



**National Park Service**

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In Cooperation with  
**National Capital Planning Commission**

**Environmental Assessment**  
**November 2002**

**Thomas Jefferson Memorial**  
**Security Improvement Project**

**Washington, DC**





**U.S. DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE**

**ENVIRONMENTAL ASSESSMENT  
for the  
THOMAS JEFFERSON MEMORIAL SECURITY IMPROVEMENT PROJECT**

**THOMAS JEFFERSON MEMORIAL  
WASHINGTON, DC**

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**Summary**

The National Park Service is proposing to construct a vehicular barrier system at the Thomas Jefferson Memorial in Washington, DC. The purpose of the proposed action is to improve security for the Memorial and for those who visit it.

This Environmental Assessment analyzes the impacts of three alternatives (a No-Action Alternative, and two Action Alternatives) on the human environment in accordance with the National Environmental Policy Act of 1969. The Preferred Alternative would either have no or negligible impacts on soils, geology, and topography; land use; agricultural lands, prime and unique farmlands soils; wildlife; rare, threatened, endangered, candidate species and species of concern; air quality; water resources; soundscape management; lightscape management; socioeconomic resources; archeology resources; Indian trust resources; ethnographic resources, environmental justice; community facilities and services; and infrastructure. Minor to moderate, long-term, adverse impacts to vegetation and land cover; and minor, long-term, adverse impacts to aesthetics and visuals resources may result from the Preferred Alternative. Moderate, long-term, adverse impacts to floodplains and major, long-term, adverse impacts to historic resources and cultural landscapes may result from the Preferred Alternative. Implementation of the Preferred Alternative would be expected to have moderate, long-term, beneficial impacts to safety (security), and visitor use and experience; and minor, long-term, beneficial impacts to transportation (traffic) and park operations.

**Note to Reviewers and Respondents**

If you wish to comment on the Environmental Assessment, you may mail or email comments to the name and address below by December 4, 2002. Our practice is to make comments, including names and home addresses of respondents, available for public review during regular business hours. Individual respondents may request that we withhold their home address from the record, which we will honor to the extent allowable by law. If you wish us to withhold your name and/or address, you must state this prominently at the beginning of your comment. We will make all submissions from organizations or businesses and from individuals identifying themselves as representatives or officials or organizations or businesses available for public inspection in their entirety.

Please address all comments to:  
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## PURPOSE OF AND NEED FOR ACTION

### PURPOSE OF THE ACTION

The National Park Service is proposing to construct a vehicular barrier system at the Thomas Jefferson Memorial in Washington, DC (see Figure 1). The purpose of the proposed action is to improve security for the Memorial and for those who visit it.

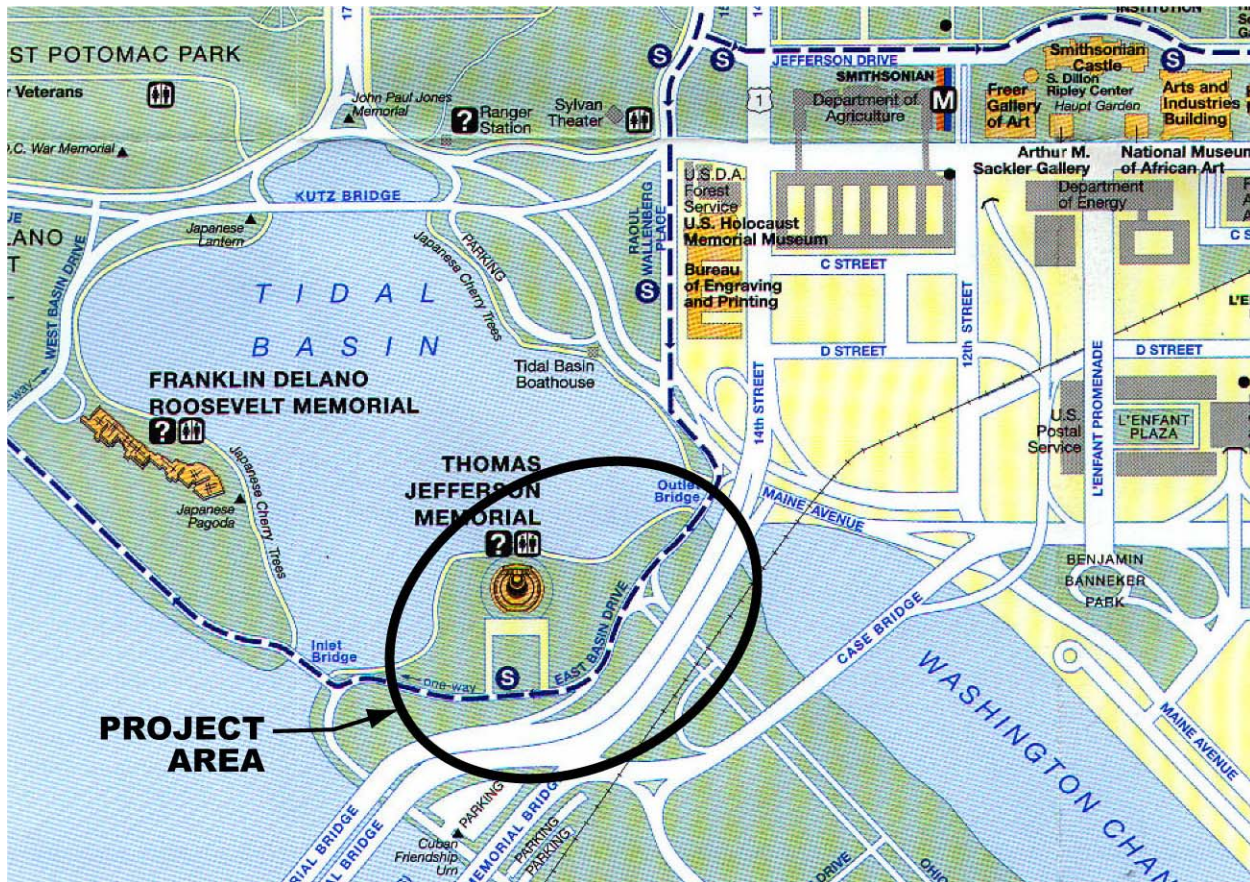


Figure 1: Project Area: Thomas Jefferson Memorial, Washington, DC.

### NEED FOR THE ACTION

Security improvements are needed to address potential terrorist threats to the United States and its symbols. For many years, makeshift security fences and concrete jersey barriers have been in place at a number of national landmarks in Washington, DC. After the September 11, 2001, attacks on the World Trade Center and the Pentagon, concrete jersey barriers were erected to prevent access around the Memorial ring at the Jefferson Memorial. The circular entrance drive was completely closed on the east side for traffic entering the Memorial. However, the temporary measures would not prevent a terrorist from maneuvering a large vehicle with explosives close enough to the Memorial to do extensive harm. In addition, these temporary barriers affect the historic landscape of the Jefferson Memorial. A long-term solution is needed

to provide adequate protection of the Memorial and its visitors, while preserving the cultural integrity of the Memorial.

This Environmental Assessment analyzes the potential environmental impacts that result from the implementation of this security barrier. This Environmental Assessment has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 and regulations of the Council on Environmental Quality for implementing NEPA (40 Code of Federal Regulation (CFR) 1500-1508), and the National Park Service's Director's Order # 12 (Conservation Planning, Environmental Impact Analysis, and Decision-making).

## **HISTORY AND BACKGROUND**



*Figure 2: Thomas Jefferson Memorial.*

The Thomas Jefferson Memorial, dedicated on April 13, 1943, is the foremost memorial to the third President of the United States and is a key landmark in the monumental core of the Nation's Capital (Figure 2). The Thomas Jefferson Memorial stands as a testament to the ideals Jefferson envisioned for this country: equality, education, liberty, and freedom.

In 1934, the U.S. Congress passed a Joint Resolution to establish the Thomas Jefferson Memorial Commission. The Commission was given the authority to plan, design, and construct a memorial that would pay tribute to Jefferson's many accomplishments. The Commission settled on a site that would complete the plans of the McMillan Commission to create a five-point kite-shaped composition in the middle of the city that was first envisioned by Pierre L'Enfant. At this time, only the left arm of the kite had not been completed and it was decided that the Jefferson Memorial would complete the final aspect of the composition.

The Memorial, modeled after the Pantheon in Rome, is an original adaptation of neoclassical architecture. Jefferson himself, in the designs for Monticello and the University of Virginia, used the concept of a circular, dome-shaped, colonnaded structure. Architect John Russell Pope first designed the Memorial. Following Pope's untimely death, architects Daniel P. Higgins and Otto R. Eggers were selected as the Memorial's architects. Considerable controversy surrounded the choice of the site and the Memorial's pantheon design. Higgins and Eggers sought to alleviate the concerns of the Commission of Fine Arts and the National Parks and Planning Commission by moving the monument 600 feet south of its original site and to decrease the size of the structure for compatibility with the other monuments. They also proposed to forgo the design for elaborate landscaping as envisioned by Pope, which would leave the Tidal Basin, the street plan, and a majority of the cherry trees largely intact.

Few changes have taken place at the Jefferson Memorial since its dedication in 1943. The most notable change is the replacement of the original plaster model statue of Jefferson with a bronze statue after World War II.

After the September 11<sup>th</sup> attacks on the World Trade Center and the Pentagon, concrete jersey barriers were erected around the Memorial ring and the circular drive was closed on the east side except for exiting traffic. Since then, the National Park Service decided to investigate long-term solutions to improving the security surrounding the Jefferson Memorial. In 2001, the National Capital Planning Commission created a Task Force to identify urban design solutions that would act as a benchmark for security design throughout the Nation's Capital. The National Park Service has used the recommendations of the Task Force in their implementation of a vehicular barrier system.

## **RELATIONSHIP TO OTHER PROJECTS AND PLANS**

### **SECURITY IMPROVEMENTS PROJECTS**

Security improvements projects are currently underway at the Washington Monument and the Lincoln Memorial. Security improvements at the Washington Monument were studied in an Environmental Assessment dated April 2002. The Environmental Assessment assessed two alternatives for security improvements. The first alternative consists of constructing an underground screening facility and passageway to the Monument and a landscaped vehicle barrier system of walled terraces and pathways. The second alternative consists of construction of an above-ground screening facility with secured pathways to the Monument. Under this second alternative, bollards would be placed around the Monument grounds to provide a vehicular barrier system.

A Draft Environmental Assessment for improvements at the Lincoln Memorial is currently being prepared. The Preferred Alternative consists of transportation improvements to Lincoln Circle, a vehicular barrier system along the outer edge of the Memorial, and construction of new visitor service areas.

## **ISSUES AND IMPACT TOPICS**

An Environmental Screening Form was completed by the National Park Service staff that identifies potential issues and impact topics that required additional investigation to address the requirements of the National Environmental Policy Act of 1969 and Director's Order #12. The issues and impact topics identified on the form are explained below.

### **ISSUES**

Issues and concerns affecting the proposed action were identified by specialists in the National Park Service, including the resource management staff of the National Capital Parks - Central, park and landscape architects, and other professional staff.

The primary issue associated with the proposed action is how to design a vehicular barrier system in a manner that meets the project need while not detracting from the historic nature of

the memorial and the cultural landscape. National Park Service staff worked with consultants, the National Capital Planning Commission, and the Commission of Fine Arts to develop alternatives that were sensitive to the context of the Memorial without appearing as though they are part of the original memorial design. In addition, the safety and security of the visitors was a major issue in meeting the need for proposed action.

Finally, the Thomas Jefferson Memorial lies within the 100-year floodplain. The design of vehicular barrier system must not affect the functions and the integrity of the floodplain. The design of the vehicular barrier system must not substantially affect the hydraulics or flood level at the Memorial.

### **IMPACT TOPICS ANALYZED IN THIS DOCUMENT**

Impact topics are resources of concern that could be affected, either beneficially or adversely, by the range of alternatives. Impact topics were identified on the basis of Federal Laws, regulations, Executive Orders, National Park Service *Management Policies* (2001), the Environmental Screening Form from DO #12, and from National Park Service knowledge of limited or easily impacted resources. Specific impact topics were developed to ensure the alternatives were compared on the basis of the most relevant topics. As a means of evaluation, impact topics included in this document were analyzed in more detail to compare the environmental consequences of the No-Action Alternative and the other two action alternatives.

Specific impact topics evaluated in more detail in this document include:

- Floodplains – the Jefferson Memorial lies within the 100-year floodplain. The alternatives were assessed to determine if they would affect the functions and integrity of the floodplain
- Vegetation and Land Cover – The vehicular barrier system would impact the vegetation and land cover surrounding the Jefferson Memorial. Therefore, the alternatives for the proposed action were analyzed to determine the effect on vegetation and land cover.
- Transportation (Traffic) – The purpose of park roads is to enhance visitor experience while providing safe and efficient accommodation of park visitors. However, urban parkways and city streets have a dual function, and not only serve park purposes, but also serve as extensions of the local transportation network and carry large volumes of non-park related traffic (NPS 1984 <sup>1</sup>). The flow of vehicular and pedestrian traffic around the Jefferson Memorial is important to maintaining access and security for the Memorial. Therefore, the alternatives were analyzed to determine their effect on traffic.
- Aesthetics and Visual Resources – The aesthetics and visual resources of the Jefferson Memorial and the vistas to and from the Memorial help to define the historic nature of the Memorial and the visitor experience. Therefore, the alternatives to the proposed action were analyzed to determine their effect on this topic.
- Historic Resources and Cultural Landscapes – The Jefferson Memorial is a contributing element to the designation of the East and West Potomac Parks to the National Register of Historic Places. There are several other resources in the vicinity of the Memorial that are listed on the National Register, including the Lincoln Memorial, the Washington Monument, the National Mall, the Ellipse, the L’Enfant Plan, and the McMillan Plan. The proposed

alternatives were assessed to determine what, if any, impact it would have on the integrity of these resources.

- Safety (Security) – Safety and security are part of the need for the proposed action. The alternatives to the proposed action were assessed to determine their effect on safety and security of both the Memorial and its visitors.
- Visitor Use and Experience – Maintaining and improving the quality of the visitor experience at the Jefferson Memorial is very important to the National Park Service. Therefore, the alternatives were assessed to determine their effect on this topic.
- Park Operations – Uninterrupted and efficient park operations at the Jefferson Memorial are vital to meeting the National Park Service mission. Therefore, the alternatives to the proposed action were assessed to determine their affect on this topic.

### **IMPACT TOPICS DISMISSED FROM FURTHER ANALYSIS**

The non-controversial topics listed below would either not be affected or would be affected negligibly by the alternatives evaluated in this document. Therefore, these topics have been briefly discussed in this section of the Environmental Assessment and then dismissed from further consideration or evaluation. Negligible effects are effects that are localized and immeasurable at the lowest level of detection.

### **SOILS, GEOLOGY, AND TOPOGRAPHY**

The project area is located in Washington, DC, approximately 10 feet in elevation mean sea level, and is situated along the southeast corner of the Potomac River Tidal Basin (USGS, 1971). The Tidal Basin is characterized by very flat, low-lying terrain. Historically, Quaternary lowland deposits consisting of gravel, sand, silt, and clay provided the parent material within the Tidal Basin. The thickness of the deposits varied from 0 to 150 feet, commonly containing reworked Eocene glauconite, varicolored silts and clays, and brown to dark grey lignitic silty clay (MGS, 1968).

Soils within the site have been substantially altered by the placement of fill material. In 1882, a project to improve navigation of the Potomac River transformed marshes and tidal flats into 600 acres of riverside recreational areas (USDA, 1976). Included within this 600 acres is the current location of the Jefferson Memorial. Dredged sediments from the Potomac and fill hauled from off site were used in this transformation. Today, mapped soils within the project area include linside loam (Ld), urban land (Ub), and udorthents (U1) (USDA, 1976) (See Figure 3).

The linside loam (Ld) soil series are nearly level, moderately well drained soils occurring along the Potomac River. The soil is characterized by moderate permeability with slow runoff and little to no hazard for erosion. Periodic flooding may occur in winter and early spring. Due to the wetness and flooding hazards, the soil has poor potential for use as building sites, with fair potential for lawns, landscaping, vegetable gardens, and most recreational activities (SCS, 1976).

The urban land (Ub) mapping unit is characterized by areas where more than 80 percent of the surface is covered by asphalt, concrete, buildings, or other impervious surfaces. The non-impervious surfaces are typically consist of variable fill material.

The udorthents (U1) mapping unit is characterized by earthy fill material that has been placed in poorly drained to somewhat excessively drained soils on uplands, terraces, and floodplains of the Coastal Plain and Piedmont. The thickness of the fill is variable, but typically is more than 20 inches. Permeability, runoff, and internal drainage tend to be quite variable.

None of the alternatives will affect the soils, geology, and topography due to there existing highly disturbed nature. Therefore, Soils, Geology, And Topography were dismissed as impact topics.

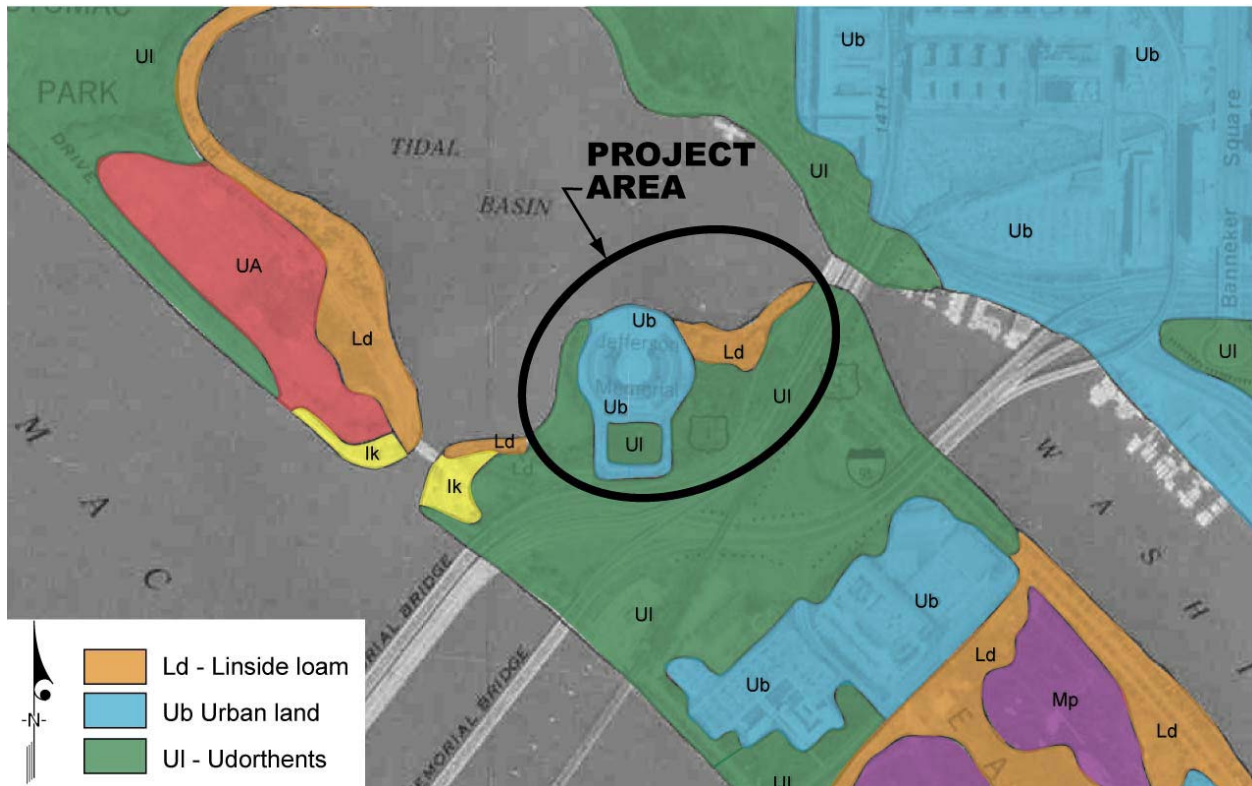


Figure 3: Soil resources in the project area.

## LAND USE

The project area is composed of 18 acres in West Potomac Park, immediately south of the Tidal Basin, within the city limits of Washington, DC. The project area consists of a maintained landscaped lawn on which the Jefferson Memorial is situated. The project area is bounded by the Tidal Basin to the west and north, and to the east and south by East Basin Drive. The entire site is designated as the Thomas Jefferson Memorial. Due to the Federal land use designation, the City of Washington, DC, has no land use zoning jurisdiction over the land. The existing use of the land will not change, as a result of the proposed security improvements; therefore, Land Use was dismissed as an impact topic.

**AGRICULTURAL LANDS, PRIME AND UNIQUE FARMLANDS SOILS**

None of the soils mapped on the project site are regulated under the Federal Farmland Protection Policy Act (7 CFR Part 658 of July 5, 1984, as superseded by the Farmland Protection Policy Act Final Rule of June 17, 1994) (USGS, 1971). Additionally, none of the soils are prime farmland soils, unique farmland soils, farmland soils of statewide importance, or identified as hydric soils by the Natural Resource Conservation Service offices in Washington, DC. Soils in the project area are not identified as having any Federal designation. None of the alternatives would affect agricultural lands or prime or unique farmlands soils as defined by the Natural Resource Conservation Service; therefore, these resources were dismissed as an impact topic.

**WILDLIFE**

Wildlife at the Jefferson Memorial is characteristic of the urban environment, and consists primarily of avian species. Birds commonly observed are those associated with human activity and include house sparrows, European starlings, common grackles, and rock doves (pigeons). Other species present are those associated with edge habitats created by plantings of trees and shrubs and include gray catbirds, northern mockingbirds, eastern phoebes, blue jays, and northern cardinals. Canadian geese and mallards have adapted to human presence and are common along the water edges such of the Potomac River and the Tidal Basin. Mammals present include Eastern chipmunks, gray squirrels, and occasional Norway rats, house mice, and beavers. Trees and shrubs planted for landscaping purposes provide nesting sites, food, and cover for many of the wildlife species present.

The proposed action would cause only a negligible disruption to wildlife during construction because the project area is located within an urban and human dominated landscape surrounded by major access roads and buildings. Therefore, Wildlife was dismissed as an impact topic.

**RARE, THREATENED, ENDANGERED, CANDIDATE SPECIES AND SPECIES OF CONCERN**

The United States Fish and Wildlife Service and the National Park Service were contacted to determine whether any known critical habitats or listed rare, threatened, or endangered species have been documented in the project area.

The U.S. Fish and Wildlife Service stated that, except for occasional transient individuals, no proposed or Federally listed endangered or threatened species are known to exist within the project area (USFWS, 2002). The National Park Service indicated that there are no records of any threatened or endangered species or rare species near the Jefferson Memorial (NPS, 2002).

The consultation letters from the U.S. Fish and Wildlife Service and the National Park Service are provided in Appendix A. Based upon current site conditions and consultation, no known critical habitats or listed rare, threatened, or endangered species, or species of concern exist in the project area. Therefore, this impact topic was dismissed from further consideration.

**AIR QUALITY**

Air quality became a national concern in the mid-1960s, leading to the passage of the Air Quality Act in 1967. The Act (now referred to as the Clean Air Act) and subsequent amendments have

established procedures for improving conditions, including a set of National Ambient Air Quality Standards (NAAQS).

The U.S. Environmental Protection Agency is directed to set levels for pollutants in order to protect the public's health. The NAAQS have been adopted for six pollutants: carbon monoxide, nitrogen dioxide, sulfur dioxide, ozone, particulate matter, and lead. A system of monitoring stations has been established across the country to measure progress in meeting these goals. If an area is found to exceed the allowable concentrations, local officials are required to develop a plan for achieving air quality that meets the standards. Generally, the nation is making great progress toward providing good air quality.

The Washington metropolitan area, however, continues to be in non-attainment for ozone and the region is required to develop a plan to move toward attainment. Similarly, the region had been in non-attainment of the carbon monoxide 8-hour standard, and it is required to show that appropriate air quality control measures are in place to maintain recent air quality improvements.

The construction of a vehicular barrier system would have negligible, short-term, adverse impacts to air quality during construction. Once complete, the vehicular barrier system would help alleviate vehicular emissions as result of improved traffic conditions because back-ups in traffic would not occur as people enter and exit the Jefferson Memorial. Therefore, Air Quality was dismissed as an impact topic.

#### **WATER RESOURCES (WETLANDS AND WATERWAYS)**

From a review of the available mapping and site visits, wetlands were not identified in the project area. The Tidal Basin lies directly north and west of the Memorial. Based on the proposed location of the vehicular barrier wall and bollards, the vehicular barrier system would not encroach on the Tidal Basin. Although the Jefferson Memorial sits at the edge of the Tidal Basin, the vehicular barrier system would not be built along the Tidal Basin.

The new vehicular barrier system would not add additional impervious surfaces. Stormwater run-off would continue to drain into the Tidal Basin. In addition, erosion and sediment control measures would be utilized during construction. The new vehicular barrier system would have no to negligible impacts to groundwater resources.

None of the alternatives considered in this document would affect water resources of the project area because of the nature of the proposed action and that no wetlands or waterways are within the project area. Therefore, this has been dismissed as an impact topic.

#### **SOUNDSCAPE MANAGEMENT**

In accordance with the National Park Service *Management Policies* (2001) and Director's Order #47, *Sound Preservation and Noise Management*, an important objective of the National Park Service's mission is the preservation of natural soundscapes associated with national park units. Natural soundscapes exist in the absence of human caused sound. The natural ambient soundscape is the aggregate of all the natural sounds that occur in park units, together with the



physical capacity for transmitting natural sounds. Natural sounds occur within and beyond the range of sounds that humans can perceive and can be transmitted through air, water, or solid materials. The frequencies, magnitudes, and duration of human caused sound considered acceptable varies among National Park Service units. Acceptance levels for each park unit are generally greater in developed areas and less in undeveloped areas.

The new vehicular barrier system would result in no long-term differences in noise frequencies, magnitudes, and durations. Typical noise associated with commercial properties surrounding the site is currently produced in the project area. In addition, several transportation noise sources exist such as vehicular traffic, nearby railroads, and the flight path of the Ronald Reagan Washington National Airport. As a result of the nearby land uses and background levels of noise, the proposed action would have negligible impacts on sound preservation and noise management.

Furthermore, construction activities would be expected to contribute temporary, negligible, short-term adverse noise impacts. The proposed action would result in negligible, short-term impacts on noise levels during construction and would have negligible impacts on sound preservation and noise management. Therefore, Soundscape Management was dismissed as an impact topic.

#### **LIGHTSCAPE MANAGEMENT**

In accordance with National Park Service *Management Policies* (2001), the National Park Service strives to preserve to the extent possible the quality of lighting associated with natural ambient landscapes and the night sky. The new vehicular barrier system would require artificial outdoor lighting to the extent necessary to ensure safe conditions for visitors. Because the proposed action would negligibly impact or contribute to the natural ambient landscapes of the Jefferson Memorial, Lightscape Management was dismissed as an impact topic.

#### **SOCIOECONOMIC RESOURCES**

The social economic environment consists of local, regional, and national businesses; the Federal government; the District of Columbia government; residences; the local and regional economy; and tourism. The area surrounding the Jefferson Memorial consists of parkland, Federal buildings, and highways. The local economy and businesses include tourism and the Federal government.

Since the Jefferson Memorial sits at a major gateway into Washington, DC, construction of the vehicular barrier system would beneficially impact vehicular access in and out of the City because traffic back-ups would not occur as a result of people entering and existing the Jefferson Memorial. Socioeconomic impacts of the proposed action would be long-term and beneficial. Therefore, Socioeconomic Resources was dismissed as an impact topic.

#### **ARCHEOLOGY RESOURCES**

In 1870, the Army Corps of Engineers began the long project of dredging the Potomac River and disposing of dredged materials in such a way to prevent siltation. By 1901, 31 acres adjacent to the Washington Monument had been filled and subsequently turned into Potomac Park. Since all

the land for the Jefferson Memorial is reclaimed land from the Potomac River, there is no archeological significance to the site. Therefore, Archeological Resources was dismissed as an impact topic.

### **INDIAN TRUST RESOURCES**

Secretarial Order 3175 requires that any anticipated impacts to Indian trust resources from a proposed action by Department of Interior agencies be explicitly addressed in environmental documents. The Federal Indian Trust responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights, and it represents a duty to carry out the mandates of Federal law with respect to American Indian and Alaskan native tribes.

There are no Indian trust resources in the area of the Jefferson Memorial. The lands comprising the Memorial are not held in trust by the Secretary of the Interior for the benefit of Indians due to their status as Indians. Therefore, Indian Trust Resources were dismissed as an impact topic.

### **ETHNOGRAPHIC RESOURCES**

The National Park Service defines ethnographic resources as any “site, structure, object, landscape or natural resource feature assigned traditional legendary, religious, subsistence or other significance in the cultural system of a group traditional associated with it” (Director’s Order #12, *Cultural Resources Management Guidelines*, P. 181). Because no ethnographic resources are known to exist in proximity of the project area, Ethnographic Resources was dismissed as an impact topic.

### **ENVIRONMENTAL JUSTICE**

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations directs Federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority or low-income populations.

According to the 2000 U.S. Census (2002) figures, the minority community in Washington, DC, is approximately 70 percent and approximately 12 percent of the population is over the age of 65. The percentage of all individuals living below the poverty line in Washington, DC, is approximately 19 percent, which is slightly higher than the national average of 13 percent. Disproportionate amounts of minorities or low-income populations exist in Washington, DC, but none reside within the project area nor would they be adversely impacted by the proposed action. Therefore, Environmental Justice was dismissed as an impact topic.

### **COMMUNITY FACILITIES AND SERVICES**

Emergency Services and Fire and Rescue – The District of Columbia Fire and Emergency Medical Services Department provides emergency, fire, and rescue services for Washington, DC. The construction of a vehicular barrier system around the Lincoln Memorial would have no

effect on existing fire and rescue operations. Special access would be provided for emergency vehicles to reach the Jefferson Memorial.

Police – Residents of Washington, DC, are served by the Metropolitan Police Department of the District of Columbia. The U.S. Park Police are the primary responders to actions occurring on park property and enforce Federal laws and regulations. The construction of a vehicular barrier system would have no effect on existing police services.

Schools – Based on the review of the District of Columbia Public Schools System, there are no public schools in close vicinity to the Jefferson Memorial. The closest public school by road is located on 7<sup>th</sup> Street, SW, and is over one mile from the site. The construction of a vehicular barrier system would have no effect on schools in the area.

Parks and Recreation – The Jefferson Memorial is part of the elaborate National Park System of the National Mall, which includes the Lincoln, the Franklin Delano Roosevelt, the Vietnam Veterans, and the Korean War Veterans Memorials; the Washington Monument; the Smithsonian; and the U.S. Capitol. No impacts to these resources are anticipated to occur.

The construction of a vehicular barrier system at the Jefferson Memorial is not anticipated to directly affect existing community facilities. The vehicular barrier system would not impact the quality or quantity of existing emergency, medical, police, and fire and rescue services. Therefore, Community Facilities and Services were dismissed as impact topics.

## **INFRASTRUCTURE**

Existing utilities would be identified prior to earth disturbance activities.

Water and Sewer Service – Water is supplied to the District of Columbia from the Potomac River through the Dalecarlia and McMillan Reservoirs where filtration and treatment occur. The U.S. Army Corps of Engineers operates the reservoirs. Pump stations at the reservoirs, and elsewhere in the system, deliver water through mains to the city and certain surrounding areas.

The District of Columbia is served primarily by combined storm and sanitary sewer facilities. This system collects sewage flows and conveys it to the Blue Plains Wastewater Treatment Facility for treatment. A sewer separation program has been in place since 1930, requiring more recently developed areas to have separate dedicated piping systems for both storm drainage and sewage.

The existing water and sewer structure would not be impacted by the construction of a vehicular barrier system because the proposed action would not increase the water and sewer system.

Electrical Power and Natural Gas – The Potomac Electric Power Company, Inc., provides electricity to the District of Columbia. The Power Company's main generation plants are located in Maryland, Virginia, and the District of Columbia. Washington Gas supplies natural gas to the District of Columbia through a network of underground conduits fed through larger high-pressure transmission lines, generally located within street rights-of-way. The vehicular barrier system would not affect service levels provided by the power or gas companies because service levels would not increase.

Communication – Verizon provides commercial and private telecommunications to the District of Columbia. The system is designed and constructed to accommodate current and future development. Communication services would not be affected in the area because no new service is anticipated.

Waste Management – The National Park Service collects the waste from the Jefferson Memorial and delivers it to the BFI Transfer Station located at 1220 W Street, NE. Waste management would not be affected in the project area because waste generated at the Memorial is not anticipated to increase.

The existing infrastructure within the project area is not anticipated to be directly affected by the construction of a vehicular security barrier around the Jefferson Memorial. The proposed project would not adversely impact water and sewer service, storm drainage, electrical power and natural gas, communication, or waste management. Therefore, Infrastructure was dismissed as an impact topic.

The impact topics dismissed from further consideration in this document have no to negligible impacts. Because these impact topics would have no major adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in establishing of legislation or proclamation of the Jefferson Memorial, (2) key to the natural or cultural integrity of the park, or (3) identified as a goal in the park's management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

## ALTERNATIVES

This alternatives section describes three alternatives, including the No-Action Alternative for improving the security of the Jefferson Memorial. Since September 11<sup>th</sup>, the National Park Service has conducted an extensive evaluation of vehicular security in and around the Jefferson Memorial. Over the course of the last year, the National Park Service in coordination with the National Capital Planning Commission, the Commission of Fine Arts, and its consultants have narrowed down the list of possible viable alternatives.

In order for the National Park Service to determine viable alternatives, the National Capital Planning Commission's Master Plan for security improvements around the Nation's Capital was reviewed. The document, *Designing for Security in the Nation's Capital*, suggests the utilization of gatehouses; terraces, walls, and raised planting beds; trees and planters; walls and fencing; posts and bollards; and other site furnishings and amenities to best meet an urban design plan that provides adequate security to Washington, DC, while enhancing the unique character of the Nation's Capital. Based upon site conditions and use, pedestrian access, cultural landscape features, and other issues, bollards and vehicular barrier walls were determined to best meet the purpose and need of this project. Posts and bollards provide the most ubiquitous security elements found in the Nation's Capital. They vary in design and provide ease of pedestrian circulation, meet accessibility requirements, and substantially enhance the streetscape. In addition, vehicular barrier walls complement the architecture of adjacent buildings. Furthermore, bollards and vehicular barrier walls would form an urban design that would create a sense of unity.

The alternatives include the No-Action Alternative (Alternative A), Alternative B: Vehicle Security Along Memorial Ring, and Alternative C: Vehicle Security Along East Basin Drive. For the purposes of this document, the Preferred Alternative is Alternative C.

### ALTERNATIVE A – NO-ACTION

The No-Action Alternative describes the action of continuing the current management operations and conditions. No-Action does not imply or direct discontinuing the current action or removing existing uses, development, or facilities. The No-Action Alternative provides a basis for comparing the management direction and environmental consequences of the other alternatives. Under the No-Action Alternative, a vehicle barrier system would not be constructed. The lack of a vehicle barrier system would not help prevent attacks from vehicle bombs. The current use of concrete jersey barriers surrounding the outer edge of Memorial ring would continue. These temporary security measures do not provide adequate security to visitors and adversely impact the historic landscape and resources of the Jefferson Memorial. Viewshed and vistas would continue to be impacted by the makeshift concrete jersey barriers. In addition, the closure of the east side of the U-shaped driveway to in-coming traffic would continue.

## ALTERNATIVE B – VEHICLE SECURITY ALONG MEMORIAL RING

Alternative B would provide a vehicular barrier system along the outer edge of the Memorial ring. Bollards would be placed at the edge of the existing pedestrian paving and would continue around the entire Memorial. At the south side of the Memorial, the vehicular barrier system would come across the existing parking area directly in front of the Memorial. This parking area would be raised to sidewalk level to create a pedestrian plaza. Visitor parking would be relocated to existing parking lots situated along Ohio Drive within walking distance to the Memorial. Handicap accessible parking for person with disabilities would be relocated to the south side of East Basin Drive directly across the street from the current tour bus access. Figure 4 depicts the general concept design for Alternative B.

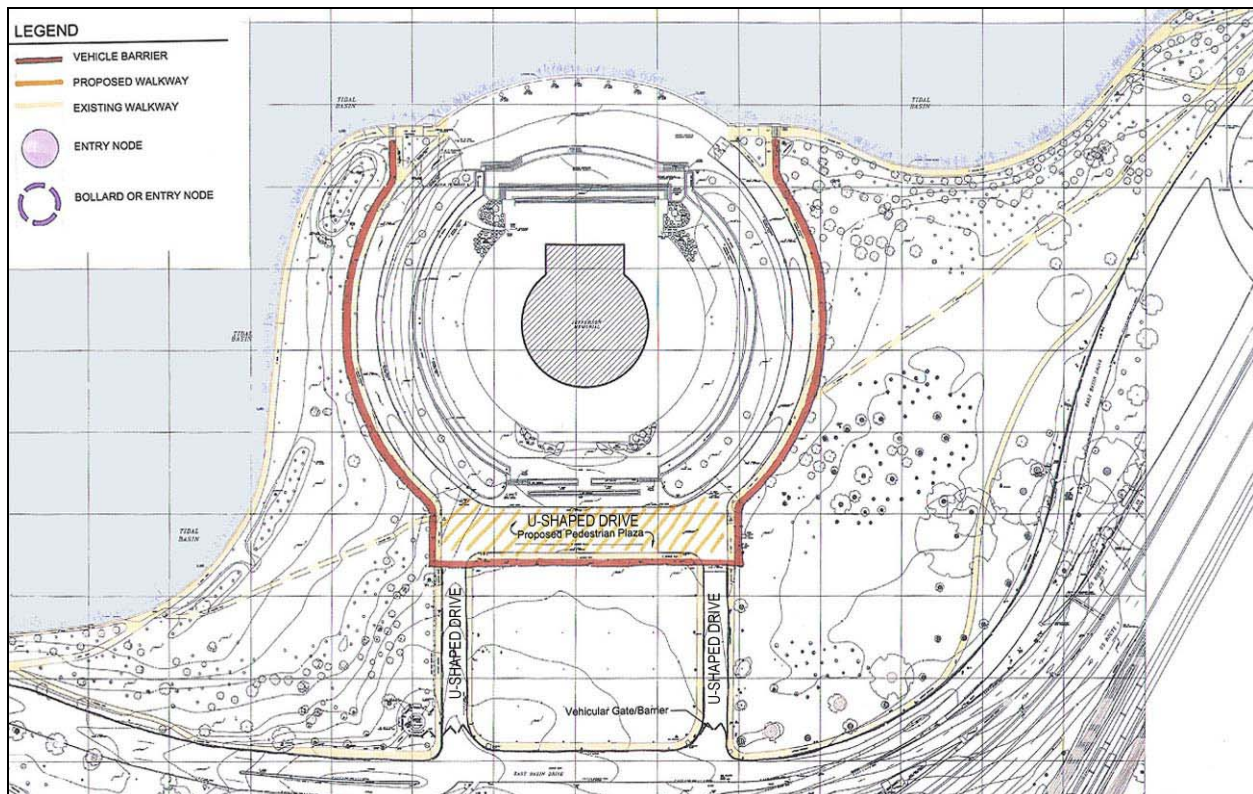


Figure 4: Alternative B general concept design.

## **ALTERNATIVE C – VEHICLE SECURITY ALONG EAST BASIN DRIVE (PREFERRED ALTERNATIVE)**

Alternative C, the Preferred Alternative, would provide a vehicular barrier system along East Basin Drive. The existing landscaping would be left as intact as possible and minor changes to the existing pedestrian paths would occur. This alternative would respect the landscape plan as envisioned by Frederic Law Olmstead, Jr. and would also create a vehicular barrier system that would be unobtrusive when viewed in context with the Memorial.

A 30 inch high vehicle barrier wall would be constructed on the east side of the Memorial grounds starting from approximately 120 feet from the east side of the U-shaped roadway and would continue along the existing pedestrian path. Two additional sections of a vehicular barrier wall would be located on the west and east sides of the Memorial between circular finished walls. Two circular finished walls will be placed at the entrance to the pedestrian path on the east side and two will be placed at the entrance to the pedestrian path on the west side. Metal bollards would be constructed from the edge of the existing bus tour drop-off area along East Basin Drive to the vehicle barrier wall on the east side of the Memorial.

The existing U-shaped roadway, which serves as a visitor parking area, would be raised to sidewalk level and slightly narrowed to create a pedestrian walk and/or National Park Service vehicular access. Visitor parking would be relocated to existing parking lots situated along Ohio Drive and would be within walking distance to the Memorial. Handicap accessible parking for visitors with disabilities would be relocated to the south side of East Basin Drive directly across the street from the current tour bus access. Rumble strips would be placed along East Basin Drive to slow vehicle traffic in this area. As with Alternative B, the parking area along the south side of the Memorial would be raised to sidewalk level to create a pedestrian plaza. Figure 5 depicts the general concept design for Alternative C.

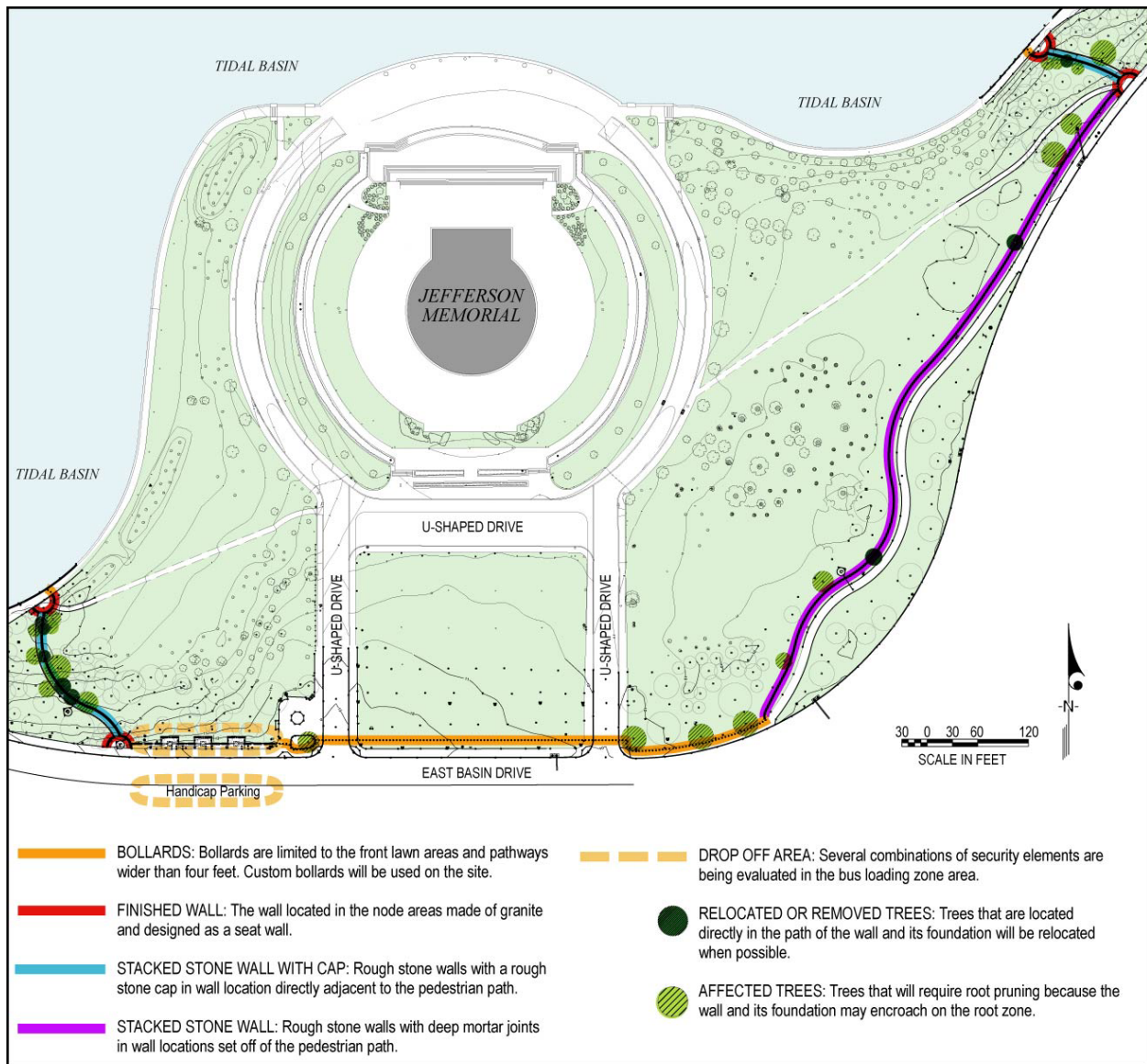


Figure 5: Preferred Alternative C general concept design.

## MITIGATION MEASURES OF THE PREFERRED ALTERNATIVE

Mitigation measures are presented as part of the Preferred Alternative. These actions have been developed to lessen the adverse effects of the Preferred Alternative. The following mitigation measures are recommended for the Preferred Alternative:

- Additional storage for floodwaters should be created at the site because the vehicle barrier system would serve as a barrier to floodwaters and could cause floodwaters to back up and flood other areas outside of the floodplain and/or cause increased water surface elevation levels. Cut and fill activities, which will be necessary to construct the



barrier, will result in increased flood storage space at the site. Cut and fill will result in a net loss of earth as the ground is graded to slope downward into the wall on the East Union Drive side of the barrier system. Essentially, this grading is producing a swale feature along the roadway side of the system and providing increased storage area for floodwaters. These mitigation measures would be in accordance with the National Park Service floodplain guidance and with Executive Order 11988 and the sustainability objectives of the National Park Service.

- Trees and shrubs would be replaced, as appropriate, to mitigate the effects of the loss of some trees, shrubs, and ground cover. These plantings would be in keeping with the Olmstead Plan and the Cultural Landscapes Inventory of 2001. During construction, best management practices would be implemented. Soil compaction and root disturbance would be kept to a minimum for the trees. Sustainable design practices would be implemented.
- Directional signage should be increased to direct visitors where to park along Ohio Drive and where to walk to reach the Jefferson Memorial.
- The construction of a vehicular barrier system would be mitigated through compatible new design and materials. The vehicular barrier system would be constructed so as to be unobtrusive when viewed in context of the cultural landscape and historic resources. A Memorandum of Agreement between the National Park Service and the DC Historic Preservation Office and the Advisory Council on Historic Preservation to provide consultation in order to avoid adverse effects on this historic resource would occur. Site improvements would be carried out in accordance with the *Secretary of Interior's Standards for the Treatment of Historic Properties* to ensure development is compatible with the historic setting and harmonizes with historic structures and landscapes.
- The existing landscape would be left as intact as possible so as not to disrupt or impact the original landscapes designed by Olmstead and to provide a buffer.
- Rumble strips along East Basin Drive to slow vehicles down to the speed limit of 25 miles per hour and a pedestrian crosswalk between the handicap accessible parking and the tour bus drop-off would be constructed. Signs to alert motorists of pedestrian/handicap crossing would be placed along East Basin Drive.
- During the construction, restrictions on the hours and duration of the construction deliveries and actual construction would be implemented. A public notice of the construction schedule would be provided.

## **SUSTAINABILITY**

The National Park Service has adopted the concept of sustainable design as a guiding principle of facility planning and development. The objectives of sustainability are to design park facilities to minimize adverse effects on natural and cultural values, to reflect their environmental setting, and to maintain and encourage biodiversity; to construct and retrofit facilities using energy-efficient materials and building techniques; to operate and maintain facilities to promote

their sustainability; and to illustrate and promote conservation principles and practices through sustainable design and ecologically sensitive use. Essentially, sustainability is living within the environment with the least impact on the environment.

The No-Action Alternative does not support the practice of sustainability because the current use of concrete jersey barriers does not conform with the objectives of sustainability. The concrete jersey barriers adversely affect the natural and cultural resources of the Jefferson Memorial. The Preferred Alternative subscribes to and supports the practice of sustainable planning, design, and use of the Jefferson Memorial through a design that would preserve the sensitive context of the natural and cultural heritage of the Memorial and that minimizes the adverse affects on the natural habitat. Following the recommendations of the Commission of Fine Arts and the National Capital Planning Commission, the vehicular barrier system would blend in with the existing landscape, thereby meeting the sensitive context design of the Jefferson Memorial. A Memorandum of Agreement will further outline and minimize the adverse affects on the cultural resources.

## **CONSTRUCTION COST AND SCHEDULE**

The cost of the project is estimated to be \$4.6 million and construction is projected for early FY 2003.

## **ALTERNATIVES CONSIDERED BUT DISMISSED FROM FURTHER ANALYSIS**

The National Park Service staff considered a range of alternatives during the preliminary planning. A second option to Alternative C would be to re-invent the landscape and incorporate the vehicular barriers so as to “design like Olmstead.” Greater changes would occur to the existing paths and greater impacts to the existing landscaping would occur. This option would be more elaborate, but would also provide an opportunity to fully integrate the security barriers so that they become an intrinsic part of the landscape. The key feature of this plan would be the use of entry “nodes” along East Basin Drive to establish entry points to the site. This was dismissed due to the cultural impact to the Olmstead Plan and because this alternative would not provide the best adequate security to the Jefferson Memorial and its visitors when compared to the other alternatives.

## **IMPACT COMPARISON MATRIX**

Table 1 compares and contrasts each of the alternatives, including the degree to which each alternative accomplishes the purpose or fulfills the need identified in the purpose and need section. Table 2 presents the impacts for comparison of the project alternatives, including the No-Action Alternative. The table presents a concise summary of each alternative’s potential effects by impact.

**TABLE 1: COMPARATIVE SUMMARY OF THE NO-ACTION AND ACTION ALTERNATIVES**

<b>Alternative A – No-Action Alternative</b>	<b>Alternative B – Vehicle Security Along Memorial Ring</b>	<b>Alternative C – Vehicle Security Along East Basin Drive (Preferred Alternative)</b>
<p>The construction of a vehicle barrier system to enable the National Capital Parks – Central to provide additional security to the Jefferson Memorial and its visitors would not occur. The lack of a vehicle barrier would not help prevent attacks from vehicle bombs. The National Capital Parks - Central would continue the use of concrete jersey barriers to provide security.</p> <p><b>Meets Project Objective?</b> No. Continuing the existing conditions would not provide adequate security from a terrorist threat. Impacts to historic and cultural resources would continue.</p>	<p>Bollards would be installed at the edge of the existing pedestrian paved walkway and continue around the entire Memorial. At the south side of the Memorial, the vehicular barrier system would come across the existing parking area directly in front the Memorial. This parking area would be raised to sidewalk level to create a pedestrian plaza. Visitor parking and handicap accessible parking would be relocated.</p> <p><b>Meets Project Objectives?</b> No. Adequate security from a terrorist threat would not be provided. Impacts to historic and cultural resources currently being impacted by makeshift security measures would not be fully alleviated.</p>	<p>Construction of vehicular security from Ohio Drive along East Basin Drive to the east edge of the existing evergreen trees would occur. Visitor parking would be relocated to existing parking lots along Ohio Drive and handicap accessible parking would be relocated to the south side of East Basin Drive. A pedestrian plaza would be created from the existing parking spots in front of the Memorial. The remaining existing visitor parking would be slightly narrowed to a pedestrian walk and/or National Park Service vehicular access. Minor changes to the existing pedestrian paths would occur.</p> <p><b>Meets Project Objectives?</b> Yes. Adequate security from a terrorist threat would be provided. Impacts to historic and cultural resources currently being impacted by makeshift security measures would be alleviated.</p>

**TABLE 2: COMPARATIVE SUMMARY OF THE POTENTIAL ENVIRONMENTAL IMPACTS**

<b>Impact Topic</b>	<b>Alternative A No-Action Alternative</b>	<b>Alternative B</b>	<b>Alternative C (Preferred Alternative)</b>
<b>Floodplains</b>	No adverse impacts would occur.	Minor to moderate, long-term, adverse impacts would occur. Cumulative impacts are anticipated to be negligible and adverse. No impairment to park resources or values would occur. Mitigation measures would be implemented.	Moderate, long-term, adverse impacts would occur to the floodplain. Cumulative impacts are anticipated to be negligible and adverse. No impairment to park resources or values would occur. Mitigation measures would be implemented.

Impact Topic	Alternative A No-Action Alternative	Alternative B	Alternative C (Preferred Alternative)
<b>Vegetation and Land Cover</b>	No adverse impacts would occur.	Minor, long-term, and adverse impacts would occur. Minor, adverse cumulative impacts are anticipated. No impairment to park resources or values would occur. Mitigation measures would be implemented.	Minor to moderate, long-term, and adverse impacts would occur from the relocation of trees and shrubs. Minor to moderate beneficial impacts would occur from narrowing the U-shaped parking area. Minor, adverse cumulative impacts are anticipated. No impairment to park resources or values would occur. Mitigation measures would be implemented.
<b>Transportation (Traffic)</b>	No adverse impacts would occur.	Impacts would be minor, long-term, and beneficial. Adverse impacts to parking would be negligible and long-term. minor, adverse cumulative effects would occur. There would be no impairment to park resources and values. Mitigation measures would be implemented.	Impacts would be minor, long-term, and beneficial. Adverse impacts to parking would be negligible and long-term. Minor, adverse cumulative effects would occur. There would be no impairment to park resources and values. Mitigation measures would be implemented.
<b>Aesthetics and Visual Resources</b>	Moderate, long-term, and adverse impact would occur. Adverse cumulative effects would occur. No impairment to park resources and values would occur.	Moderate, long-term, and adverse impacts would occur. Negligible, long-term, adverse impacts from associated features would occur. Minor, adverse cumulative effects and no impairment to park resources and values would occur. Mitigation measures would be implemented.	Minor, long-term, adverse impacts would occur. Minor, adverse cumulative effects would occur. No impairment to park resources and values would occur. Mitigation measures would be implemented.
<b>Historic Resources and Cultural Landscapes</b>	Moderate, long-term, adverse impacts would occur. Moderate, adverse cumulative effects would occur. No impairment to park resources and values would occur.	Impacts would be major, long-term, and adverse. Moderate, adverse cumulative effects would occur. No impairment to park resources and values would occur. Mitigation measures would be implemented.	Impacts would be major, long-term, and adverse. Moderate, adverse cumulative effects would occur. No impairment to park resources and values would occur. Mitigation measures would be implemented.
<b>Safety (Security)</b>	Moderate, long-term, and adverse impacts would occur. No cumulative effects or impairment to park resources and values would occur.	Minor, long-term, and beneficial impacts to security and safety would occur. Moderate, long-term, adverse impacts to occur to visitors with disabilities. Moderate, beneficial cumulative effects would occur. No impairment to park resources and values would occur. No mitigation is required.	Moderate, long-term, and beneficial impacts to security and safety would occur. Moderate, long-term, adverse impacts to occur to visitors with disabilities. Moderate, beneficial cumulative effects would occur. No impairment to park resources and values would occur. Mitigation measures would be implemented.

Impact Topic	Alternative A No-Action Alternative	Alternative B	Alternative C (Preferred Alternative)
<b>Visitor Use and Experience</b>	Moderate, short-term, and adverse impacts would occur. No cumulative effects or impairment to park resources and values would occur.	Minor, long-term, and beneficial impacts to visitor use and experience would occur. Moderate, long-term, adverse impacts to occur to visitors with disabilities. Minor, short-term, adverse impacts would occur as a result of construction. Moderate, beneficial cumulative effects would occur. No impairment to park resources and values would occur. Mitigation measures would be implemented.	Moderate, long-term, and beneficial impacts to visitor use and experience would occur. Moderate, long-term, adverse impacts to occur to visitors with disabilities. Minor, short-term, adverse impacts would occur as a result of construction. Moderate, beneficial cumulative effects would occur. No impairment to park resources and values would occur. Mitigation measures would be implemented.
<b>Park Operations</b>	Moderate, long-term, adverse impacts on park operations would occur. No cumulative effects or impairment to park resources and values would occur.	Minor, long-term, and beneficial impacts would occur. Moderate, beneficial cumulative effects would occur. No impairment to park resources and values would occur. No mitigation measures are proposed.	

## ENVIRONMENTALLY PREFERRED ALTERNATIVE

In accordance with Director’s Order #12, the National Park Service is required to identify the “environmentally Preferred Alternative” in all environmental documents, including environmental assessments. The environmentally Preferred Alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969, which is guided by the Council on Environmental Quality. The Council on Environmental Quality provides direction that “[t]he environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in Section 101 of National Environmental Policy Act,” which considers:

1. Fulfilling the responsibilities of each generation as trustee of the environment for succeeding generations;
2. Assuring for all generations safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
3. Attaining the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
4. Preserving important historic, cultural and natural aspects of our national heritage and maintaining, wherever possible, an environment that supports diversity and variety of individual choice;

5. Achieving a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and
6. Enhancing the quality of renewable resources and approaching the maximum attainable recycling of depletable resources (National Environmental Policy Act, section 101)."

The No-Action Alternative (Alternative A) meets only criterion number 4, preserving important natural and cultural resources. Alternative B provides less aesthetically pleasing protection (due to the use of bollards) while providing the following advantages:

- Preventing loss of Cultural resources (Criteria 1 and 4); and
- Improving operational efficiency and sustainability (Criteria 3, 5, and 6).

The Environmentally Preferred Alternative in this document is Alternative C. This alternative provides a better environmental approach than Alternatives A and B including the following advantages:

- Preventing loss of cultural resources (Criteria 1 and 4)
- Protecting cultural resources in an esthetically compatible manner (Criterion 2); and
- Improving operational efficiency and sustainability (Criteria 3, 5, and 6).

Alternative C is the Environmentally Preferred Alternative because it meets all six of the criteria set forth in the National Environmental Policy Act, while Alternative A meets only one of the criterion, and Alternative B meets five of the criteria. After review of potential resources and other impacts topics, and developing appropriate mitigation measures, Alternative C best ensures the preservation of park resources and values. Alternative C would alleviate impacts to historic and cultural resources currently being impacted by makeshift security barriers. In addition, the Alternative C would meet urban design criteria as proposed by the National Capital Planning Commission Interagency Task Force in *Designing for Security in the Nation's Capital*.

## AFFECTED ENVIRONMENT

A summary of the resources identified as impact topics associated with this project follows.

### FLOODPLAINS

The Jefferson Memorial is located in an area surrounded by the 100-year floodplain of the Tidal Basin, but not within it. The Memorial is on higher ground than the surrounding terrain so that it sits above the level of the 100-year floodplain, which is at an elevation of 13 feet National Geodetic Vertical Datum 29 at the site. Although the memorial is situated above the 100-year floodplain, there is no direct access to the site during a major flood as parking and service areas are located in the 100-year floodplain (See Figure 6).

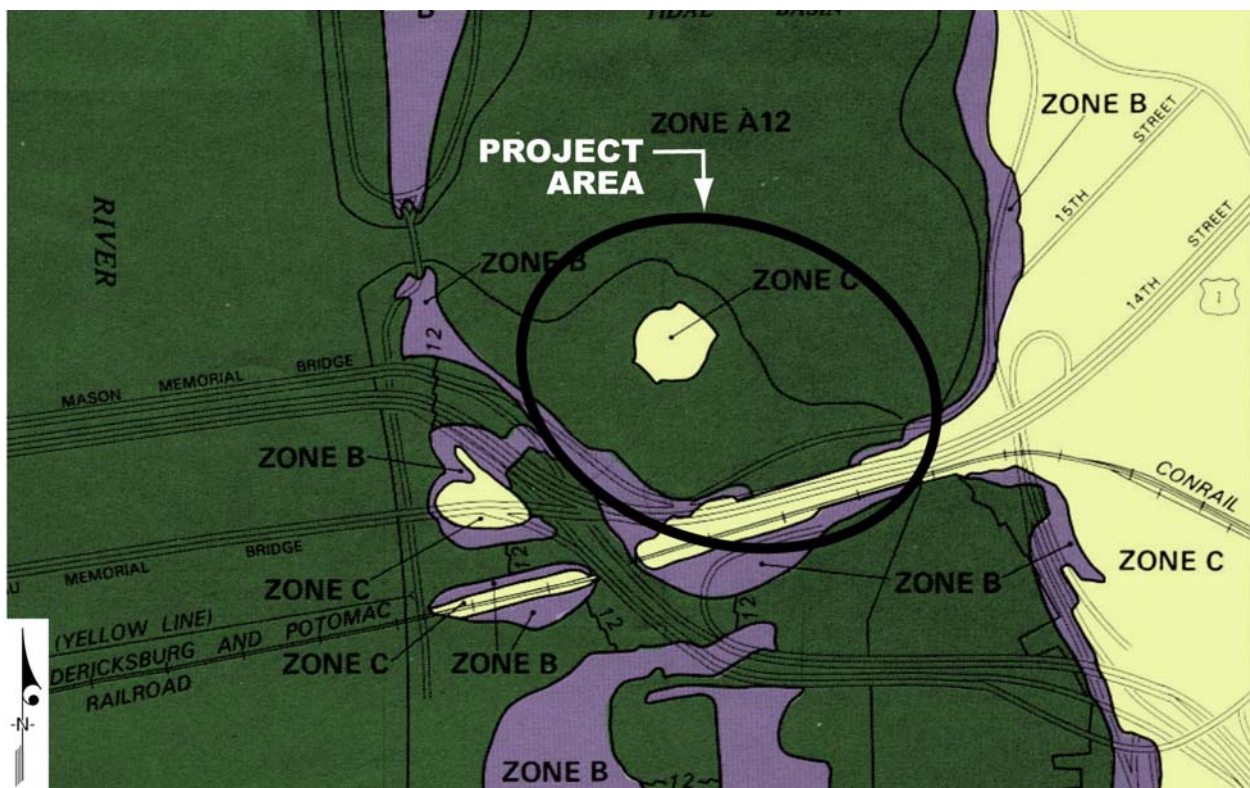


Figure 6: Floodplain Map. Source: FEMA, Flood Insurance Rate Map, District of Columbia, Washington, DC, 1985.

The Tidal Basin is connected to the Potomac River by a small inlet at the south of the basin. Generally, the basin does not have substantial velocity flows. The backwater effects and water levels of the river regulate its water surface elevation. However, during a large flood event, such as the 100-year flood, floodwaters would breach the river's banks west of the basin and provide a second connection to the basin so that it would experience higher velocity flows.

## VEGETATION AND LAND COVER

The vegetation that naturally occurred in the vicinity of the Jefferson Memorial before the reclamation by the Army Corps of Engineers has been eliminated and replaced with seeded and transplanted species as the site was developed. The species that would have grown in this area would have included willows (*Salix spp.*), cattails (*Typha spp.*), lizard's tail (*Saururus cernuus*), wild rice (*Zizania spp.*), and other aquatic and bog plants (NPS, 2001). The selection of species used for landscaping has been based primarily on aesthetics and growth characteristics and includes native species as well as non-native species that have been introduced from other regions of the United States and other continents.

The vegetated areas around the Memorial consist of a maintained park-like landscape planted with grasses and various trees and shrubs. Poor soil conditions and diseases have contributed to the loss of many of the trees. The Jefferson Memorial landscape was derived from the plan by Frederick Law Olmstead, Jr., which included a variety of trees and shrubs such as yews (*Taxus spp.*), American hollies (*Ilex opaca*), Japanese hollies (*Ilex crenata*), abelias (*Abelia graniflora*), osmanthus (*Osmanthus spp.*), firethorns (*Pyracantha coccinea*), cotoneasters (*Cotoneaster horizontalis* and the *Cotoneaster horizontalis ammeri*), dogwoods (*Cornus florida*), and winter jasmine (*Jasminum nudiflorum*). White pines (*Pinus strobus*) were later added to the stylobate mall. Today, the Jefferson Memorial landscape is dominated primarily by large American elms (*Ulmus americana*) along with sycamores (*Platanus occidentalis*), white pines, and willow oaks (*Quercus phellos*). Smaller trees and shrubs include Japanese cherry (*Prunus x yedoensis*), American holly, Japanese holly, yew, boxwoods (*Boxus spp.*), and crabapples (*Malus spp.*).

## TRANSPORTATION (TRAFFIC)

Access to the Jefferson Memorial is primarily by vehicle, either by car, private tour bus, or tourmobile. Public bus service to the site does not exist and the nearest Metro stop is approximately 1.5 miles away. The Jefferson Memorial is accessed off of East Basin Drive, which is a one-way road heading from east to west. One-way traffic must enter the Jefferson Memorial from the circular drive from the west and exit along the east. Parking currently exists along the U-shaped drive and at three parking lots along Ohio Drive. Tour buses access the site along East Basin Drive where pull-off parking spaces exist.

Pedestrians access the memorial from the east, coming from paddleboats in the Tidal Basin and the Franklin Delano Roosevelt Memorial to the west. The Jefferson Memorial was made accessible to visitors with disabilities in 1975.

## AESTHETICS AND VISUAL RESOURCES

Pierre Charles L'Enfant first conceived the formal vistas between the axial arrangements of the buildings of primary importance around the National Mall in 1792. A gradual departure from his plan has occurred, but the McMillan Commission of 1902 sought to redesign the central area, reinforcing the axes and the vistas of L'Enfant's plan. The McMillan Commission's plan incorporated a five-point kite shaped design that was to create a view of fairly open parkland.



The project area is defined visually by the designed historic landscape of the Jefferson Memorial, which includes the Japanese cherry trees given to the United States by the mayor of Tokyo in 1912. The most notable vista is the view from the Jefferson Memorial looking north to the Washington Monument and White House beyond (Figure 7, View 5). However, directly due north, the view is marred by the parking lot opposite the plaza along the north edge of the Tidal Basin. The view to the west includes the Lincoln Memorial, but it is barely visible from the Jefferson Memorial. Looking south, the vista is marred by the Interstate 395, which leads to the 14<sup>th</sup> Street Bridge.

The most notable vista looking towards the Memorial is that from the Franklin Delano Roosevelt Memorial, which frames the view of the Jefferson Memorial from the bank of the Tidal Basin. Other vistas are shown in Figure 7, as well as corresponding photographs on the following page. These views would potentially be the most impacted from the proposed action.



Figure 7: Views and vistas of the Thomas Jefferson Memorial (Views 1 through 6).



*View 1: Looking west from Ohio Drive and East Basin Drive.*



*View 2: Looking northwest from East Basin Drive.*



*View 3: Looking northeast to the Memorial from towpath.*



*View 4: Looking west from the Memorial to the Franklin Delano Roosevelt Memorial.*



*View 5: Looking north from the steps of the Memorial.*



*View 6: Looking south from Independence Avenue.*

*Figure 7 continued: Views 1 through 6 depicting views and vistas to and from the Jefferson Memorial.*

## **HISTORIC RESOURCES AND CULTURAL LANDSCAPES**

### **HISTORIC RESOURCES**

“Historic properties,” as defined by the implementing regulations of the National Historic Preservation Act (36 CFR 800), are defined as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places. This term includes artifacts, records, and the remains that are related to and located within such properties, as well as traditional and culturally important Native American sites and historic landscapes. The term “eligible for inclusion in the National Register” includes both properties formally determined eligible and all other properties that meet National Register listing criteria.

The Jefferson Memorial is a contributing element to the designation of East and West Potomac Parks to the National Register. Little documentation of the Jefferson Memorial in the 1973 documentation led to additional documentation to the nomination in 1981. However, this did not adequately address the historic landscape. An updated nomination is currently being prepared to include information about contributing landscape features.

Other surrounding resources listed on the National Register include:

- Washington Monument
- National Mall
- Ellipse
- L’Enfant Plan
- McMillan Plan
- Lincoln Memorial Grounds

### **CULTURAL LANDSCAPES**

As described by the National Park Service *Cultural Resource Management Guideline* (Director’s Order # 28), a cultural landscape is:

“...a reflection of human adaptation and use of natural resources and is often expressed in the way land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built. The character of cultural landscape is defined both by physical materials, such as roads, buildings, walls, and vegetation, and by use reflecting cultural values and traditions.”

The Jefferson Memorial is a designed historic landscape. As part of the southern point in the McMillan “kite” plan, the Jefferson Memorial is firmly part of the monumental core of Washington, DC. In addition, the relationship of the Memorial to other spaces and points in both East and West Potomac Parks contributes to the cultural landscape. The period of significance or

the landscape spans from 1934 to 1943 and is historically important under National Register criteria A and C<sup>1</sup>.

Frederick Law Olmsted, Jr. was the landscape architect for the Thomas Jefferson Memorial project. The original planting plan that was installed at the time of construction featured a simple design within the circular driveway that consisted primarily of evergreens with limited flowering trees and shrubs (NPS, 2001). The primary features of the plan included cluster groups of trees and shrubs to the north and south of the Memorial, on both sides of the north steps, and on both sides of the south view line. The Olmsted plan included yews, American hollies, Japanese hollies, abelias, osmanthus, firethorns, cotoneasters, dogwoods and winter jasmine. White pines were later added to the landscape of the Memorial.

Outside the circular drive, the landscape plan featured small flowering trees with taller shade trees with grass and limited shrub and ground covers. Other plantings, clustered at four cardinal points outside the circular drive include dogwood, crabapple, cherry, and elm. Maple, hawthorn, plane, oak, holly, pine, yew, and periwinkle are also included.

## **SAFETY (SECURITY)**

In order to provide adequate safety and security to the National Mall and its visitors, many makeshift security measures have been implemented. Due to bombing of the Alfred P. Murrah Federal Building in 1995 and the bombings of the American embassies overseas, the parking lot to the south of the Jefferson Memorial was temporarily closed in 1998. Since September 11, 2001, the circular drive has been closed on the east side except for exiting traffic. Concrete jersey barriers were installed along the west side of the inner circle.

## **VISITOR USE AND EXPERIENCE**

The Jefferson Memorial is part of the Monumental Core of Washington, DC. The Memorial site comprises approximately 18 acres. Other memorials located in the Monumental Core include the Franklin Delano Roosevelt Memorial, the Lincoln Memorial, the Korean War Veterans Memorial, the Vietnam Veterans Memorial, the Washington Monument, and President's Park (White House). Of the approximate 20 million visitors in the Monumental Core in a given year, approximately 2 million visit the Jefferson Memorial. It ranks third in popularity among the monuments and memorials in Washington, DC. The busiest time for the park is in the spring and summer months.

Once visitors arrive at the Jefferson Memorial, they can easily acquaint themselves to the site and find information via site brochures, ranger staff, and a visitor information kiosk located underground at the Memorial.

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<sup>1</sup> National Historic Preservation Act Criteria A and C for evaluation are: A. That are associated with events that have made a significant contribution to the broad patterns of our history; and C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

Visitors to the Jefferson Memorial often visit other nearby memorials, monuments, and museums prior to or after visiting the Memorial. Visitors may explore the Mall on their own or participate in guided tours of the various memorials and monuments that make up the National Mall. Tourmobiles offer daily narrated tours to the Jefferson Memorial and other sights on the National Mall, Arlington Cemetery, and the U.S. Capitol Building. This tour includes the Jefferson Memorial, Lincoln Memorial, Washington Monument, West Potomac Park, Arlington National Cemetery, Bureau of Engraving and Printing, Holocaust Museum, U.S. Capitol, Union Station, Smithsonian Museums, and the White House and President's Park.

## **PARK OPERATIONS**

The park is open daily from 8 a.m. to midnight except on Christmas Day when the Memorial is closed. The Memorial is host to various annual events including the Memorial exercises, Easter Sunrise Services, and the Cherry Blossom Festival. Other special events that no longer occur include Fish Day that attracted several hundred children to the Tidal Basin.

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## ENVIRONMENTAL CONSEQUENCES

### INTRODUCTION

This section describes the environmental consequences associated with each alternative to the proposed action. It is organized by impact topics, which refine the issues and concerns into distinct topics for discussion analysis. These topics allow a standardized comparison between the alternatives based on their impact to the environment. The National Environmental Policy Act of 1969 requires consideration of context, intensity, and duration of impacts; indirect impacts; cumulative impacts; and measures to mitigate for such impacts. National Park Service policy also requires that “impairment” of park resources be evaluated in all environmental documents.

### METHODOLOGY FOR ASSESSING IMPACTS AND IMPAIRMENT TO PARK RESOURCES AND VALUES

Potential impacts are described in terms of:

- Type - are the effects beneficial or adverse,
- Context - are the effects site-specific, local, or even regional,
- Duration - are the effects short-term, lasting through construction or less than one year; or long-term, lasting more than one year, and
- Intensity - are the effects negligible, minor, moderate, or major.

In this Environmental Assessment, the intensity of impacts is evaluated within a local (i.e., project area) context, while the intensity of the contribution to cumulative impacts is evaluated in a regional (i.e., Monumental Core) context. Because definitions of intensity (negligible, minor, moderate, major) vary by impact topic, intensity definitions are provided separately for each impact topic analyzed in this Environmental Assessment.

In addition, the National Park Service’s *Management Policies, 2001* (2000) require analysis of potential effects to determine whether or not actions would impair park resources. The fundamental purpose of the National Park System, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. National Park Service managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adversely impacting park resources and values. However, the laws do give the National Park Service the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the National Park Service the management discretion to allow certain impacts within park, that discretion is limited by the statutory requirement that the National Park Service must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is the integrity of park resources or

values. An impact to any park resource or value may constitute an impairment, but an impact would be more likely to constitute an impairment to the extent that it has a major or severe adverse effect upon a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park; or
- Identified as a goal in the park's general management plan or other relevant NPS planning documents.

Impairment may result from National Park Service activities in managing the park, visitor activities, or activities undertaken by concessionaires, contractors, and others operating in the park. A determination on impairment is made in this section for floodplains, vegetation and land cover, traffic, historic resources including cultural landscapes, safety, aesthetic and visual resources, and park operations.

#### **CUMULATIVE EFFECTS**

The Council on Environmental Quality regulations, which implement the National Environmental Policy Act, requires assessment of cumulative impacts in the decision-making process for Federal projects. Cumulative impacts are defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-federal) or person undertakes such other actions” (40 CFR 1508.7). Cumulative impacts are considered for all alternatives and are presented at the end of each impact topic discussion analysis.

Cumulative effects were determined by combining the impacts of the proposed action with other past, present, and reasonable foreseeable future actions. Therefore, it was necessary to identify other ongoing or foreseeable future projects at the Jefferson Memorial and, if necessary, the surrounding area. Future projects that may have the potential to add to cumulative impacts include security and other improvements at the Washington Monument and the Lincoln Memorial. These projects were considered in evaluating cumulative effects for the Jefferson Memorial Security Improvement Project

#### **MITIGATION MEASURES**

Mitigation measures are described at the end of each impact topic when appropriate. Mitigation measures are designed to offset or minimize the effects of the proposed action. If no or negligible impacts are anticipated, mitigation measures may not be included for the alternative.

### **IMPACTS ON FLOODPLAINS**

#### **DEFINITION OF INTENSITY LEVELS**

The potential intensity of floodplain impacts were derived from the available information on the Jefferson Memorial and the professional judgment of the National Capital Parks - Central staff,



including available flood rate insurance maps and United States Geological Surveys maps. The thresholds of change for the intensity of impacts on floodplains are defined as follows:

- *Negligible* - floodplains would not be affected, or changes would be either non-detectable or if detected, would have effects that would be considered slight, and local;
- *Minor* - changes in floodplains would be measurable, although the changes would be small, and the effects would be localized. No mitigation measure associated with water quality or hydrology would be necessary;
- *Moderate* - changes in floodplains would be measurable and would be relatively local. Mitigation measures associated with water quality or hydrology would be necessary and the measures would likely succeed; or
- *Major* - changes in floodplains would be readily measurable, would have substantial consequences that would be measurable and widespread. Mitigation measures would be necessary and their success would not be guaranteed.

#### **ALTERNATIVE A – NO-ACTION ALTERNATIVE**

Under the No-Action Alternative, no vehicular barrier system would be implemented. The No-Action Alternative would not affect the floodplain in the project area. The existing floodplain's function would remain unchanged.

Cumulative Effects. Because the No-Action Alternative would not impact the floodplain, there would be no cumulative effects.

Conclusion. There would be no new impacts to the floodplain within the project area under the No-Action Alternative. No cumulative affects are anticipated. No impairment to park resources or values would occur.

#### **ALTERNATIVE B – VEHICLE SECURITY ALONG MEMORIAL RING**

Under Alternative B, there may be some substantial flood risks. For this alternative, the proposal to raise the existing parking area, which is located in the floodplain, to the sidewalk level to create a pedestrian plaza could affect the Potomac River floodplain. Anytime fill is placed in the floodplain, it takes away flood storage space and can cause substantial increases in the flood level for a specific site. Relocation of the visitor parking to existing parking lots along Ohio Drive would not impact the floodplain because this parking already exists.

Metal bollard placement under this alternative would be either entirely or partially located in the 100-year floodplain area, but would not obstruct water flow because the space between the bollards allows for floodwaters to pass unobstructed. They would likely have very minimal, if any, effect on the water surface level during a flood event.

Therefore, the impacts to the floodplain as a result of Alternative B would be minor to moderate, long-term, and adverse.

**Cumulative Effects.** Past actions have affected the Potomac River floodplain. Historically, major portions of the floodplain's tidal marshes have been filled. No future projects have been identified that would impact the floodplain. Alternative B would result in a negligible addition to past adverse impacts.

**Conclusion.** There would be some minor to moderate, long-term, and adverse impacts to the floodplain in the project area; primarily with the placement of fill material required for raising the existing parking area. Cumulative affects are anticipated to be negligible and adverse.

Because there would be no major, adverse impact to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Jefferson Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

**Mitigation.** Under Alternative B, the cut and fill method is often used as a way to create compensatory storage in the floodplain when filling in a portion of it. This would involve excavating a portion of land in the floodplain to create more floodwater storage space if the fill is to be placed to raise the pedestrian plaza.

#### **ALTERNATIVE C – VEHICLE SECURITY ALONG EAST BASIN DRIVE (PREFERRED ALTERNATIVE)**

The Preferred Alternative includes site changes that will be located in the floodplain. East Basin Drive is located along and largely within the 100-year floodplain. The proposed vehicular barrier system would consist of three sections of a vehicular barrier wall and bollards that would be approximately 2,000- feet long. The first wall would start approximately 120 feet from the east side of the U-shaped roadway and follow the existing pedestrian path. The two other sections of the wall would be located on the west and east sides of the Memorial with the walls placed between circular finished walls that will be approximately 185 feet long on the west side and approximately 82 feet long on the east. The majority of the wall is within the 100-year floodplain; with only an estimated 200-300 feet at the southeast corner of the site that will lie outside of the 100-year floodplain. Bollards would be placed along East Basin Drive in front of the current U-shaped roadway and would connect with the vehicle barrier wall.

The vehicle barrier wall along the existing pedestrian path would be designed to be 30-inches above grade along the East Basin Drive side, and 6-inches above grade on the Memorial side (see Figure 8). The design of the wall would create a swale feature along the East Basin Drive side of the wall, so that the ground elevation would be

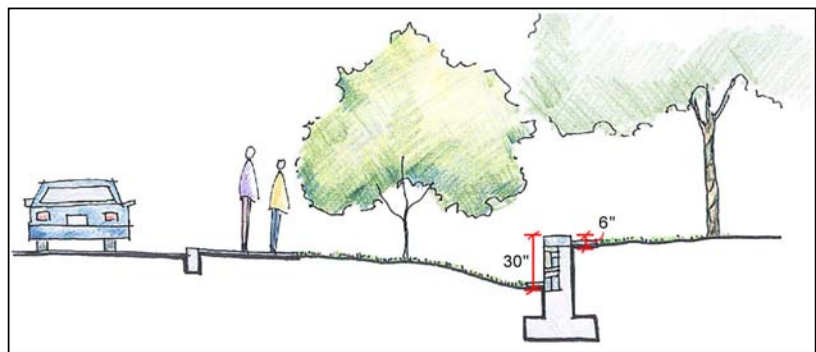


Figure 8: Schematic profile drawing of the vehicular barrier wall

approximately 30-inches lower. There would be some cut and back fill at the site during the construction of the wall.

It is anticipated that there would be a net loss of fill because of the swale placement that will actually result in a slight increase in flood storage space. Because of the cut and fill of soils and swale placement, the proposed wall will only extend 6 inches above what is the existing grade at the site.

The vehicle barrier walls that will be placed on the east and west sides of the Memorial between circular finished walls will be designed to be 30-inches above grade along the East Basin Drive side, and approximately 2-inches above the created grade on the Memorial side (See Figure 9). The design of the wall would create 28-inches of fill along the Memorial side of the wall, elevating the ground level 28-inches above grade.

Therefore, the ground elevation would be approximately 30-inches lower on the East Basin Drive side. Fill would be utilized from cut taken from the vehicle barrier wall being placed on the east side of the Memorial along the existing pedestrian path.

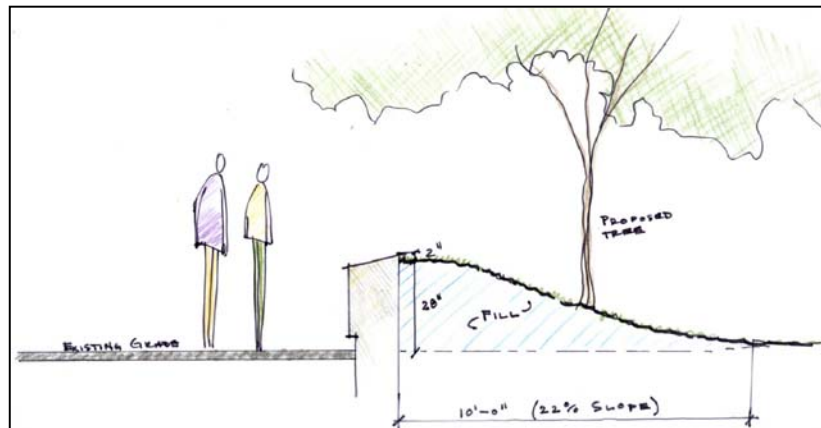


Figure 9: Schematic profile drawing of the vehicular barrier wall at the west and east sides of the Memorial.

The floodplain in this area has a water surface elevation of approximately 13 feet National Geodetic Vertical Datum 29. USGS topography information for the site indicates that the ground level is at an elevation of approximately 10 feet mean sea level.<sup>2</sup> The 100-year flood depths in the area are anticipated to be about 3 feet. The proposed walls will only extend 6-inches above the existing grade along the existing pedestrian path and approximately 30-inches above ground at the west and east sides of the Memorial. Therefore, the walls will have minimal effects on flooding during a 100-year flood event. For more frequent, less intense events, the wall could have more of an affect on the floodplain. For storms resulting in flood depths less than 6-inches, the wall would act locally as a barrier to floodwaters. However, because there are breaks in the wall at entrance nodes and where bollards are to be placed, the overall effect on the floodplain is expected to be minimal. Floodwaters will penetrate the barrier system, even for

<sup>2</sup> The United States Geological Survey (USGS) office defines mean sea level relative to National Geodetic Vertical Datum as:

“National Geodetic Vertical Datum of 1929 is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level". Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.”

Thus, mean sea level was synonymous with National Geodetic Vertical Datum of 1929 until improved technology led to other vertical datums.

flood events where floodwaters are less than 6 inches in depth, because of these openings. Therefore, there would be only moderate, long-term, adverse impacts to the floodplain as a result of the security improvements.

Under this alternative, existing parking directly in front of the Memorial would be relocated to existing parking areas along Ohio Drive. Handicap accessible parking for visitors with disabilities would be relocated to the south side of East Basin Drive directly across the street from the current tour bus access. The parking area along the south side of the Memorial would be raised to create a pedestrian plaza. These actions would not adversely impact the floodplain because this parking already exists.

Cumulative Effects. Past actions have affected the Potomac River floodplain. Historically, major portions of the floodplain's tidal marshes have been filled. No future projects have been identified that would impact the floodplain. Alternative C would result in a negligible addition to past adverse impacts.

Conclusion. Moderate, long-term, and adverse impacts to the floodplain would occur. Cumulative effects are anticipated to be negligible. A Statement of Findings pursuant to Executive Order 11988, "Floodplain Management," can be found in Appendix C.

Because there would be no major, adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Jefferson Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation. The preferred alternative is not expected to significantly alter the natural and beneficial functions of the floodplain. However, cut and fill activities which will be necessary to construct the barrier, will result in increased flood storage space at the site. Cut and fill will result in a net loss of earth as the ground is graded to slope downward into the wall on the East Basin Drive side of the barrier system. Essentially, this grading is producing a swale feature along the roadway side of the system and providing increased storage area for floodwaters. These mitigation measures would be in accordance with the National Park Service floodplain guidance and with Executive Order 11988 and the sustainability objectives of the National Park Service.

## **IMPACTS ON VEGETATION AND LAND COVER**

### **DEFINITION OF INTENSITY LEVELS**

Analyses of the potential intensity of vegetation and land cover were derived from the available information on the Jefferson Memorial and the professional judgment of the National Capital Parks - Central staff. The thresholds of change for the intensity of impacts on vegetation and land cover are defined as follows:

- *Negligible* - no vegetation would be affected or some individual plants could be affected as a result of the alternative, but there would be no effect on the vegetation essential to

maintaining the landscape design. The effects would be on a small scale, and no species of special concern would be affected;

- *Minor* - the alternative would affect some individual plants and would also affect a relatively minor portion of the vegetation essential to maintaining the landscape design. Mitigation to offset adverse effects, including special measures to avoid affecting species of special concern, could be required and would be effective;
- *Moderate* - the alternative would affect some individual plants and would also affect a sizeable segment of the vegetation essential to maintaining the landscape design over a relatively large area. Mitigation to offset adverse effects could be extensive, but would likely be successful; or
- *Major* - the alternative would have a considerable impact on vegetation essential to maintaining the landscape design and affect a relatively large area in and out of the project area. Mitigation measures to offset the adverse effects would be required, extensive, and success of the mitigation measures would not be guaranteed.

#### **ALTERNATIVE A – NO-ACTION ALTERNATIVE**

Under the No-Action Alternative, current makeshift security measures would remain. The No-Action Alternative would not affect the vegetation or land cover in the project area. The existing vegetation and landscaping would remain, and no tree removal would occur.

Cumulative Effects. Because the No-Action Alternative would not affect vegetation or landscaping, there would be no cumulative effects.

Conclusion. There would be no new impacts to the vegetation or land cover within the project area. Typical weather conditions would continue to have the greatest influence on the vegetation. No cumulative effects would occur. There would be no impairment to park resources and values.

#### **ALTERNATIVE B – VEHICLE SECURITY ALONG MEMORIAL RING**

Alternative B would affect a small amount of vegetation or land cover in the project area as a result of the construction of metal bollards around Memorial ring. Nearly all the existing vegetation and landscaping would remain; however, some herbaceous ground cover (grass), shrub, and tree removal is anticipated to occur along the outer edge of the inner ring, particularly on the eastern side of the Memorial. The impacts associated with this would be minor, long-term, and adverse because approximately 10 to 20 trees and shrubs may be removed or relocated. Some additional ground cover would be lost from this alternative with a negligible decrease in permeable soil surface and subsequent precipitation infiltration.

The creation of a new pedestrian plaza and the relocation of visitor parking would utilize existing impervious surfaces. Construction of the pedestrian plaza and relocating the visitor parking to Ohio Drive and the handicap accessible parking for visitors with disabilities on the south side of East Basin Drive directly across the street from the existing bus drop-off area will not require the removal of trees, shrubs, or other vegetation.

Cumulative Effects. Proposed security improvements at the Washington Monument may result in impacts to landscaping in the Monumental Core. Alternative B would also impact landscaping in the Monumental Core. Therefore, minor, adverse cumulative effects would occur from security improvements at the Washington Monument, Lincoln Memorial, and the Jefferson Memorial.

Conclusion. There would be some minor, long-term, and adverse impacts to the vegetation or land cover in the project area associated with the possible removal of herbaceous ground cover and relocation of shrubs and trees. Minor, adverse cumulative effects would occur from security improvements at the Washington Monument, Lincoln Memorial, and the Jefferson Memorial.

Because there would be no major, adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Jefferson Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation. Trees and shrubs would be replaced, as appropriate, to mitigate the effects of the loss of some trees, shrubs, and ground cover. These plantings would be in keeping with the Olmstead Plan and the Cultural Landscapes Inventory of 2001.

During construction, best management practices would be implemented. Soil compaction and root disturbance would be kept to a minimum for the trees. Sustainable design practices would be implemented.

#### **ALTERNATIVE C – VEHICLE SECURITY ALONG EAST BASIN DRIVE (PREFERRED ALTERNATIVE)**

Alternative C, the Preferred Alternative, would affect vegetation and land cover in the project area as a result of the construction of a barrier wall and metal bollards along East Basin Drive. Nearly all the existing vegetation and landscaping would remain; however some herbaceous ground cover (grass) removal and shrub and tree relocation is anticipated to occur along the northern side of East Basin Drive. Approximately 15 to 25 trees and shrubs may be removed or relocated because of placement of the barrier walls and metal bollards along East Basin Drive. These impacts would be minor to moderate, long-term, and adverse. Some additional ground cover would be lost from this alternative with a slight decrease in permeable soil surface and precipitation infiltration.

The creation of a new pedestrian plaza would utilize existing impervious surfaces. No new ground cover or trees and shrubs would be lost as a result of the pedestrian plaza. Slight narrowing of the U-shaped parking area to create a pedestrian walk would decrease the amount of impervious surfaces creating a minor to moderate, long-term, beneficial impact to the vegetation and land cover. The relocation of the visitor parking to Ohio Drive and handicap accessible parking for visitors with disabilities on the south side of East Basin Drive directly across the street from the existing bus drop-off area would not impact the vegetation and land cover.

Cumulative Effects. Proposed security improvements at the Washington Monument may result in impacts to landscaping in the Monumental Core. Alternative C would also impact landscaping in the Monumental Core. Therefore, minor, adverse cumulative effects would occur from security improvements at the Washington Monument, Lincoln Memorial, and the Jefferson Memorial.

Conclusion. There would be some minor to moderate, long-term, and adverse impacts to vegetation and land cover within the project area associated with removal of herbaceous ground cover and relocation of shrubs and trees due to the vehicular barrier wall and metal bollards along East Basin Drive. Minor to moderate, long-term, beneficial impacts would occur as a result of narrowing the U-shaped parking area and creating a pedestrian plaza. Minor, adverse cumulative effects would occur from security improvements at the Washington Monument, Lincoln Memorial, and the Jefferson Memorial.

Because there would be no major, adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Jefferson Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation. Trees and shrubs would be replaced, as appropriate, to mitigate the effects of the loss of some trees, shrubs, and ground cover. These plantings would be in keeping with the Olmstead Plan and the Cultural Landscapes Inventory of 2001.

During construction, best management practices would be implemented. Soil compaction and root disturbance would be kept to a minimum for the trees. Sustainable design practices would be implemented.

## **IMPACTS ON TRANSPORTATION (TRAFFIC)**

### **DEFINITION OF INTENSITY LEVELS**

Analyses of the potential intensity of transportation and traffic were derived from the available information on the Jefferson Memorial and the professional judgment of the National Capital Parks - Central staff. The thresholds of change for the intensity of impacts on transportation and traffic are defined as follows:

- *Negligible* - traffic would not be affected, or the effects would be at the lower levels of detection and would not have an appreciable effect on traffic flow. There would be no changes in the level of service;
- *Minor* - the effect would be detectable, but would be of a magnitude that would not have an appreciable effect on traffic flow. There would be no noticeable changes in the traffic congestion or level of service. If mitigation was needed to offset adverse effects, it would be simple and likely successful;

- *Moderate* - the effects would be readily apparent, and would result in a substantial change in traffic flow patterns, congestion, and/or level of service, in a manner noticeable to the public. Mitigation would be necessary to offset adverse effects and would likely be successful; or
- *Major* - the effects would be readily apparent and would result in a substantial change in traffic flow in a manner noticeable to the public and be markedly different from the present traffic flow patterns and levels of service. Mitigation measures to offset adverse effects would be needed, would be extensive and their success could not be guaranteed.

#### **ALTERNATIVE A – NO-ACTION ALTERNATIVE**

Under the No-Action Alternative a permanent vehicular barrier system would not be constructed at the Jefferson Memorial. Existing traffic patterns would continue. Parking would not change along the existing approach roadway and along Ohio Drive. Handicap accessible parking would not be relocated. There would be no new impacts to traffic resources under the No-Action Alternative.

Cumulative Effects. Proposed transportation improvements at the Lincoln Memorial would affect traffic flow in the Monumental Core. There would be a loss of parking spaces as a result of proposed security improvements at the Washington Monument. However, the No-Action Alternative would not add to these impacts. Therefore, no cumulative effects would occur under this alternative.

Conclusion. Under the No-Action Alternative no new impacts to traffic would occur. There would be no cumulative effects as a result of the No-Action Alternative. No impairment to park resources and values would occur.

#### **ALTERNATIVE B – VEHICLE SECURITY ALONG MEMORIAL RING**

Under Alternative B, metal bollards would be installed along the memorial ring surrounding the Jefferson Memorial. Along the south side of the Memorial, the parking area would be raised to sidewalk level to create a pedestrian plaza. Visitor parking would be relocated to existing parking lots along Ohio Drive and handicap accessible parking would be relocated to the side of East Basin Drive, directly across from the existing bus drop-off area. Existing traffic patterns would continue. Impacts to traffic would be minor, long-term, and beneficial because cars would no longer be entering and exiting the Jefferson Memorial at East Basin Drive. Impacts to parking would be negligible, long-term, and adverse due to the relocation of visitor parking to Ohio Drive. Visitors would have to walk approximately 300 to 400 feet to reach the Jefferson Memorial.

Cumulative Effects. Proposed transportation improvements at the Lincoln Memorial would affect traffic flow in the Monumental Core. There would be a loss of parking spaces as a result of proposed security improvements at the Washington Monument. Alternative B would not affect traffic flow; however, there would be a loss of parking spaces under the alternative. Therefore, there would be a minor, adverse cumulative effect on parking under this alternative.



Conclusion. Impacts to existing traffic patterns under Alternative B would be minor, long-term, and beneficial. Impacts to parking would be negligible, long-term, and adverse. There would be a minor, adverse cumulative effect on parking under this alternative.

Because there would be no major, adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Jefferson Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation Measures. Directional signage should be increased to direct visitors where to park along Ohio Drive and where to walk to reach the Jefferson Memorial.

**ALTERNATIVE C – VEHICLE SECURITY ALONG EAST BASIN DRIVE (PREFERRED ALTERNATIVE)**

Under the Preferred Alternative, a vehicular barrier system would be constructed along East Basin Drive. Existing traffic patterns would continue. Existing parking directly in front of the Memorial would be relocated to existing parking areas along Ohio Drive. Handicap accessible parking for visitors with disabilities would be relocated to the south side of East Basin Drive, directly across the street from the current tour bus access along East Basin Drive. The existing grass rectangle would be lengthened and the existing approach roadway would be slightly narrowed to allow pedestrian access and park service vehicles to enter the Jefferson Memorial.

Impacts to traffic would be minor, long-term, and beneficial because cars would no longer be entering and exiting the Jefferson Memorial at East Basin Drive. Traffic congestion and flow would be beneficially impacted by moving the parking area. Negligible, long-term, and adverse impacts to visitors would occur from having to use the Ohio Drive parking lots, since they are further away from the Jefferson Memorial. Visitors would have to walk approximately 300 to 400 feet to reach the Jefferson Memorial.

Cumulative Effects. Proposed transportation improvements at the Lincoln Memorial would affect traffic flow in the Monumental Core. There would be a loss of parking spaces as a result of proposed security improvements at the Washington Monument. Alternative B would not affect traffic flow; however, there would be a loss of parking spaces under the alternative. Therefore, there would be a minor, adverse cumulative effect on parking under this alternative.

Conclusion. Impacts to traffic would be minor, long-term, and beneficial. Impacts to parking would be negligible, long-term, and adverse. Minor, adverse cumulative effects are expected to occur under Alternative C.

Because there would be no major, adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Jefferson Memorial (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation Measures. Directional signage should be increased to direct visitors where to park along Ohio Drive and where to walk to reach the Jefferson Memorial.

## **IMPACTS ON AESTHETICS AND VISUAL RESOURCES**

### **DEFINITION OF INTENSITY LEVELS**

Analyses of the potential intensity of aesthetics and visual resources were derived from the available information on the Jefferson Memorial and the professional judgment of the National Capital Parks - Central staff. The thresholds of change for the intensity of impacts on aesthetics and visual resources are defined as follows:

- *Negligible* - when the impact is localized and not measurable or at the lowest level of detection;
- *Minor* - when the impact is localized and slight, but detectable;
- *Moderate* - when the impact is readily apparent and appreciable; or
- *Major* - when the impact is severely adverse and highly noticeable.

### **ALTERNATIVE A – NO-ACTION ALTERNATIVE**

Under the No-Action Alternative, current makeshift security measures impact the aesthetics and visual resources of the Jefferson Memorial; however, no further impacts are expected. The vista to the Jefferson Memorial would continue to be compromised by the existing temporary security measures. The impacts would be moderate, long-term, and adverse.

Cumulative Effects. Temporary security measures put in place at the Washington Monument and the various memorials in the Monumental Core have impacted aesthetics and visual resources in the past. The No-Action Alternative would continue to impact the vistas of the Jefferson Memorial. Proposed security improvements at the Washington Monument and the Jefferson Memorial may impact the aesthetics and visual resources of the Monumental Core. The No-Action Alternative would contribute to the cumulative impact of these past and future actions.

Conclusion. The No-Action Alternative would have no further affect aesthetics or visual resources in or surrounding the project area. Impacts would continue to be moderate, long-term, and adverse. Cumulative effects would not occur. There would be no impairment to park resources or values.

### **ALTERNATIVE B – VEHICLE SECURITY ALONG MEMORIAL RING**

Under Alternative B, aesthetics and visual resources may be impacted. The use of metal bollards along the inner ring would create moderate, long-term, and adverse impacts to the aesthetics and visual resources of the Jefferson Memorial. The existing designed historic landscape would help maintain the vistas of the Jefferson Memorial.

Associated features of the Memorial, such as bus circulation, would result in a negligible, long-term, and adverse impact to other vistas such as the Washington Monument. Site improvements would be carried out in accordance with the *Secretary of Interior's Standards for the Treatment of Historic Properties* to ensure development is compatible with the historic setting and harmonizes with historic structures and landscapes.

The creation of a pedestrian plaza, relocation of visitor parking to Ohio Drive and the relocation of handicap accessible parking for visitors with disabilities on the south side of East Basin Drive directly across the street from the existing bus drop-off area would not affect the aesthetics and visual resources of the Jefferson Memorial.

Cumulative Effects. Temporary security measures put in place at the Washington Monument and the various memorials in the Monumental Core have negatively impacted aesthetics and visual resources in the past. Proposed security improvements at the Washington Monument and the Lincoln Memorial may impact the aesthetics and visual resources of the Monumental Core. When added to past and reasonably foreseeable future actions, Alternative B would have minor, adverse cumulative effects on aesthetics and visual resources.

Conclusion. The vehicular barrier system would impact the historic character of the designed historic landscape. These impacts would be moderate, long-term, and adverse. Negligible, long-term, adverse impacts from associated features of the Memorial would occur. The pedestrian plaza and relocation of visitor and handicap accessible parking would not impact the aesthetics and visual resources of the Jefferson Memorial. Alternative B, along with past and future actions, would have a minor, adverse cumulative effect on aesthetics and visual resources.

Because there would be no major, adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Jefferson Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation Measures. The National Park Service would enter into a Memorandum of Agreement with the DC Historic Preservation Office and the Advisory Council on Historic Preservation to provide consultation in order to avoid effects associated with the views and vistas associated with Jefferson Memorial. Site improvements would be carried out in accordance with the *Secretary of Interior's Standards for the Treatment of Historic Properties* to ensure development is compatible with the historic setting and harmonizes with historic structures and landscapes.

#### **ALTERNATIVE C – VEHICLE SECURITY ALONG EAST BASIN DRIVE (PREFERRED ALTERNATIVE)**

Under the Preferred Alternative, a vehicle barrier system would be constructed along East Basin Drive. The vehicular barrier system would consist of vehicular barrier wall and metal bollards. The impacts associated with the construction of this vehicular barrier system would be minor, long-term, and adverse because the vehicular barrier system would be visible from various views and vistas. However, the vehicle security system would be constructed so as to be unobtrusive when viewed in context with the vistas and views of the Memorial. The existing landscape

would be left as intact as possible so as to not disrupt or impact the original landscape as designed by Olmstead and would provide a visual buffer, thereby reducing the impacts to the aesthetics and visual resources of the Jefferson Memorial.

Narrowing of the U-shaped parking area to create a pedestrian walk, creating a pedestrian plaza, and relocating visitor parking and the handicap accessible parking for visitors with disabilities on the south side of East Basin Drive directly across the street from the existing bus drop-off area would not affect the aesthetics and visual resources of the Jefferson Memorial.

Cumulative Effects. Cumulative effects under Alternative C would be the same as those described under Alternative B.

Conclusion. The vehicular barrier system would impact the historic character of the designed historic landscape, but the impacts would be minor, long-term, and adverse. No impacts would occur as a result of narrowing the U-shaped parking area to create a pedestrian walk, creating a pedestrian plaza, and relocating the visitor parking and handicap accessible parking. Alternative C, along with past and future actions, would have a minor, adverse cumulative effect on aesthetics and visual resources.

Because there would be no major, adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Jefferson Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation Measures. The National Park Service will enter into a Memorandum of Agreement with the DC Historic Preservation Office and the Advisory Council on Historic Preservation to provide consultation in order to avoid effects associated with the views and vistas. Site improvements would be carried out in accordance with the *Secretary of Interior's Standards for the Treatment of Historic Properties* to ensure development is compatible with the historic setting and harmonizes with historic structures and landscapes.

In addition, existing landscape would be left as intact as possible to reduce the impact on the original landscape as designed by Olmstead. This effort would produce a visual buffer that would make the vehicular barrier system unobtrusive when viewed in context of the cultural landscape and historic resources.

## **IMPACTS TO CULTURAL RESOURCES AND SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT**

Section 101(b)(4) of the National Environmental Policy Act of 1969 (P.L. 91-190), as amended, requires the Federal government to coordinate and plan its actions to, among other goals, "preserve important historic, cultural and natural aspects of our national heritage...." The Council of Environmental Quality implementing regulations require that Federal impacts to historic and cultural resources be included as part of the National Environmental Policy Act process.

In this environmental assessment, impacts to cultural resources are described in terms of type, context, duration, and intensity, as described above, which is consistent with the regulations of the Council of Environmental Quality that implement the National Environmental Policy Act. These impact analyses are intended, however, to comply with the requirements of both the National Environmental Policy Act and Section 106 of the National Historic Preservation Act. In accordance with the Advisory Council on Historic Preservation's regulations implementing Section 106 of the National Historic Preservation Act (36 CFR Part 800, Protection of Historic Properties), impacts to archeological and cultural resources were identified and evaluated by (1) determining the area of potential effects; (2) identifying cultural resources present in the area of potential effects that were either listed in or eligible to be listed in the National Register of Historic Places; (3) applying the criteria of adverse effect to affected cultural resources either listed in or eligible to be listed in the National Register; and (4) considering ways to avoid, minimize, or mitigate adverse effects.

Under the Advisory Council's regulations, a determination of either adverse effect or no adverse effect must also be made for affected National Register eligible cultural resources. An adverse effect occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource that qualifies it for inclusion in the National Register (e.g., diminishing the integrity of the resource's location, design, setting, materials, workmanship, feeling, or association). Adverse effects also include reasonably foreseeable effects caused by the Preferred Alternative that would occur later in time, be farther removed in distance, or be cumulative (36 CFR Part 800.5, Assessment of Adverse Effects). A determination of no adverse effect means there is an effect, but the effect would not diminish in any way the characteristics of the cultural resource that qualify it for inclusion in the National Register.

## **HISTORIC RESOURCES AND CULTURAL LANDSCAPES**

### **DEFINITION OF INTENSITY LEVELS**

**Historic Resources** - In order for a structure or building to be listed in the National Register of Historic Places, it must meet one or more of the following criteria of significance: A) associated with events that have made a significant contribution to the broad patterns of our history; B) associated with the lives of persons significant in our past; C) embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic value, or represent a significant and distinguishable entity whose components may lack individual distinction; D) have yielded, or may be likely to yield, information important in prehistory or history. In addition, the structure or building must possess integrity of location, design, setting, materials, workmanship, feeling, association (*National Register Bulletin, How to Apply the National Register Criteria for Evaluation*). For purposes of analyzing potential impacts to historic structures/buildings, the thresholds of change for the intensity of an impact are defined as follows:

- *Negligible* - Impact(s) is at the lowest levels of detection - barely perceptible and not measurable. For purposes of Section 106, the determination of effect would be *no adverse effect*.

- *Minor* - Adverse impact - impact would not affect the character defining features of a National Register of Historic Places eligible or listed structure or building. For purposes of Section 106, the determination of effect would be *no adverse effect*. Beneficial impact - stabilization/ preservation of character defining features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. For purposes of Section 106, the determination of effect would be *no adverse effect*.
- *Moderate* - Adverse impact - impact would alter a character defining feature(s) of the structure or building, but would not diminish the integrity of the resource to the extent that its National Register eligibility is jeopardized. For purposes of Section 106, the determination of effect would be *no adverse effect*. Beneficial impact – rehabilitation of a structure or building in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. For purposes of Section 106, the determination of effect would be *no adverse effect*.
- *Major* - Adverse impact - impact would alter a character defining feature(s) of the structure or building, diminishing the integrity of the resource to the extent that it is no longer eligible to be listed in the National Register. For purposes of Section 106, the determination of effect would be *adverse effect*. Beneficial impact – restoration of a structure or building in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. For purposes of Section 106, the determination of effect would be *no adverse effect*.

**Cultural Landscapes** - In order for a cultural landscape to be listed in the National Register, it must meet one or more of the following criteria of significance: A) associated with events that have made a significant contribution to the broad patterns of our history; B) associated with the lives of persons significant in our past; C) embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic value, or represent a significant and distinguishable entity whose components may lack individual distinction; D) have yielded, or may be likely to yield, information important in prehistory or history (*National Register Bulletin, How to Apply the National Register Criteria for Evaluation*). The landscape must also have integrity of those patterns and features - spatial organization and land forms; topography; vegetation; circulation networks; water features; and structures/buildings, site furnishings or objects - necessary to convey its significance (*Secretary of the Interior's Standards for the Treatment of Historic Properties With Guidelines for the Treatment of Cultural Landscapes*). For purposes of analyzing potential impacts to cultural landscapes, the thresholds of change for the intensity of an impact are defined as follows:

- *Negligible* - Impact(s) is at the lowest levels of detection - barely perceptible and not measurable. For purposes of Section 106, the determination of effect would be *no adverse effect*.
- *Minor* - Adverse impact - impact(s) would not affect the character defining patterns and features of a National Register of Historic Places eligible or listed cultural landscape. For purposes of Section 106, the determination of effect would be *no adverse effect*. Beneficial impact – preservation of character defining patterns and features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties With*

*Guidelines for the Treatment of Cultural Landscapes.* For purposes of Section 106, the determination of effect would be *no adverse effect*.

- *Moderate* -Adverse impact - impact(s) would alter a character defining pattern(s) or feature(s) of the cultural landscape, but would not diminish the integrity of the landscape to the extent that its National Register eligibility is jeopardized. For purposes of Section 106, the determination of effect would be *no adverse effect*. Beneficial impact – rehabilitation of a landscape or its patterns and features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties With Guidelines for the Treatment of Cultural Landscapes*. For purposes of Section 106, the determination of effect would be *no adverse effect*.
- *Major* - Adverse impact - impact(s) would alter a character defining pattern(s) or feature(s) of the cultural landscape, diminishing the integrity of the landscape to the extent that it is no longer eligible to be listed in the National Register. For purposes of Section 106, the determination of effect would be *adverse effect*. Beneficial impact – restoration of a landscape or its patterns and features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties With Guidelines for the Treatment of Cultural Landscapes*. For purposes of Section 106, the determination of effect would be *no adverse effect*.

#### **ALTERNATIVE A – NO-ACTION ALTERNATIVE**

**Historic Resources** - Under the No-Action Alternative, the proposed vehicular barrier system would not be constructed. The vistas of the Jefferson Memorial would continue to be impacted by the use of concrete jersey barriers. No impact to the Jefferson Memorial's status as a contributing element to the National Register designation of the East and West Potomac Parks would occur. Implementation of the No-Action Alternative would have a moderate, long-term, adverse impact to historic resources. The impact would not diminish the integrity of the resources to the extent that the site's National Register eligibility is jeopardized.

**Cultural Landscapes** – The No-Action Alternative would not adversely impact the designed historic landscape of the Jefferson Memorial as designed by Olmstead. The vistas of the Jefferson Memorial would continue to be impacted by the use of concrete jersey barriers. The No-Action Alternative would have a moderate, long-term, adverse impact to cultural landscapes. The impact does not diminish the integrity of the resources to the extent that the site's National Register eligibility is jeopardized.

Cumulative Effects. Temporary security measures put in place at the Washington Monument and the various memorials in the Monumental Core have negatively impacted historic resources and cultural landscapes in the past. The No-Action Alternative would continue to impact the vistas of the Jefferson Memorial. Proposed security improvements at the Washington and the Lincoln Memorial may impact the historic resources of the Monumental Core by altering the historic setting and cultural landscape of the monuments. The No-Action Alternative would continue to have an adverse impact to historic resources and, when added to past and reasonably foreseeable future actions, would have a moderate cumulative impact on historic resources and cultural landscapes.

Section 106 Summary. In accordance with Section 106 of the National Historic Preservation Act, implementation of the No-Action Alternative would have *no adverse effect* on historic properties. The historic resources and the cultural landscape would continue to be impacted by the use of concrete jersey barriers, but this would not diminish the integrity of the resource to the extent that the site's National Register eligibility is jeopardized.

Conclusion. The No-Action Alternative would result in moderate, long-term, adverse impacts to historic resources and cultural landscapes, but no further adverse impacts to historic resources or cultural landscapes of the Jefferson Memorial would occur. There would be no cumulative effects. No impairment to park resources or values would occur under the No-Action Alternative.

### **ALTERNATIVE B – VEHICLE SECURITY ALONG MEMORIAL RING**

Under Alternative B, metal bollards would be installed around the inner ring at the Jefferson Memorial and a pedestrian plaza would be created. The existing visitor parking would be relocated to existing parking along Ohio Drive, and the handicap accessible parking for visitors with disabilities on the south side of East Basin Drive directly across the street from the existing bus drop-off area.

**Historic Resources** – The Jefferson Memorial is a contributing element to the National Register designation of the East and West Potomac Parks. The installation of bollards introduces a new element into the historic landscape. The bollards would adversely impact the Jefferson Memorial as a contributing element of the National Register designation because the bollards would detract from the historic value of the Jefferson Memorial as a contributing element of the East and West Potomac Parks. The impact would potentially be major, long-term, and adverse. The National Park Service has entered into consultation with the DC Historic Preservation Office and the Advisory Council on Historic Preservation to develop mitigation measures that would reduce the level of impact to moderate or minor.

**Cultural Landscapes** – The Jefferson Memorial grounds are a contributing element to the designed historic landscape created by Olmstead. The impacts associated with construction of bollards surrounding the Jefferson Memorial would be major, long-term, and adverse because the vehicular barrier system would detract from the value of the Jefferson Memorial as a designed historic landscape; however, the impact would be mitigated through compatible design and materials.

Cumulative Effects. Temporary security measures put in place at the Washington Monument and the various memorials in the Monumental Core have negatively impacted historic resources in the past. Proposed security improvements at the Washington Monument and the Lincoln Memorial may impact the historic resources of the Monumental Core by altering the historic setting and landscape of the monuments. The security improvements proposed under Alternative B would also have adverse impacts to historic resources and the cultural landscape. When added to past and reasonably foreseeable future actions, the Alternative B would have a moderate, adverse cumulative impact on historic resources.



Section 106 Summary. In accordance with Section 106 of the National Historic Preservation Act, implementation of Alternative B may result in a determination of *adverse affect* on historic properties. However, through a Memorandum of Agreement with the DC Historic Preservation Office and the Advisory Council on Historic Preservation, the National Park Service would mitigate to avoid or reduce the adverse effects to historic properties. Therefore, impacts associated with Alternative B would impact historic properties, but, with mitigation, they would not diminish the integrity of the resource to the extent that the sites National Register eligibility is jeopardized.

Conclusion. The impacts associated with construction of the vehicular barrier system would be major and adverse; however, these impacts would be mitigated to a moderate or minor level through the use of context sensitive design and materials. There would be a moderate, adverse cumulative effect to historic resources and cultural landscapes under this alternative.

Because there would be no major, adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Jefferson Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation Measures. The construction of a vehicular barrier system would be mitigated through compatible new design and materials. As the design, development, and consultation continue, other potential adverse effects may be identified. The National Park Service would enter into a Memorandum of Agreement with the DC Historic Preservation Office and the Advisory Council on Historic Preservation to provide consultation in order to avoid or reduce adverse effects on this historic resource. Site improvements would be carried out in accordance with the *Secretary of Interior's Standards for the Treatment of Historic Properties* to ensure development is compatible with the historic setting and harmonizes with historic structures and landscapes.

#### **ALTERNATIVE C – VEHICLE SECURITY ALONG EAST BASIN DRIVE (PREFERRED ALTERNATIVE)**

Under the Preferred Alternative, a vehicle barrier system would be constructed along East Basin Drive. The vehicular barrier system would consist of retaining wall and metal bollards. In addition the U-shaped parking area would be slightly narrowed to create a pedestrian walk; a pedestrian plaza would be created. The existing visitor parking would be relocated to existing parking along Ohio Drive and the handicap accessible parking for visitors with disabilities on the south side of East Basin Drive directly across the street from the existing bus drop-off area.

**Historic Resources** – The Jefferson Memorial is a contributing element to the National Register designation of the East and West Potomac Parks. The impacts associated with the construction of this vehicular barrier system would be major, long-term, and adverse because the vehicular barrier system would detract from the historic value of the Jefferson Memorial as a contributing element of the East and West Potomac Parks to the National Register. The National Park Service has entered into consultation with the DC Historic Preservation Office and the Advisory Council on Historic Preservation to develop mitigation measures that would reduce the level of impact to moderate or minor.

**Cultural Landscapes** – The Jefferson Memorial grounds are a contributing element to the designed historic landscape created by Olmstead. Impacts to the cultural landscape of the Memorial would be major, long-term, and adverse, because the vehicular barrier system would detract from the value of the Jefferson Memorial as a designed historic landscape. However, with mitigation, the vehicle barrier system would be unobtrusive when viewed in context with the cultural landscape. The existing landscape would be left as intact as possible so as to not disrupt or impact the original landscape as designed by Olmstead and would provide a visual buffer.

Narrowing of the U-shaped parking area to create a pedestrian walk, creation of pedestrian plaza, and relocation of visitor and handicap accessible parking would not impact the historic resources and cultural landscapes of the Jefferson Memorial.

Cumulative Effects. Cumulative effects under Alternative C would be the same as those described under Alternative B.

Section 106 Summary. In accordance with Section 106 of the National Historic Preservation Act, implementation of the Preferred Alternative may result in a determination of *adverse affect* on historic properties. However, through a Memorandum of Agreement with the DC Historic Preservation Office and the Advisory Council on Historic Preservation, the National Park Service would mitigate to avoid or reduce the adverse effects to historic properties. Therefore, impacts associated with Alternative C would impact historic properties, but, with mitigation, they would not diminish the integrity of the resource to the extent that the sites National Register eligibility is jeopardized.

Conclusion. The impacts associated with construction of the Preferred Alternative would be major, long-term, and adverse however, these impacts would be mitigated to a moderate or minor level through the use of context sensitive design and materials. The existing landscape would help to provide a visual buffer for the vehicular security barrier and it would be constructed so as to be unobtrusive when viewed in context of the cultural landscape and historic resources. No impacts are anticipated from the slight narrowing of the U-shaped parking area, creation of pedestrian plaza, and relocation of visitor parking to Ohio Drive. Moderate, adverse cumulative effects associated with this alternative are expected to occur.

Because there would be no major, adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Jefferson Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation Measures. The construction of a vehicular barrier system would be mitigated through compatible new design and materials. The vehicular barrier system would be constructed so as to be unobtrusive when viewed in context of the cultural landscape and historic resources. As the design, development, and consultation continue, other potential adverse effects may be identified. A Memorandum of Agreement with the DC Historic Preservation Office and the Advisory Council on Historic Preservation would be drafted to mitigate to avoid or reduce adverse effects on this historic resource. Site improvements would be carried out in accordance

with the *Secretary of Interior's Standards for the Treatment of Historic Properties* to ensure development is compatible with the historic setting and harmonizes with historic structures and landscapes.

The vehicular barrier system would be constructed so as to be unobtrusive when viewed in context with the Memorial. The existing landscape would be left as intact as possible so as to not disrupt or impact the original landscape as designed by Olmstead and would provide a visual buffer, thereby reducing the impacts to the cultural landscape of the Jefferson Memorial.

## **IMPACTS ON SAFETY (SECURITY)**

### **DEFINITION OF INTENSITY LEVELS**

Analyses of the potential intensity of safety and security resources and security were derived from the available information on the Jefferson Memorial and the professional judgment of the National Capital Parks - Central staff. The thresholds of change for the intensity of impacts on safety and security are defined as follows:

- *Negligible* - public health and safety would not be affected, or the effects would be at low levels of detection and would not have an appreciable effect on the public health or safety;
- *Minor* - the effect would be detectable and would likely be short-term, but would not have an appreciable effect on public health and safety. If mitigation were needed, it would be relatively simple and would likely be successful;
- *Moderate* - the effects would be readily apparent and long-term, and would result in substantial, noticeable effects to public health and safety on a local scale. Mitigation measures would probably be necessary and would likely be successful; or
- *Major* - the effects would be readily apparent and long-term, and would result in substantial, noticeable effects to public health and safety on a regional scale. Extensive mitigation measures would be needed, and their success would not be guaranteed.

### **ALTERNATIVE A – NO-ACTION ALTERNATIVE**

Under the No-Action Alternative, a vehicular barrier system would not be constructed at the Jefferson Memorial. The existing concrete jersey does not provide adequate protection to the Jefferson Memorial and its visitors from the possible threat of vehicular bombs. Therefore, impacts to safety and security of the Memorial and its visitors would be moderate, long-term, and adverse under the No-Action Alternative.

Cumulative Effects. Proposed security improvements at the Washington Monument and Lincoln Memorial would improve visitor safety. The No-Action Alternative would not contribute to cumulative impacts on safety and security.

Conclusions. Impacts to the safety and security of the Jefferson Memorial under the No-Action Alternative would be moderate, long-term, and adverse. The No-Action Alternative would not

contribute to cumulative effects on safety and security. No impairment to park resources and values is anticipated to occur.

#### **ALTERNATIVE B – VEHICLE SECURITY ALONG MEMORIAL RING**

Under Alternative B, metal bollards would be installed along the Memorial ring surrounding the Jefferson Memorial. Along the south side of the Memorial, the parking area would be raised to sidewalk level to create a pedestrian plaza. Visitor parking would be relocated to existing parking lots along Ohio Drive and handicap accessible parking for visitors with disabilities on the south side of East Basin Drive directly across the street from the existing bus drop-off area. Impacts associated with installation of metal bollards would be minor, long-term, and beneficial due to improved security measures at the Jefferson Memorial providing greater protection to the Memorial and its visitors. Placement of handicap accessible parking for visitors with disabilities on the south side of East Basin Drive would create moderate, long-term, adverse impacts because visitors with disabilities would have to cross East Basin Drive, which is a heavily traveled road. The road is posted at 25 miles per hour. No impacts will occur as a result of relocating visitor parking and the creation of a pedestrian plaza.

Cumulative Effects. Proposed security improvements at the Washington Monument and Jefferson Memorial would improve visitor safety. Alternative B would also improve visitor safety. Therefore, reasonably foreseeable future actions along with Alternative B would have a moderate, beneficial cumulative effect on safety and security in the Monumental Core.

Conclusions. Impacts to the safety and security of the Jefferson Memorial would be minor, long-term, and beneficial. However, impacts to visitors with disabilities would be moderate, long-term, and adverse. Reasonably foreseeable future actions along with Alternative B would have a moderate, beneficial cumulative effect on safety and security in the Monumental Core.

Because there would be no major, adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Jefferson Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation Measures. Mitigation measures would include constructing rumble strips along East Basin Drive to slow vehicles down to the speed limit of 25 miles per hour and a pedestrian crosswalk between the handicap accessible parking and the tour bus drop-off. Signs to alert motorists of pedestrian/handicap crossing would be placed along East Basin Drive.

#### **ALTERNATIVE C – VEHICLE SECURITY ALONG EAST BASIN DRIVE (PREFERRED ALTERNATIVE)**

Under the Preferred Alternative, a vehicular barrier system would be constructed along East Basin Drive. Existing parking directly in front of the Memorial would be relocated to existing parking areas along Ohio Drive. Handicap accessible parking for visitors with disabilities would be created on the south side of East Basin Drive directly across the street from the existing bus drop-off area. The parking area along the south side of the Memorial would be raised to create a pedestrian plaza. Moderate, long-term, and beneficial impacts would occur as a result of the

construction of the vehicular barrier wall and metal bollards because the most protection to the Memorial and its visitors would occur. Placement of handicap accessible parking for visitors with disabilities on the south side of East Basin Drive would create moderate, long-term, adverse impacts because visitors with disabilities would have to cross East Basin Drive, which is a heavily traveled road. The posted speed limit is 25 miles per hour. No impacts to security and safety will occur as a result of relocating visitor parking, the creation of a pedestrian plaza, and the narrowing of the U-shaped parking area to create pedestrian walks.

Cumulative Effects. Cumulative impacts under Alternative C would be the same as those described under Alternative B.

Conclusion. Alternative C would have moderate, long-term, and beneficial impacts to safety and security. However, impacts to visitors with disabilities would be moderate, long-term, and adverse. Reasonably foreseeable future actions along with Alternative C would have a moderate, beneficial cumulative effect on safety and security in the Monumental Core.

Because there would be no major, adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Jefferson Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation Measures. Mitigation measures would be the same as for Alternative B.

## **IMPACTS ON VISITOR USE AND EXPERIENCE**

### **DEFINITION OF INTENSITY LEVELS**

Analyses of the potential intensity of visitor use and experience were derived from the available information on the Jefferson Memorial and the professional judgment of the National Capital Parks - Central staff. The thresholds of change for the intensity of impacts on visitor use and experience are defined as follows:

- *Negligible* - visitors would not be affected or changes in visitor use and/or experience would be below or at the level of detection. Any effects would be short-term. The visitor would not likely be aware of the effects associated with the alternative;
- *Minor* - changes in visitor use and/or experience would be detectable, although the changes would be slight and likely short-term. The visitor would be aware of the effects associated with the alternative, but the effects would be slight;
- *Moderate* - changes in visitor use and/or experience would be readily apparent and likely long-term. The visitor would be aware of the effects associated with the alternative and would likely be able to express an opinion about the changes; or

- *Major* - changes in visitor use and/or experience would be readily apparent and have important long-term consequences. The visitor would be aware of the effects associated with the alternative and would likely express a strong opinion about the changes.

#### **ALTERNATIVE A – NO-ACTION ALTERNATIVE**

Under the No-Action Alternative, a vehicular barrier system would not be constructed at the Jefferson Memorial. The current makeshift security measures would remain causing moderate, short-term, adverse impacts to visitor use and experience.

Cumulative Effects. Security improvements at the Washington Monument and Lincoln Memorial would have beneficial impacts on visitor use and experience by providing better security for visitors. The No-Action Alternative would not contribute to these beneficial impacts. Therefore, there would be no cumulative effects on visitor use and experience.

Conclusion. Under the No-Action Alternative impacts would be moderate, short-term and adverse. No cumulative effects on visitor use and experience would occur. No impairment to park resources and values would occur.

#### **ALTERNATIVE B – VEHICLE SECURITY ALONG MEMORIAL RING**

Under Alternative B, metal bollards would be installed along the Memorial ring surrounding the Jefferson Memorial. Along the south side of the Memorial, the parking area would be raised to sidewalk level to create a pedestrian plaza. Visitor parking would be relocated to existing parking lots along Ohio Drive and handicap accessible parking for visitors with disabilities on the south side of East Basin Drive directly across the street from the existing bus drop-off area. During construction, there would be minor, short-term, and adverse impacts to visitor use and experience as a result of temporary road closures or detours to allow construction to take place. Overall impacts to visitor use and experience would, however, create minor, long-term, and beneficial impacts through better parking facilities and the creation of a pedestrian plaza. However, impacts from the relocation of handicap accessible parking would create moderate, long-term, adverse impacts to visitor use and experience because visitors with disabilities would have to cross East Basin Drive, which is a heavily traveled road. The posted speed limit is 25 miles per hour.

Cumulative Impacts. Planned security improvements at the Washington Monument and Lincoln Memorial would have beneficial impacts on visitor use and experience by providing better security for visitors to the Monumental Core. The improvements proposed under Alternative B would also have beneficial impacts, leading to a moderate, beneficial cumulative effect on visitor use and experience.

Conclusion. Alternative B would have minor, long-term beneficial impacts to visitor use and experience. Minor, short-term, adverse impacts would occur as a result of construction. Moderate, beneficial effects on visitor use and experience would occur under this alternative.

Because there would be no major, adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Jefferson Memorial; (2) key to the natural or cultural integrity of the park; or

(3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation Measures. To mitigate impacts to visitor use and experience during the construction, restrictions on the hours and duration of the construction deliveries and actual construction should be implemented. A public notice of the construction schedule should be provided. Rumble strips along East Basin Drive to slow vehicles down to the speed limit of 25 miles per hour and a pedestrian crosswalk between the handicap accessible parking and the tour bus drop-off would be constructed to mitigate impacts to visitors with disabilities utilizing the handicap accessible parking. Signs to alert motorists of pedestrian/handicap crossing would be placed along East Basin Drive.

### **ALTERNATIVE C – VEHICLE SECURITY ALONG EAST BASIN DRIVE (PREFERRED ALTERNATIVE)**

Under the Preferred Alternative, a vehicular barrier system would be constructed along East Basin Drive consisting of a barrier wall and metal bollards. Existing parking directly in front of the Memorial would be relocated to existing parking areas along Ohio Drive and existing U-shaped parking area would be slightly narrowed to create pedestrian walks. Traffic congestion and flow would be improved by moving the parking area. Handicap accessible parking for visitors with disabilities would be located on the south side of East Basin Drive directly across the street from the existing bus drop-off area. The parking area along the south side of the Memorial would be raised to create a pedestrian plaza. During construction, there would be minor, short-term, and adverse impacts to visitor use and experience as a result of temporary road closures or detours to allow construction to take place. Overall impacts to visitor use and experience would; however, create moderate, long-term, and beneficial impacts through better parking facilities and the creation of a pedestrian plaza and walks. However, impacts from the relocation of handicap accessible parking would create moderate, long-term, adverse impacts to visitor use and experience because visitors with disabilities would have to cross East Basin Drive, which is a heavily traveled road. The posted speed limit is 25 miles per hour.

Cumulative Effects. Cumulative impacts under Alternative C would be the same as those described under Alternative B.

Conclusion. Alternative C would have moderate, long-term, and beneficial impacts to visitor use and experience. Minor, short-term, adverse impacts would occur as a result of construction. These impacts would be temporary. Moderate, beneficial effects on visitor use and experience would occur under this alternative.

Because there would be no major, adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Jefferson Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation Measures. To mitigate impacts to visitor use and experience during the construction, restrictions on the hours and duration of the construction deliveries and actual construction should be implemented. A public notice of the construction schedule should be provided. Rumble strips along East Basin Drive to slow vehicles down to the speed limit of 25 miles per hour and a pedestrian crosswalk between the handicap accessible parking and the tour bus drop-off would be constructed to mitigate impacts to visitors with disabilities utilizing the handicap accessible parking. Signs to alert motorists of pedestrian/handicap crossing would be placed along East Basin Drive.

## IMPACTS ON PARK OPERATIONS

### DEFINITION OF INTENSITY LEVELS

The National Park Service staff's knowledge regarding operational efficiency, protection and preservation of important resources, and providing an effective visitor experience was used to determine intensity levels of potential impacts on Memorial operations. For purposes of analyzing potential impacts, the thresholds of change for the intensity of an impact are defined as follows:

- *Negligible* - park operations would not be affected, or the effects would be at low levels of detection and would not have an appreciable effect on park operations;
- *Minor* - the effect would be detectable and likely short-term, but would be of a magnitude that would not have an appreciable effect on monument operations. If mitigation was needed to offset adverse effects, it would be simple and likely successful.
- *Moderate* - the effects would be readily apparent, likely long-term, and would result in a substantial change in park operations in a manner noticeable to staff and toe public. Mitigation measure would be necessary to offset adverse effects and would likely be successful; or
- *Major* - the effects would be readily apparent and would result in a substantial change in park operation in a manner noticeable to staff and the public and be markedly different from existing operations. Mitigation measure to offset adverse effects would be needed, would be extensive and their success could not be guaranteed.

### ALTERNATIVE A – NO-ACTION ALTERNATIVE

Under the No-Action Alternative, vehicle security barriers would not be erected at the Jefferson Memorial. The existing concrete jersey barriers would remain in place. Impacts to park operations would continue to be moderate, long-term, and adverse as a result of inadequate security measures.

Cumulative Effects. Proposed improvements at the Washington Monument and Lincoln Memorial would have beneficial impacts on park operations by improving visitor services and operating conditions. The No-Action Alternative would not contribute to these beneficial impacts. Therefore, there would be no cumulative effects on park operations.



Conclusion. The No-Action Alternative would have moderate, long-term, and adverse effects on park operations as a result of inadequate security measures at the Memorial. No cumulative effects are anticipated. No impairment to park resources or values would occur.

#### **ALTERNATIVE B – VEHICLE SECURITY ALONG MEMORIAL RING**

Under Alternative B, metal bollards would be installed along the Memorial ring surrounding the Jefferson Memorial. Visitor parking would be relocated to existing parking lots along Ohio Drive and the existing road directly in front of the Memorial would be raised to create a pedestrian plaza. Handicap accessible parking for visitors with disabilities would be located on the south side of East Basin Drive directly across the street from the existing bus drop-off area. This would restrict the number of vehicles allowed to enter and exit the Memorial. Long-term objectives for security to the Memorial and its visitors would also be met creating minor, long-term, beneficial impacts to park operations. Minor, long-term, beneficial impacts would also occur from the relocation of visitor parking to Ohio Drive, the relocation of the handicap accessible parking, and the creation of a pedestrian plaza because these changes would help provide better operational efficiency.

Cumulative Effects. Proposed improvements at the Washington Monument and Lincoln Memorial would have beneficial impacts on park operations by improving visitor services and operating expenses. The improvements proposed under Alternative B would also have beneficial impacts, leading to a moderate, beneficial cumulative impact to park operations.

Conclusion. Alternative B would have minor, long-term, beneficial impacts to park operations. There would be moderate, beneficial cumulative effects to park operations under this alternative.

Because there would be no major, adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Jefferson Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation Measures. No mitigation measures are proposed.

#### **ALTERNATIVE C – VEHICLE SECURITY ALONG EAST BASIN DRIVE (PREFERRED ALTERNATIVE)**

Under Alternative C, construction of a vehicular barrier system would be built along East Basin Drive, consisting of a barrier wall and metal bollards. Existing parking directly in front of the Memorial would be relocated to existing parking areas along Ohio Drive to create pedestrian walks. Traffic congestion and flow would be beneficially impacted by moving the parking area. Handicap accessible parking for visitors with disabilities would be located on the south side of East Basin Drive directly across the street from the existing bus drop-off area. The parking area along the south side of the Memorial would be raised to create a pedestrian plaza. This would restrict the number of vehicles allowed to enter and exit the Memorial. Long-term objectives for security to the Memorial and its visitors would also be met creating minor, long-term, beneficial impacts to park operations. Minor, long-term, beneficial impacts would occur from the

relocation of visitor parking to Ohio Drive and the creation of a pedestrian plaza and walks because these changes would help provide better operational efficiency.

Cumulative Effects. Cumulative impacts under Alternative C would be the same as those described under Alternative B.

Conclusion. Alternative C would be expected to create minor, long-term, and beneficial impacts on National Park Service operations as a result of constructing adequate security measures at the Memorial. There would be moderate, beneficial cumulative effects to park operations under this alternative.

Because there would be no major, adverse impacts to resources or values whose conservation are (1) necessary to fulfill specific purposes identified in the establishing of legislation or proclamation of the Jefferson Memorial; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning document, there would be no impairment of the park's resources or values.

Mitigation Measures. No mitigation measures are recommended.

## **CONSULTATION AND COORDINATION**

Scoping is the effort to involve agencies and the general public in determining the scope of issues to be addressed in the environmental document. Among other tasks, scoping determines important issues and eliminates unimportant issues; allocates assignments among the interdisciplinary team members and/or other participating agencies; identifies related projects and associated documents; identifies other permits, surveys, consultations, etc., required by other agencies; and creates a schedule that allows adequate time to prepare and distribute the environmental document for public review and comment before a final decision is made. Scoping includes any interested agency, or any agency with jurisdiction by law or expertise (including the Advisory Council on Historic Preservation, the State Historic Preservation Officer, and Indian Tribes) to obtain early input.

Design Analysis studies have been completed that have helped the National Capital Region and the National Capital Parks – Central to examine a number of alternatives for construction of a vehicular barrier system at the Jefferson Memorial. Numerous meetings have been held with the Commission of Fine Arts and the National Capital Planning Commission on the design criteria. The National Park Service presented their preliminary design concept to the National Capital Planning Commission on August 1, 2002. The National Park Service should here the Planning Commission's recommendation at the August 30, 2002, Commission hearing.

The National Park Service has also invited the DC Historic Preservation Officer and the Advisory Council on Historic Preservation to enter into consultation to develop a Memorandum of Agreement in order to avoid the potential for adverse effects on historic resources.

## **COMPLIANCE WITH FEDERAL AND STATE REGULATIONS**

The following laws and associated regulations provided direction for the design or project alternatives, the analysis of impacts, and the formulation of mitigation/avoidance measures:

**National Environmental Policy Act of 1969 (Title 42 U.S. Code Sections 4321 to 4370 [42 USC 4321-470]).** The purposes of the National Environmental Policy Act include encouraging “harmony between [humans] and their environment and promote efforts which will prevent or eliminate damage to the environment...and stimulate the health and welfare of[humanity].” The purposes of the National Environmental Policy Act are accomplished by evaluating the effects of Federal actions. The results of these evaluations are presented to the public, Federal agencies, and public officials in document format (e.g., environmental assessments and environmental impact statements) for consideration prior to taking official action or making official decisions. Implementing regulations for the National Environmental Policy Act are contained in Part 1500 to 1515 of Title 40 of the U.S. Code of Federal Regulations (40 CFR 1500-1515).

**Endangered Species Act of 1973, as amended (16 USC 1531-1544).** The purposes of the Endangered Species Act include providing “a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved.” According to the Endangered Species Act, “all Federal departments and agencies shall seek to conserve endangered species and threatened species: and “[e]ach Federal agency shall...insure that any action authorized, funded, or carried out by such agency...is not likely to jeopardize the continued existence of any endangered species or threatened species.” The U.S. Fish and Wildlife Service (non-marine species) and the National Marine Fisheries Service (marine species, including anadromous fish and marine mammals) administer the Endangered Species Act. The effects of any agency action that may affect endangered, threatened, or proposed species must be evaluated in consultation with either the U.S. Fish and Wildlife Service or National Marine Fisheries Service, as appropriate. Implementing regulations that describe procedures for interagency cooperation to determine the effects of actions on endangered, threatened, or proposed species are contained in 50 CFR 402. The National Park Service has obtained concurrence from the U.S. Fish and Wildlife Service that the proposed action is not expected to impact Federally listed endangered and threatened species or species of concern.

**National Historic Preservation Act of 1966, as amended (16 USC 470 *et sequentia*).** Congressional policy set forth in the National Historic Preservation Act includes preserving “the historical and cultural foundations of the Nation” and preserving irreplaceable examples important to our national heritage to maintain “cultural, educational, aesthetic, inspirational, economic, and energy benefits.” The National Historic Preservation Act also established the National Register of Historic Places composed of “districts, sites, buildings, structures, and objects significant in American history, architecture, archeology, engineering, and culture.” Section 106 of the National Historic Preservation Act requires that Federal agencies take into account the effects of their actions on properties eligible for or included in the National Register of Historic Places and coordinate such actions with the State Historic Preservation Office. The National Historic Preservation Act also requires Federal agencies, in consultation with the State Historic Preservation Office, to locate, inventory, and nominate all properties that appear to qualify for the National Register of Historic Places, including National Historic Landmarks. Further, it requires Federal agencies to document those properties in the case of an adverse effect

and propose alternatives to those actions, in accordance with the National Environmental Policy Act.

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# **APPENDIX A**

## **Agency Consultation and Coordination Letters**





## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Chesapeake Bay Field Office  
177 Admiral Cochrane Drive  
Annapolis, MD 21401



September 9, 2002

Mr. Steven E. Pomeroy  
Environmental Scientist  
Greenhorne & O'Mara, Inc.  
9001 Edmonston Road  
Greenbelt, Maryland 20770

*RE: Proposed Installation of Vehicle Barrier Systems at the Lincoln and Jefferson Memorials, Washington, District of Columbia*

Dear Mr. Pomeroy:

This responds to your letter, received August 12, 2002, requesting information on the presence of species which are federally listed or proposed for listing as endangered or threatened in the above referenced project area. We have reviewed the information you enclosed and are providing comments in accordance with Section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

Except for occasional transient individuals, no proposed or federally listed endangered or threatened species are known to exist within the project impact area. Therefore, no Biological Assessment or further Section 7 consultation with the U.S. Fish and Wildlife Service is required. Should project plans change, or should additional information on the distribution of listed or proposed species become available, this determination may be reconsidered.

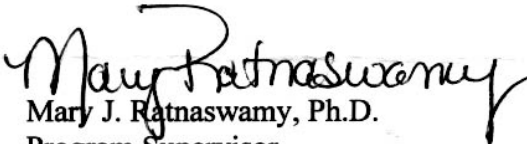
This response relates only to federally protected threatened or endangered species under our jurisdiction. Limited information is currently available regarding the distribution of other rare species in the District of Columbia. However, the Nature Conservancy and National Park Service (NPS) have initiated an inventory of rare species within the District. For further information on such rare species, you should contact Ellen Gray of the DC Natural Heritage Program at (202) 342-1443 ext. 223.

An additional concern of the Service is wetlands protection. Federal and state partners of the Chesapeake Bay Program have adopted an interim goal of no overall net loss of the Basin's remaining wetlands, and the long term goal of increasing the quality and quantity of the Basin's wetlands resource base. Because of this policy and the functions and values wetlands perform, the Service recommends avoiding wetland impacts. All wetlands within the project area should

be identified, and if alterations of wetlands is proposed, the U.S. Army Corps of Engineers, Baltimore District, should be contacted for permit requirements. They can be reached at (410) 962-3670.

We appreciate the opportunity to provide information relative to fish and wildlife issues, and thank you for your interests in these resources. If you have any questions or need further assistance, please contact Charisa Morris at 410-573-4550.

Sincerely,



Mary J. Ratnaswamy, Ph.D.  
Program Supervisor  
Threatened and Endangered Species



## United States Department of the Interior

NATIONAL PARK SERVICE  
Center for Urban Ecology  
Natural Resources and Science  
4598 MacArthur Blvd., N.W.  
Washington, D.C. 20007

N16 (NCR-NRS)

August 21, 2002

Steven E. Pomeroy, Environmental Scientist  
Greenhorne & O'Mara, Inc.  
9001 Edmonston Road  
Greenbelt, MD 20770

Dear Mr. Pomeroy:

We have reviewed your letter and map of August 7 requesting information regarding federally listed endangered and threatened species as well as rare species in and near the Lincoln and Jefferson Memorials in Washington, DC. We have no records of rare, threatened, and endangered species in either location. In addition, we recommend that you contact the Fish and Wildlife Service, which has Federal oversight for rare, threatened, and endangered species.

If you have any questions, or need further assistance, please contact me at 202-342-1443 Ext. 223.

Sincerely,

A handwritten signature in black ink that reads "Ellen van Snik Gray". The signature is written in a cursive style.

Dr. Ellen van Snik Gray  
Interim Director, DC Natural Heritage Program

Enclosure



# **APPENDIX B**

## **Environmental Screening Form**





## Environmental Screening Form

<p><b>Project Description/Location:</b></p> <p><b>The Jefferson Memorial Security Improvement Project, Washington, DC</b></p>
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	Yes	No	Data Needed to Determine
<b>Mandatory Criteria (A-N). Would the proposal, if implemented:</b>			
A. Have material adverse effects on public health or safety?		X	
B. Have adverse effects on such unique characteristics as historic or cultural resources; park, recreation, or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands; floodplains; or ecologically significant or critical areas, including those listed on the National Register of Natural Landmarks?			Are in discussions with the SHPO
C. Have highly controversial environmental effects?		X	
D. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks?		X	
E. Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?		X	
F. Be directly related to other actions with individually insignificant, but cumulatively significant, environmental effects?		X	
G. Have adverse effects on properties listed or eligible for listing on the National Register of Historic Places?			X
H. Have adverse effects on species listed or proposed to be listed on the List of Endangered or Threatened Species, or have adverse effects on designated Critical Habitat for these species?		X	
I. Require compliance with Executive Order 11988 (Floodplain Management), Executive Order 11990 (Protection of Wetlands), or the Fish and Wildlife Coordination Act?	X		

	Yes	No	Data Needed to Determine
J. Threaten to violate a federal, state, local, or tribal law or requirement imposed for the protection of the environment?		X	
K. Involve unresolved conflicts concerning alternative uses of available resources (NEPA sec. 102(2)(E)).		X	
L. Have a disproportionate, significant adverse effect on low income or minority populations (EO 12898).		X	
M. Restrict access to and ceremonial use of Indian sacred sites by Indian religious practitioners or adversely affect the physical integrity of such sacred sites (EO 130007)		X	
N. Contribute to the introduction, continued existence, or spread of federally listed noxious weeds (Federal Noxious Weed Control Act).		X	
O. Contribute to the introduction, continued existence, or spread of non-native invasive species or actions that may promote the introduction, growth or expansion of the range of non-native invasive species (EO 13112).		X	
P. Require a permit from a federal, state, or local agency to proceed, unless the agency from which the permit is required agrees that a CE is appropriate?	X		
Q. Have the potential for significant impact as indicated by a federal, state, or local agency or Indian tribe?		X	
R. Have the potential to be controversial because of disagreement over possible environmental effects.		X	
S. Have the potential to violate the NPS Organic Act by impairing park resources or values?		X	
<b>Tailor the following to meet individual park unit/project needs. Are any measurable impacts possible in the following categories relating to physical, natural, or cultural resources?</b>			
A. Geological resources—soils, bedrock, streambeds, etc.		X	
B. From geohazards		X	
C. Air quality, traffic, or from noise	X		
D. Water quality or quantity	X		
E. Streamflow characteristics		X	
F. Marine or estuarine resources		X	
G. Floodplains or wetlands	X		

	Yes	No	Data Needed to Determine
H. Land use, including occupancy, income, values, ownership, type of use		X	
I. Rare or unusual vegetation—old growth timber, riparian, alpine, etc.		X	
J. Species of special concern (plant or animal; state or federal listed or proposed for listing) or their habitat		X	
K. Unique ecosystems, biosphere reserves, World Heritage sites		X	
L. Unique or important wildlife or wildlife habitat		X	
M. Unique or important fish or fish habitat		X	
N. Introduce or promote non-native species (plant or animal)		X	
O. Recreation resources, including supply, demand, visitation, activities, etc.		X	
P. Visitor experience, aesthetic resources	X		
Q. Cultural resources, cultural landscape, sacred sites, etc.			X
R. Socioeconomics, including employment, occupation, income changes, tax base, infrastructure, etc.		X	
S. Minority and low-income populations, ethnography, size, migration patterns, etc.		X	
T. Energy resources		X	
U. Other agency or tribal land use plans or policies		X	
V. Resource, including energy, conservation potential		X	
W. Urban quality, gateway communities, etc.	X		
X. Long-term management of resources or land/resource productivity		X	
Y. Other important environmental resources		X	

**Please answer the following questions.**

1. Are the personnel preparing this form familiar with the site, and/or has a site visit been conducted? (Attach additional pages noting when site visit took place, staff attending, etc.)

**The person preparing this form is the chief of the Resource Management division of the park. He visits the site at least once a week and is familiar with past historical natural and cultural research on the site.**

2. Has consultation with all affected agencies or tribes been completed? (Attach additional pages detailing the consultation, including the name, date, and summary of comments from other agency or tribal contacts.)

**The National Park Service is the only affected agency and there are no recognized tribes in this area.**

**Instructions**

When you have completed a site visit (or if staff are familiar with the specifics of the site) and consultation with affected agencies and/or tribes, and if the answers in the checklist above are all "no," you may proceed to the categorical exclusion form (appendix 2) if the action is described in section 3-4 of NPS-12. If any answers in the checklist are "yes" or "data needed to determine," or if the action is not described in section 3-4, prepare an environmental assessment or environmental impact statement.

Attach maps, notes of site visits, agency consultation, relevant data or reports, the categorical exclusion form or other relevant information to this form to begin the statutory/administrative record file.

**Signatory**

In signing this form, you are saying you have completed a site visit or are familiar with the specifics of the site, that you have consulted with affected agencies and tribes, and that the answers to the questions posed in the checklist are, to the best of your knowledge, correct.

<p><i>Stephen Lorenzetti</i>                  _____  <b>Interdisciplinary Team Leader</b></p>	<p><b>October 8, 2002</b>                  _____  <b>Date</b></p>
<p><i>Stephen Lorenzetti</i>                  _____  <b>Technical specialist/field of expertise</b></p>	<p><b>Resource Manager</b>                  _____  <b>Technical specialist/field of expertise</b></p>

# **APPENDIX C**

## **Floodplain Statement of Findings**

