GOVERNOR HARRY W. NICE MEMORIAL BRIDGE IMPROVEMENT PROJECT

HARRY W. NICE BRIDGE
IMPROVEMENT PROJECT

FINAL SECTION 4(f) EVALUATION

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

Maryland Transportation Authority

October 2012

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NICE BRIDGE IMPROVEMENT PROJECT
Charles County, Maryland and King George County, Virginia

FINAL SECTION 4(f) EVALUATION

US Department of Transportation
Federal Highway Administration

Maryland Transportation Authority
Division of Capital Planning

11/27/12
Date

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Division Administrator
FHWA DelMar Division

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I. 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 the Section 4(f) properties, 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)).

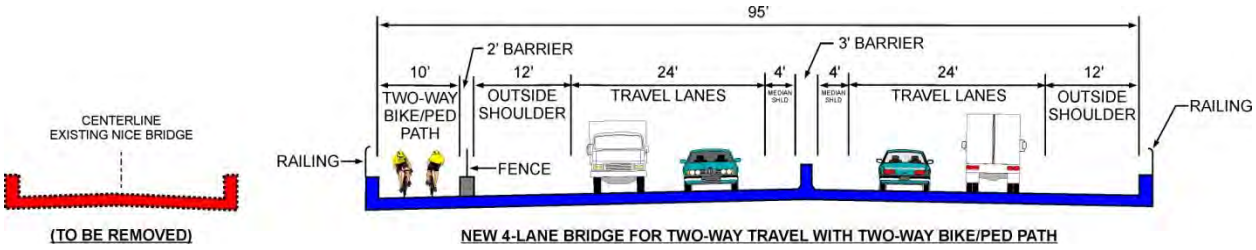
Based on the information presented in this Final Section 4(f) Evaluation, FHWA has determined there are no feasible and prudent alternatives to the use of Section 4(f) properties, and that Modified Alternate 7 includes all possible planning to minimize harm resulting from the use of these properties.

This Final Section 4(f) Evaluation also provides notification of FHWA's *de minimis* impact finding for Barnesfield Park. The determination has been made following continued coordination with the officials having jurisdiction over the resource. Pursuant to 23 CFR 774.5(b)(2), all *de minimis* impacts were presented for public review and comment in the combined Environmental Assessment (EA)/Draft Section 4(f) Evaluation, in conjunction with the requirements of the National Environmental Policy Act (NEPA). On July 20, 2011, the County Administrator for King George County concurred that the Governor Harry W. Nice Memorial Bridge (Nice Bridge) Improvement Project will not adversely affect the activities, features, and attributes of Barnesfield Park that qualify it for protection as a Section 4(f) property.

II. PROPOSED ACTION

The Proposed Action consists of the Maryland Transportation Authority (MDTA) Preferred Alternate, Modified Alternate 7 (see mapping in ***Appendix A***). The alternate was originally presented in the EA in July 2009 as Alternate 7. Modified Alternate 7 consists of the installation of a new four-lane bridge north of the existing bridge. As shown in ***Figure 1***, the new bridge will provide four 12-foot travel lanes, two four-foot inside shoulders, two 12-foot outside shoulders, a median barrier to separate opposing traffic flows, and a single, 10-foot barrier-separated, two-way bicycle/pedestrian (bike/ped) path on the south side of the bridge. The bike/ped path crosses beneath the bridge on each shore to enable bicyclists and pedestrians to transition to the shoulders of US 301 without crossing the highway. The difference between Alternate 7, as shown in the EA, and Modified Alternate 7, the Preferred Alternate, is that Alternate 7 included a bike/ped path on both the north and south sides of the bridge, while Modified Alternate 7 reduces its footprint to include a bike/ped path on the south side of the bridge, only.

Figure 1: Typical Section of Preferred Alternate



Modified Alternate 7 includes the replacement of the existing tollbooths at the Nice Bridge with Open Road Tolling (ORT) provisions, which permit the electronic collection of tolls without a reduction of vehicle speed. Modified Alternate 7 will 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 the bridge and approaches, and the ability to comply with navigational channel requirements. The type of new bridge (e.g., steel girder, suspension, cable stayed, etc.) would be determined during final design, and is independent of the length and location of the project. Modified Alternate 7 requires a slight alignment shift of the US 301 approach roadway to connect to the structure's new location. In addition, the profile grade of the new bridge will not be as steep as the existing bridge grade (3% compared to the existing 3.75%), but would maintain or exceed the existing vertical and horizontal clearance of the navigational channel. The revised profile grade results in a shift in the location of the new bridge abutment in Maryland approximately 800 feet east of the existing bridge abutment. This would not affect the location of the bridge abutment on the Virginia shore.

With the construction of a new four-lane bridge and two-way bike/ped path, there will no longer be a transportation need for the existing historic bridge. Therefore, Modified Alternate 7 includes removal of the existing bridge immediately following the opening of the new four-lane bridge to traffic.

Consideration was given to phasing the construction of Modified Alternate 7 to manage construction funding. A phased Modified Alternate 7 could involve the construction of the substructure for an ultimate four-lane bridge, but initially only the superstructure for two lanes of traffic. The additional two lanes of traffic would be constructed in the future, followed by the removal of the existing bridge. However, the delay in the installation of the superstructure for the additional two lanes of traffic would result in higher costs due to the need to fund rehabilitation of the existing bridge and the likely higher costs for materials and labor in the future. A phased installation would also require a second period of traffic disruption, and repeat disturbance of the benthic environment due to dredging for barge access to remove the existing bridge. Therefore, phasing the construction of the Modified Alternate 7 is not effective in terms of cost, traffic impacts, or aquatic impacts.

III. PURPOSE AND NEED

A. Existing Conditions

US 301 is classified as a Rural Principal Arterial in the Charles County, Maryland and King George County, Virginia comprehensive plans (***Figure 2***). 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 Nice Bridge, this section of US 301 consists of a four-lane divided roadway with two travel lanes in each direction and outside shoulders. 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). STRAHNET is a 61,000-mile system of interstate and other highways which are used for the rapid mobilization and deployment of armed forces in the event of war or a peacekeeping emergency. Current NHS and STRAHNET design standards state

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Figure 2

Project Location Map

Maryland Transportation Authority

1 in = 3 miles

N

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 gives the MDTA staff time to prepare, although not all bicyclists make arrangements prior to their trip.

On an average weekday, traffic on the Nice Bridge (northbound and southbound) operates at near capacity during the PM peak period. Bridge traffic operates at near capacity 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, length of transition areas, and sight distance, and has acceptable structural inspection ratings. ***Table 1*** lists the current roadway and bridge geometrics.

Table 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		1,050’	
Number of Toll Lanes	4	N/A	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[1]	N/A[2]	N/A[2]	N/A[2]	N/A[2]	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 are on or have already crossed the bridge.

B. Project Purpose

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; and
- 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 eleven-foot wide lanes in each direction with no median separation, lack of roadside shoulders 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 (LOS) D and worse conditions during PM peak periods. Trucks account for up to 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 two-way traffic. The narrow roadway on the bridge and the 3.75 percent grade contribute to slower operating speeds, especially for heavy trucks.

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 plaza 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 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 (4 PM to 6 PM), with 4 PM as the peak hour and 1,585 total vehicles traveling on the bridge. Nice Bridge traffic operates at LOS E for at least seven

hours (11 AM to 6 PM) during an average summer weekend day, with 3 PM as the peak hour and 1,526 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, 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 to two-way 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 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.

Table 2: Average Daily Traffic Volumes

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 (No-Build 2030)	20,528	22,072	42,600
Sunday (No-Build 2030)	23,870	17,230	41,100
Average Weekday at the Nice Bridge			
Weekday (October 2004)	8,670	8,430	17,100
Weekday (No-Build 2030)	17,745	17,255	35,000

Average daily traffic volume projections were made for no-build conditions in the year 2030 using a Regional Integrated Travel Demand Model. ***Table 2*** also shows that in 2030, travel demand across the bridge is expected to be more than double the vehicle volume experienced in 2006. As the project proceeds through design and is reevaluated, traffic data will be updated as appropriate.

b. Peak Hour Traffic

Table 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 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 DC 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, DC 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, DC 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 between 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, 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 2:00 AM and 7:00 AM, while 36 percent occurred between 5:00 PM and 6:00 PM.

On the approach roadways, the type of crash most often experienced was rear-end collisions (34 percent of all crashes), which is likely the result of congested conditions due to the merging of two travel lanes in each direction to one. 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 occurring on the northern approach roadway was rear end collision (***Table 4***). 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 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 (***Table 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 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 (***Table 6***), 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.

Table 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.*

4. Other Considerations

Other considerations that 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.

a. Incident and Evacuation Management

The existing bridge has no shoulders. Therefore, when a vehicle is disabled by an accident, flat tire, or mechanical breakdown, it is not possible for the vehicle to pull out of the travel lane. When a disabled vehicle blocks one lane of traffic, emergency responders and tow trucks have difficulty getting to the vehicle.

US 301 is an important emergency evacuation route for the Southern Maryland and Washington DC areas 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 a Homeland Security incident. 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 are for 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 become 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 Charles County Commissioners have identified the Nice Bridge as a major limiting factor in the path of evacuation from Southern Maryland and the Washington, DC 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.

US 301 also provides the main access into and out of Naval Support Facility (NSF) Dahlgren. The Navy performs research, development, testing, and evaluation operations 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.

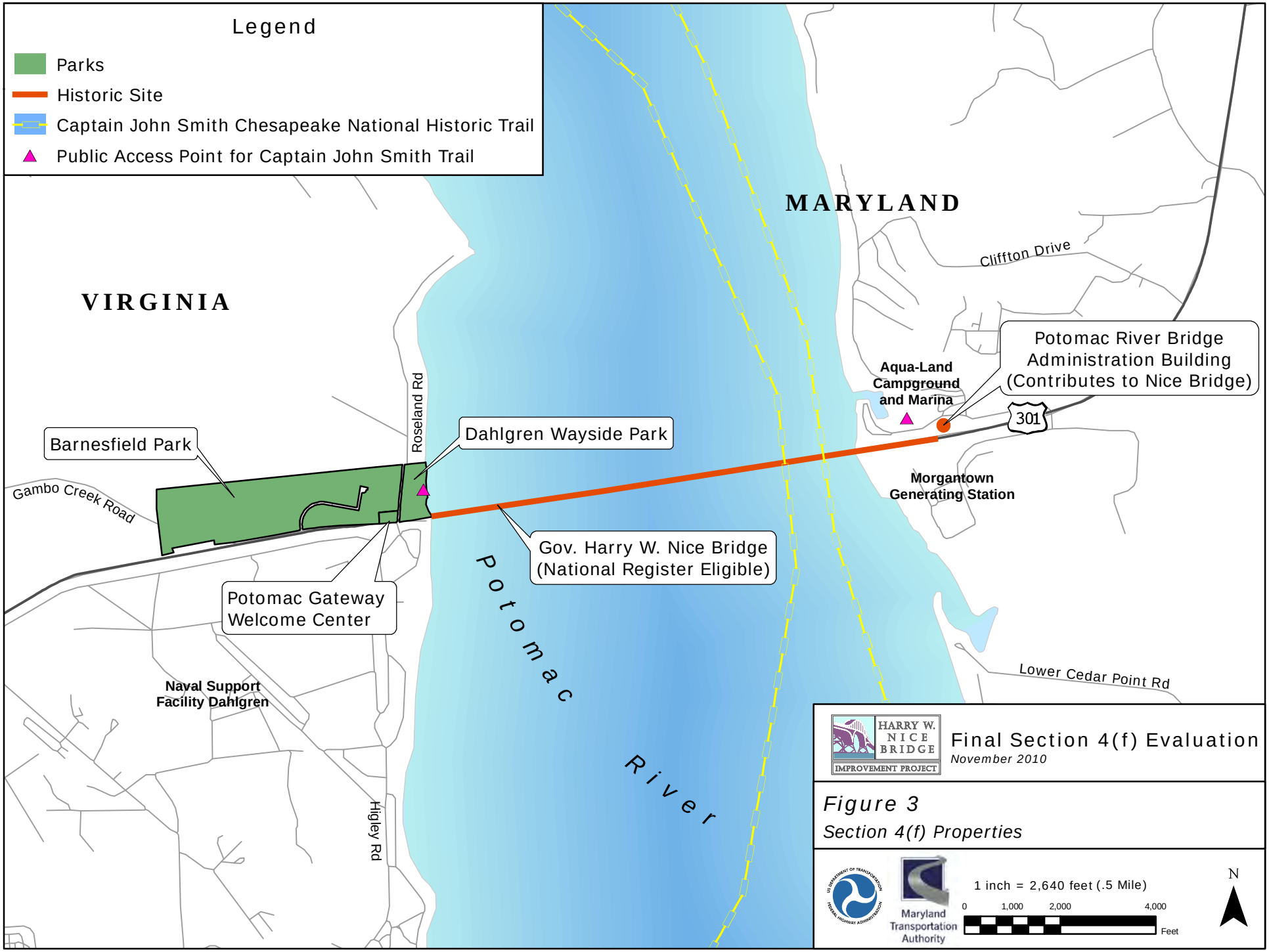
5. Purpose and Need Conclusion

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 inspection ratings. As part of the NHS and STRAHNET, the Nice Bridge should provide a cross section consistent with the US 301 approach roadways. Transportation improvements are needed to address capacity limitations and traffic operation effects of the inconsistent bridge 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 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 with 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.

IV. SECTION 4(f) PROPERTIES

There are five Section 4(f) properties within the project area as shown on ***Figure 3***:


Legend
Parks
Historic Site
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
Barnesfield Park
Dahlgren Wayside 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
Final Section 4(f) Evaluation
November 2010
Figure 3
Section 4(f) Properties
Maryland Transportation Authority
1 inch = 2,640 feet (.5 Mile)
0
1,000
2,000
4,000
Feet
N

- Governor Harry W. Nice Memorial Bridge, Maryland Inventory of Historic Places (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.

A. Historic Properties

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 MDTA and the subject of the project, is a metal cantilever bridge and is the only known example of such bridge in Maryland. ***Photos 1*** and ***2*** provide views of the major bridge features.

Photo 1: Nice Bridge from the Virginia shore

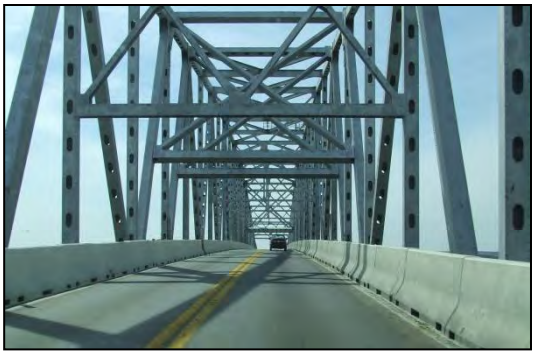


Photo 2: Nice Bridge from travel lanes

Very few significant alterations 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 mile east of the Potomac River, is a contributing resource to the Nice Bridge. The Administration Building (***Photo 3***) was constructed in 1940 to house the administration, maintenance, and police functions of the Nice Bridge. The original building consists of a one-story, T-shaped, brick block built in three distinct sections. Despite additions in *circa* 1960 and 1983, the building retains sufficient integrity dating to its period of construction

Photo 3: Administration Building

and is a contributing resource to the Nice Bridge.

Regardless of the previous additions, the size of the building is inadequate to support its current maintenance functions. The building also does not meet current building codes or handicap accessibility standards. Additional information on the historic characteristics of the Nice Bridge and the Administration Building can be found in the 2008 *Nice Bridge Improvement Project Determination of Eligibility Report for Maryland*.

B. Publicly-Owned Public Park Properties in Virginia

The land located north of US 301 adjacent to the Potomac River in Virginia includes Barnesfield Park, Dahlgren Wayside Park, and the Potomac Gateway Welcome Center. Each provides public park and recreational facilities and all are Section 4(f) properties. Below is a timeline documenting acquisition and land transfers related to these properties:

- In 1972, three parcels were acquired together 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: Parcel A (acquired by King George County, now Barnesfield Park); Parcel B (acquired by the Virginia Department of Highways and Transportation, now Dahlgren Wayside Park); and Parcel C (acquired by King George County, includes the Potomac Gateway Welcome Center building).

- In January 1980, a single site development plan was prepared for Parcels A, B, and C under the name "Barnesfield Park." The plan shows substantial development of ball fields, picnic sites, trails, parking lots, access roads, concessions, and restrooms (***Figure 4***). Today, much of the plan has been implemented, however, some elements remain incomplete (e.g., the pedestrian access from the ball fields to the Potomac River), while others have been added (e.g., the Potomac Gateway Welcome Center).

- In 1984, Parcel B (now Dahlgren Wayside Park) was acquired by King George County from the Virginia Department of Highways and Transportation.

- In 2008, the Virginia Tourism Corporation (VTC) acquired 2.1 acres of Parcel C (including the Potomac Gateway Welcome Center) from King George County. Ownership of this 2.1 acre portion of Parcel C was transferred with the consent of the US Department of the Interior (DOI).

There are several deed restrictions and covenants that originate from the 1972 Federal Lands to Parks Program acquisition which apply to all three parcels. These restrictions and covenants remain in place 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 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.

Although all three parcels originated as one administrative unit, they are treated as separate Section 4(f) properties in this evaluation because they serve distinct park and recreational objectives and are maintained by two different agencies (King George County and VTC).

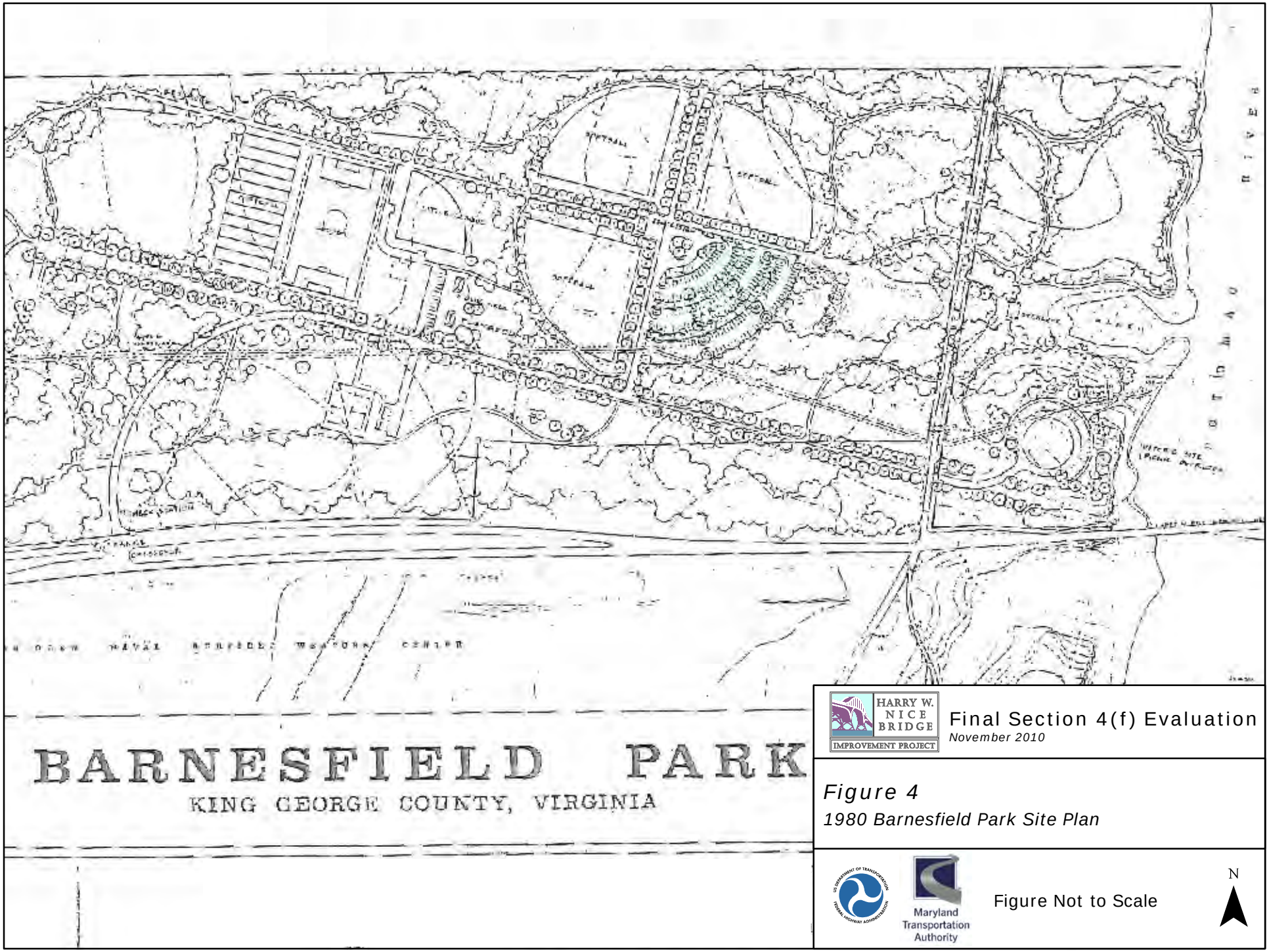


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Figure 4
1980 Barnesfield Park Site Plan

Maryland Transportation Authority

Figure Not to Scale

N

1. 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 to the public for active and passive recreation. 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 4*** and ***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 King George County and US DOI.

Photo 4: Barnesfield Park playground and picnic shelter

Photo 5: Barnesfield Park ball fields

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." (See ***Appendix B.***)

In 1985, DPR received $240,000 from the Federal Land and Water Conservation Fund (LWCF) to improve ball field, utilities, 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.

2. 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), boat access for small watercraft, picnic tables, and a parking area. ***Photos 6*** and ***7*** show some of the amenities at Dahlgren Wayside Park.

Photo 6: Dahlgren Wayside Park shoreline

Photo 7: Dahlgren Wayside Park picnic areas

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. The officials with jurisdiction are King George County and US DOI.

3. 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 1990s (***Photo 8***). The building housed 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 had restroom facilities.

The Welcome Center property was acquired by King George County from the United States in 1972, along with Barnesfield Park and Dahlgren Wayside Park. VTC acquired the property from King George County in 2008. 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 VTC and US DOI.

Photo 8: Potomac Gateway Welcome Center

In the 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 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.

4. 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.

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 section(s) are defined as historic sites. Since the trail segments near the Nice Bridge project are not considered historic sites, potential impacts to the Captain John Smith Trail do not require Section 4(f) approval. Therefore, the Captain John Smith Trail is not discussed further in this evaluation. Regardless of this exception, the project would bridge over the Captain John Smith Trail and therefore would not impact its continuity.

V. USE OF SECTION 4(f) PROPERTIES

Modified Alternate 7 would require the use of four Section 4(f) properties, as summarized in ***Table 7***.

Table 7: Use of Section 4(f) Property

Property	Description of Use
Governor Harry W. Nice Memorial Bridge Historic Site	Removal of historic bridge and contributing Administration Building
Barnesfield Park	2.2 acres wooded buffer from 146.5-acre park (*de minimis impact finding)*
Dahlgren Wayside Park	2.2 acres of 14.7-acre park, affecting park entrance road, parking area, picnic area, and beach
Potomac Gateway Welcome Center	Entire 2.1-acre parcel, removal of building

Modified Alternate 7 would result in removal of the historic Nice Bridge and contributing Administration Building (***Figure 5***).

Modified Alternate 7 would require approximately 2.2 acres of land from the 146.5-acre Barnesfield Park, affecting a wooded area that buffers the park facilities from US 301, but would not impact any recreational facilities, including the ball fields, concession areas, or parking lot (***Figure 6***). King George County was notified via the Draft Section 4(f) Evaluation of FHWA's intent to issue a Section 4(f) finding of *de minimis* impact for Barnesfield Park, and has concurred that Modified Alternate 7 would not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection (see concurrence dated July 20, 2011 in ***Appendix B***). Therefore, FHWA is issuing a finding of *de minimis* impact for Barnesfield Park pursuant to 23 CFR 774.3(b). The *de minimis* finding does not affect MDTA's and FHWA's obligation to address requirements of the Federal Lands to Parks Program or Section 6(f) of the LWCF Act for impacts to Barnesfield Park.

Modified Alternate 7 would require approximately 2.2 acres of land from the 14.7-acre Dahlgren Wayside Park (15 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 6***).

Modified Alternate 7 would require acquisition of the entire 2.1-acre Potomac Gateway Welcome Center parcel (***Figure 6***). The Welcome Center building would be removed.

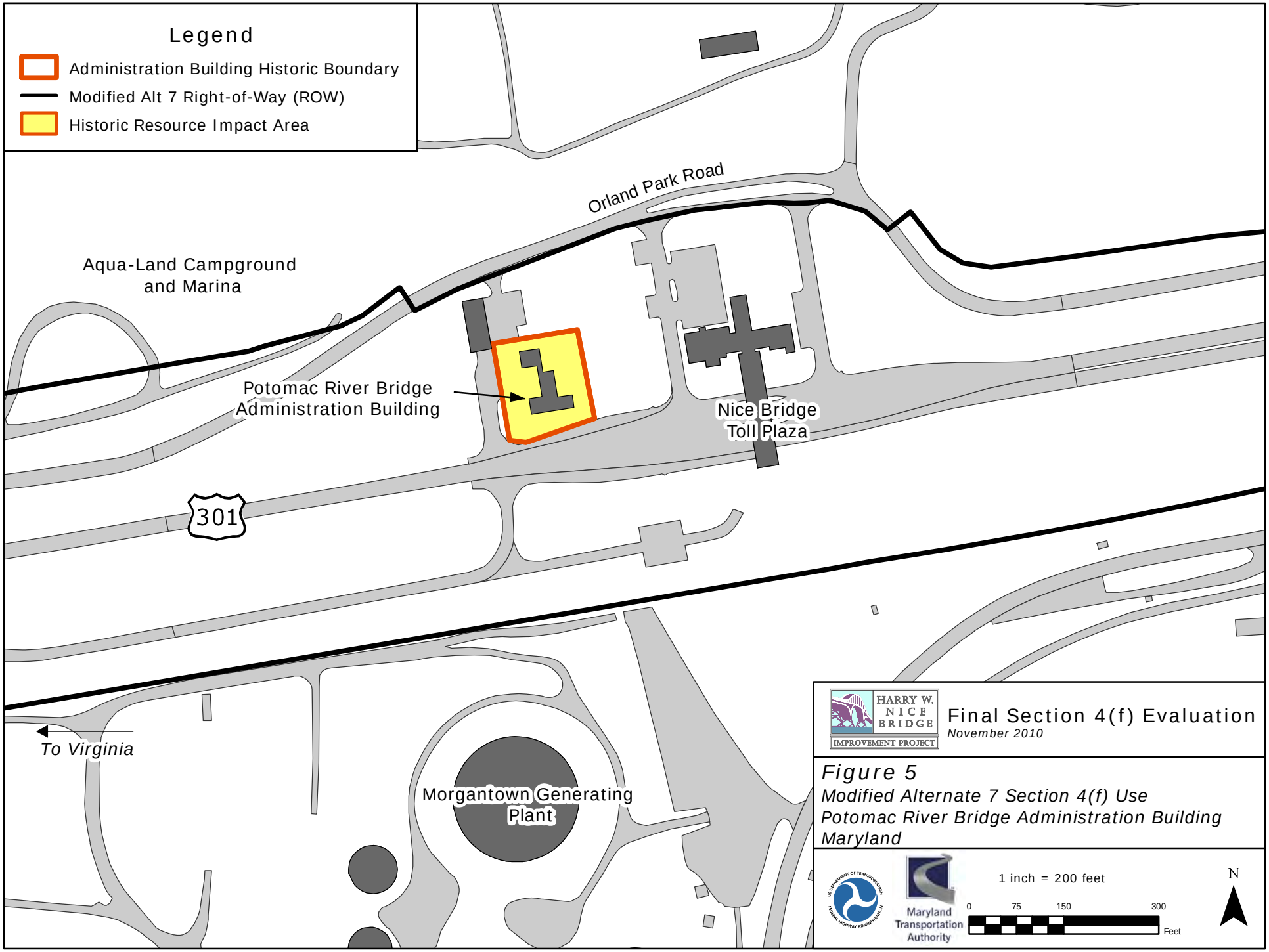
Legend
Administration Building Historic Boundary
Modified Alt 7 Right-of-Way (ROW)
Historic Resource Impact Area
Orland Park Road
Aqua-Land Campground and Marina
Potomac River Bridge Administration Building
Nice Bridge Toll Plaza
301
To Virginia
Morgantown Generating Plant
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Figure 5
Modified Alternate 7 Section 4(f) Use
Potomac River Bridge Administration Building
Maryland
Maryland Transportation Authority
1 inch = 200 feet
0 75 150 300
Feet
N

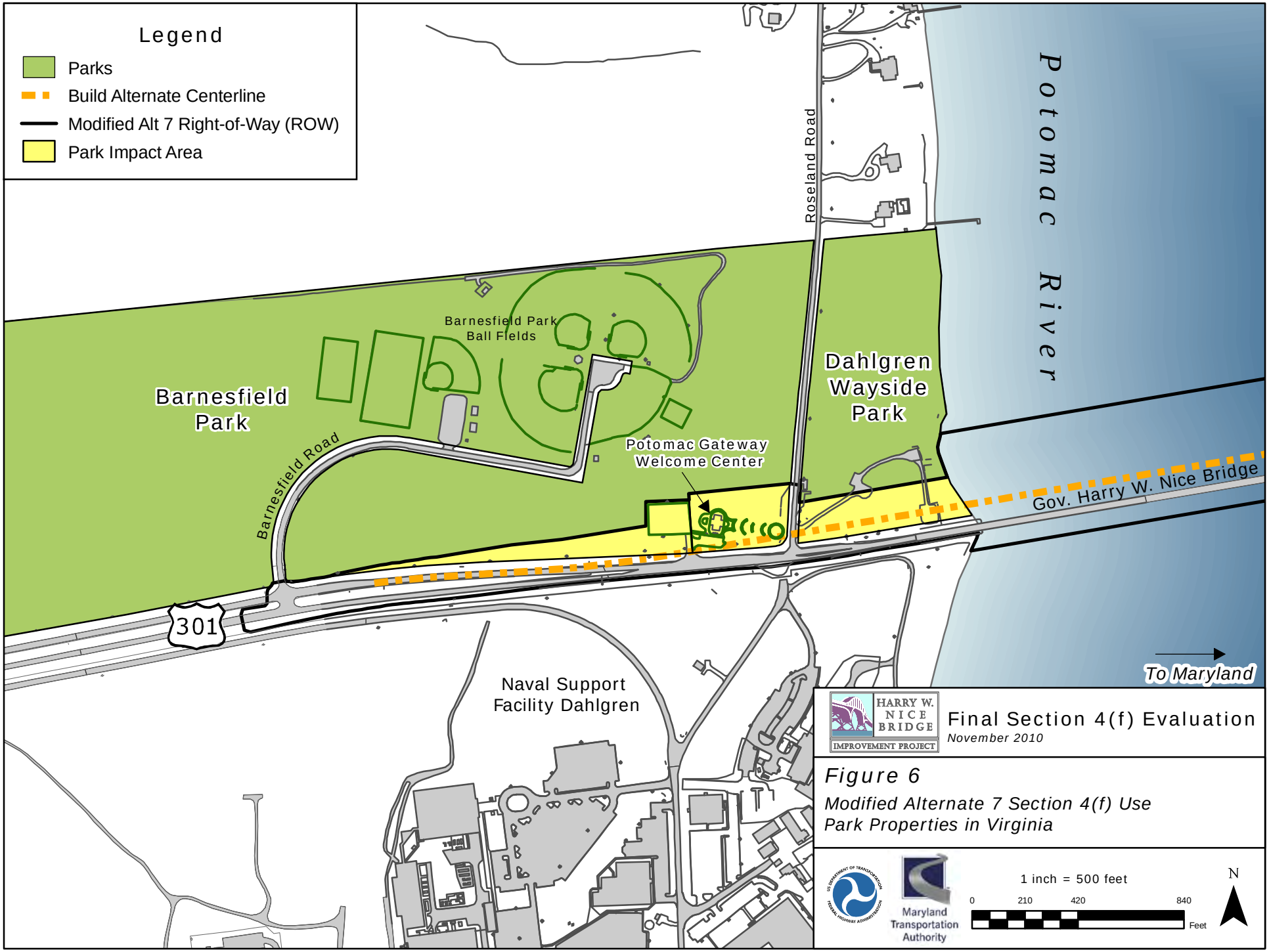
Legend
Parks
Build Alternate Centerline
Modified Alt 7 Right-of-Way (ROW)
Park Impact Area
Barnesfield Park
Barnesfield Park Ball Fields
Barnesfield Road
Roseland Road
Dahlgren Wayside Park
Potomac River
Potomac Gateway Welcome Center
Gov. Harry W. Nice Bridge
301
Naval Support Facility Dahlgren
To Maryland
HARRY W. NICE BRIDGE
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Figure 6
Modified Alternate 7 Section 4(f) Use
Park Properties in Virginia
Maryland Transportation Authority
1 inch = 500 feet
0
210
420
840
Feet
N

VI. AVOIDANCE ANALYSIS

This section provides an analysis of five alternates that would completely avoid all Section 4(f) properties. The analysis was conducted in accordance with the definition of *feasible and prudent avoidance alternatives* found in 23 CFR 774.17. ***Table 8*** on the following page provides a summary of the impacts of Modified Alternate 7 compared to other alternatives discussed in this evaluation.

All five alternates in this analysis assume that the existing bridge would remain standing. Existing transportation use would continue or the bridge would be taken out of service. It is assumed that any future maintenance and/or rehabilitation of the existing Nice Bridge would be made in accordance with the AASHTO *Guidelines for Historic Bridge Rehabilitation and Replacement,* which would likely maintain the historic integrity of the bridge and avoid Section 4(f) use. This assumption differs from the Draft Section 4(f) Evaluation so that these alternates can be properly assessed as avoidance alternatives. However, it is still recognized that, over time, these alternates may require rehabilitation of the Nice Bridge which could impact the historic integrity of the bridge and may result in a Section 4(f) use.

Per 23 CFR 774.3(b), an analysis of feasible and prudent avoidance alternatives 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, the avoidance analysis has been completed for all resources, including those for which a *de minimis* impact finding is made (i.e. Barnesfield Park).

A. Alternate 1: No-Build / Rehabilitation of Existing Bridge

Alternate 1 would involve deck replacement and structural improvements of the existing Nice Bridge. The bridge would continue to be used for transportation purposes as it is today. Alternate 1 would have no impact to Section 4(f) properties and would have no direct impact to any natural or socioeconomic resources. Although Alternate 1 has less impact and would cost considerably less than Modified Alternate 7, it would not meet any of the project purpose and need items described in ***Section III***. Therefore, Alternate 1 is not prudent because it would be unreasonable to proceed with the alternate in light of the project's stated purpose and need. Alternate 1 is being eliminated because it causes other severe problems of a magnitude that substantially outweighs the importance of protecting Section 4(f) properties in the project area.

B. 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 new 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, but not owned by MDTA.

1. Alternate 8 (North of Existing Alignment)

Alternate 8 (North) would relocate US 301 to a new alignment crossing the Potomac River approximately 2.5 miles north of the existing bridge. New four-lane bridge approach roadways would need to be constructed in Maryland and Virginia 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 west 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 roadway 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.

Table 8a: Comparison of Alternate Impacts (Alternates 1 – 7)

	Modified Alternate 7 (Proposed Action)	Alternate 1 (No-Build)	Alternate 2	Alternate 3	Alternate 4	Alternate 5	Alternate 6
Section 4(f) Avoidance Alternative?	No	Yes	No	No	No	No	No
Use of historic Nice Bridge?	Yes: Remove	No[1]	No[1]	Yes: Replacement	No[1]	Yes: Replacement	No[1]
Use of Potomac River Bridge Administration Building?	Yes: 0.5 acres, remove	No	Yes: 0.1 acre	Yes: 0.1 acre	Yes: 0.5 acre, remove	Yes: 0.5 acre, remove	Yes: 0.1 acre
Use of Barnesfield Park?	Yes: 2.2 acres	No	No	No	Yes: 0.4 acres	Yes: 0.4 acres	No
Use of Dahlgren Wayside Park?	Yes: 2.2 acres	No	No	No	Yes: 1.4 acres	Yes: 1.4 acres	No
Use of Potomac Gateway Welcome Center?	Yes: 2.1 acres	No	No	No	Yes: 2.1 acres	Yes: 2.1 acres	No
Section 4(f) *de minimis* finding?	Yes: Barnesfield Park	No	Yes: Nice Bridge	No	Yes: Barnesfield Park and Nice Bridge	Yes: Barnesfield Park	No
NSF Dahlgren Impacts?	No	No	Yes: 3.3 acres	Yes: 3.1 acres	No	No	Yes: 3.7 acres
Business ROW?	Yes: 7.6 acres	No	No	No	Yes: 7.0 acres	Yes: 7.0 acres	No
Wetland impacts?	Yes: 0.1 acres	No	Yes: 0.7 acres	Yes: 0.7 acres	Yes: 0.1 acres	Yes: 0.2 acres	Yes: 0.7 acres
Stream impacts?	Yes: 3,660 lf	No	Yes: 2,500 lf	Yes: 2,500 lf	Yes: 3,600 lf	Yes: 3,700 lf	Yes: 2,400 lf
Open water dredge impacts?	Yes: 65 acres	No	Yes: 62 acres	Yes: 88 acres	Yes: 63 acres	Yes: 89 acres	Yes: 68 acres
Floodplain impacts?	Yes: 8.4 acres	No	Yes: 6.3 acres	Yes: 8.6 acres	Yes: 8.4 acres	Yes: 8.7 acres	Yes: 6.5 acres
Forest impacts?	Yes: 2.7 acres[2]	No	Yes: 0.5 acres	Yes: 0.5 acres	Yes: 1.0 acres	Yes: 1.0 acres	Yes: 0.7 acres
Unique problems?	No	No	No	No	No	No	No
Meets purpose and need?	Yes	No	Partially	Yes	Partially	Yes	Yes
Approximate cost (in 2008 dollars)	$805-885M[3]	$110-120 M[3]	$515-565 M[2]	$915-1010 M[2]	$570-625 M[2]	$945-1040 M[2]	$805-885 M[2]
If avoidance, feasible and prudent? [4]	N/A	No	N/A	N/A	N/A	N/A	N/A

[1] Assumes AASHTO *Guidelines for Historic Bridge Rehabilitation and Replacement* are followed for future rehabilitation of existing bridge. MDTA would not own/maintain existing bridge and/or original administration building.
[2] Measured based on MD Critical Area definition for forest; other alternates measured using MD Forest Conservation Act definition.
[3] Cost with one bicycle/pedestrian path (Alternates Modified 7, 2 and 4) or two bicycle/pedestrian paths (Alternates 3, 5, 6, 7).
[4] Only applied to avoidance alternates.

Table 8b: Comparison of Alternate Impacts (Alternates 8 – 15)

	Alternate 8 (New Location)	Alternate 9 (Roadway Shift)	Alternate 10 (Tunnel)	Alternate 11 (Stacked Deck)	Alternate 12 (3-Lane Bridge)	Alternate 13 (TSM/ TDM)	Alternate 14 (Transit)	Alternate 15 (Replace Bridge)
Section 4(f) Avoidance Alternative?	Yes	No	Yes	No	No	Yes	Yes	No
Use of historic Nice Bridge?	No[1]	Yes: Modification	No[1]	Yes: Modification	Yes: Modification	No[1]	No[1]	Yes: Remove
Use of Potomac River Bridge Administration Building?	No	Yes: *MD North* – Remove, *MD South* - 0.1 acre	No	No	No	No	No	No
Use of Barnesfield Park?	No	*MD North*: No *MD South*: 0.4 acres	No	No	No	No	No	No
Use of Dahlgren Wayside Park?	No	*MD North*: No *MD South*: 1.4 acres	No	No	No	No	No	No
Use of Potomac Gateway Welcome Center?	No	*MD North*: No *MD South*: 2.1 acres	No	No	No	No	No	No
Section 4(f) *de minimis* finding?	N/A	*MD North*: No *MD South*: Barnesfield Park	N/A	No	No	N/A	N/A	No
NSF Dahlgren Impacts?	No	Yes: *MD North*- 3.1 acres	Yes: prohibits hazmat crossing	Yes: 3.1 acres	Yes: 1.0-2.0 acres	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: (Detailed 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?	Yes: not consistent with plans	Yes: complex design / construction	Yes: haz mats/ MEC/ river bed	Yes: strengthen substructure of existing bridge	No	No	No	Yes: >100 mi roadway detour
Meets purpose and need?	Yes	Partially	Yes	Partially	No	No	No	Yes
Approximate cost (in 2008 dollars)	$1.9-3.2M	$500M	$1.9B	$890M	$220M; Long-term op. costs	$0	$0	$620M
If avoidance, feasible and prudent? [2]	No	N/A	No	N/A	N/A	No	No	N/A

[1] Assumes AASHTO *Guidelines for Historic Bridge Rehabilitation and Replacement* are followed for future rehabilitation of existing bridge. MDTA would not own/maintain existing bridge and/or original administration building.

[2] Only applied to avoidance alternates.

Alternate 8 (North) would avoid all identified Section 4(f) properties. 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 four acres of wetlands (based on National Wetlands Inventory (NWI) mapping), approximately 17 acres of agricultural land and 58 acres of forest. Alternate 8 (North) may also affect historic sites that lie along its potential alignment that 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 County. In Charles County, portions of the area to the north are classified as Agricultural Conservation District, and, according to the *2006 Charles County Comprehensive Plan*, 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 2006 *King George County Comprehensive Plan*, 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.

2. Alternate 8 (South of Existing Alignment)

Alternate 8 (South) would relocate US 301 to a new alignment that crosses the Potomac River at a skewed angle, meeting the shore 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. The alignment would be located as close to the existing location of the Morgantown Generating Station, as well as NSF Dahlgren and the proving grounds south of Dahlgren, as possible while still 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 towards the Potomac River. A new bridge crossing would be constructed on a south-southwest alignment 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 avoid all identified Section 4(f) properties. 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; impact five major streams (Pasquahanza Creek, Piccowaxen Creek, Waverly Creek, Gambo Creek, and Williams Creek); and impact approximately nine acres of agricultural land and 72 acres of forest. Alternate 8 (South) may also affect historic sites that lie along its potential alignment that 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 County and King George County. Communities such as Newburg and Morgantown in Maryland, and Potomac Beach and Edgehill in Virginia would be affected.

Although both the northern and southern alignments considered for Alternates 8 would avoid the identified Section 4(f) properties and would meet the purpose and need for the Nice Bridge Improvement Project, they would involve substantial realignment of the US 301 roadway. In addition, both alignments would cause severe social and natural environmental impacts to residences and businesses, streams, wetlands, floodplains, farmlands, forests, the Potomac River and currently unidentified cultural resources in generally undisturbed locations.

Both the northern and southern alignments considered for Alternate 8 are not 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. Alternate 8 is being eliminated because it causes other severe problems of a magnitude that substantially outweighs the importance of protecting Section 4(f) properties.

C. Alternate 10: Tunnel

Alternate 10 involves constructing a four-lane tunnel under the Potomac River near the location of the existing bridge. The existing bridge would remain standing and either taken out of service or continue in use for local traffic. If the bridge is taken out of service, MDTA would not be responsible for bridge maintenance.

Alternate 10 would avoid all Section 4(f) properties by passing under or south of the Nice Bridge Administration Building in Maryland and the park properties in Virginia. 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 the existing public right-of-way. Alternate 10 could disturb hazardous materials or potential Munitions and Explosives of Concern (MEC) 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 are 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 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 MEC 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) properties.

D. Alternate 13: Transportation Systems Management/Travel Demand Management

Alternate 13 involves stand-alone Transportation Systems Management (TSM)/Travel Demand Management (TDM) improvements (e.g., van-carpooling, flexible work schedules, telecommuting, traveler information services) in conjunction with improvements to maintain service on the existing Nice Bridge (similar to Alternate 1). No additional capacity or widening would occur to US 301. Alternate 13 would avoid all Section 4(f) properties. Alternate 13 would also have no impact to residences or businesses, streams, wetlands, floodplains, agricultural land, or forest. Because a new bridge would not be constructed, the alternate would have a substantially lower cost than Modified Alternate 7.

Although Alternate 13 would have minimal environmental impact and cost less than Modified Alternate 7, it does not meet the project purpose and need because it does not provide a crossing that is

geometrically compatible 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 prudent because it would 1) be unreasonable to proceed with the alternate in light of the project's stated purpose and need; and 2) result in unacceptable safety and operational problems. Therefore, Alternate 13 is being eliminated because it causes other severe problems of a magnitude that substantially outweighs the importance of protecting Section 4(f) properties within the project area.

E. Alternate 14: Transit

Alternate 14 would involve stand-alone transit improvements, such as bus operation, in conjunction with improvements to maintain service on the existing Nice Bridge (similar to Alternate 1). No additional capacity or widening would occur to US 301. Alternate 14 would also have no impact to residences or businesses, streams, wetlands, floodplains, agricultural land, or forest. Because a new bridge would not be constructed, the alternate would have a substantially lower cost than Modified Alternate 7.

Alternate 14 would avoid all Section 4(f) properties and have minimal environmental impact. 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 prudent because 1) it 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, capacity, and operational problems. Therefore, Alternate 14 is being eliminated because it causes other severe problems of a magnitude that substantially outweighs the importance of protecting Section 4(f) properties within the project area.

Conclusion of Avoidance Analysis

Based on the evaluation presented in this section, there is no feasible and prudent avoidance alternative to the use of Section 4(f) properties.

VII. LEAST OVERALL HARM ANALYSIS

Pursuant to 23 CFR 774.3(c)(1), if the avoidance analysis determines that there is no feasible and prudent avoidance alternative, then only the alternative that causes the least overall harm may be approved. Therefore, this section provides a review of the multiple remaining alternates that use one or more Section 4(f) properties, including remaining alternates that would eliminate or reduce the use of individual Section 4(f) properties.

Build Alternates 2 through 6 were retained for detailed study for the Environmental Assessment/Draft Section 4(f) Evaluation, and as such, each includes an option to construct a bike/ped path. The 10-foot wide path would require no additional permanent impact to the park resources in Virginia. For consistency with Modified Alternate 7, each of these retained alternates is assumed to include a single two-way bike/ped path, as opposed to the two one-way paths which were presented in the Draft Section 4(f) Evaluation.

23 CFR 774.3(c)(1) provides seven factors for identifying the alternative with the least overall harm. ***Table 9*** presents a comparison of the alternates by each least overall harm evaluation factor, and identifies the alternate resulting in the least overall harm. Potential *de minimis* impact findings for individual Section 4(f) properties are factored into the least overall harm analysis.

Table 9: Least Harm Analysis

Alternative	Factors for Evaluation of Least Overall Harm per 23 CFR 774.3(c)(1)							
	i. The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)	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	iii. The relative significance of each Section 4(f) property	iv. The views of the officials with jurisdiction over each Section 4(f) property	v. The degree to which each alternative meets the purpose and need for the project	vi. After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f)	vii. Substantial differences in cost among the alternatives	**CONCLUSION**
Modified Alternate 7 (Proposed Action)	Strong ability to mitigate impacts. Recordation/interpretive displays and signage of Nice Bridge and Administration Building per PA (***Appendix C***). Replacement parkland for Barnesfield, Dahlgren Wayside, and Welcome Center per MOA (***Appendix D***). Refer to Section VIII of this document.	Severe harm to Nice Bridge and Administration Building, Barnesfield Park, Dahlgren Wayside Park, and Welcome Center. Harm is mitigated through PA and MOA (Refer to Section VIII of this document).	All resources in the project area are currently considered to be equally significant. Balancing the effects of one resource to another is not appropriate based on the current available information.	MHT and VDHR have signed a PA that mitigates the adverse effects to the Nice Bridge historic site; Officials with jurisdiction over parks have signed an MOA that mitigates impacts.	Meets purpose and need.	Impacts to Potomac River, forests; minor impacts to streams, wetlands, floodplains, and business property.	Alternate would cost approximately $805-885 M[3]	Meets purpose and need; impacts to properties not protected by Section 4(f) are minimized; appropriate mitigation measures for Section 4(f) properties to minimize harm
Alternates Retained for Detailed Study								
Alternate 2	Mitigation would not be necessary under this alternate.	Minimal harm to Administration Building; therefore *de minimis* impact likely for Nice Bridge. No harm to parks.	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.	MHT and VDHR have signed a PA that mitigates the adverse effects to the Nice Bridge historic site associated with Modified Alternate 7. Officials with jurisdiction over parks have signed an MOA that mitigates impacts from Modified Alternate 7.	Would only partially meet purpose and need; perpetuates safety, operations, and capacity deficiencies of the existing Nice bridge.	Similar impacts to Modified Alternate 7. Substantial impacts to NSF Dahlgren.	Alternate would cost approximately $515-565 M[2]	Less harm to Nice Bridge and parks, but only partially meet purpose and need; substantial impacts to NSF Dahlgren.
Alternate 3	Similar mitigation as Modified Alternate 7 for Nice Bridge historic site; mitigation not necessary for parks.	Severe harm to historic Nice Bridge. Harm could be mitigated through PA. No harm to park properties.			Meets purpose and need.	Greater dredging impacts than Mod. Alternate 7. Substantial impacts to NSF Dahlgren.	Alternate would cost approximately $915-1010 M[2]	Less harm to parks than Modified Alternate 7, but substantial impact to NSF Dahlgren and greater cost.

Table 9: Least Harm Analysis

Alternative	Factors for Evaluation of Least Overall Harm per 23 CFR 774.3(c)(1)							
	i. The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)	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	iii. The relative significance of each Section 4(f) property	iv. The views of the officials with jurisdiction over each Section 4(f) property	v. The degree to which each alternative meets the purpose and need for the project	vi. After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f)	vii. Substantial differences in cost among the alternatives	**CONCLUSION**
Alternate 4	Mitigation would be outlined in a PA for impacts to Administration Building only. Mitigation for parks would be similar to Modified Alternate 7.	No harm to Nice Bridge itself; Administration Building removed. Less harm to Barnesfield, Dahlgren Wayside, and Welcome Center compared to Mod. Alternate 7	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.	MHT and VDHR have signed a PA that mitigates the adverse effects to the Nice Bridge historic site associated with Modified Alternate 7. Officials with jurisdiction over parks have signed an MOA that mitigates impacts from Modified Alternate 7.	Would only partially meet purpose and need; perpetuates safety, operations, and capacity deficiencies of existing Nice Bridge.	Environmental impacts similar to Modified Alternate 7. No impact to NSF Dahlgren.	Alternate would cost approximately $570-625 M[2]	Less harm to Nice Bridge than Mod. Alternate 7, but only partially meets purpose and need.
Alternate 5	Similar mitigation as Modified Alternate 7.	Compared to Modified Alternate 7, would have similar harm to Section 4(f) properties, except slightly less impact to parks.			Meets purpose and need.	Greater dredging impacts than Modified Alternate 7. No impact to NSF Dahlgren.	Alternate would cost approximately $945-1040 M[2]	Slightly less harm to parks, but greater environmental impact and cost than Mod. Alternate 7.
Alternate 6	Mitigation would not be necessary under this alternate.	Minimal harm to Administration Building; therefore *de minimis* impact likely for Nice Bridge. No harm to parks.			Meets purpose and need.	Environmental impacts would be similar to Mod. Alternate 7. Substantial impacts to NSF Dahlgren.	Alternate would cost approximately $805-885 M[2]	Less harm to Nice Bridge and parks, meets purpose and need; but substantial impacts to NSF Dahlgren.
Other Minimization Alternates								
Alternate 9	Depending on location of shift, mitigation would be similar to Modified Alternate 7 or no mitigation required for specific resource.	Harm to Nice Bridge from modification. *MD South* shift would similar harm to park resources as Mod. Alternate 7.	(See response for Alternates 4 through 6)	(See response for Alternates 4 through 6)	Would only partially meet purpose and need; perpetuates safety, operations, and capacity deficiencies.	Environmental impacts would be similar to Mod. Alternate 7. *MD North* shift has substantial impacts to NSF Dahlgren.	Alternate would cost approximately $500 million	Less harm to Section 4(f) properties, but only partially meets the purpose and need.

Table 9: Least Harm Analysis

Alternative	Factors for Evaluation of Least Overall Harm per 23 CFR 774.3(c)(1)							
	i. The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)	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	iii. The relative significance of each Section 4(f) property	iv. The views of the officials with jurisdiction over each Section 4(f) property	v. The degree to which each alternative meets the purpose and need for the project	vi. After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f)	vii. Substantial differences in cost among the alternatives	CONCLUSION
Alternate 11	Mitigation would be outlined in a PA for impacts to Nice Bridge. No mitigation required for park properties.	Harm to Nice Bridge from modification. No harm to parks.	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.	MHT and VDHR have signed a PA that mitigates the adverse effects to the Nice Bridge historic site associated with Modified Alternate 7. Officials with jurisdiction over parks have signed an MOA that mitigates impacts from Modified Alternate 7.	Would only partially meet purpose and need; perpetuates safety, operations, and capacity deficiencies.	Less environmental impact than Modified Alternate 7. Similar impacts to NSF Dahlgren as Alternate 3.	Alternate would cost approximately $890 million	Less harm to Section 4(f) properties, but only partially meets the purpose and need and could have impacts to NSF Dahlgren Property.
Alternate 12	Mitigation would be outlined in a PA for impacts to Nice Bridge. No mitigation required for park properties.	Harm to Nice Bridge from modification. No harm to parks.			Does not meet purpose and need; perpetuates safety, operations, and capacity deficiencies.	Less environmental impact than Modified Alternate 7. Less impact to NSF Dahlgren compared to Modified Alternate 7, but likely would still have substantial impact on facility operations..	$220 million	Less harm to Section 4(f) properties, but does not meet the purpose and need and would impact NSF Dahlgren Property.
Alternate 15	Mitigation would be outlined in a PA for impacts to Nice Bridge. No mitigation required for park properties.	Severe harm to Nice Bridge from removal. No harm to parks.			Meets purpose and need; perpetuates safety, operations, and capacity deficiencies.	Similar environmental impacts to Mod. Alternate 7. Substantial impacts to NSF Dahlgren and regional commerce resulting from lengthy detour during construction.	$620 million	Less harm to park properties and meets the purpose and need, but would have substantial impact NSF Dahlgren Property and major impact to regional commerce.

Table 9: Least Harm Analysis

Alternative	Factors for Evaluation of Least Overall Harm per 23 CFR 774.3(c)(1)							
	i. The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)	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	iii. The relative significance of each Section 4(f) property	iv. The views of the officials with jurisdiction over each Section 4(f) property	v. The degree to which each alternative meets the purpose and need for the project	vi. After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f)	vii. Substantial differences in cost among the alternatives	**CONCLUSION**
ANALYSIS RESULTS	Under alternates for which mitigation is needed for a specific resource, mitigation for that resource would be similar to the mitigation proposed for Modified Alternate 7.	Alternate 2 would have the least severe harm. Modified Alternate 7 would have the most severe harm; however, this harm has been appropriately mitigated with the PA and MOA.	Since all resources are considered to have equal value, this factor does not differentiate the project alternates.	By signing the PA and the MOA, The officials with jurisdiction have demonstrated their support for the mitigation measures proposed for Modified Alternate 7.	Modified Alternate 7, Alternate 5 and Alternate 6, fully meet the purpose and need.	All alternates would have similar environmental impacts to Modified Alternate 7, except Alternates 3 and 5 would result in greater dredging impacts. Alternates 2, 3, 6, 9, 11, 12 and 15 would have greater impacts to NSF Dahlgren compared to Modified Alternate 7.	Alternates 1, 2, 4, 9, 12, and 15 would cost less than Modified Alternate 7.	The MDTA Preferred Alternate, Modified Alternate 7, causes the least overall harm to Section 4(f) properties.

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

Alternate 2 proposes the rehabilitation of the existing bridge and the construction of a new bridge parallel to, and south of, the existing structure. It is assumed that rehabilitation of the existing Nice Bridge would be made in accordance with the AASHTO *Guidelines for Historic Bridge Rehabilitation and Replacement* to avoid Section 4(f) use of this resource. Consequently Alternate 2, as presented here, would result in less harm than Alternate 2 presented in the Draft Section 4(f) Evaluation. However, it is recognized that, over time, rehabilitation of the Nice Bridge could impact the historic integrity of the bridge and may result in a Section 4(f) use.

Alternate 2 would require approximately 0.1 acre of land from the historic boundary of the Administration Building, resulting in a Section 4(f) use of the Nice Bridge historic site. However, the impact of 0.1 acre of land from the historic boundary of the Administration Building would likely be appropriate to be considered a Section 106 no adverse effect and a *de minimis* Section 4(f) use.

Alternate 2 would not result in permanent property impacts or Section 4(f) use of Barnesfield Park, Dahlgren Wayside Park, or the Potomac Gateway Welcome Center.

By retaining the existing structure with its narrow cross section, Alternate 2 would not fully meet the needs of safety, incident management, or consistent cross section because the bridge carrying southbound traffic would not accommodate shoulders, and the steep grade of the existing bridge would be retained. The lack of shoulders would provide no opportunity for disabled vehicles to pull off the travelway or for emergency responders to bypass stalled traffic. The steep grade would slow the movement of heavy trucks, resulting in reduced capacity and increased passing maneuvers. The design of the existing bridge would not meet current load requirements, and both the cross section and load rating are insufficient for the needs of the STRAHNET. Capacity would be affected during routine maintenance operations due to the need for lane closures. Crossings by wide-load vehicles would also necessitate a lane closure. Thus while Alternate 2 is feasible, and has the advantage of preserving the historic structure as a functioning component of the transportation network, it would not fully meet the needs of the project related to geometric inconsistencies, capacity limitations, operations and safety, incident management, bridge maintenance, and accommodating the STRAHNET.

As shown in ***Table 8a***, Alternate 2 would impact environmental resources not protected by Section 4(f). These impacts are generally comparable to, or less than, the environmental impacts of Modified Alternate 7. However, Alternate 2 would require 3.3 acres of right-of-way from 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 property 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 these unique mission capabilities cannot be duplicated or relocated elsewhere on the base. Any relocation of the existing NSF Dahlgren perimeter fence line south of its current position 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. 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 mission of NSF Dahlgren. 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.

Alternate 2 would cost approximately $430-$475 million without a bike/ped path and $515-$565 million with a bike/ped path, making it the least expensive build alternate.

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

Alternate 3 proposes the construction of a new two-lane bridge parallel to, and south of, the existing structure. The existing bridge would then be removed, and a second new two-lane bridge constructed in its place. These activities would cause a Section 4(f) use of the Nice Bridge. There also would be 0.1 acre of impact to the Administration Building historic boundary. However, Alternate 3 would not result in any permanent impacts or Section 4(f) use of Barnesfield Park, Dahlgren Wayside Park or the Potomac Gateway Welcome Center.

Alternate 3 would impact environmental resources not protected by Section 4(f), as shown in ***Table 8a.*** The need to remove the existing bridge prior to constructing the second new two-lane bridge would extend the construction timeframe to an additional construction season, which would add to the cost of this alternate and result in the need for a second season of dredging, pile driving, and associated aquatic impacts which would prolong the exposure of fish and benthic organisms to turbidity and shock wave impacts. Alternate 3 would require 3.1 acres of right-of-way from NSF Dahlgren that would result in the same unacceptable effects as Alternate 2.

Alternate 3 would meet the purpose and need for the project and would cost approximately $735-$810 million without a bike/ped path and $915-$1,010 million with a bike/ped path.

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

Alternate 4 proposes the rehabilitation of the existing structure and the construction of a new bridge parallel to, and north of, the existing structure. Similar to Alternate 2, it is assumed that rehabilitation of the existing Nice Bridge would be made in accordance with the AASHTO *Guidelines for Historic Bridge Rehabilitation and Replacement* to avoid Section 4(f) use of this resource. Consequently Alternate 4, as presented here, would result in less harm than Alternate 4 presented in the Draft Section 4(f) Evaluation. However, it is recognized that, over time, rehabilitation of the Nice Bridge could impact the historic integrity of the bridge and may result in a Section 4(f) use. The contributing Administration Building would be removed under Alternate 4.

Alternate 4 would result in 0.4 acre of permanent impact to Barnesfield Park. 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. There would be no effect to Barnesfield Park recreational facilities, including the ball fields, concession areas, and 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 appropriate for Barnesfield Park.

Due to the shift northward from the existing alignment, Alternate 4 would permanently impact 1.4 acres of the southern portion of Dahlgren Wayside Park, resulting in a Section 4(f) 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 Potomac Gateway 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 removed.

As shown in ***Table 8a***, Alternate 4 would impact environmental resources not protected by Section 4(f), although these impacts are comparable to, or less than, the environmental impacts of the Preferred Alternate. There would be no right-of-way required from NSF Dahlgren.

Like Alternate 2, Alternate 4 would preserve the existing bridge for one direction of traffic. By retaining the existing bridge for the northbound direction of travel, Alternate 4 would only partially meet the purpose and need for the project, for the same reasons enumerated under Alternate 2. Thus while Alternate 4 causes less harm to Section 4(f) resources, it would not fully meet the needs of the project related to geometric inconsistencies, capacity limitations, operations and safety, incident and evacuation management, bridge maintenance, and accommodating the STRAHNET.

Alternate 4 would cost approximately $485-$535 million without a bike/ped path and $570-$625 million with a bike/ped path, which would make it one of the least costly alternates.

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

Alternate 5 would construct a new parallel, two-lane bridge north of the existing structure. The existing Nice Bridge would be removed, and a new two-lane bridge constructed in its place, resulting in an adverse effect and use of the historic structure. The contributing Administration Building would be removed under this alternate.

Alternate 5 would result in impacts to Barnesfield Park (0.4 acre), Dahlgren Wayside Park (1.4 acres), and the Potomac Gateway Welcome Center (2.1 acres). These park impacts would be lower than the impacts of Modified Alternate 7 but identical to those for Alternate 4.

Alternate 5 would also impact environmental resources not protected by Section 4(f) as shown in ***Table 8a***. The need to remove the existing bridge prior to constructing the second two-lane bridge would extend the construction timeframe to an additional construction season, necessitating a second season of dredging and pile driving that would prolong the exposure of fish and benthic organisms to turbidity and shock wave impacts. The acreage of dredging would also be greatest with this alternate. 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 $765-$850 million without a bike/ped path, and $945-$1,040 million with a bike/ped path, substantially more than the cost of the Preferred Alternate.

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

Under Alternate 6, a new parallel, four-lane bridge would be constructed south of the existing bridge. For the purpose of this least harm analysis, it is assumed that the existing bridge would be taken out of service and not owned by MDTA, but would remain standing. Future maintenance and/or rehabilitation of the existing Nice Bridge could be made in accordance with the AASHTO *Guidelines for Historic Bridge Rehabilitation and Replacement* to maintain the historic integrity of the bridge and avoid Section 4(f) use. Consequently Alternate 6, as presented here, would result in less harm than Alternate 6 presented in the Draft Section 4(f) Evaluation. However, it is recognized that, over time, rehabilitation of the Nice Bridge could impact the historic integrity of the bridge and may result in a Section 4(f) use. Alternate 6 would also require approximately 0.1 acre of land from the historic boundary of the Administration Building.

Alternate 6 would not result in any impacts or Section 4(f) use of Barnesfield Park, Dahlgren Wayside Park, or the Potomac Gateway Welcome Center.

Alternate 6 would impact environmental resources not protected by Section 4(f) as shown in ***Table 8a***; however, these impacts are comparable to, or less than, the environmental impacts of the Modified Alternate 7. Alternate 6 would require 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 $640-$705 million without a bike/ped path and $805-$885 million with a bike/ped path.

F. Alternate 9: Roadway Shift

Alternate 9 would consist of shifting US 301 to either the north or south of the existing alignment on either shore. A new two-lane bridge would be constructed to diagonally cross over a portion of the existing bridge to minimize impacts to Section 4(f) properties and other environmental resources. This alternate may require some modification to the historic Nice Bridge that would result from building a new two-lane bridge over the existing structure. Two variations of Alternate 9 were evaluated.

1. Alternate 9 (northern shift in Maryland, southern shift in Virginia)

This variation of Alternate 9 would shift the US 301 alignment north on the Maryland shore and terminate south of the existing alignment on the Virginia shore. The Administration Building would be removed, similar to Alternates 4, 5, and 7. There would be no Section 4(f) 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 8b***. Since the existing bridge would be retained for one direction of travel, the project purpose and need to address geometric inconsistencies, capacity limitations, operations and safety, incident and evacuation management, bridge maintenance, and accommodate the STRAHNET would not be fully met. Impacts to NSF Dahlgren would likely be identical to the impacts of Alternate 2 (3.3 acres).

2. Alternate 9 (southern shift in Maryland, northern shift in Virginia)

This variation of Alternate 9 would shift the US 301 alignment south on the Maryland shore and terminate north of the existing alignment on the Virginia shore. The Administration Building would not be removed, and the encroachment onto the historic boundary for the Administration Building would be limited to 0.1 acres, similar to Alternates 2, 3, and 6. Impacts to the park properties in Virginia would be less than impacts from Modified Alternate 7, and would be identical to Alternate 4. It is likely that a *de minimis* impact finding could be pursued for Barnesfield Park.

Alternate 9-MD South would impact environmental resources not protected by Section 4(f), as shown in ***Table 8b***. The alternate would result in no direct right-of-way impacts to NSF Dahlgren.

Either variation of Alternate 9 would only result in minor reductions to Virginia parks and other environmental impacts as compared to Modified Alternate 7. Complex construction techniques would be required to build a new bridge over the existing bridge. Transitioning the northbound or southbound lanes across the new bridge would also create difficult conditions for maintenance of traffic during construction.

Alternate 9 would cost approximately $500 million, which is well below the cost of Modified Alternate 7. The alternate would only partially meet the purpose and need because, similar to Alternate 2, the existing two-lane bridge would be retained for one direction of travel and capacity, safety, and operational constraints would not be addressed.

G. Alternate 11: Stacked Deck

Alternate 11 would involve construction of a new two-lane 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 Section 4(f) use of the Nice Bridge. Assuming that upper deck access ramps are

constructed to avoid use of Section 4(f) properties, there would be no use of the park properties in Virginia, however, access to Roseland Road would be limited to one direction along US 301.

Alternate 11 would impact environmental resources not protected by Section 4(f). Although environmental impacts would be caused primarily by upper deck access ramps as opposed to the US 301 mainline, the impacts would likely be similar to Alternate 3. Property impacts to NSF Dahlgren would also be similar to Alternate 3 (***Table 8b***).

The alternate would not include the addition of shoulders on the existing bridge and the steep grade of the existing bridge would be retained; therefore, it would not fully meet the needs of the project related to geometric inconsistencies, capacity limitations, operations and safety, incident and evacuation management, bridge maintenance, and accommodating the STRAHNET. Furthermore, the substructure of the existing bridge would need to be substantially strengthened in order to support the new structure. Alternate 11 would cost approximately $890 million.

H. Alternate 12: Three-lane Bridge with Movable Barrier

This alternate would include rehabilitating and widening the existing bridge and approach roadways to accommodate a reversible third lane. The third lane would be located south of the existing lanes to minimize impacts to Section 4(f) properties. 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 Section 4(f) use of the Nice Bridge. Impacts to the Administration Building, Dahlgren Wayside Park, Barnesfield Park, and the Potomac Gateway Welcome Center would be avoided.

Alternate 12 would impact environmental resources not protected by Section 4(f). These impacts, shown in ***Table 8b***, would be associated with the construction of an additional lane on US 301 approaching the bridge, and would be less than the impacts of Modified Alternate 7 (which includes construction of two new lanes on US 301 approaching the bridge). 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 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 cross section that is compatible with the existing roadway approaches in both Maryland and Virginia. The bridge width would not be sufficient to provide full shoulders, and the width would be inconsistent with the needs of the STRAHNET. The existing 3.75 percent grade and HS 20 loading would not be improved. Therefore the alternate would not meet the purpose and need. Alternate 12 would cost approximately $220 million. Ongoing activities required to operate the movable barrier would increase the long-term cost of this alternate.

I. Alternate 15: Replace Existing Bridge on Existing Alignment

Alternate 15 would remove the existing historic bridge and rebuild a new four-lane bridge in its place. This would result in a Section 4(f) use of the Nice Bridge (excluding the Administration Building), but would reduce impacts to park properties in Virginia.

Alternate 15 would impact environmental resources not protected by Section 4(f) (***Table 8b***). 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 less than the impacts of Modified Alternate 7 because the roadway would tie to the location of the existing bridge. Similar to Alternate 2, Alternate 15 would require right-of-way from NSF Dahlgren (approximately 3.1 acres).

Alternate 15 would meet the purpose and need for the project. Although the alternate would result in minimal park 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 roadway 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 County and King George County that rely on mobility over the existing bridge. Alternate 15 would cost approximately $620 million.

Conclusion of Least Harm Analysis

Based on the evaluation presented in this section, and in ***Table 9***, Modified Alternate 7 is the alternate that causes the least overall harm to Section 4(f) properties.

VIII. ALL POSSIBLE PLANNING TO MINIMIZE HARM

"All possible planning," as defined in 23 CFR 774.17, includes all reasonable measures identified in the Section 4(f) Evaluation to minimize harm and mitigate for adverse impacts and effects. Modified Alternate 7 minimizes harm to Section 4(f) resources by incorporating measures into the project that minimize the impact on, and the use of, the resources. This section summarizes these minimization measures and also provides a review of alignment shifts and mitigation.

To reduce the amount of encroachment that Modified Alternate 7 would have on park properties in Virginia, the distance between the existing Nice Bridge and the proposed new bridge to the north has been minimized to a distance that would allow typical bridge construction methods. Other minimization measures to reduce park impacts will continue to be evaluated during the design phase, including steeper side slopes, reduced median width, retaining walls, and mechanically stabilized embankments (MSE).

Modified Alternate 7 proposes a single two-way bike/ped path on the south side of the new bridge. Compared to constructing two one-way paths (as presented with Alternate 7 in the Draft Section 4(f) Evaluation), a single two-way path results in less encroachment into Dahlgren Wayside Park and reduces the project cost by approximately seven percent. Consideration was also given to placing the path on the north side of the new bridge. This would locate the path closer to the park and enhance park amenities; however, a path loop beneath the west end of the bridge could also potentially result in greater encroachment into the park. Consideration for placing the path on either the north or south side of the new bridge will continue during final design. Park and recreational facilities on either side of the bridge would be fully accessible by the bike/ped path, regardless of the path location.

Modified Alternate 7 was evaluated to determine the possibility of allowing the existing historic bridge to remain standing, rather than removing it. Two options were considered: 1) retaining the bridge and taking it out of service, and 2) retaining the bridge and maintaining it as a bike/ped path.

If the existing bridge were retained and taken out of service, future maintenance and rehabilitation would need to occur in accordance with AASHTO *Guidelines for Historic Bridge Rehabilitation and Replacement*. The relative severity of harm to the historic bridge would be reduced, likely resulting in no adverse effect. However, retention of the bridge would result in the following costs:

- Routine bridge maintenance (costs to repair structural defects discovered during annual inspections, torque bolts, and make routine repairs) is expected to incur an annual expense of $1.5 million (in 2009 dollars).
- Maintenance of the bridge deck to prevent debris falling into the river and navigational channel is expected to cost $65 million every 40 years (or an average annual cost of $1.6 million, in 2009 dollars).

- Painting of the structural steel and associated repair of corroded members is expected to cost $40 million every 20 years (or an average annual cost of $2 million, in 2009 dollars).
- Closing the bridge would also require installation of security measures (fencing and barricades) to prevent unauthorized vehicular and pedestrian access. In addition, if the new bridge should be designed with a larger horizontal navigational clearance, the US Coast Guard (USCG) would require installation of a fender system on the existing bridge to protect the two main piers on either side of the navigation channel. These measures would require a one-time expense estimated to cost $20.5 million.

The existing bridge could also be retained and serve as a bike/ped path. This would allow the bridge to continue to have a transportation function, which would make the annual costs to preserve the bridge more justifiable. This option would allow the proposed bike/ped path to be removed from Modified Alternate 7, which would result in construction cost savings that defray the maintenance cost of the existing bridge for a number of years. However, in addition to the costs described above, converting the existing bridge to a bike/ped trail would necessitate an initial outlay of $4.5 million to provide safety fencing along the entire bridge, and over $5 million annually for maintenance of the existing bridge for transportation purposes. The mounting cost of maintenance would eventually become too great a financial burden to justify preserving the existing bridge to accommodate a bicycle/pedestrian path. The costs of maintaining a bicycle/pedestrian trail would be substantially lower with the trail incorporated into the new bridge, since only one bridge substructure would have to be maintained.

The expenditures for retaining the bridge would substantially increase the project cost, and would be difficult to justify for a bridge that ceases to have a roadway function. Therefore, the cost of these measures is not a reasonable public expenditure in light of the adverse impacts of the project on the Section 4(f) property and the benefits of the measure to the property.

Modified Alternate 7 was also evaluated to determine the possibility of allowing the existing Potomac River Bridge Administration Building to remain standing. Three options were considered: 1) shift the US 301 approach curve in Maryland; 2) shift the US 301 approach in Maryland to the north; and 3) raise the US 301 approach in Maryland.

With Modified Alternate 7, the US 301 approach roadway on the Maryland side forms a 2,200-foot S-curve between the east bridge abutment and the intersection with Orland Park Road (***Appendix A***). If the S-curve were shifted approximately 1,600 feet westward, the US 301 roadway would pass to the south of the Administration Building, with a minor encroachment onto the boundary of the historic site. Assuming this option included the same profile and bridge length proposed with Modified Alternate 7, approximately 1,100 feet of the S-curve would be on the bridge structure. Incorporating a curve into the bridge structure would add to the cost and complexity of the design and construction. The cost would be further increased by the construction of more than 2,000 feet of temporary roadway that would be required for the purpose of maintaining traffic while the new approach roadway is constructed to a higher profile. Either a retaining wall approximately 15 feet high or a 300-foot longer bridge would be required to avoid encroachment of fill slopes onto the Administration Building.

Shifting the US 301 approach in Maryland northward to avoid the Administration Building would result in impacts to the Aqua-Land Marina and Campground (Aqua-Land), a low-income community. The northern shift would also result in noise impacts at the Aqua-Land and greater forest impact. Additional costs would be required as a result of a substantial increase in right-of-way acquisition, a longer relocation of Orland Park Road, and construction of an S-curve on the bridge.

The profile of Modified Alternate 7 could be raised approximately 25 feet higher than the profile of the existing bridge and approach pavement to allow US 301 to pass directly over the Administration

Building. Raising the profile would increase the visual and audible impacts of the bridge. In addition, the higher profile would widen the footprint of the embankment on the approach to the bridge, resulting in additional forest and stream impacts, a longer relocation of Orland Park Road, and additional property acquisition from Aqua-Land. Raising the profile would also require added costs for a 350-foot longer bridge than proposed in Modified Alternate 7, noise insulation to buffer the sound of traffic passing directly overhead, and a fire suppression system to safeguard the bridge against any potential fires in the Administration Building.

The existing Administration Building does not comply with modern building codes and Americans with Disabilities Act (ADA) standards. For the building to continue to function for the MDTA, extensive renovations would be needed to meet current building codes, and an expansion would be needed to meet current floor space requirements. The condition of the building, factored with costs to avoid the building, make measures to minimize harm not reasonable public expenditures in light of the adverse impacts of the project on the Section 4(f) property and the benefits of the measure to the property.

Mitigation has been incorporated into Modified Alternate 7 for Section 4(f) uses that cannot be avoided or further minimized. These mitigation measures have been determined through consultation with the officials having jurisdiction over each resource. For historic sites, the Draft Section 4(f) Evaluation anticipated that mitigation measures would be documented in a Memorandum of Agreement (MOA) per Section 106 of the National Historic Preservation Act. However, during consultation with the Maryland Historic Trust (MHT) and the Virginia Department of Historic Resources (VDHR), it was determined that a Programmatic Agreement (PA) would be more appropriate because of the unknown timing of design, construction, and mitigation implementation. For park properties, mitigation measures are documented in an executed MOA (***Appendix D***).

Mitigation measures in the PA, executed in July 2011, were developed in coordination with the Maryland State Historic Preservation Officer (SHPO) at MHT, and the Virginia SHPO at VDHR. The following stipulations are included in the PA:

- MDTA shall develop a plan to document and photograph the Nice Bridge and Administration Building. The plan for recordation will be implemented in accordance with the standards of the Historic American Engineering Record (HAER).
- MDTA shall consider interpretive signage to be mounted in public locations adjacent to and/or on the Nice Bridge.
- MDTA shall consider creating an interpretive display that illustrates the history of the Nice Bridge, to be installed in an interior public space near the Project area.
- MDTA shall establish an electronic informational site that describes the history of the Nice Bridge and Administration Building.
- MDTA shall establish the expanded limits of the archeological Area of Potential Effect (APE). MDTA shall ensure that archeological investigations of the expanded APE are conducted. Any archaeological sites identified within the expanded APE will be evaluated for the NRHP as part of Phase II investigations, in accordance with 36 CFR Part 800.4(c).
- MDTA will conduct a Phase I underwater archeological survey of the Potomac River within the APE. Any archaeological sites identified will be evaluated for the NRHP as part of Phase II investigations.
- MDTA shall ensure that a Phase II archeological investigation is conducted for the Nice Bridge Shell Midden Site (18CH0797) and the Barnesfield Plantation Site (44KG0171).

Mitigation measures in the MOA, executed in September 2011, were developed in coordination with VDOT, FHWA, NPS, VTC, the Virginia Department of Conservation and Recreation (DCR), and King George County, and include the following:

- Parkland mitigation needs will be determined based on final engineering design plans. The mitigation will satisfy no less that a 2:1 ratio of replacement parkland to impacted parkland.
- A site search will be conducted and coordinated with the signatories to the MOA. Riverfront properties will be considered.
- Replacement parkland for Barnesfield Park shall be of at least equal fair market value to the appraised value of the converted parkland, and of reasonably equivalent usefulness, recreational value, and location, to satisfy the requirements of Section 6(f) of the LWCF Act and the Federal Lands to Parks Program.
- MDTA shall prepare a landscape plan for the three properties in Virginia, with the intent of screening the highway from the properties. Noise mitigation will be considered at Dahlgren Wayside Park.
- MDTA shall construct a new public trail within Dahlgren Wayside Park that will provide access from the park to the bicycle/pedestrian path on the new bridge. The Dahlgren Wayside Park entrance and parking lot will be relocated. Hardscape features such as picnic tables, flagpoles, replacement boat landing, and barbecue grills shall be installed.
- Any unused portion of the Potomac Gateway Welcome Center property will be returned to King George County for park usage. This will not be considered replacement parkland.

Based on the evaluation presented in this section, Modified Alternate 7 includes all possible planning to minimize harm.

IX. COORDINATION

A. Officials with Jurisdiction over Parkland

As part of the Section 4(f) Evaluation, comments have been received from the official(s) with jurisdiction over each park resource (***Appendix B***). 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.

MDTA and FHWA met with all officials with jurisdiction over park properties and the US Navy on September 14, 2009 and November 16, 2009 to present the Draft Section 4(f) Evaluation; discuss the impact of each analyzed alternate on Section 4(f) properties; discuss MDTA's Preferred Alternate; and identify measures to mitigate park impacts. The outline for the MOA was initiated at these meetings. A copy of the executed MOA is included as ***Appendix D***.

1. US Department of Interior/National Park Service

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.

The Draft Section 4(f) Evaluation was provided to the US DOI in July 2009 for comment. By letter dated October 16, 2009, DOI agreed that Alternates 2, 3, and 6 are not feasible and prudent due to security requirements at NSF Dahlgren, and stated that Alternate 4 appears to minimize the project's use of park and recreation facilities, as well as impacts to the NRHP eligible Nice Bridge. DOI also agreed to consider approval of converting sections of the three properties for the project as long as the provisions of Section 4(f) are followed; the uses and impacts are minimized; and mitigation includes replacement lands of equal acreage, appraised value, and recreation usefulness. US DOI assisted with development of the MOA which provides mitigation of impacts to park properties and is a signatory to the MOA.

2. Virginia Department of Conservation and Recreation

DCR has a role in approving the LWCF Act land conversion at Barnesfield Park. DCR received the Draft Section 4(f) Evaluation in July 2009 and provided comments related to Section 6(f) and property replacement, which have been addressed in the MOA. DCR generally provided guidance on satisfying the Section 6(f) requirements, assisted with development of the MOA which provides mitigation of impacts to park properties and is a signatory to the MOA.

3. King George County

King George County is an official with jurisdiction over Barnesfield Park and Dahlgren Wayside Park. MDTA received preliminary information from King George County regarding these facilities and met with King George County officials on February 17, 2009, to discuss potential impacts to the parks. At this meeting, King George County agreed that the project would likely have no adverse effect to Barnesfield Park, and agreed with MDTA's intent to pursue a *de minimis* finding from FHWA for impacts to this resource. In November 2010, the King George County Board of Supervisors passed a resolution supporting Modified Alternate 7. On July 20, 2011, King George County agreed the project would not adversely affect the activities, features, and attributes of Barnesfield Park. King George County assisted with development of the MOA, which provides mitigation of impacts to park properties, and is a signatory to the MOA.

4. Virginia Tourism Corporation

VTC is an official with jurisdiction over the Potomac Gateway Welcome Center property. VTC participated in September 14, 2009 and November 16, 2009 meetings to discuss property impacts and received the Draft Section 4(f) Evaluation for review, but did not provide comments on the document. VTC is a signatory to the MOA.

B. State Historic Preservation Officers

Coordination has occurred with both MHT and VDHR throughout this study. Coordination efforts included determination of the preliminary APE; identification of historic properties in the APE; and review of the Draft Section 4(f) Evaluation. MHT and VDHR received the Draft Section 4(f) Evaluation for review, but did not provide comments on the document. In a June 17, 2010, letter, VDHR stated that they do not object to the choice of Modified Alternate 7 as MDTA's Preferred Alternate. MHT and VDHR also assisted with development of the Section 106 Programmatic Agreement (PA) and were signatories to the PA. The PA was executed by FHWA, MDTA, VDOT, MHT and VDHR in July 2011. A copy of the executed PA is included as ***Appendix C***.

C. Localities

The project is located within Charles County, Maryland and King George County, Virginia. Elected officials and staff from both counties have been involved with the project by providing information regarding parks and recreational resources. Staff from Charles County also served as a consulting party pursuant to Section 106 of the NHPA, and provided information regarding historic sites. Both counties

were afforded the opportunity to review the Draft Section 4(f) Evaluation, but did not provide comments. Testimony in support of the project was given by representatives of both counties during the public hearings held in September 2009.

D. Other

1. US Navy/Naval Support Facility Dahlgren

NSF Dahlgren has been involved with the project through meetings and reviews of environmental documents. NSF Dahlgren reviewed the preliminary and final Draft Section 4(f) Evaluation and commented at the public hearings in 2009, noting their support for the retained alternates which do not affect NSF Dahlgren. NSF Dahlgren supports the proposed action, Modified Alternate 7.

2. Public Comments

The public had an opportunity to comment during the public comment period for the EA/Draft Section 4(f) Evaluation (August 14, 2009 – October 9, 2009). Seven of the 167 comments received noted concerns with the likely impacts to parks from the project. The following persons submitted these comments:

Lauren Wanzer, Bel Alton, MD
Tracy Travers, King George, VA
Betty Grigg, King George, VA
Janet Michael, Mystic, CT
Bill & Susan Willis, King George, VA
Jean Graham, King George, VA
Nancy Delaplane, La Plata, MD

This Section 4(f) Evaluation was prepared pursuant to 23 CFR 774 and demonstrates consideration of measures to avoid or minimize the impacts to parks. ***Sections VI, VII, and VIII*** of this evaluation provide a detailed analysis of measures to avoid and minimize park impacts.

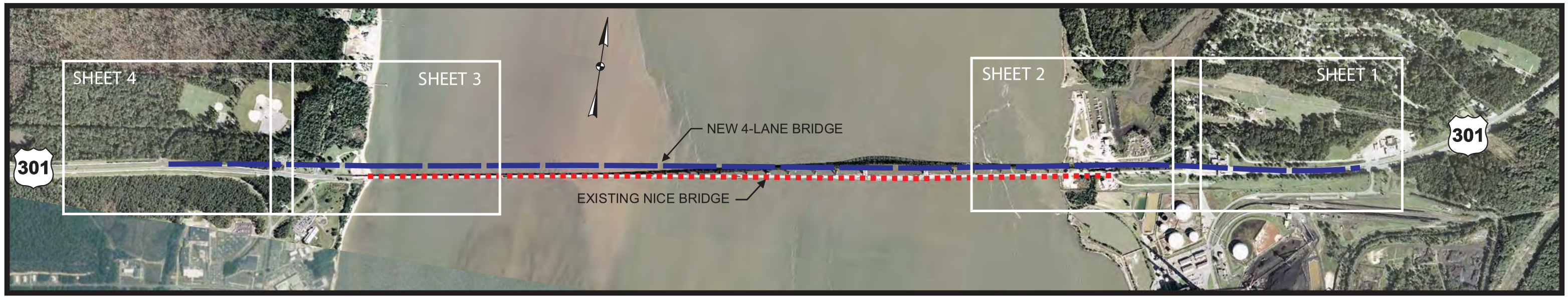
One commenter, Carl Steinhauser of Newburg, Maryland, noted that existing bridge is historic and should therefore be retained. Consideration of retaining the bridge for historic preservation purposes was considered and evaluated in ***Section VIII*** of this Final Section 4(f) Evaluation.

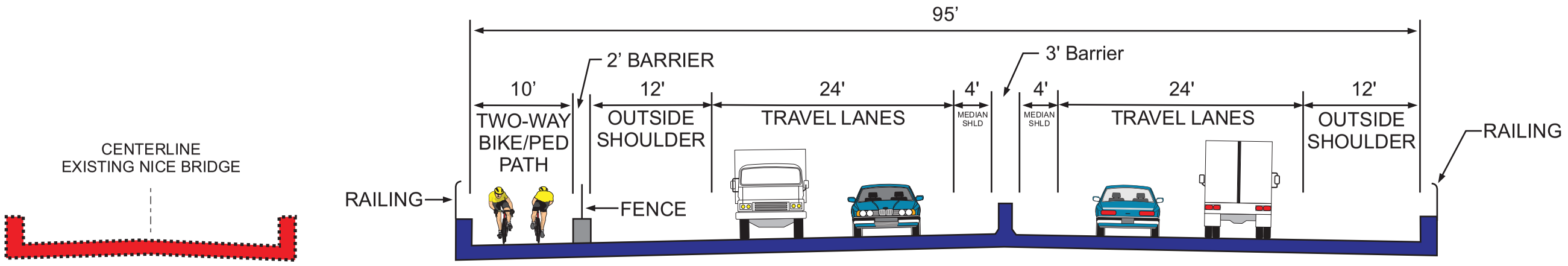
X. CONCLUSION

Based on the above considerations, FHWA has determined that there are no feasible and prudent alternatives to the use of Section 4(f) land from Dahlgren Wayside Park, Potomac Gateway Welcome Center, and the NRHP eligible Nice Bridge historic site, and that Modified Alternate 7 includes all possible planning to minimize harm resulting from the use of these properties. Furthermore, FHWA has determined that Modified Alternate 7 would have a *de minimis* impact on Barnesfield Park.

Appendix A

Plans for the
Selected Alternate (Modified Alternate 7)





MODIFIED ALTERNATE 7

Nice Bridge Improvement Project

Appendix A

Modified Alternate 7
Index Sheet

November 2010

Match Line – See Sheet 2 of 4

Aqua–Land Campground

MD–WUS 2

MD–WUS 3

MD–WUS 4

MD–WUS 5

MD–WUS 1

MD–WET 1

Nice Bridge
Campus Facilities

D

NRE

D

D

LOD

H

FP

Orland Park Road

301

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
- Bike / Pedestrian Traffic Flow

Nice Bridge Improvement Project

Appendix A November 2010

Preferred Alternate

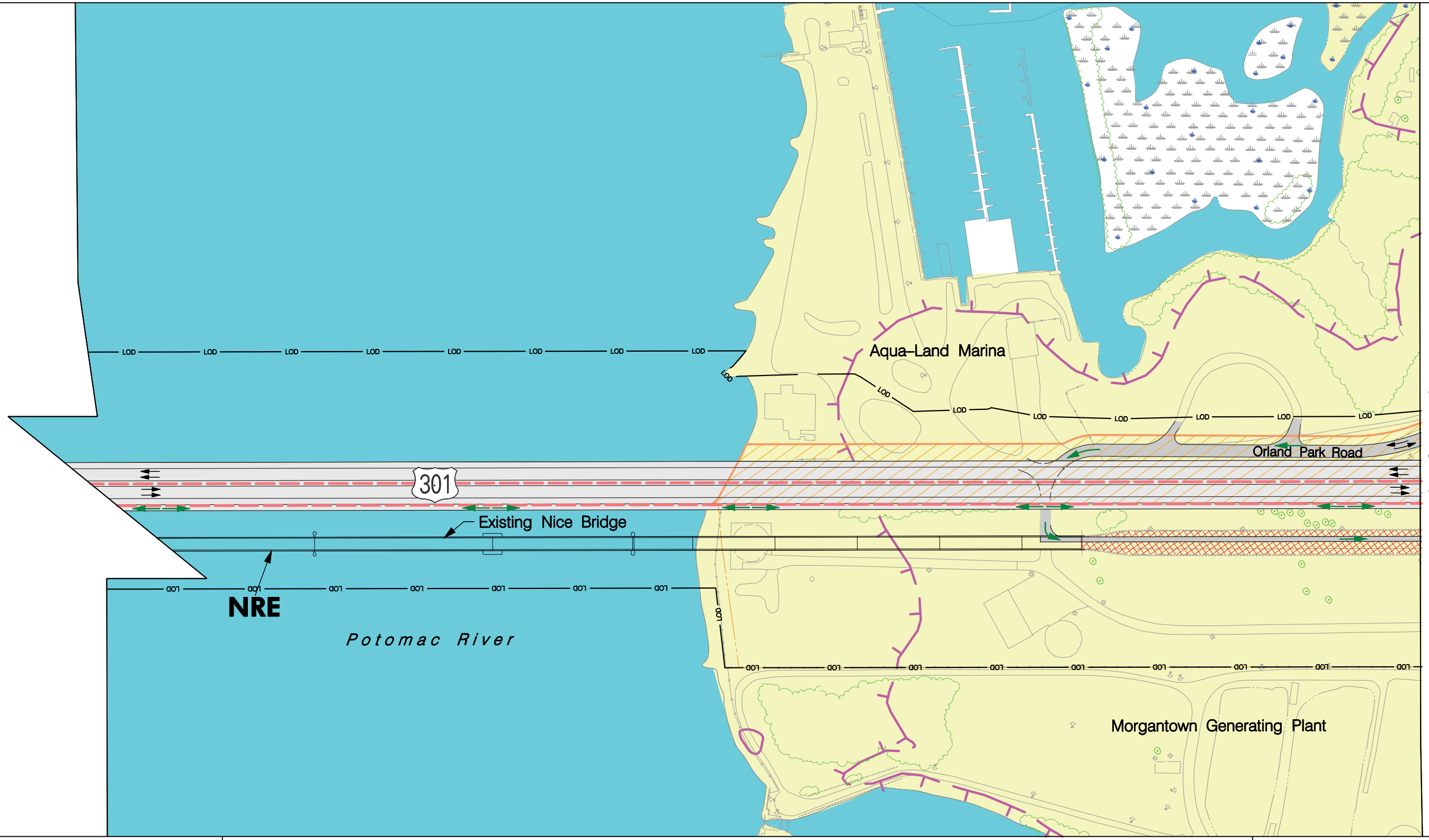
Modified Alternate 7 (Sheet 1 of 4)

US Department of Transportation Federal Highway Administration

Harry W. Nice Bridge Improvement Project

Maryland Transportation Authority

T:\Nice Bridge Study\Preferred Alternate\pHD-MODALT7-1.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
- Bike / Pedestrian Traffic Flow

Nice Bridge Improvement Project

Appendix A November 2010

Preferred Alternate

Modified Alternate 7 (Sheet 2 of 4)

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\Preferred Alternate\pHD-MODALT7-2.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

D

LOD

301

Existing Nice Bridge

NRE

Potomac River

VA–WET 7

VA–WET 6

Naval Support Facility Dahlgren

Match Line – See Sheet 4 of 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
- Bike / Pedestrian Traffic Flow

Nice Bridge Improvement Project

Appendix A November 2010

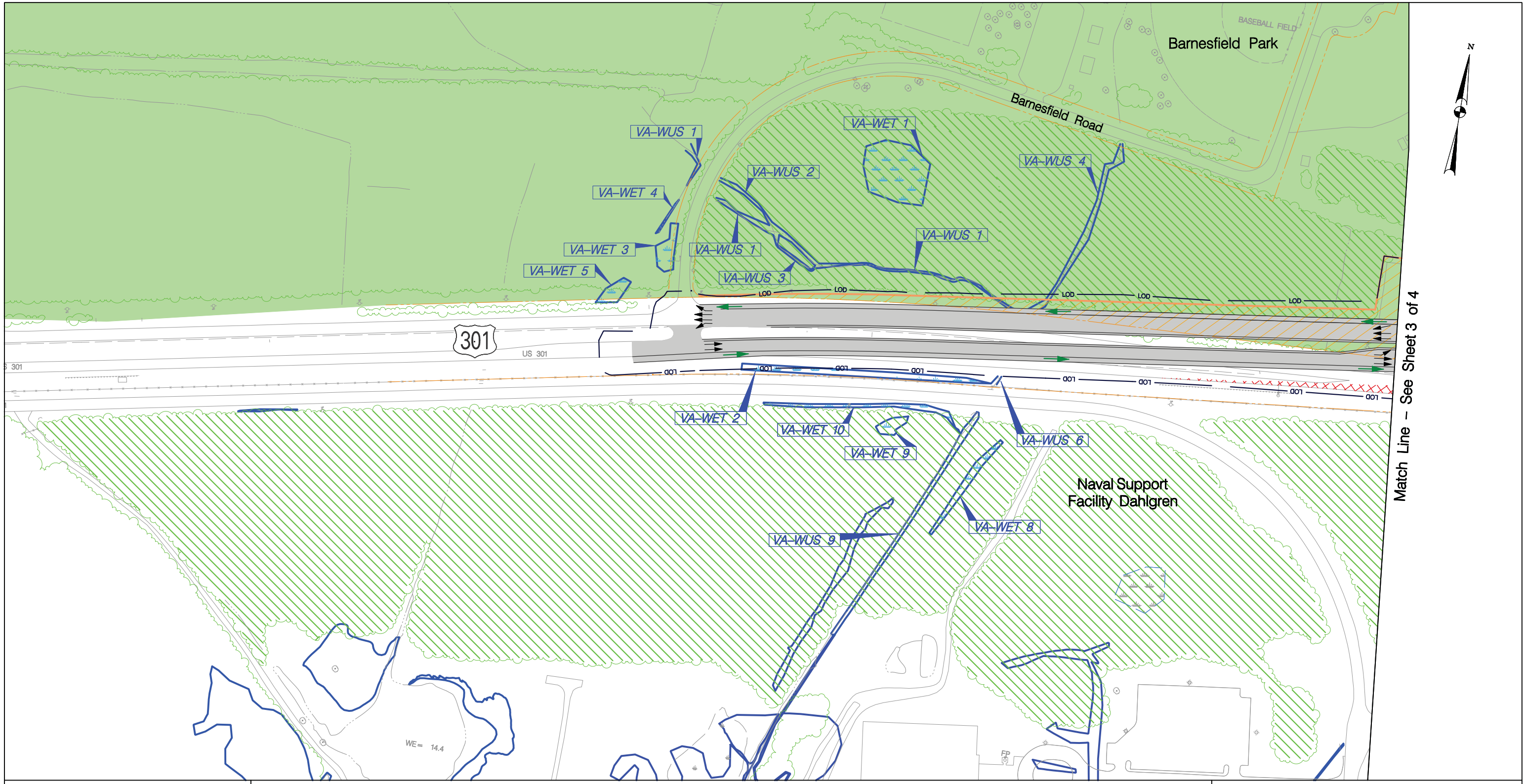
Preferred Alternate

Modified Alternate 7 (Sheet 3 of 4)

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\Preferred Alternate\pHD-MODALT7-3.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
- Bike / Pedestrian Traffic Flow

Nice Bridge Improvement Project

Appendix A November 2010

Preferred Alternate

Modified Alternate 7 (Sheet 4 of 4)

US Department of Transportation Federal Highway Administration

HARRY W. NICE BRIDGE IMPROVEMENT PROJECT

Maryland Transportation Authority

T:\Nice Bridge Study\Preferred Alternate\pHD-MODALT7-4.dgn

Appendix B

Agency Correspondence Related to Section 4(f)

United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, DC 20240

TAKE PRIDE IN AMERICA

OCT 16 2009

9043.1
PEP/NRM

ER 09/860

Mr. Glen Smith, Project Manager
Maryland Transportation Authority
2310 Broening Highway, Suite 125
Baltimore, Maryland 21224

Dear Mr. Smith:

This is in response to a request for the Department of the Interior's (Department) review and comment on the Draft Environmental Assessment and Section 4(f) Evaluation for the **Governor Harry W. Nice Memorial Bridge (Bridge) Improvement Project, Charles County, Maryland, and King George County, Virginia**. We offer the following comments on this project for your consideration.

The Department appreciates the level of detail presented in the draft document regarding public recreation and historic resources within the project planning area and the effect of the various project alternatives on those resources.

Three recreation facilities, Barnesfield Park, Dahlgren Wayside Park, and Potomac Gateway Visitor Center, and one historic site, the Bridge (determined eligible for the National Register of Historic Places), are identified as possibly being affected by this project. These properties are considered potential Section 4(f) properties because they may be used by various project alternatives. Dahlgren Wayside Park is important to the Department because it provides canoe- and raft-launching access to the Potomac and the Captain John Smith Chesapeake National Historic Trail.

In 1972, two adjacent parcels of the Naval Weapons Laboratory in Dahlgren, Virginia, were conveyed in perpetuity, at no cost by the Department, for public parks and public recreation purposes under the Federal Lands to Parks Program. A 160-acre parcel was conveyed in perpetuity to King George County and developed into Barnesfield Park. A 10.5-acre parcel was conveyed in perpituity to the Virginia Department of Highways for use as a public park and for recreation purposes. This 10.5-acre parcel was later conveyed to King George County in 1984, as an addition to Barnesfield Park with the approval of the Department. In 2008, King George County's request to transfer 2 acres of land for use as a Welcome Center was approved by the Department. In 1985, King George County received a $240,000 grant for Barnesfield Park improvements from the Land and Water Conservation Fund. The Bridge was constructed between 1938 and

1940, and determined eligible for listing on the National Register of Historic Places for its association with historic events as well as its distinctive method of construction.

Section 4(f) Comments

The Draft Environmental Assessment and Section 4(f) Evaluation for Bridge improvement identifies four potential Section 4(f) resources that may be used by various project alternatives under study, seven of which have been retained for detailed study.

The Department's review suggests that alternatives 2, 3, and 6, involving construction south of the existing Bridge, are not feasible and prudent due to security requirements of existing facilities at Naval Support Facility Dahlgren. Alternative 4 appears to minimize the project's use of the park and recreation facilities as well as impacts to the National Register-eligible Nice Bridge through rehabilitation. A *de minimis* impact determination for the use of Barnesfield Park seems appropriate due to the minimal impacts this project would have on the park, facilities, and their use. Although alternative 5 appears to define similar use of park properties, its impact on the Bridge is greater than that of alternative 4. Alternative 7 involves use of more acreage from Barnesfield Park and Dahlgren Wayside Park and includes removing the current Bridge from use. It is noted that although the Bridge may or may not be immediately scheduled for demolition, the outcome is likely to be demolition due to the continuing cost of maintaining the Bridge.

Section 6(f) Comments

Barnesfield Park is subject to Section 6(f) requirements due to a 1985 grant by the Land and Water Conservation Act of 1965(16 USC 460) as noted in the evaluation. Conversion of the use of portions of the park for this transportation project will require replacement lands of equal acreage, appraised value, and recreational usefulness as mitigation. The conversion process is to be initiated through the Virginia Department of Conservation and Recreation and requires National Park Service approval.

Mitigation Measures

Conversion from public recreation use of portions of Barnesfield Park, Dahlgren Wayside Park, and/or the Potomac Gateway Visitor Center is counter to the purposes for which these properties were transferred to the local and state governments. However, the Department will consider approval of converting sections of the three parks for the transportation project as long as the provisions of Section 4(f) are followed; the uses and impacts are minimized; and mitigation includes replacement lands of equal acreage, appraised value, and recreation usefulness. Section 4(f) Mitigation for the use of the Bridge shall be the same as that required under Section 106 of the National Historic Preservation Act and will probably include recordation of the Bridge as stipulated by the Virginia State Historic Preservation Officer.

Points of Contact

Points of Contact for the National Park Service Land and Water Conservation Fund Program and the Federal Lands to Parks Program follow. Please contact these program managers for any additional information needed.

Roy Cortez
Land and Water Conservation Program
Northeast Regional Office, National Park Service
200 Chestnut Street
Philadelphia, Pennsylvania 19106
215-597-2334

William H. Huie
Federal Lands to Parks Program
Southeast Regional Office, National Park Service
1924 Building, 100 Alabama Street, SW
Atlanta, Georgia. 30303-8701
404-507-5689

We appreciate the opportunity to provide these comments. We look forward to working with your agency on completion of planning for this important transportation project.

Sincerely,

for Willie R. Taylor
Director, Office of Environmental
Policy and Compliance

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street, Suite 326
Richmond, Virginia 23219-2010
(804) 786-2556 FAX (804) 371-7899

June 18, 2010

Erron Ramsey
Maryland Transportation Authority
Division of Capital Planning'
2310 Broening Highway
Baltimore, MD 21224

RE: Maryland Transportation Authority - Governor Harry W. Nice Memorial Bridge Improvement Project, **Modified Alternative 7**

Dear Mr. Ramsey:

The Department of Conservation and Recreations Division of Planning and Recreational Resources has reviewed the Nice Bride Improvement Project Modified Alternate 7 and finds that section VII: Mitigation Measures is well thought out. In V11.A starting on page 27-34, 16 potential replacement sites are identified, 5 of which are consistent with the *King George County Comprehensive Plan* recommendations. MTA and King George County should work together to identify the sites that are most satisfactory to King George County. When those selections are made King George County needs to contact DCR to have a site inspection of the properties to determine which are most suitable for the purposes of the LWCF. The site inspection by the LWCF administrator, SLO or ASLO is required as part of the conversion process.

We remind MTA that the Conversion of Use process of the LWCF should be initiated no less than one year prior to the desired start date for construction on the project and that King George County must be the entity that initiates the conversion with the Commonwealth. If you have any questions, please call Synthia Waymack at (804) 786-4379; email synthia.waymack@dcr.virginia.gov.

Comments made by the Division of Natural Heritage and the Division of the Chesapeake Bay Local Assistance are still appropriate. These comments were made in a letter dated November 20, 2007 addressed to Megan Blum. We continue to support coordination with the VDGIF regarding Bald Eagles.

Once the LWCF conversion process is underway, the DCR's Division of Natural Heritage should review the sites for Natural Heritage resources.

The remaining DCR divisions have no comments regarding the scope of this project. Thank you for the opportunity to comment.

Sincerely,
Roberta Rhur
Environmental Impact Review Coordinator

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 31, 2010

Mr. Glen Smith
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
Section 106 Effects Determination
Charles County, Maryland

Dear Mr. Smith:

Thank you for your recent letter dated June 7, 2010 and received by the Maryland Historical Trust (Trust) on June 8, 2010. The letter provided the Maryland Transportation Authority's (MdTA) determination of effect for the above-referenced undertaking, for review and concurrence. On August 11, 2010, we received additional documentation the MdTA prepared to supplement its submittal. The Trust reviewed the information provided pursuant to Section 106 of the National Historic Preservation Act (NHPA) of 1966 and the Maryland Historical Trust Act of 1985, State Finance and Procurement Article §§ 5A-325 and 5A-326 of the Annotated Code of Maryland. We offer the following comments and concurrence with MdTA's determination of effect for the project.

Historic Built Environment: The Trust reviewed the Supplemental Section 106 Eligibility and Effects Determination for the Pasquahanza Property (MIHP No. CH-32). We concur with the MdTA that the Pasquahanza Property is eligible for listing in the National Register of Historic Places under Criterion C as an intact example of early nineteenth century residential architecture in Maryland. In addition to Pasquahanza, previous cultural resource investigations resulted in the identification of three other National Register-eligible properties within the project's area of potential effects in Maryland. These resources include the Governor Harry W. Nice Memorial Bridge (MIHP No. CH-376, which also includes the Potomac River Bridge Administration Building), Marshall's Rest (MIHP No. CH-140) and Raven's Crest (MIHP No. CH-164). Based on the effects analysis provided in your correspondence, the Trust concurs that the Governor Harry W. Nice Memorial Bridge and its associated administration building are the only historic properties adversely affected by the preferred alternative (Modified Alternate 7).

Archeology: As noted in your submittal, the project's APE in Maryland contains a prehistoric terrestrial archeological site, 18CH797. The Trust previously agreed that Phase II archeological investigation of 18CH797 is warranted in order to conclusively determine the site's eligibility for the National Register of Historic Places. In addition, underwater archeological survey of the proposed project impact areas will be needed, as planning proceeds for the undertaking. MdTA should closely coordinate the implementation and review of the underwater survey and Phase II investigations with the Trust. Since MdTA has not yet completed the full identification and evaluation of archeological resources that may be impacted by construction of the preferred alternative and any ancillary actions, planning must assume that the project has the potential to affect archeological properties.

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

Continuing Section 106 Consultation: Based on the submitted documentation, the Trust concurs with MdTA's determination that the proposed undertaking will have an adverse effect on historic properties. The project's full effects on historic and archeological properties cannot yet be determined, pending the results of further archeological investigations and design development. If MdTA anticipates receiving federal approval for the project prior to the completion of Section 106 consultation, then the Trust agrees that it may be appropriate to develop a Programmatic Agreement (PA) for this undertaking, in accordance with 36 CFR 800.14(b)(1)(ii). The PA should contain provisions for implementing the underwater survey efforts, completing the Phase II evaluation of 18CH797 and 44KG171, undertaking additional cultural resource investigations of areas potentially impacted by ancillary activities and subsequent coordination to resolve and appropriately treat any adverse effects on historic properties. The PA would establish a process for completing the necessary investigations, considering project effects on National Register eligible resources, and resolving any adverse effects – through consultation with all the involved parties. We look forward to further coordination with MdTA and other involved parties to successfully complete the Section 106 review and execute a suitable agreement document for this undertaking, as planning proceeds for this undertaking.

If you have questions or need further assistance, please contact Beth Cole at 410-514-7631 / bcole@mdp.state.md.us or Tim Tamburrino (for historic built environment) at 410-514-7637 or ttamburrino@mdp.state.ms.us. Thank you for providing us this opportunity to comment.

Sincerely,

J. Rodney Little
Director / State Historic Preservation Officer

JRL / EJC/TJT/201002902
cc: Melissa Williams (MdTA)
Nick Blendy (FHWA)
Marc Holma (VDHR)
Steve Harman (USACE)
Cathy Thompson (Charles County Department of Planning and Growth Management)
Keith Colston (MCIA)

COMMONWEALTH of VIRGINIA

Department of Historic Resources

2801 Kensington Avenue, Richmond, Virginia 23221

Douglas W. Domenech
Secretary of Natural Resources

Kathleen S. Kilpatrick
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
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www.dhr.virginia.gov

21 June 2010

Ms Erron Ramsey
Maryland Transportation Authority
2310 Broening Highway
Suite 150
Baltimore, Maryland 21224

Re: The Governor Harry W. Nice Memorial Bridge Improvement Project, Section 106 Determination Letter, King George County, Virginia
DHR File # 2006-1393

Dear Ms Ramsey:

The Department of Historic Resources (DHR) has received your letter of 7 June 2010 regarding the above referenced project. In your correspondence you requested our concurrence on the determination that the preferred alternative (Alternate 7) for the replacement of the Governor Harry W. Nice Memorial Bridge will have an adverse effect on archaeological Site 44KG0171, a property that the Maryland Transportation Authority (MTA) presumes to be eligible for listing in the National Register of Historic Places.

As stated in our letter of 17 June 2010 regarding the MTA's request for the DHR's comments on the Draft Preferred Alternative/Conceptual Mitigation Document, we believe that it may be premature to begin a discussion of effect and development of a Memorandum of Agreement (MOA). This conclusion is based on our reading of the previous document sent to us for our review which appeared to leave many unanswered questions that require definitive answers before an MOA is written. For example, on page 21 of the Draft Preferred Alternative/Conceptual Mitigation Document it is stated that all three archaeological sites identified, two in Maryland and one in Virginia are assumed to be eligible for listing in the National Register of Historic Places, and that all three sites will be impacted by the current undertaking. However, the report goes on to state that the sites were only surveyed at the Phase IB level (which is not a survey stage recognized in Virginia) and that "the extent and significance of these archaeologieal deposits is currently unknown." Further, the report recommends that underwater archaeological investigation will be conducted prior to construction and that "the APE could potentially be expanded as a result of the following construction activities: clearing for construction staging areas, dredge material dewatering and disposal, barge berthing area, temporary construction haul roads, and utility relocation" (Page 21). From this it appears that identification of historic properties pursuant to 36 CFR Part 800.4(b) is not complete nor is the earlier process of defining the Area of Potential Effects (APE) as is described in 36 CFR Part 800.4(a)(1).

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Capital Region Office
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Preservation Office
P.O. Box 519
Stephens City, VA 22655
Tel: (540) 868-7029
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The DHR is additionally concerned that, according to the earlier report, a Phase II archaeological investigation is proposed as mitigation for the anticipated adverse effects of the undertaking. In Virginia Phase II survey is used to determine the National Register eligibility of a property and to define its boundaries. This level of investigation is intended as part of the identification process and, therefore, is inappropriate to offer as mitigation. Phase III data recovery is usually the level of survey included in project agreements as mitigation.

As we commented in our 17 June letter, the DHR recommends definitively defining the project APE now rather than waiting to determine if an expansion is necessary based on further archaeological survey. This will require expanding the APE to include those locations where the survey may be needed at a future date. If, as it sounds, identification of historic properties is not fully complete and, therefore, the full effects of the undertaking on historic properties cannot at this time be known, we suggest that a Programmatic Agreement (PA) is more appropriate than an MOA.

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

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

WAYNE COOPER, *President*
EDITH J. PATTERSON, Ed.D, *Vice President*
REUBEN B. COLLINS, II
SAMUEL N. GRAVES, Jr.
GARY V. HODGE

REBECCA B.. BRIDGETT, Ed.D.
County Administrator

JOYCE A. SCHMIDT
Chief of Staff

County Commissioners of Charles County

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September 17, 2009

Mr. Glen Smith
Project Manager
Gov. Harry W. Nice Bridge Improvement Project
Maryland Transportation Authority
Division of Capital Planning
2310 Broening Highway, Suite 125
Baltimore, Maryland 21224

Re: Public Hearing Testimony, September 17, 2009

Dear Mr. Smith:

The County Commissioners of Charles County, Maryland unanimously support the replacement and expansion of the Governor Harry W. Nice Bridge to provide a greatly needed capacity improvement for the region. The expansion of this bridge will alleviate the bottle-neck currently created by the four-lane approaches in both Maryland and Virginia tapering to two lanes. This expansion is needed on several accounts. With Charles County being located only 20 miles from the District of Columbia, US 301 would serve as a primary evacuation route for citizens as well as a primary access route for emergency support personnel and first responders to an incident. Second, the convergence of the 4-lanes of traffic into two lanes creates miles of crawling vehicle congestion and travel delays. Finally, the existing bridge is severely antiquated, with substandard travel lane widths, the lack of adequate shoulders for emergency pull-offs, the lack of bicycle and pedestrian accommodations, and the inability to maintain two lanes of travel in the event of accidents and during the performance of maintenance activities.

When the existing bridge was built in 1940, the approaching roads on each side were both two-lane roads. As both roads have been expanded over the last 69 years, the bridge has remained the same creating great issues for area travelers, including daily commuters to points north and

south. As traffic volumes have substantially increased over the last 20 years, there have been no bridge capacity improvements to accommodate this increase, resulting in back-ups that have extended over a mile in length. During the housing boom from 2002 to 2006, northern King George County experienced a substantial wave of residential development that commutes over the bridge daily to get to jobs in the Metropolitan Washington area. Much like the trends seen in other Washington D.C. suburbs, the commuting population continues to travel from points further from their destination, increasing traffic volumes being carried over this bridge.

Based on the Environmental Assessment and 4(f) documents presented by the Maryland Transportation Authority, impacts by any of the alternatives are minimal to Charles County. The County Commissioners appreciate the history and architecture of the existing Harry W. Nice Bridge, however, we recommend an alternative that replaces the existing structure in order to provide our citizens with a bridge that affords state-of-the-art safety in its design and lasting integrity in its construction. We believe replacement of the existing bridge will be a more prudent investment in limited state funds then to invest in a substandard facility that continues to need more frequent maintenance and significant rehabilitation. We understand the concern of impacts is greater to our neighbors in King George County, Virginia, both to the Dahlgren Naval Base as well as the adjacent Park Lands. While Charles County does not have a preference of a four lane Alternative to recommend based on impacts to our County, we recommend that the Authority select a four lane alternative that satisfies the parties affected on the Virginia side.

Following the selection of a four lane Alternative and the completion of the final environmental document for the project, it is paramount that the State allocate the necessary funds to move this project to final engineering design and construction. While we wish to share our sincere appreciation for the Authority's efforts to bring this project forward and complete the planning phase of this much needed project, it would be a wasted effort to place this work on the shelf and lose the investment and momentum generated by this progress. The Commissioners understand that competition for these funds is significant, including the recent addition of the Inter-County Connector (ICC) in Montgomery County. However, there is no single more significant piece of roadway infrastructure in Charles County for interstate travel, commerce, and safety than this bridge replacement. Aside from routine maintenance of the Nice Bridge, there has been no significant additional investment by the Maryland Transportation Authority in Charles County since 1940. To that point, we strongly urge the Authority to fund the next phases of this project and complete this crucial piece of interstate infrastructure improvement.

Should you have any questions please contact Mr. Jason Groth, Chief of Resource and Infrastructure Management by calling (301) 396-5814 or by email to grothj@charlescounty.org.

Very truly,

COUNTY COMMISSIONERS OF
CHARLES COUNTY, MARYLAND

Wayne Cooper, *President*

Edith J. Patterson, *Vice President*

Samuel N. Graves, Jr.

Reuben B. Collins, II

Gary V. Hodge

cc: Dr. Rebecca Bridgett, County Administrator
Mr. Roy Hancock, Assistant County Administrator
Mr. Chuck Beall, Director of Planning & Growth Management
Mr. Steven Ball, Planning Director
Mr. Jason Groth, Chief of Resource & Infrastructure Mgmt

CEDELL BROOKS, JR.
Shiloh Election District

JOSEPH W. GRZEIKA
James Madison Election District

JOHN P. LoBUGLIO
James Monroe Election District

JAMES F. MULLEN
Dahlgren Election District

DALE W. SISSON, JR.
At-Large Election District

King George County, Virginia

COUNTY ADMINISTRATOR
A. TRAVIS QUESENBERRY, P.E.
10459 Courthouse Drive, Suite 200
King George, VA 22485
Telephone: (540)775-9181
FAX: (540)775-5248
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At its meeting of Tuesday, November 2, 2010, the King George County Board of Supervisors adopted the following resolution on a motion by Joseph W. Grzeika, seconded by John P. LoBuglio, and carried unanimously:

RESOLUTION OF THE KING GEORGE COUNTY BOARD OF SUPERVISORS

WHEREAS, on September 16, 2008 the King George County Board of Supervisors adopted a joint resolution with the Charles County Commissioners which resolved, among other actions, that the Maryland Transportation Authority expedite the selection of a 4-lane "alternate", consistent with the southbound and northbound approaches of the U.S. 301 highway to the Harry W. Nice Memorial Bridge; and,

WHEREAS, on September 17 and 24, 2009 the Maryland Transportation Authority conducted public hearings in Newburg, Maryland and Dahlgren, Virginia, respectively, on the results of detailed studies for six build alternates for the Nice Bridge Improvement Project, each of which provided 4-travel lanes on a U.S. 301 highway crossing of the Potomac River; and,

WHEREAS, at the September 24, 2009 public hearing for the project, members of the King George County Board of Supervisors provided testimony that the Board recommends and supports either of the of the new four-lane options and understands the practicality and the impacts on the southerly side of the U.S. 301 highway; and,

WHEREAS, upon consideration of comments from the public, elected officials, environmental agencies, and affected property owners received during the public hearing comment period, the Maryland Transportation Authority identified Modified Alternate 7 as the Preferred Alternate for the project; and,

WHEREAS, Modified Alternate 7 consists of the installation of a new four-lane bridge north of the existing bridge, which would provide four 12-foot travel lanes, two in each direction; two 4-foot median shoulders; two 12-foot outside shoulders; a median barrier to separate opposing traffic flow; a single, barrier separated, two-way, 10-foot wide bicycle/pedestrian path along the south side of the new bridge; and removal of the existing bridge; and,

WHEREAS, on September 29, 2010 the Federal Highway Administration concurred with the Maryland Transportation Authority on the material presented in the Preferred Alternate and Conceptual Mitigation Package for the project, which identified Modified Alternate 7 as the Preferred Alternate and described conceptual mitigation approaches to the environmental impacts resulting from the Preferred Alternate.

NOW THEREFORE BE IT RESOLVED, the King George County Board of Supervisors does hereby agree and support the Maryland Transportation Authority's identified Preferred Alternate, Modified Alternate 7, for the Nice Bridge Improvement Project.

A copy teste:

A. Travis Quesenberry, P.E.
County Administrator

Maryland
Transportation
Authority

Martin O'Malley
Governor

Anthony Brown
Lt. Governor

Beverley K. Swaim-Staley
Chairman

Peter J. Basso
Rev. Dr. William C. Calhoun, Sr.
Mary Beyer Halsey
Louise P. Hoblitzell
Richard C. Mike Lewin
A. Bradley Mims
Michael J. Whitson
Walter E. Woodford, Jr., P.E.

Randolph P. Brown, P.E.
Acting Executive Secretary

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MARYLAND
Green Registry
MEMBER

July 1, 2011

Mr. Travis Quesenberry
King George County
County Administrator
10459 Courthouse Drive, Suite 200
King George, VA 22485

SUBJECT: Governor Harry W. Nice Memorial Bridge Improvement Project Impact to Barnesfield Park

Dear Mr. Quesenberry:

The Maryland Transportation Authority (MDTA), in cooperation with the Federal Highway Administration (FHWA) and the Virginia Department of Transportation (VDOT), is completing environmental and engineering studies to improve the Governor Harry W. Nice Memorial Bridge (Nice Bridge) crossing over the Potomac River as well as the US 301 approach roadways in Charles County, Maryland and King George County, Virginia (see **Attachment A**). Modified Alternate 7, the Preferred Alternate for the improvement project, would increase the capacity of the Potomac River crossing from the existing two vehicle lanes to four vehicle lanes and add a barrier-separated bicycle/pedestrian path. The Preferred Alternate would impact two parks in King George County: Dahlgren Wayside Park and Barnesfield Park (see **Attachment B**). In July 2009, MDTA prepared an Environmental Assessment and Draft Section 4(f) Evaluation which describes the effects of the Nice Bridge improvement project to these parks.

The purpose of this letter is to request concurrence from King George County that the Nice Bridge project would not adversely affect the activities, features and attributes that make the Barnesfield Park property eligible for protection under Section 4(f) of the US Department of Transportation Act. If King George County concurs with this determination, it is MDTA's intent to request a Section 4(f) *de minimis* finding for project impacts to this park from FHWA per 23 CFR 774.3(b).

As described in the Draft Section 4(f) Evaluation, the Preferred Alternate would impact approximately 2.2 acres of the 146.5-acre Barnesfield Park adjacent to the north side of US 301. The Preferred Alternate would require acquisition of a small parking area west of the Potomac Gateway Welcome Center and a sliver of land adjacent to US 301 that extends to the Barnesfield Road park entrance road (see **Attachment B**). The project would not affect park recreational activities or facilities that support recreation such as ball fields, restroom facilities, or concessions. The project would not inhibit or constrain access to the park.

Mitigation for impacts to Barnesfield Park as a result of the Nice Bridge Improvement Project would be addressed in accordance with the Memorandum of Agreement (MOA), finalized in June 2011 among MDTA, FHWA, VDOT, the National Park Service (NPS), Virginia Tourism Corporation (VTC), Virginia Department of Conservation and Recreation (VDCR), and King George County (see attached). The MOA details the selection and acquisition processes to provide replacement parkland, as well as proposed park enhancement and landscaping that will

be provided for the area of Barnesfield Park adjacent to the relocated US 301 approach roadway. Per the MOA, parkland would be replaced in accordance with Section 6(f) of the Land and Water Conservation Fund (LWCF) Act.

If you concur with this assessment, please sign below and return this letter no later than July 20, 2011 via e-mail to gsmith2@mdta.state.md.us. Please call me at 410-537-5665 if you have any questions or need additional information.

Sincerely,

Glen Smith

Glen Smith
Project Manager
Maryland Transportation Authority

Attachments: Attachment A – Project Location Map and Plans of the Preferred Alternate
Attachment B – Virginia Parklands Map
Parks Memorandum of Agreement (9 copies)

cc: Mr. Tim Smith, Virginia Department of Parks and Recreation

CONCURRENCE:

King George County concurs that the use of land from Barnesfield Park for the MDTA Nice Bridge Improvement Project will not adversely affect the activities, features, and attributes of the park. This concurrence does not constitute an endorsement of the project or conveyance of any temporary or permanent interests in or access to parklands. This concurrence is provided with the understanding that 1) further project design information is to be provided to King George County by MDTA during project design per the Memorandum of Agreement finalized in June 2011 by MDTA, FHWA, VDOT, NPS, VTC, VDCR and King George County, and 2) further consultation with King George County will be undertaken by MDTA to ensure prior to granting of any temporary or permanent property interests that harm to the park property by the project will be minimized and the conditions upon which this concurrence is based have not changed.

Signature

7/20/11
Date

A. Travis Quesenberry
Printed Name

County Administrator
Title

King George County, Virginia

COUNTY ADMINISTRATOR
10459 Courthouse Drive, Suite 200
King George, Va. 22485
Telephone: (540) 775-9181
Fax: (540) 775-5248

A. TRAVIS QUESENBERRY, P.E.
COUNTY ADMINISTRATOR

July 20, 2011

Mr. Glen Smith, Project Manager
Maryland Transportation Authority
2310 Broening Highway, Suite 150
Baltimore, Md. 21224

Re: Governor Harry W. Nice Bridge Improvement Project
Project Impact to Barnesfield Park

Dear Mr. Smith,

At its meeting on July 19, 2011 the King George County Board of Supervisors authorized me to sign the letter concurring that the use of land from Barnesfield Park for the MDTA Nice Bridge Improvement Project will not adversely affect the activities, features, and attributes of the park.

Please do not hesitate to contact me if you have any questions.

Sincerely,

A. Travis Quesenberry, P.E.
County Administrator

Appendix C

Section 106 Programmatic Agreement

PROGRAMMATIC AGREEMENT

Among the

**FEDERAL HIGHWAY ADMINISTRATION,
MARYLAND TRANSPORTATION AUTHORITY,
VIRGINIA DEPARTMENT OF TRANSPORTATION,
MARYLAND STATE HISTORIC PRESERVATION OFFICER,**

and

VIRGINIA STATE HISTORIC PRESERVATION OFFICER

Regarding the

**US 301 OVER POTOMAC RIVER
GOVERNOR HARRY W. NICE MEMORIAL BRIDGE IMPROVEMENT PROJECT in
CHARLES COUNTY, MARYLAND AND KING GEORGE COUNTY, VIRGINIA**

WHEREAS, the Maryland Transportation Authority (**MDTA**), in cooperation with the Virginia Department of Transportation (**VDOT**) and Federal Highway Administration (**FHWA**), proposes to construct a new bridge and approach roadways that would carry US 301 over the Potomac River and replace the existing Governor Harry W. Nice Memorial Bridge (**Nice Bridge**) (MDTA Project No. NB543-000-006), herein referred to as the Project; and

WHEREAS, federal funding administered through the FHWA has been identified by MDTA as a potential funding source for the Project, and FHWA is functioning as the lead federal agency; and

WHEREAS, FHWA has determined the provision of federal financial assistance for the Project would be an undertaking as defined in 36 CFR Part 800.16(y) which is subject to 36 CFR Part 800, the regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f); and

WHEREAS, the FHWA DelMar Division is the lead FHWA office for the Project and is responsible for ensuring the stipulations are carried out, and

WHEREAS, pursuant to Section 9 of the Rivers and Harbors Act of 1899 (33 U.S.C. 401 and 403) and the General Bridge Act of 1946, a Coast Guard Bridge Permit will likely be required from the U.S. Coast Guard for this Project, and pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 401 and 403) and Section 404 of the Clean Water Act of 1973 (33 U.S.C. 1344), a Department of the Army permit will likely be required from the U.S. Army Corps of Engineers (**Corps**) for this Project. Therefore, FHWA has assumed the role as lead federal agency to fulfill federal responsibilities under Section 106 of the National Historic Preservation Act (16 U.S.C. 470); and

WHEREAS, this Project is located in both Maryland and Virginia, and therefore involves agencies, organizations, and members of the public in both states; and

WHEREAS, FHWA has authorized MDTA to conduct consultation with the Maryland State Historic Preservation Officer (**MD SHPO**) and Virginia State Historic Preservation Officer (**VA SHPO**) for the Project on its behalf pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. 470f), including the initiation of the Section 106 process, identification of historic properties, and assessment of adverse effects; and

WHEREAS, following consideration of the Environmental Assessment/Draft Section 4(f) Evaluation completed for the Project in July 2009, and comments from the public, elected officials, environmental agencies, and affected property owners received on the document and other information presented at public hearings in September 2009, MDTA identified Modified Alternate 7 as the Project's Preferred Alternate, which would construct a new four-lane bridge, with a bicycle/pedestrian lane, north of the existing Nice Bridge, as shown in **Attachment A**; and

WHEREAS, MDTA, in cooperation with FHWA and in consultation with the MD SHPO and VA SHPO, has defined the Project's preliminary Area of Potential Effects (**APE**) for historic architecture to include areas subject to direct impacts as well as geographic areas within the viewshed of the Project (see **Attachment B**); and

WHEREAS, MDTA, in cooperation with FHWA and in consultation with the MD SHPO and VA SHPO, completed Maryland's *Historic Resources Survey and Determination of Eligibility Report* (October 2008) and the *Virginia Historic Resources Survey and Identification Report* (October 2008) to identify and evaluate all architectural historic properties within the Project's preliminary APE in Maryland and Virginia; and

WHEREAS, MDTA, in cooperation with FHWA and in consultation with the MD SHPO, has determined that four Maryland architectural properties located within the preliminary APE are eligible for listing on the National Register of Historic Places (**NRHP**): Governor Harry W. Nice Memorial Bridge (including the Potomac River Bridge Administration Building) (CH-376), Marshall's Rest (CH-140), Ravens Crest (CH-164), and Pasquahanza (CH-32); and

WHEREAS, MDTA, in cooperation with FHWA and in consultation with the VA SHPO, has determined that one Virginia architectural property located within the preliminary APE is eligible for listing on the NRHP: Naval Surface Warfare Center, Dahlgren Laboratory (consisting of four separate historic districts) (048-0104); and

WHEREAS, as part of the Preferred Alternate, the existing Nice Bridge and the associated Potomac River Bridge Administration Building (**Administration Building**) would be removed, thus likely constituting an adverse effect (36 CFR Part 800.5); and

WHEREAS, MDTA, in cooperation with FHWA, does not expect any other architectural historic properties within the preliminary APE would have their character defining features diminished by the Project; and

WHEREAS, MDTA, in cooperation with FHWA and in consultation with the MD SHPO and VA SHPO, established a preliminary archaeological APE (see **Attachment B**); and

WHEREAS, MDTA, in cooperation with FHWA and in consultation with the MD SHPO and VA SHPO, completed Phase IA and IB terrestrial archaeological studies for Maryland and Virginia [*Maryland Archeological Phase IA Memorandum* (October, 2008), *Virginia Archeological Phase IA Memorandum* (October, 2008), *Phase IB Archeological Investigations in Maryland for the Governor Harry W. Nice Bridge Improvement Project* (February, 2010), and *Phase IB Archaeological Investigations in Virginia for the Governor Harry W. Nice Bridge Improvement Project* (February, 2010)] using the preliminary archaeological APE; and

WHEREAS, underwater archeological investigations have not yet been conducted within part of the preliminary APE; and

WHEREAS, MDTA, in cooperation with FHWA and in consultation with the MD SHPO, has determined that the Nice Bridge Shell Midden Site (18CH0797) in Maryland may be eligible for inclusion on the NRHP under Criterion D; and

WHEREAS, MDTA, in cooperation with FHWA and in consultation with the VA SHPO, has determined that the Barnesfield Plantation Site (44KG0171) in Virginia may be eligible for inclusion on the NRHP under Criterion D; and

WHEREAS, MDTA, in cooperation with FHWA, has phased the final identification, evaluation, and determination of effects on terrestrial and underwater archeological resources pursuant to 36 CFR Part 800.4(b)(2) and 36 CFR Part 800.5(a)(3) pending the completion and results of ongoing archeological identification and evaluation studies conducted pursuant to this Programmatic Agreement (**PA**); and

WHEREAS, the Project's APE has not yet been finalized because of the potential expansion of the Project area due to factors such as construction staging areas, dredge material dewatering and disposal sites, barge berthing area, temporary construction haul roads, utility relocation, and mitigation sites. These expanded limits cannot be determined by MDTA until the bridge type is selected and additional areas of impact are incorporated into the bridge design. Therefore, although preliminary cultural resources studies were done, all investigations have not yet been completed for the Nice Bridge and effects on historic properties cannot be fully finalized prior to approval of this undertaking; and

WHEREAS, because the Project design and construction will take place at an unspecified future date, the Project's APE is not yet finalized, and MDTA has not completed the studies necessary to identify all potential properties meeting the criteria for listing on the NRHP, MDTA has elected to comply with Section 106 of the National Historic Preservation Act through execution and implementation of this PA pursuant to 36 CFR Part 800.14(b)(1)(ii); and

WHEREAS, FHWA notified the Advisory Council on Historic Preservation (**ACHP**) of the Project's potential adverse effect on historic properties and its intent to use a PA for this Project pursuant to 36 CFR Part 800.14(b)(1)(ii), and ACHP has chosen not to participate in the consultation by letter dated January 6, 2011; and

WHEREAS, MDTA, participating in the consultation pursuant to 36 CFR Part 800.2(c)(4), has responsibility for implementing the stipulations under this PA, and FHWA has invited MDTA to be a signatory to this PA pursuant to 36 CFR Part 800.6(c)(2)(iii); and

WHEREAS, VDOT has participated in this consultation pursuant to 36 CFR Part 800.2(c)(4), and FHWA has invited VDOT to be a signatory to this PA pursuant to 36 CFR Part 800.6(c)(2)(iii); and

WHEREAS, FHWA and MDTA invited the following eighteen federally recognized tribes to participate as consulting parties: Absentee-Shawnee Tribe of Indians of Oklahoma, Catawba Indian Nation, Cayuga Nation of New York, Cherokee Nation, Delaware Nation, Eastern Band of the Cherokee Indians, Eastern Shawnee Tribe, Oneida Indian Nation, Oneida Tribe of Indians of Wisconsin, Onondaga Indian Nation, Saint Regis Mohawk Tribe, Seneca-Cayunga Tribe of Oklahoma, Seneca Nation of Indians, Shawnee Tribe, Stockbridge Munsee Community of Wisconsin, Tonawanda Band of Seneca, Tuscarora Nation, and United Keetoowah Band of Cherokee Indians. Of these tribes only the Oneida Indian Nation responded. The tribe requested the opportunity to review the results of any additional cultural resources studies for this project, and to be notified in the event of the inadvertent discovery of human remains or if native cultural materials are encountered during any later phases of the Project; and

WHEREAS, FHWA and MDTA invited both the Maryland Commission on Indian Affairs (**MCIA**) and Virginia Council on Indians (**VCI**) to participate as consulting parties. MCIA and VCI requested to participate as a consulting party, and FHWA and MDTA have invited MCIA and VCI to concur with this PA pursuant to 36 CFR Part 800.14(b)(2)(i); and

WHEREAS, FHWA and MDTA invited the following tribal organizations to participate as consulting parties: three bands of the Piscataway tribe in Southern Maryland (i.e., Piscataway Indian Nation, Inc., Piscataway-Conoy Confederacy and Subtribes, Inc., and the Cedarville Band of Piscataway Indians). None of these tribal organizations responded or requested to participate as consulting parties;

WHEREAS, FHWA and MDTA have consulted with the following seven Section 106 consulting parties, pursuant to 36 CFR Part 800.2(c)(5): Charles County Government, Planning and Growth Management; The Northern Neck of Virginia Historical Society; MCIA; Town of Colonial Beach; Mr. Joseph Knott; Mr. Jerry Volman; and Mr. David Rose regarding the effects of the Project on historic properties and have invited these other consulting parties to concur with this PA pursuant to 36 CFR Part 800.6(c)(3); and

WHEREAS, MDTA, in cooperation with FHWA, has afforded the public an opportunity to comment on the effect of the Project on historic properties. A series of Public Workshops and Hearings were held from 2007 through 2009 where the public commented on historic properties:

- Public Workshop, May 31, 2007 in Newburg, Maryland
- Public Workshop, June 7, 2007 in Dahlgren, Virginia
- Public Hearing, September 17, 2009 in Newburg Maryland
- Public Hearing, September 24, 2009 in Dahlgren, Virginia; and

WHEREAS, throughout the Project planning and consultation process, FHWA and MDTA, in consultation with the MD SHPO, VA SHPO and other consulting parties, have considered alternatives that avoid or minimize the adverse effects that the Project will have on historic properties; and

WHEREAS, the MD SHPO agrees that fulfillment of the terms of this PA will satisfy the responsibilities of MDTA and any Maryland state agency under the requirements of the Maryland State historic preservation law (§§ 5A-325 and 5A-326 of the State Finance and Procurement Article, Annotated Code of Maryland) for any components of the Project that require licensing, permitting, and/or funding actions from Maryland state agencies;

NOW, THEREFORE, the signatories (FHWA-DelMar Division, FHWA-Virginia Division, MDTA, VDOT, MD SHPO, and VA SHPO) agree that the Project shall be implemented in accordance with the following stipulations in order to take into account the effects of the undertaking on historic properties.

STIPULATIONS

FHWA shall ensure that the following measures are carried out:

I. Roles and Responsibilities

A. The signatories and other consulting parties to this PA shall have the opportunity to review materials and issues resulting from the stipulations in this PA that are relevant to their state of interest. This means that the MD SHPO shall only be responsible for review and comment of materials and issues affecting historic properties in Maryland, while the VA SHPO shall only be responsible for review and comment of materials and issues affecting historic properties in Virginia. It is assumed that MDTA and VDOT shall only review materials and issues located within their respective rights-of-way or proposed rights-of-way.

B. Regarding issues related to prehistoric and historic Native American sites in Maryland, MDTA shall submit its findings to the MCIA, and for prehistoric and historic Native American sites in Virginia, MDTA shall submit its findings to VCI, for their respective review and comment.

C. Only the signatories have active roles in Stipulations XV-XVII (Amendments, Termination, and Duration).

D. Excluding Stipulations XII and XIII (Post-Review Discoveries and Treatment of Human Remains) and the administrative stipulations, MDTA shall provide a draft of products prepared pursuant to this PA to the signatories and other consulting parties for review and comment. The consulting parties shall have thirty calendar days upon receipt of complete information to review and comment on the products provided. MDTA shall address those comments received within the thirty day review period prior to developing the final product. MDTA may assume that the parties not responding within the thirty day review period have no comment.

II. Treatment of the Governor Harry W. Nice Memorial Bridge

A. <u>Documentation and Photographic Records</u>

1. Prior to removal of the Nice Bridge and Administration Building, MDTA shall develop a recordation plan to document and photograph the historic property. The draft recordation plan will be provided to the MD SHPO for review and comment per Stipulation I.D.

2. As part of the recordation plan development, the MDTA shall contact the National Park Service (**NPS**) Northeast Region Historic American Engineering Record (**HAER**) office to determine what level and kind of recordation is required for the property. Unless otherwise agreed to by NPS and the MD SHPO, the MDTA shall ensure that all documentation is completed and accepted by HABS/HAER and that copies of this documentation are provided to the MD SHPO and appropriate local archives designated by the MD SHPO prior to demolition.

3. All written, graphic and photographic documentation submitted to the MD SHPO must include the Maryland Inventory of Historic Properties (**MIHP**) number

associated with the documented resources. All photographic documentation in the HAER submittal to the MD SHPO must be prepared in accordance with current MD SHPO guidelines. The photographs shall depict significant aspects of the Nice Bridge and the Administration Building, as well as their historic settings. Appropriate historic photographs and original plans of the Nice Bridge and Administration Building shall be included in the photographic documentation, should they be available. The images shall be suitable for use in public presentations and/or exhibits.

4. In developing the documentation and photographic recordation, MDTA will make a comprehensive effort to research the Nice Bridge, including the Administration Building, at repositories such as MDTA, MD SHPO, Historical Society of Charles County, Maryland Historical Society, Maryland State Archives, Maryland State Highway Administration, and local libraries.

5. Draft products, such as a copy of the written history and scanned copies of the photographic documentation, shall be reviewed by all relevant parties per Stipulation I.D.

6. The MDTA shall ensure that the documentation is accepted by MD SHPO prior to demolition. If the MD SHPO does not provide comments on the recordation package within thirty (30) calendar days of receipt, the MDTA may assume that the MD SHPO has no comments on the submittal.

B. Interpretive Signage

1. Using the information obtained from the documentation in Stipulation II.A.3, as well as any additional research conducted at the repositories described under Stipulation II.A.4, MDTA shall mount interpretive signage in public locations adjacent to and/or on the new Nice Bridge. Signage would mainly be located along the bicycle/pedestrian lane, mounted at regular intervals on the bridge, as well as at the bridge approaches. MDTA would be responsible for the installation and maintenance of the signage. In consultation with the MD SHPO, VA SHPO, and other consulting parties, MDTA shall carefully evaluate public interpretation options and select those that are reasonable, have a good opportunity to reach a broad range of the public, and correlate with other aspects of the Project, such as the bicycle/pedestrian lane.

2. The interpretive signage shall provide such information as a brief history of the Nice Bridge and Administration Building, the reasons for the bridge's replacement, the bridge's engineering features and characteristics, the role the bridge played in the development of the area, and the historic properties surrounding it.

3. The interpretive signage shall include historic and contemporary mounted photographs of the Nice Bridge and Administration Building, accompanied by relevant narrative, plans, and maps.

4. Draft products such as signage text, scanned copies of photographs and maps, and layout and design shall be reviewed per Stipulation I.D.

5. The signs shall be erected within one year of completion of construction of the undertaking.

C. Interpretive Displays

1. Using the information obtained from the documentation in Stipulation II.A.3, as well as any additional research conducted at the repositories described under Stipulation II.A.4, MDTA shall create an interpretive display that illustrates the history of the Nice Bridge, to be installed in an interior public space near the Project area. In consultation with the MD SHPO, VA SHPO, and other consulting parties, MDTA shall carefully evaluate public interpretation options and select those that are reasonable, have a good opportunity to reach a broad range of the public, and correlate with other aspects of the Project, such as the bicycle/pedestrian lane.
2. The interpretive displays shall provide such information as a history of the Nice Bridge and Administration Building, the bridge's engineering features and characteristics, the role it played in the development of the area, and the reasons for its replacement.
3. The interpretive displays shall include historic and contemporary mounted photographs of the Nice Bridge and Administration Building, accompanied by relevant narrative, plans, and maps.
4. Draft products such as display text, scanned copies of photographs and maps, and layout and design shall be reviewed per Stipulation I.D.
5. The displays shall be erected within one year of completion of construction of the undertaking.

D. Electronic Informational Site

1. MDTA shall establish and maintain an electronic informational site which describes the history of the Nice Bridge and Administration Building. The site would be made broadly available to the public.
2. The site would provide public access to material such as written and photographic documentation resulting from Stipulation II.A.3; additional historic and current photographs, plans, and maps obtained through research at repositories such as those identified in Stipulation II.A.4; and information about the signage and interpretive displays associated with Nice Bridge.
3. Draft products such as an outline of the content, and layout and design shall be reviewed per Stipulation I.D.
4. The electronic informational site shall be established and operational within one year after construction of the undertaking is completed.

III. Expansion of APE and Additional Identification of Historic Properties

A. MDTA shall establish the expanded limits of the APE, in accordance with 36 CFR Part 800.4(a)(1), during the design of the Preferred Alternate. The expanded APE shall include, but may not be limited to, construction staging areas, dredge material

dewatering and disposal sites, barge berthing area, temporary construction haul roads, utility relocation, and mitigation sites.

B. Pursuant to 36 CFR Part 800.4(a), MDTA shall assess the architectural and archeological potential of the expanded APE, in consultation with the MD SHPO and/or VA SHPO, and other consulting parties to determine the level of survey effort warranted for the expanded APE, and shall obtain MD SHPO and VA SHPO concurrence on that effort.

C. Architectural Potential of the Expanded APE

1. Within the potential architectural expanded APE, MDTA shall consult with the MD SHPO and/or VA SHPO, and other consulting parties to identify and evaluate historic buildings, structures, and/or districts for the NRHP in the newly affected areas, and assess the effects of the Project on any newly identified historic properties, in accordance with 36 CFR Part 800.4(c) and 36 CFR Part 800.5. MDTA shall seek ways to avoid or minimize adverse effects in the design of the Project.

2. When these additional adverse effects cannot be avoided in the design, MDTA shall apply the mitigation measure described in Stipulation II.A (Documentation and Photographic Records) to these historic properties, and if appropriate incorporate them into Stipulation II.B-D (Interpretive Signage, Interpretive Displays, and Electronic Information Site) of this PA. In addition, should the adverse effect be indirect, for example visual, atmospheric, or audible, then mitigation options may include, but are not limited to, screening, earth berming, landscaping, fencing, or other appropriate barriers. To the degree practicable, FHWA and MDTA shall ensure that any mitigation elements installed are complementary to the surrounding element and/or natural vegetation, without introducing additional visual effects to historic properties.

D. Archaeological Potential of the Expanded APE

1. For any archeological investigations conducted on state-owned or state-controlled lands and waters in Maryland, MDTA shall obtain a permit from the MD SHPO, pursuant to State Finance and Procurement §§ 5A-341 and 5A342 of the Annotated Code of Maryland, as appropriate. For any archaeological investigations conducted in Virginia within VDOT right-of-way or other state controlled land, MDTA shall obtain a permit from the VA SHPO pursuant to the Virginia Antiquities Act § 10.1-2300 of the *Code of Virginia*.

   Due to the presence of the Naval Surface Warfare Center in Dahlgren, Virginia, and prior to the implementation of any archaeological survey, a survey for Munitions and Explosives of Concern (**MEC**) shall be undertaken within the expanded APE. The survey should employ the required equipment to make a determination of whether or not there are MEC's within the expanded APE and how these may affect future investigations.

2. MDTA shall ensure that Phase IB archaeological investigations of the expanded APE are conducted in accordance with 36 CFR Part 800.4(b). The survey shall be

conducted in a manner consistent with the *Secretary of the Interior's Standards and Guidelines for Identification* (48 FR 44720-23) and shall take into account the NPS publication, *The Archaeological Survey: Methods and Uses* (1978: GPO Stock #024-016-00091), MHT *Standards and Guidelines for Archeological Investigations in Maryland* (1994), and Virginia Department of Historic Resources' (**VDHR**) *Guidelines for Archaeological Investigation in Virginia* (2009), as appropriate, or any replacements or subsequent revisions to these documents.

3. Any archaeological sites identified within the expanded APE shall be evaluated in accordance with 36 CFR Part 800.4(c). If there is the potential for the sites to be eligible for the NRHP, additional background research and archaeological testing, consistent with a Phase II archaeological investigation, shall be conducted to determine the boundary and eligibility of the archaeological resources. If no archaeological resources have the potential to be eligible, MDTA shall provide the other consulting parties with a copy of the report for their review and comment per Stipulation I.D.

4. MDTA shall follow Stipulation VI of this PA if, as a result of Phase II investigations, the MDTA in consultation with the MD SHPO and/or VA SHPO, and the other consulting parties, determines that the archaeological resources are eligible and will be affected by the Project.

5. If the MDTA, in consultation with the MD SHPO and/or VA SHPO and other consulting parties, determine(s) that an archaeological site eligible for the NRHP will be adversely affected by the Project, MDTA shall follow Stipulation VII of this PA.

IV. Nice Bridge Shell Midden Site and Barnesfield Plantation Site

A. Prior to the construction of the Preferred Alternative, MDTA shall ensure that a Phase II archaeological investigation is conducted for the Nice Bridge Shell Midden Site (18CH0797) and the Barnesfield Plantation Site (44KG0171) in accordance with 36 CFR Part 800.4(c). The survey shall be conducted in a manner consistent with the *Secretary of the Interior's Standards and Guidelines for Identification* (48 FR 44720-23), and shall take into account the NPS publication, *The Archaeological Survey: Methods and Uses* (1978: GPO Stock #024-016-00091), MHT's *Standards and Guidelines for Archeological Investigations in Maryland* (1994), and VDHR's *Guidelines for Archaeological Investigation in Virginia* (2009), as appropriate, or any replacements or subsequent revisions to these documents.

B. MDTA shall follow Stipulation VI of this PA if, as a result of Phase II investigations, the MDTA in consultation with the MD SHPO and/or VA SHPO and the other consulting parties determines that the archaeological resources are eligible and will be affected by the Project.

C. If the MDTA, in consultation with the MD SHPO and/or VA SHPO and other consulting parties, determine(s) that an archaeological site eligible for the NRHP will be adversely affected by the Project, MDTA shall follow Stipulation VII of this PA.

V. Underwater Archaeological Resources

A. The *Maryland Archaeological Phase IA Memorandum* sensitivity assessment determined that the potential for both prehistoric and historic resources exists within the Potomac River Channel. Prior to the implementation of the Preferred Alternate, MDTA shall ensure that a Phase IB underwater archaeological survey of the Potomac River within the APE where disturbance will occur is conducted in accordance with 36 CFR Part 800.4(b). MDTA shall consult with the MD SHPO regarding the level of effort for the survey. The survey shall be conducted in a manner consistent with the *Secretary of the Interior's Standards and Guidelines for Identification* (48 FR 44720-23) and shall take into account the NPS publication, *The Archaeological Survey: Methods and Uses* (1978: GPO Stock #024-016-00091), and MHT's *Standards and Guidelines for Archeological Investigations in Maryland* (1994), as appropriate, or any replacements or subsequent revisions to these documents.

B. Given the high potential for MEC in the Potomac River, the survey shall employ the required equipment to make a determination of whether or not there are MEC's within the area of the underwater archaeological survey.

C. Any underwater archaeological resources identified within the APE where disturbance will occur shall be evaluated in accordance with 36 CFR Part 800.4(c), and in consultation with the MD SHPO and the other consulting parties. The methods follow those presented in Stipulation III.D.3 and III.D.4.

D. MDTA shall follow Stipulation VI of this PA if, as a result of Phase II investigations, the MDTA in consultation with the MD SHPO and the other consulting parties determines that the underwater archaeological resources are eligible and will be affected by the Project.

E. If the MDTA, in consultation with the MD SHPO and other consulting parties, determine(s) that an underwater archaeological site eligible for the NRHP will be adversely affected by the Project, MDTA shall follow Stipulation VII of this PA.

VI. Assessment of Adverse Effects on Archaeological Sites Determined Eligible for Listing on the NRHP

In accordance with 36 CFR Part 800.5, MDTA shall assess the adverse effects of the undertaking on any archaeological sites determined eligible for listing on the NRHP as a result of the processes described in Stipulations III to V of this PA. MDTA shall submit its findings to the other consulting parties for their review and comment per Stipulation I.D. For prehistoric and historic Native American sites, MDTA shall also submit its findings to the MCIA and/or VCI for their review and comment.

VII. Treatment of Archaeological Sites Determined Eligible for Listing on the NRHP

A. If MDTA, in consultation with the signatories and other consulting parties, determines that an archaeological site eligible for the NRHP will be adversely affected by the Project, MDTA, in consultation with FHWA, shall determine whether avoidance or minimization of adverse effects to the property is appropriate. If adverse effects cannot be avoided, MDTA, in consultation with the signatories and

other consulting parties, shall develop a treatment plan for the archaeological historic property. MDTA shall also consult with the MCIA and/or VCI on the development of any treatment plan for a prehistoric or historic Native American archaeological site adversely affected by the Project.

B. MDTA shall submit all treatment plans to the signatories and other consulting parties for review and comment per Stipulation I.D. For prehistoric and historic Native American sites, MDTA shall also submit its findings to MCIA and/or VCI for their review and comment.

C. Any treatment plan MDTA develops for an archaeology property under the terms of this Stipulation shall be consistent with the *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation*, ACHP's *Treatment of Archaeological Properties: A Handbook*, ACHP's *Recommended Approach for Consultation on Recovery of Significant Information from Archaeological Sites* (1999), MHT's *Standards and Guidelines for Archeological Investigations in Maryland* (1994), VDHR's *Guidelines for Archaeological Investigations in Virginia* (July 2009), and the VDHR's *Guidelines for Conducting Cultural Resources Survey in Virginia* (January, 2003), as appropriate, or any replacements or subsequent revisions to these documents.

The treatment plan shall include, at a minimum:

1. Information on the portion of the property where data recovery or controlled site burial, as appropriate, is to be carried out, and the context in which the property is eligible for the NRHP;
2. The results of the previous research relevant to the Project;
3. Research problems or questions to be addressed, with an explanation of their relevance and importance;
4. The field and laboratory analysis methods to be used, with a justification of their cost-effectiveness and how they apply to this particular property and the research needs;
5. The methods to be used in artifact, data, and other records management;
6. Explicit provisions for disseminating in a timely manner the research findings to professional peers, and to MCIA and/or VCI in the case of prehistoric or historic Native American archaeological sites;
7. Arrangements for presenting to the public the research findings, focusing particularly on the community or communities that may have interests in the results;
8. The curation of recovered materials and records resulting from the data recovery in accordance with 36 CFR Part 79, Curation of Federally-Owned and Administered Archaeological Collections; and
9. Procedures for evaluating and treating discoveries of unexpected remains during the course of the Project, including necessary consultation with other parties.

D. MDTA, in cooperation with FHWA, shall ensure the treatment plan is implemented and that any agreed upon data recovery field operations are complete before ground disturbing activities associated with the Project are initiated at the affected archaeological historic property.

MDTA and the MD SHPO and/or VA SHPO may, as necessary, meet on-site to evaluate the success of the fieldwork phase of any data recovery program, near the end of the fieldwork efforts. MDTA shall submit a management summary to the MD SHPO and/or VA SHPO documenting the completion of fieldwork for a fifteen day review. Upon receipt of the written concurrence from the MD SHPO and/or VA SHPO, MDTA may proceed with construction activities in the site areas concurrently with completion of the remaining laboratory analyses, and reporting phases of the data recovery work.

MDTA shall notify the other consulting parties once data recovery field operations have been completed. The proposed Project construction may proceed following this notification while the technical report is in preparation. MDTA shall ensure that the archaeological site form on file in the MD SHPO's Inventory of Historic Properties and/or VA SHPO's Data Sharing System (**DSS**) is updated to reflect the implementation of the treatment plan for each affected site.

VIII. Curation Standards

A. MDTA shall ensure that all materials and records resulting from cultural resources investigations conducted in Maryland for the Project will be curated in accordance with 36 CFR 79 at the MD SHPO's Maryland Archeological Conservation Laboratory, unless clear title or Deed of Gift to the collection cannot be obtained.

B. MDTA shall ensure that all original archaeological records (research notes, field records, maps, drawings, and photographic records) produced in connection with this Project and all archaeological collections recovered from VDOT right-of-way in association with the Project are provided to the VA SHPO for permanent curation. In exchange for its standard collections management fee, as published in the *Virginia Department of Historic Resources State Collections Management Standards* (June 26, 2009), or subsequent revisions or replacements to that document, the SHPO agrees to maintain such records and collections in accordance with 36 CFR 79, "Curation of Federally Owned and Administered Archaeological Collections."

IX. Personnel Qualifications

MDTA shall ensure that all archaeological work pursuant to this PA is carried out by or under the direct supervision of a person or persons meeting at a minimum the *Secretary of the Interior's Professional Qualifications Standards for Archaeologists* (48 FR 44738-9), and that all historic preservation work is carried out by or under the direct supervision of a person or persons meeting, at a minimum, the *Secretary of the Interior's Professional Qualification Standards for Architectural Historian Professionals* (48 FR 44738-9).

X. Review of Project Related Plans

MDTA shall provide relevant sections of preliminary, semi-final, and final Project plans to the other consulting parties for review and comment. Upon circulation and assurance that relevant sections have been distributed, the signatories and other consulting parties shall be provided an opportunity for review and comment per Stipulation I.D.

XI. Subsequent Changes to the Project

If, subsequent to the implementation of Stipulation X, MDTA proposes any significant changes to the location or relative footprint of the Project affecting the design or disturbance area of the Project, MDTA shall provide the signatories and any other consulting party deemed appropriate with information concerning the proposed changes per Stipulation I.D.

XII. Post-Review Discoveries

A. In the event that previously unidentified historic properties are discovered or if unanticipated effects on historic properties occur during construction activities, MDTA shall require the construction contractor to halt all construction work in the area of the resource. In addition, for any discovered archaeological resources, work shall also halt in surrounding areas where additional subsurface remains can reasonably be expected to occur. Work in all other areas of the Project may continue.

B. MDTA shall notify the signatories and other consulting parties within two working days of the discovery (36 CFR Part 800.13). In the case of prehistoric or historic Native American sites, MDTA shall notify appropriate state and federally recognized tribal leaders, and MCIA and/or VCI within two working days of the discovery.

   MDTA shall ensure that an archaeologist or architectural historian meeting the Secretary of the Interior's Professional Qualifications Standards (48 FR 44739) shall investigate the work site and the resource, and then MDTA shall forward to the signatories and other consulting parties (and MCIA and/or VCI in the case of Native American sites) an assessment of the NRHP eligibility of the resource (36 CFR Part 60.4) and/or proposed treatment actions to resolve any adverse effects on the resource. The signatories, other consulting parties, and, when relevant, MCIA and/or VCI shall respond within five working days of receipt of MDTA's assessment of NRHP eligibility of the resource and proposed action plan. MDTA, in consultation with FHWA, shall take into account the recommendations of the signatories, other consulting parties, tribal leaders, and MCIA and/or VCI regarding NRHP eligibility of the resource and/or the proposed action plan to resolve adverse effects, and then carry out appropriate actions.

C. MDTA shall ensure that construction work within the affected area does not proceed until appropriate treatment measures are developed and implemented, or the determination is made that the located resource is not eligible for inclusion on the NRHP.

D. Disputes between the signatories over the treatment of historic properties shall be resolved as provided for in Stipulation XIV.A of this PA.

XIII. Treatment of Human Remains

A. MDTA shall make all reasonable efforts to avoid disturbing gravesites individually eligible for the NRHP or contributing to the historic significance of a NRHP eligible property, including those containing Native American human remains and associated funerary artifacts. MDTA shall treat all such gravesites in a manner consistent with the ACHP's *Policy Statement Regarding Treatment of Burial Sites, Human Remains and Funerary Objects* (February 23, 2007), or any replacement or subsequent revision to this document.

B. In the event human burials are encountered during archaeological investigations or construction in any portion of the Project in Maryland, MDTA shall immediately halt subsurface disturbance in the area of the discovery and in the surrounding area where additional remains can reasonably be expected to occur. MDTA will ensure that human remains and associated funerary objects are brought to the immediate attention of the MD SHPO, FHWA, and Charles County State's Attorney, as appropriate. No activities that might disturb or damage the remains will be conducted until the MD SHPO has determined whether excavation is necessary and/or desirable. MDTA, in consultation with the MD SHPO and other interested parties, as appropriate, shall develop a plan for the appropriate treatment of the remains and comply with the Maryland State burial law (Title 10 Subtitle 4 Parts 10-401 through 10-404 of the Annotated Code of Maryland), or any replacement or subsequent revision to this law. MDTA shall submit the plan for review and approval by the MD SHPO pursuant to the terms of this PA. Work in the affected area shall not proceed until development and implementation of appropriate treatment plan or other recommended mitigation measures are completed; however, work outside the area of archeological features may continue.

   In Virginia, human remains and associated funerary objects encountered during the course of actions taken as a result of this PA shall be treated in a manner consistent with the provisions of the Virginia Antiquities Act, § 10.1-2305 of the *Code of Virginia* and its implementing regulations, 17 VAC5-20, adopted by the Virginia Board of Historic Resources and published in the Virginia Register on July 15, 1991, and the Native American Graves Protection and Repatriation Act (25 U.S.C. 3001) and its implementing regulations, 36 CFR Part 10. Any replacements or subsequent revisions to the Virginia Antiquities Act and its implementing regulations would supersede the present ones. In accordance with the regulations stated above, MDTA may obtain a permit from the VA SHPO for the archaeological removal of human remains should removal be necessary.

C. In the event that the human remains encountered are likely to be of Native American origin, whether prehistoric or historic, MDTA, on behalf of FHWA, shall immediately notify (via telephone, facsimile or regular mail) appropriate tribal leaders of Indian tribes recognized by Maryland, the Commonwealth of Virginia, MCIA, VCI, and any federally recognized tribes with an interest in the area. MDTA shall determine the treatment of Native American human remains and associated funerary objects in consultation with appropriate tribal leaders of Indian tribes recognized by Maryland, the Commonwealth of Virginia, MCIA, VCI, and any

federally recognized tribes with an interest in the area. MDTA shall make all efforts it deems reasonable to ensure that the general public is excluded from viewing any Native American gravesites and associated funerary objects. The signatories to this PA shall release no photographs of any Native American gravesites or associated funerary objects to the press or to the general public.

XIV. Dispute Resolution

A. Objection by Consulting Party

1. Should any party to this PA object at any time in writing to the manner in which the terms of this PA are implemented, to any action carried out or proposed with respect to the implementation of the PA, or to any document prepared in accordance with and subject to the terms of the PA, FHWA shall first consult with the objecting party for a period not to exceed 30 days to resolve the objection. If FHWA determines that the objection cannot be resolved through such consultation, FHWA shall then consult with all consulting parties to this PA to resolve the objection. FHWA shall honor the request of the consulting parties to participate in the consultation and shall take any comments provided by those parties into account.
2. If the objection is resolved during the thirty day consulting period, FHWA may proceed with the disputed action in accordance with the terms of such resolution.
3. If at the end of the thirty day consultation period, FHWA determines that the objection cannot be resolved through such consultation, then FHWA shall forward all documentation relevant to the objection to ACHP, including FHWA's proposed response to the objection, with the expectation that ACHP shall, within thirty calendar days after receipt of such documentation:
    a. Advise FHWA that ACHP concurs with FHWA's proposed response to the objection, whereupon FHWA shall respond to the objection accordingly; or
    b. Provide FHWA with recommendations, which FHWA shall take into account in reaching a final decision regarding its response to the objection; or
    c. Notify FHWA that it shall comment pursuant to 36 CFR Part 800.7(a)(4), and proceed to comment. Any comment provided in response to such a request shall be taken into account and responded to by FHWA in accordance with 36 CFR Part 800.7(c)(4) and Section 110(1) of the National Historic Preservation Act.
4. FHWA shall take into account any ACHP recommendation or comment provided in accordance with this Stipulation with reference only to the subject of the objection. FHWA's responsibility to carry out all actions under this PA that are not the subject of the dispute shall remain unchanged.
5. Should ACHP not exercise one of the above options within thirty calendar days after receipt of all pertinent documentation, FHWA may assume ACHP's concurrence in its proposed response to the objection and proceed to implement that response.

B. Objection from the Public

If at any time during implementation of the measures stipulated in this PA, a member of the public object in writing to FHWA, MDTA, or VDOT regarding the manner in which the measures stipulated in this PA are being implemented, FHWA shall notify the signatories to this PA and take the objection into account, while consulting with the objector. The signatories may also request that FHWA notify the other consulting parties to this PA about the objection.

XV. Amendments

This PA may be amended only upon written agreement by each of the signatories. Any signatory to this Agreement may request an amendment to FHWA, whereupon the other signatories must respond with any comments within thirty calendar days. The amendment would then be executed in accordance with 36 CFR Part 800.6(c)(7). If the signatories cannot agree to appropriate terms to amend the PA, any signatory may terminate the agreement in accordance with Stipulation XVI, below.

XVI. Termination

A. If any signatory to this PA determines that the document's terms are not being or cannot be carried out, that signatory may immediately consult with the other signatories in writing, explaining the reasons for proposing termination, and consult with the other signatories for at least thirty calendar days to attempt to develop an amendment per Stipulation XV. If within thirty calendar days an amendment cannot be reached, any signatory may immediately terminate the PA upon written notification to the other signatories. Termination hereunder shall render this PA without further force or effect.

B. Once the PA is terminated, and prior to work continuing on the Project, FHWA must either (a) execute a PA pursuant to 36 CFR Part 800.6 or (b) request the comments of ACHP under 36 CFR Part 800.7(a). FHWA shall notify the signatories as to the course of action it shall pursue.

C. Such consultation shall not be required if FHWA proposes termination because the Project no longer meets the definition of an undertaking set forth in 36 CFR Part 800.16(y).

XVII. Duration

This PA shall continue in full force and effect until ten years after the date of the last signature of a signatory. At any time during the twelve month period prior to the ten year expiration date, the signatories may agree to extend this PA, with or without amendments. No extension, with or without amendments, shall be effective unless all signatories to this PA have agreed with it in writing within thirty calendar days. If FHWA or MDTA decides it will not proceed with the Project, they may so notify VDOT, MD SHPO, VA SHPO, and the other consulting parties, and then this PA becomes null and void. Termination shall include the submission of a technical report by MDTA on any work done up to and including the date of termination.

XVIII. Reporting

MDTA shall prepare a written Project status update, anticipated schedule, and summary of all activities carried out pursuant to this PA every three years from the signature date of this PA, and provide a copy to all the signatories and other consulting parties to this PA. The three year notification period will coincide with the common National Environmental Policy Act (**NEPA**) reevaluation date. After three notifications in nine years have expired, the signatories may agree to extend the PA at any time in the remaining twelve month period, prior to the ten year expiration date per Stipulation XVII.

[SIGNATURES APPEAR ON THE FOLLOWING PAGE]

Execution of this PA by FHWA, MDTA, VDOT, MD SHPO, and VA SHPO, its filing with ACHP in accordance with 36 CFR Part 800.6(b)(1)(iv), and subsequent implementation of its terms, shall evidence, pursuant to 36 CFR Part 800.6(c), that MDTA has taken into account the effects of the Governor Harry W. Nice Memorial Bridge Project on historic properties.

SIGNATORIES

FEDERAL HIGHWAY ADMINISTRATION

By: for _____ Date: 7/7/11
Hassan Raza
DelMar Division Administrator

FEDERAL HIGHWAY ADMINISTRATION

By: John Dimkins Date: 6/17/11
for Irene Rico
Virginia Division Administrator

MARYLAND TRANSPORTATION AUTHORITY

By: _____ Date: 5/6/11
Randolph P. Brown
Acting Executive Secretary

Approved as to form and legal sufficiency:

_____
Sherita D. Harrison, Assistant Attorney General

VIRGINIA DEPARTMENT OF TRANSPORTATION

By: _____ Date: 6/3/11
Stephen J. Long
Environmental Division Administrator

MARYLAND STATE HISTORIC PRESERVATION OFFICER

By: _____ Date: 5-13-11
J. Rodney Little
Director, Maryland Historical Trust

VIRGINIA STATE HISTORIC PRESERVATION OFFICER

By: _____ Date: 6/22/11
Kathleen S. Kilpatrick
Director, Virginia Department of Historic Resources

CONCURRING PARTIES

CHARLES COUNTY GOVERNMENT, PLANNING AND GROWTH MANAGEMENT

By: _____ Date: 8/3/11

Cathy Thompson
Community Planning Program Manager

CONCURRING PARTIES (continued)

THE NORTHERN NECK OF VIRGINIA HISTORICAL SOCIETY

By: Steve Walker Date: 8-16-11

Steve Walker
President

CONCURRING PARTIES (continued)

MARYLAND COMMISSION ON INDIAN AFFAIRS

By: _____ Date: _____

E. Keith Colston
Executive Director

CONCURRING PARTIES (continued)

VIRGINIA COUNCIL ON INDIANS

By: Deanna Beacham Date: 7/28/2011

Deanna Beacham

CONCURRING PARTIES (continued)

TOWN OF COLONIAL BEACH

By: _____ Date: _____
Frederick C. Rummage
Mayor

CONCURRING PARTIES (continued)

MR. JOSEPH KNOTT

By: _____ Date: _____
Joseph Knott

CONCURRING PARTIES (continued)

~~MR. JERRY VOLMAN~~

By: _____ Date: _____
~~Jerry Volman~~

BRC, LLC, a Maryland Limited
Liability Company
By: Byars Road Corporation, Member
By: Mark D. Mudd
Mark D. Mudd, President

DATE 8/8/11

CONCURRING PARTIES (continued)

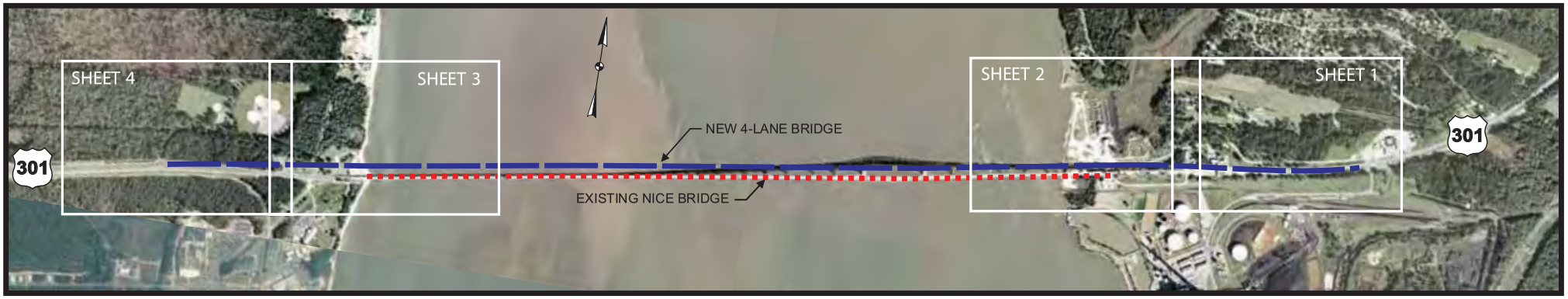
MR. DAVID ROSE

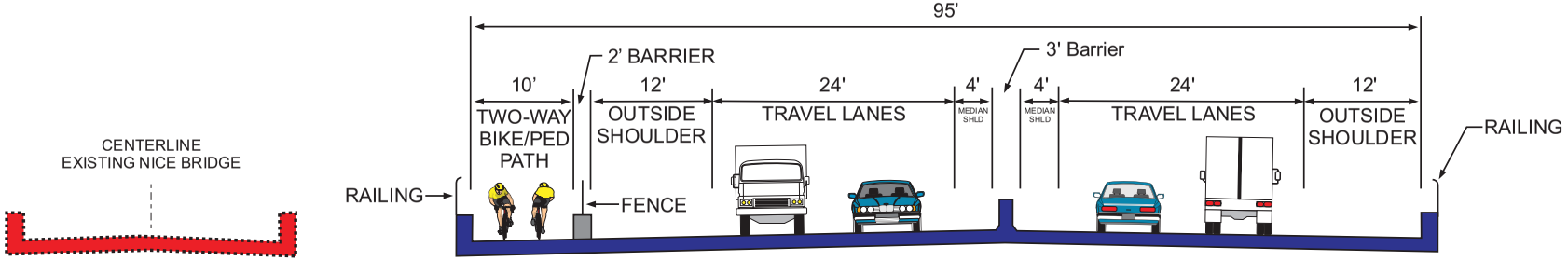
By: _____ Date: _____
David Rose

Attachment A

Project Location Map and Plans of
the Preferred Alternate (Modified Alternate 7)


Charles County
La Plata
Port Tobacco
Newtown
Dentsville
Bel Alton
MARYLAND
Allens Fresh
Wicomico
Mathias Point
Popes Creek
Budds Creek
Gov. Harry W. Nice Mem. Bridge
Newburg
St. Mary's County
West Hatton
Morgantown
Dahlgren
Woodberry Beach
Swan Point
Rock Point
Colonial Beach
VIRGINIA
Index
Westmoreland County
HARRY W. NICE BRIDGE
IMPROVEMENT PROJECT
Section 106 PA
November 2010
Figure 1
Project Location Map
1 in = 3 miles
N





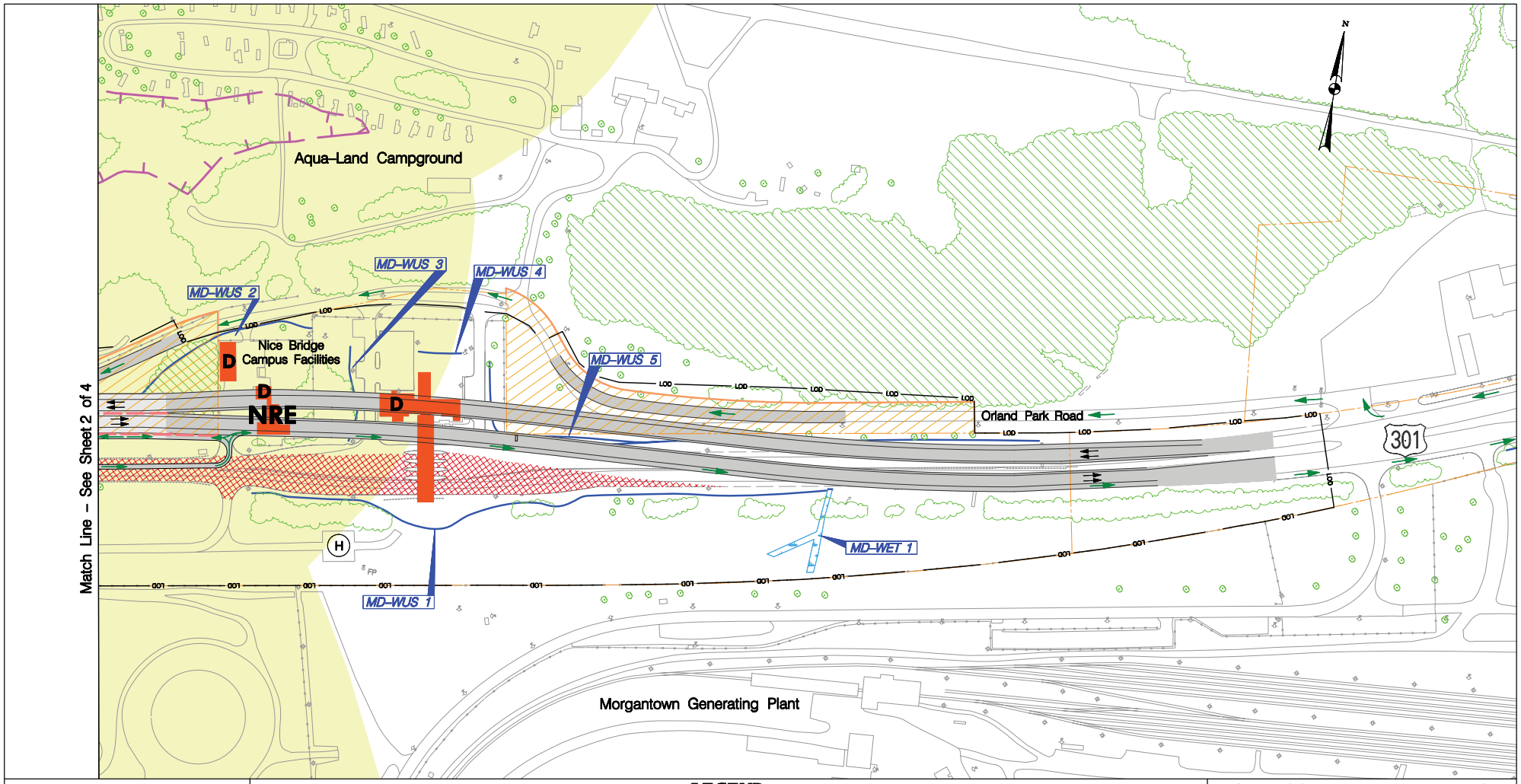
MODIFIED ALTERNATE 7

Nice Bridge Improvement Project

Appendix A

Modified Alternate 7
Index Sheet

November 2010



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
- Bike / Pedestrian Traffic Flow

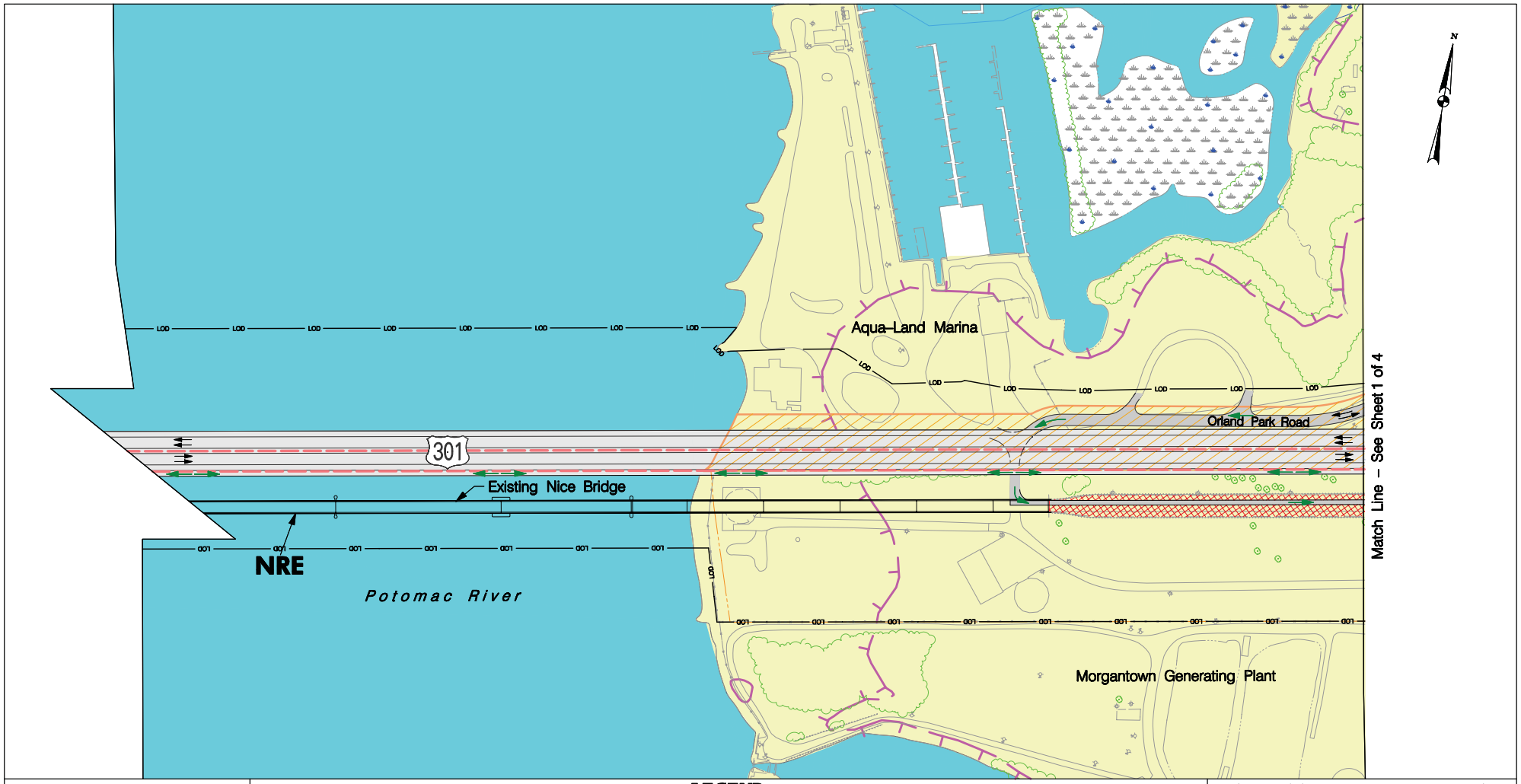
Nice Bridge Improvement Project

Appendix A November 2010

Preferred Alternate

Modified Alternate 7 (Sheet 1 of 4)

T:\Nice Bridge Study\Preferred Alternate\pHD-MODALT7-1.dgn



VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
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- NRE — National Register of Historic Places – Eligible Potential Displacement
- Bike / Pedestrian Traffic Flow

Nice Bridge Improvement Project

Appendix A November 2010

Preferred Alternate

Modified Alternate 7 (Sheet 2 of 4)

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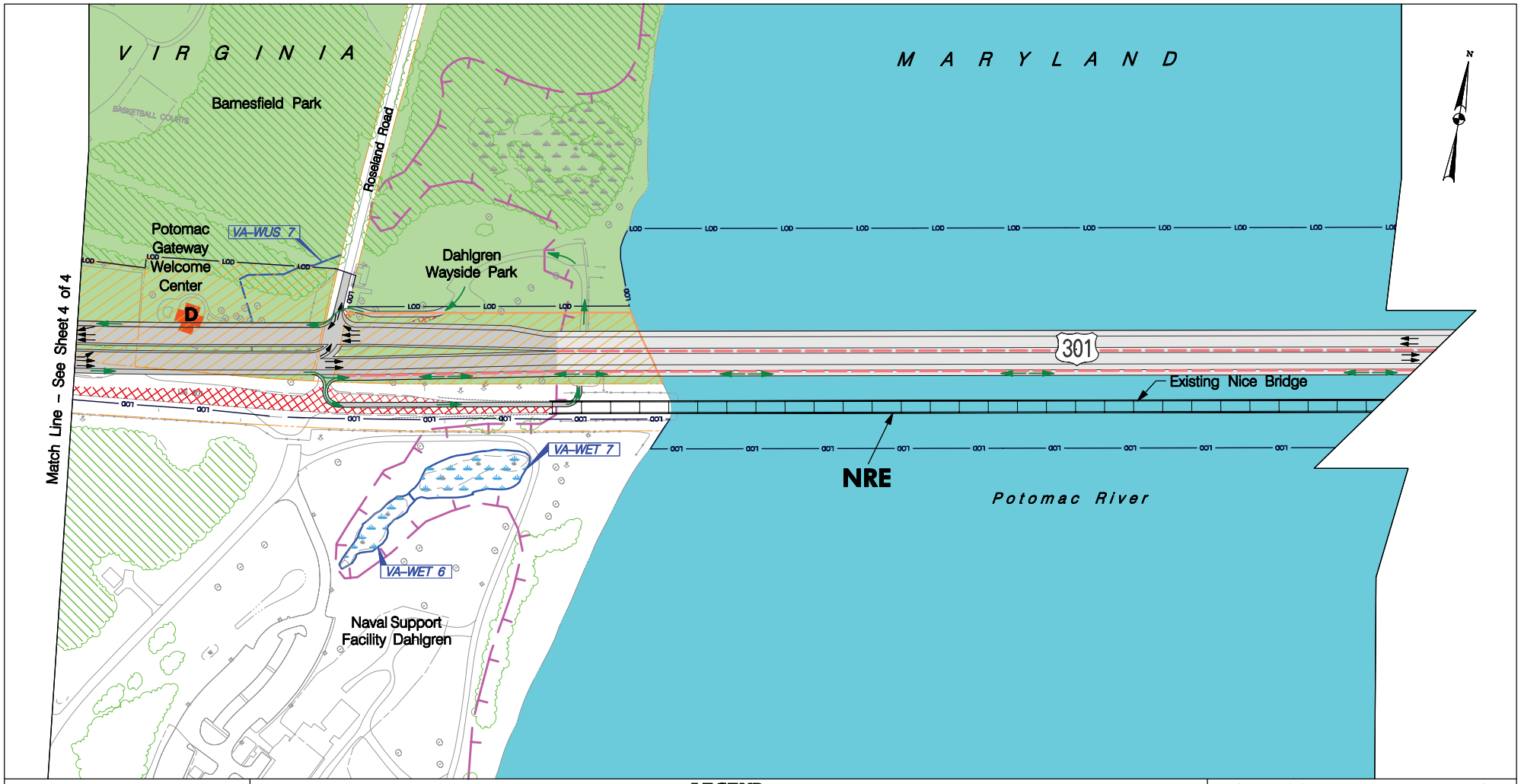


VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

T:\Nice Bridge Study\Preferred Alternate\pHD-MODALT7-3.dgn

LEGEND

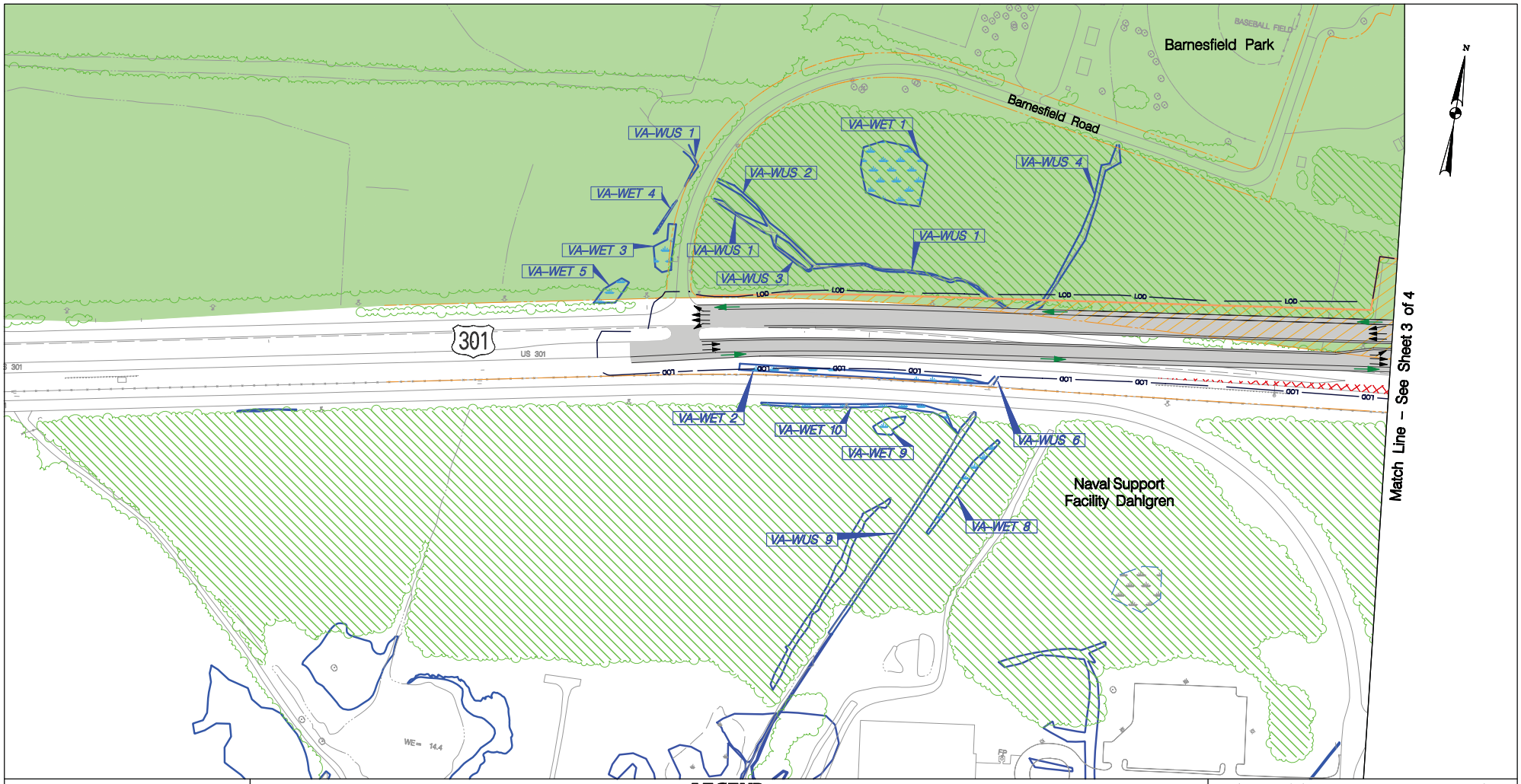
- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
- LOD — Limit of Disturbance
- Existing Property Line
- Proposed Acquisition
- Traffic Barrier
- Parkland
- Critical Area (MD)
- Forest Stand
- 100 Year Floodplain
- Jurisdictional Wetland
- Jurisdictional Water of U.S.
- NRE — National Register of Historic Places – Eligible Potential Displacement
- Bike / Pedestrian Traffic Flow

Nice Bridge Improvement Project

Appendix A November 2010

Preferred Alternate

Modified Alternate 7 (Sheet 3 of 4)



VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
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- Bike / Pedestrian Traffic Flow

Nice Bridge Improvement Project

Appendix A November 2010

Preferred Alternate

Modified Alternate 7 (Sheet 4 of 4)

T:\Nice Bridge Study\Preferred Alternate\pHD-MODALT7-4.dgn

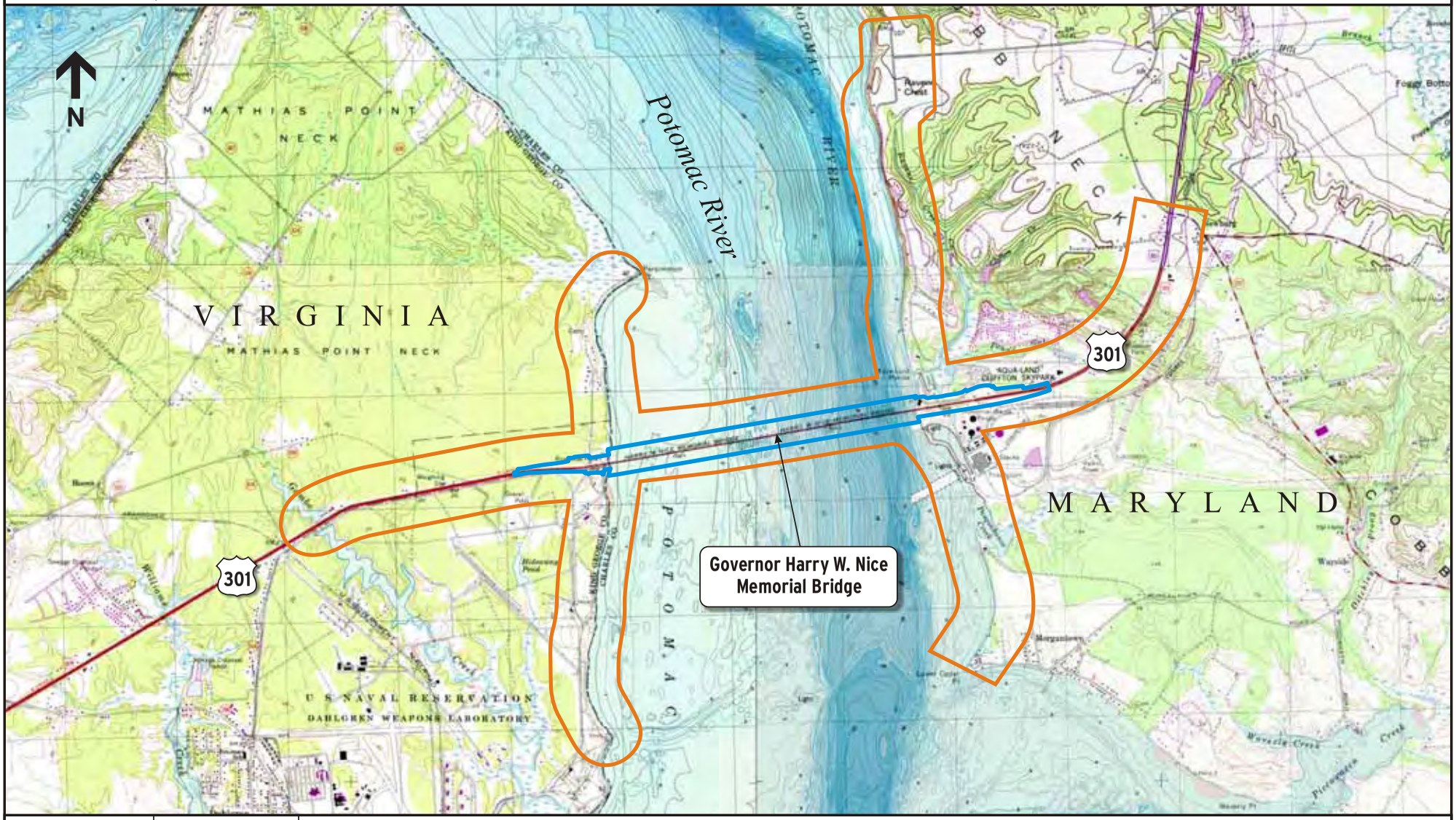
Attachment B

Maryland and Virginia Preliminary APE

Governor Harry W. Nice Memorial Bridge Improvement Project

Charles County, Maryland and King George County, Virginia

Maryland Transportation Authority



Key Map of Virginia

Key Map of Maryland

0 1000 2000 3000 4000 5000 Feet

0 0.2 0.4 0.6 0.8 1 Mile

Scale

Preliminary Architectural Area of Potential Effects

Preliminary Archaeological Area of Potential Effects

Map Source: USGS, 7.5 Minute Series -
Popes Creek, MD; Mathias Point, MD/VA; Dahlgren, VA/MD; Colonial Beach North, VA/MD

Preliminary Area of Potential Effects

November 2010

Appendix D

Public Parks Memorandum of Agreement

MEMORANDUM OF AGREEMENT

Among the
MARYLAND TRANSPORTATION AUTHORITY,
VIRGINIA DEPARTMENT OF TRANSPORTATION,
FEDERAL HIGHWAY ADMINISTRATION,
NATIONAL PARK SERVICE,
VIRGINIA TOURISM CORPORATION,
VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION, and the
KING GEORGE COUNTY BOARD OF SUPERVISORS

Regarding
MITIGATION OF EFFECTS TO PUBLIC PARKS from the
GOVERNOR HARRY W. NICE MEMORIAL BRIDGE IMPROVEMENT PROJECT in
KING GEORGE COUNTY, VIRGINIA

WHEREAS, the Maryland Transportation Authority (MDTA), in cooperation with the Virginia Department of Transportation (VDOT), and the Federal Highway Administration (FHWA), proposes to construct a new four-lane bridge and approach roadways that would carry US 301 over the Potomac River between Maryland and Virginia and replace the existing Governor Harry W. Nice Memorial Bridge (MDTA Project No. NB543-000-006), herein referred to as the PROJECT; and

WHEREAS, federal funding administered through the FHWA has been identified by MDTA as a potential funding source for the PROJECT and FHWA is functioning as the lead federal agency; and

WHEREAS, the FHWA DelMar Division is the lead FHWA office for the PROJECT; and

WHEREAS, the FHWA has determined the provision of financial assistance for the project would be an action of the US Department of Transportation which is subject to Section 4(f) of the US Department of Transportation Act (23 CFR §774); and

WHEREAS, the MDTA has identified Modified Alternate 7, which would construct a new four-lane bridge north of the existing bridge, as the PROJECT's Preferred Alternate, as shown in **Attachment A**; and

WHEREAS, the PROJECT's Preferred Alternate would require acquisition of 2.2 acres of Barnesfield Park, 2.1 acres and displacement of the Potomac Gateway Welcome Center property, and 2.2 acres of Dahlgren Wayside Park, which are considered Section 4(f) uses of those properties per 23 CFR § 774.17, shown on **Attachment B**; and

WHEREAS, Barnesfield Park and Dahlgren Wayside Park are located in the Commonwealth of Virginia in the County of King George and owned by the King George County Board of Supervisors (KGC), and the Potomac Gateway Welcome Center is likewise

located in the Commonwealth of Virginia in the County of King George and is owned by the Virginia Tourism Corporation (VTC); and

WHEREAS, an Environmental Assessment/Draft Section 4(f) Evaluation was signed by FHWA in July 2009 and a Final Section 4(f) Evaluation is expected to be completed to demonstrate there is no feasible and prudent avoidance of the use of Section 4(f) property, and, in conjunction with the execution of this Memorandum of Agreement (MOA), all possible planning has been done to minimize harm to those Section 4(f) properties; and

WHEREAS, Barnesfield Park, Dahlgren Wayside Park and the Potomac Gateway Welcome Center were donated from the United States in 1972 as part of the Federal Lands to Parks Program (FLPP) which is administered by the National Park Service (NPS), and use restrictions are included in the deeds for each property in accordance with the FLPP; and

WHEREAS, Barnesfield Park received grant funding from the National Park Service (NPS) through the Land and Water Conservation Fund, and Parcel A of the property (shown on **Attachment B**) is subject to Section 6(f) of the LWCF Act (36 CFR § 59) which is administered by the Virginia Department of Conservation and Recreation (DCR) and NPS; and

WHEREAS, the parkland impacted by the PROJECT is presently used as undeveloped woodland in Barnesfield Park; a paved and unpaved parking lot, trail, waterfront recreational area, small craft boat launch, picnic areas, and open areas in Dahlgren Wayside Park; and lawn adjacent to the Potomac Gateway Welcome Center building. These conditions will be taken into account during the development of mitigation options; and

WHEREAS, the MDTA, with input from the other signatories, has identified that parkland replacement and resolving deed restrictions are appropriate mitigation measures to address PROJECT parkland property impacts subject to Section 4(f), FLPP, and Section 6(f) requirements; and

WHEREAS, the MDTA currently has not programmed funding for PROJECT final design, right-of-way acquisition, construction, or mitigation, including parkland replacement, and funding for future PROJECT phases may not be available for several years; and

WHEREAS, the MDTA completed the Preferred Alternate / Conceptual Mitigation (PACM) report in September 2010 (**Attachment C**) which includes an example of parkland replacement site search criteria. Through development of the PACM, the MDTA has coordinated with the other signatories of this Agreement to identify preferred criteria for parkland replacement sites; and

WHEREAS, the MDTA shall not own any land within the Commonwealth of Virginia;

NOW, THEREFORE, the MDTA, VDOT, FHWA, NPS, VTC, DCR, and KGC agree to implement the following stipulations as an expression of commitment to Section 4(f), FLPP, and Section 6(f) of the LWCF Act mitigation. This Agreement does not resolve any regulatory obligations by the signatories for Section 4(f), FLPP, or Section 6(f) of the LWCF Act approval of the PROJECT.

STIPULATIONS

MDTA shall ensure the following measures are carried out once funds are programmed prior to construction of the PROJECT:

I. Parkland Replacement Site Search

MDTA shall determine the area of parkland needed from Barnesfield Park, Dahlgren Wayside Park, and the Potomac Gateway Welcome Center for PROJECT appurtenances based on final engineering design plans. The area needed for the PROJECT shall be the basis for identifying replacement requirements. Other impacts to any remaining parkland, as a result of the conversion from park to transportation use, shall also be considered in determining the replacement requirements. A no less than 2:1 ratio of replacement parkland to impacted parkland shall be used when identifying replacement parkland needs.

MDTA will prepare and conduct a site search for potential parkland replacement sites at its sole cost. Example parkland site search criteria originally identified in the PACM (**Attachment C**) will first be reviewed to determine if these criteria remain reasonable. MDTA, in coordination with KGC, will then identify additional appropriate criteria, and recommend potential mitigation sites for review. MDTA, in coordination with KGC and VDOT, will contact the landowners of potential sites to determine their interest in providing replacement parkland. As part of the site search, riverfront properties that provide open area for the public to enjoy and have minimal impact to adjoining property owners shall be considered. MDTA will coordinate the site search with all Agreement signatories, and identify one or more preferred replacement site(s) based on input from the Agreement signatories.

MDTA and VDOT will follow the Federal standards for right of way appraisal and acquisition as outlined by the Uniform Appraisal Standards for Federal Land Acquisition (the UASFLA "Yellow Book"), as well as procedures which will be agreed to by MDTA and VDOT prior to the future right-of-way acquisition phase for the PROJECT. To satisfy requirements of Section 6(f) of the LWCF Act, the value of land needed from Barnesfield Park Parcel A by the PROJECT will also be established using this method. King George County may choose to have an additional separate and independent appraisal(s) performed at their expense.

Coordination among the signatories will ensure the proposed replacement parkland would be acceptable under an LWCF Program Section 6(f) conversion of use request (for Barnesfield Park, Parcel A) and an FLPP land exchange (for all impacted park properties). The process for acquiring the replacement parkland is outlined in Stipulation II. Replacement parkland for Barnesfield Park Parcel A shall be of at least equal fair market value to the appraised value of parkland converted from Parcel A. The replacement property for Barnesfield Park Parcel A shall also be of reasonably equivalent usefulness, recreational value, and location as the parkland converted from Parcel A.

II. Parkland Replacement

Following identification of potential replacement parkland as described in Stipulation I, MDTA will coordinate with the signatories to develop and implement a process for acquiring replacement parkland. As owner of Barnesfield Park and Dahlgren Wayside Park, it will be KGC's responsibility to determine which of the potential replacement parklands identified in

Stipulation I would be most beneficial to its needs. The proposed process for acquiring replacement parkland is described below.

1) A Level 1/Phase 1 environmental investigation shall be prepared and paid for by the MDTA for the preferred replacement parkland to identify environmental effects that might limit the property's ability to provide equivalent recreational value, and to determine whether the site(s) are environmentally clean and safe for public park use. The LWCF Proposal Description and Environmental Screening Form (PD/ESF) shall be completed for any property submitted for NPS approval as well as the entire park proposed for partial conversion.
2) MDTA shall provide funding to VDOT for acquisition of the identified replacement parkland, in accordance with the procedures that will be agreed to by MDTA and VDOT prior to the future right-of-way acquisition phase for the PROJECT.
3) KGC will formally propose to DCR and NPS a land exchange which would substitute the replacement parkland for the existing parkland needed for the PROJECT. DCR and NPS will approve the land exchange if the appropriate Section 6(f) of the LWCF Act and FLPP conditions are met.
4) Subject to paragraph 2) above, VDOT shall acquire the replacement parkland.
5) The FLPP deed restrictions on the use of the land would be removed from the portions of Barnesfield Park, Dahlgren Wayside Park, and the Potomac Gateway Welcome Center properties needed for the PROJECT, pursuant to Virginia law and after the required advertisement, public hearing, comment and vote. The removal of the public park and recreation use restriction in the properties' quitclaim deeds will occur in a release and transfer deed, which will be prepared by the NPS. At no time will there be a reduction of acreage of protected parkland at Barnesfield Park, Dahlgren Wayside Park, or the Welcome Center without a simultaneous replacement of similar parkland. The deed for the replacement parkland property must contain protections per Section 6(f) of the LWCF Act.
6) KGC and VTC will convey the unrestricted former parkland (now impacted by the PROJECT) to VDOT for PROJECT purposes.
7) VDOT will donate the replacement parkland to KGC, which will be restricted pursuant to any applicable State and Federal laws and deed restrictions.
8) MDTA shall complete any additional NPS and DCR administrative requirements (e.g., property descriptions, forms and coordination) which NPS and DCR usually need from conversion applicants prior to Section 6(f) approval.

The general steps described above are subject to minor revision based on circumstance at the time of implementation of Stipulation II. Should significant alteration to these steps be required, a signatory may request an amendment to this MOA per Stipulation VII.B.

III. Park Enhancement and Landscape Design

MDTA shall prepare a landscape plan for the portions of Barnesfield Park, Dahlgren Wayside Park, and the Potomac Gateway Welcome Center property, which are adjacent to the proposed roadway, including areas that are currently within VDOT right-of-way as part of project final design activities, at its sole cost. The plans shall be developed by a professional landscape architect registered in the Commonwealth of Virginia and be approved by VDOT and KGC. The landscape plan shall be in keeping with the recreational character of Barnesfield Park and Dahlgren Wayside Park. Plantings proposed in the landscape plan will have the intent to provide

screening between US 301 and park properties. MDTA shall implement the final landscape plan during construction of the PROJECT.

The landscape plan shall accommodate the change in existing ground elevations caused by construction of the PROJECT, and shall include treatment of surrounding slopes and enhancement and/or replacement of existing landscape features. MDTA shall also construct a new public trail within Dahlgren Wayside Park that would provide access from the park to the bicycle / pedestrian path proposed by the Preferred Alternate across the replacement bridge as part of the PROJECT. The Dahlgren Wayside Park entrance and parking lot shall be relocated. The landscape plan shall recommend, and MDTA shall install, as appropriate, hardscape features such as picnic tables, flagpoles, replacement boat landing (if required) and barbecue grills within Dahlgren Wayside Park.

Also as part of the landscape plan, MDTA, VDOT and KGC will evaluate whether noise abatement measures for US 301 would be desirable adjacent to Dahlgren Wayside Park. If noise abatement at Dahlgren Wayside Park is determined feasible and reasonable per FHWA and VDOT noise abatement criteria during the PROJECT design phase, MDTA shall design appropriate noise abatement measures to be installed during the construction phase of the PROJECT. MDTA will be responsible for the design and installation of any sound abatement measures incorporated in the final design of this project.

MDTA shall provide sixty (60) calendar days for review and comment on the landscape plan by the signatories. MDTA shall ensure all comments received within that sixty (60) calendar day period are considered as appropriate in the final landscape plan.

IV. Potomac Gateway Welcome Center Property

It is anticipated that the entire Potomac Gateway Welcome Center Property would be acquired for the PROJECT, following procedures which will be agreed to by MDTA and VDOT prior to the future right-of-way acquisition phase for the PROJECT. Any remaining land from this property not needed for the PROJECT will be donated to KGC and incorporated into Barnesfield Park for the purpose of recreational use in perpetuity. Donation of the remaining, unneeded portion of the property to KGC will not be considered replacement parkland. Nevertheless, the MDTA is committed to completing this stipulation in conjunction with other mitigation measures.

V. Review of Project Design Plans

MDTA shall provide the signatories an opportunity to review and provide comments on relevant sections of the PROJECT design plans that affect existing park property at two stages of the design phase (semi-final and final) following design review funding procedures which will be agreed to by MDTA and VDOT prior to the future design phase for the PROJECT. If after sixty (60) calendar days following submittal of the design plans no comments are received, MDTA may assume the non-responding party has no comments. MDTA may proceed with implementation of the plans and development of property acquisition documents (i.e., plats). MDTA shall ensure that all comments received within that sixty (60) calendar day period are considered as appropriate in the design plans, including a written response to the responding party.

VI. Subsequent Changes to the Project

If, subsequent to the implementation of Stipulation V, any significant changes to the PROJECT affecting design of the Preferred Alternate or parkland area needed by the PROJECT are proposed, MDTA shall provide the signatories with information concerning the proposed changes. If after sixty (60) calendar days following submittal of project changes no comments are received by MDTA, MDTA may assume the non-responding party has no comments. MDTA shall ensure that all comments received within that sixty (60) calendar day period are considered as appropriate in the proposed changes.

VII. Administrative Stipulations

A. Resolving Objections

The signatories of the MOA shall notify all other signatories in writing of any instance where a signatory objects to the implementation of any of the stipulations set forth above. The signatories shall consult to resolve the objection. If MDTA determines the objection cannot be resolved, MDTA's responsibility to carry out all actions under this MOA that are not the subject of the dispute shall remain unchanged. MDTA shall coordinate with VDOT and FHWA to determine whether the subject of the dispute requires an amendment to this MOA (as described in Stipulation VII.B) or requires termination of the MOA (as described in Stipulation VII.E).

B. Amendments

This MOA may be amended only upon written agreement of the signatories. Any signatory party may request an amendment, whereupon the other signatory parties will respond with any comments within sixty (60) days of the request date.

C. Duration

This MOA shall remain in full force and effect from the date of its execution until five (5) years following commencement of construction for the PROJECT. Prior to five (5) years following commencement of construction, MDTA may consult with the other signatories to consider an extension to the MOA. Such an extension shall be treated as an amendment in accordance with Stipulation VII.B.

D. Review of Implementation

MDTA shall review the PROJECT annually to monitor progress of the implementation of the terms of this MOA. Upon completion of each review, MDTA shall submit a memorandum summarizing the status of MOA implementation to the signatories. The review should occur in January each year following implementation of the MOA.

E. Termination

If any signatory to this MOA determines that the terms of this MOA will not or cannot be completed, that signatory may immediately coordinate with the other signatories to draft an amendment to the MOA per Stipulation VII.B. If within thirty (30) calendar days an amendment cannot be drafted, any signatory may terminate its commitments in the MOA upon written notification to the other signatories.

[SIGNATURES APPEAR ON THE FOLLOWING PAGE]

Execution of this MOA by the signatories, and implementation of its terms, is evidence that MDTA is committing to address Section 4(f), Section 6(f) and FLPP effects to parks that result from the Governor Harry W. Nice Memorial Bridge Improvement Project during design and construction of the PROJECT.

SIGNATORIES

MARYLAND TRANSPORTATION AUTHORITY

By: _____ Date: 6/29/11
Randolph P. Brown, Acting Executive Secretary

Approved as to form and legal sufficiency:

_____
Sherita D. Harrison, Assistant Attorney General

FEDERAL HIGHWAY ADMINISTRATION

By: _____ Date: 9/22/2011
for Hassan Raza, DelMar Division Administrator

By: _____ Date: 8/8/11
for Irene Rico, Virginia Division Administrator

VIRGINIA DEPARTMENT OF TRANSPORTATION

By: _____ Date: 7/12/11
Steve Long, Assistant Administrator, Environmental Division

NATIONAL PARK SERVICE

By: _____ Date: 8/20/11
Dennis Reidenbach, Regional Director Northeast Region

VIRGINIA TOURISM CORPORATION

By: _____ Date: 7/27/11
Roy Knox, Vice President, Administration and Revenue

VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION

By: _____ Date: 7/20/11
Danette Poole, Director, Division of Planning and Recreational Resources

KING GEORGE COUNTY

By: _____ Date: 7/6/11
Travis Quesenberry, County Administrator

Attachment A

Project Location Map and Plans of
the Preferred Alternate (Modified Alternate 7)


Charles County
La Plata
Port Tobacco
Newtown
Dentsville
Bel Alton
MARYLAND
Allens Fresh
Wicomico
Mathias Point
Popes Creek
Budds Creek
Gov. Harry W. Nice Mem. Bridge
Newburg
St. Mary's County
West Hatton
Morgantown
Dahlgren
Woodberry Beach
Swan Point
Rock Point
Colonial Beach
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HARRY W. NICE BRIDGE
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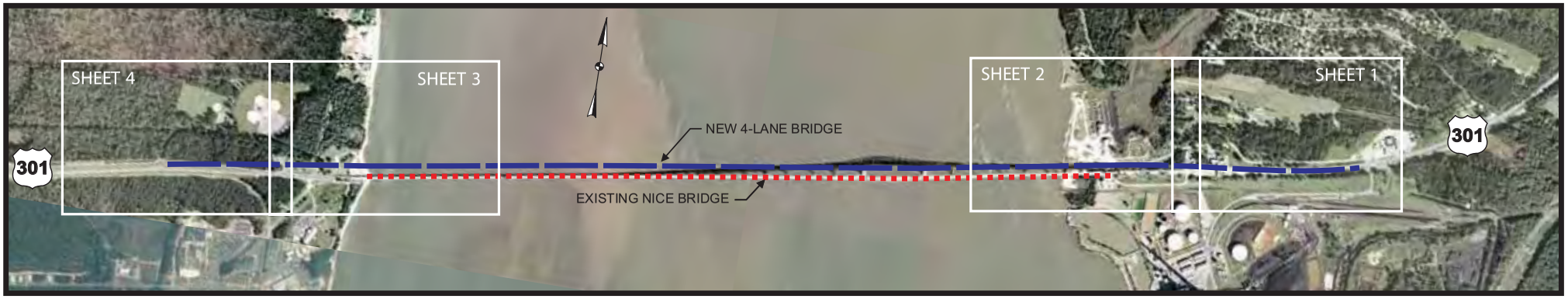
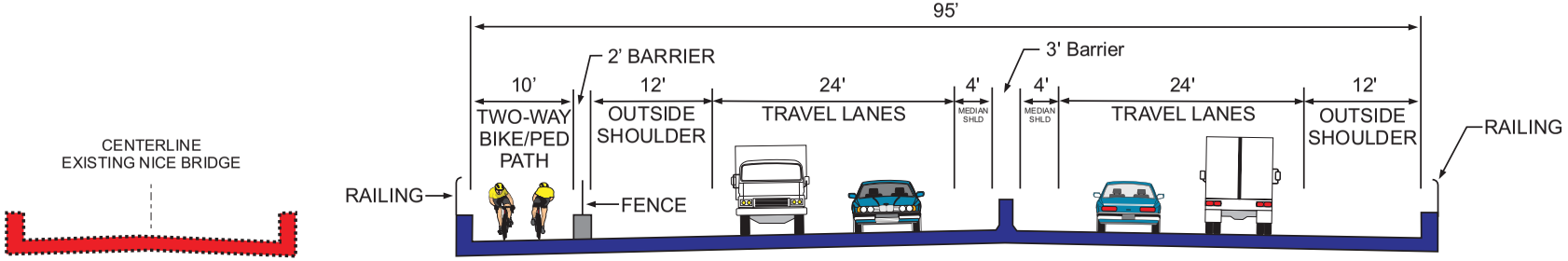
Figure 1
Project Location Map
1 in = 3 miles
N





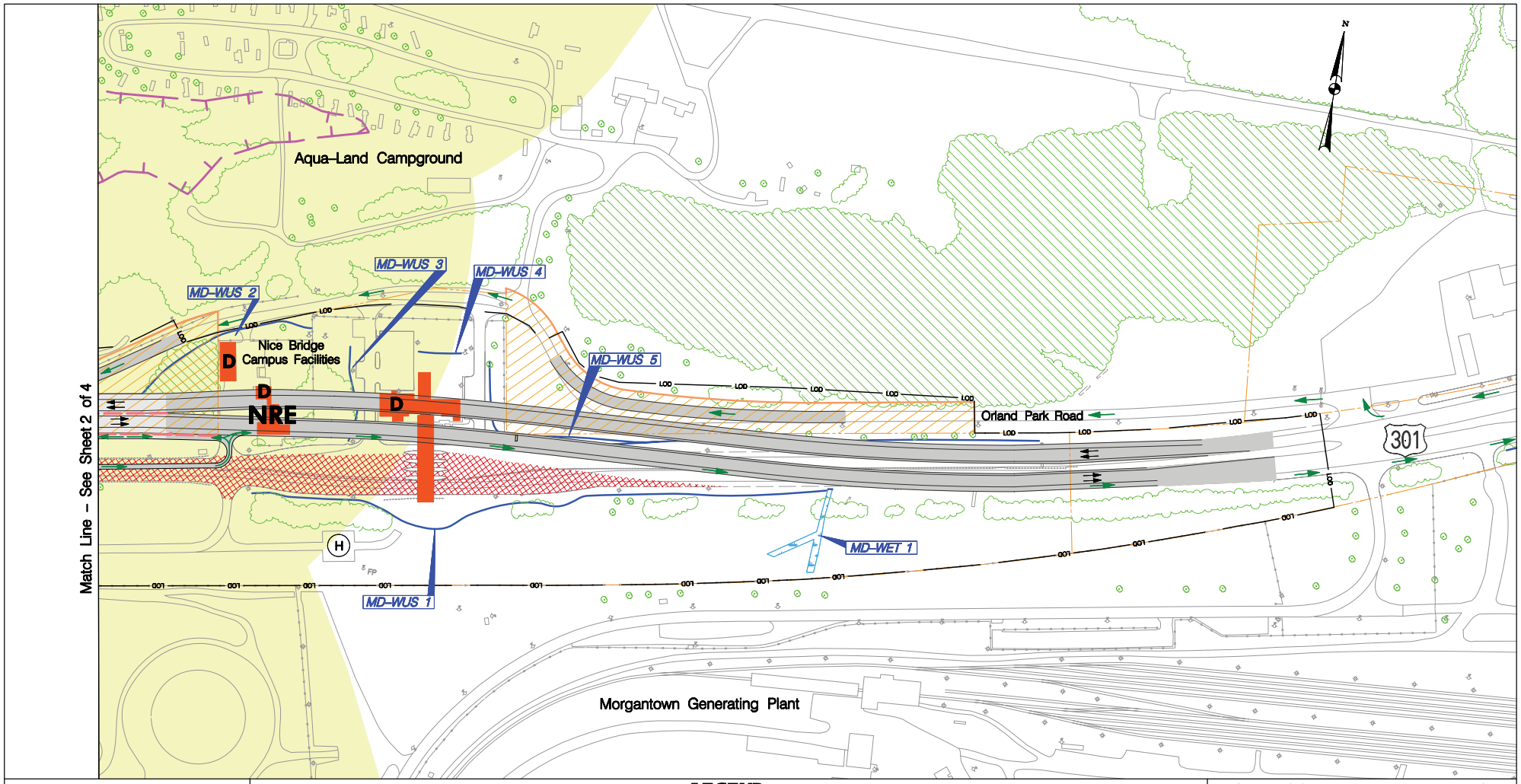
MODIFIED ALTERNATE 7

Nice Bridge Improvement Project

Appendix A

Modified Alternate 7
Index Sheet

November 2010



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
- Bike / Pedestrian Traffic Flow

Nice Bridge Improvement Project

Appendix A November 2010

Preferred Alternate

Modified Alternate 7 (Sheet 1 of 4)

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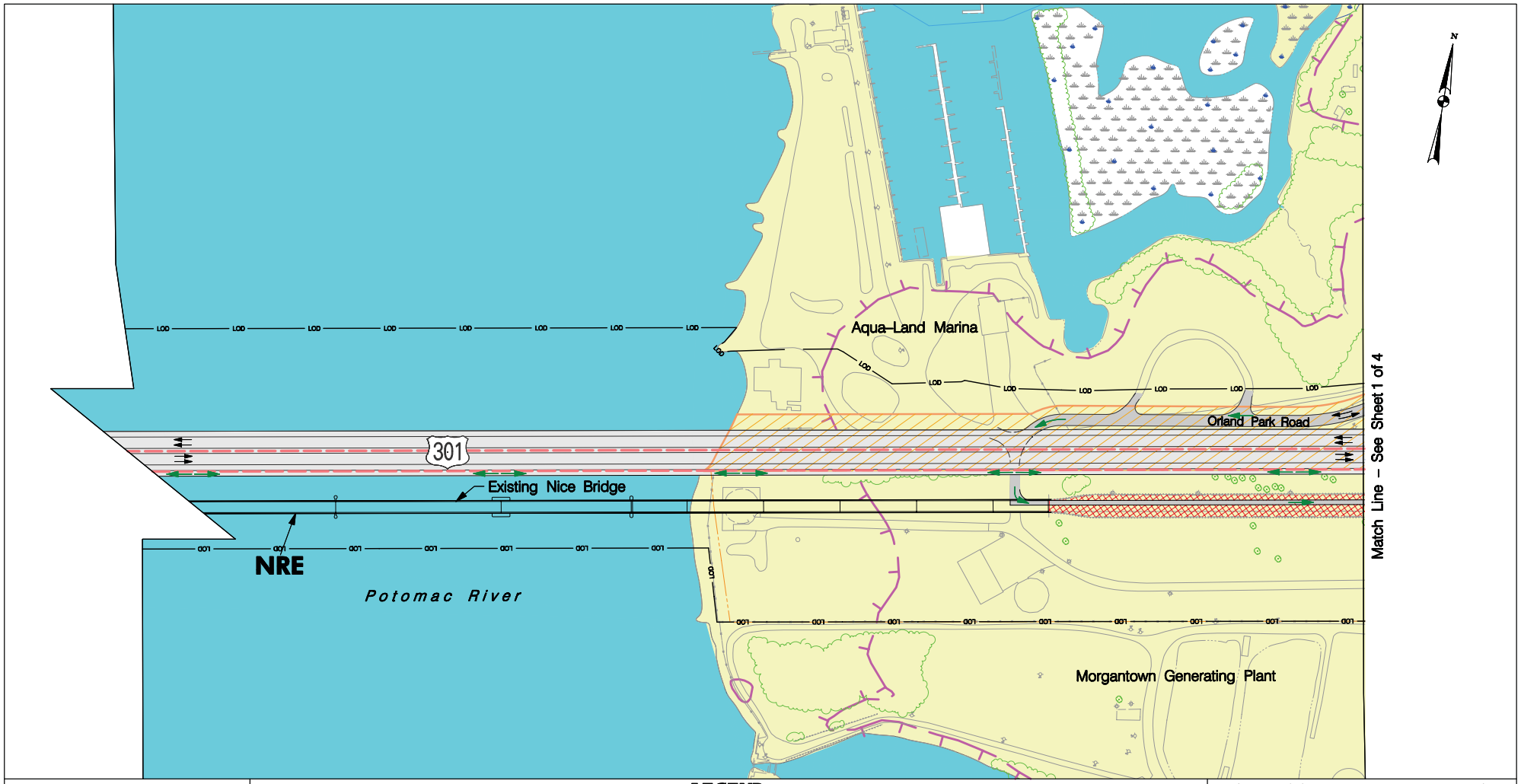

VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

LEGEND

- Bridge Structure
- New Roadway
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- NRE — National Register of Historic Places – Eligible Potential Displacement
- Bike / Pedestrian Traffic Flow

Nice Bridge Improvement Project

Appendix A November 2010

Preferred Alternate

Modified Alternate 7 (Sheet 2 of 4)

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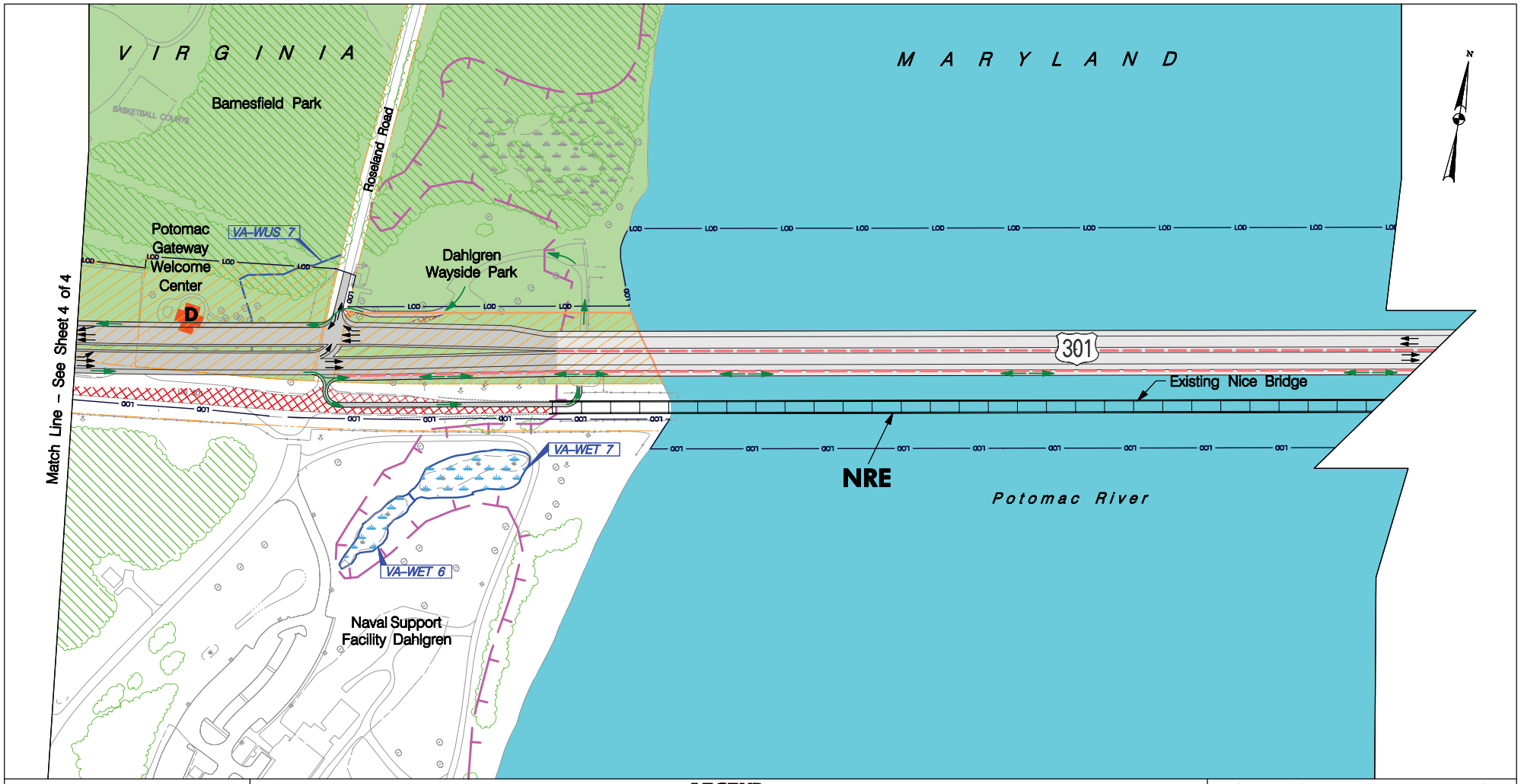

VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

T:\Nice Bridge Study\Preferred Alternate\pHD-MODALT7-3.dgn

LEGEND

- Bridge Structure
- New Roadway
- Pavement Removal
- Retaining Wall
- Proposed Fence
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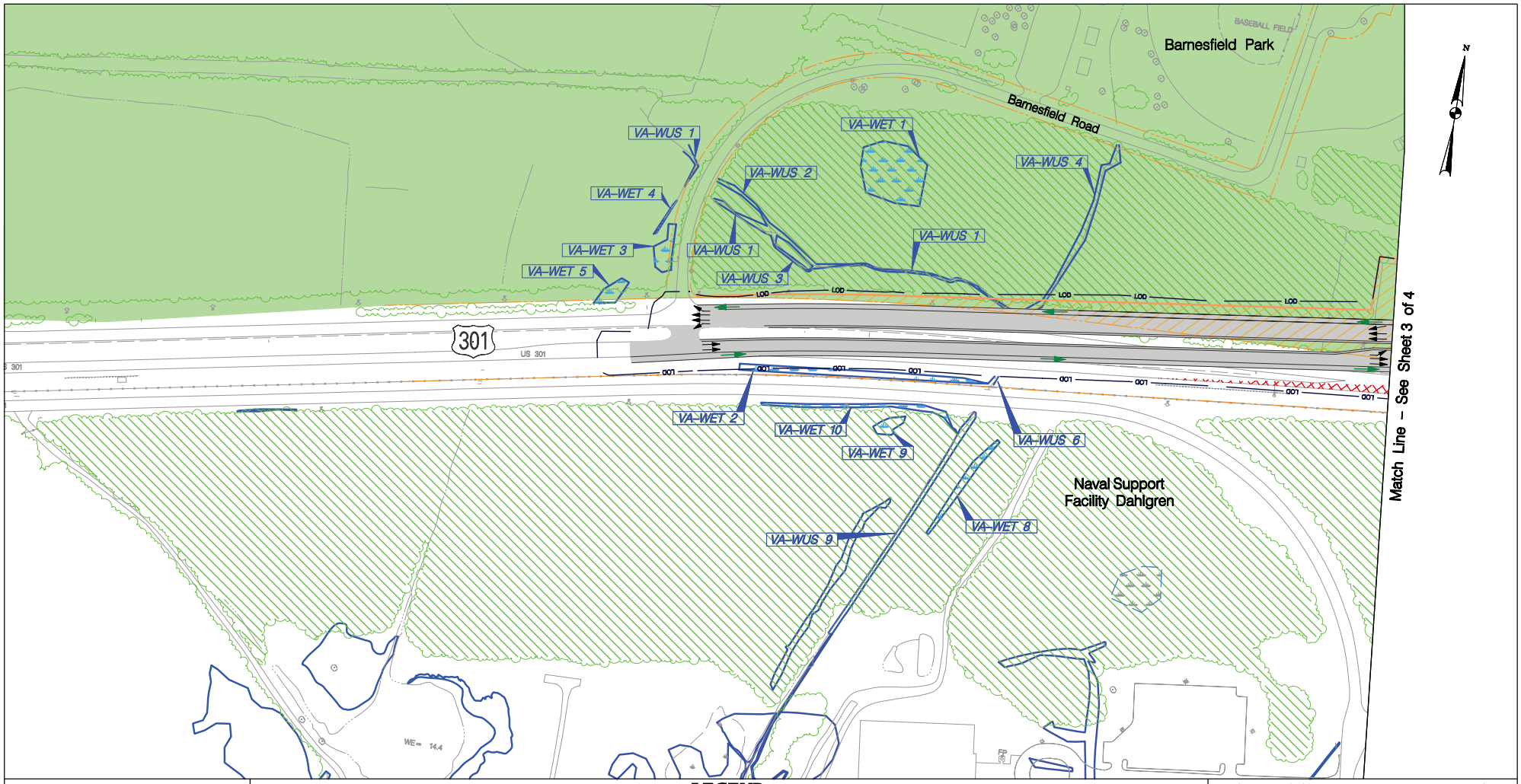
Nice Bridge Improvement Project

Appendix A November 2010

Preferred Alternate

Modified Alternate 7 (Sheet 3 of 4)



VA MD

PLATE LAYOUT

0 100 200 300 400

Scale: 1" = 200'

LEGEND

- Bridge Structure
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Nice Bridge Improvement Project

Appendix A November 2010

Preferred Alternate

Modified Alternate 7 (Sheet 4 of 4)

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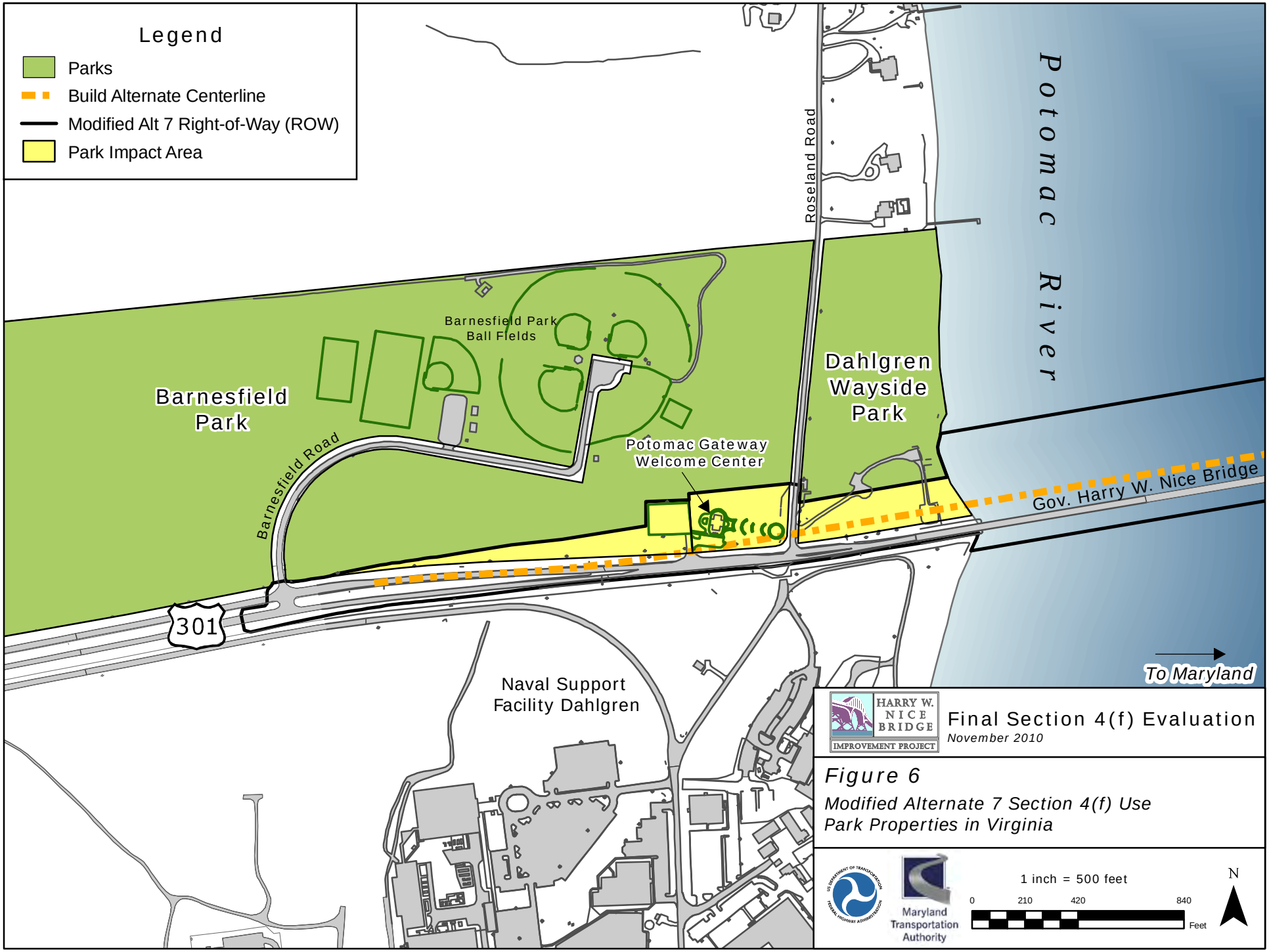
Attachment B

Virginia Parkland Impacts


Legend
Parks
Build Alternate Centerline
Modified Alt 7 Right-of-Way (ROW)
Park Impact Area
Barnesfield Park
Barnesfield Park Ball Fields
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
Final Section 4(f) Evaluation
November 2010
Figure 6
Modified Alternate 7 Section 4(f) Use
Park Properties in Virginia
Maryland Transportation Authority
1 inch = 500 feet
0
210
420
840
Feet
N

Attachment C

Excerpts from Preferred Alternate / Conceptual Mitigation (PA/CM) Package

NICE BRIDGE IMPROVEMENT PROJECT

Charles County, Maryland and King George County, Virginia

MODIFIED ALTERNATE 7

Preferred Alternate and Conceptual Mitigation (PACM) Package

MARYLAND TRANSPORTATION AUTHORITY — Date 09/20/10
Dennis N. Simpson, Acting Director

FEDERAL HIGHWAY ADMINISTRATION — Date 09/29/10
Nelson Castellanos, Division Administrator, Maryland Division

The Maryland Transportation Authority seeks concurrence from the Federal Highway Administration and the concurring agencies (U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and National Marine Fisheries Service) for the selection of Modified Alternate 7 as the Preferred Alternate for the Governor Harry W. Nice Memorial Bridge Improvement Project. The purpose of the Preferred Alternate is to provide a crossing of the Potomac River that is compatible with the approach roadway, increases capacity to accommodate design year traffic, improves safety conditions, and accommodates two-way traffic flow on the bridge during wide-load crossings, incidents, poor weather conditions, and when performing bridge maintenance and rehabilitation work.

All of these public expenditures would be difficult to justify for a bridge that ceases to have any transportation function. In addition, the cost and responsibility for maintaining bridge security would be an unreasonable burden to MDTA.

Consideration was also given to retaining the existing bridge to serve as a bicycle/pedestrian trail. This would allow the bridge to continue to have a transportation function, which would make the annual costs to preserve the bridge somewhat more justifiable as a public expenditure. Furthermore, the elimination of the bicycle/pedestrian trail from the new bridge would result in cost savings which could be used to defray the maintenance of the historic bridge for a number of years. However, at some point in the future, the mounting cost of maintenance would become too great a financial burden for a bicycle/pedestrian trail, and the bridge would be permanently closed, and fall into disrepair. At that time, it would be more costly and structurally challenging to retrofit the four-lane bridge with a trail than it would be to include the trail as part of the initial new bridge construction.

C. Consistency with Section 4(f) and Section 6(f)

1. Section 4(f) (23 CFR Part 774)

Modified Alternate 7 would impact the following significant historic properties and publicly-owned public parks which are protected under Section 4(f) of the US Department of Transportation Act of 1966: the Governor Harry W. Nice Memorial Bridge and Potomac River Bridge Administration Building, Barnesfield Park, Potomac Gateway Welcome Center, and Dahlgren Wayside Park.

In order to address the impacts of the ARDS on these resources, a Draft Section 4(f) Evaluation was completed in July 2009. The evaluation compared all of the ARDS as well as other alternates that avoid or minimize the use of Section 4(f) property. Under 23 USC Part 774, impacts to Barnesfield park were evaluated as *de minimis* in the July, 2009 EA. The Preferred Alternate has greater impacts to Section 4(f) resources compared to the other ARDS. Therefore, in order for FHWA to select Modified Alternate 7, a Final Section 4(f) Evaluation will be prepared to demonstrate 1) there are no feasible and prudent avoidance alternates to the use of Section 4(f) property; and 2) that all possible planning has been done to minimize harm to Section 4(f) property.

Based on the Draft Section 4(f) Evaluation, and coordination with the DOI, National Park Service (NPS), Virginia Department of Conservation and Recreation (DCR), the Virginia Department of Historic Resources (DHR), the Maryland Historical Trust (MHT), King George County (KGC), and the US Navy, it appears that there are no feasible and prudent alternates that avoid use of Section 4(f) property, and that Modified Alternate 7 includes all possible planning to minimize harm. However, this determination cannot be made until the Final Section 4(f) Evaluation is completed and signed by FHWA, which is scheduled for late 2010.

2. Section 6(f) (36 CFR Part 59)

In 1985, King George County received $240,000 from the Federal Land and Water Conservation Fund (LWCF) to improve ball fields, utilities, concessions, restrooms, playgrounds, parking, landscaping, and other support facilities in Parcel A of Barnesfield Park. Consequently, this parcel is protected under Section 6(f) of the LWCF Act (16 USC 460). The NPS must approve the conversion of any portion of this Section 6(f) property from parkland to any other use, including highway right-of-way. To obtain approval, replacement property must be provided which meets the following conditions:

- Replacement property must be of equal fair market value;
- Replacement property must be of reasonably equivalent usefulness, recreational value, and location to that being converted;
- Property proposed for substitution must meet the eligibility requirements for LWCF assisted acquisition; and
- Impacts to the remainder of the park, as a result of the conversion, shall be considered.

It is the MDTA's intent to also provide replacement lands of equal or greater acreage to those impacted.

To meet Section 6(f) requirements, MDTA has completed a map search of potential replacement park sites. Example replacement properties are discussed in **Section VII. A.** Due to the anticipated extended time frame for funding availability and project implementation, MDTA cannot currently secure the specific property, or properties, that would be used for Section 6(f) replacement. Specific replacement property will be identified during the project's design phase, once funding is available. However, a Memorandum of Agreement will be implemented in the coming months with NPS, DCR, KGC, VDOT, VTC, and FHWA to formalize the process which will be followed to obtain approval for a Section 6(f) conversion. Based on the large number of potential parkland mitigation properties identified, it is expected that suitable replacement parkland will be secured to ensure compliance with Section 6(f).

D. Consistency with Section 404 of the Clean Water Act

The U.S. Environmental Protection Agency's (EPA's) *Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material* [40 CFR 230] allow the U.S. Army Corps of Engineers (USACE) to authorize a Section 404 permit for impacts to waters of the US, including wetlands, only for the practicable alternative which results in the least adverse impact to the aquatic ecosystem, unless that alternative has other significant adverse environmental consequences. This alternative is often referred to as the "Least Environmentally Damaging Practicable Alternative" (LEDPA).

As discussed above under **Section V. C. 1. Section 4(f)**, Alternate 1 would not satisfy the stated purpose and need; therefore it is not a practicable alternative. Alternates 2, 3, and 6 would result in encroachment onto NSF Dahlgren property, resulting in an unacceptable decrease in the required standoff distance between the public right-of-way and several unique facilities that are critical to the Navy's mission. Therefore, Alternates 2, 3, and 6 are not practicable alternates.

Of the three northern alternates (Alternates 4, 5, and 7), Alternate 4 is not preferred because it would only partially meet the purpose and need by failing to address the safety deficiencies, capacity limitations, and operational inefficiencies of the existing bridge and not fully satisfying the requirements of STRAHNET. While Alternate 4 would result in a minor reduction in aquatic impacts (including dredging) compared to the Preferred Alternate (see ***Table 2***), this reduction in aquatic impacts is not sufficient to justify choosing an alternate that would compromise the engineering, operational, safety, and capacity benefits of the Preferred Alternate. Therefore, Alternate 4 is not practicable.

Table 2: Natural Environmental Impacts of the Northern Alternates

Environmental Resource	Alt 4	Alt 5	Mod Alt 7
Prime farmland soils and soils of statewide importance	7.2 Ac	7.5 Ac	8.2 Ac
Streams	3,640 LF	3,670 LF	3,660 LF
Wetlands	0.1 Ac	0.2 Ac	0.1 Ac
Open water pier impacts	0.4 Ac	0.7 Ac	0.5 Ac
Temporary dredge impacts	63 Ac	89 Ac	65 Ac
Chesapeake Bay Critical Area (MD)	24.4 Ac	24.5 Ac	24.2 Ac
Chesapeake Bay Preservation Area (VA)	2.3 Ac	2.3 Ac	2.2 Ac
RTE Species	0-1	0-1	0-1
100-year FEMA designated floodplain	8.4 Ac	8.7 Ac	8.4 Ac
Forests	1.0 Ac	1.0 Ac	2.7 Ac

Alternate 5 would have higher cost and greater aquatic impacts (with 89 acres of dredging) than Alternate 7 (67 acres dredging) or Modified Alternate 7 (65 acres dredging). In addition, the construction of two bridges with Alternate 5 would require a longer period of construction, requiring a second season of dredging and pile driving to construct the second bridge. This would prolong the period aquatic species would be exposed to the detrimental effects of increased turbidity and shock waves. Therefore, in terms of aquatic impacts, Alternate 5 has no advantage over the Preferred Alternate.

Based on the above discussion, Modified Alternate 7 is the LEDPA. Although a USACE Section 404 permit will not be sought at the conclusion of the planning phase, with this document MDTA seeks formal concurrence from USACE that Modified Alternate 7 is the LEDPA. A *Draft Compensatory Mitigation Plan* for unavoidable impacts to aquatic resources was included in the EA and has been coordinated with the resource agencies (for further details, see **Section VII. C.**)

VI. ENVIRONMENTAL IMPACTS OF PREFERRED ALTERNATE

As a result of comments received during the 2009 Public Hearing comment period, minor modifications were made to Alternate 7 to create a more cost-effective, and less environmentally-impactive alternate. The minor modifications made to Alternate 7 include the consolidation of two one-way bicycle/pedestrian paths into a single two-way path, and the paths on each shore that are needed to transition the bicyclists/pedestrians from the bridge to the appropriate shoulder of US 301.

This section provides a summary of environmental impacts associated with the Preferred Alternate (Modified Alternate 7) and describes efforts to minimize impacts to affected environmental resources. Impact values have been updated from the July, 2009 EA to reflect the minor changes to Alternate 7; however, the qualitative discussions of the impacts of Alternate 7 described in the EA remain valid.

A. Socioeconomic Resources

1. Communities and Community Facilities

No residential displacements would occur with the Preferred Alternate. Impacts to community facilities include the demolition of the Potomac Gateway Welcome Center and the MDTA's Nice Bridge Administration Campus facilities, and acquisition of land from Dahlgren Wayside Park, Barnesfield Park, and Aqua-Land Marina and Campground. The Preferred Alternate would acquire 2.2 acres of the 146.5-acre Barnesfield Park, 2.2 acres of the 14.7-acre Dahlgren Wayside Park, and the entire 2.1-acre Potomac Gateway Welcome Center (which is considered to have a public park and recreation purpose).

The acquisition required from Barnesfield Park would be from a wooded area, and would not affect the ball fields, playground, concessions, park facilities, or entrance. Acquisition of property from Barnesfield Park must comply with Section 6(f), as described in Section V.C.2 of this document.

The 2.2-acre acquisition from Dahlgren Wayside Park would include a portion of the park entrance on Roseland Road, a parking area, a portion of the picnic area, and a portion of the beach area. Access would be improved with the provision of a left turn storage lane in the northbound direction of US 301 at Roseland Road.

At the privately-owned Aqua-Land Marina and Campground, a portion of the entrance road (Orland Park Road) would be relocated, a portion of the gravel parking lot would be displaced, and US 301 would be moved closer to the campground, but no buildings or structures would be displaced and the intersection of US 301 and Orland Park Road would remain unchanged. Charles County has developed a concept plan to accommodate public access to the river at Aqua-Land. Coordination will be undertaken with the Charles County Department of Planning and Growth Management during the design phase concerning the accommodation of an increased number of boaters at Aqua-Land.

Minimization measures have been employed, and will continue to be considered as the project advances to final design. The project footprint, and corresponding impacts, have been reduced by the choice of an alternative that would construct a single four-lane bridge rather than two parallel bridges. The consolidation of two bicycle/pedestrian paths into a single path also reduces the encroachment of relocated Orland Park Road onto the Aqua-Land property. Finally, by accommodating the bicycle/pedestrian path on the south side of the bridge rather than the north, the grade-separated loop path beneath the bridge can be constructed without encroaching into Dahlgren Wayside Park.

During final design, further minimization of property impacts will be evaluated through measures such as 2:1 side slopes and retaining walls or U-wing abutments on the approaches to the bridge, and by returning any unused portion of the Potomac Gateway Welcome Center property to King George County for park usage. Any acquisition or easements would be purchased based on fair market value and just compensation, in accordance with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*, as amended, as well as MDTA and Virginia Department of Transportation (VDOT) property acquisition policies.

Potential park mitigation sites are discussed in **Section VII. A**.

2. Environmental Justice

The campground at Aqua-Land, was identified as a potential Environmental Justice community, with seasonal and year-round low-income residents. The Preferred Alternate would result in the roadway being closer to the residents, but would not result in any displacements or noise impacts. Therefore, the Preferred Alternate does not result in a disproportionately high and adverse human health or environmental effect to Environmental Justice communities.

3. Visual Quality

The Nice Bridge is a dominant feature in the visual landscape and is visible from a distance of several miles both upstream and downstream along the Potomac River. The Preferred Alternate would construct a new bridge on the upstream side of the existing bridge, with a grade not as steep as the existing bridge. This results in a shift in the location of a new bridge abutment in Maryland approximately 800 feet east of the existing bridge abutment. This would alter the views of the bridge, and from the bridge, with the greatest change in the bridge profile occurring at properties adjacent to the bridge on the Maryland shore (Aqua-Land Marina & Campground and Morgantown Generating Station). The type of structure may also change, which could affect the appearance of the bridge as viewed from properties on both shores. During the design phase, aesthetic treatments for the bridge would be considered to keep it visually pleasing to adjacent homes, businesses, and motorists. Also, during the design phase, coordination will be undertaken with the Charles County Department of Planning and Growth Management regarding signage and landscaping that would be appropriate for the gateway to Charles County. Appropriate vegetative screening adjacent to the Morgantown Generating Station will be considered.

4. Economic Environment

The Preferred Alternate would substantially 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.

There would be no acquisition of property from the two largest employers in the study area, NSF Dahlgren (with over 4,500 military personnel and civilian government employees and more than 4,200

to the Metropolitan Washington Council of Governments (MWCOG) Transportation Improvement Program prior to conclusion of project planning.

F. Climate

The Preferred Alternate is not expected to have an impact on climate change, as it does not induce significant new traffic volumes.

G. Hazardous Materials

Potential hazards associated with unexploded ordnance (UXO) in the study area, including the Potomac River, were identified by NSF Dahlgren. Results of land-based UXO investigations did not identify any significant UXO. Investigations for UXO in the Potomac River would be initiated prior to construction of the Preferred Alternate.

One hazardous material site, NSF Dahlgren, was identified within the Preferred Alternate's limit of disturbance. An Initial Site Assessment (ISA) was prepared in December, 2008, with soil sampling adjacent to the north and south sides of US 301. The results of the ISA documented the presence of naturally occurring levels of arsenic in the soils on the Virginia side; however, no on-site remediation of the soil is required. Any excess soil materials generated during construction and not used on-site will need to be properly disposed in accordance with applicable solid waste regulatory requirements. In addition, the Health and Safety Plan prepared for construction will include information on arsenic management and avoidance. No further regulatory compliance with DEQ is required.

H. Indirect and Cumulative Effects (ICE) Analysis

The proposed bridge improvements are expected to add an insignificant amount of new trips at the crossing. There are no developments or transportation projects that are contingent upon the construction of the Preferred Alternate. No new access points and no additions to the highway network would be provided as a result of the project. Indirect impacts could include temperature, runoff, and water quality effects that typically accompany added impervious surface; construction-related impacts on terrestrial and aquatic wildlife; dredging-related turbidity effects on benthic invertebrates; invasive species colonization of cleared roadside areas; effects of blasting and pile driving on fish populations; and access/mobility changes at Aqua-Land Marina and Dahlgren Wayside Park as a result of impacts to parking lots and entrances. Cumulative effects would be minor and are expected to primarily occur in areas zoned for development. Cumulative effects to environmental resources will be regulated by existing applicable federal, state, and local legislation and through individual avoidance, minimization and/or mitigation strategies. A detailed review of potential indirect and cumulative effects is included in the EA.

VII. MITIGATION MEASURES

This section describes the conceptual mitigation measures developed to address the unavoidable impacts of the Preferred Alternate. Funding for design, right-of-way acquisition, and construction of the Nice Bridge project is not currently programmed. Therefore, at this time, the measures presented in this document are offered as examples of the types of mitigation that may be implemented. A mitigation discussion is provided for those resources that incur an adverse effect from the project.

A. Section 4(f) / 6(f) Park Mitigation

Construction of Modified Alternate 7 would impact approximately 2.2 acres of Barnesfield Park, 2.2 acres of Dahlgren Wayside Park, and 2.1 acres of the Potomac Gateway Welcome Center. Mitigation for park impacts would be used to minimize harm to the park resources (per USDOT-FHWA Section 4(f)) and provide replacement parkland (per USDOI-NPS Section 6(f)).

The following mitigation measures were considered for impacts to all three parks:

- Replacement of property with lands that have comparable value and reasonably equivalent usefulness and location;
- Provision of new or replacement park amenities and facilities;
- Restoration and landscaping of disturbed areas;
- Incorporation of design features and habitat features where necessary;
- Payment of fair market value/just compensation for the land; and
- Enhancement of existing parkland.

In addition, mitigation measures for impacts to Parcel A of Barnesfield Park must also meet the requirements of Section 6(f) of the LWCF Act and be approved by the NPS. This mitigation requirement is due to the fact that King George County received LWCF funding for improvements to the park.

Section 6(f) requirements include:

- Evaluation of all practicable alternatives;
- Replacement property must be of equal fair market value;
- Replacement property must be of reasonably equivalent usefulness, recreational value, and location to that being converted;
- Property proposed for substitution meets the eligibility requirements for LWCF assisted acquisition; and
- Impacts to the remainder of the park, as a result of the conversion, shall be considered.

It is the intent of MDTA to identify replacement parkland which is of equal or greater acreage than the impacted area of Barnesfield Park.

Coordination and approval for the project's park mitigation will be sought in consultation with FHWA, DCR, NPS, and King George County. MDTA has conducted a series of meetings among these and other agencies having jurisdiction over the affected parklands or an approval action for the mitigation. This interagency team will be reviewing the impacts to parkland and evaluating the potential mitigation measures that are described in this report. A Memorandum of Agreement (MOA) outlining the coordination that will be undertaken to obtain final approval of the park mitigation is being developed between MDTA, VDOT, FHWA, NPS, VTC, DCR, and the King George County Board of Supervisors.

1. Mitigation Site Search

Various mitigation options that satisfy the mitigation requirements for park properties have been investigated. Primarily, mitigation options such as park enhancement, creation, and expansion were identified. The following criteria were used to identify parcels as potential sites for these mitigation options:

- The park impact areas include both active and passive recreation land. The impacted developed facilities include parking lot, picnic area, and a beach. Within the impacted park area are forests and streams, which add value to the recreation experience in terms of scenic qualities, enjoyment of wildlife, a buffer from surrounding roads and development, and protection of natural resources. Therefore, the mitigation search focused on identifying opportunities to provide lands having equivalent recreational value within a similar natural setting.
- Section 6(f) guidance recommends property adjacent to the impacted 6(f) resource be given priority; therefore, parcels of land located adjacent to the impacted parkland were considered

favorable mitigation options. Additionally, the impacts to the existing park facilities were relatively small. Therefore, acquisition of land to expand an existing park offers greater benefits than acquiring a few acres of isolated land.

- Parcels with water access were considered more favorably because the land use would replace functions lost through the conversion of the Dahlgren Wayside Park and would satisfy recommendations of the *King George County Comprehensive Plan*, which recognizes the need for aquatic recreational opportunities.
- Sites without constraints such as wetlands; rare, threatened, and endangered species; historic resources; or hazardous materials would allow for further development of recreational park features.

Twenty-two example park mitigation sites were identified, 16 of which appear viable (see **Figure 4**). Parcels located adjacent to Barnesfield Park, Dahlgren Wayside Park, and Caledon Natural Area State Park have been identified as potential replacement and park expansion lands. Enhancements to the existing Barnesfield Park have been considered. Finally, additional properties within King George County that are not adjacent to the impacted parks, but contain large open fields for park development, water access, and natural areas for trails, were considered.

Using Geographic Information Systems (GIS) data, the acreage of open space and forest was calculated for the identified mitigation options. The example properties described in this section may either be acquired in whole or in part; however, it is anticipated that MDTA would not mitigate at greater than a 2:1 ratio of replacement parkland to impacted parkland. Thus the approximate acreage of replacement land needed is not more than approximately 13 acres. Furthermore, the fair market value of the impacted parkland will be considered in the selection of any mitigation site.

Because MDTA does not intend to proceed with park mitigation until funding is available, no property owners have been contacted at this time. The sites identified present a potential menu of mitigation opportunities the MDTA could further investigate when funding is available for design and construction of the project. The property search provides evidence of sufficient replacement land for park mitigation. A property search update would be completed once design and construction funding becomes available. The MOA will detail the necessary steps to obtain agency approval of the park mitigation sites.

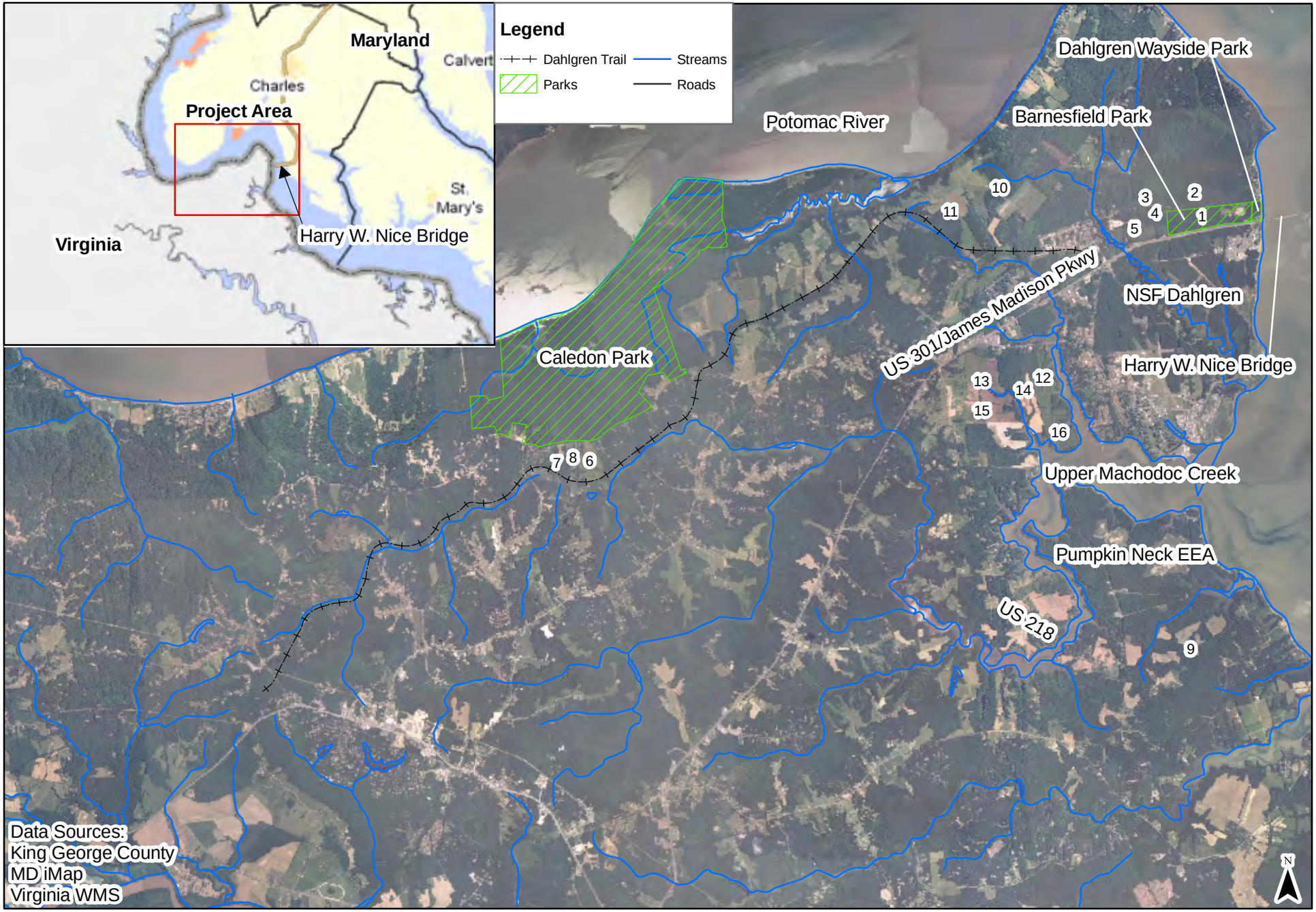
Although not identified in this report, any chosen park mitigation site will require a determination from the NPS that the property is of comparable size, reasonably equivalent usefulness and location, and of at least equal fair market value to the impacted Barnesfield Park property (36 CFR 59.3). Under any park mitigation option, the Potomac Gateway Welcome Center property would be divided so that the remaining, unaffected portion would revert back to King George County for recreational use in Barnesfield Park.

a. Mitigation Site Opportunities at or near Barnesfield Park

Option 1 - Barnesfield Park Enhancements

Option 1 consists of enhancements to Barnesfield Park. Barnesfield Park functions as a community and county park serving the recreational needs of thousands of people in King George County. Per the *King George County Capital Improvement Plan (CIP)*, possible enhancements for Barnesfield Park include the installation of additional playground equipment, lights for sports fields, a well for irrigation, the construction of a group pavilion, and the installation of additional parking. As a stand-alone option, enhancements to the park would not likely meet Section 6(f) replacement land requirements.

Figure 4: Potential Park Mitigation Sites



Option 2 - Land Acquisition from Site 2

Option 2 consists of acquiring private property located near Barnesfield Park. The property is a wooded, 150+ acre parcel with several extensive wetlands. There is sufficient upland acreage on the site to satisfy Section 6(f) requirements for land of equal recreational value, even if only a portion of the parcel is acquired.

Option 3 - Land Acquisition from Site 3

Site 3 is a 50+ acre parcel of wooded land located near Barnesfield Park. The parcel includes several extensive wetlands. Acquisition of land from this property would provide sufficient upland acreage to satisfy Section 6(f) requirements for land of equal recreational value and usefulness. Access would need to be provided to this property.

Option 4 - Land Acquisition from Site 4

Site 4 is a wooded parcel of 20+ acres located near Barnesfield Park. The parcel contains several wetlands, but has sufficient upland acreage to satisfy Section 6(f) requirements for land of equal recreational value and usefulness.

Option 5 - Land Acquisition from Site 5

Site 5 is a 50+ acre wooded tract near Barnesfield Park that would have direct access from US 301. The parcel contains several wetlands and would provide an opportunity for floodplain reforestation. The acquisition of land from Site 5 would provide sufficient upland acreage to satisfy Section 6(f) requirements for land of equal recreational value and usefulness.

b. Opportunities near Caledon Natural Area

The state operated Caledon Natural Area is a 2,579-acre state park located approximately seven miles west of the Nice Bridge. Located between Route 218 and the Potomac River, it contains approximately three miles of shoreline. Currently, the park features amenities such as cabins, campsites, hiking trails, a visitor center with environmental education facilities, and a picnic shelter. Some of the land is protected for bald eagle habitat. Caledon Natural Area adjoins the 1431-acre Chotank Creek State Natural Area Preserve which lies to the east. The preserve is privately owned and not open for public visitation.

Option 6 - Land Acquisition from Site 6

Site 6 is located near Caledon Natural Area and is accessible from Route 218. Option 6 is a 50+ acre forested tract. The acquisition of land from Site 6 would likely satisfy Section 6(f) replacement requirements.

Option 7 - Land Acquisition from Site 7

Site 7 is a 30+ acre tract of forested land located near the Caledon Natural Area and accessible from Route 218. The acquisition of land from Site 7 would likely satisfy Section 6(f) replacement requirements.

Option 8 - Land Acquisition from Site 8

Site 8 is an approximately 50-acre tract of forested land located near Caledon Natural Area and accessible from Route 218. Acquisition of land from Site 8 would likely satisfy Section 6(f) mitigation requirements.

c. Opportunities at Dahlgren Railroad Heritage Trail

Dahlgren Railroad Heritage Trail (DRHT) is an existing, privately-owned, 240-acre trail located in King George County. A permit is required to use the trail. The DRHT begins along Route 605 and extends to the south of Caledon Natural Area eastward towards the B Gate at the Naval Surface Warfare Center, Dahlgren Division. It ends approximately two miles west of the Nice Bridge and approximately 1.6 miles west of Barnesfield Park. The DRHT has potential to be part of the Potomac Heritage National Scenic Trail, a network of locally managed trails stretching from the Potomac River to the Allegheny Highlands. Options were considered to (1) purchase portions of the trail to make it publicly accessible, and (2) purchase land to extend the trail to Barnesfield Park. Because there is local opposition from property owners along the trail, these options were dropped from consideration.

d. Opportunities Near Dahlgren Wayside Park

There are several residential properties located between Dahlgren Wayside Park and the Potomac River which could potentially replace the Potomac River access that would be impacted in Dahlgren Wayside Park. Increasing access to the river is a recommendation of the *King George County Comprehensive Plan* and the *Virginia Outdoor Plan*. Because these properties are smaller than the required park replacement acreage, they would not satisfy Section 6(f) mitigation requirements. In addition, all of these sites would likely require residential relocation. Consequently, they were dropped from further consideration.

e. Opportunities With River Access or Open Fields

Option 9 – Land Acquisition from Site 9

Site 9 is a 350+ acre parcel located south of NSF Dahlgren in the Pumpkin Neck Explosive Experiment Area (EEA). This Option has more than 100 acres of open space. The location of the property adjacent to the Pumpkin Neck EEA would provide a buffer between Base properties and local residents. Creation of a park on a portion of this parcel would likely satisfy Section 6(f) requirements for mitigation.

Option 10 – Land Acquisition from Site 10

Site 10 is a 300+ acre parcel bordering the Potomac River. The property contains wooded regions, small amounts of freshwater wetlands, and more than 200 acres of open fields. The acquisition of a small portion of Site 10 would provide sufficient upland acreage to satisfy Section 6(f) requirements for land of equal recreational value and usefulness. Acquisition of land from along the river would provide additional recreational access to waterways, satisfy Section 6(f) mitigation requirements, and be consistent with *King George County Comprehensive Plan* and *Virginia Outdoor Plan*. The site is accessible from Mathias Point Road. The acquisition of a portion of waterfront would likely require the construction of a new entrance road to the waterfront parcel.

Option 11 – Land Acquisition from Site 11

Site 11 is a 250+ acre parcel located along the Potomac River. The property contains wooded regions, small amounts of freshwater wetlands, and more than 150 acres of open fields. The acquisition of land from this site would provide sufficient upland acreage to satisfy Section 6(f) requirements for land of equal recreational value and usefulness. The site is accessible from Mathias Point Road and borders the DRHT. Acquisition of land from this parcel would provide additional recreational access to state waters, satisfy Section 6(f) mitigation requirements, and be consistent with the *King George County Comprehensive Plan* and *Virginia Outdoor Plan.*

Option 12 – Land Acquisition from Site 12

Site 12 is a 200+ acre parcel located south of Route 206 (Dahlgren Road) and west of NSF Dahlgren. The property borders a tributary to the Potomac River and contains wooded regions, freshwater and marine wetlands, and more than 50 acres of open fields. There is sufficient upland acreage to satisfy Section 6(f) requirements for land of equal recreational value and usefulness, and to provide opportunities for floodplain reforestation. The acquisition of land from this parcel could provide additional recreational access to state waters, satisfy Section 6(f) mitigation requirements, and meet the *King George County Comprehensive Plan* and *Virginia Outdoor Plan.*

Option 13 – Land Acquisition from Site 13

Site 13 is a 150+ acre parcel located south of Route 206 and west of NSF Dahlgren. The property abuts a stream and an estuarine wetland, and consists of small patches of woods, a small area of estuarine wetland, and more than 150 acres of open fields. The acquisition of land from this parcel would likely satisfy Section 6(f) mitigation requirements and be consistent with the *King George County Comprehensive Plan* and *Virginia Outdoor Plan.*

Option 14 – Land Acquisition from Site 14

Site 14 is a 100+ acre parcel located south of Route 206 and west of NSF Dahlgren. The property borders a tributary to the Potomac River and an estuarine marsh and contains wooded regions, freshwater and marine wetlands, and more than 50 acres of open fields. The acquisition of portions of this property would provide sufficient upland acreage to satisfy Section 6(f) requirements for land of equal recreational value and usefulness. The acquisition of land from this parcel would provide additional recreational access to state waters, satisfy Section 6(f) mitigation requirements, be consistent with the *King George County Comprehensive Plan* and *Virginia Outdoor Plan*, and provide opportunities for floodplain reforestation. The acquisition of a portion of this property may require the construction of a new entrance road to the acquired parcel.

Option 15 – Land Acquisition from Site 15

Site 15 is a 100+ acre parcel located east of Route 218 (Windsor Drive) and west of NSF Dahlgren. The property abuts a stream and an estuarine wetland, and consists of wooded regions, a small area of estuarine marsh, and more than 100 acres of open fields. The large areas of open land would be easily accessible from Route 218. Acquisition of land from a portion of this parcel would satisfy Section 6(f) mitigation requirements and be consistent with the *King George County Comprehensive Plan* and *Virginia Outdoor Plan*. A new entrance road would be needed to the acquired portion of the parcel.

Option 16 – Land Acquisition from Site 16

Site 16 is a 50+ acre parcel located west of NSF Dahlgren adjacent to tributaries to the Potomac River. The property consists of small patches of woods, small areas of freshwater and estuarine wetlands, and more than 50 acres of open fields. Acquisition of land from this property would provide sufficient upland acreage to satisfy Section 6(f) requirements for land of equal recreational value and usefulness. Acquisition of land from this parcel would also provide additional recreational access to state waters, be consistent with the *King George County Comprehensive Plan* and *Virginia Outdoor Plan*, and provide opportunities for riparian reforestation.

2. Evaluation of Mitigation Site Options

Each of the identified Mitigation Site Options has been evaluated based on the following four criteria:

- Criterion 1: Meets Section 4(f)/6(f) requirements;
- Criterion 2: Could provide recreation needs without substantial impacts to other environmental or social resources;
- Criterion 3: Meets *King George County Comprehensive Plan* recommendations—creation of parkland with recreational access to waterways; and
- Criterion 4: Located adjacent to an existing state/local park.

Table 4 displays the park mitigation options and evaluation criteria.

Table 4: Park Mitigation Options and Criteria

Option	Location	Size (acres)	Open Space (acres)	Forest (acres)	Wetlands (acres)	Criteria			
						1	2	3	4
1	Barnesfield Park	140	15+	123	30.50				X
2	Near Barnesfield Park	150+	0	168	42.50	X	X		X
3	Near Barnesfield Park	50+	0	90	10.78	X	X		X
4	North of Rt. 301 and near Barnesfield Park	20+	0	27	2.92	X	X		X
5	Adjacent to Route 301 near Barnesfield Park	50+	50+	22	7.30	X	X		X
6	Near Caledon Natural Area	50+	40+	22	0.07	X	X		X
7	Near Caledon Natural Area	30+	5	31	0	X	X		X
8	Near Caledon Natural Area	50	20	27	0.37	X	X		X
9	Pumpkin Neck EEA	350+	100+	290	5.32	X	X		
10	Potomac River, North of US 301	300+	200+	114	14.55	X	X	X	
11	Potomac River, North of US 301	250+	150+	110	12.72	X	X	X	
12	South of Route 206, west of Dahlgren	200+	50+	145	13.66	X	X	X	
13	South of Route 206, west of Dahlgren	150+	150+	8	0.35	X	X		
14	South of Route 206, west of Dahlgren	100+	50+	55	9.80	X	X	X	
15	East of Route 218, west of Dahlgren	100+	100+	17	2.18	X	X		
16	West of Dahlgren	50+	50+	15	6.05	X	X	X	

Evaluation Criteria: (X = meets criteria)

(1) Meets Section 4(f)/6(f) requirements.
(2) Could provide recreation needs without substantial impacts to other environmental or social resources.
(3) Meets *King George County Comprehensive Plan* recommendations—creation of park land with recreational access to waterways.
(4) Located adjacent to an existing state/local park.

While no option satisfies all four criteria, twelve options satisfy three of the four criteria. All but Option 1 potentially satisfy Section 4(f)/6(f) replacement requirements. There are numerous sites that are adjacent to existing parks, and numerous waterfront sites, but no sites satisfying both criteria.

The above list provides examples of the types of park mitigation sites that could potentially be acquired, when funding becomes available to advance the project. Ultimately, a decision on the parcel or parcels most likely to be acquired for mitigation will be dependent upon the willingness of the property owners to participate, and the approval of several local, state, and federal agencies that have a role in the Section 6(f) conversion process. Although the requirements for a Section 6(f) conversion are stringent, there are

numerous examples of potential parkland replacement sites cited above which could satisfy all of the Section 6(f) requirements.

B. Historic Mitigation

As noted previously, the project would result in an adverse effect to historic properties per Section 106 of the NHPA. Mitigation measures are currently being identified to address the adverse effect. Potential mitigation measures could include documentation of the existing Nice Bridge which would be appropriate for the Historic American Engineering Record (HAER) and Historic American Bridge Survey (HABS), administered through the NPS. A Section 106 MOA or PA will be developed among the MDTA, FHWA, MHT and DHR which will outline the measures necessary to address the adverse effects. In addition, the MOA or PA will prescribe a Phase II evaluation of identified archeological deposits to determine their extent and significance, and Phase III data recovery for those sites determined eligible for the NRHP. The signatures of all parties to the MOA or PA will constitute agreement on the sufficiency of the proposed mitigation measures for historic resources.

C. Aquatic Resource Mitigation

1. Essential Fish Habitat Mitigation

Essential Fish Habitat for summer flounder, juvenile bluefish, and their prey occurs within the project area. Specialized protection measures based on best available technology will be implemented during construction to reduce impacts to these populations. Potential water quality impacts will be addressed and managed through erosion and sediment control BMPs. Submerged Aquatic Vegetation (SAV) does not currently occur within the project area but the results of the annual SAV survey are posted on the Virginia Institute of Marine Science (VIMS) website and this data will be revisited as the project is advanced to final design. If SAV are determined present at that time, mitigation efforts will be considered.

The Essential Fish Habitat Assessment stated that construction activities can be mitigated through time-of-year restrictions, conditional blast design requirements, blast pressure wave maximum thresholds, and other methods. As the Nice Bridge progresses through the design phase, avoidance and minimization measures will be clarified in consultation with the NMFS to ensure the protection of sensitive resources. Specifically, NMFS has provided the following conservation recommendations for use during construction (see August 15, 2008 letter, **Appendix B**):

1) During power driving of large (>48 inch diameter) hollow steel piles, the pile being driven should be surrounded by a "can" (larger diameter pile), with a bubble curtain contained within the can.
2) Any subaqueous blasting should be prohibited from March 1 – October 30, the primary period of finfish migrations and nursery activities in the project area.

Use of a "can" and bubble curtain during pile driving activities for the recent Woodrow Wilson Bridge construction reduced shock waves up to 95 percent immediately outside of the "can". The levels were well below those lethal to fish. The same construction techniques could be applied to the construction of the Preferred Alternate.

Prior to commencing construction, MDTA must provide NMFS with a detailed written response to the NMFS conservation recommendations. Justification must be provided for any disagreements with the NMFS recommendations. Because the construction is currently not funded, and may not occur in the near future, MDTA will address the NMFS recommendations during final design. If, in the interim, techniques are developed that are proven more effective in protecting fish from underwater shock waves, MDTA will consider such measures during the future NMFS coordination.

2. Wetland and Stream Mitigation

The Preferred Alternate would impact 0.1 acres of wetlands, 0.5 acres of open water for pier placement, and 3,660 linear feet of streams. In addition, there would be up to 65 acres of temporary dredge impacts. Impacts to wetlands and streams located in Virginia will be mitigated through the use of wetland mitigation banks, as preferred by EPA and USACE's *Compensatory Mitigation Rule*. However, no Maryland mitigation banking opportunities exist within the Lower Potomac River Watershed. Therefore, MDTA must provide project specific mitigation. Mitigation should occur in the same watershed and in close proximity to the impacted resources. This provides local compensation for lost resource functions. In-kind mitigation is preferred, but out-of-kind mitigation can also provide valuable ecological functions. Out-of-kind mitigation is defined as the improvement of a different aquatic resource than the one actually affected.

Regulatory agencies have recognized the Lower Potomac River Watershed as not meeting clean water and other natural resource goals. This is due to high rates of historic wetland loss, low SAV populations, eutrophication, high bacteria presence, high erosion rates, and polychlorinated biphenyl (PCB) contamination. The watershed was targeted by the 1998 Maryland Clean Water Action Plan for restoration.

Due to the biological deficiencies of the watershed, MDTA sought to identify sites that:

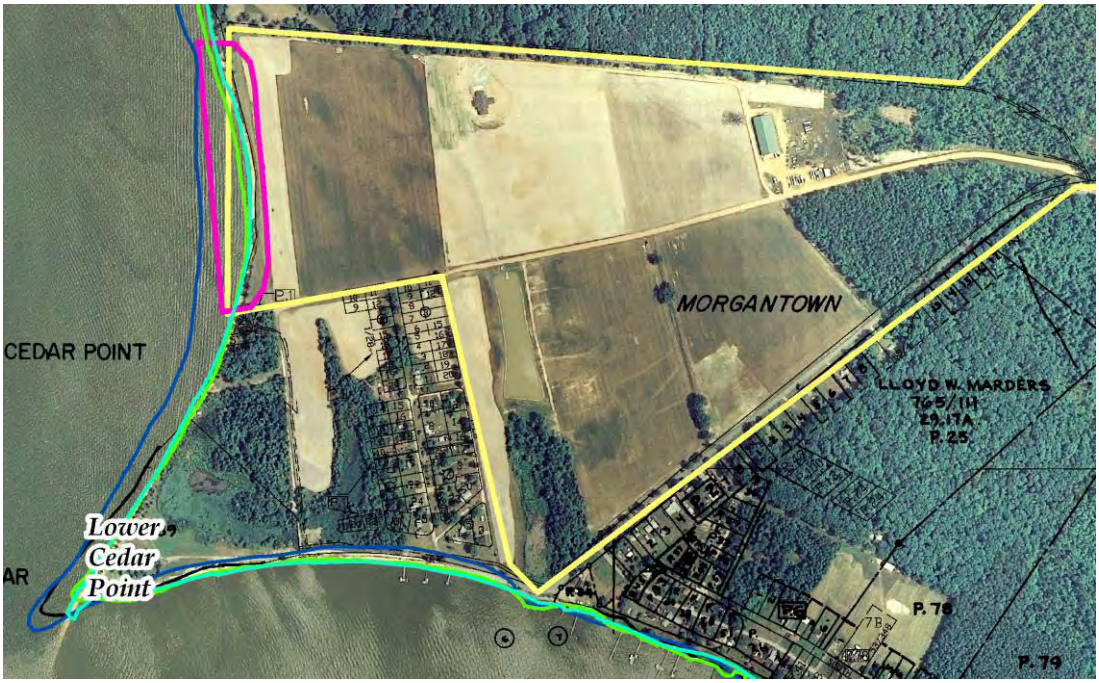
1) Expand existing tidal marshes to improve water quality and increase biological diversity,
2) Provide shoreline stabilization to areas identified with high rates of erosion, and/or
3) Protect Wetlands of Special State Concern and other sensitive resources.

To accomplish these goals, a *Draft Compensatory Mitigation Plan* was prepared. Site selection efforts were focused on lands adjacent to the Potomac River and its tidal tributaries within ten miles of the Nice Bridge.

a. Mitigation Site Search

Using aerial photography and GIS data, 23 sites were identified. Because funding is not currently available for the design or construction of the project, the mitigation site search attempted to identify the type of site that could best meet the mitigation needs, as opposed to identifying a specific site(s) to acquire. Property owners were identified and contacted by letter, followed by phone calls, seeking approval to enter the properties. Site visits were conducted to assess suitability of the sites and to further explain the mitigation components of the project and determine property owner interest. Sites which were inaccessible, under the stewardship of the Maryland Environmental Trust (MET), or had existing land uses that conflicted with mitigation goals were not visited. A rating form was used to assess site suitability based on soils, amount of excavation required, slope, hydrology, opportunity for water quality improvement, habitat value, site constraints, and potential functions. Sites which were not preferred for a variety of reasons were dropped from further consideration. Ultimately, five preferred sites were identified: 2, 4, 11, 13, and 14 (see the *Draft Compensatory Mitigation Plan* included in the July, 2009 EA). A field tour of these five sites was conducted with state and federal regulatory agencies to identify their concerns and preferences for a mitigation site. Site 2 received the most favorable comments from the environmental agencies (see ***Figure 5***).

Figure 5: Aquatic Mitigation Site #2



b. Site 2 - Shoreline Stabilization

Site 2 is located directly on the Potomac River, approximately one mile south of the Nice Bridge. The shoreline is approximately 1,500 feet long, with vertical bluffs 15-20 feet high and erosion rates of one foot/year. The soils at this site are rated fair for highway embankments and are not hydric. The site would require the installation of some form of shore erosion control device, most likely a breakwater, to protect the shoreline from wave action. The vertical bluff would not need to be re-graded, as it would seek a natural angle of repose within a few years. Due to good access from the Potomac, the off-shore breakwater could be constructed entirely from the water, eliminating the need for the MDTA to acquire property or purchase conservation or construction easements. This would also prevent any disturbance of the American Indian shell middens which may be located on the site. Time-of-year restrictions would apply due to an oyster bed located off the shoreline, prohibiting construction within 1500 feet from December 16 – March 14 and June 1 – September 30. Shoreline stabilization would benefit Potomac River and Chesapeake Bay water quality as well as the oyster bar and other aquatic fauna by controlling erosion. The breakwater would also provide wildlife habitat, potentially allow SAV regeneration, and prevent the erosion of shell middens. The regulatory agencies indicated that this site demonstrated the most compelling need for erosion control. Therefore, the agencies favored shoreline stabilization efforts to be undertaken at this site. NMFS favored the installation of an off-shore breakwater, which would allow the bank to remain untouched. Off-shore breakwater projects typically cost approximately $300/LF of shoreline. This cost would be partially reduced by constructing the breakwater without encroaching on the property. Additional dredging may not be needed to access the site by barge. However, due to the proximity to Blossom Point, breakwater construction would require an underwater search for unexploded ordnance and may require additional monitoring during construction.

c. Conclusion

Coordination with the regulatory agencies provided additional insight into the suitability of the five sites for mitigation efforts. Shoreline stabilization was generally favored over marsh creation due to the immediate environmental benefit of preventing further shoreline erosion. Out-of-kind mitigation through

shoreline stabilization would adequately compensate for all functions and values lost from impacted resources. In addition, a shoreline stabilization site could be constructed entirely from the water, and would not require a purchase of property or a right-of-entry from any land owner. Site 2, or a similar type of site, would be pursued when funding becomes available for the project. Upon receipt of design and construction funding for the Nice Bridge Improvements, conceptual mitigation plans will be developed and reviewed by the regulatory agencies. Regulatory agency comments will be incorporated into the final design plans.

Prior to construction, MDTA will acquire permits from MDE and USACE and obtain CAC approval for construction within the Potomac River. In addition, an erosion and sediment control plan will need to be approved by the local Soil Conservation District. The DCR approves erosion and sediment control plans in Virginia.

D. Noise Mitigation

With the Preferred Alternate, Dahlgren Wayside Park would be impacted by noise. A sound barrier was evaluated to determine whether it would be both feasible and reasonable to mitigate noise at the park. A sound barrier at Dahlgren Wayside Park would not restrict vehicular/pedestrian access, would not cause safety or maintenance issues, would not create drainage problems, and could be constructed, given the topography of the area. A barrier approximately 429-foot long with an average height of 10.5 feet would provide up to a 7.3 dBA insertion loss, which satisfies the criterion for a feasible sound barrier. Preliminary estimates of the cost suggest that a barrier built to these dimensions would be considered reasonable in terms of cost. It is MDTA's policy to make final decisions on the construction of noise abatement during preliminary design, after final horizontal and vertical engineering alignments are determined and detailed engineering evaluations of barriers can be made. It should be noted that the MDTA would also consider alternatives to barriers, such as landscaping and berms. The desires of the property owner (in this case, King George County) are considered when making a decision to proceed with noise mitigation. MDTA will coordinate with VDOT concerning any noise mitigation proposed on future VDOT property.

E. Forest Mitigation

The Preferred Alternate would impact approximately 2.7 acres of forest in Maryland and Virginia, of which 1.6 acres occur in Maryland. Forest impacts from highway projects are exempt from the Critical Area Act in Virginia, and are not regulated by any other law. Therefore, Modified Alternate 7 would require approximately 4.1 acres of reforestation in Maryland only, which includes both 3.9 acres of Critical Area mitigation and 0.15 acres of Roadside Tree Law mitigation. Although mitigation for forest impacts is not a requirement in Virginia for highway projects, parkland mitigation options that would provide opportunities for forest preservation could be considered. There are no specimen or champion trees within the study area in Maryland or Virginia.

1. Mitigation Site Search

Potential forest mitigation sites were identified in Charles County, Maryland and assessed for their ability to compensate for unavoidable impacts to wooded natural resources. The search for desirable compensatory traits focused on finding four to five-acre sites that have potential to provide socioeconomic and ecological functions equal to or greater than the functions lost by the proposed activity. The mitigation requirements could be satisfied through partial acquisition from a site such as the ones identified below. High priority sites consisted of areas containing non-forested soil (farm land) situated within the first 100 feet of the Critical Area (the area referred to as the Critical Area buffer). The second priority for compensatory mitigation sites included those lands within the Critical Area and areas that could increase Forest Interior Dwelling Species (FIDS) habitat. A list of other desirable ancillary traits used to identify potential mitigation sites is presented in the bullets listed below: