Operation Desert Storm/Desert Shield, involving more than half a million American servicemen and women, is the largest major military conflict of the 20th Century without a memorial. In 2014, the U.S. Congress authorized a memorial to commemorate and honor those, who, as a member of the Armed Forces, served on active duty in support of Operation Desert Storm or Operation Desert Shield to be placed on federal land within the District of Columbia in Public Law 113-291. In 2017, Congress authorized the potential location of the commemorative work within Area I in Public Law 115-18. This future memorial intends to create a meaningful and deeply moving sequential experience that informs visitors about the historical events of the operation. This commemorative work would memorialize the Americans who sacrificed their lives, reflect the unique environmental and battle conditions experienced by servicemen and women, and leave visitors with an enduring memory of the historical significance and moral accomplishments of Operation Desert Storm and Operation Desert Shield.
PROJECT BACKGROUND
Site Selection Background

The National Desert Storm War Memorial (NDSWM) Association, the sponsoring organization for the NDSWM, conducted a site selection study in 2015-2016. The Association and the National Park Service (NPS) developed a series of criteria in order to identify a suitable location for the memorial on a site and that supports the stated purpose of the memorial. These criteria were then applied to the 100 potential memorial sites listed in the National Capital Planning Commission’s Memorials and Museums Master Plan. Many of the sites in the document did not meet the criteria; however, the Board identified fourteen sites and areas that merited further consideration based on overall location and size. The list was later narrowed to ten sites and areas for more intensive analysis.

The Association presented its finding to the National Capital Memorials Advisory Commission (NCMAC) on January 28, 2016 and again on May 16, 2017. The Association presented the site selection process, including criteria at the 2016 meeting and NCMAC recommended the siting of the Memorial within Area I as defined by the Commemorative Works Act. Congress authorized siting within Area I in January 2017.

The full Site Selection Study evaluated a total of 18 sites. Two sites were selected as the most appropriate for further analysis and to explore potential concepts for how the site could accommodate a memorial. The two finalist sites, the Memorial Circle Area, Site 1, Memorials and Museums Master Plan and the Constitution Avenue Terminus Area, Site 6, Memorials and Museums Master Plan are analyzed in this submittal.

Memorial Background

In the wake of the end of the Cold War, international cooperation faced an uncertain future. Saddam Hussein’s invasion of Kuwait in 1990 prompted the world to act, and the result was an unprecedented coalition that joined to liberate that country and prevent further violence and bloodshed. Upon return after a rapid victory, U.S. service members were greeted with a welcome of excitement and gratitude not seen in decades. Though 293 Americans perished or are missing and never returned from Operation Desert Storm/Desert Shield, not only did the conflict liberate an occupied country with broad international support, but it also revived the public’s faith in the U.S. military and helped to heal the wounds of the Vietnam War.
NEPA AND SECTION 106 PROCESS AND ISSUES
NEPA and Section 106 Compliance

In order to meet its regulatory responsibilities, the NPS will conduct concurrent National Environmental Policy Act (NEPA) and National Historic Preservation Act (NHPA) reviews. The NPS will prepare an Environmental Assessment (EA) to identify impacts and potential mitigation strategies, if necessary, of the placement of the NDSWM. Similarly, NPS will conduct a review of historic resources under Section 106 of the NHPA. The NPS, in cooperation with the National Capital Planning Commission (NCPC), is evaluating an updated NEPA and Section 106 process for this memorial’s site and design. The purpose of this revised process is to better align and support key decision points associated with each agency’s NEPA and Section 106 responsibilities, and to ensure that the review is commensurate with the complexity of the project.

The first step in the memorial review process is to receive comment through public scoping. A site selection scoping period will be open between June 20, 2017 and July 24, 2017. These dates allow formal input from both NCPC and the U.S. Commission of Fine Arts to be included during the official comment period. During this scoping period, a joint public scoping and Section 106 introductory meeting is anticipated to be held in July 2017. Notice will be made to the public prior to the start of the scoping period.

Subsequent to this site selection scoping period, the NPS and NCPC will also conduct scoping review and a scoping meeting for design in the fall 2017. Following both scoping periods, an EA will be created to document potential environmental impacts. This is a deviation from NCPC's existing Environmental and Historic Preservation Procedures, which requires separate NEPA and Section 106 processes for site selection and the design of the memorial.
Purpose and Need

Purpose of the Memorial
- To commemorate and honor members of the Armed Forces who served on active duty in support of Operation Desert Storm or Operation Desert Shield

Need of the Memorial
- To carry out Public Law 113-291 and address the current lack of a formal place for commemoration of those who served during Operation Desert Storm or Operation Desert Shield
The NDSWM EA will address a full range of man-made and natural resource issues. These include:

**Cultural Resources**
- Historic Resources
- Cultural Landscapes
- Visual Resources
- Archeology

**Transportation**
- Traffic Operations
- Parking
- Pedestrian Circulation

**Other Issues**
- Land Use
- Utilities
- Park Operations
- Visitor Use and Experience

**Natural and Physical Resources**
- Soils
- Vegetation
- Water Resources
- Stormwater
- Floodplains
Historic Resources in the Vicinity of Sites Under Consideration

Legend
- Arlington House, The Robert E. Lee Memorial
- Arlington National Cemetery Historic District
- Arlington Ridge Park
- East & West Potomac Parks Historic District
- Fifteenth Street Financial Historic District
- Fort Myer Historic District
- George Washington Memorial Parkway (GWMP)
- GWMP Mount Vernon Memorial Highway
- George Washington University/Old West End Historic District
- Lady Bird Johnson Park
- Lafayette Square Historic District
- Observatory Hill Historic District
- Pennsylvania Avenue National Historic Site
- Rock Creek & Potomac Parkway
- Seventeenth Street Historic District
- Theodore Roosevelt Island

Memorials

- Historic Resources near the Potential Sites

1. Arlington Memorial Bridge and related features
2. Lincoln Memorial (and Statue of Lincoln)
3. John F. Kennedy Center for the Performing Arts
4. Old Naval Observatory (National Observatory; Naval Museum of Hygiene; Naval Medical School)
5. Harry S Truman Federal Building
6. American Institute of Pharmacy (American Pharmacists Association)
7. National Academy of Sciences
8. Federal Reserve Building
9. Public Health Service (Department of the Interior South Building)
10. Department of the Interior (New Interior Building)
11. Corcoran Gallery of Art
12. American National Red Cross
13. Constitution Hall (Daughters of the American Revolution)
14. Daughters of the American Revolution, Memorial Continental Hall
15. Pan American Union (Organization of American States)
16. Washington Monument
17. Jefferson Memorial

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
PROJECT DESCRIPTION
The NPS and the Association are considering the Memorial Circle Area and the Constitution Avenue Terminus Area as potential sites for the Memorial. Analysis conducted for each of the sites includes visitor context, thematic context, access to Metrorail and pedestrian circulation, floodplains, and scale. The experiential context for each site is also identified.

In the case of Constitution Avenue Terminus Area, the site’s location within the Monumental Core Framework Plan and DC Water’s potential tunnel project are also indicated. These contextual efforts would not affect the Memorial Circle Area and are therefore not included in analysis of that site.

**Design Intent**

As part of the site selection process, multiple design considerations have been identified that influence the location of the memorial. The following considerations help inform the overall suitability of each potential memorial site and may inform the design once a site has been selected:

- **Complement the existing attributes and limitations of the site.** These include topography and drainage, floodplains, notable surrounding and nearby buildings and monuments, views into and out of the site, pedestrian and vehicular access routes to/from the site, universal accessibility, solar and wind exposure, and existing vegetation.
- **Study and analyze how a memorial would fit onto the site.** The scale and design of each alternative will be studied in relation to all of the attributes listed above.
- **Respect the historic context, preserve existing view sheds, and develop a poignant design;** one that is both meaningful to veterans and their families and harmonious with its setting beyond the boundaries of the site.
- **Create an intimate, reflective experience within a compact footprint for the memorial.**
- **Use precedent to inform the scale of the memorial.** Relative to previously built commemorative works, the memorial will have a smaller footprint than the WWII, Korea, and Vietnam memorials.
- **Connect with existing circulation while providing visual and acoustic buffers.** This should create a central sacred space for reflection.
- **Evoke the unique spatial qualities of the Kuwaiti desert.** This could be accomplished with low sloping walls and landforms that integrate the memorial into the surrounding landscape, direct circulation, provide dedicated commemorative space, and frame views to surrounding historic properties and the city.
Site Selection Process

Developed 9 preliminary site selection criteria:

- Within the District of Columbia
- At least 1.5 acres in size and able to accommodate a minimum of 80-100 people
- Accessible to pedestrians, transit, and visitors and meet ABAAS standards
- Near other visitor destinations
- Thematically connected to the memorial
- Minimal infrastructure improvements
- Appropriate environment for reflection
- Safe environment for both visitors and memorial features, and minimal potential maintenance issues of memorial features
- Resilient to the environment and the potential effects of climate change and enable sustainable design practices
Design Parameters

The following design parameters are intended to ensure the Memorial provides an appropriate commemorative experience as well as fit within the context of the site. The Memorial should:

- Be compact in size with a footprint of less than 1.0 acre within a site of less than 2.0 acres
- Serve as more than a stand-alone object, and provide a place of reflection
- Maintain a generally low horizontal profile
- Be integrated within, and complementary to, the existing landscape
- Maintain existing trees, particularly designed rows or allees of trees, to the extent practicable
- Utilize existing circulation resources (sidewalks and pathways) to the extent practicable
- Provide minimal parking (likely to be universally accessible parking only)
- Be located outside of 100 year floodplain; if located within the 500 year floodplain, the Memorial must be flood resilient
Site Location Map
The Memorial Circle Area is a 9.3-acre site located on Columbia Island. The site lies near Memorial Bridge, Memorial Drive, and the George Washington Memorial Parkway. This site was identified as Site 1 in the Memorials and Museums Master Plan.
Memorial Circle Area

Historical Photographs

MEMORIAL CIRCLE SITE - 1931

MEMORIAL CIRCLE SITE - CIRCA 1940

MEMORIAL CIRCLE SITE - 1973
The Memorial Circle Area offers views of the Washington Monument as well as a more natural landscape surrounding. The Memorial would offer the opportunity to integrate itself into the landscape, as well as connect to the existing trail network.
Memorial Circle Area

Visitor Context

The Memorial Circle Area has attractions with four million visitors within a half mile.
Arlington National Cemetery, the Women in Military Service for America Memorial, and the Lincoln Memorial offer thematic links for NDSWM at this site.
Access to transit and parking is primarily through the Arlington National Cemetery Metrorail station and parking garage. Pedestrian connections would be via Memorial Bridge to West Potomac Park and its memorials; Memorial Drive; and the Mount Vernon Trail. The Parkway presents safety concerns for pedestrians and challenges.
Memorial Circle Area

Circulation and Constraints

The site is largely outside the floodplain. New infrastructure, such as utilities, would be required.
Memorial Circle Area

Scale Comparisons

MEMORIAL CIRCLE SOUTH SITE
9.3 ACRES
MEMORIAL AREA ~1 ACRE

LBJ MEMORIAL
9.2 ACRES

FDR MEMORIAL
7.8 ACRES
Memorial Circle Area

Experiential Concept

MEMORIAL CIRCLE APPROACH

BERMING TO CONTROL VIEWS

FOYER

SACRED SPACE

REFLECTION

REFLECTION

REFLECTION

REFLECTION

MEMORIAL CIRCLE STUDY AREA - EXPERIENTIAL CONCEPT

NATIONAL DESERT STORM VETERANS WAR MEMORIAL
The Memorial Circle Area could accommodate other future memorials that would want to be located in proximity to the NDSWM.

Commemorative connection

Potential commemorative sites

Arlington Cemetery Metro Station
The Constitution Avenue Terminus Area is a 3.8-acre site at the southwest corner of the intersection of Constitution Avenue NW and 23rd Street NW. This site was identified as Site 6 in the Memorials and Museums Master Plan.
Constitution Avenue Terminus Area

Historical Photographs

Constitution Avenue Site - Mid 19th Century
Constitution Avenue Site - 1917
Constitution Avenue Site - 1919
Constitution Avenue Site - 1925
Constitution Avenue Site - 1935
The landforms of the Memorial would allow for the integration of 100-year flood protection into the memorial design, which would enhance and protect a larger area of the Constitution Avenue Terminus Area site. The Memorial landforms could also be used as part of the enhanced Potomac Levee System project.
The Constitution Avenue Terminus Area has attractions with eight million visitors within a half mile (18 million visitors cumulatively).
The site provides a highly relevant thematic nexus to Vietnam Veterans Memorial and other 20th Century war memorials, including the Korean War Memorial and the World War II Memorial, as well as close proximity and access to these and other memorials.
Circulation and Constraints

The site would accommodate the desired program to a high level, but would present minor challenges in terms of resiliency due to the location of the floodplain. However, a levee is being evaluated for the area to help protect downtown Washington from flooding. The memorial would be coordinated with the potential levee.
The Constitution Avenue Terminus Area site offers the opportunity to enhance the existing Constitution allee and tree planting framework of the National Mall. The site would allow the Memorial to sit within the sloping topography and present a horizontal profile that maintains views from the Lincoln Memorial and surrounding streets.
Constitution Avenue Terminus Area

Scale Comparisons

- Constitution Ave Site: 3.8 acres, Memorial Area ~1 acre
- Vietnam Memorial: 7.4 acres
- Korean War Memorial: 5.2 acres
- WWII Memorial: 4.0 acres
- MLK Memorial: 4.0 acres
Constitution Avenue Terminus Area

Experiential Concept

CONSTITUTION AVENUE ALLEE

EXISTING CHERRY TREE GROVE

‘CONSTITUTION AVE APPROACH’

‘LINCOLN MEMORIAL APPROACH’

SACRED SPACE

REFLECTION

BERMING TO CONTROL VIEWS

FOYER
Constitution Avenue Terminus Area

Potential Future Memorial Sites

The Constitution Avenue Terminus Area could accommodate other future memorials that would want to be located in proximity to the NDSWM. This would particularly be the case with the implementation of the Monumental Core Framework Plan’s revised roadway network.
DC Water is considering the Constitution Avenue Terminus Area for use in its Potomac River Tunnel project. The image below reflects one potential configuration of potential DC Water operations at the site with the Memorial.