

A tot-lot and an 80 x 40 yard multi-use field would be located north of the parking area and a 110 x 60 yard multi-use field would be located south of the WWB in a similar location as the existing field. A vehicle turnaround and 159 additional parking spaces to be located under the WWB, the landscape plantings, the perimeter barrier system, and connection to the Mt. Vernon Trail would be similar to Alternative 4.

4.0 AFFECTED ENVIRONMENT

A. Social and Built Environments

General and Environmental Justice Populations

U.S. Census data (2000) indicate that the City of Alexandria contained 128,283 persons, of which approximately 9% were age 65 years and over, 40% were minority, 15% were of Hispanic or Latino origin, and 9% low-income.^{1, 2} There are no environmental justice (minority or low income) populations living within JPP's project area. Although no formal study has been conducted, the NPS has observed that many users of the existing finishing piers for fishing activities include minority populations (primarily African American and Hispanic) of varied ages. By observation, retirement-aged visitors tend to use the piers for fishing during the mid-day while visitors of all ages utilize the piers during other periods.

Neighborhoods, Community Facilities, and Services

The park includes two community gardens, a recycling center, and is in close proximity to the (private) St. Mary's School, located west of Royal Street, and the Yates Gardens neighborhood, located between Fairfax Street and Lee Street. The Yates Gardens neighborhood contains single-family homes and townhouses. The existing access road to JPP is located approximately 300 feet from the closest residence in the Yates Gardens neighborhood. A recycling center is located just north of the WWB (previously located south of the bridge, but relocated during bridge construction). Approximately 80 parking spaces were located under the WWB prior to construction of the new bridge. Since construction on the new WWB, JPP visitors have been using an interim parking area located in the eastern portion of JPP.

Visitor Use and Experience

Prior to the WWB construction, JPP contained passive and active open space, forested areas, recreation trails, and parking areas. The park has forested areas, two large soccer fields, picnic areas with picnic tables, walking and biking trails, two community gardens, fishing areas, and an area previously used as a large ship dock north of the WWB along the Potomac River.

¹ <http://quickfacts.census.gov/qfd/states/51/51510lk.html>

² Minority is defined as "individual(s) who are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic."



● 24 Inch, or larger, DBH (Diameter at Breast Height) Tree Identified in the October 2000 Jones Point Park Forest Stand Delineation.



JONES POINT PARK

Alternative 4A - Preferred Alternative
Multi-use fields north and south of WWB

Potomac Crossing Consultants



Total Parking Spaces: 110 (With Special Event Parking: 240)

- Visual Screening
- Area for Relocated Recycling Center
- 80-foot Stand-off Distance
- Forested Wetlands
- Secured Event Parking
- Perimeter Barrier
- 80-foot Stand-off Distance

For illustrative purposes ONLY.

Jones Point Park
Environmental Assessment

Alternative 4A - Preferred Alternative
Multi-use fields north and south of WWB

Access to the Potomac River for fishing and other water recreational activities currently exists approximately 340 feet from the interim parking area located north of the WWB. The typical visitor experience includes travel to the historical, natural and recreational areas, by either automobile on the roadway or by foot or bicycle on the linear trail network. JPP also hosts city festivals and events.



Soccer fields located south of the WWB

The WWB physically and visually bisects the park and contributes most of the existing noise in the park. The NPS currently owns JPP under the jurisdiction of the George Washington Memorial Parkway.

Visual and Aesthetic Conditions

The WWB is the most prominent element in the visual landscape when entering the park via Royal Street (the Royal Street community garden is hidden from view by vegetation). Royal Street currently ends at Jones Point Park Drive, flanked by a recycling center and dense woodlands to the north and the large WWB structure to the south. Parking is provided in an open area north of the park access road, which then dead-ends at the Potomac River. Most views of the Potomac River from the park access road are obstructed by either heavy vegetation or the WWB structure. Fields and woodlands south of the bridge are visible under and through the bridge structure.



Looking south at existing bridge from Royal Street



Looking west through Royal Street Community Garden from S. Fairfax St.

The Yates Gardens neighborhood borders the northern edge of JPP. Dense woodlands along the park's northern perimeter prohibit nearly all views between the park and neighboring communities. A pedestrian path at the end of Lee Street provides a second access point to the park. Woodlands to the west and the Lee Street community garden to the east border this wide path. Planted rows of trees run parallel to both sides of the trail. While views of the natural environment border the trail, the WWB dominates the southern view.

The Mt. Vernon Trail, located at the eastern edge of JPP, provides views of the Potomac River before continuing northward to dense woodlands. Views of the river, various birds and animals, and Maryland's coastline can be seen from this vantage point. Panoramic views of the WWB can be seen looking south.



Lee Street Community Garden



Royal Street Community Garden in Winter

The Potomac River borders JPP on the east and Hunting Creek is on the south. Dominating the northern view, the WWB visually separates the southern section of the park from the northern section. Natural wetlands, the Potomac River, Hunting Creek, birds and wildlife, the Jones Point Lighthouse, and the D.C. South Cornerstone can all be viewed from pathways along the water's edge. A fishing pier, located on the extension of one of the historic shipways at the park's southeast corner, provides unique views of the Potomac River and the WWB. Rosalie Island, on Maryland's coastline, and the Hunting Towers in the west can also be seen from JPP. Dense woodlands surround the open playing-field area and foundations of past shipbuilding activities can be seen in the forest understory.

B. Natural Resources

Soils

The Alexandria County Soil Science Office, Fairfax County Soil Science Office and USDA Natural Resources Conservation Service (formerly USDA Soil Conservation Service) have mapped soils within the project study area (1915 and 1963). The predominant soil is dredged fill from the Potomac River, deposited circa 1910, and consisting mostly of poorly-drained silt loam. Residual soils are mapped as Huntington loam (H1), a friable, well-drained loam.

Wetlands and Waters of the U.S.

Wetlands exist within JPP primarily north of the bridge and along Hunting Creek south of the bridge. On the north side, wetlands exist in shallow depressions or gently sloping drainage swales. These systems are primarily forested with broad-leaved deciduous vegetation including *Platanus occidentalis* (sycamore), *Acer negundo* (box elder), *Acer rubrum* (red maple), *Cornus amomum* (silky dogwood), and *Toxicodendron tulipifera* (poison ivy). Underlying soil samples were mostly silt loam in texture and had hydric indicators including low chroma colors and redoximorphic features. Hydrologic indicators included inundation, water marks on trees, drift lines, sediment deposits, and drainage patterns. Functions and values provided by the non-tidal forested wetlands within the park were assessed through best professional judgment. Principal functions include nutrient removal and transformation, and wildlife habitat. The principal value is aesthetics.

One tidal freshwater emergent wetland occurs north of the bridge along the Potomac River. This wetland is comprised of *Sagittaria latifolia* (arrowhead) and *Saururus cernuus* (lizard's tail) vegetation and is underlain by gleyed soils. Hydrologic indicators included inundation, saturation, water marks, drift lines, sediment deposits, water-stained leaves, and drainage patterns. Principal functions were identified through best professional judgment and include sediment/toxicant retention, nutrient removal and transformation, and finfish habitat.

On the south side, wetlands are primarily tidally influenced and occur adjacent to Hunting Creek and along the Potomac River. Additionally, isolated wetland depressions occur in the interior of the park site just south of the bridge. Tidal wetlands include large areas of emergent marsh comprised of *Pontederia cordata* (pickerelweed), *Polygonum arifolium* (halberd-leaf tearthumb), *Typha* sp. (cattail), *Hibiscus moscheutos* (rosemallow), and *Polygonum sagittatum* (arrow-leaf tearthumb). Tidally influenced forested wetlands also occur along the shoreline of Hunting Creek. Dominant vegetation within this wetland includes *Ulmus americana* (American elm), *Acer saccharinum* (silver maple), and red maple.



Wetlands



Wetlands

Soil samples had low chroma matrix colors and exhibited a silt loam texture. Hydrologic indicators included drift lines, sediment deposits, and water marks. Wetland functions and values provided by the tidal wetlands along Hunting Creek include floodflow alteration, sediment/toxicant retention, nutrient removal and transformation, wildlife habitat, and aesthetics. Isolated depressional non-tidal wetlands are dominated by forested vegetation including silver maple, box elder, sycamore, *Fraxinus pennsylvanica* (green ash), red maple, silky dogwood, poison ivy, and *Lonicera japonica* (Japanese honeysuckle). Soils were clayey in texture and appeared to hold surface runoff for sufficient time to create wetland conditions. Wetland functions and values provided by the isolated forested wetlands are limited to minor wildlife habitat and aesthetics.

Non-wetland waterways also occur within and adjacent to the park, including the tidal portions of the Potomac River and Hunting Creek. Other non-wetland drainage swales are located north of the bridge adjacent to the Potomac River and between Lee Street and Royal Street. Submerged aquatic vegetation (SAV) also occurs along the eastern and southern shoreline of JPP within the Potomac River. Common SAV species include *Hydrilla verticillata* (hydrilla), *Ceratophyllum demersum* (coontail), *Myriophyllum spicatum* (Eurasian watermilfoil), *Vallisneria americana* (wild celery), and *Heteranthera dubia* (water stargrass).

All wetlands and Waters of the U.S. within JPP originally were delineated in January and February 1999 and received a jurisdictional determination from the USCOE later that year. A redelineation of a portion of the forested nontidal wetlands just east of the Lee Street community gardens was conducted in August of 2005 as part of a reevaluation of the wetlands and waters by the USCOE. The USCOE verified the expanded wetland boundaries and accepted the remainder of the wetlands and waterways within JPP as previously delineated in 1999.

Vegetation and Terrestrial Habitats

Terrestrial habitats within JPP include managed lawn, vine tangles, and forest. Managed lawn occurs on the southwest side of the park and comprises about 6 acres. It includes athletic fields surrounded by a natural park setting with scattered large trees. Areas overgrown with vines, primarily the exotic, invasive *Ampelopsis brevipedunculata* (porcelain berry), occur north of the WWB and east of Lee Street in JPP. This area comprises approximately 5.5 acres. Scattered dead trees occur in this area, some of which have been overgrown and appear to have been killed by vines.

The remainder of the vegetated portion of the park (approximately 28 acres) is comprised of forest. This forest community consists of mixed mesophytic types of the eastern deciduous forest, normally characterized by an uneven-aged, second growth mixed hardwood community. Most of the forest habitat within JPP occurs on land that was dredged from the Potomac River in the early part of the twentieth century. This forest has been allowed to grow since the area was abandoned for shipbuilding and other uses during World War II. However, the forest that occurs along the western peninsula that represents the original Jones Point is older, and contains more diverse native flora.

Six forest stands were recognized at JPP, including three stands on the south of the bridge and three stands on the north side. Common canopy species within these forest stands includes silver maple, red maple, box elder, sycamore, green ash, *Populus deltoids* (cottonwood), *Morus alba* (white mulberry), *Salix nigra* (black willow), and American elm. Wetland forest occurs within most stands. Non-native and invasive plant species, including Japanese honeysuckle and *Hedera helix* (English ivy) vine and *Rosa multiflora* (multiflora rose) bush dominate much of the herbaceous and shrub layer of the forest stands in JPP. While JPP is comprised of uneven-aged, second growth trees, many of these trees have reached considerable size. A total of 144 trees with a diameter at breast height (dbh) of 24 inches or greater were identified within the park. A description of each forest stand is provided in a report entitled *Final Supplemental Jones Point Park Consolidated Natural Resources Inventory*, October 2000.

Wildlife

JPP is small and relatively isolated from other natural habitat areas along the Virginia shoreline. Consequently, wildlife use of the park is limited. Even so, the park provides habitat for typical suburban woodland wildlife species, particularly birds. A two-year breeding bird survey was conducted in June 1999 and 2000 to provide an inventory of breeding birds in the park. Birds observed in flight over the park or in the adjacent tidal fresh waterways were recorded during the bird surveys. Other wildlife was also recorded. The Appendix contains a list of birds and other wildlife observed in JPP.

Results of the study indicated that JPP is not valuable habitat for forest interior dwelling species (FIDS), species that require large tracts of undisturbed forest to sustain viable breeding populations, even though some FIDS were present within the park. The study did conclude that the forested habitat at JPP was suitable for various species of Neotropical migratory land birds (NML) that breed in the mid-Atlantic region then migrate south to Central and South America to spend the winter. A few of these species that were probable or confirmed breeders within the park include *Icterus galbula* (Baltimore oriole), *Dumetella carolinensis* (gray catbird), *Hylocichla mustelina* (wood thrush), and *Vireo gilvus* (warbling vireo). Resident land birds (RL) that reside within the park year round were also well represented. These species include many common suburban birds such as *Melanerpes carolinus* (red-bellied woodpecker), *Picoides pubescens* (downy woodpecker), *Cyanocitta cristata* (blue jay), *Corvus brachyrhynchos* (American crow), *Poecile carolinensis* (Carolina chickadee), *Baeolophus bicolor* (tufted titmouse), and *Cardinalis cardinalis* (northern cardinal). Details of the study are contained within the *Final Supplemental Jones Point Park Consolidated Natural Resources Inventory*, October 2000.

In addition to breeding species, JPP provides habitat for winter resident birds and transients that stop over for short periods during migration. Winter resident species expected to occur at JPP include: *Zonotrichia albicollis* (white-throated sparrow), *Troglodytes troglodytes* (winter wren), *Dendroica coronata* (yellow-rumped warbler), and *Junco hyemalis* (dark-eyed junco). Transient migratory species include cuckoos, flycatchers, vireos, warblers, *Piranga olivacea* (scarlet tanager), and *Pheucticus ludovicianus* (rose-breasted grosbeak). No amphibians and few reptiles were observed in the park.

However, species typical of suburban environments include *Bufo americana* (American toad), *Rana clamitans* (green frog), *Hyla crucifer* (spring peeper), and *Nerodia sipedon* (northern water snake).

Species of Special Concern (Rare, Threatened, and Endangered Species)

The U.S. Fish and Wildlife Service, Virginia Department of Conservation and Recreation, Virginia Department of Game and Inland Fisheries, and Virginia Department of Agriculture and Consumer Services were contacted regarding the presence of rare, threatened, and endangered species in JPP. According to the records of these agencies, no such species have been identified in the park. No rare, threatened, or endangered species were observed during fieldwork in the park. However, according to Brent Steury, Supervisory Biologist with the NPS GWMP, the state-listed rare (S-2) *Schoenoplectus fluviatilis* (river bulrush) commonly occurs within the tidal marshes along JPP south of the Woodrow Wilson Bridge..

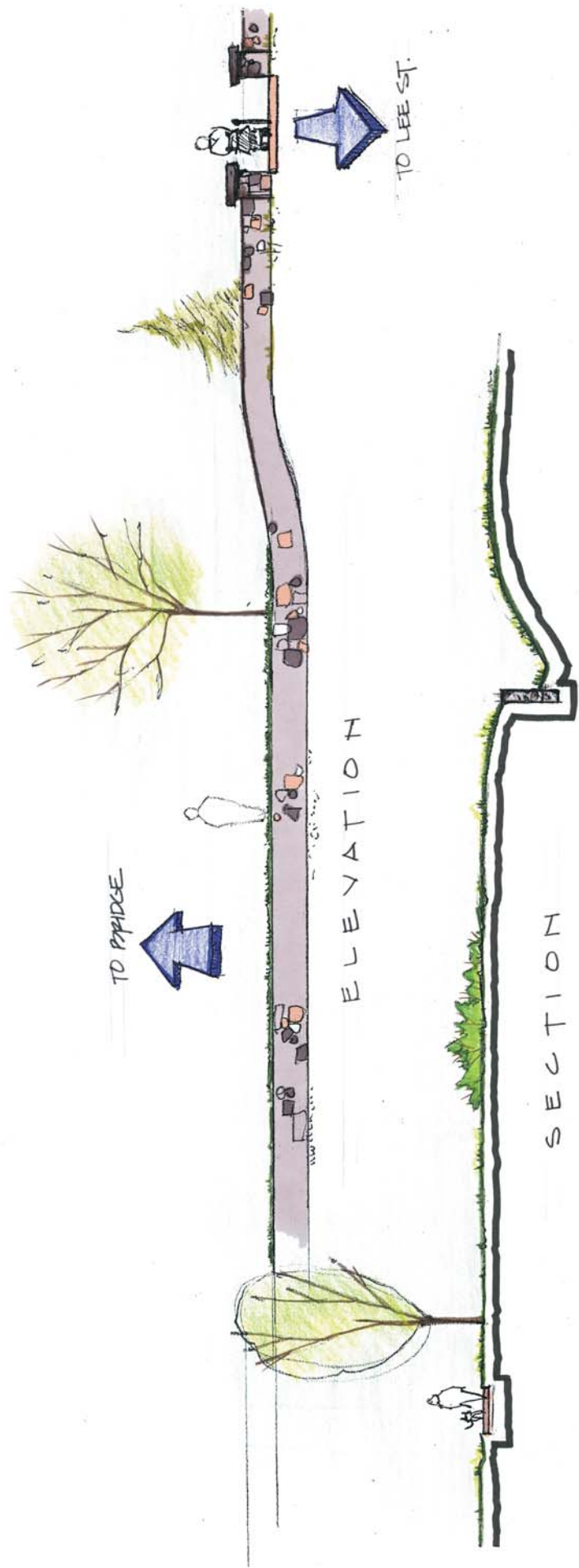
C. Cultural Resources

Section 106 of the NHPA, as amended (16 USC 470 et seq.), Director's Order 28, *Cultural Resource Management Guideline* (NPS, 1998), and the NPS Management Policies (2006) all require that consideration be given to the impacts of a proposed project on historic properties that are listed or eligible for listing in the National Register of Historic Places (NRHP). These policies and regulations require the NPS to consult with the SHPO regarding the potential effects to properties listed in or eligible for the NRHP. Cultural resources are defined for this document as including archeological resources and historic resources, the latter comprised of historic buildings, historic structures, collections of historic properties (historic districts), and objects. Each of these topics is discussed in further detail below. Figure 10 shows the locations of cultural resources within, and adjacent to, JPP.

Archeological Resources

In addition to the policies and regulations cited above, Director's Order 28A, *Archeology* (2004) further discusses NPS' approach and commitment to the investigation, documentation, preservation, interpretation, and protection of archeological resources located within park units. As a steward of America's heritage, NPS is charged with the preservation of the commemorative, educational, scientific, and traditional cultural values of archeological resources for the benefit and enjoyment of present and future generations. Archeological sites are irreplaceable resources, so it is important that management decisions and activities throughout the park system reflect a common commitment to the preservation of archeological resources as important elements of our national heritage.

A number of archeological investigations have been conducted within JPP since the mid-1960s and continuing into the 1980s. Much of this work was carried out within the southern half of the park and focused on areas slated for proposed development or increased park uses. Additional investigations were conducted throughout the park between 1999 and 2005 in association with the WWB Replacement Project.



THIS VEHICULAR BARRIER CONCEPT
 COULD BE IMPLEMENTED FOR ANY OF
 THE FOUR POTENTIAL ALTERNATIVES

Jones Point Park Environmental Assessment		
Perimeter Barrier Concept: Ha-Ha Wall		
May, 2006	Not to Scale	Figure 10

For illustrative purposes ONLY.

A total of five known archeological sites have been recorded within the project area. Three of these sites, the Jones Point Lighthouse Site (44AX52), the Jones Point Site (44AX53), and the VSC Site (44AX78) were identified prior to the WWB Replacement Project. Further investigation of JPP was conducted after the commencement of the project to determine the NHRP eligibility of these three sites and determine if any additional archeological sites were located within the park.

Geoarcheology was used to analyze soils for Phase I testing. The 2001 report, *Interpretations of Borings in the Southern Blocks of Piers V6 and V7, Woodrow Bridge Replacement Project, Jones Point, Alexandria, Virginia*, and 2002 reports, *Geoarcheological Interpretations of Soils and Sediments Between the Northern Blocks of Piers D and F For the Woodrow Wilson Bridge Replacement in Alexandria, Virginia* and *Pedology, Geomorphology and Landscape Reconstruction at Jones Point Park in Alexandria, Virginia*, identified no previously unknown archeological sites located within the footprint of the bridge.

The Jones Point Lighthouse Site (44AX52) encompasses a 30 x 100-foot area around the existing lighthouse structure. Although the site is primarily more of historic than prehistoric interest, the survey form indicates that a “possible quartzite projectile point” was collected from the site during a 1978 survey. Excavations in the yard area of the lighthouse in 2000 as part of the *Historic Structures Report and Treatment Plan for the Jones Point Lighthouse and District of Columbia Cornerstone* recovered a number of quartz and quartzite flakes, as well as four projectile points.

The JPP area has been subjected to previous archeological investigations beginning in the 1960s. Most of this work was conducted in the southern portion of the park by Lewis (1966) and Little and Ayres (no date). In 1982, the Jones Point Site (44AX53) was recorded when a collector turned in a number of artifacts from the eroding shoreline. In 1985, Leedecker and Friedlander completed an archeological survey for proposed improvements in the park. Additional prehistoric artifacts were recovered from an intact surface beneath 2.5 feet of fill deposits during the excavation of three backhoe trenches in the area of the soccer fields. The small artifact assemblage consisted of an assortment of quartz, quartzite and rhyolite flakes, a quartz projectile point and a ceramic sherd. Given the proximity to the Jones Point Site to the backhoe trenches, the recovered artifacts were included as part of the previously recorded site (44AX53) in the *Historic Structures Report and Treatment Plan for the Jones Point Lighthouse and District of Columbia Cornerstone*.

The VSC Site (44AX78) was identified and formally recorded during the 1984 archeological survey. Coal, ash and structural debris associated with the shipyard were encountered in all the areas that were tested for the proposed improvements. Although no important features were identified within the areas of potential construction impact, the report did note that a number of structural features and foundations had survived and were visible on the surface. Other than noting their presence, no further investigation was conducted since they were not located within the area of potential affects. However, in 1999 an intensive investigation of the entire shipyard site was conducted as part of the WWB Replacement Project.

Phase II Investigations, discussed in the 2000 report *Phase II Archeological Testing and Determination of Eligibility Documentation for Submittal to the Keeper of the National Register of Historic Places, Virginia Shipbuilding Corporation Site (44AX78), Alexandria, Virginia*, found that the site was not eligible for inclusion in the NRHP. Based on a 1921 Sanborn Insurance Map, the locations for 19 structures, four craneways, and four shipways were tested in order to determine if foundation and structural features remained intact. The results of the testing effort indicated that 10 structures have intact foundations, four consist of foundation sections, pier supports and machine mounts, while five did not have any foundation remains. All that was left of the four craneways were the rail supports, and only sections of the shipways were intact. In addition, no primary artifact deposits associated with the shipyard were found; although push piles of materials were present to the west of the shipways. On August 16, 2000, the Keeper of the National Register formally agreed that this site was not individually eligible for the NRHP, but was a contributing element to the NRHP-listed Alexandria National Register Historic District.

In 1992, Site 44AX165 was identified during subsurface investigations within the lawn area adjacent to the then standing VSC Administration Building. An 1845 map depicted a ropewalk and two unidentified structures, one to the northeast and one to the southwest. The investigation did not encounter any definitive evidence for the ropewalk or the structure located to the northeast. However, stratigraphic data and cultural material recovered from test units excavated southwest of the postulated location of the ropewalk suggested the possible location of the other (or southwesterly situated) structure. This site was included in the Phase II report for the VSC Site (44AX78).

The final site recorded to date is the Hunting Creek Site (44AX185). The Hunting Creek Site was first identified in the course of the testing for the VSC Site. Backhoe trenches were excavated in the vicinity of the then extant Administration Building. An intact buried surface, identified as an early plowzone, was found beneath approximately 5 feet of fill. The buried plowzone contained variably dense quantities of primary and secondary debitage, as well as core and core fragments. The assemblage from these initial three-foot units included 873 flakes, along with several biface fragments and projectile points. Also recovered were historic materials that included domestic ceramics, brick, and other materials, most dating to the early to mid-19th century. In view of the density of lithic debitage and other tools associated with the buried plowzone, the site was considered potentially eligible for listing in the NRHP.

Phase II investigations, discussed in the 2000 report *Phase II Archeological Testing on the Prehistoric and Historic Components of Site 44AX185, Jones Point Park, Alexandria, Virginia*, were conducted in August and September 2000 to evaluate the site's potential to be listed in the NRHP. The report concluded, based on the recovery of additional lithic debitage, three small pit features, and a post mold, that the site was eligible for nomination to the NRHP under Criterion D. Data recovery excavations were recommended to mitigate adverse impacts to the site posed by the construction of the new WWB. Phase III investigations, discussed in the 2005 report, *Phase III Archeological Mitigation of the Prehistoric and Historic Components of Site 44AX185, Jones Point Park, Virginia*, resulted in the definition of a small Late Woodland hamlet site marked by at least one small, oval-shaped (or elliptical) structure, several associated refuse pits, and other posts and small pits that may or may not be associated.

In addition, historic remains included a significant section of the 19th century ropewalk that once existed on the point, as well as a cellar hole.

In 2005, additional Phase I testing was performed to the north of the bridge and along the Potomac River in areas designated for potential placement of parking and pathways as part of the EA process for the proposed JPP improvements. This report, titled *Geoarcheological Interpretation of Soils and Sediments Beneath an Area Proposed for Park Access and Parking for Jones Point Park in Alexandria, Virginia*, found no previously unknown archeological sites located within the planned parking or pathways.

Although not located within JPP, but relevant to studies associated with the WWB Replacement Project, archeological investigations were conducted within a 10.1 acre parcel adjacent to the northern border of the project area (Cheek and Glendening 1966, Artemel et al. 1988 and Engineering-Science, Inc. 1993). Background research indicated that the southern third of the study area was once part of Battery Cove, which had been filled by the USCOE, and that there was potential evidence for a late 18th century wharf, a marine railway, features associated with a shipyard, and buried derelict vessels. Phase II testing involved the excavation of a number of backhoe trenches to locate these resources and, if present, to assess their integrity. The trenches encountered sections of a marine railway, the bulkhead for the wharf, a ship building slip and several barge and boat fragments were located at the edge of the cove. The buried derelict vessels were encountered between 7.5 to 9 feet below the surface, while the cove bottom ranged in depth from 9 to 13 feet below the surface. The data recovery phase of the project focused on these resources by exposing larger areas for detailed recordation. Once recorded, the features were reburied since they would not be impacted by the proposed development (Engineering-Science 1993).

In addition to the five known archeological sites, historic documentary and cartographic research has indicated that several potential historic archeological sites may be within the high sensitivity archeological zone of JPP. These sites consist of a Revolutionary War era blockhouse and battery, a late 18th century log house and quarantine station, and an early 18th century tavern and house. Very little information exists about these potential sites other than they were situated on Jones Point. Although the exact location of these resources is unknown, the time periods during which they existed indicate that they would have been located within the original landmass of JPP (i.e., the high sensitivity archeological zone) prior to its expansion in 1910 to 1911. Extensive development during the 20th century, specifically the VSC, may have impacted the remains of these sites.

One site within JPP that may still have intact remains is the 1863 slaughterhouse. During the Civil War, Alexandria served as a hospital and supply center for the Union Army. All of Alexandria's railroads were consolidated and interconnected under federal control. The result was that thousands of federal soldiers milled about in town or manned fortifications around the city. To process meat, a government slaughterhouse was constructed in 1863. It was located at the foot of Green Street, approximately 250 feet south of Battery Rodgers. The slaughterhouse consisted of a 20 x 56-foot wooden structure with horizontal siding with two 14 x 16-foot and 18 x 19-foot additions, which were built on a pier extending out over Battery Cove. Carcasses and offal dumped into the cove soon created an untenable situation.

To mediate the problem, the USCOE drained the marsh at the head of the point and cleared and graded South Water Street (now Lee Street) through to Jones Point. Since subsequent development has not occurred at this location, there is a high potential that structural remains are still intact.

Finally, evidence of the remains of Battery Rodgers may be located to the northeast and adjacent to JPP at the intersections of Jefferson and Lee streets. Battery Rodgers was one of 68 forts which guarded Washington D.C. and Alexandria during the Civil War. The fortification was named for Navy Captain George W. Rodgers who was killed during the attack on Fort Wagner, Charleston Harbor, South Carolina on August 17, 1863. The fort, constructed in that same year, was strategically placed on a bluff approximately 28 feet above high water at the foot of Jefferson Street. Its location allowed it to fire on any vessels attempting to pass up the river. The section of the fort facing the river was 185 feet long, while the flanks were 60 (right) and 80 (left) feet long. The parapets were 25 feet thick with the two magazines protected by 17.5 feet of earth. The fort was designed for an armament of five 200-pounder Parrott guns and one 15-inch Rodman gun. Two large traverses that served as bombproof filling rooms protected the guns. In addition to the battery, other structures associated with the fort consisted of a mess hall and kitchen. Two barracks, a guardhouse and a prison (jail) were added in 1865. Although the battery was garrisoned after the war, it was finally abandoned and the buildings sold at public auction in 1869. Today, there are no visible remains of this historic site.

Prehistoric and Historic Resources

In Director's Order 28, *Cultural Resource Management Guideline*, NPS defines a historic structure as a resource constructed specifically for serving some kind of human activity. (Prehistoric resources are included under this definition, as well as under archeology, because the technical aspects of their preservation are similar to those of historic structures). Within JPP, the project area contains two historic resources, the Jones Point Lighthouse and D.C. South Cornerstone. These two resources are jointly identified as a single resource, known as the Jones Point Lighthouse and D.C. South Cornerstone (100-116), which was listed in the NRHP in May 1980 under Criterion A for its associations with the history of commerce, transportation in the City of Alexandria, as well as the planning and development of the District of Columbia.

The resource is located to the south of the WWB at the southern end of Jones Point on the Potomac River. The lighthouse, constructed between 1855 and 1866, is an early product of the U.S. Lighthouse Board. It is a rare surviving example of a "unified" form of lighthouse, with an integral keeper's dwelling and tower. It was an important component of the shipping trade in Alexandria, Virginia and Washington, D.C. from 1856 to 1926, when it ceased to be used as an active, inhabited aid to navigation. After it was deactivated, the property was abandoned. Fearing the effects of abandonment on the building, the Mt. Vernon Chapter of the Daughters of the American Revolution (DAR) worked with the U.S. Congress to formally transfer the lighthouse to the DAR which maintained the site until 1964, when it was subsequently transferred to the custody of the NPS. In 1986, the NPS and the DAR executed a cooperative agreement that provides for the use of the Lighthouse by the DAR, and delineates management responsibilities for the preservation, repair, maintenance and interpretation of the Lighthouse.



Jones Point Lighthouse



D.C. South Cornerstone

Within the work yard of the lighthouse is located the Margaret Brent Memorial. Margaret Brent, known as a gracious and enterprising champion of women’s rights, has been called the “first feminist of Colonial America.” She was treasurer of the Colony of Maryland and the legal representative of Lord Baltimore. After a few years in Maryland, the Brent family moved to Virginia. On September 6, 1654, Margaret Brent received the first legal grant for a 700-acre tract of land which included the original 60-acre site of Alexandria. The 700-acre land grant was given in exchange for her payment of transportation from England to Virginia for fourteen yeoman servants, at the rate of 50 acres for each new settler brought over to Virginia. The land grant was re-issued in 1662 in the name of Charles II following his accession to the throne. The area was part of the present City of Alexandria. Margaret Brent died in 1671 on her estate in Virginia. In 1979, the Mt. Vernon Chapter of the DAR erected a memorial stone in her honor commemorating the first legal boundary designated in the area.

Adjacent to the lighthouse and located within a vault set into the sea wall adjacent to the Jones Point Lighthouse is the D.C. South Cornerstone. The cornerstone was placed at this site on April 15, 1791. The D.C. South Cornerstone is nationally significant for its association with the establishment of Washington, D.C. and with two nationally significant men: Andrew Ellicott, the surveyor who established the boundary lines, and Benjamin Banneker, his assistant, who was a highly accomplished free black astronomer and mathematician. The stone marks the beginning point, specified by George Washington in his instructions on the location of the federal district, for the survey of the boundaries of the District of Columbia. The stone is the first of 40 boundary markers used to delineate the original boundaries of the District of Columbia. The DAR constructed a concrete vault around the cornerstone in 1912.

A Multiple Property Documentation Form for the Boundary Markers of the District of Columbia was prepared and entered into the NRHP in 1990. The South Cornerstone was not specifically included within this nomination, as it had already been listed in the NRHP in 1980. However, the Multiple Property Documentation Form provides context for evaluating the significance of the stone. According to the Registration Requirements established in this nomination, the criteria for a stone’s eligibility for listing in the NRHP are that the stone “must be intact, its location known and marked, and if moved, preserved in a nearby location.

If not the original marker, its replacement must be at least 50 years old.” The D.C. South Cornerstone meets all of these criteria, as its location is known, and, if the existing stone is a replacement, the replacement dates to 1794 and it is, therefore, over 200 years old. Despite its poor condition, the D.C. South Cornerstone is clearly a monument of national significance as one of the earliest artifacts associated with the District of Columbia.

Another set of small historic foundations and an object are located within the park. The first is the Jones Point Light Tower Foundation, which consists of four concrete pads which once supported a 60-foot steel light tower to the east of Jones Point Lighthouse. Constructed in 1926, this tower was twice as high as the light on the older Jones Point Lighthouse, and could be seen for a distance of 13 miles. The light tower was dismantled in the late 1930s-early 1940s. The second object is the Virginia-Maryland Boundary Commission Monument. A now-eroded concrete pyramid topped with a bronze cap stamped “NO 58” and encircled with the words “Virginia-Maryland Boundary Commission” was placed in an area just north of the Jones Point Lighthouse in 1929. An arrow pointing east towards the river and the lettering “Distance 42 feet” indicates the high water mark boundary between the two states ending more than three centuries of dispute. U.S. Coast and Geodetic Survey data sheets state that the marker is azimuth 21 degrees 55 minutes 38 seconds and was recovered (surveyed and condition checked) in 1946 and 1957.

Outside the boundary of JPP to the north and west are located three historic districts: the Alexandria National Historic Landmark Historic District, the Alexandria National Register Historic District, and the locally-designated Alexandria Historic District. As specified under NHPA and NEPA, only the first two of these districts are considered in this EA and described in detail below.

Alexandria National Historic Landmark Historic District

A smaller Alexandria Historic District was designated a National Historic Landmark (NHL) in 1966 and listed in the NRHP on November 13, 1966. It encompasses an area of about 25 square blocks in the east-central part of the City, and is an irregular shape, bounded roughly by Union Street on the East, Queen Street on the north, Washington Street on the west, and Franklin Street on the south. The Alexandria Historic District (NHL) is significant under NRHP Criteria A and C, for contributions to the broad patterns of American history and for its outstanding early architecture. The Alexandria Historic District (NHL) contains one of the largest concentrations of 18th and early 19th century architecture in Virginia, and is particularly notable for its outstanding buildings in the federal period. The period of significance for the NHL district is 1732-1861. The NHL district comprises one of the finest early historic cityscapes in the United States. One individually listed NHL, Gatsby’s Tavern, is within its boundaries. The generally high physical integrity of buildings within the district is attributable in part to a longstanding tradition of historic preservation in the community and the establishment of a local historic district (“Old and Historic Alexandria District”) in 1946.

Alexandria National Register Historic District

A large area of the City of Alexandria, encompassing nearly 100 blocks of the oldest part of the town, has been identified by the Virginia Department of Historic Resources as Site No. 100-21. The historic district, referred to as the Alexandria Historic District, was determined eligible for listing in the NRHP in 1969. It was not, however, entered into the NRHP database until 1997.

The boundary of the Alexandria Historic District (NRHP), established in 1969, corresponded to the boundary of the local historic district (“Old and Historic Alexandria District”) at that time, as described in the City of Alexandria’s Ordinance 1338. The boundary has an irregular shape, and is generally defined by the Potomac River on the east, Second Street on the north, Payne Street on the west, and Hunting Creek and I-495 on the south, although it also includes JPP. The NRHP district is slightly smaller than the current boundaries of the Old and Historic Alexandria District, which was expanded in 1984 by City of Alexandria Ordinance 2959. This district, which extends further south, west, and north than the NRHP district, has local significance but has been previously found ineligible for NRHP listing for Section 106 purposes.

The Alexandria Historic District (NRHP) is significant under NRHP Criteria A and C. It contains one of the largest concentrations of 18th and 19th century urban architecture in Virginia, and collectively with the National Historic Landmark portion is one of the finest historic cityscapes in the United States. NRHP documentation indicates the period of significance for this larger historic district spanning from 1732 through the first third of the 20th century (ca. 1933). The Alexandria Historic District (NRHP) contains three NHLs – Gatsby’s Tavern, Christ Church, and the Franklin and Armfield Office.

D. Noise

JPP is located close to the vehicular traffic of the WWB and the air traffic of Reagan National Airport. Both vehicular traffic and aircraft traffic are sources of noise at JPP. Noise generated by vehicular traffic on the bridge was analyzed in the WWB FEIS and FSEIS. Please refer to these documents for the analysis of traffic noise from the new bridge. Additional noise studies were completed during 2000-2001 in accordance with the VDOT Noise Abatement Committee requirements to address specific traffic noise generation. These noise studies determined that, due to the height of the WWB relative to JPP, there would be no noise impacts within JPP at the areas of frequent human use as a result of design year traffic on the bridge. These reports are available for inspection at the WWB Replacement Project offices.

E. Utilities

Existing utilities located within the project’s proposed construction limits include electrical distribution and service lines, telephone, water, and sanitary sewer. The existing WWB has two separate electrical feeds that provide power to the operator’s tower and the bascule mechanism. Both of these two power feeds run through JPP to the WWB. Feed “A” travels overhead along Lee Street from the north, then runs underground near the intersection of Lee Street and Lee Court.

Feed “A” then continues underground along the closed portion of the Lee Street right-of-way toward the south side of the WWB.

Feed “B” travels overhead along Fairfax Street from the north past the dead end, then turns into the forested area towards the east. Feed “B” continues overhead through the trees toward the east until it intersects the closed portion of the Lee Street right-of-way, at which point it runs underground and continues south to the existing WWB. Further, there are overhead electrical distribution lines that run toward the east from the intersection of Lee Street and Lee Court through the forested area towards the JPP parking areas. These lines feed into construction trailers and the Jones Point Lighthouse. Additional overhead lines travel along the closed portion of the Lee Street right-of-way, which temporarily feed into other construction trailers and roadway lighting along Jones Point Park Drive.

Telephone lines travel with the electrical distribution lines, which feed service to construction trailers and the Jones Point Lighthouse. These lines travel along the Lee Street right-of-way and through the woods towards the JPP parking area. An additional phone line runs through the woods from the end of Fairfax Street in a southeast direction to the Lee Street right-of-way along a separate path from the electric lines.

Sanitary sewer lines travel along both sides of Lee Street towards the south. At the end of Lee Street, they turn toward the southwest prior to reaching Jones Point Park Drive and continue to a point underneath the existing WWB. They continue west to tie into a sewer line along Royal Street under the bridge. Another sewer line runs down Fairfax Street and turns east to tie into the sewer line on Lee Court.

A water line travels along the eastern side of Royal Street through the project area. Water lines also are located on Fairfax Street, Lee Court, and Lee Street. There is also a water line that runs from the end of Lee Street into the closed right-of-way serving the community gardens. This water line is located within the proposed access improvement area.

F. Safety and Security

In December 2000, the City of Alexandria City Council approved the conceptual mitigation plan for JPP due to effects from construction of the new WWB. Included in this plan was a design for access and parking under the new WWB. The original plan for access and parking in JPP provided approximately 240 parking spaces under the WWB with a dedicated space for a bridge operator.

Since the events of September 11, 2001, there has been a heightened threat level in the Washington Metropolitan Area. Because of these events, the original plan to include parking under the new WWB was abandoned. At the request of the FHWA, the TSA reviewed a recommendation from the Virginia and Maryland Departments of Transportation that vehicles be restricted from accessing and parking beneath the new WWB and within an 80-foot distance measured from the north and south parapet driplines of the bridge. This recommendation was based on threat assessments conducted by the WWB Replacement Project and the USCOE.

The federal TSA conducted an emergency response review and issued a concurrence with this recommendation.

5.0 ENVIRONMENTAL CONSEQUENCES

This section describes the environmental consequences associated with each alternative to the proposed action.

Summary of Environmental Regulations

- **National Environmental Policy Act (NEPA), 1969:** 42 U.S.C. Section 432f et seq. Recognizing the profound impact of man's activity on the social, economic, and natural environment, Congress directs all agencies of the federal government to report on actions affecting the environment and include:
 - (i) The environmental impact of the proposed action.
 - (ii) Any adverse environmental effects which can not be avoided should the proposal be implemented.
 - (iii) Alternatives to the proposed action.
- **The Council on Environmental Quality (CEQ) Regulations:** 40 CFR 1500–1508. provide guidance to implement the provisions of NEPA.
- **NPS Organic Act, August 25, 1916:** Public Law 64-235. Congress created the NPS within the Department of Interior to:

... conserve the scenery and the natural and historic objects and the wild life therein, and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.
- **NPS Director's Order 12:** *Conservation Planning, Environmental Impact Analysis, and Decision Making* (2001), and its accompanying handbook, includes procedures to comply with NEPA and CEQ regulations.
- **NPS Management Policies, 2006:** Park managers must preserve park resources "unimpaired;" qualifying impairment to mean reaching a level that violates the Organic Act. "That level is reached when an action that is taken would permanently impair essential park resources that are fundamental to the values and purposes for which a park was established."
- **National Historic Preservation Act (NHPA) of 1966:** The nation's primary historic preservation law (16 U.S. C. 470). The Act was designed to bolster the preservation and wise use of our historic resources, and set forth the policy of the federal government regarding historic preservation, encouraging conditions in which historic properties can be preserved in harmony with modern society while fulfilling modern society's needs.