, Issue, MD
Maryland Transportation Authority
1 in = 800 ft
N


Legend
Property Boundary
Proposed Mitigation Area
Historical Shorelines
1942
1958
1993
CUCKOLD
SWAN POINT
HARRY W. NICE BRIDGE
IMPROVEMENT PROJECT
Draft Compensatory Mitigation Plan
July 2009
Figure 8
Site 14
11932 Maiden Point Farm Road, Newburg, MD
Maryland Transportation Authority
1 in = 800 ft
N

# Ephemeral Stream Assessment Form (Form 1a)

**Unified Stream Methodology for use in Virginia**

**For use in ephemeral streams**

| Project # | Project Name | Locality | Cowardin Class. | HUC | Date | SAR # | Impact/SAR length | Impact Factor |
|---|---|---|---|---|---|---|---|---|
| | Nice Bridge Improvement Project | | R2UB3 | | 3/25/2009 | | 83 | 1 |

| Name(s) of Evaluator(s) | Stream Name and Information |
|---|---|
| WMMS, ERB | VA-WUS-1 |

**2. RIPARIAN BUFFERS:** Assess both bank's 100 foot riparian areas along the entire SAR. (rough measurements of length & width may be acceptable)

| Conditional Category | | | | | | | | NOTES>> |
|---|---|---|---|---|---|---|---|---|
| | Optimal | Suboptimal | | Marginal | | Poor | | |
| Riparian Buffers | Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover and an non-maintained understory. Wetlands areas. | **High Suboptimal:** Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory. | **Low Suboptimal:** Riparian areas with tree stratum (dbh > 3 inches) present, with >30% tree canopy cover and a maintained understory. Recent cutover (dense vegetation). | **High Marginal:** Non-maintained, dense herbaceous vegetation with either a shrub layer or a tree layer (dbh > 3 inches) present, with <30% tree canopy cover. | **Low Marginal:** Non-maintained, dense herbaceous vegetation, riparian areas lacking shrub and tree stratum, hay production, ponds, open water. If present, tree stratum (dbh >3 inches) present, with <30% tree canopy cover with maintained understory. | **High Poor:** Lawns, mowed, and maintained areas, nurseries; no-till cropland; actively grazed pasture, sparsely vegetated non-maintained area, recently seeded and stabilized, or other comparable condition. | **Low Poor:** Impervious surfaces, mine spoil lands, denuded surfaces, row crops, active feed lots, trails, or other comparable conditions. | |
| | | High | Low | High | Low | High | Low | |
| Condition Scores | 1.5 | 1.2 | 1.1 | 0.85 | 0.75 | 0.6 | 0.5 | |

1. Delineate riparian areas along each stream bank into Condition Categories and Condition Scores using the descriptors.
2. Determine square footage for each by measuring or estimating length and width. Calculators are provided for you below.
3. Enter the % Riparian Area and Score for each riparian category in the blocks below.

Ensure the sums of % Riparian Blocks equal 100

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Bank | % Riparian Area> | 80% | 20% | | | | | 100% | | | |
| | Score > | 1.5 | 0.5 | | | | | | | | |
| | | | | | | | | | CI= (Sum % RA * Scores*0.01)/2 | | |
| Left Bank | % Riparian Area> | 80% | 20% | | | | | 100% | Rt Bank CI > | 1.30 | CI |
| | Score > | 1.5 | 0.5 | | | | | | Lt Bank CI > | 1.30 | 1.30 |

**REACH CONDITION INDEX and STREAM CONDITION UNITS FOR THIS REACH**

*NOTE:* **The CIs and RCI should be rounded to 2 decimal places. The CR should be rounded to a whole number.**

| | |
|---|---|
| **THE REACH CONDITION INDEX (RCI) >>** | **0.65** |
| RCI= (Riparian CI)/2 | |
| **COMPENSATION REQUIREMENT (CR) >>** | **54** |
| CR = RCI X LF X IF | |

**INSERT PHOTOS:**



**DESCRIBE PROPOSED IMPACT:**

# Ephemeral Stream Assessment Form (Form 1a)

**Unified Stream Methodology for use in Virginia**

**For use in ephemeral streams**

| Project # | Project Name | Locality | Cowardin Class. | HUC | Date | SAR # | Impact/SAR length | Impact Factor |
|---|---|---|---|---|---|---|---|---|
| | Nice Bridge Improvement Project | | R2UB4 | | 3/25/2009 | | 0 | 0 |

| Name(s) of Evaluator(s) | Stream Name and Information |
|---|---|
| WMM, ERB | VA-WUS-2 |

**2. RIPARIAN BUFFERS:** Assess both bank's 100 foot riparian areas along the entire SAR. (rough measurements of length & width may be acceptable)

| Conditional Category | | | | | | | | NOTES>> |
|---|---|---|---|---|---|---|---|---|
| | Optimal | Suboptimal | | Marginal | | Poor | | |
| Riparian Buffers | Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover and an non-maintained understory. Wetlands areas. | **High Suboptimal:** Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory. | **Low Suboptimal:** Riparian areas with tree stratum (dbh > 3 inches) present, with >30% tree canopy cover and a maintained understory. Recent cutover (dense vegetation). | **High Marginal:** Non-maintained, dense herbaceous vegetation with either a shrub layer or a tree layer (dbh > 3 inches) present, with <30% tree canopy cover. | **Low Marginal:** Non-maintained, dense herbaceous vegetation, riparian areas lacking shrub and tree stratum, hay production, ponds, open water. If present, tree stratum (dbh >3 inches) present, with <30% tree canopy cover with maintained understory. | **High Poor:** Lawns, mowed, and maintained areas, nurseries; no-till cropland; actively grazed pasture, sparsely vegetated non-maintained area, recently seeded and stabilized, or other comparable condition. | **Low Poor:** Impervious surfaces, mine spoil lands, denuded surfaces, row crops, active feed lots, trails, or other comparable conditions. | |
| | | High | Low | High | Low | High | Low | |
| Condition Scores | 1.5 | 1.2 | 1.1 | 0.85 | 0.75 | 0.6 | 0.5 | |

1. Delineate riparian areas along each stream bank into Condition Categories and Condition Scores using the descriptors.
2. Determine square footage for each by measuring or estimating length and width. Calculators are provided for you below.
3. Enter the % Riparian Area and Score for each riparian category in the blocks below.

Ensure the sums of % Riparian Blocks equal 100

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Bank | % Riparian Area> | 80% | 20% | | | | | 100% | | | |
| | Score > | 1.5 | 0.5 | | | | | | | | |
| | | | | | | | | | CI= (Sum % RA * Scores*0.01)/2 | | |
| Left Bank | % Riparian Area> | 80% | 20% | | | | | 100% | Rt Bank CI > | 1.30 | CI |
| | Score > | 1.5 | 0.5 | | | | | | Lt Bank CI > | 1.30 | 1.30 |

**REACH CONDITION INDEX and STREAM CONDITION UNITS FOR THIS REACH**

*NOTE:* **The CIs and RCI should be rounded to 2 decimal places. The CR should be rounded to a whole number.**

| | |
|---|---|
| **THE REACH CONDITION INDEX (RCI) >>** | **0.65** |
| RCI= (Riparian CI)/2 | |
| **COMPENSATION REQUIREMENT (CR) >>** | **0** |
| CR = RCI X LF X IF | |

**INSERT PHOTOS:**



**DESCRIBE PROPOSED IMPACT:**

# Ephemeral Stream Assessment Form (Form 1a)

**Unified Stream Methodology for use in Virginia**

**For use in ephemeral streams**

| Project # | Project Name | Locality | Cowardin Class. | HUC | Date | SAR # | Impact/SAR length | Impact Factor |
|---|---|---|---|---|---|---|---|---|
| | Nice Bridge Improvement Project | | R2UB3 | | 3/25/2009 | | 0 | 0 |

| Name(s) of Evaluator(s) | Stream Name and Information |
|---|---|
| WMM, ERB | VA-WUS-3 |

## 2. RIPARIAN BUFFERS: Assess both bank's 100 foot riparian areas along the entire SAR. (rough measurements of length & width may be acceptable)

| Conditional Category | | | | | | | | NOTES>> |
|---|---|---|---|---|---|---|---|---|
| | Optimal | Suboptimal | | Marginal | | Poor | | |
| Riparian Buffers | Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover and an non-maintained understory. Wetlands areas. | **High Suboptimal:** Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory. | **Low Suboptimal:** Riparian areas with tree stratum (dbh > 3 inches) present, with >30% tree canopy cover and a maintained understory. Recent cutover (dense vegetation). | **High Marginal:** Non-maintained, dense herbaceous vegetation with either a shrub layer or a tree layer (dbh > 3 inches) present, with <30% tree canopy cover. | **Low Marginal:** Non-maintained, dense herbaceous vegetation, riparian areas lacking shrub and tree stratum, hay production, ponds, open water. If present, tree stratum (dbh >3 inches) present, with <30% tree canopy cover with maintained understory. | **High Poor:** Lawns, mowed, and maintained areas, nurseries; no-till cropland; actively grazed pasture, sparsely vegetated non-maintained area, recently seeded and stabilized, or other comparable condition. | **Low Poor:** Impervious surfaces, mine spoil lands, denuded surfaces, row crops, active feed lots, trails, or other comparable conditions. | |
| | | High | Low | High | Low | High | Low | |
| Condition Scores | 1.5 | 1.2 | 1.1 | 0.85 | 0.75 | 0.6 | 0.5 | |

1. Delineate riparian areas along each stream bank into Condition Categories and Condition Scores using the descriptors.
2. Determine square footage for each by measuring or estimating length and width. Calculators are provided for you below.
3. Enter the % Riparian Area and Score for each riparian category in the blocks below.

Ensure the sums of % Riparian Blocks equal 100

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Bank | % Riparian Area> | 100% | | | | | | 100% | | | |
| | Score > | 1.5 | | | | | | | | | |
| | | | | | | | | | CI= (Sum % RA * Scores*0.01)/2 | | |
| Left Bank | % Riparian Area> | 100% | | | | | | 100% | Rt Bank CI > | 1.50 | CI |
| | Score > | 1.5 | | | | | | | Lt Bank CI > | 1.50 | 1.50 |

## REACH CONDITION INDEX and STREAM CONDITION UNITS FOR THIS REACH

*NOTE:* **The CIs and RCI should be rounded to 2 decimal places. The CR should be rounded to a whole number.**

| | |
|---|---|
| THE REACH CONDITION INDEX (RCI) >> | 0.75 |
| RCI= (Riparian CI)/2 | |
| COMPENSATION REQUIREMENT (CR) >> | 0 |
| CR = RCI X LF X IF | |

**INSERT PHOTOS:**



**DESCRIBE PROPOSED IMPACT:**

# Stream Assessment Form (Form 1)

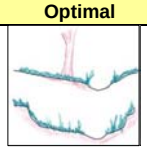
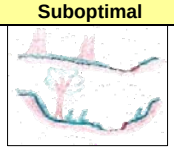
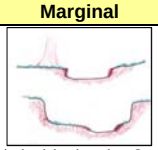
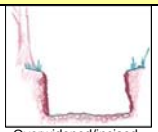
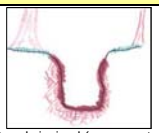
**Unified Stream Methodology for use in Virginia**

**For use in wadeable channels classified as intermittent or perennial**

| Project # | Project Name | Locality | Cowardin Class. | HUC | Date | SAR # | Impact/SAR length | Impact Factor |
|---|---|---|---|---|---|---|---|---|
| | Nice Bridge | | R4UB2 | | 3/25/2009 | | 119 | 1 |

| Name(s) of Evaluator(s) | Stream Name and Information |
|---|---|
| WMM, ERB | VA-WUS-4 |

## 1. Channel Condition: Assess the cross-section of the stream and prevailing condition (erosion, aggradation)

| | Conditional Category | | | | | |
|---|---|---|---|---|---|---|
| | Optimal | Suboptimal | Marginal | Poor | Severe | |
| Channel Condition |  Very little incision or active erosion; 80-100% stable banks. Vegetative surface protection or natural rock, prominent (80-100%). AND/OR Stable point bars/bankfull benches are present. Access to their original floodplain or fully developed wide bankfull benches. Mid-channel bars, and transverse bars few. Transient sediment deposition covers less than 10% of bottom. |  Slightly incised, few areas of active erosion or unprotected banks. Majority of banks are stable (60-80%). Vegetative protection or natural rock prominent (60-80%) AND/OR Depositional features contribute to stability. The bankfull and low flow channels are well defined. Stream likely has access to bankfull benches, or newly developed floodplains along portions of the reach. Transient sediment covers 10-40% of the stream bottom. |  Often incised, but less than Severe or Poor. Banks more stable than Severe or Poor due to lower bank slopes. Erosion may be present on 40-60% of both banks. Vegetative protection on 40-60% of banks. Streambanks may bevertical or undercut. AND/OR 40-60% of stream is covered by sediment. Sediment may be temporary/transient, contribute instability. Deposition that contribute to stability, may be forming/present. AND/OR V-shaped channels have vegetative protection on > 40% of the banks and depositional features which contribute to stability. |  Overwidened/incised. Vertically/laterally unstable. Likely to widen further. Majority of both banks are near vertical. Erosion present on 60-80% of banks. Vegetative protection present on 20-40% of banks, and is insufficient to prevent erosion. AND/OR 60-80% of the stream is covered by sediment. Sediment is temporary/transient in nature, and contributing to instability. AND/OR V-shaped channels have vegetative protection is present on > 40% of the banks and stable sediment deposition is absent. |  Deeply incised (or excavated), vertical/lateral instability. Severe incision, flow contained within the banks. Streambed below average rooting depth, majority of banks vertical/undercut. Vegetative protection present on less than 20% of banks, is not preventing erosion. Obvious bank sloughing present. Erosion/raw banks on 80-100%. AND/OR Aggrading channel. Greater than 80% of stream bed is covered by deposition, contributing to instability. Multiple thread channels and/or subterranean flow. | CI |
| Score | 3 | 2.4 | 2 | 1.6 | 1 | 2.0 |
| NOTES>> | | | | | | |

## 2. RIPARIAN BUFFERS: Assess both bank's 100 foot riparian areas along the entire SAR. (rough measurements of length & width may be acceptable)

| | Conditional Category | | | | | | | NOTES>> |
|---|---|---|---|---|---|---|---|---|
| | Optimal | Suboptimal | | Marginal | | Poor | | |
| Riparian Buffers | Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover and a non-maintained understory. Wetlands located within the riparian areas. | **High Suboptimal:** Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory. | **Low Suboptimal:** Riparian areas with tree stratum (dbh > 3 inches) present, with > 30% tree canopy cover and a maintained understory. Recent cutover (dense vegetation). | **High Marginal:** Non-maintained, dense herbaceous vegetation with either a shrub layer or a tree layer (dbh > 3 inches) present, with <30% tree canopy cover. | **Low Marginal:** Non-maintained, dense herbaceous vegetation, riparian areas lacking shrub and tree stratum, hay production, ponds, open water. If present, tree stratum (dbh >3 inches) present, with <30% tree canopy cover with maintained understory. | **High Poor:** Lawns, mowed, and maintained areas, nurseries; no-till cropland; actively grazed pasture, sparsely vegetated non-maintained area, recently seeded and stabilized, or other comparable condition. | **Low Poor:** Impervious surfaces, mine spoil lands, denuded surfaces, row crops, active feed lots, trails, or other comparable conditions. | |
| | | High | Low | High | Low | High | Low | |
| Condition Scores | 1.5 | 1.2 | 1.1 | 0.85 | 0.75 | 0.6 | 0.5 | |

1. Delineate riparian areas along each stream bank into Condition Categories and Condition Scores using the descriptors.
2. Determine square footage for each by measuring or estimating length and width. Calculators are provided for you below.
3. Enter the % Riparian Area and Score for each riparian category in the blocks below.

Ensure the sums of % Riparian Blocks equal 100

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Right Bank | % Riparian Area> | 80% | 20% | | | | | 100% | |
| | Score > | 1.2 | 0.5 | | | | | | |
| | | | | | | | | | CI= (Sum % RA * Scores*0.01)/2 |
| Left Bank | % Riparian Area> | 80% | 20% | | | | | 100% | Rt Bank CI > 1.06 — CI |
| | Score > | 1.2 | 0.5 | | | | | | Lt Bank CI > 1.06 — 1.06 |

## 3. INSTREAM HABITAT: Varied substrate sizes, water velocity and depths; woody and leafy debris; stable substrate; low embededness; shade; undercut banks; root mats; SAV; riffle poole complexes, stable features.

| | Conditional Category | | | | NOTES>> |
|---|---|---|---|---|---|
| | Optimal | Suboptimal | Marginal | Poor | |
| Instream Habitat/ Available Cover | Habitat elements are typically present in greater than 50% of the reach. | Stable habitat elements are typically present in 30-50% of the reach and are adequate for maintenance of populations. | Stable habitat elements are typically present in 10-30% of the reach and are adequate for maintenance of populations. | Habitat elements listed above are lacking or are unstable. Habitat elements are typically present in less than 10% of the reach. | CI |
| Score | 1.5 | 1.2 | 0.9 | 0.5 | 0.70 |

# Stream Impact Assessment Form Page 2

| Project # | Applicant | Locality | Cowardin Class. | HUC | Date | Data Point | SAR length | Impact Factor |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | 500 | 1 |

**4. CHANNEL ALTERATION:** Stream crossings, riprap, concrete, gabions, or concrete blocks, straightening of channel, channelization, embankments, spoil piles, constrictions, livestock

**NOTES>>**

| | Conditional Category | | | | | | |
|---|---|---|---|---|---|---|---|
| | Negligible | Minor | | Moderate | | Severe | |
| **Channel Alteration** | Channelization, dredging, alteration, or hardening absent. Stream has an unaltered pattern or has naturalized. | Less than 20% of the stream reach is disrupted by any of the channel alterations listed in the parameter guidelines. | 20-40% of the stream reach is disrupted by any of the channel alterations listed in the parameter guidelines. | 40 - 60% of reach is disrupted by any of the channel alterations listed in the parameter guidelines. If stream has been channelized, normal stable stream meander pattern has not recovered. | 60 - 80% of reach is disrupted by any of the channel alterations listed in the parameter guidelines. If stream has been channelized, normal stable stream meander pattern has not recovered. | Greater than 80% of reach is disrupted by any of the channel alterations listed in the parameter guidelines AND/OR 80% of banks shored with gabion, riprap, or cement. | |
| **SCORE** | **1.5** | **1.3** | **1.1** | **0.9** | **0.7** | **0.5** | **1.10** |

## REACH CONDITION INDEX and STREAM CONDITION UNITS FOR THIS REACH

***NOTE:*** **The CIs and RCI should be rounded to 2 decimal places. The CR should be rounded to a whole number.**

| | |
|---|---|
| **THE REACH CONDITION INDEX (RCI) >>** | **0.97** |
| RCI= (Sum of all CI's)/5 | |
| **COMPENSATION REQUIREMENT (CR) >>** | **115** |
| CR = RCI X LF X IF | |

**INSERT PHOTOS:**



**DESCRIBE PROPOSED IMPACT:**

# Stream Assessment Form (Form 1)

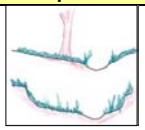
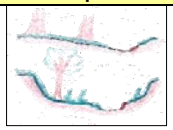
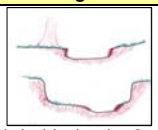
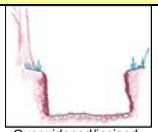
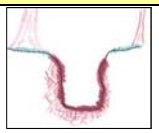
**Unified Stream Methodology for use in Virginia**

**For use in wadeable channels classified as intermittent or perennial**

| Project # | Project Name | Locality | Cowardin Class. | HUC | Date | SAR # | Impact/SAR length | Impact Factor |
|---|---|---|---|---|---|---|---|---|
| | Nice Bridge | | R4UB2 | | 3/25/2009 | | 22 | 1 |

| Name(s) of Evaluator(s) | Stream Name and Information |
|---|---|
| WMM, ERB | VA-WUS-6 |

## 1. Channel Condition: Assess the cross-section of the stream and prevailing condition (erosion, aggradation)

| Conditional Category | Optimal | Suboptimal | Marginal | Poor | Severe | |
|---|---|---|---|---|---|---|
| Channel Condition |  Very little incision or active erosion; 80-100% stable banks. Vegetative surface protection or natural rock, prominent (80-100%). AND/OR Stable point bars/bankfull benches are present. Access to their original floodplain or fully developed wide bankfu |  Slightly incised, few areas of active erosion or unprotected banks. Majority of banks are stable (60-80%). Vegetative protection or natural rock prominent (60-80%) AND/OR Depositional features contribute to stability. The bankfull and low flow channels |  Often incised, but less than Severe or Poor. Banks more stable than Severe or Poor due to lower bank slopes. Erosion may be present on 40-60% of both banks. Vegetative protection on 40-60% of banks. Streambanks may bevertical or undercut. AND/OR 40-60% |  Overwidened/incised. Vertically/laterally unstable. Likely to widen further. Majority of both banks are near vertical. Erosion present on 60-80% of banks. Vegetative protection present on 20-40% of banks, and is insufficient to prevent erosion. AND/OR |  Deeply incised (or excavated), vertical/lateral instability. Severe incision, flow contained within the banks. Streambed below average rooting depth, majority of banks vertical/undercut. Vegetative protection present on less than 20% of banks, is not p | CI |
| Score | 3 | 2.4 | 2 | 1.6 | 1 | 2.0 |
| NOTES>> | | | | | | |

## 2. RIPARIAN BUFFERS: Assess both bank's 100 foot riparian areas along the entire SAR. (rough measurements of length & width may be acceptable)

| Conditional Category | Optimal | Suboptimal | | Marginal | | Poor | | NOTES>> |
|---|---|---|---|---|---|---|---|---|
| Riparian Buffers | Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover and a non-maintained understory. Wetlands located within the riparian areas. | **High Suboptimal:** Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory. | **Low Suboptimal:** Riparian areas with tree stratum (dbh > 3 inches) present, with > 30% tree canopy cover and a maintained understory. Recent cutover (dense vegetation). | **High Marginal:** Non-maintained, dense herbaceous vegetation with either a shrub layer or a tree layer (dbh > 3 inches) present, with <30% tree canopy cover. | **Low Marginal:** Non-maintained, dense herbaceous vegetation, riparian areas lacking shrub and tree stratum, hay production, ponds, open water. If present, tree stratum (dbh >3 inches) present, with <30% tree canopy cover with maintained understory. | **High Poor:** Lawns, mowed, and maintained areas, nurseries; no-till cropland; actively grazed pasture, sparsely vegetated non-maintained area, recently seeded and stabilized, or other comparable condition. | **Low Poor:** Impervious surfaces, mine spoil lands, denuded surfaces, row crops, active feed lots, trails, or other comparable conditions. | |
| | | High | Low | High | Low | High | Low | |
| Condition Scores | 1.5 | 1.2 | 1.1 | 0.85 | 0.75 | 0.6 | 0.5 | |

1. Delineate riparian areas along each stream bank into Condition Categories and Condition Scores using the descriptors.
2. Determine square footage for each by measuring or estimating length and width. Calculators are provided for you below.
3. Enter the % Riparian Area and Score for each riparian category in the blocks below.

Ensure the sums of % Riparian Blocks equal 100

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Right Bank | % Riparian Area> | 50% | 50% | | | | | 100% | |
| | Score > | 0.6 | 0.5 | | | | | | |
| | | | | | | | | | CI= (Sum % RA * Scores*0.01)/2 |
| Left Bank | % Riparian Area> | 50% | 50% | | | | | 100% | Rt Bank CI > 0.55 |
| | Score > | 0.6 | 0.5 | | | | | | Lt Bank CI > 0.55 |

CI: 0.55

## 3. INSTREAM HABITAT: Varied substrate sizes, water velocity and depths; woody and leafy debris; stable substrate; low embededness; shade; undercut banks; root mats; SAV; riffle poole complexes, stable features.

| Conditional Category | Optimal | Suboptimal | Marginal | Poor | NOTES>> | |
|---|---|---|---|---|---|---|
| Instream Habitat/ Available Cover | Habitat elements are typically present in greater than 50% of the reach. | Stable habitat elements are typically present in 30-50% of the reach and are adequate for maintenance of populations. | Stable habitat elements are typically present in 10-30% of the reach and are adequate for maintenance of populations. | Habitat elements listed above are lacking or are unstable. Habitat elements are typically present in less than 10% of the reach. | | CI |
| Score | 1.5 | 1.2 | 0.9 | 0.5 | | 0.50 |

# Stream Impact Assessment Form Page 2

| Project # | Applicant | Locality | Cowardin Class. | HUC | Date | Data Point | SAR length | Impact Factor |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | 500 | 1 |

**4. CHANNEL ALTERATION:** Stream crossings, riprap, concrete, gabions, or concrete blocks, straightening of channel, channelization, embankments, spoil piles, constrictions, livestock

**NOTES>>**

| | Conditional Category | | | | | | |
|---|---|---|---|---|---|---|---|
| | Negligible | Minor | | Moderate | | Severe | |
| **Channel Alteration** | Channelization, dredging, alteration, or hardening absent. Stream has an unaltered pattern or has naturalized. | Less than 20% of the stream reach is disrupted by any of the channel alterations listed in the parameter guidelines. | 20-40% of the stream reach is disrupted by any of the channel alterations listed in the parameter guidelines. | 40 - 60% of reach is disrupted by any of the channel alterations listed in the parameter guidelines. If stream has been channelized, normal stable stream meander pattern has not recovered. | 60 - 80% of reach is disrupted by any of the channel alterations listed in the parameter guidelines. If stream has been channelized, normal stable stream meander pattern has not recovered. | Greater than 80% of reach is disrupted by any of the channel alterations listed in the parameter guidelines AND/OR 80% of banks shored with gabion, riprap, or cement. | |
| **SCORE** | **1.5** | **1.3** | **1.1** | **0.9** | **0.7** | **0.5** | **0.50** |

## REACH CONDITION INDEX and STREAM CONDITION UNITS FOR THIS REACH

***NOTE:*** **The CIs and RCI should be rounded to 2 decimal places. The CR should be rounded to a whole number.**

| | |
|---|---|
| **THE REACH CONDITION INDEX (RCI) >>** | **0.71** |
| RCI= (Sum of all CI's)/5 | |
| **COMPENSATION REQUIREMENT (CR) >>** | **15** |
| CR = RCI X LF X IF | |

**INSERT PHOTOS:**



**DESCRIBE PROPOSED IMPACT:**

# Ephemeral Stream Assessment Form (Form 1a)

**Unified Stream Methodology for use in Virginia**

**For use in ephemeral streams**

| Project # | Project Name | Locality | Cowardin Class. | HUC | Date | SAR # | Impact/SAR length | Impact Factor |
|---|---|---|---|---|---|---|---|---|
| | Nice Bridge Improvement Project | | R2UB3 | | 3/25/2009 | | 136 | 1 |

| Name(s) of Evaluator(s) | Stream Name and Information |
|---|---|
| WMM, ERB | VA-WUS-7 |

**2. RIPARIAN BUFFERS:** Assess both bank's 100 foot riparian areas along the entire SAR. (rough measurements of length & width may be acceptable)

| Conditional Category | | | | | | | | NOTES>> |
|---|---|---|---|---|---|---|---|---|
| | Optimal | Suboptimal | | Marginal | | Poor | | |
| Riparian Buffers | Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover and an non-maintained understory. Wetlands areas. | **High Suboptimal:** Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory. | **Low Suboptimal:** Riparian areas with tree stratum (dbh > 3 inches) present, with >30% tree canopy cover and a maintained understory. Recent cutover (dense vegetation). | **High Marginal:** Non-maintained, dense herbaceous vegetation with either a shrub layer or a tree layer (dbh > 3 inches) present, with <30% tree canopy cover. | **Low Marginal:** Non-maintained, dense herbaceous vegetation, riparian areas lacking shrub and tree stratum, hay production, ponds, open water. If present, tree stratum (dbh >3 inches) present, with <30% tree canopy cover with maintained understory. | **High Poor:** Lawns, mowed, and maintained areas, nurseries; no-till cropland; actively grazed pasture, sparsely vegetated non-maintained area, recently seeded and stabilized, or other comparable condition. | **Low Poor:** Impervious surfaces, mine spoil lands, denuded surfaces, row crops, active feed lots, trails, or other comparable conditions. | |
| | | High | Low | High | Low | High | Low | |
| Condition Scores | 1.5 | 1.2 | 1.1 | 0.85 | 0.75 | 0.6 | 0.5 | |

1. Delineate riparian areas along each stream bank into Condition Categories and Condition Scores using the descriptors.
2. Determine square footage for each by measuring or estimating length and width. Calculators are provided for you below.
3. Enter the % Riparian Area and Score for each riparian category in the blocks below.

Ensure the sums of % Riparian Blocks equal 100

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Bank | % Riparian Area> | 100% | | | | | | 100% | | | |
| | Score > | 0.6 | | | | | | | | | |
| | | | | | | | | | CI= (Sum % RA * Scores*0.01)/2 | | |
| Left Bank | % Riparian Area> | 100% | | | | | | 100% | Rt Bank CI > | 0.60 | CI |
| | Score > | 0.6 | | | | | | | Lt Bank CI > | 0.60 | 0.60 |

**REACH CONDITION INDEX and STREAM CONDITION UNITS FOR THIS REACH**

*NOTE:* **The CIs and RCI should be rounded to 2 decimal places. The CR should be rounded to a whole number.**

| | |
|---|---|
| **THE REACH CONDITION INDEX (RCI) >>** | **0.30** |
| RCI= (Riparian CI)/2 | |
| **COMPENSATION REQUIREMENT (CR) >>** | **41** |
| CR = RCI X LF X IF | |

**INSERT PHOTOS:**



**DESCRIBE PROPOSED IMPACT:**

# Stream Assessment Form (Form 1)

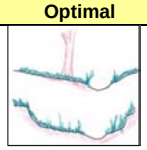
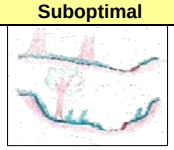
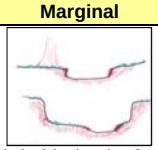
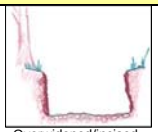
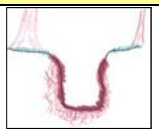
**Unified Stream Methodology for use in Virginia**

**For use in wadeable channels classified as intermittent or perennial**

| Project # | Project Name | Locality | Cowardin Class. | HUC | Date | SAR # | Impact/SAR length | Impact Factor |
|---|---|---|---|---|---|---|---|---|
| | Nice Bridge | | R4UB2 | | 3/25/2009 | | 0 | 0 |

| Name(s) of Evaluator(s) | Stream Name and Information |
|---|---|
| WMM, ERB | VA-WUS-9 |

## 1. Channel Condition: Assess the cross-section of the stream and prevailing condition (erosion, aggradation)

| | Conditional Category | | | | | |
|---|---|---|---|---|---|---|
| | Optimal | Suboptimal | Marginal | Poor | Severe | |
| Channel Condition |  Very little incision or active erosion; 80-100% stable banks. Vegetative surface protection or natural rock, prominent (80-100%). AND/OR Stable point bars/bankfull benches are present. Access to their original floodplain or fully developed wide bankfu |  Slightly incised, few areas of active erosion or unprotected banks. Majority of banks are stable (60-80%). Vegetative protection or natural rock prominent (60-80%) AND/OR Depositional features contribute to stability. The bankfull and low flow channels |  Often incised, but less than Severe or Poor. Banks more stable than Severe or Poor due to lower bank slopes. Erosion may be present on 40-60% of both banks. Vegetative protection on 40-60% of banks. Streambanks may bevertical or undercut. AND/OR 40-60% |  Overwidened/incised. Vertically/laterally unstable. Likely to widen further. Majority of both banks are near vertical. Erosion present on 60-80% of banks. Vegetative protection present on 20-40% of banks, and is insufficient to prevent erosion. AND/OR |  Deeply incised (or excavated), vertical/lateral instability. Severe incision, flow contained within the banks. Streambed below average rooting depth, majority of banks vertical/undercut. Vegetative protection present on less than 20% of banks, is not p | CI |
| Score | 3 | 2.4 | 2 | 1.6 | 1 | |
| NOTES>> | No impacts to this feature | | | | | |

## 2. RIPARIAN BUFFERS: Assess both bank's 100 foot riparian areas along the entire SAR. (rough measurements of length & width may be acceptable)

| | Conditional Category | | | | | | | NOTES>> |
|---|---|---|---|---|---|---|---|---|
| | Optimal | Suboptimal | | Marginal | | Poor | | |
| Riparian Buffers | Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover and a non-maintained understory. Wetlands located within the riparian areas. | **High Suboptimal:** Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory. | **Low Suboptimal:** Riparian areas with tree stratum (dbh > 3 inches) present, with > 30% tree canopy cover and a maintained understory. Recent cutover (dense vegetation). | **High Marginal:** Non-maintained, dense herbaceous vegetation with either a shrub layer or a tree layer (dbh > 3 inches) present, with <30% tree canopy cover. | **Low Marginal:** Non-maintained, dense herbaceous vegetation, riparian areas lacking shrub and tree stratum, hay production, ponds, open water. If present, tree stratum (dbh >3 inches) present, with <30% tree canopy cover with maintained understory. | **High Poor:** Lawns, mowed, and maintained areas, nurseries; no-till cropland; actively grazed pasture, sparsely vegetated non-maintained area, recently seeded and stabilized, or other comparable condition. | **Low Poor:** Impervious surfaces, mine spoil lands, denuded surfaces, row crops, active feed lots, trails, or other comparable conditions. | |
| | | High | Low | High | Low | High | Low | |
| Condition Scores | 1.5 | 1.2 | 1.1 | 0.85 | 0.75 | 0.6 | 0.5 | |

1. Delineate riparian areas along each stream bank into Condition Categories and Condition Scores using the descriptors.
2. Determine square footage for each by measuring or estimating length and width. Calculators are provided for you below.
3. Enter the % Riparian Area and Score for each riparian category in the blocks below.

Ensure the sums of % Riparian Blocks equal 100

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Right Bank | % Riparian Area> | | | | | | | 0% | |
| | Score > | | | | | | | | |
| | | | | | | | | | CI= (Sum % RA * Scores*0.01)/2 |
| Left Bank | % Riparian Area> | | | | | | | 0% | Rt Bank CI > 0.00 CI |
| | Score > | | | | | | | | Lt Bank CI > 0.00 |

## 3. INSTREAM HABITAT: Varied substrate sizes, water velocity and depths; woody and leafy debris; stable substrate; low embededness; shade; undercut banks; root mats; SAV; riffle poole complexes, stable features.

| | Conditional Category | | | | NOTES>> |
|---|---|---|---|---|---|
| | Optimal | Suboptimal | Marginal | Poor | |
| Instream Habitat/ Available Cover | Habitat elements are typically present in greater than 50% of the reach. | Stable habitat elements are typically present in 30-50% of the reach and are adequate for maintenance of populations. | Stable habitat elements are typically present in 10-30% of the reach and are adequate for maintenance of populations. | Habitat elements listed above are lacking or are unstable. Habitat elements are typically present in less than 10% of the reach. | CI |
| Score | 1.5 | 1.2 | 0.9 | 0.5 | |

# Stream Impact Assessment Form Page 2

| Project # | Applicant | Locality | Cowardin Class. | HUC | Date | Data Point | SAR length | Impact Factor |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | 500 | 1 |

**4. CHANNEL ALTERATION:** Stream crossings, riprap, concrete, gabions, or concrete blocks, straightening of channel, channelization, embankments, spoil piles, constrictions, livestock

**NOTES>>**

| | Conditional Category | | | | | | |
|---|---|---|---|---|---|---|---|
| | Negligible | Minor | | Moderate | | Severe | |
| **Channel Alteration** | Channelization, dredging, alteration, or hardening absent. Stream has an unaltered pattern or has naturalized. | Less than 20% of the stream reach is disrupted by any of the channel alterations listed in the parameter guidelines. | 20-40% of the stream reach is disrupted by any of the channel alterations listed in the parameter guidelines. | 40 - 60% of reach is disrupted by any of the channel alterations listed in the parameter guidelines. If stream has been channelized, normal stable stream meander pattern has not recovered. | 60 - 80% of reach is disrupted by any of the channel alterations listed in the parameter guidelines. If stream has been channelized, normal stable stream meander pattern has not recovered. | Greater than 80% of reach is disrupted by any of the channel alterations listed in the parameter guidelines AND/OR 80% of banks shored with gabion, riprap, or cement. | |
| **SCORE** | **1.5** | **1.3** | **1.1** | **0.9** | **0.7** | **0.5** | |

## REACH CONDITION INDEX and STREAM CONDITION UNITS FOR THIS REACH

***NOTE:*** **The CIs and RCI should be rounded to 2 decimal places. The CR should be rounded to a whole number.**

| | |
|---|---|
| **THE REACH CONDITION INDEX (RCI) >>** | **0.00** |
| RCI= (Sum of all CI's)/5 | |
| **COMPENSATION REQUIREMENT (CR) >>** | **0** |
| CR = RCI X LF X IF | |

**INSERT PHOTOS:**



**DESCRIBE PROPOSED IMPACT:**

Wetland Mitigation Site Evaluation Worksheet
Nice Bridge Improvement Project

Site Identification Number: _____ Mitigation Ranking Total: ##

**Site information**

Date: _____ Size of Parcel: _____
Property Owner: _____ Watershed: _____
Street Address: _____ Tax Map: _____
City: _____ Subwatershed: _____
State: _____ Parcel: _____
Zip: _____ Zoning: _____
County: _____ Drainage Acreage: _____
Potential Mitigation Acreage: _____
Site Description:
Cover Type/Land Use: _____

**Soils**

| Soil Type | Abbreviation | ~ % of Mitigation Area | Groundwater | Hydric |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

3 >= 50% Primary Hydric
2 >= 50% Secondary Hydric or > 50% Combined Primary/ Secondary Hydric
1 = Non Hydric
Ranking: _____

**Estimated Excavation Depth:**

3 = less than 3 feet
2 = 3 to 6 feet
1 = greater than 6 feet
Ranking: _____

**Existing Slope:**

3 = 2% or less
2 = 3 - 9%
1 = 10% or greater
Ranking: _____

**Hydrology** _____ Tidal _____ Non-Tidal

Hydrology: _____ Weather: _____

Source(s): Depth to Groundwater (feet): _____

Ground _____ Flood _____ Surface _____ Stream _____

Other: _____

Comments: _____

Distance to tidal source _____'
3 = Abutting to 10'
2 = 10' to 200'
1 = > 200'
Ranking: _____
Distance between you and tidal source _____'

Site Identification Number: 0 Mitigation Ranking Total: ###

Drainage Area/ Creation Area Ratio:

3 = Greater than 20:1
2 = 2:1 to 20:1
1 = less than 2:1 Ranking:

Water Quality Opportunity:

3 = Drainage area primarily commercial/high density residential
2 = Drainage area primarily agricultural/low density residential
1 = Drainage area primarly parkland/resource conservation Ranking:

Habitat Value of Site:

4 = Site contiguous to wetland/upland forest >100 acres
3 = Site contiguous to wetland/upland forest 25 - 100 acres
2 = Site contiguous to wetland/upland forest < 25 acres
1 = Site isolated from wetland/forest Ranking:

Constraints:

Surrounding Land Use: Access: Hazardous Waste:
upland fill, residential, commercial
Feasibility: Utilities:
3 = No Constraints
2 = Moderate constraints
1 = Significant constraints Ranking: #DIV/0!
Obstructions to hydraulic connections

Additional Information:

| Functions and Values | Potential | Functions and Values | Potential |
|---|---|---|---|
| Groundwater recharge: | | Wildlife diversity/abundances: | |
| Groundwater discharge: | | Wildlife D/A breeding | |
| Floodflow alterations: | | Wildlife D/A Migration: | |
| Sediment stabilization: | | Wildlife D/A Wintering: | |
| Sediment/toxics retention: | | Aquatic diversity/abundance: | |
| Nutrient removal/transformation: | | Uniqueness/Heritage: | |
| Production export: | | Recreation: | |

Average overall functional replacement ranking: 1

Other:

Invasives

Beaver

Deer

Dirt Bike Trails

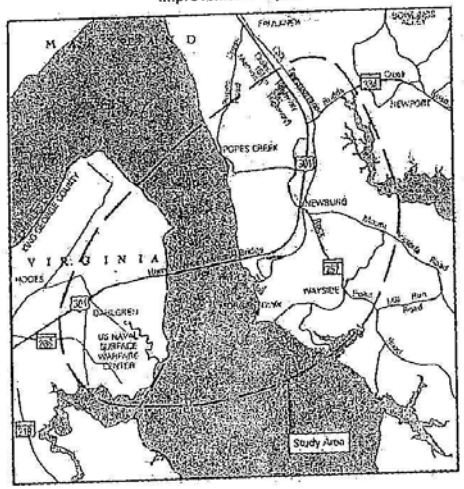
## Tuesday, August 1, 2006

PUBLIC NOTICE

The Maryland Transportation Authority, in coordination with the Virginia Department of Transportation

HAS INITIATED

PROJECT PLANNING STUDIES FOR THE Governor Harry W. Nice Memorial Bridge (Nice Bridge) Improvement Project




The project planning study for the Governor Harry W. Nice Memorial Bridge Project will evaluate alternatives to address transportation needs on US 301 from King George County, Virginia to Charles County, Maryland. The project needs include addressing the current bridge conditions associated with the inconsistency with approach roadways, steep grade and narrow lane widths on the bridge, resulting in capacity and safety concerns. Additionally, the study will address roadway congestion at the Nice Bridge due to normal weekend and holiday weekend traffic. For further information on project background, including the Project Purpose and Need, please visit the project webpage on the Maryland Transportation Authority's website ( go to Capital Projects Link) at www.mdtransportationauthority.com.

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Written comments or requests to be added to the project mailing list may be submitted via mail to Mr. Glen Smith, Project Manager, Maryland Transportation Authority, 2310 Broening Highway, Suite 150, Baltimore, MD 21224, by email to nicebridgestudy@mdta.state.md.us or by calling 410-537-5665. Information is also available by calling the Maryland Transportation Authority, toll-free, at (866) 713-1596. To contact the Virginia Department of Transportation, please call (540) 899-4288. Throughout the study, persons on the project mailing list will be kept informed of project updates and public involvement opportunities.

The Examiner.
BALTIMORE

**PROOF OF PUBLICATION**

I, Michael Phelps, Publisher of the The Baltimore Examiner, a newspaper in the City of Baltimore, published In English for 52 successive weeks or more prior to the issue of August 1st, 2006, certify that the notice of

The Maryland Transportation Authority in coordination with the Virginia Department of Transportation
Public Notice

For

Project Planning Studies for the Gov. Harry W. Nice Memorial Bridge Improvement Project

attached hereto has been published on

August 1st, 2006

Michael Phelps

Sworn to and subscribed before me this 1st day of August, 2006

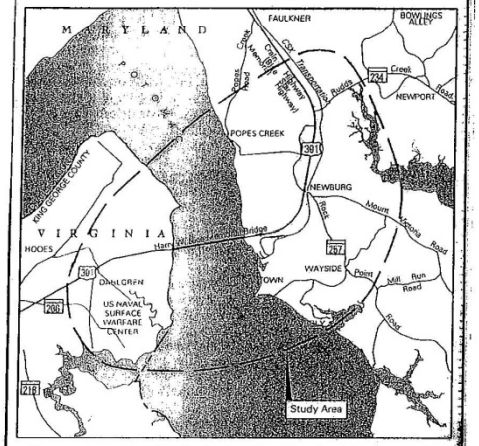
***The Examiner***

## Tuesday, August 1, 2006

THE FREE LANCE-STAR

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AFFIDAVIT

THE FREE LANCE-STAR
616 Amelia Street
Fredericksburg, Virginia 22401

McCormick Taylor Inc.
509 S Exeter Street 4th Floor
Baltimore, MD 21202

**Subject: Public Notice**
**Harry W. Nice Memorial Bridge**

I hereby certify that the attached notice was published in The Free Lance-Star, a Newspaper published daily in Fredericksburg, Va. on the following date (s):

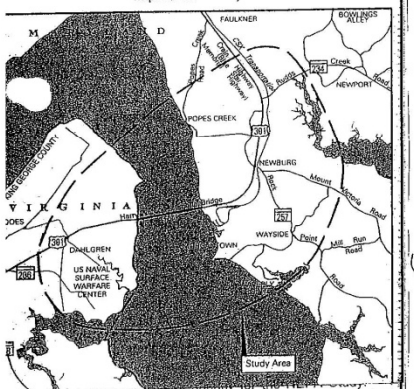
**August 1, 2006**

Angela Carter
Accounting

Subscribed and sworn to before me,
This 1st day of September 2006.

Notary Public

PUBLIC NOTICE
The Maryland Transportation Authority, in coordination with the Virginia Department of Transportation
HAS INITIATED PROJECT PLANNING STUDIES FOR THE Governor Harry W. Nice Memorial Bridge (Nice Bridge) Improvement Project



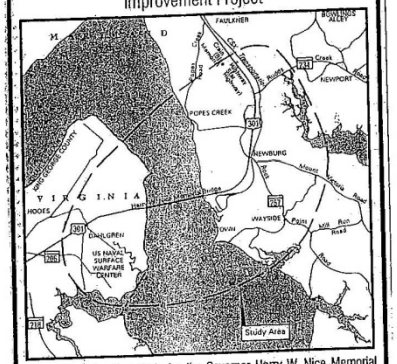

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*The Free Lance-Star*

E4 Tuesday, August 1, 2006 Richmond Times-Dispatch

**PUBLIC NOTICE**

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in coordination with
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(Nice Bridge)
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*Richmond Times-Dispatch*

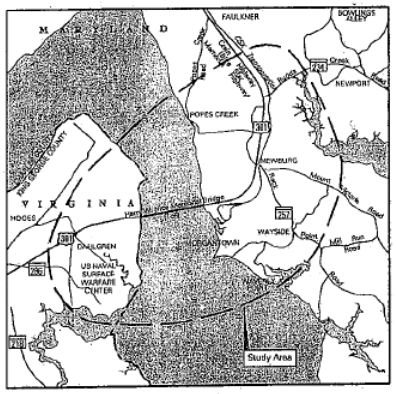
# Wednesday, August 2, 2006

**PUBLIC NOTICE**

**The Maryland Transportation Authority, in coordination with the Virginia Department of Transportation**

**HAS INITIATED**

**PROJECT PLANNING STUDIES FOR THE Governor Harry W. Nice Memorial Bridge (Nice Bridge) Improvement Project**




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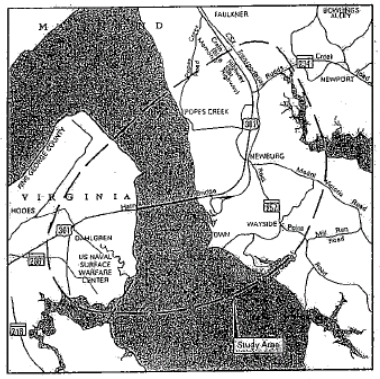
***The Journal***

PUBLIC NOTICE

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MI 1525216 8-2-06

***Maryland Independent***

## Thursday, August 3, 2006

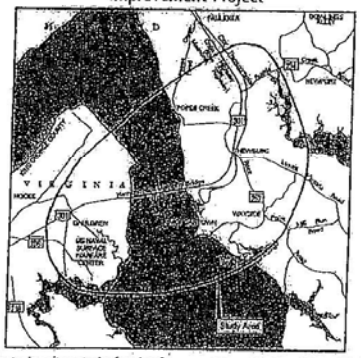
F2 THURSDAY, AUGUST 3, 2006 THE WASHINGTON POST

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***The Washington Post***

# Project Mailer

## PUBLIC NOTICE

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***Governor Harry W. Nice Memorial Bridge (Nice Bridge)***
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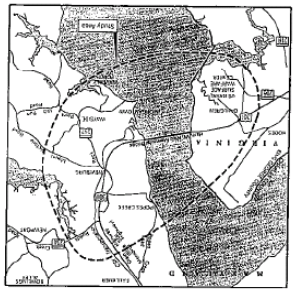
Governor Harry W. Nice Memorial Bridge Improvement Project

**We'd like to hear from you!**
Please fill out this form, detach and send to us to be added to the project mailing list.
Please include any questions or comments that you may have.
*All postage is paid for by the Maryland Transportation Authority.*

**Maryland Transportation Authority**
2310 Broening Highway, Suite 150
Baltimore, MD 21224

Pre-Sorted
First Class Mail
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MR. JOHN Q. SAMPLE
655 NORTH HORNERS LANE
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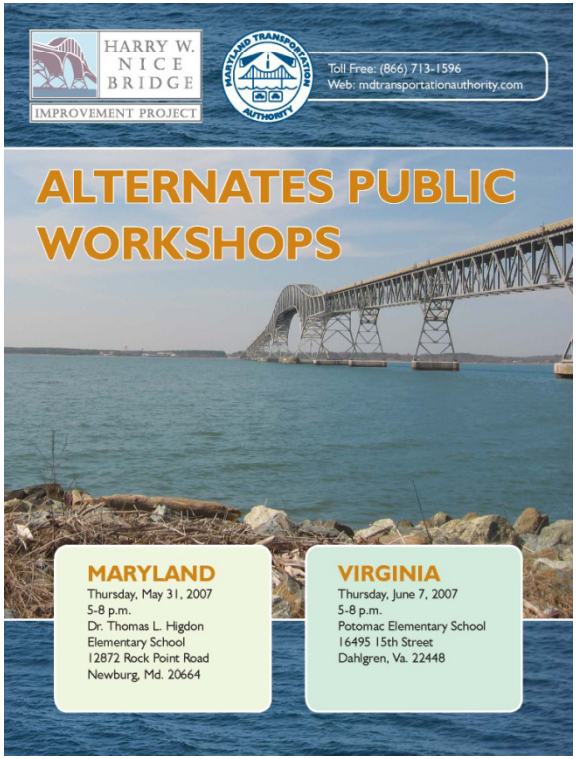

Maryland Transportation Authority thanks you for your feedback!

## Project Postcard



# Alternates Public Workshop Brochure

## May 31, 2007 & June 7, 2007




*Cover*

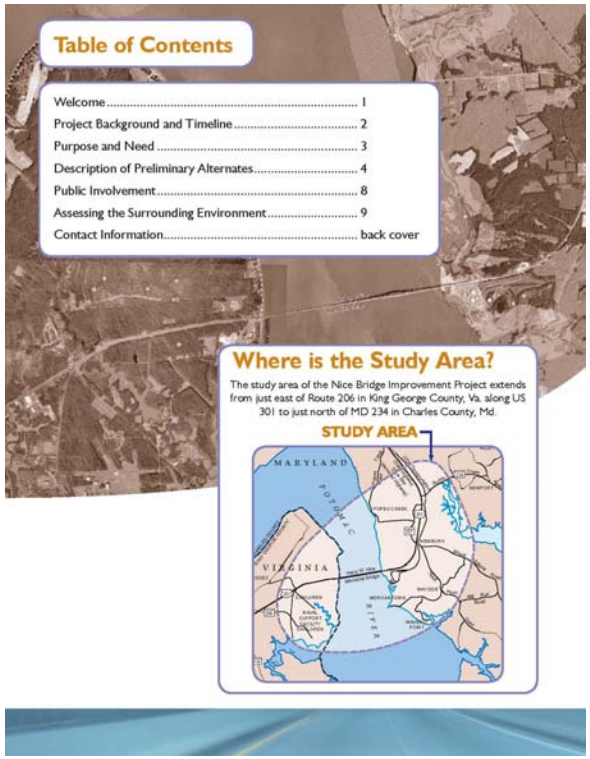
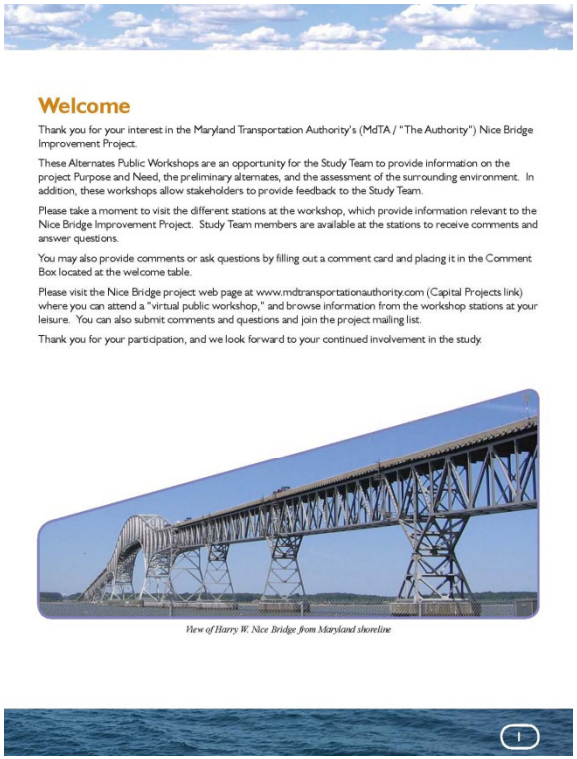



*Table of Contents*




***Page 1***

# Alternates Public Workshop Brochure

## May 31, 2007 & June 7, 2007

## Project Background

The project planning study for the Harry W. Nice Bridge Improvement Project kicked off in summer 2006. The Maryland Transportation Authority, which owns and operates Maryland's seven toll facilities including the Nice Bridge, is conducting the study in coordination with the Federal Highway Administration (FHWA) and Virginia Department of Transportation (VDOT).

**As part of the evaluation, here are some of the topics that the study is exploring:**

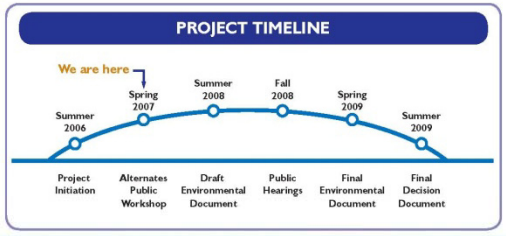
- Investigating ways to improve traffic flow on the Nice Bridge;
- Evaluating current and future traffic conditions and travel patterns;
- Becoming better informed about the motorists, communities, and businesses that are served by the Nice Bridge, and
- Assessing the surrounding environment.



*Maryland shoreline at the Aqualand Marina*



*Traveling northbound across the Nice Bridge*



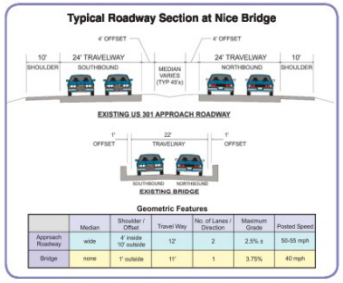

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## PURPOSE

The purpose of the Nice Bridge Improvement Project is to:

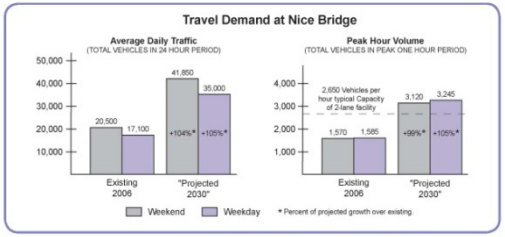
- Provide a Potomac River crossing that conforms with existing roadway approaches to the existing crossing;
- Improve traffic operations and safety at the crossing; and
- Reduce impacts to traffic flow during maintenance, renovation and wide-load crossings.




## NEED

This project is needed to address the following conditions at the Nice Bridge:

- Bridge roadway features, including the lack of median barrier and shoulder area, narrow roadway widths and inconsistent number of travel lanes and greater vertical grade as compared to approach roadways;
- Projected peak-hour traffic demand that exceeds current bridge capacity;
- Extensive weekend and holiday traffic back-ups;
- Long-term single-lane closures or complete nighttime bridge closures for scheduled bridge renovation in near future;
- Frequency of truck related and opposite direction crashes, and
- Transportation significance of the facility



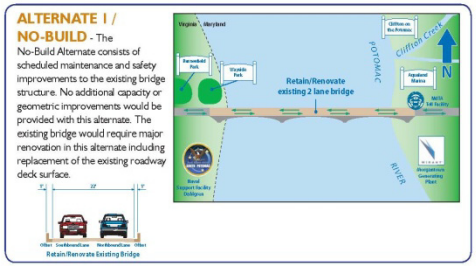

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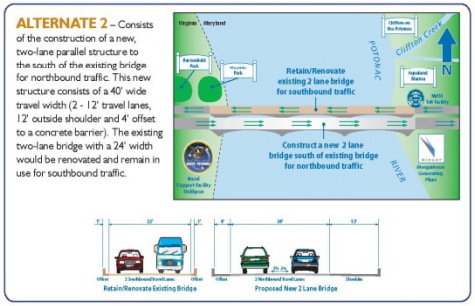
## Description of Preliminary Alternates

In addition to the No-Build Alternate (Alternate 1), several build preliminary alternates are being considered at this stage of the project. The following graphic depictions of each alternate are not to scale and are for conceptual purposes only.

**ALTERNATE 1 / NO-BUILD** - The No-Build Alternate consists of scheduled maintenance and safety improvements to the existing bridge structure. No additional capacity or geometric improvements would be provided with this alternate. The existing bridge would require major renovation in this alternate including replacement of the existing roadway deck surface.




**ALTERNATE 2** – Consists of the construction of a new, two-lane parallel structure to the south of the existing bridge for northbound traffic. This new structure consists of a 40' wide travel width (2 - 12' travel lanes, 12' outside shoulder and 4' offset to a concrete barrier). The existing two-lane bridge with a 24' width would be renovated and remain in use for southbound traffic.



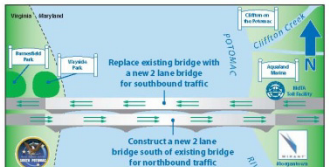

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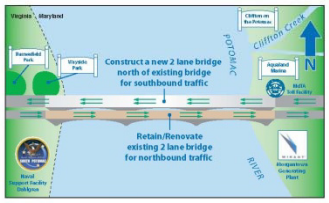
# Alternates Public Workshop Brochure

## May 31, 2007 & June 7, 2007

**ALTERNATE 3** – Similar to Alternate 2 this Alternate consists of the construction of a new, two-lane parallel structure to the south of the existing bridge for northbound traffic. This new structure consists of a 40' wide travel width (2 - 12' travel lanes, 12' outside shoulder and 4' offset to a concrete barrier). The existing two-lane bridge would be replaced with a new structure for southbound traffic consisting of a similar 40' wide travel width (2 - 12' travel lanes, 12' outside shoulder and 4' offset to a concrete barrier).



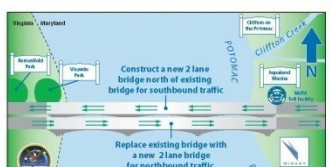

**ALTERNATE 4** – Consists of the construction of a new, two-lane parallel structure to the north of the existing bridge for southbound traffic. This new structure consists of a 40' wide travel width (2 - 12' travel lanes, 12' outside shoulder and 4' offset to a concrete barrier). The existing two-lane bridge with a 24' width would be renovated and remain in use for northbound traffic.



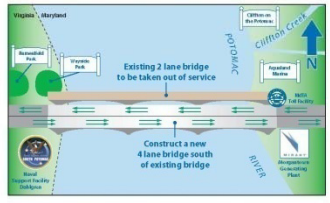

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**ALTERNATE 5** – Similar to Alternate 4 this Alternate consists of the construction of a new, two-lane parallel structure to the north of the existing bridge for southbound traffic. This new structure consists of a 40' wide travel width (2 - 12' travel lanes, 12' outside shoulder and 4' offset to a concrete barrier). The existing two-lane bridge would be replaced with a new structure for northbound traffic consisting of a similar 40' wide travel width (2 - 12' travel lanes, 12' outside shoulder and 4' offset to a concrete barrier).



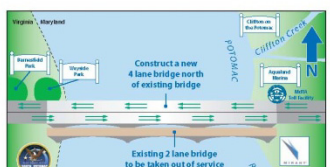

**ALTERNATE 6** – Consists of the construction of a new, four-lane parallel structure to the south of the existing bridge for all traffic. This new structure consists of an 83' wide travel width (4 - 12' travel lanes, two for northbound and two for southbound traffic, 12' outside shoulder in both directions, a 4' inside offset in both directions to the 3' median concrete barrier). The existing two-lane bridge would be taken out of service.




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**ALTERNATE 7** – Consists of the construction of a new four-lane parallel structure to the north of the existing bridge for all traffic. This new structure consists of an 83' wide travel width (4 - 12' travel lanes, two for northbound and two for southbound traffic, 12' outside shoulder in both directions, a 4' inside offset in both directions to the 3' median concrete barrier). The existing two-lane bridge would be taken out of service.




**Design elements that will be considered with each Alternate:**

- Open Road Tolling
- Off-line cash lanes
- Vehicle inspection areas
- Wide-load staging areas
- Authority Facility Campus Master Plan




*The Maryland Transportation Authority Toll Facility at the Nice Bridge*

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# Alternates Public Workshop Brochure

## May 31, 2007 & June 7, 2007

## Public Involvement

Public involvement is an important part of the planning study for the Nice Bridge Improvement Project. Public involvement ensures two-way communication between the public and the Study Team. Part of this communication comes from disseminating information on the study through newsletters, brochures, the project web page, fact sheets and public meetings. The other part is listening to the public's questions, comments and concerns and responding in a clear and timely manner and taking the comments into consideration during the evaluation and decision-making process.

### Focus Group

Another form of communication for the project takes place through the Nice Bridge Improvement Project Focus Group.

In fall 2006, the project team contacted community leaders and commercial and business representatives to request their participation in the Focus Group. Serving as the voices for their communities and organizations, Focus Group members provide a local perspective on issues and potential improvement solutions at the Nice Bridge.

On Thursday, May 10, 2007, the Project Team met with the Focus Group for the second time to discuss the preliminary alternates and the information to be presented at the May 31st and June 7th Alternates Public Workshops. The group met at the Naval Support Facility Dahlgren in Dahlgren, Virginia.



*Focus Group Meeting #1, December 2006, Newburg, Maryland*

The first Focus Group Meeting was held on Tuesday December 5, 2006, at the Dr. Thomas L. Higdon Elementary School in Newburg, Maryland. This meeting introduced the group to the project.

The Study Team will meet with the Focus Group periodically throughout the project planning study. More information on the group is available on the project web page.

### What We've Heard From You!

The public has provided feedback, by emails, letters and the project web page, to the Study Team since the Nice Bridge Improvement Project began. Concerns include:

- Backups resulting from holiday and weekend traffic;
- Safety on the bridge;
- Desire for bridge to have two lanes in each direction; and
- Difficulty accessing local communities when there are backups at the bridge.



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## Assessing the Surrounding Environment

The project planning study for the Nice Bridge Improvement Project includes identifying the natural environmental, community and cultural resources within the study area. An environmental inventory is conducted through observation of the study area, data research and coordination with the federal, state and local resource and regulatory agencies. The inventory provides information on the location and function of these valuable environmental resources.



*Wayside Park, Virginia*

### Natural Environmental Resources

Natural environmental resources identified include:

- Potomac River
- Wetlands
- Floodplains
- Forests
- Wildlife (bald eagle habitat, waterfowl, colonial waterbirds)
- Fish spawning areas
- Chesapeake Bay Critical Areas (Maryland only)
- Natural Oyster Bars (Maryland only)
- Submerged Aquatic Vegetation



*Identifying and assessing water resources.*



*Barnesfield Park, Virginia*

### Community Resources

Identifying the places where people live, work and go to for recreation is also part of the environmental inventory. The community resources identified include:

- Residential Communities
- Businesses
- Schools
- Religious Institutions
- Aqualand Marina & Campground
- Morgantown Generating Plant
- Potomac Gateway Welcome Center
- Crain Memorial Visitors Center
- Wayside and Barnesfield Parks
- Naval Support Facility Dahlgren




*Aqualand Marina & Campground, Maryland*

### Cultural Resources

Various historic and archeological resources are located throughout the Nice Bridge study area. The study team continues to work with federal, state and local agencies to ensure that all archeological and historic sites, structures and districts are identified and assessed.



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## What's Next?

Following the Alternates Public Workshops, the Nice Bridge Improvement Project will move forward by reviewing and responding to the comments received at the workshops. The Study Team will identify the alternates that will be studied in detail during the next stage of the project planning study. Detailed analyses will be conducted for each alternate carried forward to determine how each will affect the surrounding communities and natural environment. The public will continue to be updated on the study as it progresses and will have an opportunity to review these detailed analyses in the draft environmental document and at the fall 2008 Public Hearings.

Please continue to visit the project web page at www.mdtransportationauthority.com (Capital Projects link) where project updates will be posted and where you can submit a comment, ask a question or join the Project Mailing List.

## Questions?

Please contact: Glen Smith, Project Manager
Division of Capital Planning
Maryland Transportation Authority
2310 Broening Highway, Suite 125
Baltimore, Maryland 21224
Toll Free: (866) 713-1596
E-mail: nicebridgestudy@mdta.state.md.us

*Back Cover*

# Spring 2008 Newsletter

## PUBLIC INPUT

Input from the public is a valuable resource for the project team. Public meetings and the project website give you the opportunity to get involved and help our project team better understand the needs of the surrounding community. Please visit **www.mdtransportationauthority.com**. Click on **"Capital Projects"** and **"Nice Bridge Improvement Project"** for more information and to provide comments electronically.



Maryland Transportation Authority

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Glen Smith, Project Manager
**Maryland Transportation Authority**
Division of Capital Planning
2310 Broening Highway, Suite 125
Baltimore, Maryland 21224

Phone: 410-537-5665
Toll Free: 866-713-1596

Fax: 410-537-5653
E-mail: nicebridgestudy@mdta.state.md.us
Web: **mdtransportationauthority.com**

## FOCUS GROUP EXPLORES IMPACTS OF NICE BRIDGE IMPROVEMENTS

MDTA asked a group of community representatives from a wide variety of interests to serve as members of a focus group for the Nice Bridge Improvement Project. The focus group provides a sampling of public opinion that will help shape the project and assist MDTA by providing valuable local perspective. The 16-member focus group met for the third time on January 24, 2008 to discuss the project and learn more about the proposed alternates. At the meeting, Project Manager Glen Smith and the team shared comments from workshop attendees, provided project updates and answered questions about the Alternates Retained for Detailed Study (ARDS) and the National Environmental Policy Act (NEPA) processes. The next focus group meeting will be held in Virginia prior to the fall 2008 Public Hearings.

**SECTION 106** of the National Historic Preservation Act requires that MDTA seek and consider comments from the public regarding the effects of the Nice Bridge Improvement Project on historic standing structures and archeological resources. The views of the public are essential to informed decision making in the Section 106 process. MDTA will coordinate with the public in a manner that reflects the nature and complexity of the project and its effects on historic properties. If you or your group would like to share your comments, please email MDTA or contact the Project Manager (see top of page for contact information).



## WE WANT TO HEAR FROM YOU!

If you received this newsletter, then chances are this project will affect where you live, where you work, or how you commute. It is important that you share your concerns, questions and ideas with us. Thank you!




## PUBLIC WORKSHOPS DREW A CROWD

More than 130 citizens attended the Nice Bridge Improvement Project Alternates Public Workshops held on May 31, 2007 at the Dr. Thomas L. Higdon Elementary School in Newburg, Md and on June 7, 2007 at the Potomac Elementary School in Dahlgren, Va. At the workshops, the project team presented fourteen preliminary alternates for improvements to the Nice Bridge. Attendees also viewed displays of the project schedule, public involvement activities, ongoing coordination with federal, state and local agencies, and maps depicting the natural environmental features of the surrounding area.

Project team members answered questions and discussed the information presented with workshop attendees.



Attendees also shared their thoughts, concerns and questions by submitting comment cards to the project team. The Maryland Transportation Authority (MDTA) thanks all citizens who took the time to participate and made these workshops a success.

## WHY IS A PLANNING STUDY FOR THE NICE BRIDGE BEING CONDUCTED?




The purpose of the Nice Bridge Improvement Project is to provide roadway elements that are consistent with US 301 as it approaches the bridge. This includes evaluating a Potomac River crossing with two 12-foot lanes in each direction, a median separation and adequate shoulders.

Project needs include:

- Relieving congestion;
- Improving safety;
- Providing for forecasted future travel demand; and,
- Providing the ability to maintain two-way traffic during wide load crossings and when performing maintenance and rehabilitation work.

# Spring 2008 Newsletter

## WHAT IS AN "ALTERNATE?"

An alternate is a proposed solution to a transportation problem. Alternates for the Nice Bridge Improvement Project range from maintaining the existing bridge (no-build alternate) to building new bridge(s) (build alternates). The Project Team is investigating a no-build alternate and six build alternates to determine how they address the project's Purpose and Need.

## ALTERNATES RETAINED FOR DETAILED STUDY

The preliminary alternates presented at the workshops were evaluated, refined, and either dropped from further consideration or retained for detailed study. The project team identified seven alternates to evaluate further. Comments from the public, as well as input from federal, state and local government agencies were considered when determining which alternates to carry forward. Over the next few months, the project team will assess each alternate to identify the positive and negative effects it would have on the surrounding area. The assessment will include determining how each alternate would affect traffic operations and capacity, as well as how each would affect the surrounding communities, businesses, and natural environment.

### Proposed Alternate 1 (No-Build)




- *Major rehabilitation will be required (2015 – 2020)*
- *Scheduled maintenance and safety operations will continue*

### Proposed Alternate 2




- *Avoids parks (VA) and marina/campground (MD)*
- *Low construction costs*

### Proposed Alternate 3




- *Avoids parks (VA) and marina/campground (MD)*
- *Low maintenance costs*

### Proposed Alternate 4




- *Avoids wetlands in naval facility (VA)*
- *Low construction costs*
- *Possible displacement of the Potomac Gateway Welcome Center*
- *May impact marina, campground and parkland activities*

### Proposed Alternate 5




- *Avoids wetlands in naval facility (VA)*
- *Possible displacement of the Potomac Gateway Welcome Center*
- *May impact marina, campground and parkland activities*

### Proposed Alternate 6




- *Low impacts to socioeconomic, natural and cultural resources*
- *Low maintenance costs*

### Proposed Alternate 7




- *Low construction impacts*
- *Low maintenance costs*
- *Possible displacement of the Potomac Gateway Welcome Center*
- *May impact marina, campground and parkland activities*

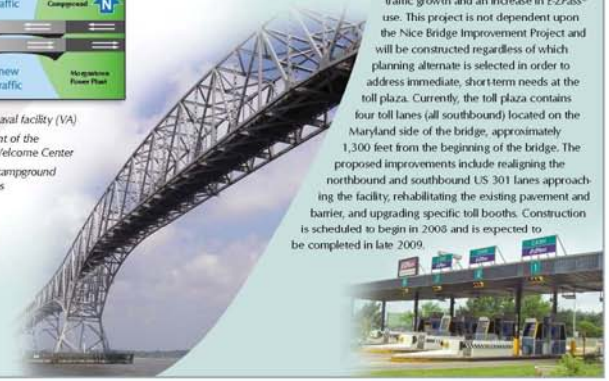
## NEXT STEPS...

- **Winter 2008** – Alternates Retained for Detailed Study
- **Summer 2008** – Draft Environmental Document; Public Hearings
- **Fall 2008**
- **Spring 2009** – Final Environmental Document
- **Summer 2009** – Project Planning Complete

In accordance with the National Environmental Policy Act (NEPA) process, the Nice Bridge project team will investigate each alternate in detail (see alternates at left) and prepare the environmental document. The public will be able to review the environmental document at local public libraries in summer 2008 (15 days prior to and 30 days after the public hearing(s)) and provide comments or ask questions about it at the public hearings, which are scheduled for fall 2008. If you received this newsletter, then you are on the mailing list and will receive notification of the public hearings and document availability.

## TOLL PLAZA IMPROVEMENTS

The Maryland Transportation Authority is upgrading the US 301/Nice Bridge Toll Plaza to accommodate future traffic growth and an increase in *E-ZPass®* use. This project is not dependent upon the Nice Bridge Improvement Project and will be constructed regardless of which planning alternate is selected in order to address immediate, short-term needs at the toll plaza. Currently, the toll plaza contains four toll lanes (all southbound) located on the Maryland side of the bridge, approximately 1,300 feet from the beginning of the bridge. The proposed improvements include realigning the northbound and southbound US 301 lanes approaching the facility, rehabilitating the existing pavement and barrier, and upgrading specific toll booths. Construction is scheduled to begin in 2008 and is expected to be completed in late 2009.



# Nice Bridge Improvement Project
# May 31st and June 7th, 2007 Alternates Public Workshops
# Public Feedback

The public provided a range of valuable comments at and following the May 31st and June 7th Alternates Public Workshops. Comments were provided by either filling out comment cards at and following the workshops, submitting the on-line comment form, or through discussions with study team representatives. The study team takes all comments received from the public and resource agencies into consideration when evaluating the proposed alternatives.

To understand the different issues, preferences and concerns voiced by the public, the comments were sorted into the following seven categories and summarized below:

- *Alternates;*
- *Community access;*
- *Natural environmental resources;*
- *Community/Business resources;*
- *Design/aesthetics;*
- *Existing bridge issues (traffic/tolls); and*
- *Project schedule/funding.*

## ***Alternates***

The majority of comments received noted preference for a Build Alternate. Comments in support of building a new span(s) were a mix of preferences for a two-lane or four-lane span, north or south of the existing Nice Bridge:

- Prefer new four lane structure, keeping existing open during construction to maintain traffic flow.
- Prefer new span on north side, away from power plant.
- Prefer new bridge further north of existing bridge.
- Prefer new two-lane structure with opposing lanes of traffic separated by different structures.
- Prefer new four lane two-span bridge north of existing bridge.
- Prefer building alternates that are south of the existing bridge.
- Two separate bridges would be safer than Alternates 6 or 7.
- Prefer Alternate 7.
- Prefer Alternate 4.
- Alternate 3 is preferred long-term.
- Prefer Alternate 3 because avoids disturbing Wayside Park.

## ***Community Access***

- Back-ups at the bridge on the weekend create difficulty for access into and out of the Cliffton on the Potomac community in Maryland.
- Need to ensure that access is maintained to the residences along Roseland Road in Virginia.

***Natural Environmental Resources***

- Concern for potential fog and smog on the bridge from the Morgantown Power Plant.
- Need to protect the natural environment if a new span is constructed.

***Community/Business Resources***

- Need to preserve Wayside Park and its beach area in Virginia.
- Concern for protection of the Aqua-Land Marina in Maryland.

***Design/Aesthetics***

- Prefer a lower bridge height.
- Prefer a bridge height that will allow for the passage of tall ships.
- Drawbridges create traffic congestion.
- Include a bicycle/pedestrian facility on the crossing.

***Existing Bridge Issues (traffic/tolls)***

- Concern for the narrowness of the Nice Bridge, current congestion on the bridge, the age of the structure and congestion generated from back-ups at the toll booths.
- Back-ups at the toll booths during the summer are not that much of an inconvenience.
- Maintain part of the existing bridge as a fishing pier if a new structure is developed.

***Project Schedule/Funding***

- Project schedule should be expedited.
- How is the project funded and what will it cost to build and maintain the bridge?
- What will the impacts be on taxes and tolls?

## *1. Introduction*

In accordance with the Safe, Accountable, Flexible, Efficient Transportation Equity Act - A Legacy for Users (SAFETEA-LU), the Federal Highway Administration (FHWA) and the Maryland Transportation Authority (Authority)[1], in their capacity as joint lead agencies for the Governor Harry W. Nice Memorial Bridge Improvement Project (Nice Bridge Project), have developed the following Interagency Coordination Plan. This plan seeks to establish the responsibilities of the lead agencies in complying with the various aspects of the environmental review process and the anticipated schedule for the Nice Bridge Project. It also seeks to establish the lead agencies' plan for providing opportunities for other agencies and the public to provide input on the project. The plan identifies specific points of coordination; the persons, agencies, or organizations that should be included at each point of coordination; the input required from each agency; and the methods employed to obtain the required input. Furthermore, the plan establishes timeframes for the agencies to provide the requested input.

## *2. DEFINITION OF LEAD AGENCY RESPONSIBILITIES*

The environmental review process is defined as the project development process followed when preparing a document required under National Environmental Policy Act (NEPA) regulations for a transportation project. The environmental review process also includes the process for, and completion of, any environmental permit, approval, review, or study required for the transportation project under any federal law other than NEPA. The lead agencies will divide responsibilities for compliance with the various aspects of the environmental review process according to the following plan.

The Authority and FHWA will share the responsibility for identifying the roles and responsibilities of other agencies in this project. This will involve identifying potential cooperating and participating agencies. The Authority will be responsible for developing and sending the Project Initiation Notification Letter to the FHWA Division Administrator. The Authority will also be responsible for issuing invitation letters to all state and local agencies identified as potential cooperating or participating agencies. FHWA will be responsible for sending invitations to federal agencies identified as potential cooperating or participating agencies.

The Authority and FHWA will share the responsibility for developing the project purpose and need statement and for providing the cooperating and participating agencies and the public with the opportunity to provide input on the purpose and need. The Authority will provide appropriate support data to demonstrate the stated transportation needs. FHWA is responsible for approving the purpose and need.

The Authority and FHWA will share the responsibility for the alternates analysis portion of the environmental review process. The Authority will assume primary responsibility for the development of the range of reasonable alternates. FHWA will provide input on the alternates developed by the Authority. The Authority and FHWA will also share the responsibility for providing the cooperating and participating agencies, as well as the public, with the opportunity to provide input on the range of alternates.

[1] It is assumed in this document that the term “Maryland Transportation Authority” and the term “Authority” refer collectively to the Maryland Transportation Authority and its consultants.

The Authority will be responsible for determining the level of detail necessary for impact analyses and for developing impact assessment methodologies to be utilized in the project. FHWA will provide input on the level of detail and methodologies. The Authority will assume primary responsibility for providing the level of detail and methodologies to the participating agencies for their review and comment.

The Authority will prepare the draft and final NEPA document, allow for FHWA to provide input, and revise each document accordingly. However, approval of both the draft and final NEPA documents lies solely with FHWA. At this time, the NEPA document classification has not been determined. The Authority will follow Section 6002 of SAFETEA-LU in preparing an Environmental Impact Statement (EIS) and will follow a process modeled on Section 6002 in preparing an Environmental Assessment (EA). If an EIS is prepared, two additional coordination points would be needed that would not be required for an EA. These include issuing a Notice of Intent and the completing a Record of Decision document.

FHWA will be responsible for the identification of the preferred alternate. FHWA will consider the analysis conducted in the draft environmental document as well as input received from agencies and the public on those analyses in its identification of a preferred alternate.

FHWA will also be responsible for formal consultation with the U.S. Department of the Interior in regard to the Section 4(f) Evaluation.

Similar to the draft and final NEPA documents, the Authority will prepare the ROD document (if one is required), allow for FHWA to provide input, and revise the document. However, FHWA will ultimately approve the document.

### *3. COOPERATING AND PARTICIPATING AGENCY ROLES AND RESPONSIBILITIES*

As stated previously, the Authority and FHWA will be responsible for identifying potential cooperating and participating agencies. Participating agencies are agencies that have an interest in the project. Cooperating agencies, which are a subset of participating agencies, are agencies with jurisdiction by law or special expertise with respect to the project or its impacts. In addition, cooperating agencies are permitted to assume, by request of the lead agency, responsibility for developing information and preparing environmental analyses for topics about which the cooperating agency has special expertise. Furthermore, cooperating agencies may adopt, without re-circulating, the NEPA document of a lead agency when, after an independent review of the document, the cooperating agency concludes that its comments and suggestions have been satisfied.

The responsibilities of cooperating and participating agencies include the following:

- Participating in the NEPA process starting at the earliest possible time, especially with regard to the development of the purpose and need, range of alternates, methodologies, and the level of detail for the analysis of alternates
- Identifying as early as possible any issues of concern regarding the project's potential environmental or socioeconomic impacts

- Providing meaningful and timely input on unresolved issues within established timeframes
- Participating in the scoping process

For the Nice Bridge Project, the Authority and FHWA have identified cooperating and participating agencies as shown on ***Table 1***.

## *4. AGENCY AND PUBLIC COORDINATION PLAN*

The lead agencies will provide the opportunity for input from the cooperating and participating agencies, as well as the general public, in accordance with SAFETEA-LU, NEPA and other applicable laws, regulations, and policies, including Section 106 of the National Historic Preservation Act (Section 106). The opportunities occur at various points throughout the environmental review process and are often used to meet the requirements of multiple laws, regulations, and policies.

### *4.1 Agency and Public Coordination Plan for the NEPA and Section 106 Processes*

This portion of the plan establishes the specific points throughout the NEPA and Section 106 processes at which opportunities for agency and public input will be provided. The points at which coordination will occur include the following:

- Project Initiation and Scoping
- Development of Purpose and Need
- Initial Section 106 Coordination
- Identification of Range of Alternates
- Notice of Intent Publication (if necessary)
- Section 106 Eligibility and Historic Boundary Determinations
- Alternates Retained for Detailed Study
- Collaboration of Impact Assessment Level of Detail and Methodologies
- Section 106 Effect Determinations
- Completion of the Draft EIS or EA/Draft Section 4(f) Evaluation
- Preferred Alternate and Conceptual Mitigation (PACM) Package
- Section 106 Memorandum of Agreement
- Completion of the Final EIS or FONSI
- Completion of the Final Section 4(f) Evaluation
- Completion of the Record of Decision (if necessary)

***TABLE 1:*** *SUMMARY OF AGENCY ROLES*

| Agency Role | Federal Agencies | State Agencies | | Local Agencies | |
|---|---|---|---|---|---|
| | | **Maryland** | **Virginia** | **Maryland** | **Virginia** |
| **Lead Agencies** | • Federal Highway Administration (FHWA) | • Maryland Transportation Authority (Authority) | N/A | N/A | N/A |
| **Cooperating Agencies** | • U.S. Coast Guard (USCG)<br>• U.S. Army Corps of Engineers (USACE)<br>• NOAA- National Marine Fisheries Service (NMFS)<br>• U.S. Environmental Protection Agency (EPA) | • Maryland Department of the Environment (MDE) | • Virginia Department of Transportation (VDOT)<br>• Virginia Department of Environmental Quality (DEQ) | N/A | N/A |
| **Participating Agencies** | • U.S. Department of the Interior (DOI)<br>  • U.S. Fish and Wildlife Service (USFWS)<br>  • National Park Service (NPS)<br>• U.S. Department of Agriculture - Natural Resource Conservation Service (NRCS)<br>• U.S. Navy (USN) | • Maryland Historical Trust (MHT/MD SHPO)<br>• Maryland Department of Natural Resources (DNR)<br>• Maryland DNR Critical Area Commission (CAC)<br>• Maryland Department of Transportation (MDOT)<br>• Maryland State Highway Administration (SHA)<br>• Maryland Department of Planning (MDP) | • Virginia Department of Conservation and Recreation (DCR)<br>• Virginia Department of Historic Resources (VA SHPO)<br>• Virginia Marine Resources Commission (MRC)<br>• Virginia Department of Agriculture and Consumer Services<br>• Virginia Department of Game and Inland Fisheries<br>• Virginia Outdoors Foundation<br>• Virginia Department of Mines, Minerals, and Energy<br>• Virginia Department of Forestry | • Charles County Department of Planning and Growth Management | • King George County Planning Commission |

***TABLE 2:** AGENCY AND PUBLIC COORDINATION PLAN: NEPA PROCESS*

| Coordination Point | Approximate Schedule | Persons, Agencies & Organizations Involved | Input Required | Method Used to Obtain Input | Timeframe |
|---|---|---|---|---|---|
| Project Initiation Scoping Activities | Fall 2006 | • All Agencies | • Agency response accepting or declining invitation role of participating agency<br>• Identification of issues associated with the project | • Letter<br>• Meeting; Field Tour | 30 days<br>30 days |
| Development of Purpose and Need | Spring 2007 | • All Participating Agencies; General Public<br>• ACOE; USCG; EPA; MDE; DEQ | • Comments on project Purpose and Need<br>• Concurrence on Purpose and Need | • Public Workshop; Project Website<br>• Letter | 30 days |
| Identification of Range of Alternates | Spring 2007 | • All Participating Agencies; General Public | • Comments on Preliminary Alternate Concepts | • Public Workshop; Project Website | 30 days |
| Notice of Intent Publication (NOI) (if necessary) | Spring 2007 | • Authority<br>• FHWA | • Authority will prepare draft NOI<br>• FHWA will approve and publish NOI | N/A | N/A |
| Initial Section 106 Coordination | Summer 2007 | • MHT/MD SHPO; VA SHPO | • Comments regarding known historic sites and Area of Potential Effects | • Letter | 30 days |
| Alternates Retained for Detailed Study | Fall 2007 | • All Other Participating Agencies<br>• ACOE; USCG; EPA, MDE; DEQ | • Comments on Alternates Retained for Detailed Study<br>• Concurrence on Alternates Retained for Detailed Study | • Meeting<br>• Letter | 30 days<br>30 days |
| Collaboration of Impact Assessment Level of Detail and Methodologies | Fall 2007 | • All Appropriate Participating Agencies1 | • Comments on Impact Assessment Level of Detail and Methodology<br>• Agreement on Impact Assessment Level of Detail and Methodology | • Meeting<br>• Letter | 30 days<br>30 days |
| Section 106 Eligibility and Historic Boundary Determinations | Winter 2007 | • MHT/MD SHPO; VA SHPO | • Concurrence/comments regarding proposed eligibility determinations and historic boundaries | • Letter | 30 days |
| Section 106 Effect Determinations | Spring 2008 | • MHT/MD SHPO; VA SHPO | • Concurrence/comments regarding proposed effects determinations | • Letter | 30 days |
| Completion of the Draft EIS or EA/Draft Section 4(f) Evaluation | Summer 2008 | • All Participating Agencies; General Public | • Comments on Draft NEPA document | • Public Hearing; Project Website; Letter | 30 days (45 days for an EIS) |
| Preferred Alternate and Conceptual Mitigation (PACM) Package | Winter 2009 | • All Participating Agencies<br>• ACOE; USCG; EPA, MDE; DEQ | • Comments on PACM package<br>• Concurrence on PACM package | • Meeting<br>• Letter | 30 days<br>30 days |
| Section 106 Memorandum of Agreement (MOA) | Spring 2009 | • MHT/MD SHPO; VA SHPO | • Signature on MOA | • Letter | N/A |
| Completion of Final EIS or FONSI/Final Section 4(f) Evaluation | Spring 2009 | • All Participating Agencies; General Public<br>• USDOI | • Comments on Final NEPA document<br>• Section 4(f) Consultation | • Project Website; Letter<br>• Letter | 30 days<br>45 days |
| Completion of the Record of Decision (ROD) (if necessary) | Summer 2009 | • All Participating Agencies | • Comments on Draft ROD | • Letter | 30 days |

[1] The determination of which agencies will agree on specific impact assessment methodologies will be made on a resource-by-resource basis. Agreement will be reached only with agencies that have appropriate jurisdiction or expertise specific to each resource and associated assessment methodology.

A description of the activities involved at each coordination point, the approximate point in the project schedule that the coordination will occur, the input requested, the method by which input will be obtained, and the timeframes in which the agencies and the public will be expected to provide their input, are described in detail below and are summarized in ***Table 2***.

### *4.1.1 Project Initiation and Scoping*

The Authority will undertake project scoping activities, which will involve coordination with federal, state, and local agencies in Fall 2006. These activities will be focused on introducing the project to the agencies, identifying potential issues associated with the project, making requests for data from the agencies, and determining the agencies' roles in the project (i.e., participating, cooperating, or non-participating).

A project scoping meeting and field tour will be held with the agencies to introduce the project and identify any immediately known issues associated with the project. Agencies will be provided background information on the project and be asked to attend the meeting and field tour.

Additional coordination with certain agencies will also occur separately from the scoping meeting. Letters will be sent by the Authority to specific agencies with requests for data on the location and nature of environmental resources within the project's study area. The agencies would be expected to respond to the Authority providing, if possible, the data requested within 30 days.

After the project has been introduced and the agencies have become familiar with known project issues, additional letters will be sent by the Authority or FHWA, in accordance with Section 6002 of SAFETEA-LU, formally inviting each agency to assume a role in the project as a participating agency. Some agencies will also be asked to assume a role as a cooperating agency. The agencies would be asked to respond in writing to the Authority or FHWA and either accept or decline the invitation within 30 days. In the case of federal agencies choosing to decline the invitation, the agency's response must include a statement that the agency:

- Has no jurisdiction or authority with respect to the project;
- Has no expertise or information relevant to the project; and
- Does not intend to submit comments on the project.

### *4.1.2 Purpose and Need*

The Authority, in coordination with FHWA, will develop the Draft Purpose and Need Statement for the Nice Bridge Project. Participating agencies and the general public will have the opportunity for involvement in the development of the project's Purpose and Need. The Purpose and Need document will be made available to participating agencies at the project scoping meeting. The document will also be made available through the project website and at the Alternates Public Workshop scheduled in Spring 2007. If the participating agencies have comments on the Purpose and Need, they would be asked to provide them to the Authority within 30 days of the Alternates Public Workshop. The Authority will address any agency comments and respond in writing to each agency that provides comments. Once all comments on the Purpose and Need are addressed, the Authority will send a letter transmitting the Final

Purpose and Need document to ACOE, USCG, EPA, MDE, and DEQ. These agencies will be asked to concur in writing on the Purpose and Need within 30 days of this letter.

### *4.1.3 Range of Alternates*

The Authority, in coordination with FHWA, will identify preliminary alternate concepts and will meet with the participating agencies to present them. Based on preliminary assessment of the alternate concepts and agency input, the lead agencies will determine the range of alternates to be evaluated in the NEPA document. The range of alternates will be made available to the participating agencies and the general public through the project website and at the Alternates Public Workshop in Spring 2007. If the participating agencies have comments on the range of alternates, they would be asked to provide them to the Authority within 30 days of the Alternates Public Workshop. The Authority will address any agency comments and respond in writing to each agency that provides comments.

### *4.1.4 Notice of Intent*

Publication of a Notice of Intent (NOI) for the Nice Bridge Project is only required if an EIS is to be prepared. If FHWA determines that the appropriate level of documentation for this project is an EA, a NOI is unnecessary at this stage of the project. If it is deemed necessary, the Authority will prepare the draft NOI on FHWA's behalf. FHWA will publish the NOI in the Federal Register. This is expected to occur in Spring 2007 and is intended to inform the participating agencies and the general public of FHWA's intent to prepare an EIS. No response will be expected from the participating agencies.

### *4.1.5 Initial Section 106 Coordination*

In accordance with Section 106, the Authority will coordinate with MHT/MD SHPO and VA SHPO to obtain concurrence on the Area of Potential Effects (APE) and the architectural survey research design. The Authority will prepare two technical memoranda documenting the proposed APE and architectural survey research design: one for Maryland and one for Virginia. The technical memoranda will be submitted to MHT/MD SHPO and VA SHPO, respectively. MHT/MD SHPO and VA SHPO will offer comments or concur with the Authority’s findings. If MHT/MD SHPO and VA SHPO offer comments, the Authority will address them as part of the Determination of Eligibility Report.

### *4.1.6 Alternates Retained for Detailed Study*

The Authority, in coordination with FHWA, will identify the Alternates Retained for Detailed Study (ARDS). The identification of the ARDS will be based upon the Authority's analyses of the preliminary alternate concepts with consideration given to comments and suggestions received from the participating agencies and the general public. The draft ARDS document will be prepared by the lead agencies and distributed to the participating agencies for review approximately 30 days prior to a Fall 2007 meeting at which the participating agencies will provide their comments on the ARDS. Following this meeting, the lead agencies will address the participating agencies' comments. The ARDS document will then be redistributed to the participating agencies along with a summary of the comments received and the lead agencies' responses. Agencies including the ACOE, USCG, EPA, MDE, and DEQ will be asked to concur in writing on the ARDS within 30 days.

### *4.1.7 Collaboration of Impact Assessment Level of Detail and Methodology*

Based upon the findings of the Authority's preliminary environmental inventory and the issues and concern raised by the participating agencies during the scoping process, the lead agencies will identify the anticipated level of detail necessary to adequately address potential impacts to environmental resources. The level of detail necessary will be determined on a resource-by-resource basis based upon the severity of the anticipated impacts. A corresponding methodology for assessing impacts that is commensurate with the anticipated level of detail needed will also be developed for each resource.

For each individual resource, the level of detail and methodology for the impact assessment will be coordinated with those agencies that have jurisdiction or expertise relevant to that resource. ***Table 3*** lists the agencies with whom the Authority will coordinate for each resource.

The Authority will provide each appropriate agency the level of detail and methodology as part of the draft ARDS package (described in Section 4.1.5 above). This will be provided to the agencies 30 days prior to the meeting that is expected to be held in Fall 2007 to discuss comments on the ARDS package. At this meeting, each agency would be expected to provide comments on the level of detail and methodology to the Authority. The Authority will make revisions to the level of detail and methodology for each resource based on comments from participating agencies. The Authority will send a letter to each agency transmitting the revised level of detail and methodology to the appropriate agencies as part of the revised ARDS package and seeking agreement from each appropriate agency involved within 30 days of this letter.

### *4.1.8 Section 106 Eligibility and Historic Boundary Determinations*

The Authority will evaluate all properties fifty years of age or older within the APE by using the architectural survey research design. The Authority will recommend whether each site is eligible for listing in the National Register of Historic Places as well as the historic boundaries of each site. The Authority will develop an eligibility report and submit it to MHT/MD SHPO and VA SHPO. MHT/MD SHPO and VA SHPO will concur with the Authority's findings or will disagree with one or more the eligibility or boundary determinations. If MHT/MD SHPO and VA SHPO disagree, the Authority will coordinate with the MHT/MD SHPO and/or the VA SHPO to attempt to reach agreement. If agreement cannot be reached, MHT/MD SHPO and/or the VA SHPO will forward the matter to the Advisory Council on Historic Preservation (ACHP) and ACHP will make the final determination.

### *4.1.9 Section 106 Effect Determinations*

The Authority will evaluate all historic properties within the APE in accordance with National Register effects criteria. The Authority will recommend the effect that each of the ARDS would have on each site (i.e., No Effect, No Adverse Effect, Adverse Effect). The Authority will develop an effects report and submit it to MHT/MD SHPO and VA SHPO. MHT/MD SHPO and VA SHPO will concur with the Authority's findings or will disagree with one or more of the effect determinations. If MHT/MD SHPO and/or VA SHPO disagree, the Authority will coordinate with the MHT/MD SHPO and/or the VA SHPO to attempt to reach agreement. If

***TABLE 3***
*IMPACT ASSESSMENT LEVEL OF DETAIL AND METHODOLOGY COORDINATION*

| Resource | Appropriate Agency(s) to Provide Input |
|---|---|
| Communities | Charles County Department of Planning and Growth Management; King George County Planning Commission |
| Businesses | Charles County Department of Planning and Growth Management; King George County Planning Commission |
| Parkland | NPS; DNR; DCR; King George County |
| Land Use | MDP; Charles County Department of Planning and Growth Management; King George County Planning Commission |
| Historic Sites | MHT/MDSHPO; VA SHPO |
| Archaeological Sites | MHT/MDSHPO; VA SHPO |
| Soils | NRCS |
| Surface Water | USACE; MDE; DEQ |
| Ground Water | USACE; MDE; DEQ |
| Floodplains | USACE; MDE; DEQ |
| Wildlife Habitat | USFWS; DNR; Virginia Department of Game and Inland Fisheries, Virginia Department Forestry |
| Aquatic Habitat | USFWS; DNR; Virginia Department of Game and Inland Fisheries |
| Wetlands | USACE; MDE; DEQ |
| Rare, Threatened, & Endangered Species | USFWS; DNR; Virginia Department of Game and Inland Fisheries |
| Noise | FHWA |
| Air Quality | EPA |
| Hazardous Materials | EPA |

agreement cannot be reached, MHT/MD SHPO and/or the VA SHPO will forward the matter to the Advisory Council on Historic Preservation (ACHP) and ACHP will make the final determination.

### *4.1.10 Draft EIS/Draft Section 4(f) Evaluation or Final EA/Draft Section 4(f) Evaluation*

The lead agencies will complete the draft NEPA document (either a Draft EIS/Draft Section 4(f) Evaluation or a Final EA/Draft Section 4(f) Evaluation) in Summer 2008. The Authority will prepare a Notice of Availability (NOA) for the document on FHWA's behalf and FHWA will publish the NOA in the Federal Register. The draft NEPA document will be distributed to the participating agencies and will also be made available for review on the project website and at local public repositories.

Participating agencies, as well as the general public, will be expected to submit comments to the lead agencies within the legally required comment period (within 30 days of the publication of the NOA in the Federal Register if a Final EA/Draft Section 4(f) Evaluation is prepared and within 45 days if a Draft EIS/Draft Section 4(f) Evaluation is prepared). Comments can be submitted in a letter to the lead agencies or through the project website, although participating agencies would typically be expected to submit comments in a letter. In addition, a public

hearing will be held during the comment period on the draft NEPA document. At the public hearing, both participating agencies and the general public would have the opportunity to give testimony on the document for the public record or submit comments orally or in writing.

### *4.1.11 Preferred Alternate Conceptual Mitigation (PACM) Package*

Based upon the analysis contained in the Draft NEPA document with consideration given to the comments received from the participating agencies and the general public, the lead agencies will identify the Preferred Alternate. The Authority will prepare a PACM package that describes the Preferred Alternate, the justification for identifying that alternate as the Preferred Alternate, and conceptual mitigation for the anticipated impacts of the Preferred Alternate. The PACM package will be distributed to the participating agencies for review approximately 30 days prior to a meeting in Winter 2009 at which the participating agencies will be expected to provide comments on the document. The Authority will revise the PACM package and redistribute the document to the participating agencies along with a record of comments received and the lead agencies' responses. In addition, the ACOE, USCG, EPA, MDE, and DEQ will be asked to concur on the preferred alternate within 30 days.

### *4.1.12 Section 106 Memorandum of Agreement*

If the project is determined to have an adverse effect on one or more listed or eligible properties, the Authority will develop a draft Memorandum of Agreement describing the effects on historic sites and proposed mitigation for any adverse effects. The draft memorandum will be submitted for signature to FHWA, the MHT/MD SHPO, and the VA SHPO.

### *4.1.13 Final EIS/Final Section 4(f) Evaluation or FONSI/Final Section 4(f) Evaluation*

The lead agencies will complete the final NEPA document (either a Final EIS/Final Section 4(f) Evaluation or a FONSI/Final Section 4(f) Evaluation) in Spring 2009. The Authority will prepare a Notice of Availability (NOA) for the document on FHWA's behalf and FHWA will publish the NOA in the Federal Register. The final NEPA document will be distributed to the participating agencies and will also be made available for review on the project website and at local public repositories.

If a Final EIS/Final Section 4(f) Evaluation is prepared, the participating agencies, as well as the general public, will be expected to submit comments to the lead agencies within the legally required comment period (within 30 days of the publication of the NOA in the Federal Register). Comments can be submitted in a letter to the lead agencies or through the project website, although participating agencies would typically be expected to submit comments in a letter.

The publication of the Final Section 4(f) Evaluation along with either a Final EIS or FONSI will fulfill FHWA's legal obligation to coordinate with the USDOI. From the date of the Federal Register publication of the NOA, USDOI will be expected to provide comments in writing on the Final Section 4(f) Evaluation within the legally required 45-day comment period.

### *4.1.14 Record of Decision*

Publication of a Record of Decision (ROD) for the Nice Bridge Project is only required if an EIS is to be prepared. If FHWA determines that the appropriate level of documentation for this project is an EA and the findings of the EA allow for a FONSI, the FONSI would be the decision document and, therefore, a ROD is unnecessary. If it is deemed necessary, the lead agencies will

prepare the draft ROD and distribute the document to the participating agencies for review in Summer 2009. The participating agencies will be expected to provide comments in writing on the draft ROD within 30 days.

### *4.2 Agency and Public Coordination Plan for Post NEPA Activities*

This portion of the plan identifies all agency actions that may be required following the completion of the NEPA process. These actions include the issuing of permits, licenses, approvals, and other coordination that may be necessary to construct the selected alternate identified in the Record of Decision or FONSI. Since the alternatives and impacts have not been determined at this stage of the project, it is possible that one or more of these actions would ultimately not be required. However, the coordination activities involved in each action are described below and are summarized in ***Table 4***. Furthermore, the project schedule has not yet been determined for post-NEPA activities. Therefore, this plan does not specify approximate time frames for these activities.

#### *4.2.1 Section 404 Permit*

Section 404 of the Clean Water Act (CWA) establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Proposed activities are regulated through a permit review process. An "individual permit" is required for potentially significant impacts. An individual permit involves evaluation of individual, project specific applications in what can be considered three steps: pre-application consultation, formal project review, and decision making. During the pre-application consultation, the Authority will meet with the USACE district staff, interested resource agencies (federal, state, or local), and sometimes the interested public. The Authority and attending parties will partake in informal discussions about the pros and cons of the project before the Authority makes irreversible commitments of resources (funds, detailed designs, etc.). Once the complete application is received by the USACE, the formal review process will begin. The USACE project manager will prepare a public notice, evaluate the impacts of the project and all comments received, negotiate necessary modifications of the project (if required), and oversee drafting of appropriate documentation to support a recommended permit decision. At this time, the Authority will be responsible for preparing the permit decision document, which includes a discussion of the environmental impacts of the project, the findings of the public interest review process, and any special evaluation required by the project. During the decision making process, the USACE will evaluate public benefits and detriments of all factors relevant to the project are carefully evaluated and balanced.

#### *4.2.2 Coast Guard Bridge Permit*

In accordance with Section 9 of the Rivers and Harbors Act of 1899 and the General Bridge Act of 1946, the Authority must obtain a bridge construction permit prior to the construction of a build alternate for this project. The Authority will prepare an application for a Coast Guard Bridge Permit in accordance with the requirements defined under 33 CFR §§ 114-115. The application will be submitted to the USCG District Commander along with the completed NEPA document, the State Water Quality Certification, and the Coastal Zone Management Certification. The USCG District Commander will make a determination of whether the application is complete and will either issue the permit, deny the permit, or forward the application (along with a recommendation to issue or deny the permit) to USCG Headquarters

for review. If the application is forwarded to USCG Headquarters, the USCG Commandant will be responsible for issuing or denying the permit.

### *4.2.3 Approval for the Conversion of Section 6(f) Land*

If the Selected Alternative for the Nice Bridge Project requires the conversion of land from Barnesfield Park, which is protected under Section 6(f)(3) of the Land and Water Conservation Fund (LWCF) Act, the project will require approval from the DCR, which administers the LWCF in Virginia, and the Regional Director of the NPS before it can be constructed. The Authority will, on the behalf of the King George County Parks and Recreation Department, need to demonstrate that there is no feasible alternative to converting land from Barnesfield Park and to locate a suitable replacement property as determined by the NPS. To demonstrate that there is no feasible alternative to the conversion of land from Barnesfield Park, the Authority will coordinate with the King George County Parks and Recreation Department to develop the following items, which King George County is required to submit to DCR:

- Written description of all practical alternatives to conversion[2]
- Analysis and evaluation of each alternative and why it was rejected[2]
- Analysis and evaluation demonstrating the conversion is the most feasible course of action.[2]

To demonstrate that the proposed replacement property is suitable, the Authority will also work with the King George County Parks and Recreation Department to provide DCR with the following information:

- Appraisals to the Uniformed Appraisal Standards for Federal Land Acquisition on both the land to be converted and the replacement property by a state certified appraiser.
- Evidence that shows the replacement property meets eligibility requirements for LWCF assisted acquisition.
- Evidence that shows the replacement property is of reasonably equivalent or greater usefulness and location as that of the property being converted.
- Evidence that shows the proposed replacement property can constitute or is part of a viable recreation area.
- A complete environmental analysis in accordance with NEPA.
- Evidence that shows the Authority will obtain title or adequate control of the replacement property and assure protection of the replacement property in accordance with Section 6(f)(3) of the LWCF.
- Metes and bounds map showing the area of Barnesfield Park to be converted and a metes and bounds map of the replacement property.

The King George County Parks and Recreation Department will submit two copies of the above-mentioned items to DCR for review. Once DCR is satisfied with the required documentation and proposed replacement property, the conversion request will be forwarded by the DCR to the NPS for final review and approval. The NPS will notify the DCR in writing of their decision to

[2] At the time these items will be submitted to DCR, they will already exist as part of the completed Final Section 4(f) Evaluation.

approve or deny the conversion request. The DCR will then notify King George County Parks and Recreation Department in writing of the NPS's decision.

### *4.2.4 Permanent Easement for the Use of Property from the Naval Support Facility Dahlgren*

The Authority will take the lead in obtaining a perpetual easement on Naval Support Facility (NSF) Dahlgren property. The Authority will develop a Memorandum of Understanding (MOU) with the NSF Dahlgren and appropriate parties.

### *4.2.5 Surface Water & Groundwater Discharge Permits*

Pursuant to the Federal Clean Water Act, (MDE Environment Article, Title 9, Subtitle 3; COMAR 26.08.01 through 26.08.04 and COMAR 26.08.07-08) the Authority, prior to final design, will obtain a surface water and/or groundwater discharge permit. This permit is a combined state and federal permit under the National Pollutant Discharge Elimination System (NPDES) which is designed to meet federal effluent guidelines when applicable and also to ensure the discharge satisfies state water quality standards. The groundwater discharge permit will contain the limitations and requirements deemed necessary to protect public health and protect ground water quality. The Authority will submit a completed application form (the permit application) triggering MDE to publish a "notice of application" and provide an opportunity for an informational meeting. Following the informational meeting, MDE will publish a notice of tentative determination, and, if no adverse comments are received, issue the permit. However; if adverse comments are received, a final determination will be necessary and an additional notice will be provided allowing citizens an additional 15 days to request a contested case hearing. MDE will then issue the permit if the final determination is not contested. If, contested administrative procedure for the appeal process is followed.

### *4.2.6 Tidal Wetlands Licenses and Permits/Non-tidal Wetlands and Waterways Permit*

The Authority is required to demonstrate that proposed impacts to tidal and non-tidal wetlands are necessary and unavoidable (Environment Article Title 16; COMAR 26.24; Environment Article Title 5, Subtitle 5-901through 5-911; Annotated Code of Maryland; COMAR 26.23). The Authority is responsible for first eliminating (wherever possible), then reducing impacts through avoidance and minimization. Wetland mitigation may be required for authorized impacts. Wetland mitigation monitoring may be required, under the discretion of MDE, and may extend beyond construction of an approved mitigation project. The Authority will initiate these activities early in the planning process, typically before the permit application is submitted.

The Authority will complete a *Joint Federal/State Application for the Alteration of any Floodplain, Waterway, Tidal or Nontidal Wetland in Maryland* and forward to MDE, Regulatory Services Coordination Office (RSC) for review. Upon receipt of the application package, the RSC will determine what type of permit is necessary and will forward the application to the appropriate governmental agencies. MDE may advise that the project and tidal permit be advertised for comment and allow the opportunity for a public informational hearing. The Authority will be responsible for notifying adjacent property owners of the proposed action and the filing of the tidal wetland permit. At the conclusion of the review process, MDE will make a decision on the application. The Authority will be responsible for providing final construction plans to MDE. Upon receipt of final construction plans, a permit or license is issued by MDE.

### *4.2.7 Erosion and Sediment Control and Stormwater Management Plan Approvals/ General Permit for Construction Activity*

The Authority will identify a concept for the management and/or mitigation of stormwater runoff in the planning phase of the project. The management of runoff associated with new and redeveloped impervious surfaces resulting from the project will be in accordance with the most current MDE stormwater management guidelines. A preliminary stormwater management (SWM) report identifying existing and proposed hydrology, and management concepts will be developed by the Authority and submitted to MDE Plan Review Division for review around the 30 percent design stage. Following an approximate 30-day MDE review period, which may be shortened by the use of an MDE-approved Expedited Reviewer, concurrence of, and/or comments related to the SWM report will be received by the Authority for their use in revising and developing the final SWM design approach.

Plans for Erosion and Sediment Control (ESC Plans) during project construction will be developed by the Authority and submitted to MDE for review and comment around the 60 percent design stage; this may occur concurrently with subsequent SWM submissions. MDE Plan Review Division will issue comments related to the ESC plans in a similar manner to the SWM design. The Authority will make iterative submissions of SWM and ESC plans with supporting computations, waiver forms, etc., addressing MDE comments with a point-by-point response letter, until all MDE comments and concerns have been addressed. At this time, the Authority will submit a Notice of Intent form to MDE Compliance Division for the project. Upon receipt of the Notice of Intent form, the MDE Compliance Division will issue to the Authority a General Permit for Construction Activity and MDE Plan Review Division will issue a Stormwater Management and Sediment Control Approval for the project.

### *4.2.8 Chesapeake Bay Critical Areas Commission Approval*

Due to the location of the Nice Bridge project, it is anticipated that the approval of the CAC will be required before the project can be constructed. Coordination between the Authority and the CAC, as a participating agency in the project will occur throughout the NEPA process as describe in Section 4.1 of this plan. This coordination will constitute the official consultation with the CAC to determine the possible or likely effects of the project on Critical Areas and the CAC will be expected to provide comments on the project to the Authority within the specified timeframes. Following the NEPA process, the Authority will submit to the Commission a notice and description of the project (which reflects the selected alternate) and findings that the project is consistent with the criteria for development in the Critical Area resulting from state and local agency programs as defined in COMAR 27.02.05.03 - 14. The CAC will review the findings and either approve, deny, or request modifications to the project based on an assessment of the extent to which the project conforms with the above-mentioned criteria.

### *4.2.9 Virginia Permits*

The Authority will prepare documents and supplemental information required in order to obtain project authorizations which may include permits and any other approvals required by the regulatory review agencies in Virginia. The Authority will attend regulatory agency field reviews and other meetings with the regulatory agencies as appropriate to develop regulatory concurrence.

A *Joint Permit Application* will be prepared specifically for the Virginia agencies. The completed application, along with various graphics/permit plates, including plan, profile, and cross-section views of proposed conditions, limits of disturbance, cut and fill calculations, waterway construction details, H&H design report, and impact calculations, will be submitted to the MRC who will be responsible for submitting copies to the DEQ and the USACE.

Each agency will review the application and will send individual responses and approved permits to the Authority within 45 days of receipt of the complete permit application. The Norfolk District will respond in writing stating that they will be working with the USACE Baltimore District to issue a permit (see *Section 4.2.1* above). Permits which may be issued through this Joint Permit Application process, depending on the final design of the project, include a Subaqueous or Bottomlands Permit, Tidal Wetlands Permit, or Coastal Primary Sand Dunes Permit from the MRC or a Virginia Pollutant Abatement Permit, Surface and Ground Water Withdrawal Permit or Virginia Water Protection Permit from the DEQ.

In order to comply with the Virginia Pollutant Discharge Elimination System Permit from the DCR, the Authority must complete a registration form two days prior to construction.

***Chesapeake Bay Preservation Act Approval***

In accordance with Virginia's Chesapeake Bay Preservation Act, the Authority will coordinate with the King George County Zoning Administrator to obtain approval for the construction of the Nice Bridge project across any Resource Protection Areas (RPAs). Article 8 of King George County's Zoning Ordinance, entitled Chesapeake Bay Preservation Overlay District, was enacted under the authority of Section 10.1-2100, et seq. (The Chesapeake Bay Preservation Act) and Section 15.2-2283 of the Code of Virginia. According to this ordinance, roads and driveways may be constructed in or across RPAs if each of the following conditions is met:

- The Zoning Administrator makes a finding that there are no reasonable alternatives to aligning the road or driveway in or across the RPA;
- The alignment and design of the road or driveway are optimized, consistent with other applicable requirements, to minimize encroachment of the RPA and adverse effects of on water quality;
- The design and construction of the road or driveway satisfy all applicable criteria of this Ordinance, including submission of a water quality impact assessment;
- The Zoning Administrator reviews the plan for the road or driveway proposed in or across the RPA in coordination with other local government, state, federal requirements and development approvals.

If a build alternative is selected, the Authority will provide all appropriate documentation to the Zoning Administrator to demonstrate that there are no reasonable alternatives to aligning the roadway across the RPA, the alignment and design of the roadway are optimized, and the design and construction of the roadway satisfy all applicable criteria. The Zoning Administrator will review the plan for the roadway and, if all requirements are met, will approve the project.

***TABLE 4***

*AGENCY AND PUBLIC COORDINATION PLAN: POST NEPA ACTIONS*

| Coordination Point | Approximate Schedule | Persons, Agencies & Organizations Involved | Permits, Licenses, or Approvals Required |
|---|---|---|---|
| Completion of Permits, Licenses, or Approvals After the EA/FONSI or ROD | Summer 2009 | USACE | • Section 404 Permit |
| | | USCG | • Coast Guard Bridge Permit |
| | | DOI | • Approval for conversion of Section 6(f) land |
| | | USN | • Permanent Easement for the Use of Property from NSF Dahlgren |
| | | MDE | • Surface Water Discharge Permit |
| | | | • Tidal Wetlands Licenses and Permits/Nontidal Wetland and Waterways Permit |
| | | | • Erosion/Sediment Control and Stormwater Management Plan Approvals/General Permit for Construction Activity |
| | | CAC | • Chesapeake Bay Critical Areas Commission Approval |
| | | MRC | • Subaqueous or Bottomlands Permit |
| | | | • Tidal Wetlands Permit |
| | | | • Coastal Primary Sand Dunes Permit |
| | | DEQ | • Virginia Pollution Abatement Permit |
| | | | • Surface and Ground Water Withdrawal Permit |
| | | | • Virginia Water Protection Permit |
| | | DCR | • Virginia Pollutant Discharge Elimination System Permit |

| | |
|---|---|
| AASHTO | American Association of State Highway and Transportation Officials |
| ABT | Aboveground Storage Tank |
| ADDT | Average Daily Diesel Truck Volumes |
| ADT | Average Daily Traffic |
| APE | Area of Potential Effect |
| ARDS | Alternatives Retained For Detailed Study |
| Authority | Maryland Transportation Authority |
| BMP | Best Management Practices |
| CAA | Clean Air Act |
| CAAA | Clean Air Act Amendments (1990) |
| CAC | Critical Area Commission |
| CBG | Census Block Group |
| CEQ | Council on Environmental Quality |
| CFR | Code of Federal Regulations |
| CLRP | Constrained Long-Range Transportation Plan |
| CMP | Conceptual Mitigation Plan |
| CO | Carbon Monoxide |
| COMAR | Code of Maryland Regulations |
| CTP | Consolidated Transportation Plan |
| DBH | Diameter Breast Height |
| DCR | Virginia Department of Conservation and Recreation |
| DHHS | Department of Health and Human Services |
| DO | Dissolved Oxygen |
| DOI | US Department of the Interior |
| EFH | Essential Fish Habitat |
| EJ | Environmental Justice |
| EO | Executive Order |
| ERNS | Emergency Response Notification System |
| ESCP | Erosion and Sediment Control Plan |
| FEMA | Federal Emergency Management Agency |
| FHWA | Federal Highway Administration |
| FIDS | Forest Interior Dwelling Species |
| FIRM | Flood Insurance Rate Map |
| IBA | Important Bird Areas |
| ICE | Indirect and Cumulative Effects |
| IRM | Interagency Review Meeting |
| ISA | Initial Site Assessment |
| KGC | King George County |
| LOD | Limit of Disturbance |
| LOS | Level of Service |
| LUST | Leaking Underground Storage Tanks |
| LWCF | Land Water and Conservation Fun |
| MBSS | Maryland Biological Stream Survey |
| MBT | Migratory Bird Treaty Act |
| MD DNR | Maryland Department of Natural Resources |

| | |
|---|---|
| MD SHA | Maryland State Highway Administration |
| MDE | Maryland Department of the Environment |
| MDOT | Maryland Department of Transportation |
| MEPA | Maryland Environmental Policy Act |
| MGD | Million Gallons per Day |
| MHT | Maryland Historical Trust |
| MOA | Memorandum of Agreement |
| Mph | Miles per Hour |
| MSATs | Mobile Source Air Toxics |
| NCDC | National Climatic Data Center |
| NEPA | National Environmental Policy Act |
| NHA | Natural Heritage Area |
| NHPA | Natural Heritage Preservation Area |
| NHS | National Highway System |
| NMFS | National Marine Fisheries Service |
| NPL | National Priority List |
| NPS | National Park Service |
| NRCS | Natural Resources Conservation Service |
| NRHP | National Register of Historic Places |
| NSA | Noise Sensitive Area |
| NSF | Navel Support Facility Dahlgren |
| O-D | Origin-Destination |
| ORT | Open-Road Tolling |
| PCB | Polychlorinated Biphenyl |
| $PM_{2.5}$ | Particulate Matter 2.5 microns or smaller in size |
| PPT | Parts per Thousand |
| PPM | Parts per Million |
| PFA | Priority Funding Area |
| PRFC | Potomac River Fisheries Commission |
| PSA | Preliminary Site Assessment |
| RCRA | Resource Conservation and Recovery Act |
| ROW | Right-of-Way |
| RTE | Rare, Threatened, Endangered |
| SAFETEA-LU | Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users |
| SAV | Submerged Aquatic Vegetation |
| S/NAAQS | State and National Ambient Air Quality Standards |
| SHA | State Highway Administration |
| SHPO | State Historic Preservation Officer |
| SIP | State Implementation Plan |
| STRAHNET | Strategic Highway Network |
| SWM | Stormwater Management |
| TIP | Transportation Improvement Program |
| TNM | Traffic Noise Model |
| TSM | Transportation Systems Management |
| TDM | Travel Demand Management |

| | |
|---|---|
| TMDL | Total Maximum Daily Loads |
| USACE | United State Army Corps of Engineers |
| USDA | United State Department of Agriculture |
| USFWS | United States Fish and Wildlife Service |
| UST | Underground Storage Tank |
| UXO | Unexploded Ordanance |
| VA DACS | Virginia Department of Agriculture and Consumer Service |
| VA DCR | Virginia Department of Conservation and Recreation |
| VA DEQ | Virginia Department of Environmental Quality |
| VA DGIF | Virginia Department of Game and Inland Fisheries |
| VA DHR | Virginia Department of Historic Resources |
| VIMS | Virginia Institute of Marine Science |
| VMT | Vehicle Miles of Travel |
| VPD | Vehicles per Day |
| VPI | Virginia Polytechnic Institute and State University, College of Natural Resources |
| VTC | Virginia Tourism Corporation |
| WUS | Waters of the United States |

# Section 6(f) Supporting Documentation for Barnesfield Park

# United States Department of the Interior

NATIONAL PARK SERVICE
Northeast Region
United States Custom House
200 Chestnut Street
Philadelphia, PA 19106

RECEIVED
DEC 01 2008
THE WILSON T. BALLARD CO.
BY

IN REPLY REFER TO:

L32-4507

November 28, 2008

Re Land and Water Conservation Fund
Project number 51-00299

Jennifer Rohrer
The Wilson T. Ballard Company
17 Gwynns Mill Ct.
Owings Mills, MD 21117

Dear Mr. Rohrer:

At the request of Lloyd Champan of this office, I am forwarding copies of documents identifying the area in Barnesfield Park which are subject to section 6(f) requirements of the Land and Water Conservation Fund Act. Note that only parcel "A" as outlined in yellow on the enclosed map is subject to 6(f). Thank you for interest and attention in this matter.

If you have any questions, please contact me by phone at (215) 597-5134 or e-mail at roy_cortez@nps.gov .

Sincerely,

Roy D. Cortez, Program Manager
Recreation and Conservation Grants Assistance

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Land and Water Conservation Fund Project Agreement

| | |
|---|---|
| State Virginia | Project Number 51=00299 |

Project Title Barnesfield Park

| | |
|---|---|
| Project Period Date of Approval to April 30, 1987 | Project Stage Covered by this Agreement Entire |

Project Scope (Description of Project)

Barnesfield Park

King George County

Park development includes: Ballfields, utilities, concession, restrooms, playground, parking, landscaping and support facilities.

| | |
|---|---|
| Project Cost | The following are hereby incorporated into this agreement: |
| Total Cost $ 480,000 | 1. General Provisions (LWCF Manual) |
| Fund Support not to exceed 50% Fund Amount $ 240,000 | 2. Project Application and Attachments. |
| Cost of this Stage $ 480,000 | 3. |
| Assistance this Stage $ 240,000 | 4. |

POSTED
Date 5-30-85
By

NPS 10-902
(7-81)

The United States of America, represented by the Director, National Park Service, United States Department of the Interior, and the State named above (herinafter referred to as the State), mutually agree to perform this agreement in accordance with the Land and Water Conservation Fund Act of 1965, 78 Stat. 897 (1964), the provisions and conditions of the Land and Water Conservation Fund Grants Manual, and with the terms, promises, conditions, plans, specifications, estimates, procedures, project proposals, maps, and assurances attached hereto or retained by the State and hereby made a part hereof.

The United States hereby promises, in consideration of the promises made by the State herein, to obligate to the State the amount of money referred to above, and to tender to the State that portion of the obligation which is required to pay the United States' share of the costs of the above project stage, based upon the above percentage of assistance. The State hereby promises, in consideration of the promises made by the United States herein, to execute the project described above in accordance with the terms of this agreement.

The following special project terms and conditions were added to this agreement before it was signed by the parties hereto:

In witness whereof, the parties hereto have executed this agreement as of the date entered below.

THE UNITED STATES OF AMERICA

By _____
(Signature)

National Park Service
United States Department
of the Interior

Date 23 MAY 1985

STATE

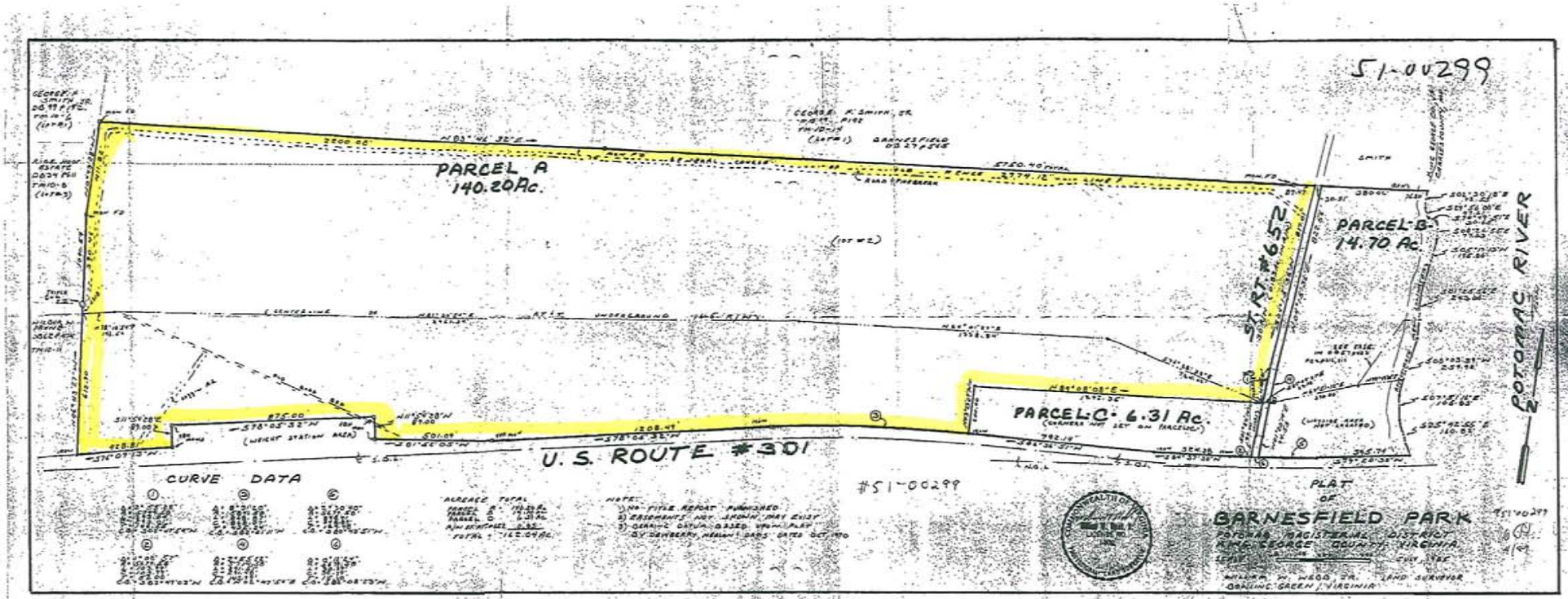
Virginia

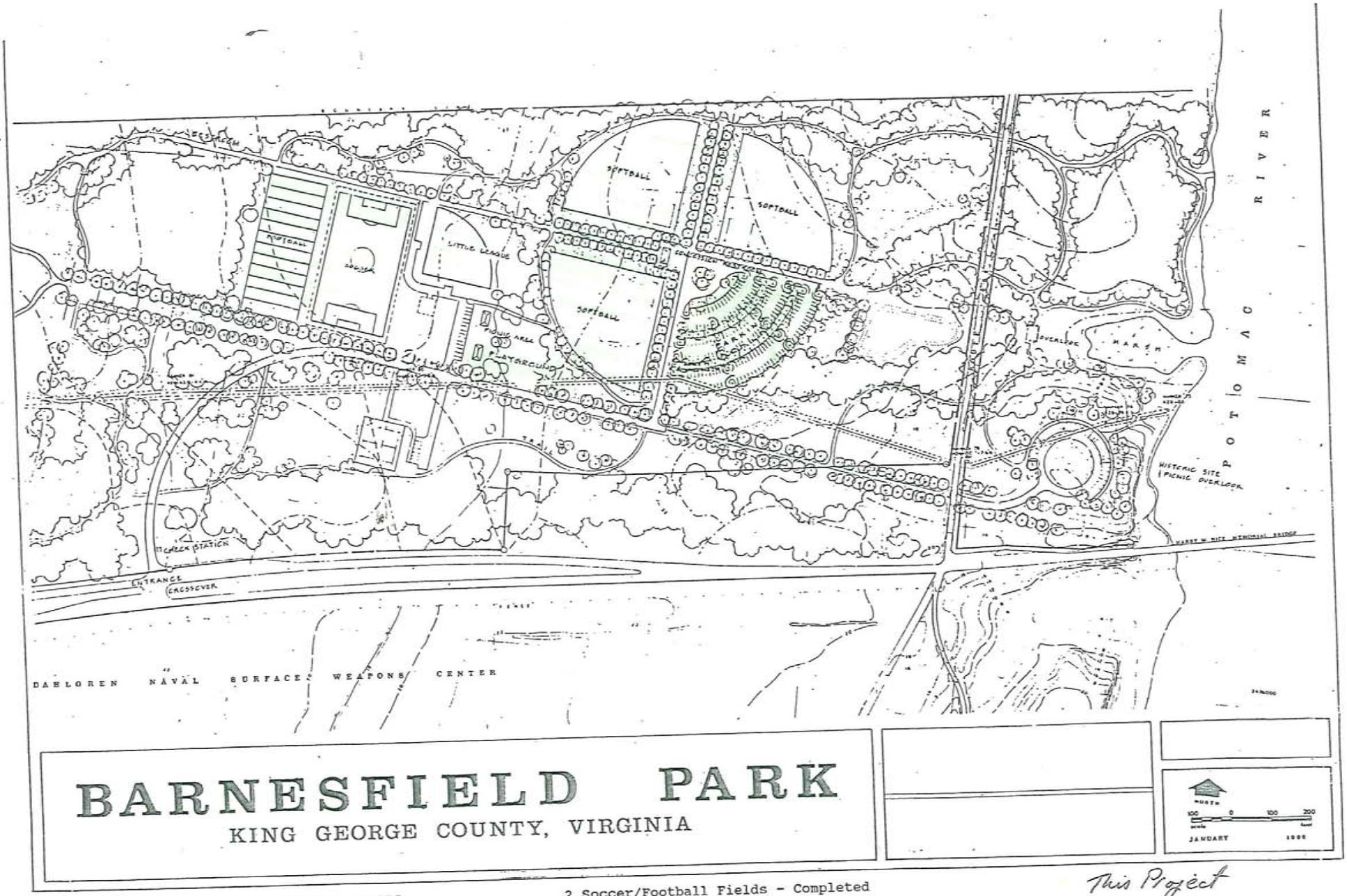
By _____
(Signature)

Art Buehler, Director, Outdoor Recreation Services, Division
(Name)

of Parks & Recreation and SLO to NPS
(Title)

NPS 10-902
(7-81)


51-00299
PARCEL A
140.20Ac.
PARCEL B
14.70 Ac.
PARCEL C 6.31 Ac.
(OWNERS NOT SET ON TRACELINE)
ST. RT. #652
POTOMAC RIVER
U.S. ROUTE #301
CURVE DATA
#51-00299
PLAT
OF
BARNESFIELD PARK
POTOMAC MAGISTERIAL DISTRICT
KING GEORGE COUNTY, VIRGINIA
SCALE
DATE
WILLIAM H. HEAD JR.
LAND SURVEYOR
BOWLING GREEN, VIRGINIA




# BARNESFIELD PARK

KING GEORGE COUNTY, VIRGINIA

SOFTBALL FIELDS
A - Completed (With lights)
B - Completed (No lights)
C - Undeveloped (Graded only)

2 Soccer/Football Fields - Completed
Little League/Tee Ball Field -
Undeveloped (Graded only)
Playground - Partially complete
Picnic Area - 1 Shelter completed

This Project
Recreational Access Road

No. 844

BOOK 111 PAGE 355

Examined:
Original sent
by mail to
Address

QUITCLAIM DEED

The UNITED STATES OF AMERICA, acting by and through the Secretary of the Interior, acting by and through the Acting Southeast Regional Director, Bureau of Outdoor Recreation, under and pursuant to the power and authority contained in the provisions of the Federal Property and Administrative Services Act of 1949 (63 Stat. 377), as amended, and particularly as amended by Public Law 484, 91st Congress, and regulations and orders promulgated thereunder (hereinafter designated "Grantor"), for and in consideration of the perpetual use of the hereinafter described premises as and for public park and public recreation area purposes, by the Board of Supervisors, King George County, Virginia (hereinafter designated "Grantee"), does hereby release and quitclaim to Grantee, and to its successors and assigns, subject to the reservations, exceptions, restrictions, conditions and covenants hereinafter expressed and set forth, all Grantor's right, title and interest in and to the property described in attached Exhibit A, consisting of approximately 160 acres, located in King George County, Virginia.

There are excepted from this conveyance and reserved to the Grantor, and its assigns, all oil, gas, and other minerals in, under and upon the lands herein conveyed, together with the rights to enter upon the land for the purpose of mining and removing the same.

This conveyance is made subject to any and all existing rights-of-way, easements and covenants and agreements affecting the above described premises, whether or not the same now appear of record.

To Have and to Hold the hereinbefore described property, subject to the reservations, exceptions, restrictions, conditions and covenants herein expressed and set forth unto the Grantee, its successors and assigns, forever.

Pursuant to authority contained in the Federal Property and Administrative Services Act of 1949, as amended, and applicable rules, regulations and orders promulgated thereunder, the General Services Administration determined the property to be surplus to the needs of the United States of America and assigned the property to the Department of the Interior for further conveyance to the Board of Supervisors, King George County, Virginia.

It is Agreed and Understood by and between the Grantor and Grantee, and the Grantee by its acceptance of this deed, does acknowledge its understanding of the agreement, and does covenant and agree for itself, and its successors and assigns, forever, as follows:

1. This property shall be used and maintained for the public purposes for which it was conveyed in perpetuity as set forth in the program of utilization and plan contained in the application, submitted by the Grantee on July 29, 1972, which program and plan may be amended from time to time at the request of either the Grantor or Grantee, with the written concurrence of the other party, and such amendments shall be added to and become a part of the original application.

2. The Grantee shall, within 6 months of the date of the deed of conveyance, erect and maintain a permanent sign or marker near the point of principal access to the conveyed area indicating that the property is a park or recreation area and has been acquired from the Federal Government for use by the general public.

3. The property shall not be sold, leased, assigned, or otherwise disposed of except to another eligible governmental agency that the Secretary of the Interior agrees in writing can assure the continued use and maintenance of the property for public park or public

recreational purposes subject to the same terms and conditions in the original instrument of conveyance. However, nothing in this provision shall preclude the Grantee from providing related recreational facilities and services compatible with the approved application, through concession agreements entered into with third parties, provided prior concurrence to such agreements is obtained in writing from the Secretary of the Interior.

4. From the date of this conveyance, the Grantee, its successors and assigns, shall submit biennial reports to the Secretary of the Interior, setting forth the use made of the property during the preceding two-year period, and other pertinent data establishing its continuous use for the purposes set forth above, for ten consecutive reports and as further determined by the Secretary of the Interior.

5. If at any time the United States of America shall determine that the premises herein conveyed, or any part thereof, are needed for the national defense, all right, title and interest in and to said premises, or part thereof determined to be necessary to such national defense, shall revert to and become the property of the United States of America.

6. As part of the consideration for this Deed, the Grantee covenants and agrees for itself, its successors and assigns, that (1) the program for or in connection with which this Deed is made will be conducted in compliance with, and the Grantee, its successors and assigns, will comply with all requirements imposed by or pursuant to the regulations of the Department of the Interior as in effect on the date of this Deed (43 C.F.R. Part 17) issued under the provisions of Title VI of the Civil Rights Act of 1964; (2) this covenant shall be subject in all respects to the provisions of said regulations; (3) the Grantee, its successors and assigns, will promptly take and continue to take such action as may be necessary to effectuate this

covenant; (4) the United States shall have the right to seek judicial enforcement of this covenant, and (5) the Grantee, its successors and assigns, will (a) obtain from each other person (any legal entity) who, through contractual or other arrangements with the Grantee, its successors or assigns, is authorized to provide services or benefits under said program, a written agreement pursuant to which such other person shall, with respect to the services or benefits which he is authorized to provide, undertake for himself the same obligations as those imposed upon the Grantee, its successors and assigns, by this covenant, and (b) furnish a copy of such agreement to the Secretary of the Interior, or his successor; and that this covenant shall run with the land hereby conveyed, and shall in any event, without regard to technical classification or designation, legal or otherwise, be binding to the fullest extent permitted by law and equity for the benefit of, and in favor of the Grantor and enforceable by the Grantor against the Grantee, its successors and assigns.

7. In the event there is a breach of any of the conditions and covenants herein contained by the Grantee, its successors and assigns, whether caused by the legal or other inability of the Grantee, its successors and assigns, to perform said conditions and covenants, or otherwise, all right, title and interest in and to the said premises shall revert to and become the property of the Grantor at its option, which in addition to all other remedies for such breach shall have the right of entry upon said premises, and the Grantee, its successors and assigns, shall forfeit all right, title and interest in said premises and in any and all of the tenements, hereditaments and appurtenances thereunto belonging; provided, however, that the failure of the Secretary of the Department of the Interior to require in any one or more instances complete performance of any of the conditions or covenants shall not be construed as a waiver or relinquishment of such future performance, but the obligation of the Grantee, its successors and assigns, with respect to such future performance shall continue in full force and effect.

IN WITNESS WHEREOF, the Grantor has caused these presents to be executed in its name and on its behalf this the 31st day of OCTOBER 1972.

UNITED STATES OF AMERICA
Acting by and through the
Secretary of the Interior

Through:

Forrest V. Durand
Acting Southeast Regional Director
Bureau of Outdoor Recreation

By _____

WITNESSES:

_____

_____

GEORGIA
COUNTY OF FULTON } ss

On this 31st day of OCTOBER, 1972, before me, the subscriber, personally appeared FORREST V. DURAND, Bureau of Outdoor Recreation, of the United States Department of the Interior, a governmental agency of the United States of America, and known to me to be the same person described in and who executed the foregoing instrument aforesaid, as the act and deed of the United States of America, for and on behalf of the Secretary of the Interior, duly designated, empowered and authorized so to do by said Secretary, and he acknowledged that he executed the foregoing instrument for and on behalf of the United States of America, for the purposes and uses therein described.

_____
NOTARY PUBLIC

My Commission expires:
Notary Public, Georgia, State at Large
My Commission Expires Jan. 4, 1976

The foregoing conveyance is hereby accepted and the undersigned agrees, by this acceptance, to assume and be bound by all the obligations, conditions, covenants and agreements therein contained.

BOARD OF SUPERVISORS
KING GEORGE COUNTY, VIRGINIA

By V. Elwood Mason
V. Elwood Mason
Clerk of the Board

COMMONWEALTH OF Virginia )
) ss
COUNTY OF King George )

On this 16th day of November 1972, before me, the undersigned Officer, personally appeared V. Elwood Mason, to me known and known to me to be the same person whose name is subscribed to the foregoing acceptance, who being by me duly sworn, did depose and say that he is the Clerk of the Board of Supervisors, King George County, that he is duly designated, empowered and authorized by a resolution adopted by the Board on July 20, 1972, to execute the foregoing acceptance and sign his name thereto; and that he signed his name thereto and acknowledges that he executed the foregoing instrument for and on behalf of the Board, for the purposes and uses therein described.

Jane M. Mason
NOTARY PUBLIC

My Commission expires:
January 22, 1976

EXHIBIT A

That property bounded on the west by private property, on the north by private property, on the east by Route 652 and on the south by Route 301, as more particularly described on the plat attached hereto and made a part hereof.

VIRGINIA, to-wit:

In the Clerk's office of the Circuit Court of King George County, the 16th day of November, 1972, this deed was presented and, with the certificates annexed, and plat attached, admitted to record at 2:44 o'clock p.m., and is truly recorded and indexed.

Teste:

V. Edward Mason
Clerk

SEE PLAT RECORDED IN PLAT BOOK NO. 6, at page 136.

V. Edward Mason
Clerk

# Farmland Protection Policy Act Correspondence

Maryland
Transportation
Authority

Martin O'Malley
Governor

Anthony Brown
Lt. Governor

John D. Porcari
Chairman

Peter J. Basso
Rev. Dr. William C. Calhoun, Sr.
Louise P. Hoblitzell
Richard C. Mike Lewin
Isaac H. Marks, Sr., Esq.
Carolyn Y. Peoples
Michael J. Whitson
Walter E. Woodford, Jr., P.E.

Ronald L. Freeland
Executive Secretary

2310 Broening Highway
Suite 150
Baltimore MD 21224
410-537-1000
410-537-1090 (fax)
410-355-7024 (TTY)
1-866-713-1596

e-mail: mdta@
mdtransportation
authority.com

www.mdtransportation
authority.com

June 3, 2008

Mr. Ron Wisniewski
United States Department of Agriculture – Natural Resource Conservation Service
4805 Carr Drive
Fredericksburg, Virginia, VA 22408

RE: Nice Bridge Improvement Project

Dear Mr. Wisniewski,

The Maryland Transportation Authority (Authority) has initiated a project planning study to improve the Governor Harry W. Nice Memorial Bridge over the Potomac River in Charles County, Maryland and King George County, Virginia. The purpose of the Nice Bridge Improvement Project is to upgrade the bridge design to conform to existing roadway approaches on both the Maryland and Virginia sides; to improve traffic operations and safety across the bridge; and to reduce traffic impacts during bridge maintenance and rehabilitation. The study area extends approximately ten miles along US 301, from King George County, Virginia to just north of the US 301/MD 234 intersection in Charles County, Maryland (Attachment A). To address these needs, the Authority developed seven alternates (see Attachment B – Alternates mapping).

The purpose of this letter is to request your input, in accordance with the Farmland Protection Policy Act, regarding the potential impacts to farmland, specifically prime farmland soils or soils of statewide importance. Prime farmland or soils of statewide importance impacts are limited to Virginia and range from 1.6 to 2.9 acres. For your review, please also find attached to this letter the AD 1006 Farmland Conversion Impact Rating Form, the prime farmland and soils of statewide importance mapping (Attachment C), prime farmland and soils of statewide importance tables with soils types and acreage (Attachment D), and the farmland rationale (Attachment E).

In addition to the No-Build Alternate (Alternate 1), six preliminary build alternates are being considered. In general, the build alternates include rehabilitating the existing bridge and adding a parallel bridge, replacing the existing bridge and constructing a parallel bridge, or removing the existing bridge after constructing

new, two or four lane bridges north or south of the existing bridge. The following is a description of each alternate.

**Alternate 1 (No-Build)** – The No-Build Alternate serves as a baseline for comparison; it does not otherwise meet the project's purpose and need. This alternate includes major rehabilitation to the existing bridge in the 2015-2020 time frame. It would also require adequate vessel collision protection be provided for both directions of vessel travel at the existing bridge.

Build Alternates 2 through 7 provide reasonable tie-in points with the existing and planned highway network, capacity for 2030 demand, the ability to maintain two-way traffic flow, improved safety on approaches and bridge, and the ability to comply with navigational channel guidelines.

**Alternate 2 (New Two-Lane Bridge to South, Rehabilitate Existing Bridge)** –This alternate retains the existing bridge and proposes a new bridge be built to the south. Although widening the existing bridge would not be possible, the new two-lane bridge (to the south of the existing bridge) would provide for improved safety, with two 12-foot travel lanes, a 12-foot outside shoulder and a four-foot offset to the inside concrete barrier. This Alternate involves the removal of the existing helipad on Authority property south of the existing toll plaza.

**Alternate 3 (New Two-Lane Bridge to South, Replace Existing Bridge)** – This alternate is similar to Alternate 2 in that a new two-lane bridge would be built to the south of the existing bridge. The existing bridge would then be replaced by a new two-lane bridge with two 12-foot travel lanes, a 12-foot outside shoulder and a four-foot offset to the inside concrete barrier. Alternate 3 provides increased capacity and safety on both the north and southbound crossings of the Potomac River as opposed to only one.

**Alternate 4 (New Two-Lane Bridge to North, Rehabilitate Existing Bridge)** – This alternate is similar to Alternate 2 in that it retains the existing bridge but it a new bridge would be built north of the existing bridge. Although safety improvements via widening the existing bridge would not be possible, the new two-lane bridge (to the north of the existing bridge) would provide for improved safety, with two 12-foot travel lanes, a 12-foot outside shoulder and a four-foot offset to the inside concrete barrier.

**Alternate 5 (New Two-Lane Bridge to the North, Replace Existing Bridge)** – Similar to Alternate 3 (which replaces the existing bridge), this alternate provides increased safety on both north and southbound crossings of the Potomac River since two new bridges would be built. The new bridge to the north would have two 12-foot travel lanes, a 12-foot outside shoulder and a four-foot offset to the inside concrete barrier, as would the bridge that replaces the existing bridge.

**Alternate 6 (New Four-Lane Bridge to the South, Take Existing Bridge Out of Service)** – Alternate 6 consists of constructing a new four-lane parallel structure to the

south of the existing bridge. This new bridge would consist of an 83-foot travel width (four 12-foot travel lanes (two in each direction), a 12-foot outside shoulder in both directions, a four-foot offset to the inside concrete barrier in both directions, and a three-foot median barrier).

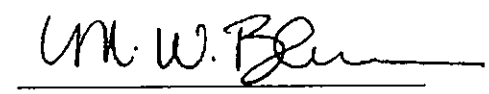
The existing two-lane bridge would be taken out of service. Whether the existing bridge will be removed or remain for recreational use will be determined through on-going coordination with the Maryland Historical Trust (MHT), US Army Corps of Engineers (COE) and the US Coast Guard (USCG).

**Alternate 7 (New Four-Lane Bridge to the North, Take Existing Bridge Out of Service)** –
Similar to Alternate 6, Alternate 7 consists of constructing a new four-lane parallel structure to the north of the existing bridge. This new bridge would consist of an 83-foot travel width (four 12-foot travel lanes (two in each direction), a 12-foot outside shoulder in both directions, a four-foot offset to the inside concrete barrier in both directions, and a three-foot median barrier).

The existing two-lane bridge would be taken out of service. Whether the existing bridge will be removed or remain for recreational use will be determined through on-going coordination with the Maryland Historical Trust (MHT), US Army Corps of Engineers (COE) and the US Coast Guard (USCG).

A response from you, including completion of the Farmland Conversion Impact Rating Form, is greatly appreciated. If you have any questions or concerns, please feel free to contact me at 410-537-1060 (toll-free at 866-713-1596) or mblum1@mdta.state.md.us, or Mr. Glen Smith, Project Manager, at 410-537-5665 (toll-free at 866-713-1596) or gsmith2@mdta.state.md.us.

Sincerely,



Megan Blum
Environmental Manager
Division of Capital Planning
Maryland Transportation Authority

cc: Nick Nies, Location Studies Project Manager, Environmental Division, VDOT
Glen Smith, Project Manager, Division of Capital Planning, MdTA

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

# FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

| | | |
|---|---|---|
| PART I *(To be completed by Federal Agency)* | 3. Date of Land Evaluation Request 6/02/08 | 4. Sheet 1 of 1 |
| 1. Name of Project Nice Bridge Improvement Project | 5. Federal Agency Involved Federal Highway Administration | |
| 2. Type of Project Proposed Bridge Replacement/Rehab | 6. County and State King George County, Virginia | |
| PART II *(To be completed by NRCS)* | 1. Date Request Received by NRCS | 2. Person Completing Form |
| 3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES ☐ NO ☐ | | 4. Acres Irrigated / Average Farm Size |
| 5. Major Crop(s) | 6. Farmable Land in Government Jurisdiction Acres: % | 7. Amount of Farmland As Defined in FPPA Acres: % |
| 8. Name Of Land Evaluation System Used | 9. Name of Local Site Assessment System | 10. Date Land Evaluation Returned by NRCS |

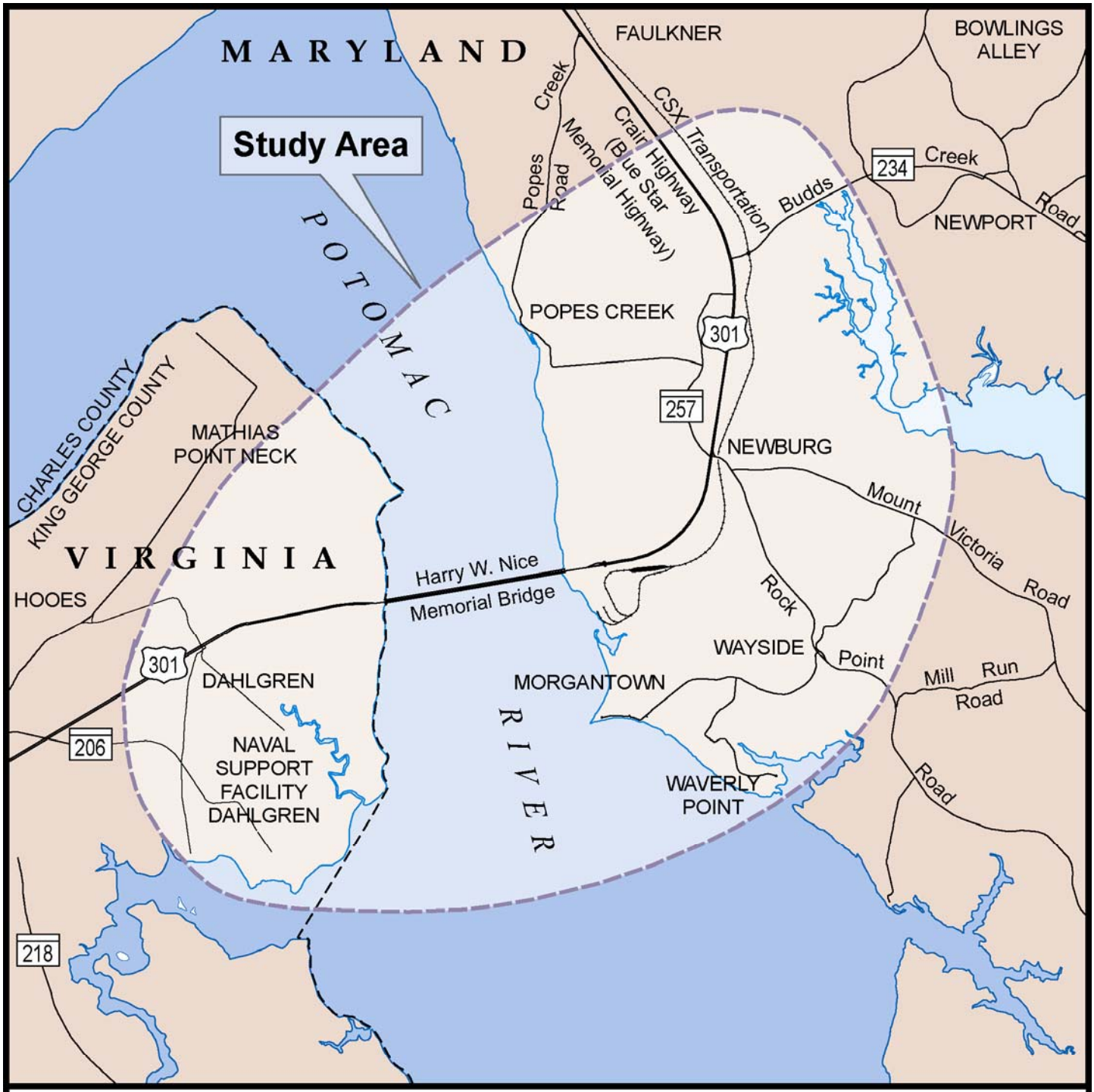
| PART III *(To be completed by Federal Agency)* | Alternative Corridor For Segment | | | |
|---|---|---|---|---|
| | Alts 2 & 3 | Alts 4 & 5 | Alternate 6 | Alternate 7 |
| A. Total Acres To Be Converted Directly | 5.0/5.4 | 7.7/7.4 | 6.2 | 9.4 |
| B. Total Acres To Be Converted Indirectly, Or To Receive Services | | | | |
| C. Total Acres In Corridor | 5.0/5.4 | 7.7/7.4 | 6.2 | 9.4 |
| PART IV *(To be completed by NRCS) Land Evaluation Information* | | | | |
| A. Total Acres Prime And Unique Farmland | | | | |
| B. Total Acres Statewide And Local Important Farmland | | | | |
| C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted | | | | |
| D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value | | | | |
| PART V *(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)* | | | | |
| PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))* — Maximum Points | | | | |
| 1. Area in Nonurban Use — 15 | 3 | 3 | 3 | 3 |
| 2. Perimeter in Nonurban Use — 10 | 3 | 3 | 3 | 3 |
| 3. Percent Of Corridor Being Farmed — 20 | 0 | 0 | 0 | 0 |
| 4. Protection Provided By State And Local Government — 20 | 20 | 20 | 20 | 20 |
| 5. Size of Present Farm Unit Compared To Average — 10 | 0 | 0 | 0 | 0 |
| 6. Creation Of Nonfarmable Farmland — 25 | 0 | 0 | 0 | 0 |
| 7. Availablility Of Farm Support Services — 5 | 0 | 0 | 0 | 0 |
| 8. On-Farm Investments — 20 | 0 | 0 | 0 | 0 |
| 9. Effects Of Conversion On Farm Support Services — 25 | 0 | 0 | 0 | 0 |
| 10. Compatiblity With Existing Agricultural Use — 10 | 0 | 0 | 0 | 0 |
| TOTAL CORRIDOR ASSESSMENT POINTS — 160 | 26 | 26 | 26 | 26 |
| PART VII *(To be completed by Federal Agency)* | | | | |
| Relative Value Of Farmland (From Part V) — 100 | | | | |
| Total Corridor Assessment (From Part VI above or a local site assessment) — 160 | | | | |
| TOTAL POINTS *(Total of above 2 lines)* — 260 | | | | |

| 1. Corridor Selected: | 2. Total Acres of Farmlands to be Converted by Project: | 3. Date Of Selection: | 4. Was A Local Site Assessment Used? YES ☐ NO ☐ |
|---|---|---|---|
| | | | |

5. Reason For Selection:

Signature of Person Completing this Part: | DATE

NOTE: Complete a form for each segment with more than one Alternate Corridor

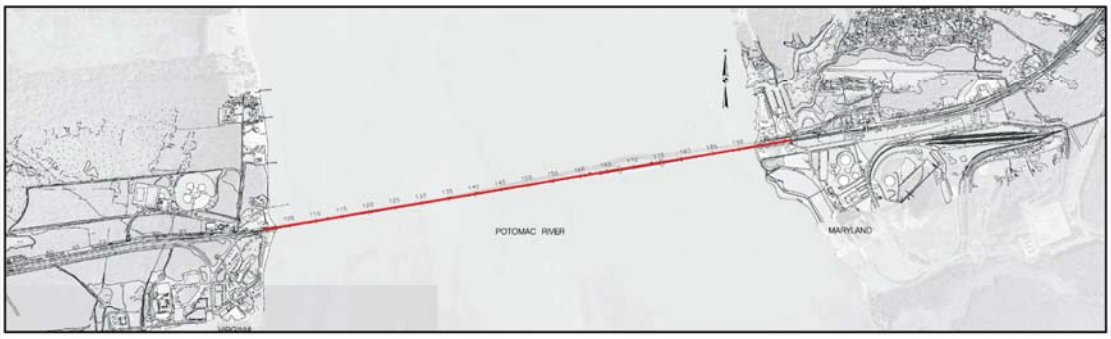


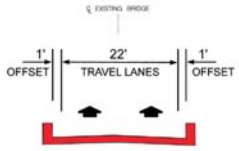

**Attachment A:** Project Study Area

***Nice Bridge Improvement Project***

*Maryland Transportation Authority*

# ALTERNATE 1



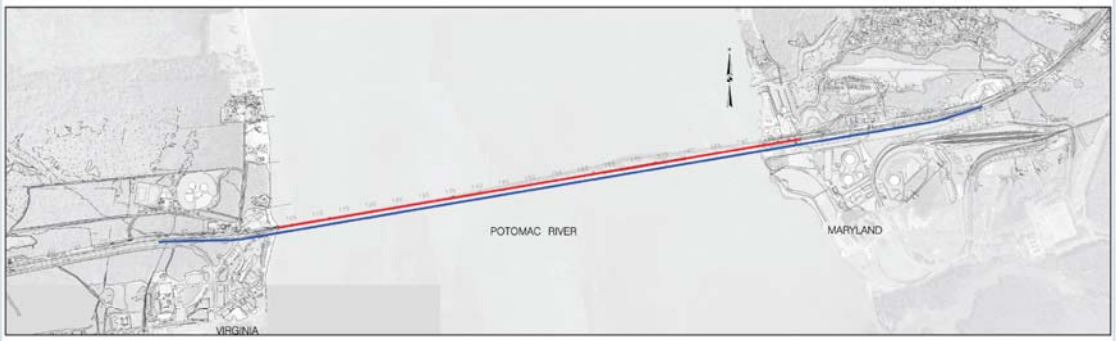



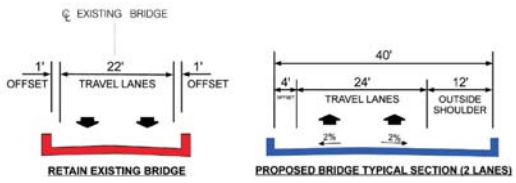

**Attachment B -** Alternate 1

***Nice Bridge Improvement Project***

*Maryland Transportation Authority*

# ALTERNATE 2



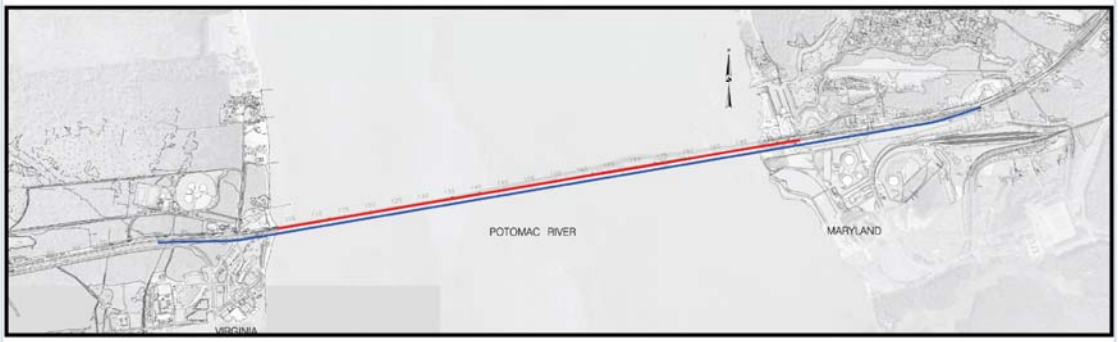



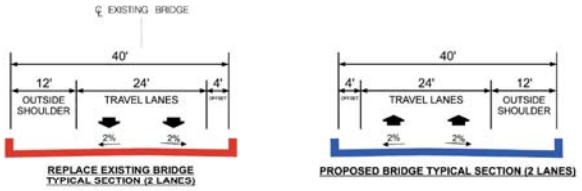

**Attachment B -** Alternate 2

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*Maryland Transportation Authority*

# ALTERNATE 3



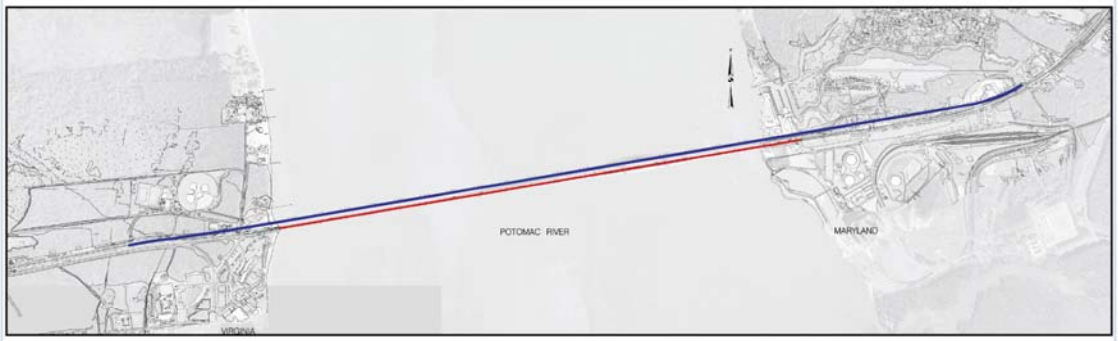



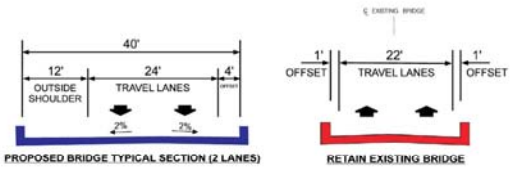

**Attachment B -** Alternate 3

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*Maryland Transportation Authority*

# ALTERNATE 4



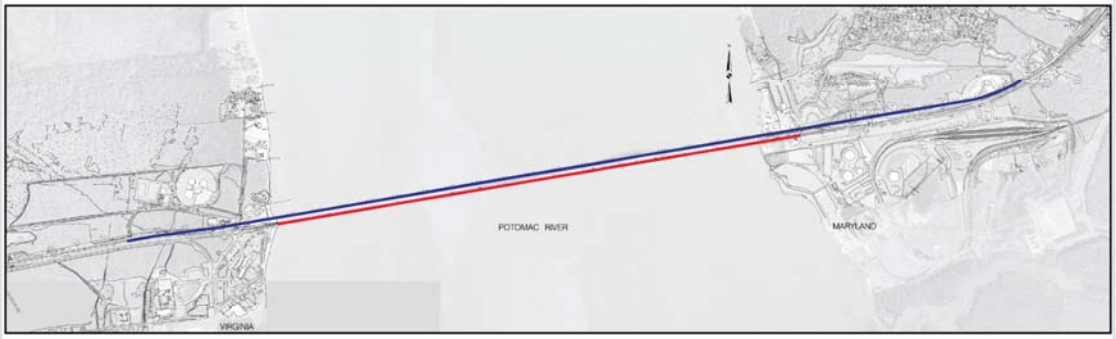



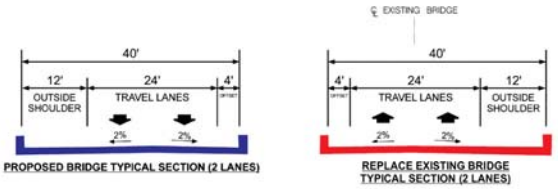

**Attachment B -** Alternate 4

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*Maryland Transportation Authority*

# ALTERNATE 5



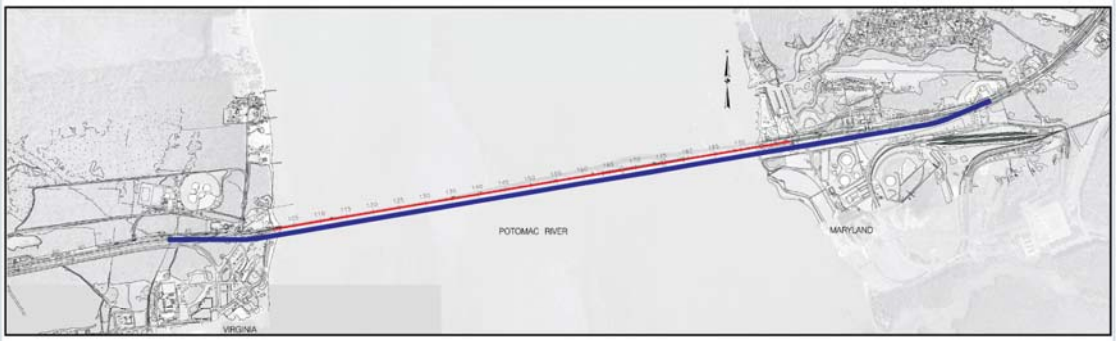



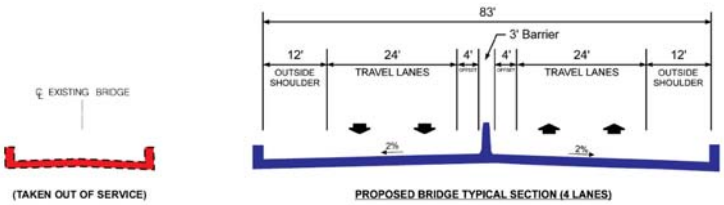

**Attachment B -** Alternate 5

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# ALTERNATE 6



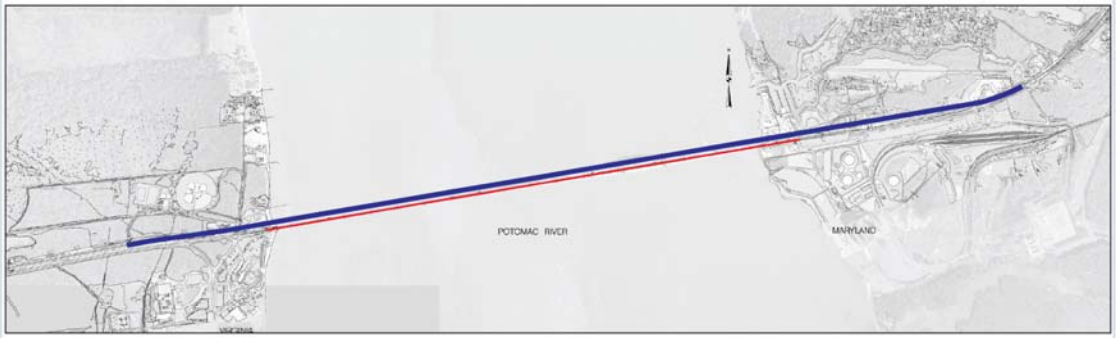



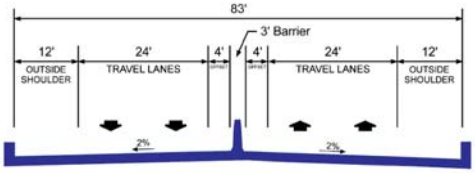

**Attachment B -** Alternate 6

***Nice Bridge Improvement Project***

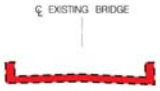
*Maryland Transportation Authority*

# ALTERNATE 7




PROPOSED BRIDGE TYPICAL SECTION (4 LANES)




(TAKEN OUT OF SERVICE)

**Attachment B -** Alternate 7

***Nice Bridge Improvement Project***

*Maryland Transportation Authority*

## Legend

- Prime Farmland
- Soils of Statewide Importance
- 1 Mile Project Area Buffer
- Water
- County Boundaries
- Existing Bridge

N / W / E / S

0 2,500 Feet

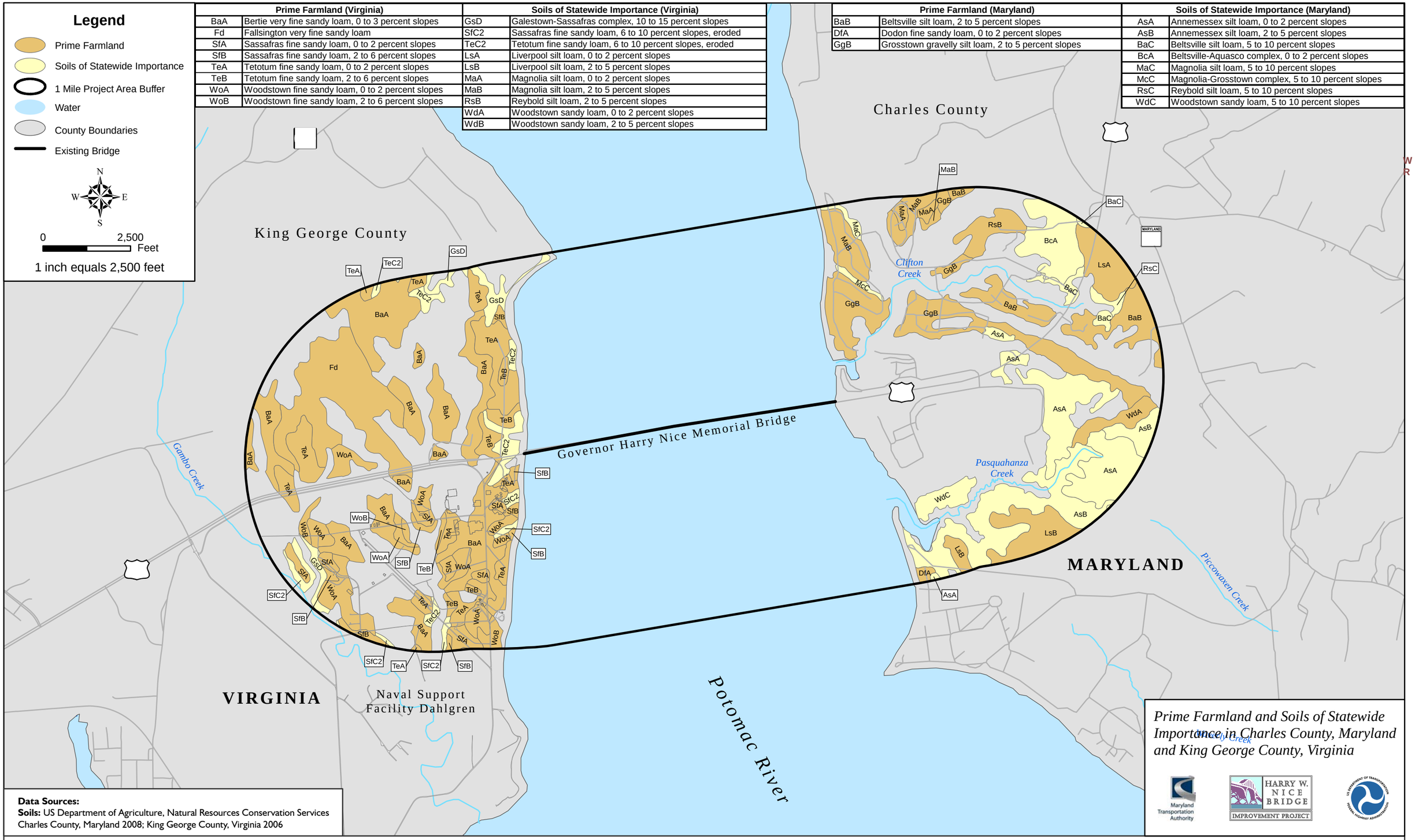
1 inch equals 2,500 feet

| Prime Farmland (Virginia) | |
|---|---|
| BaA | Bertie very fine sandy loam, 0 to 3 percent slopes |
| Fd | Fallsington very fine sandy loam |
| SfA | Sassafras fine sandy loam, 0 to 2 percent slopes |
| SfB | Sassafras fine sandy loam, 2 to 6 percent slopes |
| TeA | Tetotum fine sandy loam, 0 to 2 percent slopes |
| TeB | Tetotum fine sandy loam, 2 to 6 percent slopes |
| WoA | Woodstown fine sandy loam, 0 to 2 percent slopes |
| WoB | Woodstown fine sandy loam, 2 to 6 percent slopes |

| Soils of Statewide Importance (Virginia) | |
|---|---|
| GsD | Galestown-Sassafras complex, 10 to 15 percent slopes |
| SfC2 | Sassafras fine sandy loam, 6 to 10 percent slopes, eroded |
| TeC2 | Tetotum fine sandy loam, 6 to 10 percent slopes, eroded |
| LsA | Liverpool silt loam, 0 to 2 percent slopes |
| LsB | Liverpool silt loam, 2 to 5 percent slopes |
| MaA | Magnolia silt loam, 0 to 2 percent slopes |
| MaB | Magnolia silt loam, 2 to 5 percent slopes |
| RsB | Reybold silt loam, 2 to 5 percent slopes |
| WdA | Woodstown sandy loam, 0 to 2 percent slopes |
| WdB | Woodstown sandy loam, 2 to 5 percent slopes |

| Prime Farmland (Maryland) | |
|---|---|
| BaB | Beltsville silt loam, 2 to 5 percent slopes |
| DfA | Dodon fine sandy loam, 0 to 2 percent slopes |
| GgB | Grosstown gravelly silt loam, 2 to 5 percent slopes |

| Soils of Statewide Importance (Maryland) | |
|---|---|
| AsA | Annemessex silt loam, 0 to 2 percent slopes |
| AsB | Annemessex silt loam, 2 to 5 percent slopes |
| BaC | Beltsville silt loam, 5 to 10 percent slopes |
| BcA | Beltsville-Aquasco complex, 0 to 2 percent slopes |
| MaC | Magnolia silt loam, 5 to 10 percent slopes |
| McC | Magnolia-Grosstown complex, 5 to 10 percent slopes |
| RsC | Reybold silt loam, 5 to 10 percent slopes |
| WdC | Woodstown sandy loam, 5 to 10 percent slopes |




*Prime Farmland and Soils of Statewide Importance in Charles County, Maryland and King George County, Virginia*

**Data Sources:**
**Soils:** US Department of Agriculture, Natural Resources Conservation Services Charles County, Maryland 2008; King George County, Virginia 2006

**Attachment C:** Prime Farmland and Soils of Statewide Importance in Charles County, Maryland and King George County, Virginia

# Attachment D
# Harry W. Nice Memorial Bridge Improvement Project
# Prime Farmland Soils and Soils of Statewide Importance

**Soil Totals**

| Soil Type | Acreage |
|---|---|
| All Soils in Maryland and Virginia | 6040.67 |
| Water | 2592.55 |
| Prime Farmland | 1334.1 |
| Statewide Important Farmland | 532.01 |

**Prime Farmland Soils (Virginia)**

| Soil Type | Acreage |
|---|---|
| Bertie very fine sandy loam, 0 to 3 percent slopes (BaA) | 333.91 |
| Fallsington very fine sandy loam (Fd) | 174.93 |
| Sassafras fine sandy loam, 0 to 2 percent slopes (SfA) | 39.22 |
| Sassafras fine sandy loam, 2 to 6 percent slopes (SfB) | 22.32 |
| Tetotum fine sandy loam, 0 to 2 percent slopes (TeA) | 139.66 |
| Tetotum fine sandy loam, 2 to 6 percent slopes (TeB) | 31.37 |
| Woodstown fine sandy loam, 0 to 2 percent slopes (WoA) | 98.30 |
| Woodstown fine sandy loam, 2 to 6 percent slopes (WoB) | 18.01 |

**Soils of Statewide Importance (Virginia)**

| Soil Type | Acreage |
|---|---|
| Galestown-Sassafras complex, 10 to 15 percent slopes (GsD) | 32.94 |
| Sassafras fine sandy loam, 6 to 10 percent slopes, eroded (SfC2) | 21.71 |
| Tetotum fine sandy loam, 6 to 10 percent slopes, eroded (TeC2) | 39.46 |

**Prime Farmland Soils (Maryland)**

| Soil Type | Acreage |
|---|---|
| Beltsville silt loam, 2 to 5 percent slopes (BaB) | 85.69 |
| Dodon fine sandy loam, 0 to 2 percent slopes (DfA) | 4.08 |
| Grosstown gravelly silt loam, 2 to 5 percent slopes (GgB) | 156.02 |
| Liverpool silt loam, 0 to 2 percent slopes (LsA) | 45.95 |
| Liverpool silt loam, 2 to 5 percent slopes (LsB) | 62.55 |
| Magnolia silt loam, 0 to 2 percent slopes (MaA) | 10.23 |
| Magnolia silt loam, 2 to 5 percent slopes (MaB) | 59.38 |
| Reybold silt loam, 2 to 5 percent slopes (RsB) | 29.53 |
| Woodstown sandy loam, 0 to 2 percent slopes (WdA) | 22.85 |
| Woodstown sandy loam, 2 to 5 percent slopes (WdB) | 0.06 |

**Soils of Statewide Importance (Maryland)**

| Soil Type | Acreage |
|---|---|
| Annemessex silt loam, 0 to 2 percent slopes (AsA) | 152.84 |
| Annemessex silt loam, 2 to 5 percent slopes (AsB) | 161.77 |
| Beltsville silt loam, 5 to 10 percent slopes (BaC) | 16.68 |
| Beltsville-Aquasco complex, 0 to 2 percent slopes (BcA) | 64.66 |
| Magnolia silt loam, 5 to 10 percent slopes (MaC) | 6.32 |
| Magnolia-Grosstown complex, 5 to 10 percent slopes (McC) | 5.44 |
| Reybold silt loam, 5 to 10 percent slopes (RsC) | 6.85 |
| Woodstown sandy loam, 5 to 10 percent slopes (WdC) | 23.33 |

**ATTACHMENT E**
**FARMLAND CONVERSION IMPACT RATING FORM AD-1006**
**RATIONALE FOR EVALUATION OF SITE ASSESSMENT CRITERIA**
**7CFR 658.5(b)**
**Harry W. Nice Memorial Bridge Improvement Project**
**KING GEORGE COUNTY, MARYLAND**
**JUNE 2008**

1. ***How much land is in non-urban use within a radius of 1 mile from where the project is intended?***

   ***More than 90 percent – 15 points***
   ***90 to 20 percent – 14 to 1 point(s)***
   ***Less than 20 percent – 0 points***

   Aerial photography and land use maps were reviewed and a field review of the site was conducted to determine non-urban use within a one-mile radius of the project area. Non-urban lands were defined based on the guidance offered in the *Instructions for Completing the Farmland Conversion Impacting Rating Form* provided by the U.S. Department of Agriculture for use with Form AD-1006. Though this guidance includes many types of land uses that should be considered non-urban lands, non-urban lands on the site primarily include parkland, forest, farmland, and campground. Non-urban use on the Virginia side of the project is limited to parkland and forest. Within Maryland, non-urban use consists of campground, forest and farmland. The farmland is found slightly more than one mile from the site. It is estimated that approximately 40 percent of the land area within a one-mile radius of the project limits in non-urban use.

   Rating: 3 points

2. ***How much of the perimeter of the site borders on land in non-urban use?***

   ***More than 90 percent – 10 points***
   ***90 to 20 percent – 9 to 1 point (s)***
   ***Less than 20 percent – 0 points***

   Aerial photography and land use maps were reviewed and a field review of the site was conducted to determine the amount of non-urban land use bordering the project area. Non-urban land use bordering the site in Virginia and Maryland is parkland and campground, respectively. The majority of land in Virginia bordering the site is parkland to the north and the Naval Support facility Dahlgren to the south. In Maryland, Aqua-Land Marina and Campground and Morgantown Power Generating Station

border the site to the north and south, respectively. It is estimated that approximately 25-30 percent of this land area is in non-urban use.

Rating: 3 points

3. ***How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?***

   ***More than 90 percent - 20 points***
   ***90 to 20 percent – 19 to 1 point(s)***
   ***Less than 20 percent – 0 points***

   There are no active farms within the project limits nor have there been in the last five to ten years.

   Rating: 0 points

4. ***Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to project farmland?***

   ***Site is protected – 20 points***
   ***Site is not protected – 0 points***

   There are several Federal and state farm preservation and conservation programs in place for farmland within King George County, Virginia. These include:

   - Conservation Reserve Program
   - Conservation Reserve Enhancement Program
   - Environmental Quality Incentive Program
   - Wildlife Habitat Incentive Program
   - Virginia Best Management Practices Cost Share Program

   Rating: 20 points

5. ***Is the farm unit(s) containing the site (before the project) as large as the average size farming unit in the county. (Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with $1,000 or more in sales.***

   ***As larger or larger – 10 points***
   ***Below average – deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more***
   ***Below average – 9 to 0 points***

There are no farmlands within the project limits.

Rating: 0 points

6. ***If this site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of the interference with land patterns?***

   ***Acreage equal to more than 25 percent of acres directly converted by the project – 25 points***
   ***Acreage equal to between 25 and 5 percent of the acres directly converted by the project – 24 to 1 point(s)***
   ***Acreage equal to less than 5 percent of the acres directly converted by the project – 0 points.***

   There are no farmlands within the project limits.

   Rating: 0 points

7. ***Does the site have available adequate supply of farm support services and markets, i.e. farm suppliers, equipment dealers, processing and storage facilities and farmers markets?***

   ***All required services are available – 5 points***
   ***Some required services are available – 4 to 1 point(s)***
   ***No required services are available – 0 points***

   There are no farmlands within the project limits. Active farming within the County is evident north of and east of the project limits.

   Rating: 0 points

8. ***Does the site have substantial and well maintained on-farm investments such as barns, other storage buildings, farm trees and vines, field terraces, drainage, irrigation waterways or other soil and water conservation measures?***

   ***High amount of on-farm investments – 20 points***
   ***Moderate amount of on-farm investments – 10 to 1 point(s)***
   ***No on-farm investment – 0 points***

   There are no on-farm investments within the project limits.

   Rating: 0 points

9. ***Would the project at this site, by converting farmland to non-agricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?***

   ***Substantial reduction in demand for support services if the site is converted – 25 points***
   ***Some reduction in demand for support services if the site is converted – 24 to 1 point(s)***
   ***No significant reduction in demand for support services if the site is converted – 0 points***

   The project would not have any impact on farm support services by either reducing farmland or affecting opportunities for farm support services to access farms throughout King George County. There are no farms or farmland support services within the project limits.

   Rating: 0 points

10. ***Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to non-agricultural use?***

    ***Proposed project is incompatible with existing agricultural use of surrounding farmland – 10 points***
    ***Proposed project is tolerable to existing agricultural use of surrounding farmland – 9 to 1 point(s)***
    ***Propose project is fully compatible with existing agricultural use of surround farmland – 0 points.***

    The proposed project is fully compatible with existing agricultural use of farmland on either side of the Nice Bridge. There are no existing farmlands or support services within the project limits. The proposed use of the site (corridor) would be to improve an existing transportation facility.

    Rating: 0 points

    *Questions 1 -10: Total Rating:*

    26 points

# Environmental Assessment Form (EAF)

**Governor Harry W. Nice Memorial Bridge**
**Improvement Project**

# Environmental Assessment Form (EAF)

| | | YES | NO | COMMENTS |
|---|---|---|---|---|
| **A.** | **Land Use Considerations** | | | |
| 1. | Will the action be within the 100 year floodplain? | **X** | | See Section III.C.5 |
| 2. | Will the action require a permit for construction or alteration within the 50 year floodplain? | **X** | | See Section III.C.5 |
| 3. | Will the action require a permit for dredging, filling, draining or alteration of a wetland? | **X** | | See Section III.C.6 |
| 4. | Will the action require a permit for the construction or operation of facilities for solid waste disposal including dredge and excavation spoil? | | **X** | |
| 5. | Will the action occur on slopes exceeding 15%? | | **X** | |
| 6. | Will the action require a grading plan or sediment control permit? | **X** | | See Section III.C.2 |
| 7. | Will the action require a mining permit for deep or surface mining? | | **X** | |
| 8. | Will the action require a permit for drilling a gas or oil well? | | **X** | |

# Environmental Assessment Form (EAF)

| | | YES | NO | COMMENTS |
|---|---|---|---|---|
| 9. | Will the action require a permit for airport construction? | | X | |
| 10. | Will the action require a permit for the crossing of the Potomac River by conduits, cables or other like devices? | | X | |
| 11. | Will the action affect the use of a public recreation area, park, forest, wildlife management area, scenic river or wildland? | X | | See Chapter V |
| 12. | Will the action affect the use of any natural or manmade features that are unique to the county, state, or nation? | | X | |
| 13. | Will the action affect the use of an archeological or historical site or structure? | X | | See Section III.B |
| **B.** | **Water Use Considerations** | | | |
| 14. | Will the action require a permit for the change of the course, current, or cross-section of a stream or other body of water? | X | | See Section III.C.6 |
| 15. | Will the action require the construction, alteration, or removal of a dam, reservoir, or waterway obstruction? | | X | |

# Environmental Assessment Form (EAF)

| | | YES | NO | COMMENTS |
|---|---|---|---|---|
| 16. | Will the action change the overland flow of the stormwater or reduce the absorption capacity of the ground? | **X** | | See Section III.C.3 |
| 17. | Will the action require a permit for the drilling of a water well? | | **X** | |
| 18. | Will the action require a permit for water appropriation? | | **X** | |
| 19. | Will the action require a permit for the construction and operation of facilities for treatment or distribution of water? | | **X** | |
| 20. | Will the project require a permit for the construction and operation of facilities for sewage treatment and/or land disposal of liquid waste derivatives? | | **X** | |
| 21. | Will the action result in any discharge into surface or sub-surface water? | **X** | | See Section III.C.3 |
| 22. | If so, will the discharge affect ambient water quality parameters and/or require a discharge permit? | **X** | | See Section III.C.3 |

# Environmental Assessment Form (EAF)

| | | YES | NO | COMMENTS |
|---|---|---|---|---|
| **C.** | **Air Use Considerations** | | | |
| 23. | Will the action result in any discharge into the air? | | **X** | |
| 24. | If so, will the discharge affect ambient air quality parameters or produce a disagreeable odor? | | | N/A |
| 25. | Will the action generate additional noise which differs in character or level from present conditions? | **X** | | See Section III.D |
| 26. | Will the action preclude future use of related air space? | | **X** | |
| 27. | Will the action generate any radiological, electrical, magnetic, or light influences? | | **X** | |
| **D.** | **Plants and Animals** | | | |
| 28. | Will the action cause the disturbance, reduction or loss of any rare, unique or valuable plant or animal? | **X** | | See Section III.7 |
| 29. | Will the action result in the significant reduction or loss of any fish or wildlife habitats? | | **X** | See Section III.7 |

# Environmental Assessment Form (EAF)

| | | YES | NO | COMMENTS |
|---|---|---|---|---|
| 30. | Will the action require a permit for the use of pesticides, herbicides or other biological, chemical or radiological control agents? | | X | |
| **E.** | **Socio-Economic** | | | |
| 31. | Will the action result in a pre-emption or division of properties or impair their economic use? | | X | See Section III.2 |
| 32. | Will the action cause relocation of activities, structures, or result in a change in the population density or distribution? | | X | |
| 33. | Will the action alter land values? | | X | |
| 34. | Will the action affect traffic flow and volume? | X | | See Chapter II |
| 35. | Will the action affect the production, extraction, harvest or potential use of a scarce or economically important resource? | | X | |
| 36. | Will the action require a license to construct a sawmill or other plant for the manufacture of forest products? | | X | |

# Environmental Assessment Form (EAF)

| | | YES | NO | COMMENTS |
|---|---|---|---|---|
| 37. | Is the action in accord with federal, state, regional and local comprehensive or functional plans - including zoning? | **X** | | See Section III.A. |
| 38. | Will the action affect the employment opportunities for persons in the area? | | **X** | |
| 39. | Will the action affect the ability of the area to attract new sources of tax revenue? | | **X** | |
| 40. | Will the action discourage present sources of tax revenue from remaining in the area, or affirmatively encourage them to relocate elsewhere? | | **X** | |
| 41. | Will the action affect the ability of the area to attract tourism? | **X** | | See Section III.A. |

**F. Other Considerations**

| | | | | |
|---|---|---|---|---|
| 42. | Could the action endanger the public health, safety or welfare? | | **X** | |
| 43. | Could the action be eliminated without deleterious affects to the public health, safety, welfare or the natural environment? | | **X** | |
| 44. | Will the action be of statewide significance? | **X** | | See Chapter I |

# Environmental Assessment Form (EAF)

| | | YES | NO | COMMENTS |
|---|---|---|---|---|
| 45. | Are there any other plans or actions (federal, state, county or private) that, in conjunction with the subject action could result in a cumulative or synergistic impact on the public health, safety, welfare, or environment? | | **X** | |
| 46. | Will the action require additional power generation or transmission capacity? | | **X** | |
| 47. | This agency will develop a complete environmental effects report on the proposed action. | | **X** | N/A |

# Environmental Assessment Form (EAF)

## COMMENTS

**1. Will the action be within the 100 year floodplain?**

The project will impact FEMA-designated 100-year floodplains within the vicinity of the Nice Bridge. The project would result in perpendicular disturbances to the Potomac River.

**2. Will the action require a permit for construction or alteration within the 50 year floodplain?**

The project will impact 50-year floodplains within the vicinity of the Nice Bridge. The project would result in perpendicular disturbances to the Potomac River.

**3. Will the action require a permit for dredging, filling, draining or alteration of a wetland?**

Several wetland systems are located within the immediate vicinity of US 301 in both Maryland and Virginia. Alternate 1 (No-Build) would not impact any wetlands within the study area. All other project alternates have the potential to impact wetlands. Other project-related facilities, including stormwater management, may directly impact wetlands. Direct impacts could also occur from temporary construction-related activities.

**6. Will the action require a grading plan or sediment control permit?**

All alternates would affect soils, especially by erosion and subsequent sedimentation during the building phase.

A grading plan and sediment and erosion control plan will be prepared and implemented in accordance with Maryland Department of the Environment (MDE) regulations. The grading and sediment control plans will minimize the potential for impacts to water quality from erosion and sedimentation. Measures to prevent erosion in highly susceptible areas (i.e., steep slopes) will be included in the plans when necessary. In Virginia, the ESCP will be prepared in accordance with the Virginia Department of Conservation and Recreation (VA DCR) Erosion and Sediment Control (ESC) Handbook which outlines basic ESC concepts, ESC measure design, installation and maintenance, plan review procedures and administrative guidelines to support compliance with the appropriate ESC laws and regulations. The plan will also be developed to comply with King George County ESC requirements.

**11. Will the action affect the use of a public recreation area, park, forest, wildlife management area, scenic river or wildland?**

The project is likely to include one or more alternatives that would affect the use of Wayside and Barnesfield Parks in King George's County, Virginia. Use of Wayside Park could be substantially affected because the anticipated alignment of an alternative that would impact this park would place a four-lane roadway and bridge abutments through the portions of the park maintained as recreational open space. The primary recreational activities at this park occur several hundred feet away from existing US 301. The anticipated alignment of any alternative that would affect this park would be close to US 301 and, at the location of the park, would most likely be gradually tying into the existing alignment of US 301.

# Environmental Assessment Form (EAF)

**13. Will the action affect the use of an archeological or historical site or structure?**

The Authority, in consultation with the Maryland Historical Trust (MHT), the Virginia Department of Historic Resources (VA DHR) and other interested parties determined that there are six historic resources within the study area. The existing Nice Bridge, a historic resource, will be impacted regardless of which build alternate is selected. In addition, impacts are anticipated to the Nice Bridge Administration Building (CH-376) a contributing element to the Nice Bridge. The Dahlgren Naval Support Facility historic district may be impacted depending on build alternate. Coordination with MHT and VA DHR will continue throughout the study in accordance with Section 106 of the National Historic Preservation Act to determine the effect of the various alternates on historic standing structures and archeological resources.

**14. Will the action require a permit for the change of the course, current, or cross-section of a stream or other body of water?**

A Section 404 permit will be required for impacts relating to the discharge of dredged, excavated, or fill material in wetlands, streams, rivers, and other U.S. waters. Stream and floodplain impact minimization efforts will be investigated, and a more detailed calculation of impacts will be performed in the upcoming planning stages. However, it is anticipated that most impacts would occur within the immediate vicinity of the existing structure (Potomac River open water) and not have a significant affect on other water resources located within the study area.

**16. Will the action change the overland flow of the stormwater or reduce the absorption capacity of the ground?**

Several alternates will require the construction of new bridge approaches along US 301, and therefore have the potential to create additional non-pervious surface. Stormwater Best Management Practices (BMPs) will be incorporated wherever possible to remove pollutants from runoff, improve water quality, and control quantity before stormwater reaches other waterbodies.

**21. Will the action result in any discharge into surface or sub-surface water?**

See Response #14.

**22. If so, will the discharge affect ambient water quality parameters and/or require a discharge permit?**

See Response #14.

**25. Will the action generate additional noise which differs in character or level from present conditions?**

Additional noise is likely to be generated during construction of this project.

# Environmental Assessment Form (EAF)

**28. Will the action cause the disturbance, reduction or loss of any rare, unique or valuable plant or animal?**

Coordination with the US Fish and Wildlife Service, the Maryland Department of Natural Resources (DNR), the Virginia Department of Conservation and Recreation and other interested parties indicated the presence of federal and state listed animal and plant species within the study area. Bald eagle nests and a concentration zone (Virginia only) have been identified in the study area. State law requires that appropriate protection measures be incorporated into actions taken by state agencies. Specific protection measures depend on site conditions, planned activities, nest history and other factors. Further coordination will be necessary to determine the projects impacts on the bald eagle populations in the area. In addition, a waterbird colony has been documented under the existing Nice Bridge structure during breeding season. Waterbird colonies are generally protected during the breeding season within a ¼ mile radius of their colony location. The open waters to the north and south of the existing structure on the Potomac River are known historic waterfowl concentration areas. Additional steps will be taken with the appropriate officials to further identify and minimize impacts (including work prohibitions during critical times such as breeding seasons) to all threatened, endangered and sensitive species located within the study area.

**31. Will the action result in a pre-emption or division of properties or impair their economic use?**

Minor right-of-way may be required from property within the immediate vicinity of the Nice Bridge, depending on build alternate. Impacts are anticipated at the Aqualand Marina and Campground and Potomac Gateway Welcome Center. However, these impacts are not anticipated to result in the pre-emption, division, or impairment of these properties (with the exception of the Potomac Gateway Welcome Center).

**34. Will the action affect traffic flow and volume?**

The purpose of the Nice Bridge Improvement Project is to upgrade the bridge design to conform with existing roadway approaches on both the Maryland and Virginia sides; to improve traffic operations and safety across the bridge; and to reduce traffic impacts during anticipated significant bridge maintenance and rehabilitation. Therefore, it is anticipated that any of the build alternates would improve traffic flow and decrease traffic volume.

**37. Is the action in accord with federal, state, regional and local comprehensive or functional plans - including zoning?**

The Maryland Economic Growth, Resource Protection and Planning Act of 1992 (the Planning Act) and the subsequent Smart Growth Priority Funding Areas Act of 1997 direct State and local governments to target their infrastructure investments to designated priority funding areas (PFAs). Within Charles County, communities near the Nice Bridge such as Newburg and Morgantown are targeted for new growth and economic development. These areas were proposed by the County and have been certified by the Maryland Department of Planning (MDP) as PFAs.

# Environmental Assessment Form (EAF)

**41. Will the action affect the ability of the area to attract tourism?**

Increasing traffic flow, the potential of incorporating a bicycle lane with the build alternates, and the ability in which tourists may enter/exit King George County and Charles County will encourage tourism in the local area.

**44. Will the action be of statewide significance?**

The Nice Bridge, constructed in 1940, is a link on the US 301 corridor, which is part of the National Highway System (NHS) and Strategic Highway Network (STRAHNET), providing a direct connection between the northeastern region of Virginia and southern Maryland and is the southernmost roadway crossing of the Potomac River. Therefore, improvements to this facility would be of significance to both Maryland and Virginia.

**47. This agency will develop a complete environmental effects report on the proposed action.**

Given the scope and range of potential environmental impacts, it is anticipated that the Nice Bridge Improvement Project will be classified as a NEPA-documented Environmental Assessment/Section 4(f) Evaluation. However, state environmental mandates (i.e., MEPA) will also be consulted to ensure full compliance on the local level.