



Executive Director's Recommendation

Commission Meeting: April 5, 2012

PROJECT THE SMITHSONIAN INSTITUTION NATIONAL MUSEUM OF AFRICAN AMERICAN HISTORY AND CULTURE SMITHSONIAN INSTITUTION Constitution Avenue and Madison Drive between 14th and 15th Streets, NW Washington, DC	NCPC FILE NUMBER 6331 NCPC MAP FILE NUMBER 1.42(38.00)42538 APPLICANT'S REQUEST Final approval of building plans (Foundations)
SUBMITTED BY Smithsonian Institution	PROPOSED ACTION Approve comments as requested
REVIEW AUTHORITY PL 108-184 per 40 U.S.C. § 8722(b)(1) and (d)	ACTION ITEM TYPE Consent Calendar

PROJECT SUMMARY

The Smithsonian has submitted final foundation plans for a new museum building to house the National Museum of African American History and Culture (NMAAHC) on a site bounded by Constitution Avenue and Madison Drive, NW and 14th and 15th Streets, NW. The 373,798 SF museum will contain state-of-the-art galleries, offices for program and administrative staff, and an education center. The submission includes the deep foundation, concrete, and vertical transportation. Since the preliminary design submission, the Smithsonian has begun construction on site utilities, and the support of excavation. The Smithsonian has plans to submit for final design approval by the commission this fall.

KEY INFORMATION

The Smithsonian seeks final approval for the final foundation and vertical transportation cores for the museum. This action:

- Will not preclude further design of the building finishes or landscape.
- This will preclude movement of the building on site in all directions.

RECOMMENDATION

Approves the final foundation plans for the National Museum of African American History and Culture (NMAAHC), at the corner of 15th Street and Constitution Avenue, Northwest Washington, DC as shown on NCPC Map File No 1.42(38.00)42538

PROJECT REVIEW TIMELINE

Previous actions	November 2011 – Approval of Preliminary Design, Final Site Utility, and Support of Excavation, Excavation and Dewatering Plans. April, 2011 – Approval of Revised Concept Design September, 2010 – Approval of Concept Design
Remaining actions (anticipated)	– Final Site and Building Plans - Fall 2012 – Continued Section106 review

Prepared by Ken Walton
March 29, 2012

I. PROJECT DESCRIPTION

The site is located on the National Mall at the end of a row of museums along Constitution Avenue NW and Madison Drive, NW between 14th and 15th Streets, NW. The site is BOUNDED BY Constitution Avenue and Madison Drive, NW and 14th and 15th Streets, NW, immediately northeast of the Washington Monument. The site occupies approximately 5.0 acres of open space on the National Mall. The National Park Service transferred administrative jurisdiction of the property to the Smithsonian, effective June 1, 2007. Operation and maintenance of the site was transferred to the Smithsonian in September of 2011.

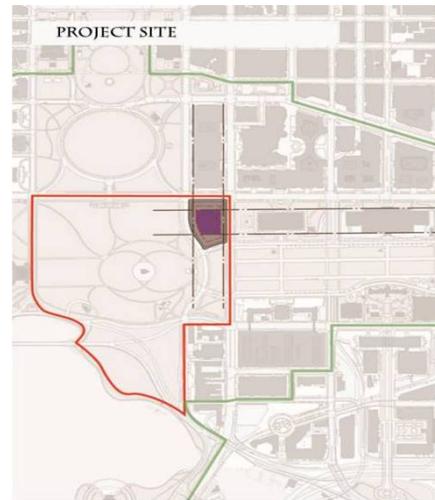


Figure 1: Site Plan

Background

Public Law 108-184 (December 2003) created the NMAAHC, and authorized the Smithsonian Institution Board of Regents to designate a museum site from four potential sites (narrowed from an initial twelve.) After a site selection process that included consideration of recommendations from the Chairman of the National Capital Planning Commission and the Commission of Fine Arts, the Smithsonian's Board of Regents selected the Washington Monument site. Congress authorized the National Park Service to transfer jurisdiction to the Smithsonian for the purpose of constructing a building to house the new museum. The Tier I Environmental Impact Statement quotes a 2003 report titled "The Time Has Come: Report to the President and Congress" as saying the project is needed to "provide a national meeting place for all Americans to learn about the history and culture of African Americans; establish an Institution that can respond to the interests and needs of diverse racial constituencies; and build a national venue that can serve as an educational healing space to further racial reconciliation."

The museum will be dedicated to the collection, preservation, research, and exhibition of African American historical and cultural materials reflecting the breadth and depth of the experience of individuals of African descent living in the United States.



Figure 2: National Museum of African American History and Culture

Proposal

Final approval is requested for the foundation and vertical transportation cores. These are part of a phased project design and construction process and the Commission's approval is sought at this time so that construction can meet the November 2015 opening date. The mild winter allowed the Smithsonian to maintain their schedule, without weather delays. Utility work is currently approaching completion, and basic site preparation is complete. Construction of the slurry wall, previously approved by the Commission, began in March.

NMAAHC is a fast track project, meaning that construction is initiated before design is completed; construction sequencing therefore is very critical. The foundation construction will begin with mat slab foundations on the north one-third of the site, followed by construction of piles under the core towers and mat slab on the middle third, and then the remaining piles on the south third. Once the mat slab is complete on the north, construction of the 60' high 6' thick foundation walls will begin. Construction of

the towers will begin once the piles and slab are complete in the middle one-third. Construction of these towers is critical because they support the building structure.

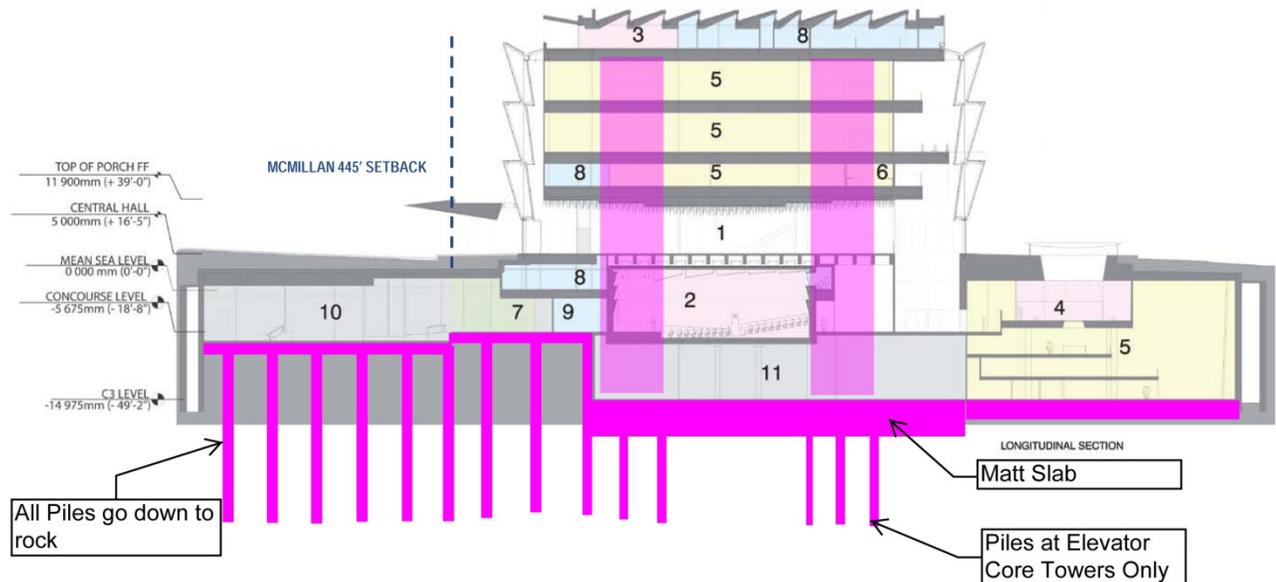


Figure 3: Illustrative Foundation Section

The submission includes construction of the building's foundations. These are comprised of a combination of steel bearing piles driven into bedrock to support the largest loads, including those of the four internal cores, and supporting columns and slab at the loading dock, and a mat slab foundation system consisting of an approximately 3-5 feet thick mat reinforced concrete slab below other areas of the building.

This submission also includes all of the concrete for the building's structure including floor slabs and the walls of the four central cores that support most of the building live and dead loads, all pile caps, and all below grade perimeter walls. It does not include, sidewalk paving or footings for site furnishings. All of the vertical transportation for the project is included as a part of the submission as well, including four passenger, two staff, one freight and one service elevators and 8 escalators.

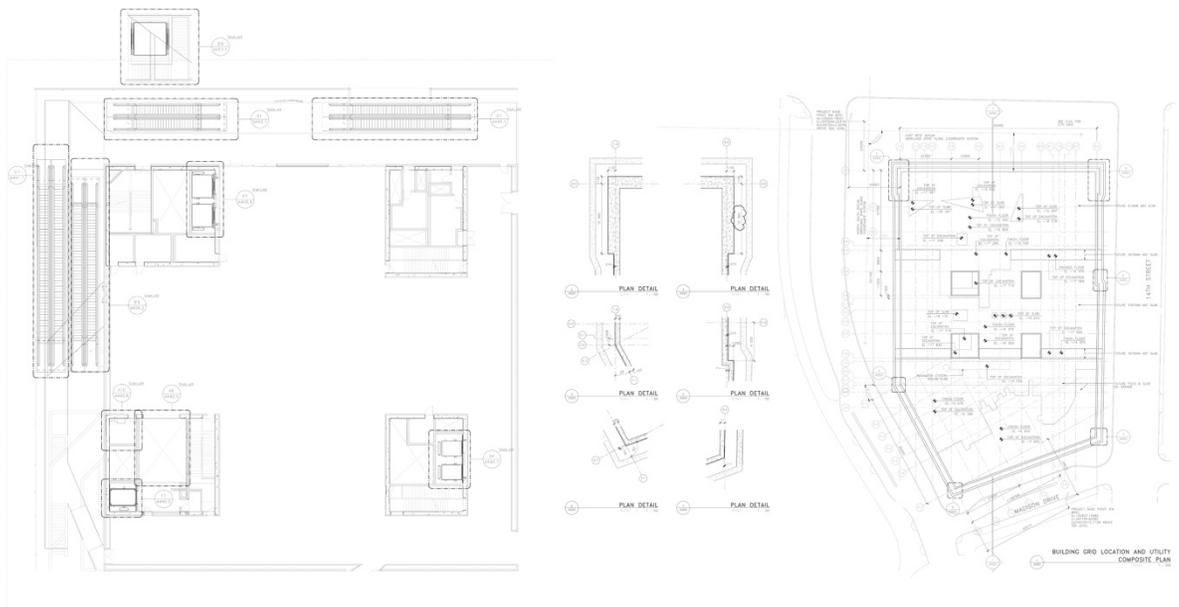


Figure 4: Building Core and Foundation Details

During the design of the project's foundation system, the Smithsonian and its Construction Manager undertook a Vibration and Noise Study in September and October 2011 that evaluated the impact of the installation of test piles at the site. The study was designed to test the impact of the test pile installation on nearby buildings and monuments including the Washington Monument and its Lodge; the Department of Commerce and EPA Buildings of the Federal Triangle; and the Smithsonian National Museum of American History. The study's conclusions included the finding that the vibrations transmitted to the surrounding buildings and the Washington Monument were well below the thresholds agreed to with the Monument's engineers and accepted industry standards for limits to avoid damage to adjacent buildings. Measured noise levels at the adjacent buildings and monument from the test piles were comparable to the measured background noise.

Representatives of the agencies responsible for the above monuments and buildings, including the structural engineering consultants assessing earthquake damage to the Washington Monument, were engaged in planning the test-pile exercise, setting the maximum acceptable vibration limits and assisting in the placement of the seismographs at their sites. Additional crack-monitoring devices were also installed at the Washington Monument as part of this study. The final report of that study entitled Vibration and Noise Study, Test-Pile Program, National Museum of African American History and Culture, Constitution Avenue NW, Washington, DC has been made available to the commission.

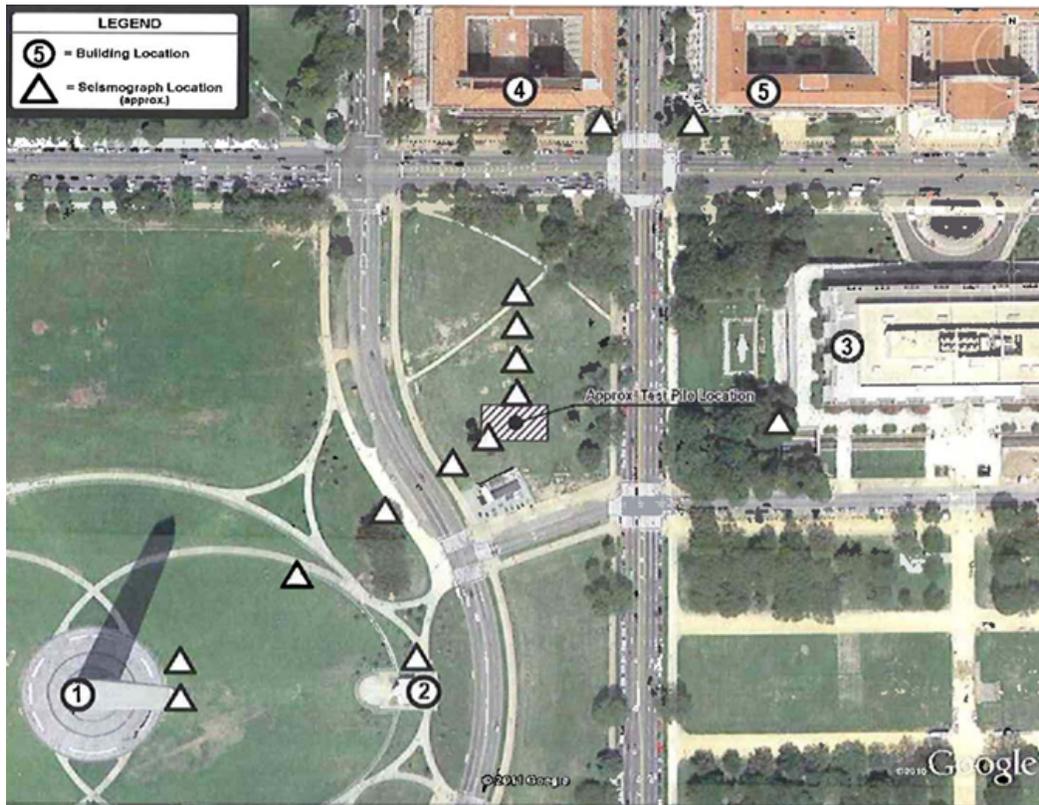


Figure 5: Seismic Monitoring Plan

II. PROJECT ANALYSIS/CONFORMANCE

Executive Summary

The Smithsonian has submitted Final Foundation Plans, Concrete and Vertical Transportation Plans. NMAAHC is a fast track project and construction sequencing is critical. Utility work is currently approaching completion. Preliminary approval for the project as a whole was provided at the Commission's November 3, 2011 meeting, along with adoption of the Tier I and II NEPA Records of Decision and the Section 106 Programmatic Agreement. The Construction Documents for the foundation and core plans are consistent with the approved preliminary design and the approved final designs for site utilities, support of excavation, excavation and dewatering. Final approval for the project as a whole will be sought from NCPC in fall 2012.

Analysis

The Construction Documents for the foundation and core plans are consistent with the approved preliminary design. The work will not preclude further design of the building exterior or landscape; however, the location of the building on site will be fixed.

The Smithsonian and its Construction Manager undertook a Vibration and Noise study that included the installation of test piles at the site. Representatives of the agencies responsible for the impacted monuments and buildings were involved in the development of the vibration and noise standards for the construction. The study's conclusions included the finding that the vibrations transmitted to the surrounding buildings and the Washington Monument were well below the thresholds agreed to with the Monument's engineers and accepted industry standards for limits to avoid damage to adjacent buildings. Measured noise levels at the adjacent buildings and monument from the test piles were comparable to the measured background noise.

Comprehensive Plan for the National Capital

The project is in conformance with the Comprehensive Plan, in particular the Visitors Element. Visitors often come to the National Capital Region to enjoy the many national symbols and memorials and to educate them about American culture. They come to commemorate important public events, to petition their elected government officials, to conduct business and to do research. The nation's capital averages almost 20 million domestic and international visitors each year and consistently rates as one of the nation's most popular tourist destinations. Visitors to the region are particularly interested in the major federal visitor attractions located along the National Mall that tell the story of American history, hold invaluable artifacts and display the artistic, technological, and scientific achievements of our society. In 2002, the Smithsonian recorded 24 million visits which included visitors who live in the area and from outside the region.

Federal Capital Improvements Program

The applicant's submitted project is identified in the Commission's FCIP report, Fiscal Years 2011-2017. Funding for the total project cost of \$500 million will be shared equally as a public/private partnership. Through FY11, Congress has provided \$45 million. The value of these construction bid packages is roughly \$60.5 million of the total estimated construction cost of \$309 million.

National Environmental Policy Act (NEPA)

NCPC's Environmental and Historic Preservation Policies and Procedures require completion of the NEPA process at the preliminary design stage. In compliance with this requirement, NCPC and the Smithsonian have completed a two-tiered Environmental Impact Statement (EIS). The Commission adopted the Tier I and II NEPA Records of Decision at the November 3, 2011 meeting.

National Historic Preservation Act (NHPA)

The Smithsonian led the Section 106 consultation process under NHPA for the design and construction of NMAAHC. Through this consultation with the District of Columbia State Historic Preservation Officer and other consulting parties the Smithsonian determined that the construction of the NMAAHC would have an adverse effect on historic properties, most notably on the view to and from the Washington Monument and Federal Triangle.

As a result of the Section 106 review process, the Smithsonian executed a Programmatic Agreement (PA) with the DC SHPO, NCPC, NPS, and the Advisory Council on Historic Preservation. The PA described the minimization efforts undertaken to reduce the adverse effects of the design and construction of NMAAHC and to enhance views to and from the Washington Monument and Federal Triangle. Mitigation measures included the monitoring of adjacent historic properties during construction of the building, tree planting on the Washington Monument Grounds, additional National Register documentation on the Washington Monument Grounds as well as the Bulfinch gate posts and National Mall, Historic American Building Survey/Historic American Landscape Survey of the site prior to construction, and a National Register nomination for the Horatio Greenhough statue of George Washington.

The PA also outlines the process by which Section 106 consultation will continue as the design is refined. Topics to be addressed in on-going consultation include the design of the porch element, the design of the rain garden, possible ways to reduce the massing and footprint of the building, the effects of extending any museum element beyond the 445-foot setback line, the design of proposed skylights, the review of site furnishings associated with regularly programmed outdoor spaces, the selection of building and landscape materials, the installation of exterior artwork, the design of the exterior guard booth and outdoor food service area, installation of exterior lighting and effects of night lighting, and other construction related activities or other alterations that may have the potential to constitute a previously unidentified adverse effect or intensify a previously identified adverse effect. The Smithsonian will also convene annual or biannual meetings to update the Signatories of the PA and Consulting Parties on the status of the design and construction of NMAAHC and compliance with the PA.

Consulting parties included: NCPC, CFA, NPS, General Services Administration, Advisory Council on Historic Preservation, National Trust for Historic Preservation, DC Preservation League, National Coalition to Save Our Mall, Committee of 100 on the Federal City, U.S. Capitol Historical Society, Afro American Historical and Genealogical Society, and Association for the Study of African American Life and History. NCPC fulfilled its Section 106 by

participating in the Section 106 consultation and has taken into account the effects of its approval action on historic properties. The Section 106 Programmatic Agreement was adopted at the November 3, 2011 commission meeting.

III. CONSULTATION

Coordinating Committee

The Coordinating Committee reviewed the proposal at its March 14, 2012 meeting, and forwarded the proposal to the Commission with the statement that the proposal has been coordinated with all participating. The participating agencies were the General Services Administration, the National Park Service, District Office of Transportation, District Office of Planning, and the Washington Metropolitan Area Transit Authority.

Coordination with local agencies

The Smithsonian has consulted extensively with both DDOT and NPS in securing necessary permits for the project, including agreement on temporary street and sidewalk closings and overall traffic control plans for each major phase of work.