

Dwight D. Eisenhower Memorial Design

Washington, DC



Responsible Federal Agency Prepared in Association with

September, 2011



This page is intentionally left blank

EXECUTIVE SUMMARY

This page is intentionally left blank

EXECUTIVE SUMMARY

The National Park Service (NPS), in association with the Eisenhower Memorial Commission (EMC) and in cooperation with the National Capital Planning Commission (NCPC) and the U.S. General Services Administration (GSA), has prepared an Environmental Assessment (EA) to evaluate impacts of three alternatives for the design of a national memorial to President Dwight D. Eisenhower. The Memorial site is bounded by Independence Avenue SW to the north, 4th and 6th Streets SW to the east and west, respectively, and the Lyndon Baines Johnson Building to the south. Additionally, Maryland Avenue SW bisects the site diagonally.

The purpose of the proposed action is to establish a national memorial for Dwight D. Eisenhower that reflects “his unique contributions to America as a patriot and a hero; lifelong public servant; outstanding military officer; and beloved President” (EMC, 2005). The proposed action is necessary given the significance of Dwight D. Eisenhower and the lack of a national memorial to him. Eisenhower served as the 34th President of the United States, and he ranks as one of the preeminent figures in global history from the 20th century.

This EA presents three design concepts, or action alternatives, and a No Action Alternative. The design concepts feature bas relief blocks, a water feature, a central Memorial grove, and a colonnade, whose columns would range from 50 to an average of 78 feet in height and 10 to 12 feet in diameter. Alternative 3 would also contain three metal tapestries to frame the eastern, western, and southern boundaries of the site. Visitor services, such as restrooms, ranger contact station, and book sales area, would be included. All of the action alternatives would include the transfer of land from GSA and DC Department of Transportation (DDOT) to NPS for the operation

of the Memorial. GSA would retain jurisdiction over the 50 feet immediately adjacent to the LBJ Building, forming the LBJ Promenade. All action alternatives would realign the Maryland Avenue corridor to its historic orientation. Alternative 1 would keep it open to vehicular traffic, while Alternatives 2 and 3 would close it to vehicular traffic.

The implementation of the action alternatives would result in long-term beneficial impacts to soils, vegetation, visitor use and experience, and water resources. There would be long-term minor to moderate adverse impacts to cultural resources, also known as historic properties or historic resources, park operations and management, and transportation in the project area.

This document is being used for compliance with both the National Environmental Policy Act (NEPA) of 1969, as amended and the National Historic Preservation Act of 1966, as amended.

Note to Reviewers and Respondents

To comment on this EA, you may mail comments or submit them online at <http://parkplanning.nps.gov/NAMA> and follow the appropriate links. Please be aware that your comments and personal identifying information may be made publicly available at any time. While you may request that NPS withhold your personal information, we cannot guarantee that we will be able to do so. Please mail comments to:

Glenn DeMarr, Project Manager
National Capital Region, National Park Service
1100 Ohio Drive Southwest
Washington, DC 20242

This page is intentionally left blank

**DWIGHT D. EISENHOWER MEMORIAL DESIGN
ENVIRONMENTAL ASSESSMENT**

TABLE OF CONTENTS

EXECUTIVE SUMMARY	ES-1	2.0 ALTERNATIVES	
TABLE OF CONTENTS	I	2.1 INTRODUCTION	2-1
1.0 PURPOSE AND NEED	1-1	2.2 DESCRIPTION OF ALTERNATIVES	2-1
1.1 INTRODUCTION	1-1	2.2.1 No Action Alternative	2-1
1.2 PURPOSE AND NEED FOR ACTION	1-3	2.2.2 Elements Common to All Alternatives.....	2-3
1.3 PROJECT BACKGROUND.....	1-3	2.2.3 Alternative 1: Maryland Roadway	2-9
1.3.1 Agency Relationships.....	1-5	2.2.4 Alternative 2: Maryland Promenade	2-13
1.3.2 Purpose and Significance of the Park	1-6	2.2.5 Alternative 3: Maryland Park/Tapestry .	2-17
1.3.3 Relationship to Laws, Executive Orders, Policies, and Other Plans	1-7	2.3 IDENTIFICATION OF THE PREFERRED ALTERNATIVE	2-24
1.4 SCOPING	1-18	2.4 CONSTRUCTION STAGIN	2-24
1.5 ISSUES AND IMPACT TOPICS	1-18	2.5 RELATIONSHIP TO THE NCPC DESIGN PRINCIPLES	2-24
1.6 IMPACT TOPICS ANALYZED IN THIS EA	1-20	2.6 MITIGATION MEASURES OF THE ACTION ALTERNATIVES.....	2-33
1.6.1 Impact Topics Dismissed from Further Analysis.....	1-22	2.7 ALTERNATIVES CONSIDERED BUT DISMISSED	2-35
1.7 IMPAIRMENT	1-27	2.7.1 Creation of a Square	2-35
		2.7.2 Retention of the Plaza.....	2-36
		2.8 ENVIRONMENTALLY PREFERRABLE ALTERNATIVE.....	2-36

2.9	SUMMARY OF ENVIRONMENTAL CONSEQUENCES	2-38
-----	---	------

3.0 AFFECTED ENVIRONMENT

3.1	CULTURAL RESOURCES	3-1
3.1.1	Archaeological Resources	3-4
3.1.2	Historic Resources.....	3-12
3.2	Visual Resources	3-20
3.3	PARK OPERATIONS AND MANAGEMENT	3-27
3.4	SOILS	3-29
3.5	TRANSPORTATION SYSTEMS	3-30
3.5.1	Vehicular Traffic	3-30
3.5.2	Parking	3-38
3.6	VEGETATION.....	3-40
3.7	VISITOR USE AND EXPERIENCE	3-41
3.8	WATER RESOURCES	3-42

4.0 ENVIRONMENTAL CONSEQUENCES

4.1	GENERAL METHODOLOGY FOR ESTABLISHING IMPACT THRESHOLDS AND MEASURING EFFECTS BY RESOURCE.....	4-1
4.1.1	General Analysis Methods.....	4-1
4.1.2	Basic Assumptions	4-1
4.1.3	Impact Thresholds.....	4-2
4.1.4	Cumulative Impact Analysis Method	4-2
4.2	CULTURAL RESOURCES	4-9
4.2.1	Archaeological Resources	4-9
4.2.2	Historic Resources	4-17
4.3	Visual Resources	4-29
4.4	PARK OPERATIONS AND MANAGEMENT	4-49
4.5	SOILS	4-57
4.6	TRANSPORTATION SYSTEMS	4-63
4.6.1	Vehicular Traffic.....	4-63
4.6.2	Parking.....	4-78
4.7	VEGETATION	4-87
4.8	VISITOR USE AND EXPERIENCE.....	4-93
4.9	WATER RESOURCES.....	4-103

5.0 CONSULTATION AND COORDINATION	5-1
5.1 AGENCY CONSULTATION AND COORDINATION....	5-1
6.0 LIST OF PREPARERS	6-1
7.0 GLOSSARY AND ACRONYMS	7-1
7.1 GLOSSARY OF TERMS.....	7-1
7.2 ACRONYMS	7-4
8.0 REFERENCES	8-1
APPENDIX A: IMPAIRMENT DETERMINATION	A-1
APPENDIX B: CORRESPONDENCE	A-2

List of Figures

1-1	Memorial location	1-2
1-2	Commemorative Works Act Memorial Zones	1-9
2-1	Existing site configuration.....	2-2
2-2	Side-by-side comparisons of all alternatives.....	2-4
2-3	Photos representing those under consideration for the Eisenhower Memorial.....	2-6
2-4	Alternative 1 site plan	2-10
2-5	Alternative 1, cross-section looking south	2-11
2-6	Alternative 1, cross-section looking east.....	2-11
2-7	Alternative 1, model looking northeast along Maryland Avenue	2-11
2-8	Alternative 2 site plan	2-14
2-9	Alternative 2, cross-section looking south	2-15
2-10	Alternative 2, cross-section looking east.....	2-15
2-11	Alternative 2, model looking northeast along Maryland Avenue	2-16
2-12	One example of a tapestry mock-up to illustrate its intended transparent quality	2-17
2-13	Alternative 3 site plan	2-18
2-14	Alternative 3, cross- section looking south	2-19
2-15	Alternative 3, cross-section looking east.....	2-19
2-16	Alternative 2, model looking northeast along Maryland Avenue	2-20
2-17	Photographs of woven tapestry mock-up at LBJ Building	2-23
	Photographs of woven tapestry mock-up at LBJ Building	2-23
2-18	LBJ Building	2-23

3-1	Area of Potential Effects.....	3-3	3-22	Maryland Avenue view corridor looking northeast towards the U.S. Capitol Building from 7th Street.....	3-24
3-2	A. Boschke 1857 Map of Washington City, District of Columbia	3-5	3-23	Independence Avenue view corridor from 7th Street.....	3-25
3-3	Sanborn Fire Insurance Map 1888	3-6	3-24	4th Street view corridor looking north from Independence Avenue.....	3-26
3-4	Southwest Washington, D.C. July 1939.....	3-7	3-25	Map of National Mall and Memorial Parks	3-28
3-5	Baist Real Estate Survey Map 1903.....	3-8	3-26	Studied roadways and intersections	3-31
3-6	Baist Real Estate Survey Map 1909-1911	3-9	3-27	Parking supply in Memorial vicinity	3-38
3-7	Baist Real Estate Survey Map 1945.....	3-10	4-1	Existing and proposed views northeast along Maryland Avenue under Alternative 1.....	4-31
3-8	North Elevation of the Lyndon Baines Johnson Building.....	3-12	4-2	Existing and proposed views west along Independence Avenue under Alternative 1.....	4-32
3-9	L'Enfant Plan as engraved by Andrew Ellicott, 1792.....	3-13	4-3	Existing and proposed views north along 4th Street under Alternative 1	4-33
3-10	McMillan Plan.....	3-14	4-4	Existing and proposed views southwest to the Memorial site under Alternative 1	4-34
3-11	Orville and Wilbur Wright Buildings.....	3-15	4-5	Existing and proposed views northeast along Maryland Avenue under Alternative 2.....	4-37
3-12	Wilbur Cohen Building	3-16	4-6	Existing and proposed views west along Independence Avenue under Alternative 2.....	4-38
3-13	Hubert Humphrey Building.....	3-16	4-7	Existing and proposed views north along 4th Street under Alternative 2.....	4-39
3-14	U.S. Capitol Building.....	3-17	4-8	Existing and proposed views southwest to the Memorial site under Alternative 2	4-40
3-15	U.S. Botanic Garden.....	3-17	4-9	Existing and proposed views northeast along Maryland Avenue under Alternative 3.....	4-43
3-16	The National Mall.....	3-18	4-10	Existing and proposed views west along Independence Avenue under Alternative 3.....	4-44
3-17	Existing Plaza in front of Lyndon Baines Johnson Building.....	3-20			
3-18	Maryland Avenue Right-of-Way and Parking.....	3-20			
3-19	NPS parcel with community gardens and exercise course and NASM in the distance	3-21			
3-20	The Wilbur Cohen Building located directly east of the Memorial site.....	3-22			
3-21	The Wilbur Wright Building and intersection of 7th Street and Maryland Avenue located west of the Memorial site.....	3-23			

4-11	Existing and proposed views north along 4th Street under Alternative 3.....	4-45
4-12	Existing and proposed views southwest to the Memorial site under Alternative 3	4-46

List of Tables

2-2	Summary of NCPC Design Principles Compliance	2-31
2-2	Summary of Environmental Consequences.....	2-40
3-1	Historic Resources within the Area of Potential Effect.....	3-2
3-2	Existing Peak Travel Volumes	3-34
3-3	Level of Service Standards	3-35
3-4	Existing Level of Service Conditions.....	3-36
3-5	Parking by Type in Vicinity of Memorial.....	3-37
3-6	Table 3-6: Existing Available Memorial Site Parking ..	3-38
3-7	Existing Trees by Parcel.....	3-40
4-1	Summary of Cumulative Projects	4-4
4-2	Existing Level of Service Conditions (directly below) and Level of Service for Future Without Project (Year 2015).....	4-65
4-3	Existing Level of Service Conditions (directly below) and Alternative 1 Future With Project Conditions (Year 2015)	4-69
4-4	Existing Level of Service Conditions and LOS for Alternative 2 Future With Project Conditions (Year 2015)	4-74
4-5	Parking Assumptions Calculations	4-79

This page is intentionally left blank

1.0 PURPOSE AND NEED

This page is intentionally left blank

1.1 INTRODUCTION

The National Park Service (NPS) and the Eisenhower Memorial Commission (EMC) propose to design, construct, and operate a national memorial to Dwight D. Eisenhower to commemorate his accomplishments and achievements as the Supreme Commander of the Allied Forces in Europe in World War II, as the 34th President of the United States, and as a public servant (115 STAT. 2273). Upon its completions and acceptance the memorial would be operated and maintained by the NPS. The Eisenhower Memorial (Memorial) would be located in Washington, DC, between 4th and 6th Streets SW, and bound by Independence Avenue SW to the north (all streets are SW, unless otherwise specified). The Lyndon Baines Johnson Building (LBJ Building), which houses the Department of Education (DEd), lies to the south (see Figure 1-1). The Memorial would include commemorative features and a designed landscape to honor Eisenhower, as well as a canopy, restrooms, a ranger contact station, and a book sales area.

According to the EMC's authorizing legislation (Public Law (PL) 106-79 Section 8162 (1999)), the proposed Memorial is to be "an appropriate permanent memorial to Dwight D. Eisenhower to perpetuate his memory and his contributions to the United States," and EMC "shall consider and formulate plans for such a permanent memorial to Dwight D. Eisenhower, including its nature, design, construction, and location." The legislation authorized the construction of the Memorial and created EMC to carry out the project.

On January 10, 2002, Congress authorized EMC to establish the Eisenhower Memorial within the District of Columbia or its environs upon enactment of PL 107-117, Section 8120 (115 STAT.

2273). The Memorial is to be established in accordance with the Commemorative Works Act (PL 99.652(1986)) as amended (40 USC 89), described in Section 1.3.3. Authorization to consider a site within Area I (40 USC 89) was approved April, 2006. EMC's legislatively authorized period of performance is seven years, from April, 2006 to April, 2013.

EMC, with assistance from NPS, is responsible for designing and constructing the Memorial. Once construction is complete, NPS would be responsible for operating and maintaining the Memorial.

The design, construction, conveyance, and operation of the Eisenhower Memorial and the transfer of jurisdiction for lands currently administered by the U.S. General Services Administration (GSA) and the District of Columbia Department of Transportation (DDOT) to NPS are the subject of this environmental assessment (EA). NPS is the lead federal agency responsible for the preparation of this EA. The National Capital Planning Commission (NCPC) and GSA are cooperating agencies, which are requested or designated by the lead agency to assist in the preparation of the EA.

NPS, in association with EMC, has prepared this EA consistent with the National Environmental Policy Act (NEPA) of 1969, as amended, the Council on Environmental Quality (CEQ) regulations implementing NEPA [40 Code of Federal Regulations (CFR) 1500-1508 (1986)], as amended, and NPS Director's Order #12 (DO-12). This EA has also been prepared consistent with NCPC's Environmental and Historic Preservation Policies and Procedures. In conjunction with this EA, the project is undergoing a review of potential effects on historic resources in compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966.

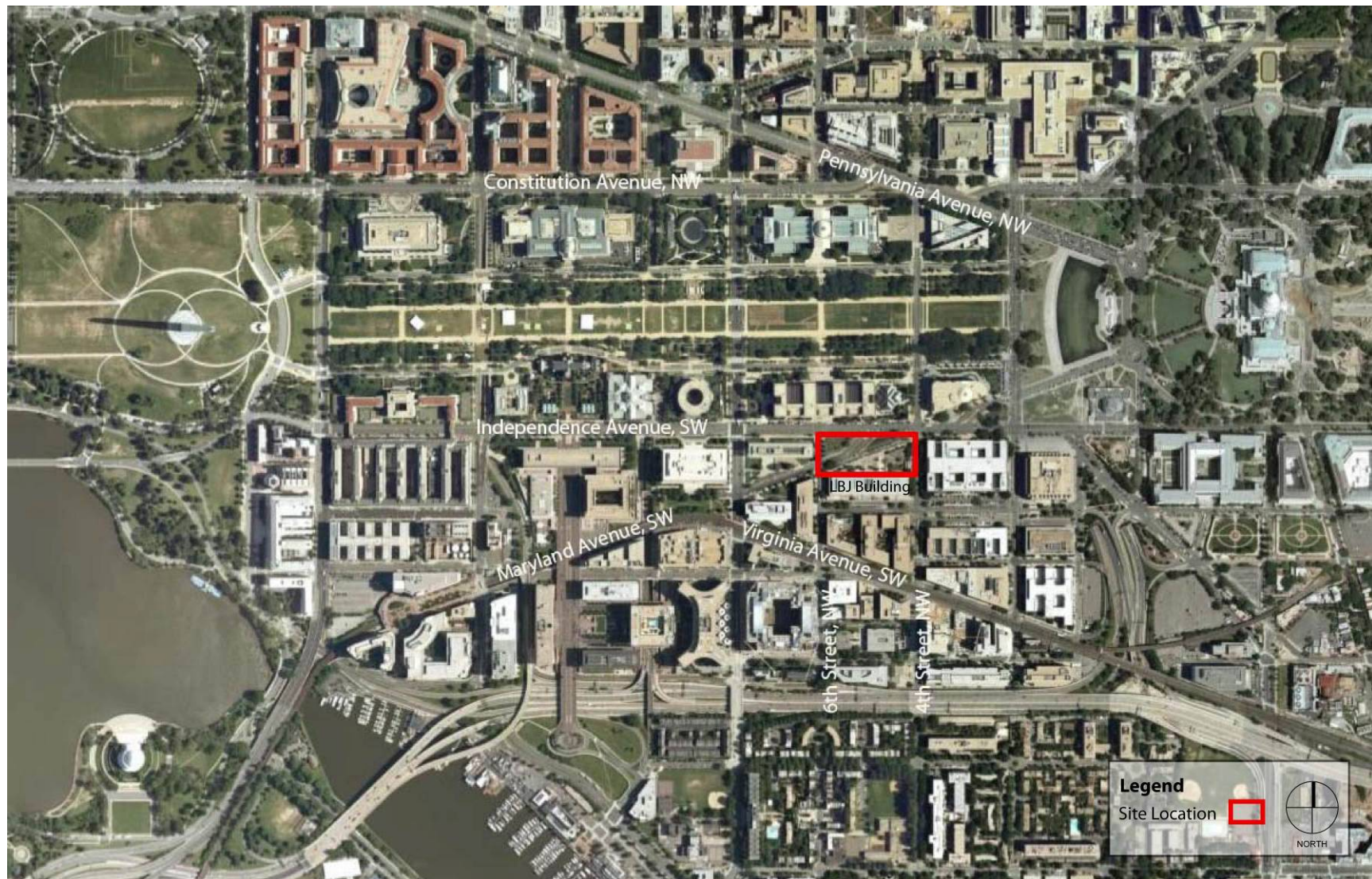


Figure 1-1: Memorial location
Source: Google and AECOM, 2010

1.2 PURPOSE AND NEED FOR ACTION

The purpose of the proposed action is to establish a memorial for Dwight D. Eisenhower that reflects “his unique contributions to America as a patriot and a hero; lifelong public servant; outstanding military officer; and beloved President” (EMC, 2005). The proposed action is necessary given the significance of Dwight D. Eisenhower and the lack of a memorial honoring him in Washington, DC. Eisenhower served as the 34th President of the United States, and he ranks as one of the preeminent figures in global history from the 20th century.

Eisenhower was a central figure in the victorious resolution of World War II, but his lasting significance in history lies in his deep commitment to freedom, the Constitution and democracy, and his contributions to defining and sustaining an international peace for which many Americans died (EMC, 2005).

Dwight D. Eisenhower’s life of public service was built around certain basic values that he shared with most Americans. Central to his thought and his public image was a powerful dedication to democracy, and a belief in the right of the people to choose their own government and to judge the policies and the leaders who implemented the nation’s public programs (EMC, 2006).

1.3 PROJECT BACKGROUND

In October, 1999, Congress determined that a memorial to President Eisenhower was needed. It enacted PL 106-79, where it established that “the people of the United States feel a deep debt of gratitude to Dwight D. Eisenhower, who served as Supreme Commander of the Allied Forces in Europe in World War II and subsequently as the 34th President of the United States; and an appropriate permanent memorial to Dwight D. Eisenhower should be created to perpetuate his memory and his contributions to the United States.” In the law, Congress established EMC to lead the effort of establishing the permanent memorial. EMC consists of 12 members: four U.S. Senators, four U.S. Congressmen, and four Presidential Appointees. Authorization of the establishment of the memorial followed in January 2002 (115 STST. 2273) Authorization to consider a site within Area I (40 USC 89) was approved April, 2006.

Site Selection

On November 8, 2005, the National Capital Memorial Advisory

Commission (NCMAC) gave their concurrence to the preferred site, pending legislation authorizing location within Area I (discussed in Section 1.3.3). In May 2006, Congress enacted PL 109-220, noting that “the location of the commemorative work to honor Dwight D. Eisenhower..., within Area I as depicted on the map referred to in section 8908(a) of title 40, United States Code, is approved.”

In 2006, NPS, in association with EMC, completed the *Proposed Dwight D. Eisenhower Memorial Site Selection Environmental Assessment* for the selection of the preferred site (NPS and EMC, 2006). The analysis stated that a presidential memorial would

transform the “spare and uninviting plaza” into a new cultural destination near the National Mall and that no significant impact would occur due to the location of a memorial at the site. The Finding of No Significant Impact concluded that the design of the Memorial “will respect the historic significance of Maryland Avenue and its historic vista through appropriate design guidance and development limitations.” It also left open the possibility of NPS, NCPC, and the U.S. Commission of Fine Arts (CFA) to respectively develop design at the time of site approval.

On September 7, 2006 NCPC voted to approve the location for the Dwight D. Eisenhower Memorial at the site. NCPC found the site to be consistent with *Memorials and Museums Master Plan, Extending the Legacy*, and the *Federal Elements of the Comprehensive Plan for the National Capital* (as discussed in Section 1.3.3). At that time, NCPC adopted a FONSI that included a number of design principles to guide development of the Memorial design. The NCPC FONSI noted the possibility that the design principles could be further refined during the design phase Section 106 process and a resultant MOA. The design principles are listed below:

- Preserve reciprocal views to and from the U.S. Capitol along Maryland Avenue.
- Enhance the nature of the site as one in a sequence of public spaces embellishing the Maryland Avenue vista.
- Create a unified Memorial site that integrates the disparate parcels into a meaningful and functional public gathering place that also unifies the surrounding precinct.

- Reflect L’Enfant Plan principles by shaping the Memorial site as a separate and distinct public space that complements the DEd Headquarters and other surrounding buildings.
- Respect and complement the architecture of the surrounding precinct.
- Respect the building lines of the surrounding rights-of-way and the alignment of trees along Maryland Avenue.
- Incorporate significant green space into the design of the Memorial.

On September 21, 2006, CFA reviewed and approved the proposed site for the Memorial. At that time, CFA chose not to adopt the design approved by NCPC and incorporated into the NCPC’s site selection FONSI. Instead, the CFA Commission members said they expected the design team to fully consider the appropriate treatment of the site in developing a concept for their review.

Memorial Design

Following site approval, EMC set out to select and contract a designer for the Memorial. In 2008, EMC solicited potential design concepts from leading architects, landscape architects, and designers. In 2009, EMC awarded Gehry Partners, LLP the commission.

Gehry Partners developed three concept design alternatives, which were refined using the Section 106 consultation process. Over the course of 20 months, four Section 106 Consulting Parties meetings were held. Representatives from NCPC, CFA, SHPO, the Advisory

Council on Historic Preservation (ACHP), DEd, the National Coalition to Save our Mall, the Committee of 100, and other parties provided comment and input.

EMC and Gehry Partners, LLP submitted conceptual plans to both CFA and NCPC in the winter of 2010-11. On January 20, 2011, CFA approved the concept plan for the Eisenhower Memorial. It is anticipated that a revised concept plan for the Memorial will be submitted to CFA in the fall of 2011 for approval.

NCPC reviewed concept plans of the Eisenhower Memorial on February 3, 2011. Given that this was only the concept review stage, no formal action was taken by NCPC. Rather, NCPC provided comments on the three design alternatives, because they do not formally approve concept plans (See Appendix D). A revised concept plan was approved by CFA on September 15, 2011.

1.3.1 Agency Relationships

Although EMC is proposing the design and construction of the Memorial, three governmental agencies currently control portions of the project site. NPS controls an approximately one half-acre portion at the northwest corner; the District of Columbia Government has administrative jurisdiction over approximately two acres; and GSA owns approximately 1.5 acres along the south side of Maryland Avenue in Square 492, which is comprised of the plaza and the LBJ Building. Prior to construction, the District of Columbia and GSA would transfer their respective portions of the site to NPS. GSA would retain jurisdiction over the 50-foot wide area adjacent to the LBJ Building (known as the LBJ Promenade), which GSA would operate as part of the building yard for DEd. Following construction,

NPS would be responsible for the long-term operation and maintenance of the Eisenhower Memorial.

Approvals Framework

The Commemorative Works Act, discussed further in Section 1.3.3, outlines the approvals necessary for a commemorative work authorized by federal law. NCMAC must be consulted regarding the selection of design concepts. In addition, NPS must submit design proposals to CFA and NCPC, for their approval. Only after these tasks are completed and approved, and the necessary funds to complete construction and preserve the Memorial are proven to be available, may a construction permit be issued, in this case (40 U.S.C. Chapter 89, Section 8906) by NPS.

In addition to its role as a cooperating agency, NCPC is required to comply with NEPA and has adopted NEPA guidance outlined in Section 4(D) of NCPC's Environmental and Historic Preservation Policies and Procedures. NCPC's design principles require applicants to prepare the necessary NEPA and Section 106 of the NHPA documents, in conformance with respective CEQ and ACHP requirements.

CFA is also required to comply with NEPA and Section 106. Although it participates as a consulting party under Section 106, CFA does not issue its own FONSI and does not participate as a cooperating agency in the NEPA process.

SHPO has reviewed the Memorial designs, as called for by the National Historic Preservation Act. Through consultation, SHPO must make determinations of effects, in consultation with any consulting parties, to historic resources as a result of the Memorial.

These determinations enable NPS and NCPC to meet their Section 106 responsibilities.

1.3.2 Purpose and Significance of the National Mall and Memorial Parks

The NPS parcel at the Memorial site is part of the National Mall and Memorial Parks (NAMA). This park unit lies within the National Capital Region, which contains numerous park units, of NPS. NAMA would manage and operate the Eisenhower Memorial upon its completion. As part of the planning process for the National Mall Plan, NPS developed a Foundation Statement (NPS, 2008) designed to create a shared understanding of the purpose and significance of NAMA.

Purpose of NAMA

As stated in the Foundation Statement, the purpose of NAMA is to

- Preserve, interpret, and manage federal park lands in the national capital on the land delineated by the L'Enfant Plan and the 1902 Senate Park Improvement Plan (commonly referred to as the McMillan Plan), including green spaces, vistas, monuments, memorials, statues, historic sites, cultural landscapes, and natural and recreation areas.
- Preserve places where important events in U.S. history occurred (e.g., the Petersen House, Pennsylvania Avenue).
- Provide opportunities for visitor contemplation, celebration, commemoration, citizen participation, recreation, and demonstration, where the full expression of

the constitutional rights of speech and peaceful assembly occur.

- Maintain space for the symbols and icons of our nation and its ideals (e.g., equality, freedom, and democracy).
- Serve as a symbol of the United States to the world.

Significance of NAMA

Park significance statements capture the essence of a park's importance to the nation's natural and cultural heritage.

Understanding park significance helps managers make decisions that preserve the resources and values necessary to the park's purpose. Several aspects of the NAMA contribute to its overall significance.

- The areas under NPS stewardship are some of the oldest public lands in the United States, dating back to 1791 when the District was established, and the L'Enfant Plan guided the creation and development of park areas.
- Much of the area managed by NAMA reflects the physical expression of the historic L'Enfant and McMillan Plans for the federal city.
- The areas managed by NAMA are vital components of the historic federal city- the singular designed urban core that from inception has physically expressed its political role as the American national capital city and seat of government.

- NAMA preserves the stage upon which historic events of national significance occurred, such as the "I Have a Dream" speech of Dr. Martin Luther King, Jr. at the Lincoln Memorial.
- The iconography, architecture, and open spaces within NAMA are a source of national pride and symbolize our cherished values and ideals, and they commemorate individuals and events that symbolize our freedom, justice, compassion, equality, service, healing, citizenship, civil rights, liberty, service, dedication, courage, sacrifice, innovations, unity, and diversity, as well as struggles of the international community for freedom and democracy. A visit to the park sites is a pilgrimage to find inspiration among the principal symbols of America's heritage.
- NAMA is the setting for national celebrations, parades, festivals, ceremonies, and rallies, as well as local and regional events.
- NAMA comprises a globally recognized platform to exercise democratic First Amendment rights.
- The individual states within the United States are represented in park elements ranging from street names and layout of the L'Enfant Plan and successor plans to African American personages, history, and events that have taken place or are commemorated here.

1.3.3 Relationship to Laws, Executive Orders, Policies, and Other Plans

The proposed action and the site upon which it would be constructed relate to a variety of laws, policies, and other plans. The purpose of this section is to describe the regulatory framework for the Eisenhower Memorial. The following section describes the Commemorative Works Act, the NPS Organic Act, NEPA, NHPA, the National Parks Omnibus Management Act, the Energy Independence and Security Act, the Migratory Bird Treaty Act, and the Architectural Barriers Act; Executive Orders 12898, 11593, 11988, 13112, and 13514; NPS Director's Orders 12 and 28; the *Extending the Legacy: Planning America's Capital for the 21st Century Plan*; the *Memorials and Museums Master Plan*, the *Comprehensive Plan for the National Capital*, *Federal Elements and District Elements*, the *Monumental Core Framework Plan*, the *Capital Space: Ideas to Achieve the Full Potential of Washington's Parks and Open Space*, the *National Mall Plan*, the Urban Design and Security Plan Objectives and Policies, and NCPC Donor Recognition Policies .

Commemorative Works Act

Most directly relevant to the project is the Commemorative Works Act, which addresses the location of memorials within the Washington, DC area. Based on the Commemorative Works Act of 1986 (amended in 2003), the standards preserve the integrity of the Monumental Core and encourage memorials to be located in all quadrants of the city. The standards provide direction for placing memorials on federal lands administered by NPS and GSA in the District of Columbia and its environs.

The Commemorative Works Act, as amended, establishes three memorial zones in the Washington, DC area: The Reserve, Area I, and Area II. The Mall is an area that has been declared as a substantially completed work of civic art, in which no new museums or memorials can be constructed (40 USC 8908 (c)). Since 1986, Area I has been and is now a sensitive area designated for commemorative works of pre-eminent historic and lasting national significance requiring Congressional approval. Area II includes the balance of the city and its surrounding environs. Of the Memorial site, the NPS parcel and the Maryland Avenue right-of-way are located within Area I. The GSA parcel is located within Area II (see Figure 1-2).

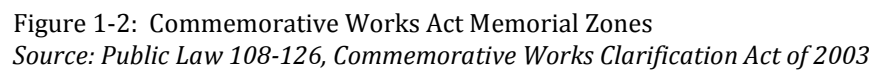
In considering site and design approvals, CFA and NCPC shall be guided but not limited by, the following criteria:

- Surroundings - To the maximum extent possible, a commemorative work shall be located in surroundings that are relevant to the subject of the work.
- Location - A commemorative work shall be located so that it does not interfere with, or encroach on, an existing commemorative work; and to the maximum extent practicable, it protects open space, existing public use, and cultural and natural resources.
- Material - A commemorative work shall be constructed of durable material suitable to the outdoor environment.

- Landscape features - Landscape features of commemorative works shall be compatible with the climate.
- Museums - No commemorative work primarily designed as a museum may be located on lands under the jurisdiction of the Secretary in Area I or in East Potomac Park as depicted on the map referenced in section 8902 (2).
- Site-specific guidelines - NCPC and CFA may develop such criteria or guidelines specific to each site that are mutually agreed upon to ensure that the design of the commemorative work carries out the purposes of this chapter.
- Donor contributions - Donor contributions to commemorative works shall not be acknowledged in any manner as part of the commemorative work or its site.

NPS Organic Act

Through the NPS Organic Act of 1916 (Organic Act), Congress has directed the U.S. Department of Interior and NPS to manage units “to conserve the scenery and the natural and historic objects and wildlife therein and to provide for the enjoyment of the same in such a manner and by such a means as will leave them unimpaired for the enjoyment of future generations” (16 USC 1). Congress reiterated this mandate in the Redwood National Park Expansion Act of 1978 by stating that NPS must conduct its actions in a manner that will ensure no “derogation of the values and purposes for



which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress” (16 USC 1a-1). Despite these mandates, the Organic Act and its amendments afford the NPS latitude when making resource decisions that balance resource preservation and visitor recreation.

Because conservation is an important function of the agency, NPS seeks to avoid or to minimize adverse impacts on park resources and values. NPS has discretion to allow impacts on park resources and values when necessary and appropriate to fulfill the purposes of a park (NPS, 2006 sec. 1.4.3). While some actions and activities cause impacts, NPS cannot allow an adverse impact that would constitute impairment of the affected resources and values (NPS, 2006 sec. 1.4.3). The Organic Act prohibits actions that permanently impair park resources unless a law directly and specifically allows for the acts (16 USC 1a-1). An action constitutes an impairment when its impacts “harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values” (NPS, 2006 sec. 1.4.5). To determine impairment, NPS must evaluate “the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts” (NPS, 2006 sec. 1.4.5).

Park units vary based on their enabling legislation, natural resources, cultural resources, and missions; management activities appropriate for each unit and for areas within each unit vary as well. An action appropriate in one unit could impair resources in another unit. This EA analyzes the context, duration, and intensity of impacts related to the development of a memorial to Dwight D.

Eisenhower, as well as the potential for resource impairment as required by the Organic Act and other regulations described below.

National Environmental Policy Act, 1969, as Amended

NEPA was passed by Congress in 1969 and took effect on January 1, 1970. This legislation established this country’s environmental policies, including the goal of achieving productive harmony between human beings and the physical environment for present and future generations. It provided the tools to implement these goals by requiring that every federal agency prepare an in-depth study of the impacts of “major federal actions having a significant effect on the environment” and alternatives to those actions. It required that each agency make that information an integral part of its decisions. NEPA also requires that agencies make a diligent effort to involve the interested and affected public before they make decisions affecting the environment.

NEPA is implemented through CEQ regulations (40 CFR 1500–1508) (CEQ 1978) and U.S. Department of Interior regulations (43 CFR Part 46). NPS has in turn adopted procedures to comply with the Act and the CEQ regulations, as found in Director’s Order 12: Conservation Planning, Environmental Impact Analysis, and Decision-making (NPS, 2006a), and its accompanying handbook. This EA complies with NEPA, NCPC’s Environmental and Historic Preservation Practices and Procedures, and the procedures outlined in Director’s Order 12.

National Historic Preservation Act, as amended through 2000 (16 U.S.C. 470), including Section 106

NHPA of 1966, as amended through 2000, protects buildings, sites, districts, structures, and objects that have significant scientific, historic, or cultural value. The act established affirmative responsibilities of federal agencies to preserve historic and prehistoric resources. Section 106 of the NHPA directs federal agencies to take into account the effects of any undertaking on historic properties. "Historic property" is defined as any district, building, structure, site, or object that is eligible for listing in the National Register of Historic Places (NRHP). Section 106 also provides the Advisory Council on Historic Preservation (ACHP) and the state historic preservation officer (SHPO) an opportunity to comment on the assessment of effects that would result from the undertaking. Section 1.4 of this EA describes the Section 106 process that will continue throughout the design period for the Eisenhower Memorial.

National Parks Omnibus Management Act of 1998

The National Parks Omnibus Management Act (16 USC 5901 et seq.) underscores NEPA and is fundamental to NPS park management decisions. It provides direction for articulating and connecting resource management decisions to the analysis of impacts, using appropriate technical and scientific information. Both the National Parks Omnibus Management Act and NEPA also recognize that such data may not be readily available and provide options for resource impact analysis should this be the case.

The National Parks Omnibus Management Act directs the NPS to obtain scientific and technical information for analysis. The NPS

handbook for Director's Order 12 states that if "such information cannot be obtained due to excessive cost or technical impossibility, the proposed alternative for decision will be modified to eliminate the action causing the unknown or uncertain impact or other alternatives will be selected" (Management Policies, 2006; NPS, 2006 sec 4.4). This EA has been prepared consistent with the National Parks Omnibus Management Act, using appropriate technical and scientific information.

Energy Independence and Security Act of 2007

Enacted in 2007, the stated purpose of the Energy Independence and Security Act of 2007 (EISA) is "to move the United States toward greater energy independence and security, to increase the production of clean renewable fuels, to protect consumers, to increase the efficiency of products, buildings, and vehicles, to promote research on and deploy greenhouse gas capture and storage options, and to improve the energy performance of the Federal Government, and for other purposes." Under Section 438 of EISA, federal agencies are required to reduce stormwater runoff from federal development and redevelopment projects to pre-development levels in order to protect water resources. These stormwater requirements are addressed in this EA.

Architectural Barriers Act

Pursuant to the Architectural Barriers Act of 1968, all public buildings, structures, and facilities must comply with specific requirements related to architectural standards, policies, practices, and procedures that accommodate people with hearing, vision, or other disability and access requirements. NPS must comply with

the Architectural Barriers Act Accessibility Standards (ABAAS) for this project, as provided in the action alternatives.

Migratory Bird Treaty Act of 1918, as amended 1989

The original 1918 Migratory Bird Treaty Act implemented a 1916 treaty between the U.S. and Great Britain (for Canada) for the protection of migratory birds. Later amendments implemented treaties between the U.S. and Mexico, the U.S. and Japan, and the U.S. and the Soviet Union (now Russia). Specific provisions in the statute include a Federal prohibition to “pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention ...for the protection of migratory birds... or any part, nest, or egg of any such bird” (16 U.S.C. 703). These actions would be considered a take. This applies to birds included in international conventions between the U.S. and Great Britain, the U.S. and Mexico, the U.S. and Japan, and the U.S. and Russia.

The responsibilities of Federal agencies to protect migratory birds are set forth in Executive Order 13186. U.S. Fish and Wildlife Service (FWS) is the lead agency for migratory birds. The Directors of the NPS and the FWS signed a Memorandum of Understanding to Promote the Conservation of Migratory Birds (MOU) on April 12, 2010, in order to meet the requirements under Section 3 of Executive Order 13186 concerning the responsibilities of Federal agencies to protect migratory birds. The MOU specifies procedures that the superintendent of a NPS unit, or a designated

representative of the superintendent, will conduct prior to starting any activity that is likely to result in unintentional take. NPS will follow these procedures if it is determined that an action would result in take.

Executive Order 12898 – Minority Populations and Low-Income Populations

On February 11, 1994, President Clinton issued Executive Order 12898. This order directs agencies to address environmental and human health conditions in minority and low-income communities so as to avoid the disproportionate placement of any adverse effects from federal policies and actions on these populations. This EA complies with Executive Order 12898 by determining whether minority and low-income communities would be disproportionately adversely affected by the establishment of the Eisenhower Memorial.

Executive Order 11593 – Protection and Enhancement of the Cultural Environment

This Executive Order directs NPS to support the preservation of cultural properties and to identify and nominate to the National Register cultural properties within the park and to “exercise caution . . . to assure that any NPS-owned property that might qualify for nomination is not inadvertently transferred, sold, demolished, or substantially altered.” Section 106 consultations were undertaken for the Eisenhower Memorial to ensure that actions regarding cultural properties are consistent with Executive Order 11593.

Executive Order 11988: Floodplain Management

Executive Order 11988 requires federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by flood plains in carrying out its responsibilities." This EA used these standards in its evaluation of floodplains in Section 1.6.1.

Executive Order 13112: Invasive Species

This Executive Order addresses the prevention of the introduction of invasive species and provides for their control and minimization of the economic, ecological, and human health impacts the invasive species causes. This EA evaluates invasive species in Section 4.7: Vegetation.

Executive Order 13514: Federal Leadership in Environmental, Energy, and Economic Performance

This Executive Order sets sustainability goals for federal agencies and focuses on making improvements in their environmental, energy and economic performance. It requires federal agencies to set a 2020 greenhouse gas emissions reduction target; increase energy efficiency; reduce fleet petroleum consumption; conserve water; reduce waste; support sustainable communities; and leverage federal purchasing power to promote environmentally

responsible products and technologies. This EA documents the Eisenhower Memorial's strategies to meet these goals.

Director's Order 12: Conservation Planning, Environmental Impact Analysis, and Decision-making

Director's Order 12 (NPS, 2006a) and its accompanying handbook outlines policies and procedures by which NPS carries out NEPA and the NPS Organic Act. This order provides specific guidance on analysis standards required by legislation, and describes the roles and responsibilities for decision makers within NPS. It encourages the use of interdisciplinary approaches to decision making, establishment of benchmarks demonstrating best management practices, use of alternative dispute resolution, peer review panels, and analysis of impairment to resources as part of the environmental impact analysis process. As part of the development of this EA, NPS created an interdisciplinary science team. Comprised of members with technical expertise in the resources identified in this EA, the team reviewed analysis to ensure its quality. This EA was prepared in accordance with the instructions, guidance, and policies of Director's Order 12.

Director's Order 28: Cultural Resource Management

Director's Order 28 calls for NPS to protect and manage cultural resources in its custody through effective research, planning, and stewardship and in accordance with the policies and principles contained in the NPS Management Policies (NPS, 2006). This order also directs NPS to comply with the substantive and procedural requirements described in the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation*, the Secretary of the Interior's *Standards for the Treatment of Historic*

Properties with Guidelines for Treatment of Cultural Landscapes, and the Secretary of the Interior's *Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings*. Additionally, NPS will comply with the 2008 Programmatic Agreement (PA) among the NPS, ACHP, and the National Conference of State Historic Preservation Officers for Compliance with Section 106 of the NHPA. The accompanying handbook to this order addressed standards and requirements for research, planning, and stewardship of cultural resources as well as the management of archeological resources, cultural landscapes, historic and prehistoric structures, museum objects, and ethnographic resources. This EA was prepared in accordance with the standards described in Director's Order 28. Section 106 consultation regarding the Eisenhower Memorial described in this EA helps to ensure that actions will comply with Director's Order 28.

Legacy Plan

In 1997, NCPC released its vision plan for the nation's capital, *Extending the Legacy: Planning America's Capital for the 21st Century*. The Legacy Plan built upon the foundations of the L'Enfant and McMillan Plans and recommended dispersing new museums, memorials, and federal office buildings in all quadrants of the city. It established the importance of the U.S. Capitol as the center of the city and envisioned a reestablished Maryland Avenue that visually connected the U.S. Capitol to the Tidal Basin. Several subsequent studies were a direct outgrowth of the Legacy Plan, including the *Memorials and Museums Master Plan*, completed in 2001. The *Proposed Dwight D. Eisenhower Memorial Site Selection Environmental Assessment* included an analysis of the site's impacts on planning policies, including the Legacy Plan.

Memorials and Museums Master Plan

The *Memorials and Museums Master Plan*, prepared by NCPC and the Joint Memorial Task Force at the request of Congress "to guide the location and development of future Commemorative and cultural facilities in the District of Columbia and its environs," expands on some of the principles laid out in the Legacy Plan. Released in 2001, it also guided the development of the Commemorative Zone Policy, included in the 2003 amendments to the Commemorative Works Act, that established the Reserve and Areas I and II. The Memorials and Museums Master Plan establishes a framework for future memorials within the circles and squares of major avenues, at urban gateways and scenic overlooks, and along the Anacostia and Potomac Rivers. According to the *Memorials and Museums Master Plan*, new memorials should enhance the image and identity of their surroundings.

The site of the Eisenhower Memorial was identified as a prime candidate site (Site #3) for a commemorative work in the *Memorials and Museums Master Plan*. According to the *Memorials and Museums Master Plan*, a memorial on Site #3 should respect and reinforce the location's prominence as a civic plaza and incorporate existing vistas along Maryland Avenue. The mass and scale of the memorial should not obstruct or obscure the primary axial relationships along the Avenue and should not overshadow the LBJ Building, which houses the DED. In addition, the memorial should allow for public gathering while providing adequate space for commemorative reflection and take advantage of the existing transportation infrastructure. In addition, the *Memorials and Museums Master Plan* states "amenities such as parking and visitor services, i.e., restrooms, gift shops, and parking, should not be located at this site; nearby buildings should serve these uses. The site is not

appropriate for a building.” Subsequently, during the site selection process, the NPS FONSI for the site as a location for a landscaped memorial included provisions to allow for a small amount of building space to accommodate some on-site amenities.

The Proposed Dwight D. Eisenhower Memorial Site Selection Environmental Assessment included an analysis of the site’s impacts on planning policies, including the *Memorials and Museums Master Plan*.

Comprehensive Plan for the National Capital, Federal Elements

The Comprehensive Plan for the National Capital: Federal Elements (NCPC, 2004) is the principal planning document adopted by NCPC for the planning of federal facilities. The Comprehensive Plan contains goals, objectives, and planning policies for the growth and development of the Nation’s Capital. The Comprehensive Plan looks to the L’Enfant and McMillan Plans to preserve and enhance the image and identity of the national capital region. It also seeks to ensure that visitors have an enjoyable and educational experience and that regional planning goals are supported. The Proposed Dwight D. Eisenhower Memorial Site Selection Environmental Assessment included an analysis of the site’s impacts on planning policies, including the Comprehensive Plan: Federal Elements.

Comprehensive Plan for the National Capital, District Elements

The Comprehensive Plan for the National Capital: District Elements (DCOP, 2006) was prepared by the District of Columbia government and contain policies and maps that guide local government and private development in Washington, DC.

The Central Washington Area Element identified a number of goals for the area that includes the Eisenhower Memorial site. Among these goals were to have a “living downtown” and to integrate the “federal city,” or the federal buildings and structures, with the “domestic city,” or local community. Relevant policies in support of the goals include reinforcing the physical qualities that distinguish Central Washington from other major American cities, such as the L’Enfant framework of diagonal avenues and park reservations. Particularly relevant to the Eisenhower Memorial, the Central Washington Area Element recommends allowing Maryland and Virginia Avenues to be restored as connecting diagonal streets and important corridors that respect reciprocal views and pedestrian movement.

Monumental Core Framework Plan

The Monumental Core Framework Plan (NCPC, 2009) is a document that focuses on improving the setting of federal precincts that surround the National Mall in order to encourage future museum and memorial sponsors to locate in those areas and as a result relieve some of the development pressure from the National Mall. The stated goals of the *Monumental Core Framework Plan* are “to protect the National Mall from overuse; create distinctive settings for cultural facilities and commemorative works; improve connections between the National Mall, the city, and the waterfront; and transform the monumental core into a vibrant and sustainable place to visit, work, and live.”

The Monumental Core Framework Plan specifically addresses the area in which the Eisenhower Memorial would be located. The *Monumental Core Framework Plan* guidance includes:

- “The currently planned President Dwight D. Eisenhower Memorial will mark Maryland Avenue’s arrival at the Mall as a significant visitor destination” and improve the public realm of the corridor.
- Maryland Avenue should be restored as “a grand urban boulevard that links the U.S. Capitol to the Jefferson Memorial while enhancing mobility and environmental quality.” As part of this, a key action would be to tunnel the rail lines along Maryland Avenue in order to reclaim it as a complete and sustainable street and to divert vehicular traffic along a series of open spaces within the view corridor.
- Infill development should be encouraged along Maryland Avenue to strengthen the street wall to better frame views toward the U.S. Capitol and link the Jefferson Memorial.

Capital Space: Ideas to Achieve the Full Potential of Washington’s Parks and Open Space

The goal of the *Capital Space: Ideas to Achieve the Full Potential of Washington’s Parks and Open Space* (CapitalSpace) initiative is to address the growing, changing, and sometimes conflicting needs of residents, visitors, and workers regarding parks and open spaces. This document outlines six “big ideas” to accomplish this goal, including the enhancement of Center City parks. The Center City, as defined in CapitalSpace, is the dense urban area surrounding the National Mall and U.S. Capitol, which includes the site of the Eisenhower Memorial. One of the opportunities identified for Center City parks includes shaping “a greater understanding of the national

significance of the historical and cultural resources of the Center City parks, grand avenues and streets, and the statues and monuments within them.” Regarding the evaluation of the Memorial within this EA, relevant recommendations in support of the goal are:

- Identify and target capital improvements to repair and replace infrastructure and amenities, including quality landscaping, that will allow increased park usage.
- Consider the capacity of parks to function as neighborhood amenities when designing memorial and monument installations.
- Incorporate sustainable design features, low-impact development, and other greening techniques into new and existing parks and park improvements.
- Establish design guidelines that reinforce existing regulations promoting visual openness and continuity in the corridors between park spaces.
- Research and define historical significance, and build an understanding and appreciation of the park and neighborhood history through increased signage, promotions, programming, and other opportunities.

National Mall Plan

The National Mall Plan, completed by NPS in 2010, sets forth a vision for sustainable use, refurbishment, improvement, and maintenance of one of our nation's most iconic historic spaces, the National Mall. The plan provides for important uses, including commemoration, celebration, First Amendment demonstration and civic activities, as well as recreation, education, events, and relaxation. Acknowledging the National Mall as a complete work of civic art and as a source of national pride, the vision will protect memorials, views and other resources; improve the health and appearance of these areas; and provide quality facilities and experiences desired by the American people. The National Mall Plan's implementation would affect the Memorial, due to its proximity to the National Mall, through provision of visitor services and amenities.

Urban Design and Security Plan Objectives and Policies

Adopted in 2005, NCPC's *Urban Design and Security Plan Objectives and Policies* address urban planning and design issues while acknowledging the need for risk management strategies. The policies advise that security measures should be tailored to the setting and should include operational strategies, in addition to physical security measures. The policies call for allowing multi-modal transportation, such as maintaining open roadways and parking, to the extent possible. Physical perimeter security should be located and integrated into the building yard. If that is not possible, barriers should be integrated into the urban landscape.

NCPC Donor Recognition Policies

NCPC Donor Recognition Policies state that NCPC "will not approve donor or sponsor acknowledgements which intrude on the integrity of the particular project or its environs" (NCPC, 1988).

Contributions from private donors shall not be visibly acknowledged anywhere at the memorial site, including memorial buildings and cultural buildings and facilities associated with a memorial. Acceptable ways of acknowledging sponsors include a buried time capsule, at dedication ceremonies, and tokens of appreciation given to donors that are suitable for display in their home or office.

1.4 SCOPING

NEPA Scoping Process

As part of the preparation of this EA, and building upon the site selection EA prepared in 2006, appropriate government agencies, public organizations, and interested citizens were contacted and informed about the project. Notices were placed in the *Washington Post* newspaper and NPS's Planning, Environment, and Public Comment (PEPC) website. The purpose of the communications was to solicit comments on the proposed improvements, identify potential environmental concerns, and obtain other relevant information. Scoping input was obtained from the following agencies and organizations:

- NPS
- GSA
- NCPC
- NCMAC

- CFA
- DDOT
- DEd
- DC State Historic Preservation Office (DC SHPO)

In addition, a public scoping meeting was held April 22, 2010 to convene the interested parties and generate further discussion of issues. NPS and EMC considered all scoping comments in the preparation of this EA. The comments are identified in Section 1.5: Issues and Impact Topics.

Historic Preservation Consultation (NHPA-related)

The National Mall and the L'Enfant Plan are listed as historic resources in the NRHP. Because this project is a federal undertaking, NPS and EMC are required to take into account potential adverse affects to historic properties. As a result, a review of the project's potential effects on historic resources is being undertaken consistent with Section 106 of NHPA. NPS and EMC informally began the Section 106 consultation process in February, 2010, and formally initiated the process in April, 2010. Consultation with the consulting parties has continued through the design process. The Section 106 consultation process is being carried out concurrently with the NEPA process

1.5 ISSUES AND IMPACT TOPICS

Several key issues were identified during the scoping process:

- *Scale.* Comments were received regarding the scale of the Eisenhower Memorial design concepts; some comments expressed that the proposed scale of Memorial elements would establish a sense of place for the Memorial in its urban context, while others were concerned that the scale would eclipse neighboring buildings.
- *Maryland Avenue roadway.* Comments stated that consideration should be given to restoring Maryland Avenue to its historic alignment with the U.S. Capitol. Conflicting comments were received regarding vehicular access at the site. In particular, some comments requested closing the roadway to vehicular traffic, while others wanted to maintain vehicular access through the site.
- *Maryland Avenue viewshed.* Comments reflected the desire to maintain the vistas and views through the Memorial to the U.S. Capitol. Additionally, comments advised that the viewshed should be physically defined within the Memorial. Also, comments suggested that the view corridor should be defined by the 160-foot right-of-way, which is the building line, rather than the 50-foot cartway, which is the roadway.

- *Promenade area.* Comments suggested that design concepts should clearly define the passage between the Memorial and the LBJ Building.
- *Landscape.* Comments stated that the landscape treatment (ground plane) should be considered as a background to Memorial elements, rather than a prominent feature.
- *Perimeter security.* Comments stated that the design concepts should consider the integration of perimeter security elements, if deemed necessary.
- *Maintenance.* Comments advised that the Memorial and its elements should be appropriate for a wide range of seasonal conditions.
- *Visual impacts on surrounding buildings.* Comments included that consideration should be given to the potential visual impact to surrounding buildings, particularly the LBJ Building.
- *Consistency with site selection design principles/pre-design program.* Comments noted that the design should be consistent with the design principles developed through the Section 106 consultation process at site selection and subsequently incorporated into NCPC's site approval and FONSI. These design principles are listed in Section 1.3.
- *Open space.* Comments stated that the Memorial design should maintain the existing open space character of the site.
- *Commemoration of Eisenhower.* Among the comments received were questions regarding how Eisenhower should best be commemorated.
- *Parking.* Comments were received expressing concern for the reduction of on-street parking supply and removal of District parking meters and associated revenue.
- *Pedestrian circulation and access.* Comments stated that the safety of pedestrians accessing and circulating within the site should be ensured, particularly if Maryland Avenue is open to vehicular traffic.

1.6 IMPACT TOPICS ANALYZED IN THIS EA

A number of impact topics were identified for the Eisenhower Memorial through a variety of sources, including scoping for this EA; NPS knowledge of memorials in the national capital area; federal laws, regulations, and executive orders; and NPS management policies. The 2006 *Proposed Dwight D. Eisenhower Memorial Site Selection EA* also informed decisions about impact topics addressed in this EA. Many of the findings related to resource areas in the Site Selection EA would not be affected by the Memorial design, and are therefore dismissed from consideration in this EA. Other resource areas, such as visual resources, could be affected by the specific design of the Memorial, and are therefore revisited. The impact topics that have been determined to require a more detailed analysis of potential impacts as part of this EA are described below.

Cultural Resources

As specified in Chapter 5 of the NPS Management Policies 2006, the NPS is committed to identifying, documenting, and protecting cultural resources. NPS NEPA guidance requires the consideration of five types of cultural resources:

- Cultural Landscapes: A geographic area, including both cultural and natural resources and the wildlife and wildlife habitat or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values.
- Historic Structures or Districts: Historic properties significant in the history of American architecture, culture, engineering, or politics at the national, state, or local level.

- Archeology: Material remains or physical evidence of past human life or activities of archeological interest.
- Museum Collections: Prehistoric and historic objects, artifacts, works of art, archival documents, and natural history specimens. Prevention of damage and minimization of potential for deterioration are NPS management goals.
- Ethnography: Cultural and natural features of a Park that are of notable significance to traditionally associated peoples, which include contemporary Park neighbors and ethnic or occupational communities that have been associated with a Park for at least two or more generations (40 years), and whose interests in the Park's resources began before the Park's establishment.

The project area contains and has the potential to impact historic structures or districts, archeology, and cultural landscapes. No museum collections or ethnographic resources would be impacted and have been dismissed from further analysis (see Section 1.6.1 for dismissal).

Before Washington, DC was established, the Tiber, Goose, and St. James creeks ran near the site. As a result, prehistoric use of the area is likely. Urban development grew out of the 1791 L'Enfant Plan, and continues to the present. The possibility of the preservation of prehistoric archeological site and features is possible, although urban development may have already impacted them. It is also possible that sub-surface features associated with the mid-19th to mid-20th century residential and commercial uses remain capped below fill across some of the project site. Therefore, the site has moderate potential for prehistoric resources and moderate to high potential for historical archeological resources.

The establishment of the Memorial could have potential impacts on the integrity of the 1791 L'Enfant Plan and its characterizing features, as well as historic resources within the Area of Potential Effect (APE), as defined in Section 3.1. The Eisenhower Memorial site is bordered and bisected by streets (4th and 6th Streets and Maryland Avenue) that originally appeared in the 1791 L'Enfant Plan for Washington. This plan is one of the best American examples of a comprehensive Baroque city plan, featuring strong visual axes, roadways, and views. The L'Enfant Plan is listed in the NRHP. Additionally, several buildings adjacent to the site are listed in the NRHP or are considered to be potentially eligible for listing. Therefore, historic resources are addressed as an impact topic in this EA.

The Eisenhower Memorial site also borders the Mall, which is an iconic cultural landscape. Contributing elements include views to building facades from the Mall, views up 4th Street, and the historic circulation of 4th Street. Union Square is also located near the Memorial site. Union Square, which connects the Mall to the U.S. Capitol Grounds, is also considered a cultural landscape. Among its contributing elements is the vista to the U.S. Botanical Garden.

Visual Resources

The establishment of a new memorial and realignment (or closure to vehicular traffic) of Maryland Avenue may result in changes to the visual character and the views and vistas of the site and adjacent areas. This includes the view along Maryland Avenue to the U.S. Capitol. The views to and from the north side of the LBJ Building may also be altered with respect to light, air, and workplace environment. The visual resources discussion in this EA will address the potential visual impacts of the Memorial on the use

and enjoyment of surrounding buildings, particularly the LBJ Building,

Park Operations and Management

Operation and management of the Eisenhower Memorial would be more intense than the current site use. Operation and management of the site would require more NPS resources than is currently required for the existing 0.5-acre NPS parcel. The Eisenhower Memorial would require a minimum of one park ranger on-site during hours of operation. Additionally, the Memorial maintenance would require more intense management due to increased visitation and use and the change in the nature of the facility. Therefore, this resource area is addressed as an impact topic in this EA.

Soils

Activities associated with the construction of the Memorial would disturb approximately four acres, which may result in the loss of soil productivity and increase the potential for soil erosion and loss of topsoil. As a result, soil resources are addressed as an impact topic in this EA.

Transportation

The Eisenhower Memorial would represent a change to the existing roadway alignment of Maryland Avenue and new configurations for its intersections with Independence Avenue, 6th Street, and 4th Street. Construction of the Memorial may temporarily disrupt local traffic and pedestrian flow. In addition, parking spaces within and

adjacent to the Memorial site may be removed. Therefore, transportation is analyzed as an impact topic in this EA.

Vegetation

Existing vegetation on the Eisenhower Memorial site consists of landscaped grasses, shrubbery, trees, and permitted community gardens. During construction of the Memorial, almost all of the vegetation would be removed, but some street trees would be protected. Although the Eisenhower Memorial would install new plant materials, vegetation is considered as an impact topic for this EA.

Visitor Use and Experience

In its current condition, the Memorial site does not receive a significant amount of visitors, with the exception of workers from nearby government offices using the plaza during breaks, and occasional DED events. There are 38 community garden plots cultivated by gardeners on the NPS parcel, as well as an exercise circuit used by members of the public. Pedestrian traffic patterns follow sidewalks along adjacent roadways. The Eisenhower Memorial would increase visitor use at the site over current levels, modify pedestrian traffic patterns, and alter the essential purpose of the site. Therefore, visitor use and experience is considered as an impact topic.

Water Resources

Currently, impervious surfaces cover the majority of the site, which minimizes the amount of stormwater absorbed within the site. While the Eisenhower Memorial would likely alter the ratio of

paved and impervious surfaces, stormwater affects both the quantity and quality of area water resources. Therefore, water resources are addressed as an impact topic in this EA.

1.6.1 Impact Topics Dismissed from Further Analysis

The following topics were eliminated from further analysis in this EA. With mitigation, the potential impacts on these resources, to the extent they would occur, would be negligible or localized.

Air Quality

The 1963 Clean Air Act and the 1970 and 1990 Clean Air Act Amendments require public land managers, including NPS Park Superintendents, to protect air quality in national parks. The U.S. Environmental Protection Agency (EPA) has issued National Ambient Air Quality Standards for six criteria pollutants: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter with a diameter less than or equal to 10 micrometers (PM₁₀) and particulate matter with a diameter less than or equal to 2.5 micrometers (PM_{2.5}), lead (Pb), and sulfur dioxide (SO₂). Areas across the country are monitored for their criteria pollutant level. Air-quality Control Regions are monitored for their attainment or non-attainment of the standards. Air-quality Control Regions that exceed the allowable criteria pollutant level are designated as a “non-attainment” area; there are different levels of severity of nonattainment from marginal, moderate, serious, severe or extreme. The Washington, DC area is in moderate nonattainment for the criteria pollutant O₃, and nonattainment for PM_{2.5}; the area is in attainment for all other criteria pollutants.

This topic was addressed as part of the *Proposed Dwight D. Eisenhower Memorial Site Selection EA* (NPS and EMC, 2006). Should the proposed action be selected and implemented, short-term, construction-related impacts on air quality could occur as a result of the following:

- Construction emissions from soil excavation and construction equipment/installation of Memorial features and from trucks hauling construction materials to the site and excavated soil and broken pavement from the site;
- Vehicle emissions from construction worker vehicles driven to and from the site; and
- Fugitive dust from soil excavation and site disturbance.

Hydrocarbons, nitrogen oxide, and sulfur dioxide emissions would dissipate quickly. At times, fugitive dust would increase airborne particulates in the area of the project site.

Due to the limited potential grading area; the limited duration of construction equipment use; and the few vehicle trips that would be generated by the Memorial's operation, the project-generated emissions for O₃ and PM_{2.5} would be below minimum pollutant thresholds and would not change regional air quality. Best management practices related to vehicle and equipment emissions, such as the use of electric power sources for construction equipment, rather than portable fuel-combustion generators, would further reduce construction emissions. Therefore, this impact topic was dismissed from further analysis.

Ethnographic Resources

Ethnographic resources are defined by NPS 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 traditionally associated with it" (NPS, 1998). In this analysis, the NPS' term "ethnographic resource" is equivalent to the term Traditional Cultural Property (TCP). As defined by NPS's National Register Bulletin, *Guidelines for Evaluating and Documenting Traditional Cultural Properties*, a TCP is the "association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community." There are no properties that meet the definition of a TCP within the APE. Therefore, this impact topic has been dismissed from further consideration.

Museum Collections

The Eisenhower Memorial would not have any effects upon recognized museum collections (historic artifacts, natural specimens, and archival and manuscript material). Therefore, this impact topic was dismissed from further analysis.

Environmental Justice

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing the disproportionately high and/or adverse human health or environmental effects of the programs and policies on minorities

and low-income populations and communities. According to the EPA, environmental justice is

“...fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.”

There are no minority or low-income populations present near the Eisenhower Memorial site. Therefore, this impact topic was dismissed from further analysis.

Floodplains

A portion of the Eisenhower Memorial site is located within the 500-year floodplain boundary of the Potomac River, as determined by the U.S. Federal Emergency Management Agency (FIRM Map 1100010019C). The 500-year floodplain is defined as any land that would be inundated by a flood having a 0.2% chance of occurring in any given year. Existing conditions at the site include no values, or ecosystems, for floodplains.

FEMA recently adopted new floodplain maps based on existing Potomac River levee protection. Construction of a closure system for the levee is underway, with committed funding and developed plans. It is anticipated that the levee construction would be

completed before the Eisenhower construction would begin. Director's Order 77-2: Floodplain Management is NPS's floodplain management guidance required by Executive Order 11988: Floodplain Management. Director's Order 77-2 identifies three classes of actions based on the use and location of the proposed action: Class I addresses facilities in the 100-year floodplain, Class II addresses critical facilities in the 500-year floodplain, and Class III addresses facilities in High Hazard Areas.

Because the Memorial is outside the 100-year floodplain, does not include critical actions, and the site would not be in the 500-year floodplain at the time of construction, NPS would not require a statement of findings for this project, consistent with Director's Order 77-2, Floodplain Management. Therefore, this topic area was dismissed as an impact topic.

Human Health and Safety

Because the Eisenhower Memorial would be surrounded by roads, the potential threats to human health and safety include pedestrian safety, security, access to emergency responders, and any hazardous materials currently located at the site. The site is considered a relatively low-priority target for terrorism. Additionally, the LBJ Promenade would form a minimum 50-foot buffer between the Eisenhower Memorial and the LBJ Building, to maintain a security stand-off area. The LBJ Promenade would provide an emergency evacuation route for the LBJ Building and provide access for emergency responders (but not vehicles). GSA has reviewed the site and has determined that adequate emergency response access to the LBJ Building can be obtained via 4th and 6th Streets; the remaining three sides of the building would have full fire

department access (Dafin, 2006). The issue of pedestrian safety is addressed under the impact topic of visitor use and experience.

Construction of the Eisenhower Memorial would disturb existing petroleum-contaminated soils found at the site. Any disturbance would be a result of construction activities. Mitigation measures would include the removal and treatment of any waste or materials found and the wearing of protective gear by those who would potentially come into contact with such materials in accordance with an approved safety plan. Such materials would not pose health risks to the general public through best management practices and due to their location underground, posing little opportunity for contact with the general public.

At the site, an exhaust duct is located at the existing plaza and would be relocated to the LBJ Promenade. The exhaust source is the LBJ Building electrical and mechanical room, which would not be hazardous or have temperature differential such that a pedestrian would be burned. Therefore, human health and safety was dismissed from further consideration as an impact topic.

Land Use

Land use is often divided into categories depending upon the types of activities for which the land is used, such as industrial, retail, open space, etc. In the case of the Eisenhower Memorial, the existing land use is open space, which hosts a community garden and exercise space and the LBJ Building's plaza. The Eisenhower Memorial would continue use of the site as open space, providing park-like setting with less hardscape and more plants and trees. The use of the site as a Memorial was addressed in the Site Selection EA. Impacts of the Memorial designs on other buildings in relation

to light, air, and workplace environment are addressed in Section 4.2.1: Visual Resources. Impacts to the existing community garden and exercise course are addressed in Section 4.8: Visitor Use and Experience.

Socioeconomics

Socioeconomics was addressed as part of the *Proposed Dwight D. Eisenhower Memorial Site Selection EA* (NPS and EMC, 2006) and it was determined that the Eisenhower Memorial would not appreciably affect either local and regional land use or local businesses or other agencies. Implementation of the Eisenhower Memorial could provide beneficial impacts on the local economy. These beneficial impacts would be temporary or minimal in nature and would result from minimal increases in employment opportunities from the construction of the site and increased retail activity from visitors. It was also determined that the removal of metered parking at the site would not significantly impact local government revenue. Therefore, socioeconomic resources were dismissed as an impact topic.

Threatened, Endangered, Rare, and Special Concern Species

There are no rare, threatened, or endangered species or habitat known or expected to occur in the project area. Therefore, this impact topic was dismissed from consideration.

Unique Ecosystems, Biospheres Reserves, or World Heritage Sites

There are no known biosphere reserves, World Heritage sites, or unique ecosystems listed at the Eisenhower Memorial site. Therefore, this impact topic was dismissed from further analysis.

Utilities and Infrastructure

Utilities and infrastructure was addressed as part of the *Proposed Dwight D. Eisenhower Memorial Site Selection EA* (NPS and EMC, 2006). Because the Eisenhower Memorial would largely be an outdoor area for quiet reflection, it would generate minimal additional demands on sanitary sewer systems, water supply systems, and energy systems. Stormwater management at the site would be altered in order to comply with appropriate requirements as part of the Memorial development; the stormwater management actions are addressed in Section 4.8: Water Resources. In addition, implementation of one the action alternatives would likely require re-routing certain utilities. It is anticipated however, that no breaks in services would occur. Therefore, utilities were dismissed from further analysis as an impact topic.

Wildlife or Wildlife Habitat

The NPS Organic Act of 1916, NPS Management Policies 2006 (NPS 2006), and NPS Reference Manual 77: Natural Resource Management (NPS 1991) direct NPS managers to provide for the protection of park resources. The Organic Act requires that wildlife be conserved unimpaired for future generations, which has been interpreted to mean that native animal life are to be protected and perpetuated as part of a park unit's natural ecosystem. Parks rely on natural processes to control populations of native species to the greatest extent possible; otherwise, they are protected from harvest, harassment, or harm by human activities. The NPS Management Policies 2006 make restoration of native species a high priority. Management goals for wildlife include maintaining components and processes of naturally evolving park ecosystems, including natural abundance, diversity, and ecological integrity of plants and animals

(NPS 2006, sec. 4.1). Policies in the NPS Natural Resource Management Guideline state, "the National Park Service would seek to perpetuate the native animal life as part of the natural ecosystem of parks" and that "native animal populations would be protected against . . . destruction . . . or harm through human actions."

The Eisenhower Memorial site is located in a highly urban setting, with concrete plazas, roadways, decorative trees, a limited amount of lawn, and community gardens. The area has a high amount of attendant human activity and is surrounded by heavily used roads. The existing wildlife community on-site likely includes common urban species of small mammals and birds, such as gray squirrels (*Sciurus carolinensus*) and Norway rats (*Rattus norvegicus*). Birds common to the area and that have adapted to urban areas include house sparrows (*Passer domesticus*), pigeons (*Columba livia*), house finches (*Carpodacus mexicanus*), gray catbird (*Dumetella carolinensis*), mallard (*Anas platyrhynchos*), and starlings (*Sturnis vulgaris*). Other songbird species such as blue jays (*Cyanocitta cristata*) and mockingbirds (*Mimus polyglottis*) that nest in nearby parks may utilize the study area. Neotropical migratory songbirds may also pass through during spring and fall migration. The most common hawks and falcons would be Sharp-shinned hawks (*Accipiter striatus*), Cooper's Hawks (*Accipiter cooperi*), Kestrels (*Falco sparverius*), Merlins (*Falco columbarius*) and possibly Peregrine falcons (*Falco peregrinus*).

Construction activities and vegetation removal would repel birds and other wildlife from the site. As construction activity ceases and new, native vegetation is established, the site would become more attractive for birds. While there has not been any research on how birds would perceive the tapestries, Dr. Daniel Klem, a professor of ornithology who has done extensive research on bird strikes and

windows, stated that depictions that appear real to the human eye also appear real to birds. The semi-transparent background and rural Kansas landscapes may confuse birds and attract them towards the tapestries. However, he also went on to state that he expected the tapestries to be bird safe because of their non-reflective or minimally reflective appearance (D. Klem, personal communication, September 6, 2011).

The USFWS was also informally consulted on this issue and stated that as the new vegetation at the site becomes more established, it would likely attract more songbirds to the area, which could increase the chance of the occasionally bird strike with the tapestries. It was also stated that raptors could collide with the tapestries during their pursuit of songbirds as prey items (C. Koppie, personal communication, September 6, 2011).

While the NPS acknowledges there may be an occasional bird strike, it is expected that the overall impacts on native bird species would be minor or less (it would not likely be detectable). Furthermore, changes to population numbers, population structure, or other demographic factors would not likely occur. To ensure this assumption, Park staff working at the site would be instructed document every bird strike occurrence and report the findings to the park's natural resource specialist. If, through this reporting, it is determined the incidence of bird strikes is increasing to a point where they are occurring regularly, the NPS would work with the USFWS to determine the best mitigations to decrease these occurrences. The NPS and the USFWS signed an MOU in July 2010 to promote the conservation of migratory birds. Both parties pledged to work together to

develop conservation measures consistent with the Executive Order outlining the responsibilities of federal agencies to protect migratory birds (Executive Order 13186, 2001). One example of a mitigation could include the application of ultraviolet light (UV) reflectants that is visible to birds placed in a natural and unobtrusive manner within the tapestries. Due to the area's urban context, level of human activity, minimal habitat value, and negligible to minor adverse impacts to the area's wildlife and bird populations, this topic was dismissed from detailed analysis.

1.7 IMPAIRMENT

According to *NPS Management Policies 2006*, an action constitutes an impairment when an impact "would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values" (NPS 2006, sec. 1.4.5). Whether an impact meets this definition depends on the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts. An impact on 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 affects 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 to the opportunity for enjoyment of the park; or

- identified as a goal in the park's general management plan or other relevant NPS planning documents

Impairment findings are not necessary for visitor experience and park operations because impairment findings are related to park resources and values, and visitor experience and park operations are not generally considered to be park resources or values according to the NPS Organic Act, and cannot be impaired the same way that an action can impair park resources and values. A draft impairment determination for the NPS preferred alternative is provided in Appendix A of this document. Park resources considered in this determination include cultural resources, visual resources, soils, vegetation, and water. A final impairment determination would be provided in the decision document developed on the findings of this EA.

2.0 ALTERNATIVES

This page is intentionally left blank

2.1 INTRODUCTION

The proposed action is the design, construction, and operation of the Eisenhower Memorial on land located immediately south of Independence Avenue between 4th and 6th Streets and the LBJ Building, headquarters of Department of Education. This EA evaluates a range of alternatives related to the proposed memorial to President Eisenhower, including: three action alternatives, which were refined during the public scoping and consultation processes, and a No Action Alternative. The three action alternatives present varying approaches to the Eisenhower Memorial design, including the possibility of maintaining Maryland Avenue open to vehicular traffic. This section describes the alternative designs for the Eisenhower Memorial; defines the No Action Alternative; identifies a preferred alternative; and summarizes the environmental impacts and mitigation measures for each alternative.

2.2 DESCRIPTION OF ALTERNATIVES

2.2.1 No Action Alternative

As part of the environmental review process, the consequences of a No Action Alternative are considered. Under the No Action Alternative, all existing site features would remain in their current condition and use. This would include transportation patterns, visitor use, management of the site, and existing vegetation. Figure 2-1 on the following page shows the existing site configuration.

Under the No Action Alternative, the current administrative jurisdiction held by three separate agencies would continue and no land would be transferred. GSA would continue to manage the plaza area that complements the LBJ Building. Benches and temporary

tables would remain at the site, providing seating to visitors, most of which are nearby office workers on break. The sunken courtyard would continue to be accessed through the LBJ Building basement and prohibit access from the plaza. Existing trees and plantings within the plaza would remain. The former school bell and two plaques currently located within the plaza would also remain.

NPS would continue its current management practices of maintaining its area. The 38 community gardens plots would continue to be in use by gardeners, who would continue to visit the site regularly. The existing donated exercise circuit located at the site, made up primarily of bars and benches (relocated here in advance of the American Indian Museum), would remain for visitors to the site.

DDOT would continue to maintain the current Maryland Avenue roadway within the site under the No Action Alternative. There would be no reconfiguration of the site and the existing roadway and parking configuration would be maintained. Vehicles would continue to enter Maryland Avenue at 6th Street and mid-block at Independence Avenue. Vehicles would continue to exit Maryland Avenue at 4th and 6th Streets and diagonally at Independence Avenue. Parking would continue along Maryland Avenue and its associated spur. DDOT would continue to maintain the sidewalks and vegetated areas along the roadway. DDOT would continue to collect parking revenue from meters at the site.



Source: Gehry Partners, 2010

Figure 2-1: Existing site configuration

2.2.2 Elements Common to All Action Alternatives

Each of the action alternatives would establish and operate a memorial dedicated to President Dwight D. Eisenhower on the approved site. Although many design elements are common to the action alternatives, the exact placement and quantity of the elements would vary among the alternatives. The alternatives are comparatively illustrated in Figure 2-2.

Memorial Design

The following quote summarizes the design approach of the Memorial architect, Gehry Partners:

"The underlying premise in the proposals is representing a president widely viewed as modest in character but defined by great and vast accomplishments. President Eisenhower was as a leader who put himself in the middle of the people. By viewing himself in the context of his countrymen, he became an ideal leader for a democratic society at a time in history when the United States was projected to the forefront of a world stage and leadership role. President Eisenhower always considered himself in relation to the accomplishments of those who served with him. Ike's consciousness of the world as an interrelated community made him a spokesman for peace in his later life. He was truly a citizen of the world."

- Gehry Partners, 2011

The overall site design of the Memorial focuses on a central element supported by a series of stone reliefs to narrate the story of President Eisenhower and his accomplishments. Large trees would be installed to represent the strength and modesty of President

Eisenhower. The reliefs would be carved on blocks of stone. Two action alternatives would contain lintels over the blocks that would be made of similar materials. For two of the action alternatives, varying numbers of cylindrical columns would help define the Memorial core; for the third action alternative, the columns would help define the whole site within the larger context of the city. The column size would vary between alternatives, ranging from 65 feet (Alternative 1) to 50 feet (Alternative 2) to an average of 78 feet (Alternative 3) in height; the columns in Alternative 1 are 65 feet in height. For Alternative 1, the columns would be 12 feet in diameter. Columns in Alternative 2 would be ten feet in diameter. For Alternative 3, the columns would be eleven feet in diameter. Water features designed to soften the site and mute the urban and traffic noise would be located in front of select reliefs or other features in Alternatives 1 and 2.

A number of amenities to provide minimal visitor services would be installed in each of the action alternatives. A small building with a ranger contact station, toilet facilities, and book sales area would be located on the site. The total amount of at-grade indoor space is 2,500 square feet for Alternatives 1 and 2, and 2,100 square feet for Alternative 3. Covered areas for groups (canopy elements) are envisioned around various areas of the site. These are intended to be gathering areas in inclement weather.

The Memorial site would be a mix of hardscape and green space with a number of trees and several ground cover areas. Trees suitable for the Washington, DC climate would be placed throughout the site. Additionally, street trees along Independence Avenue and 4th and 6th Streets would be coordinated with those on neighboring parcels, respecting the existing streetscape aesthetic. Grassy spaces



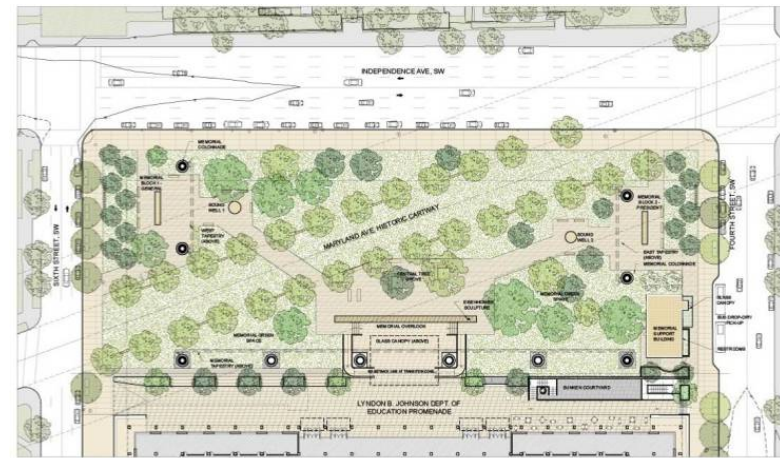
No Action Alternative



Alternative 2: Maryland Promenade



Alternative 1: Maryland Roadway



Alternative 3: Maryland Park

Figure 2-2: Side-by-side comparisons of all alternatives

would range from defined portions of the site to more expansive arrangements. Walkways and sidewalks would consist of a variety of surfaces. The stormwater would be collected and reused for on-site landscape irrigation and/or for toilet flushing.

Memorial Thematics

The underlying premise in the alternatives is to represent a leader widely viewed as modest in character but whose accomplishments were great. As a result, three themes would be presented throughout the Memorial:

- Eisenhower's personal journey, which begins with his youth in Abilene, Kansas, was fundamentally shaped by the values and understanding of the world as seen through an American heartland lens;
- Eisenhower as General, and his achievements in reaching the supreme position of the U.S. military during World War II; and
- Eisenhower as two-term President of the United States, and his continued role as valuable world citizen.

Relief blocks, the central grove and landscape, possible sculptural figures, and, in the case of Alternative 3, stainless-steel tapestries (described in the summary of Alternative 3), would articulate these themes.

The site itself would reflect the landscape of Abilene, Kansas, which is both Eisenhower's hometown and the geographical center of the United States. This reflection would be accomplished through the use of plant materials, design, and, in the case of Alternative 3, the use of tapestries. The Memorial would establish a contemplative

park of trees and plantings intended to provide a calm, autonomous, and picturesque experience, framing the context of Eisenhower's early life and values.

Quotations and archival images would serve as a base for the treatment of the Memorial elements, such as inclusion in the tapestries or inspiration for relief blocks. Several photographs that represent potential images under consideration are shown in Figure 2-3.

In addition to text from his Guildhall Address, Chance for Peace speech, and Farewell address, the following quotes by President Eisenhower represent potential text under consideration for the Memorial:

- "I come from the very heart of America."
Guildhall Address, London, England, June 12, 1945
- "Because no man is really a man who has left out of himself all the boy, I wanted to speak first of the dreams of a barefoot boy... Always in his dreams is the day when he finally comes home to a welcome from his hometown. Because today that dream of forty-five years ago has been realized beyond the wildest stretches of my own imagination, I came here to thank you and to say that the proudest thing I can claim is that I'm from Abilene...."
Homecoming speech, Abilene, Kansas June 22, 1945
- "The American tradition is to finish whatever we start, however hard the road."
Material for NBC Address, June 4, 1946

- “Whatever America hopes to bring to pass in the world must first come to pass in the heart of America.”

Inaugural Address, January 20th, 1953



Figure 2-3: Photos representing those under consideration for the Eisenhower Memorial

- “I have found out in later years that we were very poor, but the glory of America is that we didn’t know it then.”

Speech made at the cornerstone laying of the Eisenhower Foundation, Abilene, Kansas, June 4, 1952

- “The spirit of our people is the strength of our nation.”

Address to a Meeting Sponsored by the Republican National Committee, April 17, 1956

- “Peace, like all virtues, begins at home.”

Radio and Television Address, September 19, 1956

- “There can be no enduring peace for any nation while other nations suffer privation, oppression, and a sense of injustice and despair.”

Nomination Acceptance Speech, August 23, 1956

- “We must be ready to dare all for our country. For history does not long entrust the care of freedom to the weak or the timid.”

Inaugural Address, January 20, 1953

- “A people that values its privileges above its principles soon loses both.”

Inaugural Address, January 20th, 1953

- “May we be ever unswerving in devotion to principle, confident but humble with power, diligent in pursuit of the Nation’s great goals.”

Farewell Address, January 17, 1961

Land Transfer

While the entire site is owned by the federal government, administrative jurisdiction is held by three separate entities: NPS, GSA, and the District of Columbia Department of Transportation (DDOT). NPS administers the northwest corner of the site, which currently contains permitted community gardens and a donated

exercise course. GSA administers the plaza in front of the LBJ Building, in addition to the building itself. Finally, DDOT holds administrative jurisdiction over the Maryland Avenue portion of the site including the roadway, parking areas, and the median.

Each of the action alternatives would require that DDOT initially transfer some, if not all, of its portion of the site to NPS, depending upon the alternative. The existing street space covers Maryland Avenue, its spur road, and median area at the site. While one of the alternatives would maintain vehicular access on Maryland Avenue through the site, not all of the street space would be necessary. For the other two action alternatives, the entire street space would be transferred to NPS. DDOT would also transfer the care and maintenance of the Memorial site's sidewalks to NPS.

GSA would transfer the site area located north of the LBJ Building to NPS for construction and operation of the Eisenhower Memorial. However, GSA would retain responsibility for the LBJ Building and the adjacent Promenade. Sidewalks on 4th and 6th Streets adjacent to the Promenade would continue to be maintained by DDOT. The land transfers from DDOT would be subject to review and approval by NCPC.

The Memorial would be operated by NPS once construction is completed. NPS operations would include staffing the ranger contact station, managing the landscape and facilities maintenance, providing stewardship and preservation of Memorial features, and any other potential services. NPS would use a cooperating association to operate and manage the bookstore on-site.

Sunken Courtyard

The existing sunken courtyard at the southeast corner of the site would remain, although it would be altered. The courtyard provides a below-grade exit from the LBJ Building, and provides natural light to a portion of the Building's basement level. While currently a poorly maintained area, the courtyard has several trees and planters. The air intake currently located in the courtyard would remain. Access is provided via the LBJ Building basement. Stairs connecting the courtyard to the plaza above are currently cordoned off and serve as emergency exit only.

In each of the action alternatives, the courtyard would be reduced in size. A narrower courtyard would continue to offer light into the basement library of the LBJ Building. Stairs from the courtyard would connect to the ground level, maintaining the existing point of egress in case of emergency. The courtyard would be refinished to redefine a new usable space for DED use. This space would not be accessible to the general public from the Memorial.

LBJ Promenade

Each of the action alternatives would feature a minimum 50-foot wide space along the southern end of the Memorial site, between the LBJ Building and the landscaped Eisenhower Memorial. This area, referred to as the LBJ Promenade, would serve to transition between the contemplative setting of the Memorial and the office building. It would also help establish the Eisenhower Memorial site as a traditional urban square, bounded by four roads (although this element would be pedestrian-only), in keeping with the L'Enfant and McMillan Plans. The eastern portion of the LBJ Promenade would be elevated approximately four feet above the sidewalk and

street level; stairs and a ramp entry would be installed to provide access to the LBJ Promenade. In Alternatives 2 and 3, the Memorial itself would be lower than the LBJ Promenade, and stairs would connect the two spaces near the center of the LBJ Promenade.

The LBJ Promenade would include a mix of paved materials, landscaping, and visitor amenities. Portions of the basement of the LBJ Building extend beyond the north façade of the building by approximately 27 feet, limiting construction and landscaping possibilities in this zone.

Perimeter Security

Perimeter security features for the north side of the LBJ Building would be incorporated into the design. The LBJ Promenade provides a 50-foot setback as needed for security. The western point of access to the promenade would have small pillars to serve as physical barriers to prohibit vehicular access. From the Memorial itself, access to the LBJ Promenade and Building would be limited by Memorial elements and the sunken courtyard.

Alignment of Maryland Avenue

In each of the action alternatives, the alignment of Maryland Avenue between 4th and 6th Streets would change. Currently, Maryland Avenue west of the site is directly in line with the U.S. Capitol. Within the site, the roadway curves north to intersect mid-block with Independence Avenue. As part of the alternatives, the alignment of Maryland Avenue would return to its historic L'Enfant orientation with the U.S. Capitol. The principal variation between the action alternatives is whether Maryland Avenue remains open to vehicular traffic along the new alignment. These variations are

discussed in the in their respective descriptions for the action alternatives.

Community Gardens and Exercise Equipment

In each of the action alternatives, the permitted community garden and exercise equipment would be removed. The creation of a presidential memorial at the site would preclude these uses. Providing gardening opportunities in the District of Columbia is not a responsibility of the NPS but has historically been permitted at this site.

Parking and Bus Access

In each of the action alternatives, existing parking on-site along Maryland Avenue and its spur would be removed. A bus pull-off, large enough to accommodate two buses, would be provided on the eastern edge of the Memorial, off of 4th Street.

2.2.3 Alternative 1: Maryland Roadway

Alternative 1 would realign Maryland Avenue to its historic location and 50-foot roadway width (also referred to as the cartway width). Because vehicular traffic would bisect the site, Alternative 1 would have relief blocks on either side of Maryland Avenue with a Memorial grove placed south of the roadway. Overall, the landscape design is an urban civic park with hard pathways and a grid pattern of trees. This alternative is illustrated in Figures 2-4 through 2-7.

The columns and central grove of trees would be situated so that Maryland Avenue could pass through them. A differentiation in surface material would distinguish the central Memorial area around the grove. This would extend to the Maryland Avenue roadway, where the segment within the central Memorial would have pavement materials similar to the grove. The colonnade, made up of columns 12 feet in diameter and 65 feet high, would serve to formally unify the two sides of the street and distinguish the central Memorial core from the larger site.

Two relief blocks with lintels would be found north of Maryland Avenue, while the other relief components and the Memorial grove would be located south of the roadway. Included in the elements south of Maryland Avenue would be three Memorial relief blocks, lintels, and the grove of trees. Facing the central Memorial area, each relief block would incorporate a water feature. The visitor service facilities would be located south of Maryland Avenue. The ranger contact station, book store, and restroom would be incorporated at the rear of two relief blocks. A canopy is envisioned for gatherings in inclement weather in the central Memorial core.

Beyond the central Memorial area, trees would populate the Memorial, providing an urban park experience. Although some areas in the northwestern and eastern portions of the site would be dominated by vegetation, because of the roadway, the ground surface of the Eisenhower Memorial would have paved areas. The site could be accessed at most points from the sidewalk, the LBJ Promenade, and from Maryland Avenue. Large tree wells within the paved areas would contain shade canopy trees and landscape ground cover. Seating areas would surround many of the tree wells.

Vehicular access to 6th Street from Maryland Avenue would remain at the southwest corner of the site, but the access to Independence Avenue from Maryland Avenue would be located near the northeast corner of the site, rather than the current mid-block intersection. The Maryland Avenue spur access point to 4th Street would be removed. In the area where Maryland Avenue becomes part of the central Memorial area, a speed table or raised roadway at the plaza level would minimize pedestrian safety concerns. A mid-block crossing would also be installed. The exact location of the crossing would be established during a subsequent phase of the design.

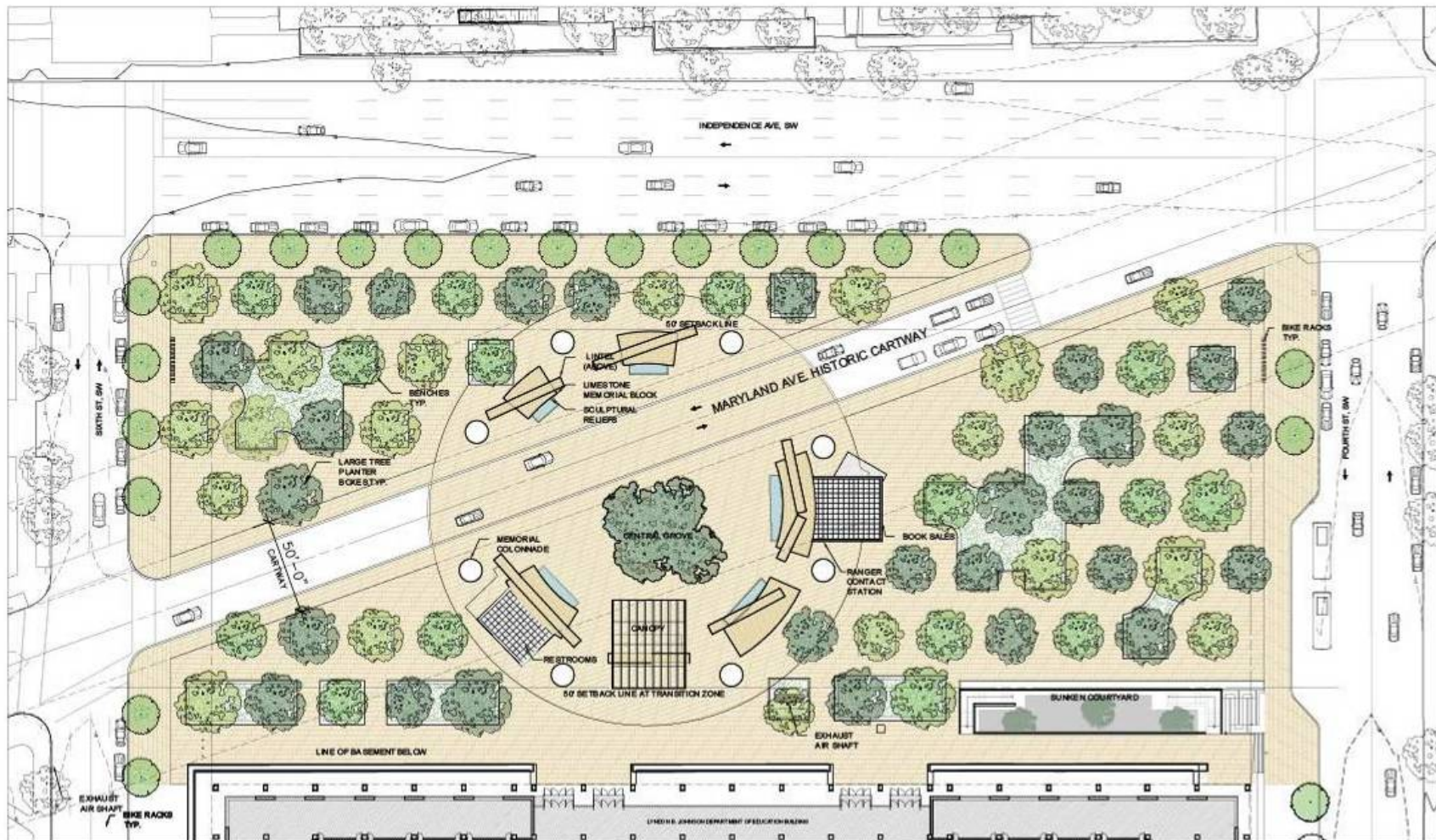


Figure 2-4: Alternative 1 (Maryland Roadway) site plan
 Source: Gehry Partners, 2010

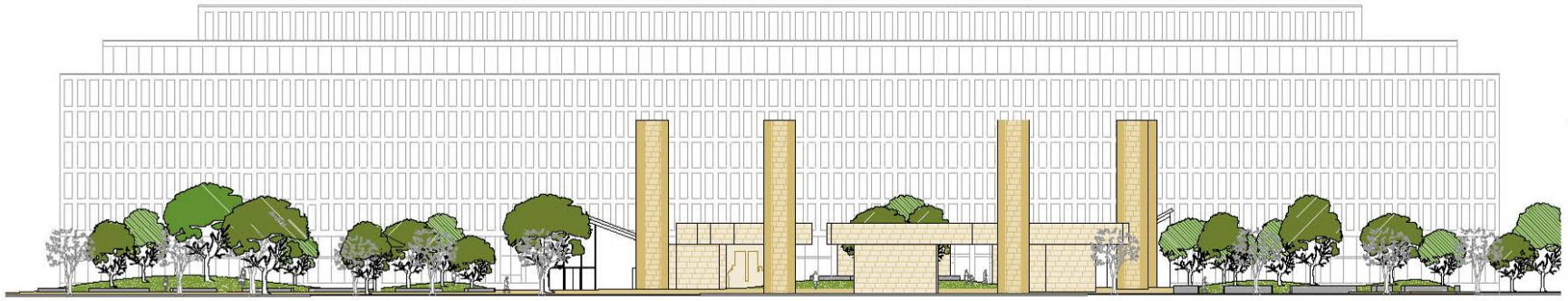


Figure 2-5: Alternative 1, cross-section looking south

Source: Gehry Partners, 2010

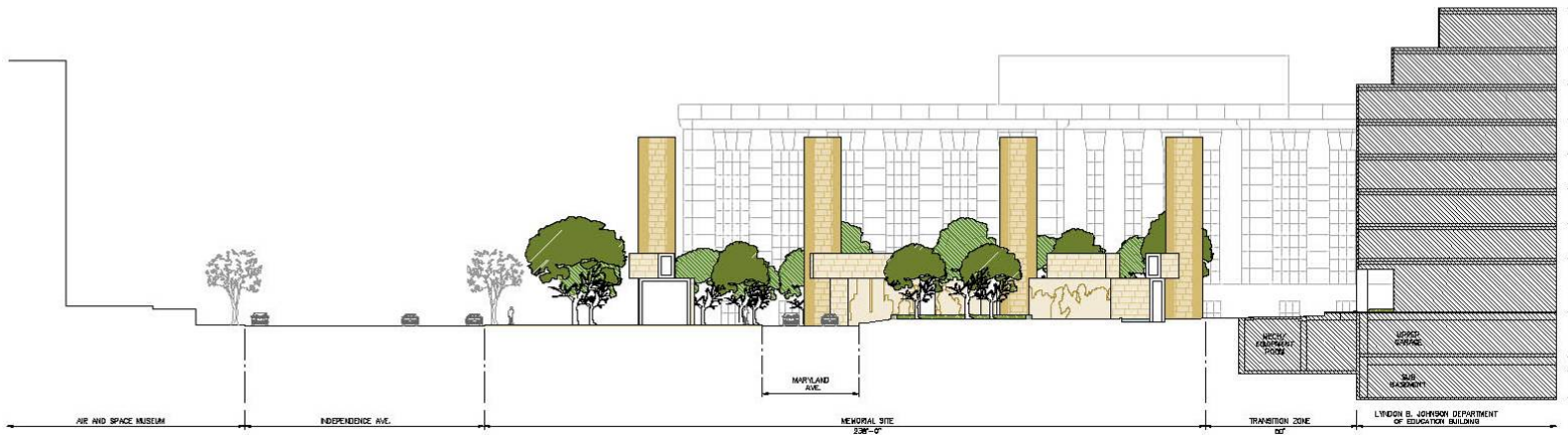


Figure 2-6: Alternative 1, cross-section looking east

Source: Gehry Partners, 2010



Figure 2-7: Alternative 1, model view looking northeast along Maryland Avenue
Source: Gehry Partners, 2010

2.2.4 Alternative 2: Maryland Promenade

Alternative 2 is similar to Alternative 1, although there are three key differences. Most importantly, Maryland Avenue would be closed to vehicles under Alternative 2 to create a more cohesive civic space. In addition, under Alternative 2, the designed Memorial features, such as the reliefs, would encompass an expanded area and the plant elements would have a more prominent presence leading to a stronger park setting. Figures 2-8 through 2-11 illustrate Alternative 2.

Alternative 2 would respect the historic diagonal avenue of the L'Enfant Plan by maintaining the view along Maryland Avenue toward the U.S. Capitol. The closure of Maryland Avenue to vehicles at the site would divert traffic around the site at 6th Street, creating a civic square. Eliminating the roadway that bisects the site would also unite the site into a cohesive, contemplative space to commemorate President Eisenhower and his accomplishments.

The central grove of Alternative 2 would be larger than that of Alternative 1, expanding into the Maryland Avenue 50-foot cartway. However, the intrusion into the cartway would not obscure views to the U.S. Capitol. The circular colonnade, which consists of columns 10 feet in diameter and 50 feet high, surrounding the central grove, would be located on both sides of the Maryland Avenue view corridor. The reliefs and lintels would be in approximately the same location and configuration as Alternative 1. However, amphitheater-style seating would be incorporated into the rear of two of the relief blocks, providing places for visitors to rest while considering the

Memorial. Each of these seating areas would be covered by a canopy for inclement weather. The seating would be constructed of stone. Four of the relief blocks would incorporate a water feature facing the central memorial area.

The Ranger contact station would be located to the west of the central Memorial area, north of Maryland Avenue. The bookstore and toilets would be located to the east of the central Memorial area, south of Maryland Avenue. Both of these facilities would be aligned to relate to Maryland Avenue.

In addition to closing the roadway, Alternative 2 would be distinguished from the other alternatives by its landscape. The historic location of the 50-foot cartway would be reflected by using hard materials, such as stone or pavers. This treatment would be extended to the curbs, further reinforcing the idea of the former cartway. The same materials would be carried through in the central Memorial area. The LBJ Promenade and sidewalks along the adjacent streets would be attractively landscaped but with a different material or pattern, differentiating it from the Memorial. The landscape beyond the central Memorial core has a formal grid arrangement of trees installed in larger softscape areas.

Access to the Memorial would be more limited under Alternative 2. Pathways would connect the extensive landscaping to sidewalks and other walkways at various intervals. From the LBJ Promenade, a prominent opening would connect with the central Memorial core. The cartway would also provide pedestrian access to the Memorial.



Figure 2-8: Alternative 2 (Maryland Promenade) site plan
 Source: Gehry Partners, 2010

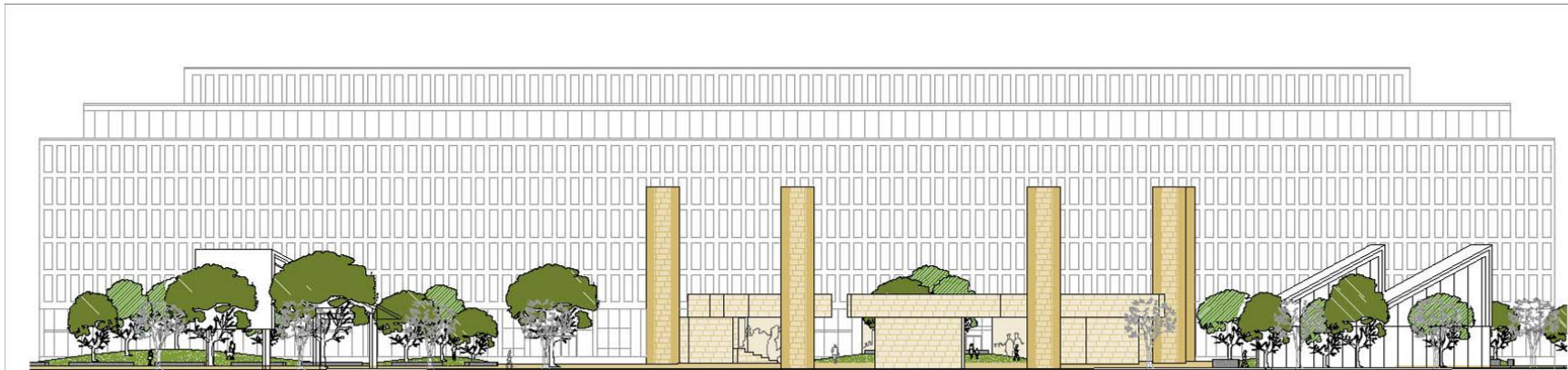


Figure 2-9: Alternative 2, cross-section looking south

Source: Gehry Partners, 2010



Figure 2-10: Alternative 2, cross-section looking east

Source: Gehry Partners, 2010



Figure 2-11: Alternative 2, model looking northeast along Maryland Avenue

Source: Gehry Partners, 2010

2.2.5 Alternative 3: Maryland Park/Tapestry

Alternative 3 would differ from the other alternatives by creating a more expansive park and Memorial. Although Alternative 3 closes the Maryland Avenue cartway to vehicular traffic, similar to Alternative 2, the built Memorial elements and landscaping differ from the other alternatives in location and form. The colonnades would be aligned in a linear manner and would be used to structurally support and display stainless steel tapestries. Three tapestries would be located along 4th and 6th Streets and a along the southern portion of the site. The tapestry elements would create an autonomous precinct to define the site within the larger urban context. Additionally, the tapestries would serve as a unique method of memorialization. The tapestries would depict different Kansan landscape imagery and have been demonstrated to be substantially transparent, as seen in Figure 2-12. Representing a portion of the tapestry that would be installed, the woven tapestry, shown on the left in Figure 2-12 and also shown in Figure 2-17, illustrates a moderate level of transparency. The welded tapestry section, shown on the right in Figure 2-12 and also in Figure 2-18, shows a high level of transparency.

The horizontal and vertical geometry of the tapestries is derived from the LBJ Building. The top of the tapestries would be the same height as the LBJ Building cornice. The bottom of the tapestry relates to the LBJ Building soffit (the underside of part of a building) at the top of the first level exterior. As a result, at full size, the top of the tapestries would be an average of 78 feet (depending upon topography) and the bottom of the tapestry would be at least 15 feet above ground. Figures 2-13 through 2-16 illustrate Alternative 3.

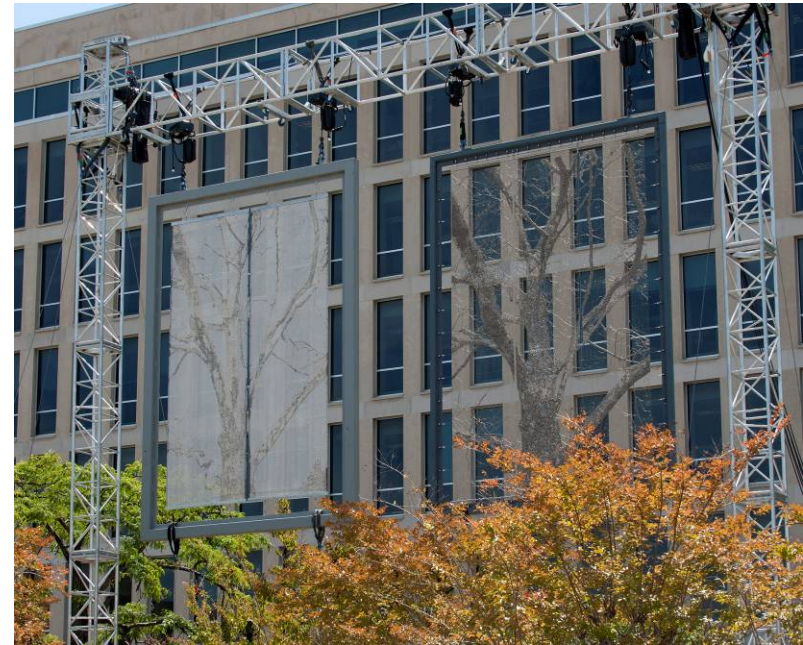


Figure 2-12: Two mock-up examples of a tapestry to illustrate the transparent quality

As opposed to Alternatives 1 and 2, Alternative 3 would align its 11-foot diameter columns linearly along the eastern, western, and southern portions of the Memorial. The closure of Maryland Avenue at the site would divert traffic around the site at 6th Street, creating a civic square. By closing vehicular access at the site, this design would enable a cohesive civic space and monument within the city.

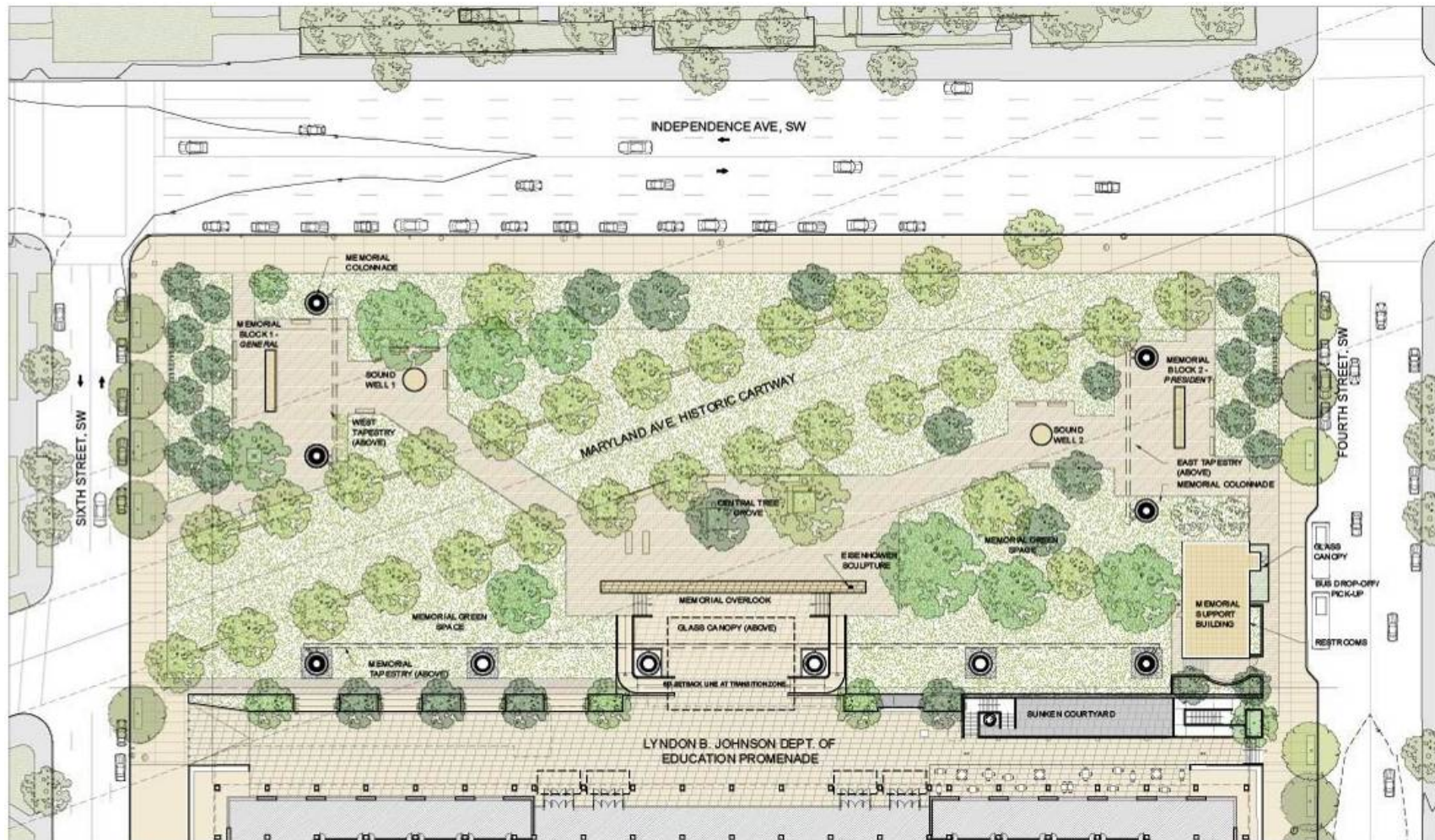


Figure 2-13: Alternative 3 (Maryland Park) site plan
 Source: Gehry Partners, 2011

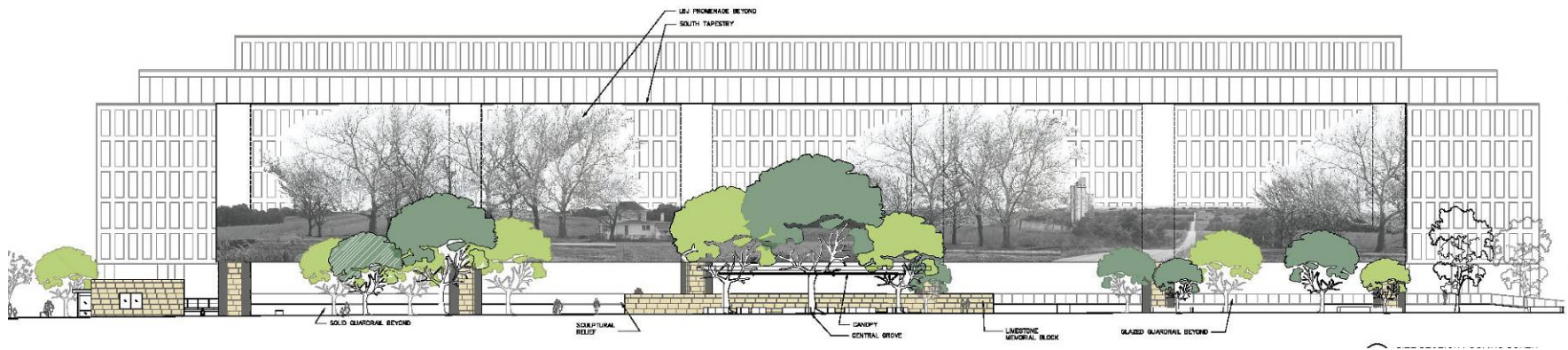


Figure 2-14: Alternative 3, cross-section looking south

Source: Gehry Partners, 2011

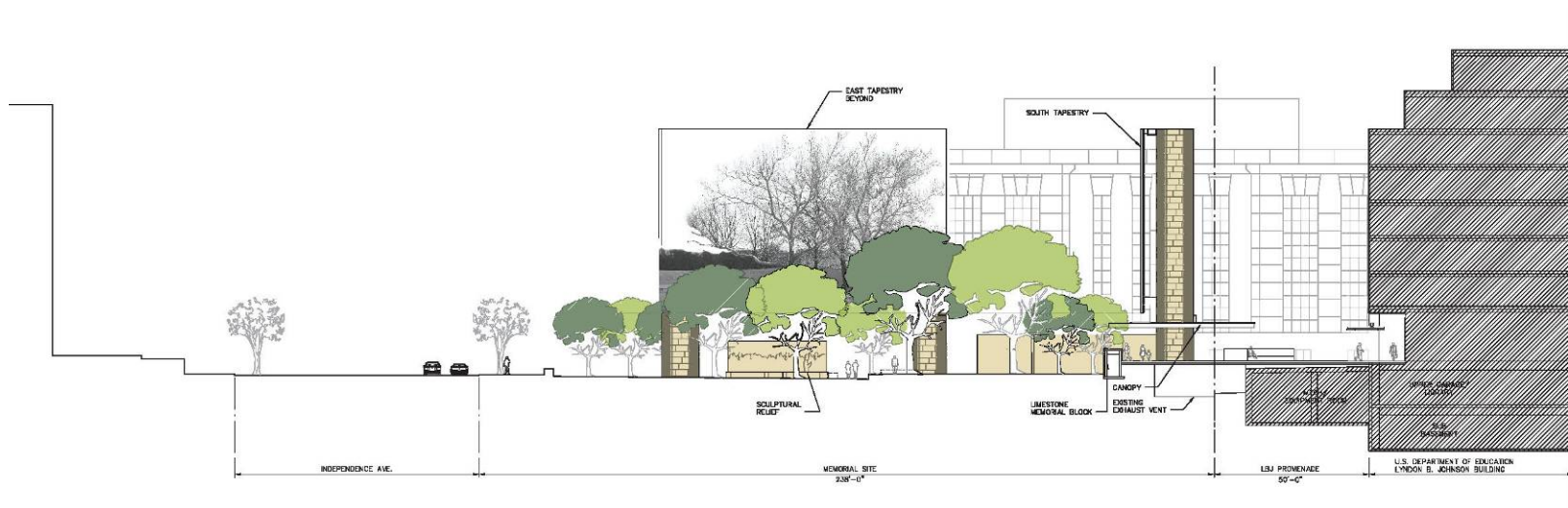


Figure 2-15: Alternative 3, cross-section looking east

Source: Gehry Partners, 2011



Figure 2-16: Alternative 3, model looking northeast along Maryland Avenue
Source: Gehry Partners, 2011

Eliminating the roadway that bisects the site and installing tapestries on three sides of the site is intended to evoke an urban room, a quiet and contemplative space to commemorate Eisenhower and his military and chief executive accomplishments.

Alternative 3 would defer to the L'Enfant Plan by maintaining the diagonal view along Maryland Avenue toward the U.S. Capitol. The columns inside the Maryland Avenue right-of-way would be located 46 feet from the Maryland Avenue center line and 21-feet from the curb line, thereby observing a 92-foot clearance to frame views of the U.S. Capitol (Figure 2-16). The columns along the southern portion of the site would maintain consistent spacing and would frame the entrance of the LBJ Building. To allow views to the corners of the LBJ Building from the north, the colonnades would be pulled in 44 feet from each end of the LBJ Building and would align with the second bay of the LBJ façade.

The columns along the eastern and western edges of the site would also contain tapestries to help delineate the site. The eastern and western tapestries would be inset from the 4th and 6th Streets rights-of-way, respectively. Bas relief blocks approximately eight feet in height would be placed next to the tapestries along 4th and 6th Streets, parallel to those streets. Landscaping would provide buffer zones between the street and tapestries facing the Wilbur Cohen and Wilbur Wright Buildings.

The other features of the central Memorial would be arranged to form an expansive central core. A paved plaza area would be located in the southern portion of the site, serving as the central Memorial area. At the north edge of the plaza, a grove of trees would serve as a Memorial element. A commemorative wall would form the southern border of the plaza, also serving as the edge of the LBJ Promenade podium. Several benches would be located in the plaza.

A single building that includes the restrooms, ranger contact station, and a book sales area would be located in the southeast portion of the site, aligned with the 4th Street setback.

To respond to the urban space created by the tapestries and the colonnades, the landscape design is intended to “green,” or soften, the site within the Memorial precinct. As opposed to the circular shape of the central Memorial area in the other alternatives, Alternative 3 would instead exhibit a more angular form. Two paths would extend to the plaza from the northeastern and northwestern corners of the site, offering a large green swath between the paths, the Independence Avenue sidewalk, and the plaza. The central plaza would have a collection of large trees and would include a stone relief block. The Maryland Avenue cartway between 4th and 6th Streets would be a view corridor, consisting of an allee of trees and a grassy space of at least 50 feet in width as shown in Figure 2-13. This grassy area would be broken only by the path linking the central Memorial area with the northwest corner of the site.

Beyond the central Memorial area, ground cover would be accented by trees at the site. As described above, trees would be aligned to create an allee observing the Maryland Avenue cartway. In addition, clusters of trees in Alternative 3 would be placed in a more organic arrangement to evoke the character of Kansas, represent a more natural landscape, and complement the imagery on the tapestries.

Formal pedestrian access under Alternative 3 would be provided from the corners of the site at Independence Avenue, from 4th and 6th Streets, and via the LBJ Promenade. Stairs and a ramp from the LBJ Promenade lead to the Memorial. The tapestry elements would serve as portals and formal entrances to the Memorial at three

locations. The cartway would also provide informal access through the grass-covered alley. Informal access to the green space from the adjacent streets would also be available at almost all areas of the Memorial.

From the LBJ Promenade, a central extension would provide a podium overlook to the Memorial, taking advantage of the grade difference. A glass canopy over this podium would provide visitors shelter from the elements. As mentioned above, stairs and a ramp from the podium would lead to the Memorial plaza below.

Tapestry Material Science

As described earlier, Alternative 3 would feature three stainless-steel tapestries. In order to ensure transparency, durability, and the overall artistic and aesthetic value of the tapestries, numerous manufacturing methods and materials testing have been explored. One potential production method would include weaving blackened and non-blackened steel threads in order to generate an image based on the contrast between the threads. Another potential production method would be welding threads to an overall grid of threads (similar to the concept of weaving lace on a transparent veil).

Numerous materials, including varieties of stainless steel threads and Teflon fibers, have been tested to determine how the aging process affects them. In several cases using stainless-steel threads or titanium, no change was discovered at the end of the testing period; in other materials, changes in color or texture were detectable.

Scale mock-ups of the most promising tapestry materials were procured to demonstrate the viability of the process and the transparency of the product. The mock-ups were installed in front

of the LBJ Building between August 31 and September 2, 2011 to coincide with an NCPC commission meeting and a Section 106 consultation. The mock-ups were also installed on-site between September 12 and 16, 2011 to coincide with a CFA meeting. At these times, viewing of the tapestries was open to review agency staff members, and Section 106 consulting parties. NCPC and CFA Commissioners and staff also viewed the tapestries from inside the LBJ Building.



Figure 2-17: Photographs of woven tapestry mock-up at the LBJ Building

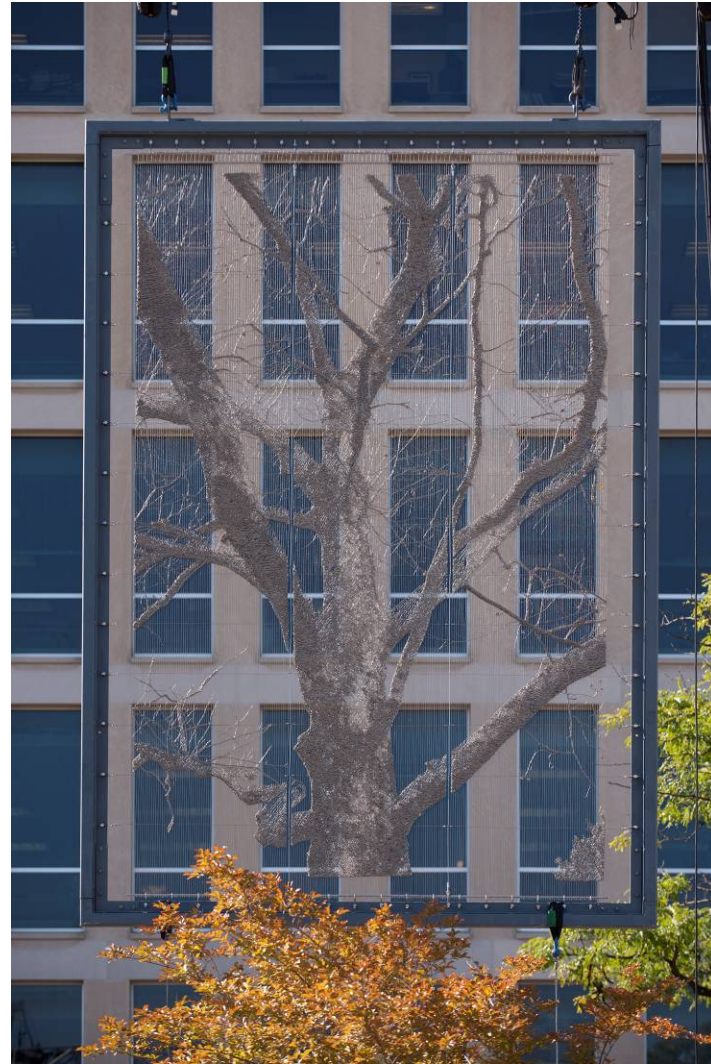


Figure 2-18: Photograph of welded tapestry mock-up at the LBJ Building

2.3 IDENTIFICATION OF THE PREFERRED ALTERNATIVE

NPS and EMC have identified Alternative 3 as the preferred alternative. Alternative 3 (Maryland Park/Tapestry) best meets the purpose and need and design principles for establishing a national memorial to commemorate the accomplishments of Dwight D. Eisenhower. The memorial elements frame the site, are monumental in scale, and provide consistency with the mixed context of the site. The Memorial core is a special area within the larger park setting. At the same time, the entire site can be identified by visitors as the Eisenhower Memorial.

Alternative 1 (the Roadway alternative) would not meet the design principles for the national memorial to Eisenhower. This alternative would maintain vehicular traffic on Maryland Avenue through the Memorial site, which would result in a bisected, and less unified site, greatly diminishing the viability of the site for a contemplative destination. Also, numerous Memorial built elements are located within the right-of-way, on the edge of the 50-foot cartway. In comparison to Alternative 3, Alternative 1 does not preserve reciprocal views to and from the U.S. Capitol.

Alternative 2 (the Promenade alternative) also does not fully meet the design principles for a national memorial to Eisenhower. This alternative does not establish, as strongly as Alternative 3, a memorial that unifies and defines the entire site. Alternative 2 would place the majority of the Memorial elements within the Maryland Avenue right-of-way, which would not defer, as much as Alternative 3, to the L'Enfant Plan and the Maryland Avenue vista.

2.4 CONSTRUCTION STAGING

All project construction would be staged on-site. Equipment and trailers would be stored at the project site. Lay-down activities would be conducted on-site. Occasional deliveries may temporarily block roadway lanes adjacent to the project site. Fencing, signs, and other notices would be placed along the periphery of the site as needed. Sidewalks and the Maryland Avenue entrance to the LBJ Building would be closed temporarily during construction of the LBJ Promenade.

2.5 RELATIONSHIP TO THE NCPC DESIGN PRINCIPLES

As mentioned in Section 1.3, NCPC included seven design principles in its 2006 approval of the Eisenhower Memorial site. These principles were also incorporated into NCPC's FONSI for site selection stating that 'with the mitigation specified in the design principles, to be further developed in the National Historic Preservation Act Section 106 process and a resulting Memorandum of Agreement, and that will be enforced by the Commission in design reviews for this memorial, the Commission's approval of the submitted project site at Maryland and Independence Avenues, 4th and 6th Streets, SW, will not significantly affect the human environment. The following is a discussion of each action alternative's consistency with the design principles.

Alternative 1

- *Preserve reciprocal views to and from the U.S. Capitol along Maryland Avenue.*

Alternative 1 would remove overgrowth currently blocking the primary views of the U.S. Capitol along Maryland Avenue and would instead frame views of the dome with columns and trees. The Memorial design would strategically place columns outside the 50-foot cartway (providing a 55-foot clearance), although five columns and four relief blocks would be located within the 160-foot right-of-way. Additionally, the re-alignment of Maryland Avenue to its historical location, as well as the removal of parking for the roadway, would help focus sight lines along Maryland Avenue. This issue is also addressed in Section 4.2.3: Visual Resources.

- *Enhance the nature of the site as one in a sequence of public spaces embellishing the Maryland Avenue vista.*

Alternative 1 would transform the existing disparate and disjointed plaza into a park setting with a central plaza and visitor amenities. Alternative 1 provides direct visual connections to other public spaces along Maryland Avenue, as described in Section 4.2.3: Visual Resources, by restoring Maryland Avenue to its historic alignment and by placing five columns outside the cartway, providing a 55-foot clearance of the center line, but within the 160-foot right-of-way. To the southwest, Maryland Avenue would link the Memorial to Reservation 113, where Maryland and Virginia Avenues intersect. To the northeast, Maryland Avenue would link the Memorial to the Mall and the U.S. Capitol Grounds. However, as Maryland Avenue remains open to vehicular traffic under Alternative 1, the functional value of the public space at the Memorial site is diminished. This issue is also addressed in Section 4.8: Visitor Use and Experience.

- *Create a unified memorial site that integrates the disparate parcels into a meaningful and functional public gathering place that also unifies the surrounding precinct.*

Under Alternative 1, the Memorial would serve as public space and provide an attractive feature that would also unify the surrounding precinct. However, under Alternative 1 Maryland Avenue would remain open to vehicular traffic, which would detract from the goal of creating a functional public gathering space. The current plaza and park land, while open, is spare and uninviting, and offers few visitor

amenities. The Memorial would offer educational, artistic, and natural experiences, as well as public gathering space, as part of a cohesive site. It would also unify the surrounding precinct by establishing a large urban park in a fragmented part of the city. By realigning Maryland Avenue to its historical location and establishing an attractive destination, the Memorial would strengthen Maryland Avenue as a central spine and help connect and unify the surrounding precinct. The circular colonnade would straddle both sides of Maryland Avenue, serving to unify the site. This is evaluated in the Section 4.3: Visual Resources and Section 4.8: Visitor Use and Experience.

- *Reflect L'Enfant Plan principles by shaping the Memorial site as a separate and distinct public space that complements the DED Headquarters and other surrounding buildings.*

The Memorial site is bounded by roadways on three sides and a large building on the fourth side, each of which provides clear boundaries to the Memorial. The focus of Alternative 1 on 79 new trees and green space would serve to distinguish the public space from the urban context surrounding the Memorial. The LBJ Promenade would help define the southern boundary of the site, thereby helping to establish the Memorial as a separate and distinct public space. It would complement and activate the forecourt of the Building and give it the character of a street. The LBJ Promenade would enhance the existing public space at the entrance of the LBJ Building. The LBJ Promenade would provide an entry to the LBJ Building, where signage and lighting would identify the entrance to the Building. The grade from the LBJ Building to Independence Avenue would

be continuous, and would cohesively integrate the spaces. The height of the colonnade, at 65 feet, would not directly relate to the LBJ Building through its horizontal building elements, such as its cornice line or fenestration. The three other adjacent buildings would also help define the Memorial as a civic square by providing visual boundaries.

Under Alternative 1, Maryland Avenue would be realigned and open to vehicular traffic, which would detract from the goal of a distinct public space. This is evaluated in the Section 4.2.3: Visual Resources and Section 4.8: Visitor Use and Experience.

- *Respect and complement the architecture of the surrounding precinct.*

Under Alternative 1, the columns, trees, and built Memorial features would be consistent with NASM, the Wilbur Cohen Building, the LBJ Building, and the Wilbur Wright Building. The Memorial elements, including the columns, would be shorter than the neighboring buildings, although the 65-foot height of the colonnade would not directly relate through references to horizontal elements to these Buildings, such as cornice lines or fenestration. These surrounding large-scale buildings have varying setbacks, styles, cornice lines, and heights. Durable building materials, including stone, would be consistent with the surrounding area. This is evaluated in the Section 4.2.2: Historic Resources.

- *Respect the building lines of the surrounding rights-of-way and the alignment of trees along Maryland Avenue.*

Along Maryland Avenue, buildings between the U.S. Capitol and Reservation 113 are aligned along north-south streets (7th Street) or east-west streets (e.g. Independence Avenue), resulting in an inconsistent streetwall. By framing the trees along Maryland Avenue, with the built features located outside of the 50-foot cartway, and restoring its historical alignment, Alternative 1 would respect the existing alignment of trees. Alternative 1 would not intrude into the rights-of-way of 4th or 6th Streets or Independence Avenue. This is evaluated in the Section 4.3: Visual Resources.

- *Incorporate significant green space into the design of the Memorial.*

Alternative 1 would increase both the number and quality of trees, replacing immature or under-developed trees with more robust and/or mature trees. Alternative 1 would improve existing root systems, soils, and on-site drainage enabling the new trees to flourish. However, the amount of green space would decrease by 0.6 acres. This is evaluated in Section 4.7: Vegetation.

Alternative 2

- *Preserve reciprocal views to and from the U.S. Capitol along Maryland Avenue.*

Alternative 2 would remove overgrowth currently blocking the primary views of the U.S. Capitol along Maryland Avenue and would instead frame views of the dome with columns and trees. The Memorial design would strategically place columns (outside the 50-foot cartway providing a 55-foot clearance), although five columns and four relief blocks would be located within the 160-foot right-of-way. Additionally, the re-alignment of Maryland Avenue to its historical location, as well as the removal of parking for the roadway, would help focus sight lines along Maryland Avenue. This issue is also addressed in Section 4.3: Visual Resources.

- *Enhance the nature of the site as one in a sequence of public spaces embellishing the Maryland Avenue vista.*

Alternative 2 would transform the existing disparate and disjointed plaza into a park setting with a central plaza and visitor amenities. Alternative 2 provides direct visual connections to other public spaces along Maryland Avenue, as described in Section 4.3: Visual Resources, by restoring Maryland Avenue to its historic alignment and by placing five columns outside the cartway, providing a 55-foot clearance around the center line, but within the 160-foot right-of-way. To the southwest, Maryland Avenue would link the Memorial to Reservation 113, where Maryland and Virginia Avenues intersect. To the northeast, Maryland

Avenue would link the Memorial to the Mall and the U.S. Capitol Grounds. This issue is also addressed in Section 4.8: Visitor Use and Experience.

- *Create a unified memorial site that integrates the disparate parcels into a meaningful and functional public gathering place that also unifies the surrounding precinct.*

Under Alternative 2, the Memorial would serve as public space and provide an attractive feature that would also unify the surrounding precinct. The current plaza and park land, while open, is spare and uninviting, and offers few visitor amenities. The Memorial would offer educational, artistic, and natural experiences, as well as public gathering space, as part of a cohesive site. It would also unify the surrounding precinct by establishing a large urban park in a fragmented part of the city. By realigning Maryland Avenue to its historical location and establishing an attractive destination, the Memorial would strengthen Maryland Avenue as a central spine and help connect and unify the surrounding precinct. The circular colonnade would straddle both sides of the Maryland Avenue cartway, serving to unify the site. This is evaluated in the Section 4.3: Visual Resources and Section 4.8: Visitor Use and Experience.

- *Reflect L'Enfant Plan principles by shaping the Memorial site as a separate and distinct public space that complements the DED Headquarters and other surrounding buildings.*

The focus of Alternative 2 on trees and green space, as well as the closure of Maryland Avenue to vehicular traffic,

would serve to distinguish the public space from the urban context surrounding the Memorial. The LBJ Promenade would help define the southern boundary of the site, thereby helping to establish the Memorial as a separate and distinct public space. The Promenade would complement and activate the forecourt to the Building, giving it the character of a street. The three other adjacent buildings would also help define the Memorial as a civic square by providing visual boundaries. The installation of 95 new trees and green space would serve to enhance the existing public space at the entrance of the LBJ Building and complement the usage of public space in the LBJ Promenade. Elevated above the Memorial, the LBJ Promenade would rise to entry level of the LBJ Building, where signage and lighting would identify the entrance to the Building. The height of the colonnade, at 50 feet, would not directly relate to the LBJ Building. This is evaluated in the Section 4-3: Visual Resources and Section 4.8: Visitor Use and Experience.

- *Respect and complement the architecture of the surrounding precinct.*

Under Alternative 2, the columns, trees, and built Memorial features would be consistent with the NASM, the Wilbur Cohen Building, the LBJ Building, and the Wilbur Wright Building. These surrounding large-scale buildings have varying setbacks, styles, cornice lines, and heights. The Memorial elements, including the columns, would be shorter than the neighboring buildings, although the 50-foot height of the colonnade would not directly relate through references to horizontal elements to these Buildings, such as cornice lines or fenestration. The west entrance along the

LBJ Building's northern elevation would align with one set of stairs leading from the LBJ Promenade to the Memorial. Durable building materials, including stone, would be consistent with the surrounding area. These surrounding large-scale buildings have varying setbacks, styles, cornice lines, and heights. Durable building materials, including stone, would be consistent with the surrounding area. This is evaluated in the Section 4.2.2: Historic Resources.

- *Respect the building lines of the surrounding rights-of-way and the alignment of trees along Maryland Avenue.*

Along Maryland Avenue, buildings between the U.S. Capitol and Reservation 113 are aligned along north-south streets (7th Street) or east-west streets (e.g. Independence Avenue), resulting in an inconsistent streetwall. By placing trees along Maryland Avenue, with the built features located outside of the 50-foot cartway, and restoring its historical alignment, Alternative 2 would respect the existing alignment of trees. Alternative 2 would not intrude into the rights-of-way of 4th or 6th Streets or Independence Avenue. This is evaluated in the Section 4.2.3: Visual Resources.

- *Incorporate significant green space into the design of the Memorial.*

Alternative 2 would increase both the number and quality of trees, replacing immature or under-developed trees with more robust and/or mature trees. Alternative 2 would improve existing root systems, soils, and on-site drainage enabling the 95 new trees to flourish. The amount of green

space would increase by 0.61 acres. This is evaluated in Section 4.7: Vegetation.

Alternative 3

- *Preserve reciprocal views to and from the U.S. Capitol along Maryland Avenue.*

Alternative 3 would remove overgrowth currently blocking the primary views of the U.S. Capitol along Maryland Avenue and would instead frame views of the dome with columns and trees. Alternative 3 would place columns 46 feet from the Maryland Avenue center line, which would allow a 92-foot clearance of the cartway's center line. Four columns and two relief blocks would be located within the 160-foot Maryland Avenue right-of-way. The columns would symmetrically frame view northeast, with the U.S. Capitol in the center. Alternative 3 would place both trees and columns in locations that preserve the primary views as seen by pedestrians. Additionally, the re-alignment of Maryland Avenue to its historical location would help focus sight lines along Maryland Avenue. The removal of parking and the closure of Maryland Avenue to vehicular traffic would reinforce these sight lines. This issue is also addressed in Section 4. 3: Visual Resources.

- *Enhance the nature of the site as one in a sequence of public spaces embellishing the Maryland Avenue vista.*

Alternative 3 would transform the existing disjointed parcels and spare plaza into a park setting consistent with established L'Enfant squares. Alternative 3 would provide direct visual connections to other public spaces along Maryland Avenue as described in Section 4.3: Visual Resources, by restoring the Maryland Avenue view corridor

to its historic alignment and by placing providing a 92-foot clearance around the center line, with four columns outside the cartway but visible within the Maryland Avenue view corridor. To the southwest, Maryland Avenue would link the Memorial to Reservation 113, where Maryland and Virginia Avenues intersect. To the northeast, Maryland Avenue would link the Memorial to the Mall and the U.S. Capitol Grounds. This issue is also addressed in Section 4.8: Visitor Use and Experience.

- *Create a unified memorial site that integrates the disparate parcels into a meaningful and functional public gathering place that also unifies the surrounding precinct.*

Under Alternative 3, the Memorial would function as a public gathering space and would provide an attractive feature that would also unify the surrounding precinct by establishing a large urban park in a fragmented part of the city. The tapestries would serve to create a sense of an urban room, thereby unifying the site as a distinct place within the large urban context. The current plaza and park land, while open, is spare and uninviting, and offers few visitor amenities. The Memorial would offer educational, artistic, and natural experiences, as well as public gathering space, as part of a cohesive site. It would also unify the surrounding precinct. The LBJ Promenade would also include a podium overlooking the Memorial, which would be used as a sheltered gathering space. By realigning Maryland Avenue to its historical location and establishing an attractive destination, the Memorial would strengthen Maryland Avenue as a central spine and help connect and unify the surrounding precinct. This issue is evaluated in

the Section 4.3: Visual Resources and Section 4.8: Visitor Use and Experience.

- *Reflect L'Enfant Plan principles by shaping the Memorial site as a separate and distinct public space that complements the DED Headquarters and other surrounding buildings.*

The Memorial site is bounded by roadways on three sides and a large building on the fourth side, each of which provides clear boundaries to the Memorial. By incorporating the LBJ Building into its design through the creation of the LBJ Promenade, it would complement and activate the forecourt of the Building. The Promenade would evoke the character of a street, thereby acting to create a memorial square bound by four streets. The installation of 81 trees and green space would serve to enhance the existing public space at the entrance of the LBJ Building and complement the usage of public space in the LBJ Promenade. Elevated above the Memorial, the LBJ Promenade would rise to entry level of the LBJ Building, where signage and lighting would identify the entrance to the Building. The LBJ Promenade's entrances to the Memorial would align with the Building's main entrance. Alternative 3's tapestries would align with the second bay at each end of the LBJ Building, and the bottom of the tapestries would align with the first floor soffit of the LBJ Building façade, complementing the building. The upper floors of the LBJ Building would be unobstructed, as would the eastern and western portions of the Building's north elevation. Additional references to the building design within the landscape would include the podium that extends from the LBJ Promenade into the Memorial.

The tapestries of the Memorial would also help to visually define the Memorial space as a more intimate area, in comparison to the large buildings surrounding the site. The other adjacent buildings would provide secondary visual boundaries to the site. This issue is evaluated in the Section 4.3: Visual Resources and Section 4.8: Visitor Use and Experience.

- *Respect and complement the architecture of the surrounding precinct.*

Under Alternative 3, the columns, trees, and built Memorial features would be consistent with the scale and context of the NASM, the Wilbur Cohen Building, the LBJ Building, and the Wilbur Wright Building. These surrounding large-scale buildings have varying setbacks, styles, cornice lines, and heights. The alignment of the 78-foot high colonnades and tapestries along 4th and 6th Streets would complement the building setbacks along those streets. One column would be located 31 feet from the Independence Avenue curb line, outside of its right-of-way. The streetwall along Independence Avenue varies between 14th and 2nd Streets, with building setbacks ranging from 16 feet to 110 feet. Durable building materials, including stone, would be consistent with the surrounding area. This issue is evaluated in the Section 4.2.2: Historic Resources.

- *Respect the building lines of the surrounding rights-of-way and the alignment of trees along Maryland Avenue.*

Along Maryland Avenue, buildings between the U.S. Capitol and Reservation 113 are aligned along north-south streets

(7th Street) or east-west streets (e.g. Independence Avenue), resulting in an inconsistent streetwall. An allee of trees would be placed outside the Maryland Avenue cartway, supporting the alignment of trees along the roadway. Alternative 3 would place the ranger contact station and book sales along the 4th Street right-of-way, consistent with neighboring buildings. No Memorial elements or structures would intrude into the rights-of-way of 4th or 6th Streets. The northern-most column and its associated tapestry would not extend into the Independence Avenue right-of-way. The column would be located 31 feet from the curb. The Independence Avenue street wall varies between 2nd and 14th Streets. The ranger contact station would be entirely outside the Maryland Avenue right-of-way. Four columns of the linear colonnades and two relief blocks would be located outside

of the roadway (cartway), but within the 160-foot Maryland Avenue right-of-way. This is evaluated in the Section 4.3: Visual Resources.

- *Incorporate significant green space into the design of the Memorial.*

Alternative 3 would increase both the number and quality of trees, replacing immature or under-developed trees with more robust and/or mature trees. Alternative 3 would improve existing root systems, soils, and on-site drainage enabling the 81 new trees to flourish. The amount of green space would substantially increase by 1.07 acres. This issue is evaluated in Section 4.7: Vegetation.

2.6 MITIGATION MEASURES OF THE ACTION ALTERNATIVES

NPS places a strong emphasis on avoiding, minimizing, and mitigating potentially adverse environmental impacts. To help ensure the protection of natural and cultural resources and the quality of the visitor experience, the following protective measures would be implemented as part of the selected action alternative. NPS would implement an appropriate level of monitoring throughout the construction process to help ensure that protective measures are being properly implemented and are achieving their intended results.

Cultural Resources

- If during construction, archeological resources are discovered, all work in the immediate vicinity of the discovery would be halted until the resources can be identified and documented and an appropriate mitigation strategy developed. If necessary, consultation with the DC Historic Preservation Officer, NPS, and/or the NPS Regional Archeologist will be coordinated to ensure that the protection of resources is addressed. In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (25 USC 3001) of 1990 would be followed.
- Additional mitigation for impacts on archeological, historic, and visual resources may be determined during the Section 106 consultation process. A memorandum of agreement between NPS, DC SHPO, ACHP, and EMC would be developed as part of

this process to mitigate adverse impacts to cultural resources. Potential mitigation measures that could be identified in the MOA include: incorporation of archeological findings into the e-Memorial, an online source of information about Eisenhower and the Memorial site; a Historic American Landscape Survey to document the LBJ Building plaza; and, for Alternative 3, the recognition of the former Maryland Avenue cartway in the Memorial design.

- Ongoing consultation would also be specified in the MOA. As the Memorial design advances, placement of trees and built elements near the historic Maryland Avenue cartway should be sensitive to the view corridor to help diminish impacts on the L'Enfant and McMillan Plans and to maintain the open character of these historic resources. These changes would be coordinated through the ongoing consultation process.

Visual Resources

- The NPS, the DC SHPO, GSA, and the EMC are developing an MOA that would stipulate that consultation will continue through the detailed design process. This agreement would allow for the design to advance while incorporating elements, such as changes to the placement of built features to maintain the open character of the vista, which would mitigate adverse impacts to visual resources

Soils

- Prior to construction, an erosion and sedimentation control plan that establishes measures to prevent erosion of cleared areas and the transport of soil and sediment would be prepared.

- During construction, soils exposed by clearing, grading, excavation, or construction would be stabilized. Soils would be stockpiled using appropriate best management practices.
- Soils excavated would be subject to sampling and testing, should indicators of petroleum-impacted soils present themselves during excavation and construction.
- If determined to contain petroleum hydrocarbons, the soils would be removed and disposed of in accordance with a safety plan approved by District of Columbia Department of the Environment (DDOE).
- Appropriate regulatory notification would occur.
- Impacted soils would be segregated through field screening.
- Waste characterization samples would be collected.
- Soils would be disposed of at an appropriate waste disposal facility.
- Removal activities would be documented.

Transportation

If Alternative 1, which maintains vehicular use of Maryland Avenue, is adopted, the following measures would be implemented:

- The stop bar for eastbound Independence Avenue would be moved approximately 100 feet to the west in order to accommodate vehicular access from Maryland Avenue to the intersection of Independence Avenue and 4th Street, resulting in

a loss of vehicle storage space. The signalization clearance time for traffic passing through the intersection would be longer in the eastbound direction.

- In addition, the intersection design would need to be altered. This mitigation would enhance safety and traffic operations by making Maryland Avenue one-way in a west-to-east direction. A curb bulb-out would be provided at each end of this segment of Maryland Avenue to create a single lane entrance and exit condition. The crossing width would be shorter for pedestrians crossing Maryland Avenue.
- The LOS at the intersection of 6th Street and Maryland Avenue could improve as a result of the one-way operation, eliminating the westbound traffic demand approaching the intersection. The conflicting vehicular movement between the through traffic and left turn movement would be eliminated at 4th Street and Independence Avenue when intersecting with Maryland Avenue.
- Changes to the street network could potentially confuse motorists and pedestrians who were accustomed to the previous road and sidewalk configuration. Therefore, these changes would require signage placed at key locations and intersections to alert and safely re-direct vehicles and pedestrians during construction.

If Alternative 1, 2, or 3 is adopted, the following measures would be implemented:

- Temporary signage would be placed at key locations and intersections to alert and safely re-direct vehicles during construction.

- Visitors would be informed of parking areas in pre-arrival information, such as on the website or in brochures.
- Visitors would be encouraged to use alternate forms of transportation, such as bus or rail, to reach the site through pre-arrival information.

Water Resources

- An erosion and sedimentation control plan and a stormwater management plan would be prepared.

Visitor Use and Experience

- NPS would provide information regarding construction on its NAMA website and distribution lists.

2.7 ALTERNATIVES CONSIDERED BUT DISMISSED

Several alternative configurations of the Eisenhower Memorial site were explored and dismissed in the 2006 Proposed Dwight D. Eisenhower Memorial Site Selection EA (NPS, 2006). Subsequently, additional alternatives or alternative elements were identified during public scoping for this EA and during the ongoing consultation process. Some of these were determined to be unreasonable, or much less desirable than similar options included in the analysis, and were therefore not carried forward for analysis in this EA. Justification for eliminating alternatives from further analysis was based on factors relating to:

- Conflict with the stated purpose and need for the Memorial project;
- Not technically or economically feasible;
- Conflict with existing plans and policies; and
- Potentially severe impact on environmental or historic resources.

The following represent the alternatives considered and dismissed from further consideration in this EA.

2.7.1 Creation of a Square Bounded by Roadways

During the scoping process, some comments suggested developing a street along the southern border of the site to create a formal urban square, bounded by roadways on four sides. Such a square would be operationally consistent with others in Washington, DC and would evoke the L'Enfant Plan. This road would also serve to formally

separate the Memorial from the LBJ Building, located just south of the site. However, under a standard configuration, the basement and many components of the LBJ Building's heating and cooling systems are located underneath what would become the street. In this configuration, extensive efforts would be required to make the new street technically feasible to carry the loads of vehicular traffic. Such a street would not be within the project's economic constraints. Additionally, security setbacks for the DEd, housed in the LBJ Building, would necessitate the closure of the street, were it constructed, thus conflicting with the goal of maintaining a new roadway and with existing plans and policies. Therefore, this alternative was eliminated from further consideration.

2.7.2 Retention of the Plaza

Because the existing plaza in front of the LBJ Building was designed in conjunction with the building, consideration was given to an alternative that would retain the existing plaza in its current configuration. However, because the plaza would occupy more than 40 percent of the site, this option would limit the Eisenhower Memorial to a triangular parcel that would be less than 51 percent of the total site area (approximately 9 percent of the site would be unused for either the Memorial or the plaza due to the configuration of the site components). Due to the limited space for the Memorial, this would conflict with the stated purpose and need for the Memorial project. Such a small parcel would not befit the significance of Eisenhower as a preeminent figure in global history from during the 20th century. Therefore, this alternative was eliminated from further consideration.

2.8 ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The environmentally preferable alternative is defined by CEQ as the alternative that would promote the national environmental policy as expressed in NEPA. This includes:

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 would 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 (NEPA, Section 101).

NPS is required to identify the environmentally preferable alternative in its NEPA documents for public review and comment. NPS, in accordance with the Department of Interior policies contained in the Departmental Manual (516 DM 4.10) and CEQ's

EPA's Forty Most Asked Questions, defines the environmentally preferable alternative (or alternatives) as the alternative that best promotes the national environmental policy expressed in NEPA (Section 101 (b) (5164.10)). In their *Forty Most Asked Questions*, CEQ further clarifies the identification of the environmentally preferable alternative, stating "ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources" (Q6a).

The No Action Alternative would not impact biological or natural resources nor cultural resources. It would not degrade the environment through disturbance of soils or removal of vegetation. Views and other elements of cultural resources would not be affected by the No Action Alternative; the existing cultural resources would continue to be managed similar to existing practices. The No Action Alternative would continue to provide open and cultural space to the visiting public. As a result, after completing the environmental analysis, NPS identified the No Action Alternative as the environmentally preferable alternative in this EA and the alternative that best meets the definition established by the CEQ.

2.9 SUMMARY OF ENVIRONMENTAL CONSEQUENCES

A summary of the environmental consequences as a result of the alternatives described in this chapter follows in Table 2-2. The full analysis for each impact topic is found in Section 4.

Table 2-2: Summary of Impacts to Resources by Alternative

Impact Topic	No Action Alternative	Alternative 1: Maryland Roadway	Alternative 2: Maryland Promenade	Alternative 3: Maryland Park/Tapestry
Cultural Resources: Archeological Resources	Because no ground-disturbing activities would take place, there would be no impact.	Due to the installation of Memorial elements and the subsequent soil disturbance, there would be negligible to moderate adverse impacts and cumulative impacts.	Due to the installation of Memorial elements and the subsequent soil disturbance, there would be negligible to moderate adverse impacts and cumulative impacts.	Due to the installation of Memorial elements and the subsequent soil disturbance, there would be negligible to moderate adverse impacts and cumulative impacts.

Impact Topic	No Action Alternative	Alternative 1: Maryland Roadway	Alternative 2: Maryland Promenade	Alternative 3: Maryland Park/Tapestry
Cultural Resources: Historic Resources	The Memorial would not be constructed. Therefore, there would be negligible adverse impacts on historic resources.	The Memorial would restore Maryland Avenue to its historic alignment, resulting in beneficial impacts on the L'Enfant and McMillan Plans, and would alter the Maryland Avenue view corridor, resulting in minor adverse impacts to the Plans. The Memorial would remove the LBJ Building plaza, resulting in moderate adverse impacts on the LBJ Building. The Memorial elements would be visible, to varying degrees, from historic resources, resulting in minor adverse impacts on the Wilbur and Orville Wright Building and the Wilbur Cohen Building and negligible impacts on the U.S. Botanical Garden and the U.S. Capitol. There would be long-term moderate adverse cumulative impact on the L'Enfant Plan and minor adverse cumulative impact on the National Mall..	The Memorial would restore Maryland Avenue to its historic alignment, resulting in beneficial impacts on the L'Enfant and McMillan Plans, and would alter the Maryland Avenue view corridor, resulting in minor adverse impacts to the Plans. The Memorial would remove the LBJ Building plaza, resulting in moderate adverse impacts on the LBJ Building. The Memorial elements would be visible, to varying degrees, from historic resources, resulting in minor adverse impacts on the Wilbur and Orville Wright Building and the Wilbur Cohen Building and negligible impacts on the U.S. Botanical Garden and the U.S. Capitol. There would be long-term moderate adverse cumulative impact on the L'Enfant Plan and minor adverse cumulative impact on the National Mall..	The Memorial would restore Maryland Avenue to its historic alignment, resulting in beneficial impacts on the L'Enfant and McMillan Plans, and would alter the Maryland Avenue view corridor, resulting in moderate adverse impacts to the Plans. The Memorial would remove the LBJ Building plaza, resulting in moderate adverse impacts on the LBJ Building. The Memorial elements would be visible, to varying degrees, from historic resources, resulting in minor adverse impacts on the Wilbur and Orville Wright Building and the Wilbur Cohen Building and negligible impacts on the U.S. Botanical Garden and the U.S. Capitol. There would be long-term moderate adverse cumulative impact on the L'Enfant Plan and minor adverse cumulative impact on the National Mall...

Impact Topic	No Action Alternative	Alternative 1: Maryland Roadway	Alternative 2: Maryland Promenade	Alternative 3: Maryland Park/Tapestry
Visual Resources	The Memorial would not be constructed. Therefore, there would be negligible adverse impacts on visual resources and no cumulative impacts.	Installation of Memorial elements would result in changes to the views and vistas along view corridors. The installation of trees and Memorial elements would alter views to and from the lower levels of the LBJ Building. Given the varying degree of changes, Alternative 1 would result in negligible to minor adverse impacts on visual resources. There would be long-term minor cumulative impacts to the Maryland Avenue view.	Installation of Memorial elements would result in changes to the views and vistas along view corridors. The installation of trees and Memorial elements would alter views to and from the lower levels of the LBJ Building. Given the varying degree of changes, Alternative 2 would result in negligible to minor adverse impacts on visual resources. There would be long-term minor cumulative impacts to the Maryland Avenue view.	Installation of Memorial elements, including the tapestry, would result in changes to the views and vistas along view corridors. The tapestry would alter views to and from the LBJ Building but would not change the amount of direct sunlight received. Given the varying degree of changes, Alternative 3 would result in minor to moderate adverse impacts on visual resources. There would be long-term moderate cumulative impacts to the Maryland Avenue view.
Park Operations and Management	Existing management practices would continue. Therefore, there would be no impact.	Alternative 1 would require a higher level of maintenance and staffing than the current NPS parcel. Therefore, there would be a minor adverse impact. There would be short-term moderate adverse cumulative impacts and long-term minor adverse cumulative impacts.	Alternative 2 would require a higher level of maintenance and staffing than the current NPS parcel. Therefore, there would be a minor adverse impact. There would be short-term moderate adverse cumulative impacts and long-term minor adverse cumulative impacts.	Alternative 3 would require a higher level of maintenance and staffing than the current NPS parcel. Therefore, there would be a minor adverse impact. There would be short-term moderate adverse cumulative impacts and long-term minor adverse cumulative impacts.

Impact Topic	No Action Alternative	Alternative 1: Maryland Roadway	Alternative 2: Maryland Promenade	Alternative 3: Maryland Park/Tapestry
Soils	No soils would be disturbed or removed. Amendments would be made by community gardeners. Therefore, there would be beneficial impacts to soils. There would be short-term minor adverse cumulative impacts and long-term beneficial cumulative impacts.	Alternative 1 would disturb and remove existing soils on-site. The soil matrix and drainage would be improved. However, the amount of unpaved soils at the site would decrease. Therefore, there would be a long-term minor adverse impact. There would be short and long-term minor adverse cumulative impacts.	Alternative 2 would disturb and remove existing soils on-site. The soil matrix and drainage would be improved. Therefore, there would be a long-term beneficial impact. There would be short-term minor adverse cumulative impacts and long-term beneficial cumulative impacts.	Alternative 3 would disturb and remove existing soils on-site. The soil matrix and drainage would be improved. Therefore, there would be a long-term beneficial impact. There would be short-term minor adverse cumulative impacts and long-term beneficial cumulative impacts.
Transportation: Traffic	Traffic would increase at an average rate of 1.6 percent annually, resulting in a decline of level of service (LOS) at four intersections and an improved LOS at one intersection. Therefore, there would be long-term minor adverse impacts on traffic. There would be short-term minor adverse and long-term beneficial cumulative impacts.	Alternative 1 would restore Maryland Avenue to its historical alignment and maintain vehicular access, resulting in a decline in LOS for seven intersections and an improved LOS for four intersections. Therefore, there would be moderate adverse impacts on traffic. There would be short-term minor adverse cumulative impacts and long-term moderate adverse cumulative impacts.	Alternative 2 would close Maryland Avenue to vehicular access, resulting in a decline in LOS for five intersections and an improved LOS for two intersections. Therefore, there would be long-term minor adverse impacts. There would be short- and long-term minor adverse cumulative impacts.	Alternative 3 would close Maryland Avenue to vehicular access, resulting in a decline in LOS for five intersections and an improved LOS for two intersections. Therefore, there would be long-term minor adverse impacts. There would be short- and long-term minor adverse cumulative impacts.

Impact Topic	No Action Alternative	Alternative 1: Maryland Roadway	Alternative 2: Maryland Promenade	Alternative 3: Maryland Park/Tapestry
Transportation: Parking	Parking would continue to be provided on-site. Therefore, there would be no impacts.	Parking on-site would be removed, forcing people to park elsewhere. Motorists would be able to find spaces within a 1-block radius of the site would be available. Therefore, long-term adverse impacts would be minor. There would be short-term moderate adverse and long-term minor adverse cumulative impacts.	Parking on-site would be removed, forcing people to park elsewhere. Motorists would be able to find spaces within a 1-block radius of the site. Therefore, long-term adverse impacts would be minor. There would be short-term moderate adverse and long-term minor adverse cumulative impacts.	Parking on-site would be removed, forcing people to park elsewhere. Motorists would be able to find spaces within a 1-block radius of the site. Therefore, long-term adverse impacts would be minor. There would be short-term moderate adverse and long-term minor adverse cumulative impacts.
Vegetation	No vegetation would be removed or changed under the No Action Alternative. Therefore, there would be no impacts.	Alternative 1 would remove existing trees, grassed areas, and existing landscape plants and install more trees than currently exist at the site. On-site drainage and soil improvements would lead to healthier, fuller trees. Therefore, there would be beneficial impacts. There would be long-term beneficial cumulative impacts.	Alternative 2 would remove existing trees, grassed areas, and existing landscape plants and install more trees and landscape plants than currently exist at the site. On-site drainage and soil improvements would lead to healthier, fuller trees. Therefore, there would be beneficial impacts. There would be long-term beneficial cumulative impacts.	Alternative 3 would remove existing trees, grassed areas, and existing landscape plants and install more trees and landscape plants than currently exist at the site. On-site drainage and soil improvements would lead to healthier, fuller trees. Therefore, there would be beneficial impacts. There would be long-term beneficial cumulative impacts.

Impact Topic	No Action Alternative	Alternative 1: Maryland Roadway	Alternative 2: Maryland Promenade	Alternative 3: Maryland Park/Tapestry
Visitor Use and Experience	<p>Gardeners would continue to use the community garden at the site. The exercise equipment would remain available for use.</p> <p>Visitors would be able to use the open areas and plaza. Therefore, there would be no impacts.</p>	<p>Alternative 1 would offer visitors a contemplative educational opportunity to learn about Eisenhower. Minimal services would be available on-site.</p> <p>Community gardeners and those using the exercise equipment would no longer be accommodated at the site.</p> <p>Alternative 1 would provide seating and shelter to visitors, as well as more shaded areas than the existing site.</p> <p>Pedestrian connections and bicycle racks would be available. Therefore, there would be long-term beneficial impacts. There would be short-term moderate adverse impacts and long-term beneficial cumulative impacts.</p>	<p>Alternative 2 would offer visitors a contemplative educational opportunity to learn about Eisenhower. Minimal services would be available on-site.</p> <p>Community gardeners and those using the exercise equipment would no longer be accommodated at the site.</p> <p>Alternative 2 would provide seating and shelter to visitors, as well as more shaded areas than the existing site.</p> <p>Pedestrian connections and bicycle racks would be available. Therefore, there would be long-term beneficial impacts. There would be short-term moderate adverse impacts and long-term beneficial cumulative impacts.</p>	<p>Alternative 3 would offer visitors a contemplative educational opportunity to learn about Eisenhower. Minimal services would be available on-site.</p> <p>Community gardeners and those using the exercise equipment would no longer be accommodated at the site.</p> <p>Alternative 3 would provide seating and shelter to visitors, as well as more shaded areas than the existing site.</p> <p>Pedestrian connections and bicycle racks would be available. Therefore, there would be long-term beneficial impacts. There would be short-term moderate adverse impacts and long-term beneficial cumulative impacts.</p>

Impact Topic	No Action Alternative	Alternative 1: Maryland Roadway	Alternative 2: Maryland Promenade	Alternative 3: Maryland Park/Tapestry
Water Resources	No changes to the impervious surfaces would occur, resulting in no change in stormwater management or groundwater. Therefore, there would be no impacts to water resources.	The amount of impervious surface at the site would increase slightly. The amount of stormwater managed on-site would increase to pre-development levels, some of which would be reused for water features and/or toilet flushing. Groundwater recharge would be negligibly affected by the small amount of new impervious surface. Therefore, there would be beneficial impacts. There would be short-term minor adverse and long-term beneficial cumulative impacts.	The amount of impervious surface at the site would decrease. The amount of stormwater managed on-site would increase to pre-development levels, some of which would be reused for water features and/or toilet flushing. Groundwater recharge would be slightly improved as a result of less impervious surface. Therefore, there would be beneficial impacts. There would be short-term minor adverse and long-term beneficial cumulative impacts.	The amount of impervious surface at the site would decrease. The amount of stormwater managed on-site would increase to pre-development levels, some of which would be reused for water features and/or toilet flushing. Groundwater recharge would be slightly improved as a result of less impervious surface. Therefore, there would be beneficial impacts. There would be short-term minor adverse and long-term beneficial cumulative impacts.

3.0 AFFECTED ENVIRONMENT

This page is intentionally left blank

3.1 CULTURAL RESOURCES

This section documents the cultural resources located on the Eisenhower Memorial site and within the surrounding area. This information was derived from NRHP nominations, historic maps, and field survey, as well as from a Phase 1A archeological study and two determinations of eligibility that were prepared in support of this document. For the purposes of this document, cultural resources impact topics include: prehistoric and historic archeological resources; historic (above ground) properties, including historic structures and districts; and cultural landscapes, and visual resources. Ethnographic resources and museum collections were dismissed as impact topics.

The National Historic Preservation Act (NHPA) of 1966 is the guiding legislation for the preservation of historic properties. As broadly defined by 36 CFR 800, historic properties are “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the National Register of Historic Places.” According to the NHPA, properties that qualify for inclusion in the NHRP must meet at least one of the following criteria:

- Criterion A: Be associated with events that have made a significant contribution to the broad patterns of our history;
- Criterion B: Be associated with the lives of persons of significance in our past;

Criterion C: 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; or

Criterion D: Have yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

Properties that qualify for the NRHP must also possess integrity, which is defined as the ability of a property to convey its significance. The seven aspects of integrity are location, design, setting, materials, workmanship, feeling, and association. The term “eligible for inclusion in the NRHP” describes properties formally designated as eligible and all other properties determined to meet NRHP Criteria.

In accordance with Section 106 of the NHPA, federal agencies are required to consider the effects of a proposed project on properties listed in, or eligible for listing in, the NRHP. NPS has entered into consultation with the State Historic Preservation Officer (SHPO) and other interested agencies and individuals to identify historic properties that could be affected, to assess potential adverse effects, and to resolve the adverse effects through mutually agreed upon avoidance, minimization, or mitigation measures.

An initial step in the Section 106 process is the determination of the area within which historic properties will be affected or are likely to be affected. The area of potential effects (APE) as defined by 36 CFR 800.16(d) represents “the geographic area within which an undertaking may directly or indirectly cause alterations in the

character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.” An APE had previously been defined through the Site Selection Section 106 Process that concluded in 2006. For the development of the preferred Memorial design (the current undertaking), NPS initiated consultation with the DC SHPO in April 2010, and in consultation with the DC SHPO, defined the area of potential effects (APE) of this undertaking.

For the Eisenhower Memorial design, the Primary APE for above-ground historic resources includes the facades of buildings that are adjacent to the project site. As part of the current consultation effort, a broader secondary APE was defined which represents the area within which the proposed Memorial has the potential to have both direct effects and indirect visual effects on historic properties. The secondary APE was presented at the combined NEPA scoping/Section 106 meeting held on April 22, 2010, as well as at a consulting parties meeting on May 21, 2010. For more details regarding consulting parties, please refer to Section 5 of this document.

Both the primary and secondary APEs for historic above-ground resources are identified in Figure 3-1. Historic properties that lie within this area are listed in Table 3-1 and located in Figure 3-1.

Note that this list includes listed properties, properties determined eligible, and properties that may be eligible but have not yet been evaluated. The secondary APE is identical to the study area for visual resources.

Table 3-1: Historic Resources within the Area of Potential Effects

HISTORIC STRUCTURES AND DISTRICTS
L’Enfant Plan of the City of Washington
U.S. Capitol Building and Grounds
Lyndon Baines Johnson Building and plaza
Orville and Wilbur Wright Buildings
U.S. Botanic Garden
Hubert Humphrey Building
Wilbur Cohen Building
CULTURAL LANDSCAPES
The Mall (and its Contributing Features)
Union Square

Source: AECOM, 2010

In deriving the APE for archeological resources, it was determined that the proposed project’s only effects on archeological resources would occur as a result of ground-disturbing construction activities. Thus, the APE for archeological resources is the four-acre Memorial site, also delineated in Figure 3-1.

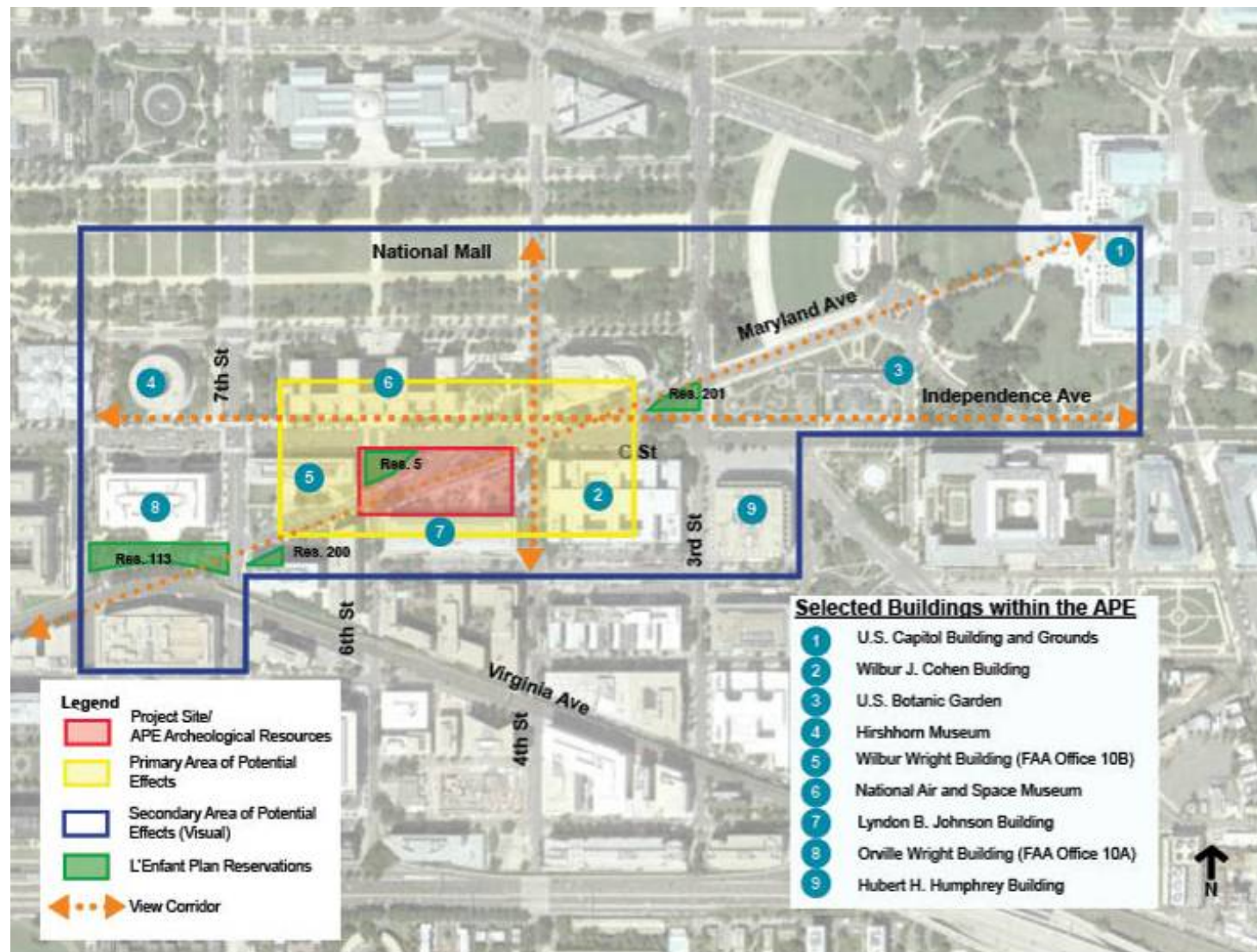


Figure 3-1: Area of Potential Effects (APE)

Source: AECOM, 2010

3.1.1 Archeological Resources

A Phase 1A Archaeological Survey for the Eisenhower Memorial was conducted in April, 2011. This survey described the prehistoric and historic contexts, a review of previously surveyed archeological resources, an assessment of the site's sensitivity to archeological resources, and a summary of recommendations. The information presented below reflects information provided in the Phase 1A survey.

Local Context

The Potomac River Valley has a rich history of human occupation dating back at least 10,000 years. Prior to the 19th century, Tiber Creek drained a large portion of what is now downtown Washington, flowing north of the Memorial site along the Mall. The waterway met Goose Creek approximately two blocks east of the site, and then turned south where it became St. James Creek. Because of its proximity to important waterways, the project area would have been an ideal setting for different activities throughout many periods of prehistory, including fishing, hunting, and cultivation. Native American settlements are known to have existed in the Tiber Creek area, but none have been documented within close proximity to the Eisenhower Memorial site.

The earliest urban development in Southwest DC grew out of Pierre Charles L'Enfant's 1791 Plan for the Capital City. In addition to establishing the roadway network in central Washington, the plan envisioned a canal that would connect the Potomac and the Anacostia Rivers along Tiber Creek. The Washington City Canal opened in 1815 and was a key element in the commercial and residential development of Southwest. Following the Civil War, with an influx of freed slaves, thousands of row houses were built and

numerous businesses were established and expanded. The largest growth in the area was in alley dwellings – small row houses built along alleys in city blocks. These dwellings, due to their limited light, and lack of sanitary sewage and water, created unhealthy living conditions for residents.

By the early 20th century, Southwest DC had come to be viewed as a slum. Beyond concerns from reformers about the unhealthy living conditions, the rise of the City Beautiful movement brought pressures to clean up the city, particularly those areas around the Capitol. The Senate Park Commission Plan (also known as the McMillan Plan), prepared in 1901, and later plans produced by the National Capital Park and Planning Commission, began to focus on the redevelopment of both the Federal Triangle area and portions of Southwest DC with a series of monumental federal buildings. By 1946, with the establishment of the Redevelopment Land Authority (RLA), the concept of large-scale urban renewal in the city had taken hold.

The product of “redevelopment theory”—the idea that a revitalized downtown would draw people back from the suburbs—urban renewal gained traction in Southwest DC with the release of the National Capital Park and Planning Commission's *1950 Comprehensive Plan*. This plan defined Southwest DC as one of the “Principal Problem Areas in the District of Columbia.” In 1956, redevelopment plans were approved for Project Area C, which encompassed the Eisenhower Memorial site, and in 1959 ground was broken on the Federal Office Building (FOB) 6, which would later be named in honor of Lyndon Baines Johnson, the first of several federal buildings under this program.

Between 1961 and 1976, eight more headquarters buildings were constructed in Southwest, both by GSA and by private developers: FOB 10, which is composed of two buildings located between 6th

and 9th Streets, SW, FOB 10A (the Orville Wright Building) and FOB 10B (the Wilbur Wright Building); FOB 8, located on C Street, SW, between 2nd and 3rd Streets; FOB 5, also known as the James V. Forrestal Building, located between 9th and 12th Streets, SW on Independence Avenue; the U.S. Department of Housing and Urban Development (HUD) Building, also known as the Robert C. Weaver Building, located at the southwest corner of 7th and D Streets, SW; the Nassif Building, constructed on a speculative basis by a private developer and formerly occupied by U.S. Department of Transportation (DOT), located at the southeast corner of 7th and D Streets, SW; the Reporters Building, also privately developed, located at the northeast corner of 7th and D Streets, SW; and the Hubert Humphrey Building, constructed by GSA for the Department of Health and Human Services (HHS), located at the southwest corner of 2nd Street, SW and Independence Avenue.

Constructed over a span of more than 17 years, these diverse buildings were designed by an array of architectural firms, some local and others of national importance. While each building is distinct, all are unified in their use of the Modern style, be it articulated as Formalism, Brutalism, Expressionism, or the International Style.

Site History

As depicted in L'Enfant's 1791 plan for the city, Maryland Avenue visually connected the U.S. Capitol Building with the Potomac River (see Figure 3-9). Bisecting the Memorial site, Maryland Avenue had a right-of-way of 160' in width, which has since served as the build-to line, the point to which buildings can be constructed. The 1791 L'Enfant Plan calls for 10-foot-wide foot ways and 30-foot-wide walks of trees on both sides of an 80-foot carriage way. By 1851, Maine Avenue had been installed north of and paralleling Maryland

Avenue. South B Street, which ran approximately along the current alignment of Independence Avenue, terminated at 6th Street. This formed an irregularly shaped parcel, defined by two diagonal avenues to the north and south and north-south gridded streets to the east and west. This parcel, a portion of which is included in the Memorial site, is identified as Square D in an 1857 map of the city by Albert Boschke (Figure 3-2). In subsequent Baist Real Estate maps Square D is termed Reservation D (in order to avoid confusion, this document will consistently refer to the parcel as Reservation D). The southern portion of the Memorial site was identified as Square 492.

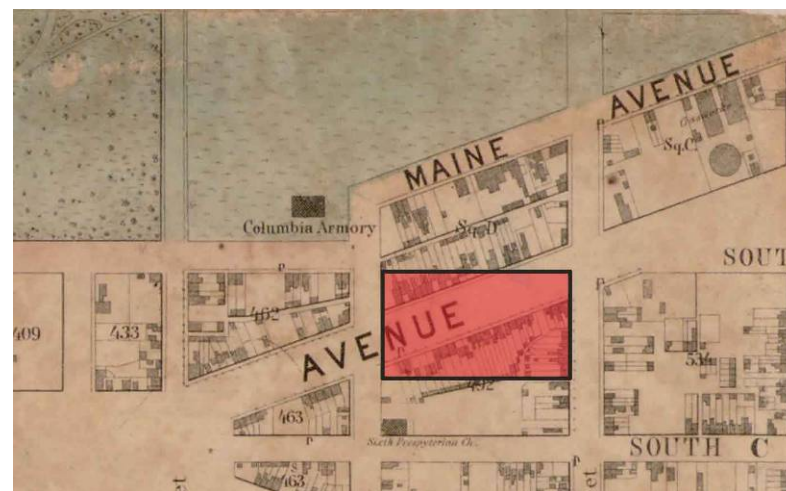


Figure 3-2: A. Boschke 1857 Map of Washington City, District of Columbia, with Reservation D and Square 492 north and south of Maryland Avenue, respectively

Source: Library of Congress, Geography and Maps Division

Boschke's 1857 map of Washington, DC shows that structures existed on most of Square 492, except for the southern central portion of the square that fronted C Street. Buildings fronted Maryland Avenue and 4th Street (historically known as 4 and One-Half Street) and included alley structures behind them (Figure 3-2). Boschke's map indicates that at this time the Sixth Presbyterian Church was located on the corner of 6th and C Streets. Reservation D was also developed with structures and included an alley running generally east to west, parallel to Maine Avenue. The blocks were made-up of a combination of brick and wood-framed dwellings of varying sizes, many two-story with porches and alley sheds.

An 1888 Sanborn Fire Insurance Map shows denser development on Square D and Square 492 than Boschke's 1857 map with most of the previously vacant lots having been developed (Figure 3-3). The 1888 map shows buildings, stables and two alleys (Armory St. and Aiken Alley) in Square 492. The railroad abutted the western edge of the site, running north along 6th Street from the Baltimore and Potomac Railroad roundhouse directly south of the site. Maryland Avenue cut diagonally through the Memorial site from the northeast to the southwest. Buildings, stables and two alleys were located on Reservation D, with businesses clustered on the eastern side of Reservation D fronting both Maine and Maryland Avenues and 4th Street. These businesses included several industrial structures including a planing mill, a lumber shed, and a foundry. Census records indicate that residents included families, boarders, and lodgers, and that the population was ethnically and racially diverse.

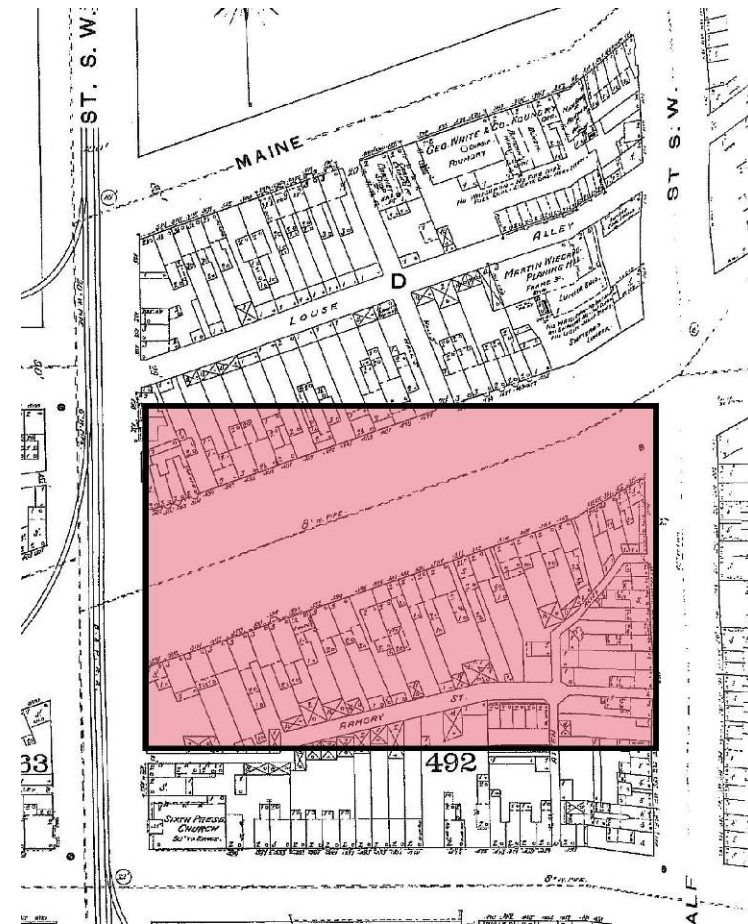


Figure 3-3: Sanborn Fire Insurance Map 1888

Source: Library of Congress Geography and Maps Division

Historic maps and Census records suggest there was little change in building patterns between 1888 and 1930. A 1939 photo of Southwest DC illustrates the density of development within the area (see Figure 3-4). However, according to Baist maps of the site, by 1903, the historic Maryland Avenue cartway, the way or road for carts or vehicular traffic, had been reduced to 60 feet in width, with 15 foot sidewalks and 35 feet of side yard on each side. Baist maps also indicate that the cartway was reduced from 60 feet to 50 feet between 1903 and 1911 (Figures 3-5 and 3-6). By approximately 1940, the buildings and structures on Reservation D had been demolished, in part to make way for Independence Avenue which would form the southern edge of the Mall. Land records indicate that by the end of 1941 the construction of Independence Avenue was complete, including a spur off of Maryland Avenue that connected it to Independence Avenue at mid-block. A 1945 Baist Real Estate Survey Map shows that a temporary building for the Veterans Administration had been constructed on the north side of Independence Avenue, across from the Memorial site (Figure 3-7). In 1957, residents of Square 492 were relocated to make way for Federal Office Building (FOB) 6, now known as the LBJ Building.



Figure 3-4 Southwest DC, D.C. July 1939

Source: Library of Congress, Prints and Photographs Division

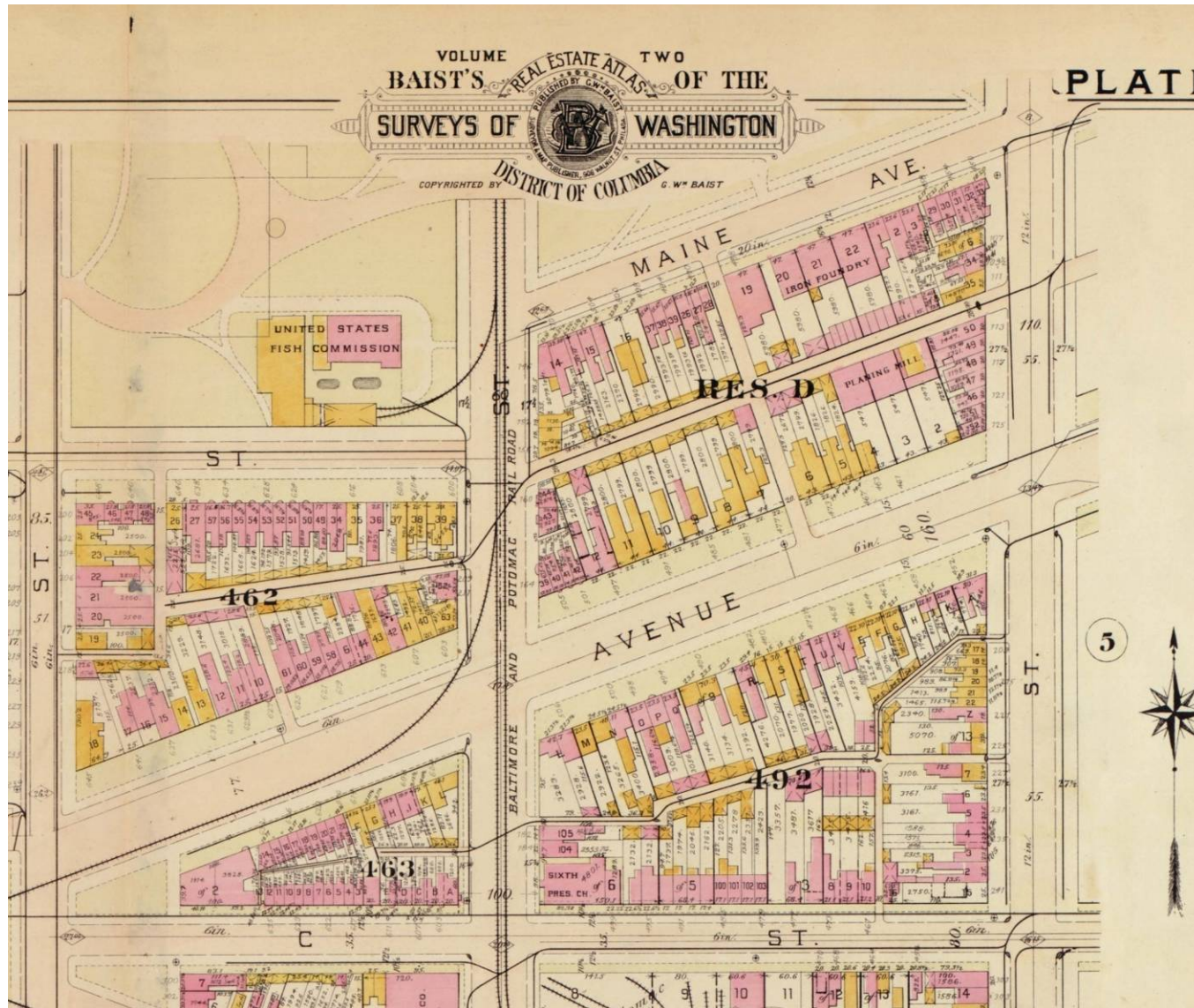


Figure 3-5: Baist Real Estate Survey Map 1903

Source: Library of Congress Geography and Maps Division

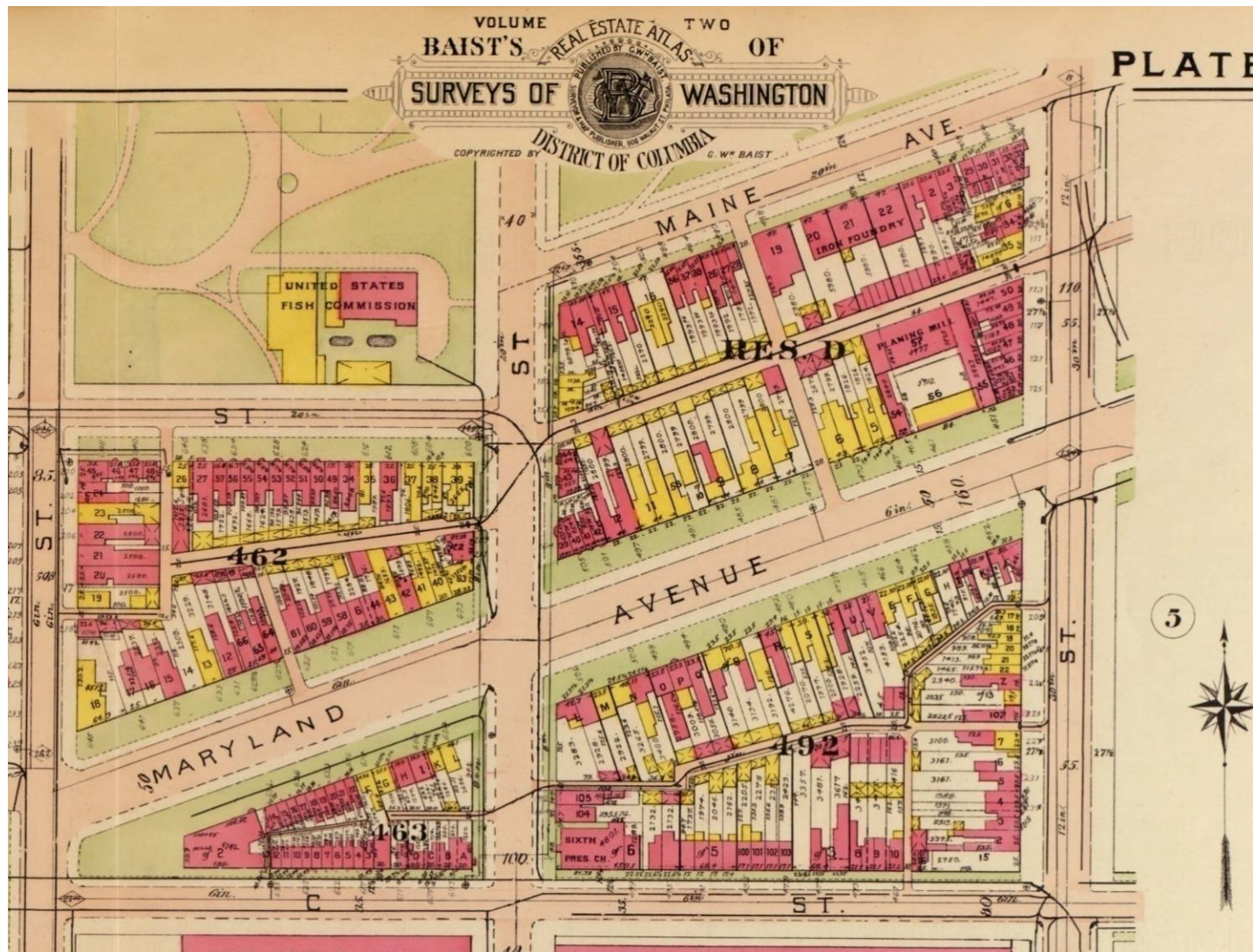


Figure 3-6: Baist Real Estate Survey Map 1909-1911

Source: Library of Congress Geography and Maps Division

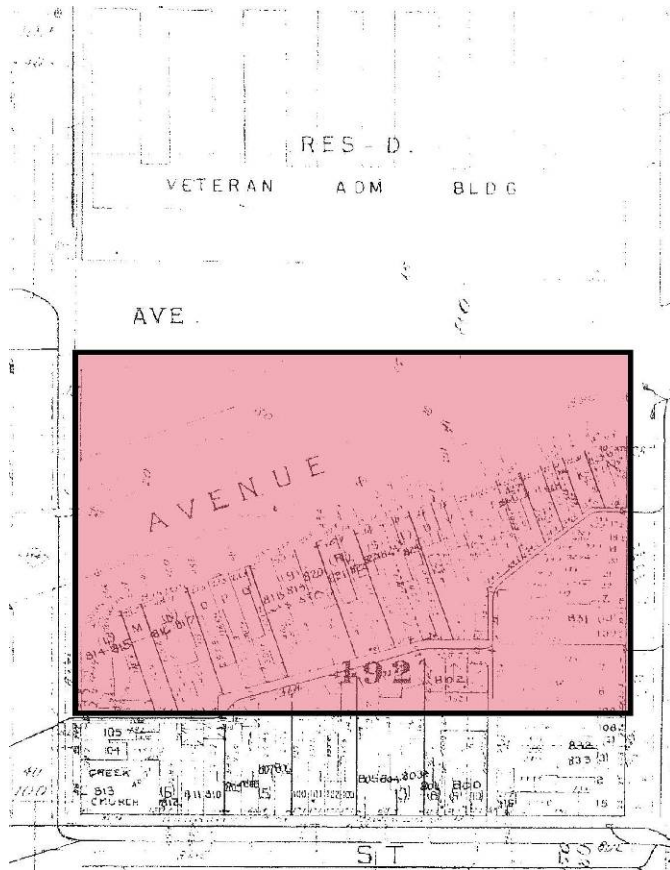


Figure 3-7 Baist Real Estate Survey Map 1945

Source: Library of Congress Geography and Maps Division

Constructed by GSA between 1959 and 1961, FOB 6 originally housed a portion of the headquarters function of the National Aeronautics and Space Administration (NASA), as well as employees of the U.S. Department of Health, Education and Welfare. A landscaped plaza was installed between the north face of the building and Maryland Avenue. This plaza comprises the

southeastern portion of the Memorial site. Maryland Avenue was further altered during this time period, with the single spur to Independence Avenue becoming a double spur and parking added along the side of the remaining portions of the diagonal Avenue. In addition, the northeastern end of this portion of Maryland Avenue was altered such that through traffic would not enter at the Independence Avenue and 4th Street intersection, but instead would be deposited on 4th Street just south of the intersection. This configuration persists today.

Archeological Potential

Given the proximity of the project site to Tiber, Goose, and St. James Creeks, prehistoric use of the area is likely. The possibility of alluvial deposits could have led to the preservation of prehistoric archeological sites and features; however, intensive urban development may have already impacted such sites and features. Given the historic development on the project site, it is possible that sub-surface features associated with the mid-19th to mid-20th century residential and commercial uses remain capped below fill across the project site, with the exception of the southernmost 22 to 52 feet bordering the LBJ Building, where a below-grade basement is located. The portion of Reservation D at the northwest portion of the site is considered to have moderate potential for prehistoric resources and moderate to high potential for historical archeological resources. The portion of Square 492 within the project area (excepting the location of the below-grade basement) is considered to have moderate potential for both prehistoric and historic resources. This applies to the portions of the plaza where subsurface development did not occur, particularly if these areas were covered with fill following demolition of the residential structures. The Maryland Avenue right-of-way within the project area is also considered to have moderate potential for both

prehistoric and historical archeological resources. Prehistoric archeological deposits could be buried beneath fill and remnants of the historic road surface could be buried beneath the current roadway. Excavations in nearby historic Reservation C for the National Museum of the American Indian revealed that a construction sequence similar to what took place at Square 492 did result in the preservation, beneath layers of deep fill, of domestic deposits from the 19th and early 20th century residential use of the area.

3.1.2 Historic Resources

This section documents historic resources, including historic structures and districts, as well as cultural landscapes, located within the APE. Buildings located within the Mall Historic District, a documented cultural landscape, are discussed under the heading Cultural Landscapes.

Historic Structures and Districts

Lyndon Baines Johnson Building and Designed Landscape

Originally known as Federal Office Building 6, the building located immediately adjacent to the south edge of the Memorial site was built as part of Washington's urban renewal efforts (Figure 3-8). It was designed for GSA by the architectural firms of Faulkner, Kingsbury & Stenhouse, and Chatelain, Gauger & Nolan, and constructed between 1959 and 1961. The building's long rectangular form anchored by granite-veneered pilotis, flat roof with setback top stories, and austere clean lines created by limestone panels and glass-curtain walls were designed to deliberately harmonize with the rigorous geometry of the granite and aggregate concrete hardscape and low-lying, light-tracery landscaping of the site. The union of building and site through materials and design is a hallmark of the Modern Movement, as expressed by the LBJ Building.

The building environs, including a plaza on its north side, are the work of the landscape architecture firm of Collins, Simonds & Simonds. Typical of modern design during this period, the landscape and building were designed together, with the outdoor space intending to serve as an extension of the indoor space. The plaza was planned as a series of interpenetrating spaces, including raised

terraces, three outdoor rooms, and a sunken courtyard. As originally designed, clusters of tall Southern Magnolia were located at the eastern and western ends of the plaza, while shorter saucer and star Magnolia were to be located at the center. Several of the trees remain. Bordered by granite-edged pits, these trees appear to have been scattered randomly across the plaza. Due to their height at maturation, together with their placement, these trees would have served to provide intermittent views of the east and west ends of the building's north façade, and fuller views of the upper stories of the center section of the building. Over time, many of the specimens have been replaced with other species. The plaza makes up the southeastern portion of the Memorial site.



Figure 3-8 North Elevation of the Lyndon Baines Johnson Building
Source: AECOM 2010

A 2011 determination of eligibility for the building and landscape concluded that the property is eligible for listing in the National Register under Criteria A and C for its significance in the areas of politics/government, landscape architecture, architecture, and community planning/development. It is eligible under Criterion A

as a key component of GSA's master plan for the design, construction, and funding of federal office buildings in the District of Columbia between 1956 and 1966. The location of the LBJ Building was the result of the first cooperative response by the federal government to the National Capital Planning Commission's 1950 Comprehensive Plan for the District of Columbia and the removal of temporary federal office buildings from the National Mall. The LBJ Building also reflects the direct participation of the federal government in the redevelopment plans for Southwest Washington, becoming the first federal office building constructed specifically as part of the Southwest Urban Renewal Plan. Furthermore, it is eligible under Criterion C as the most successful component of the Southwest Rectangle, a grouping of Modernist buildings at the southern edge of the National Mall. Significant to its mid-century aesthetic is the holistic treatment (hardscape and landscape) of the trapezoidal site, a character-defining aspect of Modernist design. It retains sufficient integrity of location, design, setting, materials, workmanship, feeling and association to convey its significance.

L'Enfant and McMillan Plans

The Memorial site is bordered and bisected by streets originally planned by Pierre Charles L'Enfant in the 18th century (Figure 3- 9). L'Enfant's 1791 Plan for Washington, one of the best American examples of a comprehensive Baroque city plan, defined the physical and symbolic character of the nation's capital through its arrangement of buildings, parks, roadways, and views. Maryland Avenue, 4th Street, and 6th Street were all components of L'Enfant's original design. As planned by L'Enfant, Maryland Avenue was a 160'-wide diagonal thoroughfare connecting the U.S. Capitol building with the Potomac River. Fourth and 6th Streets, which define the eastern and western boundaries of the Memorial site, were part of L'Enfant's orthogonal street grid.

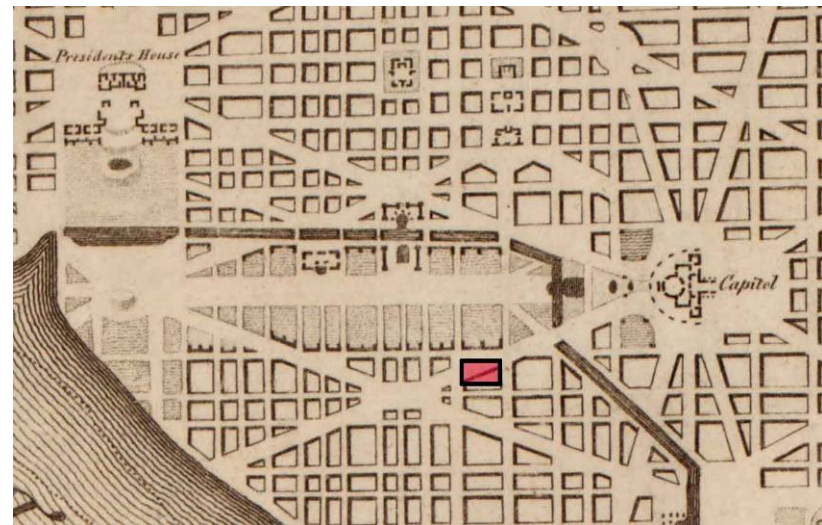


Figure 3-9 L'Enfant Plan as engraved by Andrew Ellicott, 1792

Source: Library of Congress, Geography and Maps Division

At the turn of the century, the McMillan Commission expanded on L'Enfant's Plan in a manner consistent with the City Beautiful movement, extending the National Mall and terminating several visual axes with monuments (Figure 3-10). The McMillan Plan envisioned Maryland Avenue as a broad, tree-lined thoroughfare that provided a visual connection to the U.S. Capitol building. The Plan also established Independence Avenue (formerly South B Street) as a continuous east-west axis along the southern boundary of the Mall, altering the street pattern in the vicinity of the site. The L'Enfant Plan is listed in the NRHP. A draft National Historic Landmark nomination was also prepared in 2002. The nomination recognizes components of the McMillan Plan that contribute to the plan of the city. Maryland Avenue is a Contributing Major Avenue, Independence Avenue (B Street South) is a Contributing Major Street, and 4th and 6th Streets are both Contributing North-South Streets. In addition, Maryland Avenue is a Contributing Vista along the radiating avenue to the U.S. Capitol, and 4th Street has a Contributing Vista along the major cross-axes to Judiciary Square. The northwestern portion of the site is a small component of Reservation 5, the balance of which comprises a portion of the Mall. Although historic maps of the area completed prior to the construction of Independence Avenue considered the NPS parcel together with the portion of the Mall directly northeast to be a single block (see Figure 3-6), the NPS parcel is not considered to be part of the Mall. Reservation 201 northeast of the Memorial site, and Reservations 200 and 113 southwest of the Memorial site, are considered to be contributing elements to the L'Enfant Plan (see Figure 3-9).

The Plan meets National Register Criterion A for its relationship with the creation of the new United States of America and the creation of a capital city. It meets Criterion B because of its

association with Pierre Charles L'Enfant and subsequent groups responsible for the planning and design of the city. It meets Criterion C as a representative example of a Baroque Plan with Beaux Arts modifications.

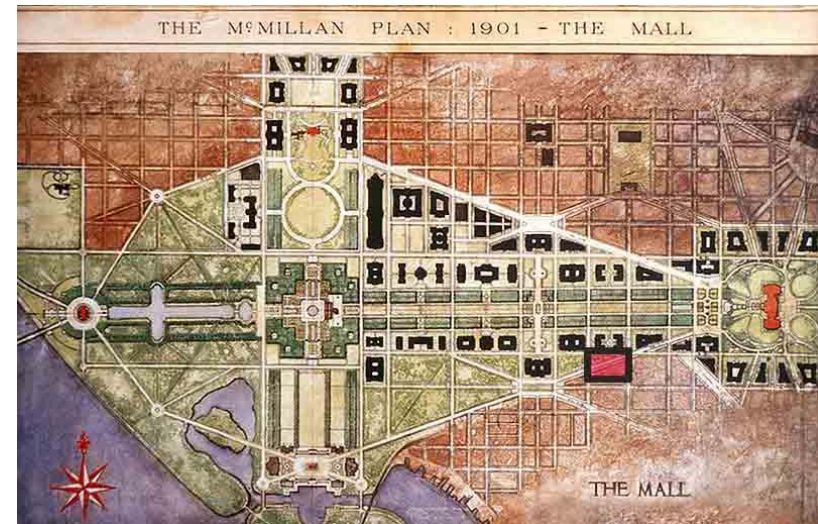


Figure 3-10 McMillan Plan
Source: NCPC

Orville Wright and Wilbur Wright Buildings

The Orville and Wilbur Wright Buildings (Figure 3-11), located to the west of the Memorial site on Independence Avenue, were designed by the firms of Holabird & Root & Burgee, together with Carroll, Grisdale & Van Alen. Although constructed in 1963 as separate structures, the Orville Wright Building and the Wilbur Wright Building (FOB 10A and FOB 10B, respectively) were designed as one federal office building. The Orville Wright Building, located between 7th and 9th Streets, has served since its completion as the headquarters of the Federal Aviation Administration (FAA) and is the larger of the pair. The Wilbur Wright Building, located between 6th and 7th Streets, originally housed headquarters functions of NASA, including the Office of Manned Space Flight. It is now occupied by the FAA. These buildings are characterized by their smooth, flat facades that are composed of a glass and marble grid. The larger Orville Wright Building is raised on pilotis and measures 10 stories high, while the Wilbur Wright Building is six full stories with a lower level partially below grade.

A DOE was prepared in 2011 for the Wilbur Wright Building recommending its eligibility for listing in the NRHP. It was determined eligible under Criterion A because of its association with urban renewal in Southwest DC and under Criterion C as a representative example of modern design in Washington during this period. The Wilbur and Orville Wright Buildings are considered eligible as an ensemble based on their intrinsic design relationship.



Figure 3-11: Orville and Wilbur Wright Buildings

Source: AECOM, 2010

Wilbur J. Cohen Building

East of the Memorial site, the Wilbur J. Cohen Building was constructed in 1939 for the Social Security Administration (Figure 3-12). The structure is representative of the Stripped Classical style with its bands of vertically oriented windows. The building is significant under Criterion A for its role in city planning in Washington, DC. It is significant under Criterion B both as an example of Stripped Classical design and as the last work of Charles Klauder, a prominent architect known for his skill in melding historical references with modern programmatic needs. It is further significant for its association with the Social Security Administration and the New Deal. The Wilbur J. Cohen Building was listed in the DC Inventory of Historic Sites and the NRHP in 2007.



Figure 3-12: Wilbur Cohen Building
Source: AECOM, 2010

Hubert Humphrey Building

Located on Independence Avenue between 2nd and 3rd Streets SW, the Hubert Humphrey Building was constructed in 1977 to house the U.S. Department of Health and Human Services (Figure 3-13). Designed by Marcel Breuer and Herbert Beckhard, the precast concrete structure is an example of Brutalism. The design is characterized by its four corner towers, heavy concrete and glass facades, angled fins on its upper story, and open plaza. It has not yet been evaluated for its eligibility for the NRHP.



Figure 3-13: Hubert Humphrey Building
Source: AECOM, 2010

U.S. Capitol

The U.S. Capitol is one of Washington's and the nation's most iconic buildings. Located approximately ¼ mile northeast of the site, the Neoclassical style structure was designed by William Thornton in 1793, and then renovated and expanded in the 19th century by Benjamin Latrobe, Charles Bulfinch, and Thomas U. Walter (Figure 3-14). The structure is characterized by a large columned portico on the east and west fronts of the building, and a massive dome. The monumental building is sited on an original L'Enfant Appropriation and is set within a landscape designed by Frederick Law Olmsted. Both the Capitol dome and the grounds are directly visible from the Memorial site. The Capitol was designated a National Historic Landmark in 1960 and listed in the DC Inventory of Historic Sites in 1964.



Figure 3-14: U.S. Capitol Building

Source: AECOM, 2009

U.S. Botanic Garden

The U.S. Botanic Garden, located northeast of the Memorial site within the Capitol Grounds, showcases diverse vegetative species and ecosystems in varying climatic exhibits (Figure 3-15). The garden was originally established by Congress in 1820 and remains one of the largest of its kind in North America. Designed in the Beaux Arts style by Bennett Parsons & Frost in 1902, the garden was listed in the DC Inventory of Historic Sites in 1964.



Figure 3-15: U.S. Botanic Garden

Source: EDAW, 2008

Cultural Landscapes

The Mall

The Mall was a key component of the L'Enfant and McMillan plans for the city. The Mall extends from the Capitol Grounds on the east to 14th Street on the west, and from Pennsylvania and Constitution Avenues on the north to Maryland and Independence Avenues on the south. The NPS parcel, although part of Reservation 5 which includes portions of the Mall, is not considered to be part of the Mall (Figure 3-16).

Numerous national museums line the Mall, and a tree-lined greensward runs through the center. The Mall was listed in the DC Inventory in 1964 and the NRHP in 1966. It is also a contributing element to the L'Enfant Plan. In 2006, a cultural landscape inventory was completed for the Mall which identified contributing features and concluded that the Mall clearly has national significance. The following character-defining features proximate to the Eisenhower Memorial are listed as contributing features to the cultural landscape:

- Views to building facades from the Mall
- View up 4th Street, a cross-street
- Historic circulation of 4th Street



Figure 3-16: The National Mall

Source: EDAW, 2008

Located at the eastern edge of the Mall, Union Square connects it to the U.S. Capitol grounds. Union Square is the section of the Mall located between 1st and 3rd Streets, N.W. and S.W., Pennsylvania Avenue, N.W., and Maryland Avenue, S.W. The wedge-shaped site lies at the foot of Capitol Hill and functions as an intermediate landscape between the central landscape of the Mall and the U.S. Capitol Grounds. The enormous memorial to Ulysses S. Grant (installed 1922) extends for 252 feet across the site's east end, parallel to and a short distance from 1st Street. Planting beds at the ends of the platform help tie it visually to the ground. A six-acre wedge-shaped pool, with a broad, simple limestone coping, occupies the central third of the site and is set slightly below ground level. The vista to the U.S. Botanical Garden is a contributing element of the cultural landscape.

Although not identified as contributing elements in the NRHP nomination, the museums on the Mall are generally considered to contribute to its historic significance. These include the Hirshhorn Museum, designed by Gordon Buntshaft of Skidmore, Owings, and Merrill, and NASM, designed by Gyo Obata of Hellmuth, Obata + Kassabaum, both with visual connections to the Eisenhower Memorial site. NASM, located directly north of the Memorial site, is modern in style, consisting of a series of repeating rectangular blocks made of Tennessee Pink Marble. The Hirshhorn Museum, located northwest of the Memorial site, is also modern in style, its primary mass being cylindrical in form.

3.2 VISUAL RESOURCES

The following discussion of visual resources addresses both the existing visual character of the areas surrounding the Memorial site, as well as views and vistas in the vicinity of the site. For the purposes of this analysis, the term “vista” defines views of primary importance that were specifically planned, designed, and implemented, while the term “view” describes those unplanned views that resulted from the construction of other features. Due to the site location, views and vistas are generally afforded along streets that border and bisect the site, as well as across the plaza located north of the LBJ Building. Two major view corridors, Maryland Avenue and 4th Street, are both recognized as contributing vistas within the NRHP nomination for the L'Enfant Plan.

Memorial Site

The Memorial site is made up of three visually distinct areas: the GSA parcel that includes the plaza in front of the LBJ Building; the Maryland Avenue right-of-way; and the NPS parcel that contains community gardens and a small fitness area.

Due to the angle of Maryland Avenue, the plaza on the north side of the LBJ Building (Figure 3-17) is irregular in shape. Made up of a series of interpenetrating spaces, it follows a grid, responding to the symmetry of the LBJ Building. The two raised entry terraces are largely open paved areas that correspond to the openness of the building entrances. The terraces are accessed by stairs on three sides and each terrace has been retrofitted with accessible ramps.



Figure 3-17: Existing Plaza in front of Lyndon Baines Johnson Building

Source: AECOM, 2010



Figure 3-18: Maryland Avenue Right-of-Way and Parking

Source: AECOM, 2010

Flanking the raised entry terraces are more densely planted outdoor rooms, each differing in size and shape. Within these areas, shrubs and trees of varying sizes appear randomly placed. A sunken courtyard, accessed by a series of steps, is located at the east end of the plaza. Views from Maryland Avenue across the plaza towards the LBJ Building are filtered by vegetation. The north face of the LBJ Building, which borders the Memorial site, receives little direct sunlight. Indirect light is afforded by the large number of the building's windows.

The Maryland Avenue right-of-way runs diagonally through the Memorial site, physically and visually separating the GSA parcel from the NPS parcel (Figure 3-18). The area is visually disjointed, made up of a web of paved vehicular travel lanes, irregularly shaped grassy parcels, and a small surface parking lot. The Maryland Avenue right-of-way is directly on axis with, and provides views to, the U.S. Capitol Building.

The NPS parcel is triangular in shape and bordered on three sides by roadways (Figure 3-19). At the southwest end of the parcel is a small paved area that is used as an exercise course. The balance of the parcel is made up of open lawn and a series of community garden plots. The largest of these plots is bordered by a split-rail fence. Several trees dot the parcel and a small shed borders the fence on its south side. Lines of street trees on the north and west sides filter views to and from Independence Avenue and 6th Street. The community gardens and exercise course are not historic resources.



Figure 3-19: NPS parcel with community gardens and exercise course and NASM in the distance

Source: AECOM, 2010

Surrounding Visual Environment

The Memorial site lies within an area of monumental federal buildings located south of the Mall. While diverse in form and materials, they are largely unified in their use of pre-modern and modern styles including Stripped Classicism, the International Style, Formalism, and Brutalism.

North of the Memorial site, a series of mid-rise museum buildings line the south side of the Mall. NASM fills three full city blocks; its planar façade serves to visually enclose the Memorial site and obscures views of the open space of the Mall further to the north. The Hirshhorn Museum and NMAI which flank NASM to the west and east, respectively, are similar in height, but display softer curved forms. A wide, tree-lined sidewalk runs along the north side of Independence Avenue, physically separating the museum buildings from the roadway.

The south and east sides of the Memorial site are also visually defined by large mid-rise structures. The Wilbur Cohen Building (Figure 3-20) lies to the east of the Memorial site across 4th Street. A narrow planting bed divides the sidewalk from the west face of the building, and a line of street trees filter views between the Cohen Building and the Memorial site. The LBJ Building, filling two full city blocks, spans the southern boundary of the Memorial site, providing a continuous building line and obstructing views of the neighborhood to the south (see Figure 3-18).

Light entering and views from buildings affect their working environment. The LBJ Building receives little direct sunlight through its north side. Instead, the windows allow indirect sunlight to reach the building. On the lower floors, this sunlight is filtered by trees in the plaza and along the streets. The views from the

northern portion of the building are primarily unobstructed, with the exception of lower floors, where trees intermittently obscure views outside.



Figure 3-20: The Wilbur Cohen Building located directly east of the Memorial site

Source: AECOM, 2010

While the north, east, and south sides of the Memorial site are tightly defined, the area to the west is more open, due primarily to the diagonal alignment of the Maryland Avenue right-of-way. Directly west of the site, the Wilbur Wright Building (Figure 3-21) is set back from Maryland Avenue, allowing for a terrace and lawn on the building's south side. South of the Wilbur Wright Building across Maryland Avenue, the Capitol Gallery also has an open feel, with a plaza, Metrorail entrance, and lawn filling the space between the face of the building and the roadway. The Orville Wright Building one block further west breaks the open feeling of the area, obscuring views in this direction.

The Cohen and Wilbur Wright Buildings receive direct sunlight through their western and eastern sides, respectively, depending upon the time of day. Windows allow direct and indirect sunlight to reach the building. On the lower floors, this sunlight is filtered by trees. The views from these portions of the buildings are primarily unobstructed, with the exception of lower floors, where trees intermittently obscure views outside.



Figure 3-21: The Wilbur Wright Building and intersection of 7th Street and Maryland Avenue located west of the Memorial site
Source: AECOM, 2010

View Corridors

Maryland Avenue

As designed by L'Enfant, Maryland Avenue was a wide diagonal thoroughfare intended to visually connect the U.S. Capitol with the Potomac River. Over time, the roadway has been fragmented such that it does not consistently follow the historic view corridor. In some blocks, buildings define the edges of the view, but for many blocks the buildings are aligned east-west along grid streets and thus have substantial setbacks from Maryland Avenue (Figure 3-22). In these blocks where the buildings are not aligned to Maryland Avenue, the street wall lacks definition.

Through the Memorial site, the Maryland Avenue roadway diverges from its historic alignment with the U.S. Capitol Building. The vista northeast from the site is framed by buildings and terminates at the Capitol dome, with portions of the dome partially obscured by existing street trees. The vista southwest from the site also varies in composition. Street trees and buildings with large setbacks line Maryland Avenue to the south, loosely defining the edges of the vista. From the Capitol steps the expansive vista southwest along Maryland Avenue does not reach the waterfront, but rather terminates at Reservation 113 two blocks west of the Memorial site.



Figure 3-22: Maryland Avenue view corridor looking northeast towards the U.S. Capitol Building from the 7th Street

Source: AECOM, 2010

Independence Avenue

Independence Avenue is a broad, six-lane, two-way street. While many of the buildings that line Independence Avenue are similar in height, they vary in setback, form, and materials, forming an inconsistent building line along the avenue (Figure 3-23). Vistas are framed by street trees of varying sizes. The lines of street trees and buildings are broken by open spaces and roadways, including the Memorial site between 4th and 6th Streets. The vista to the east along Independence Avenue, defined by mid-rise buildings and framed by street trees of varying sizes, follows the roadway up to Capitol Hill. The vista to the west along Independence Avenue is interrupted by the arched pedestrian bridges that connect the U.S. Department of Agriculture buildings on either side of the avenue.



Figure 3-23 Independence Avenue view corridor from 7th Street

Source: AECOM, 2010

4th Street

In Southwest, DC, 4th Street is a wide four-lane right-of-way, a major visual corridor in L'Enfant's Plan for the city. North of Independence Avenue, the view corridor opens to incorporate the greenspace of the Mall. The vista north along the corridor terminates at the National Building Museum (Figure 3-24). The vista south along the right-of-way is framed by the greenspace of the Mall and narrowed by the canopies of mature street trees. In the block south of Independence Avenue, at the Memorial site the Wilbur J. Cohen Building provides a sharply defined edge to the vista on the east side, while the open space of the LBJ plaza is visible on the west edge of the vista. The vista looking south from the Memorial site is tightly framed by the Wilbur Cohen and LBJ Buildings, as well as lines of street trees. One block further south, the vista is bordered on both sides of the roadway by a consistent building line. The view corridor terminates at the railway infrastructure at Virginia Avenue, several blocks south of the Memorial site.



Figure 3-24: 4th Street view corridor looking north from Independence Avenue

Source: AECOM, 2010

3.3 PARK OPERATIONS AND MANAGEMENT

The northwest corner of the project site is under the jurisdiction of the National Mall and Memorial Parks (NAMA), which is part of the National Capital Region of the National Park Service. NAMA manages various NPS units on the National Mall, which received approximately 22 million visitors in 2008, and sites in the northwest section of Washington, DC that provide visitors with opportunities to commemorate presidential legacies; honor the courage and sacrifice of war veterans; and celebrate the United States commitment to freedom and equality. Included in NAMA are the Washington Monument, Lincoln Memorial, and Jefferson Memorial; World War II Memorial, Korean War Veterans Memorial, and Vietnam Veterans Memorial; and areas focusing on recreation, such as the National Mall and East and West Potomac Parks (NPS, 2010).

NPS manages and maintains over 1,000 acres in NAMA, including more than 80 historic structures and over 150 major named historic parks, squares, circles and triangles such as Dupont Circle, Farragut Square, and Columbus Plaza at Union Station (see Figure 3-25). NAMA has employed an average of 378 full-time equivalent employees to manage its parkland since 1996 (NPS, 2010). Its management structure is divided into six divisions under the Office of the Superintendent: Administration, Facilities Management, Interpretation and Education, Permits Management, and Resource Management. Budgets are not assigned to specific memorials or areas of the park, but rather come as one appropriation. Operation and management activities range from interpretation to security to maintenance.

At the Eisenhower Memorial site, NPS does not have staff dedicated to its parcel. As such, no ranger is present on-site. Mowing and other landscaping activities for the Memorial site occur on a regular basis during the year as part of a coordinated program for multiple sites within NAMA. NPS also maintains the approximately fifteen pieces of metal and plastic exercise equipment and associated signs at the site.

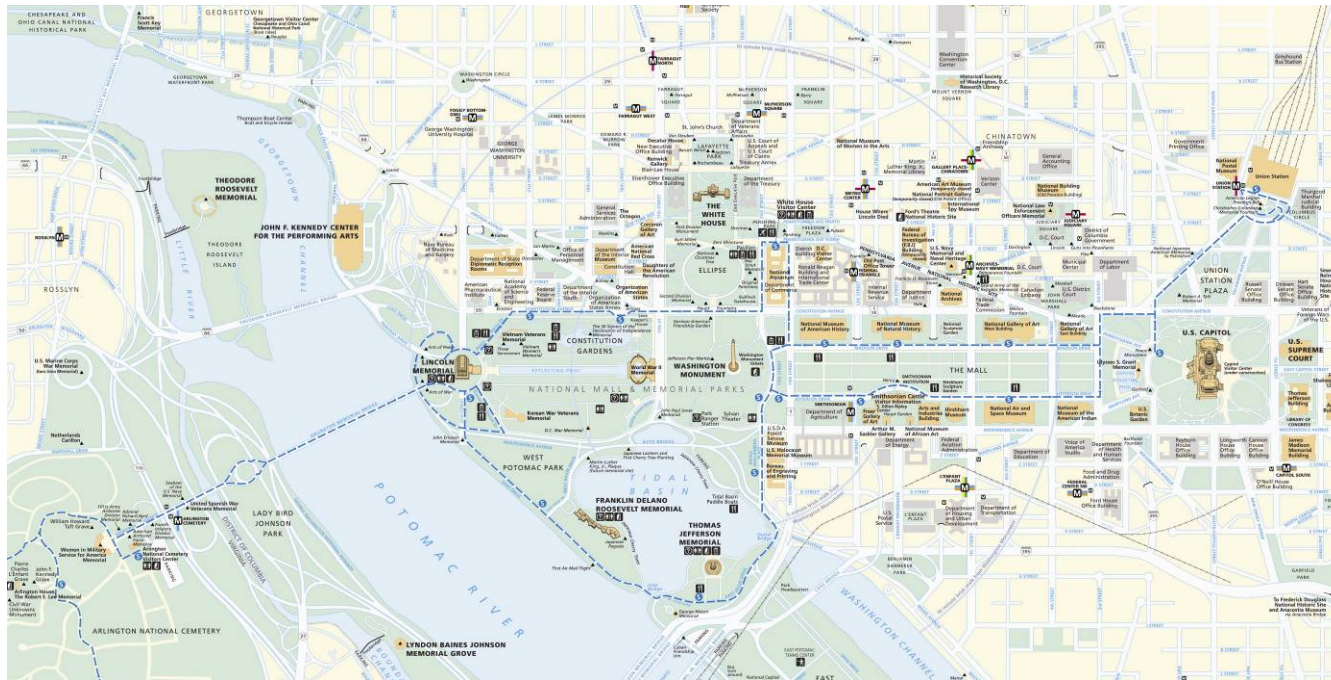


Figure 3-25: Map of the National Mall and Memorial Parks (portion of jurisdictional area)

3.4 SOILS

The Eisenhower Memorial site is regionally located within the geological province of the Atlantic Coastal Plain Region, where natural sedimentary materials of sand, clay, and silt overlay crystalline bedrock. The surrounding area has been historically developed by the placement of fill material upon a geologic terrace above the Potomac River floodplain. The terrace deposits have been encountered at depths of 32 to 44 feet below the ground surface (Smithsonian Institution, 1993).

The surface soils of the area are classified as Urban Land Association, which are soils that have been previously disturbed, cut, or filled, and may be covered by impervious surfaces. Existing fill material may be present on the site at varying depths and, based on previous investigations at the adjacent NMAI, may contain foreign materials and trace petroleum odors due to historical use of the area (Smithsonian Institution, 1993).

The majority of the site soils, as well as those surrounding the site, have been altered and covered with grassed areas and impervious surfaces such as asphalt streets and concrete sidewalks and plazas. A total of 0.9 acres of productive soils are at the Memorial site. The NPS parcel within the site is predominantly grassed open space, as well as 0.15 acres of community gardens. The majority of the GSA parcel within the site consists of a paved plaza and sidewalks to the LBJ Building. The Maryland Avenue right-of-way is largely covered by pavement, with some grassed areas.

A preliminary soil investigation was conducted on behalf of the EMC. Upon reviewing limited soil data available from Washington Metropolitan Area Transit Authority (WMATA) soil borings, the study found that there appears to be no geotechnical findings that would limit the construction of the Eisenhower Memorial (EarthTech, 2005). The study extrapolated that the soil condition at the Memorial site consists of approximately 15 to 25 feet of fill material over original ground, which is typically mixed sands and gravels with some debris. The original ground is likely to consist of 10 to 20 feet of silts over stiff sand clay of Cretaceous Age as deep foundation material (EarthTech, 2005).

A Geotechnical Engineering Report, prepared for EMC in 2010, built on the previous studies. The 2010 report used eleven soil borings in its investigation and determined that the majority of the site is covered with 8-19 feet of fill material, followed by varying degrees of sand/silty clays, gravel, and sand (AECOM, 2010a). One site probe at the northeastern corner of the site had no fill.

Sampling for an Environmental Hazards report, also prepared for EMC in 2010, discovered petroleum-impacted soils at the site (AECOM, 2010b). These are likely a result from the historic use of the site as a filling station. The concentrations detected do not exceed any established screening level or cleanup standard.

3.5 TRANSPORTATION

3.5.1 Vehicular Traffic

Roadways

The Eisenhower Memorial site is an assembly of parcels comprising a total of approximately four acres in Southwest DC, near the U.S. Capitol. To the south of the site lies the LBJ Building. The other sides are bounded by the following streets:

- Independence Avenue to the north;
- 4th Street to the east; and
- 6th Street to the west.

Within the site, Maryland Avenue runs from 6th Street to Independence Avenue, crossing the site diagonally, southwest to northeast. This divides the site into two triangular parcels. A spur road from Maryland Avenue leads to 4th Street, further dividing the site. One block to the west, 7th Street is an important roadway in the vicinity of the site. The roadways on and surrounding the site are shown in Figure 3-26, and are described as follows:

- *Independence Avenue* is a two-way, eight-lane minor arterial street. It connects the U.S. Capitol and numerous federal buildings, including the Departments of Health and Human Services, Transportation, Energy, and Agriculture, as well as several Smithsonian Institution museums on the Mall. No on-street parking is allowed during peak hours (Monday through Friday, 7:00 a.m. to 9:30 a.m. and 4:00 p.m. to 6:30

p.m.). During off-peak periods, the roadway operates as a six-lane street with parking.

- *Maryland Avenue* essentially functions in two different ways near the site. Between 7th Street and Independence Avenue, it runs diagonally for about two city blocks and is classified as a collector facility. From 7th Street to a point 150 feet east of 6th Street, this road is a two-lane street with parking prohibited during the same peak periods described above. Functioning differently, the remainder of Maryland Avenue eastward to Independence Avenue is a six-lane divided, urban street, except when parking is allowed, during which times it operates as a four-lane street. Maryland Avenue intersects with Independence Avenue mid-block between 6th and 4th Streets as a yield-controlled intersection. Traffic can egress and ingress Maryland Avenue only during gaps in traffic flow along Independence Avenue. Dual right turn movements are allowed from eastbound Maryland Avenue to eastbound Independence Avenue during the morning and evening peak periods. It is relatively unusual to have a yield traffic control for this situation. Northeast of the site, Maryland Avenue continues across Independence Avenue, crossing 3rd and 1st Streets until it terminates at the U.S. Capitol grounds.
- A one-way *Maryland Avenue Spur* road runs from Maryland Avenue along the northern edge of the LBJ Building site to 4th Street, just south of Independence Avenue, at a stop sign-controlled “T” intersection. The spur road provides egress from a small parking lot to the north and offers curb parking along the south side.

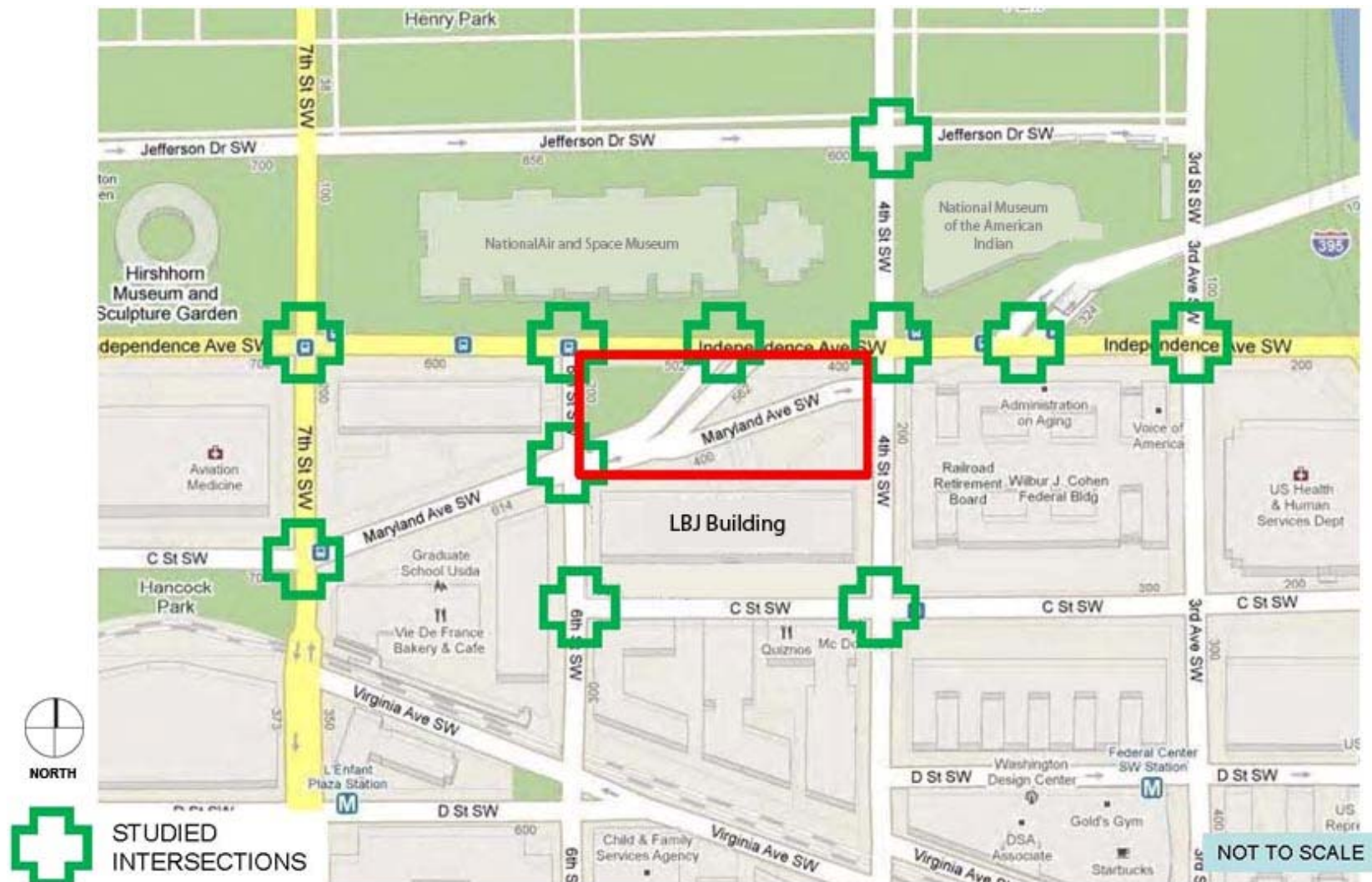


Figure 3-26: Studied roadways and intersections
 Source: AECOM, 2010

- *4th Street* runs as a north-south collector road along the east side of the Eisenhower Memorial site and the LBJ

Building, and forms an intersection with Independence Avenue. A minor intersection is also formed with the Maryland Avenue spur road. In this area, 4th Street operates as a two-lane street with parking allowed on the west side during off-peak hours. South of the site, 4th Street continues under Interstate 395 (I-395) to I Street.

- *6th Street* serves as a north-south, four-lane collector street with no on-street parking allowed during peak hours. During off-peak periods, 6th Street operates as a two-lane street. Bordering the west side of the Eisenhower Memorial site, 6th Street intersects Maryland Avenue and Independence Avenue across from NASM.
- *7th Street* is an important north-south, six-lane collector street with intersections at Maryland Avenue and Independence Avenue. During off-peak periods, when parking is permitted, the street operates as a four-lane facility.
- *Regional roadway access* is provided from the site to I-395 via 14th, 12th, 9th, or 3rd Streets or via Washington Avenue. I-395 provides access to Virginia and the Capital Beltway (I-495) to the west and provides access to southeast Washington, Maryland and the Capital Beltway via Interstate 295 (I-295).

Intersections

Intersections involving the site roadways (described above) are controlled by electronic traffic signals or signage, and include:

- Independence Avenue at 4th Street (signalized);
- Independence Avenue at Maryland Avenue, between 4th and 6th Streets (yield sign);
- 6th Street at Independence Avenue (signalized);
- 6th Street at Maryland Avenue (signalized);
- 7th Street at Independence Avenue (signalized); and
- 7th Street at Maryland Avenue (signalized).

Additional intersections around the site include:

- 3rd Street at Independence Avenue (signalized);
- Independence Avenue with Maryland Avenue, between 3rd and 4th Streets, east, at NMAI (yield sign);
- 4th Street at C Street (signalized);
- 4th Street at Jefferson Drive (signalized); and
- 6th Street at C Street (signalized).

The unsignalized, yield-controlled intersection of Maryland Avenue and Independence Avenue requires traffic movements from Maryland Avenue to wait for a break or opening in the flow of traffic to turn onto Independence Avenue. This can create delays and driving hazards during peak traffic periods. In addition, this Traffic on the roadway network around the site operates efficiently and has excess capacity under most circumstances. However, traffic can be constrained due to the intermittent movement of taxis, buses, service vehicles, and police, and from visitors searching for parking spaces, particularly before and after events on the National Mall.

Transportation Studies

A number of traffic studies for the development of a presidential memorial at this site have been conducted. A preliminary study of vehicular and pedestrian traffic, and parking for the site was prepared for EMC in October 2005 as part of the due-diligence site assessment of the site for the proposed Eisenhower Memorial. The study identified existing roadways, vehicular traffic, and parking on and adjacent to the site.

In order to determine the area's traffic demand, manual traffic turning movement counts were taken in September, 2005 during mid-week days for three, two-hour peak periods (morning, mid-day, and evening) at the four major intersections on and adjacent to the site. At that time, it was concluded that vehicular traffic volumes on the Maryland Avenue segment within the site were comparatively low and substantially below the capacity of this existing configuration. The traffic signals and unsignalized intersections typically operate with very little delay or stacking of vehicles. Traffic volumes were heaviest on Independence Avenue, with the heaviest

intersection is located mid-block on Independence Avenue between the intersections of 4th and 6th Streets with Independence Avenue. This creates additional vehicle turning movements (unsignalized) between the turning movements at the two signalized intersections.

traffic headed west in the morning peak and conversely, headed east in the evening peak (Earth Tech, 2005).

A more detailed Traffic Impact Study was prepared on behalf of EMC in February, 2006. The traffic impact study looked at traffic patterns, volumes, and level-of service (LOS). Supplemental traffic counts were taken at the intersections of 7th Street with Independence and Maryland Avenues during the same periods as the October 2005 study. A Saturday peak period (1:00 p.m. to 2:00 p.m.) was added for these two new intersections and the four site intersections (EarthTech, 2006). The traffic study concluded that all intersections in the study area operated at an overall LOS C, except for the unsignalized intersection of Independence Avenue with Maryland Avenue (west), which operated at a LOS D.

An additional study of the site and the potential traffic impacts of the proposed Eisenhower Memorial was undertaken in 2010. This study evaluated turning movements, LOS, and traffic counts at the site. The results indicated that existing conditions were very similar to those in the previous studies. The intersections typically operate with very little delay or stack of vehicles, and the heaviest traffic volumes are along Independence Avenue headed west in the morning peak hours and headed east in the evening peak hours (AECOM, 2010d).

Peak Traffic Volumes

The highest traffic volumes occurred during four peak periods (see Table 3-2 below):

- Weekday morning (7:00 a.m. to 9:00 a.m.);
- Weekday mid-day (12:00 noon to 2:00 p.m.);
- Weekday evening (4:00 p.m. to 6:00 p.m.); and
- Weekend peak hour (Saturday 12:00 noon to 2:00 p.m.).

In 2010, AECOM analyzed the Average Daily Traffic (ADT) volumes for roadway links, which were derived from District Department of

Transportation (DDOT) 2008 traffic volumes. The results are shown below.

The heaviest traffic movements occur on Independence Avenue, with the highest volumes of 2,804 vehicles occurring during the weekday evening peak between Maryland Avenue and 4th Street. Volumes dropped dramatically during the peak mid-day (1,433 vehicles). The predominant direction of flow is eastbound during the evening peak period, and westbound in the morning peak period (2,350 vehicles). Maryland Avenue on-site experiences its highest volumes (279 vehicles) during the evening peak period in the eastbound direction, turning right (east) at the yield-controlled intersection to join the predominant eastbound traffic on Independence Avenue during the evening peak period.

Table 3-2: Existing Peak Travel Volumes

Roadway Segment (between intersections)	AM Peak Volumes	Mid-day Peak Volumes	PM Peak Volumes	Sat. Peak Volumes
Independence Avenue (Maryland Ave and 4 th Street)	2,350	1,433	2,804	1,023
Independence Avenue (6 th Street and Maryland Avenue)	2,168	1,352	2,516	975
Independence Avenue (7 th Street and 6 th Street)	2,361	1,526	2,679	1,033
Maryland Avenue (6 th Street and Independence Avenue)	236	101	279	77
Maryland Avenue (7 th Street and 6 th Street)	259	64	197	65
7 th Street (Independence Ave and Maryland Avenue)	1,058	793	984	531
6 th Street (Independence Ave and Maryland Avenue)	273	213	240	101
6 th Street (Maryland Avenue and C Street)	290	251	400	103
4 th Street (Independence Avenue and C Street)	346	286	447	207

Source: AECOM, 2010

The second-highest traffic volume in the site vicinity is observed on 7th Street between Independence and Maryland Avenues during the morning peak period (1,058 vehicles). During the mid-day peak, volume reduces to 793 vehicles.

Volumes on 6th Street are more balanced between morning peak (273 vehicles) and evening peak periods (240 vehicles) from Independence to Maryland Avenues. The highest volume (400 vehicles) on 6th Street occurs during the evening peak period from C Street to Maryland Avenue and drops to 240 vehicles north of the Maryland Avenue intersection. This decrease is a likely indication of vehicles turning northeast onto Maryland Avenue on-site to turn right (east) at the yield-controlled (unsignalized) intersection on Independence Avenue, rather than utilizing the 6th Street signalized intersection at Independence Avenue.

Traffic volumes on 4th Street are higher than on 6th Street, and are highest during the evening peak period (447 vehicles), predominantly headed northbound and turning right (east) onto Independence Avenue.

Level of Service Analysis

Level of Service (LOS) is a quality measurement of traffic flow in terms of speed and travel time, freedom to maneuver, comfort, and convenience. There are six LOS designations represented by the letters A through F, with LOS A representing the best operating conditions and LOS F representing the worst. Signalized intersection LOS is determined by seconds delay per vehicle. The designations are summarized in Table 3-3.

Table 3-3: Level of Service Standards

Level of Service	Signalized Intersections Average Control Delay (seconds/vehicle)
A	Less than 10
B	>10-20
C	>20-35
D	>35-55
E	>55-80
F	More than 80

Source: AECOM, 2010

Generally, LOS C or better is desired; however, in major urban areas such as the District, LOS D is considered acceptable. LOS E and F are considered unsatisfactory because they are at or exceeding capacity, requiring an extra light cycle to pass through the intersection. Based on the 2010 analysis, all of the intersections studied operate at LOS C or better; exceptions include: the intersection of Independence Avenue and 3rd Street, which operates at LOS D in the evening peak hour and the existing unsignalized intersection of Independence and Maryland Avenues (East, at NMAI), which operates a LOS D in the morning peak hour. Table 3-4 shows the existing LOS conditions at the study intersections.

Table 3-4: Existing Level of Service Conditions

Location		AM Peak		Mid-Day Peak		PM Peak		Sat. Peak
	Delay/Sec	LOS	Delay/Sec	LOS	Delay/Sec	LOS	Delay/Sec	LOS
Independence Avenue at 4 th Street	11	B	11	B	14	B	17	B
Independence Avenue at Maryland Avenue (West)	15	C	15	B	16	C	14	B
6 th Street at Independence Avenue	17	B	8	A	14	B	8	A
6 th Street at Maryland Avenue	14	B	16	B	18	B	11	B
7 th Street at Independence Avenue	19	B	16	B	21	C	16	B
7 th Street at Maryland Avenue and C Street	11	B	8	A	8	A	8	A
3 rd Street at Independence Avenue	20	B	21	C	23	D	27	C
Independence Ave at Maryland Avenue (East, at NMAI)	32	D	17	C	15	C	23	C
4 th Street at Jefferson Drive	9	A	16	B	10	B	15	B
4 th Street at C Street	14	B	14	B	14	B	13	B
6 th Street at C Street and Garage Entrance	14	B	14	B	15	B	15	B

Source: AECOM, 2010

In addition to examining LOS for the intersections as a whole, the 2010 traffic analysis reviewed specific movements, i.e. lanes of traffic, at these intersections. Around the site, the following intersections with Independence Avenue operated at LOS D or better during peak periods:

- Saturday peak northbound 3rd Street; and
- Evening peak southbound 3rd Street.

The following intersections with Maryland Avenue operated at LOS D during peak periods:

- Mid-day peak eastbound at 6th Street ;
- Evening peak eastbound at 6th Street ; and
- Evening peak westbound 7th Street.

3.5.2 Parking

Parking facilities in the study area include metered parking, public agency permit (GSA), public garage, taxi zones, and bus zones. The Memorial site currently has a total of 67 parking spaces (53 metered, 14 permitted). The parking space distribution is as follows:

- Maryland Avenue (22 metered and 1 permitted)
- Maryland Avenue spur to 4th Street (11 metered and 11 permitted)
- One-way parking area (20 metered and 2 permitted)

The additional curb metered parking supply within walking distance is 197 spaces. Of those 197, 104 of them are on street sections bordering the site (Independence Avenue and 4th and 6th Streets). The curb metered parking duration in the area generally has a limit of two hours. Curb metered parking along Independence Avenue is prohibited Monday through Friday during the peak periods of 7:00 a.m. to 9:30 a.m. and 4:00 p.m. to 6:30 p.m. Not included in the total 250 curb metered parking supply, both on- and off-site, are 89 (including 13 on Maryland Avenue at the Memorial site) permitted spaces found within one block of the site.

A public parking garage is located at 500 C Street. The capacity of the garage with stacked parking is 634 vehicles. During stacked operation, the customers leave the keys with the attendant to park the car. The hours of operation are 6:00 a.m. to 9:00 p.m. on weekdays and 9:00 a.m. to 6:00 p.m. on weekends.

Table 3-5: Parking by Type in Vicinity of Memorial

	Total	On-Site	Adjacent to the Site	Within 1 Block
Permit	89	14	n/a*	75
Metered	250	53	104**	197
Garage	634			634
Total	973	67	104**	906

*Permit parking adjacent to the site were not specifically calculated, but are included in the Within 1 Block.

**These parking spaces are included in the Within 1 Block calculation for metered parking spaces.

Source: AECOM, 2010

The overall total supply is 973 parking spaces, including curbside spaces (both metered and permitted) in and around the site and the parking garage (Figure 3-27).

Parking Demand and Supply

As part of the 2006 Traffic Impact Study, a parking field study was conducted to determine the number of parked vehicles in the vicinity of the Eisenhower Memorial site. The study was conducted between the hours of 11:00 a.m. and 1:00 p.m. Observations indicated that peak demand for parking is around noon. The field study showed that parking occupancies varied, from 58% occupancy along Independence Avenue in front of the site to 100% occupancy along Maryland Avenue, to the southwest of the site. Parking on the site, along Maryland Avenue and its spur, was

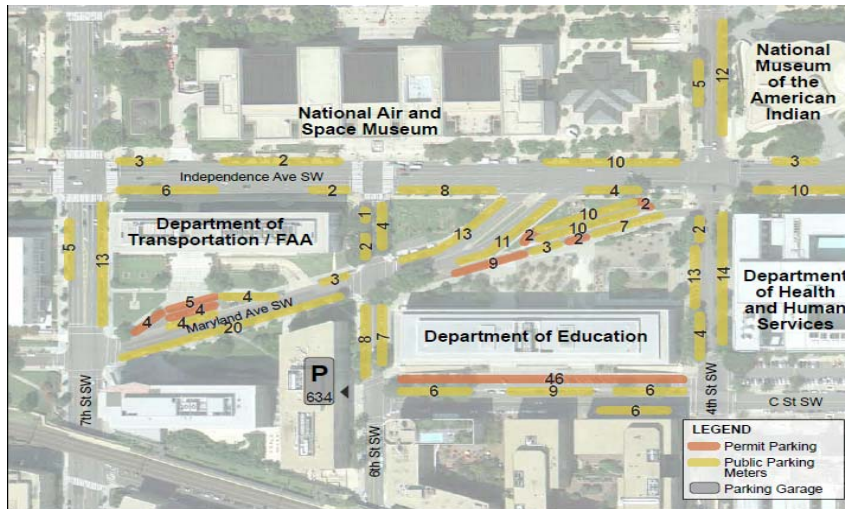


Figure 3-27: Parking supply in Memorial vicinity

Source: AECOM, 2011

approximately 70% occupied. South of the site, on-street parking was at or near capacity. The study also showed that in addition to Maryland Avenue located southwest of the site, 6th Street experienced 100% occupancy south of the site, and C and 4th Streets experienced 96% and 94% occupancy, respectively. In addition, the parking garage at 500 C Street operates at 64% occupancy during weekdays and much lower on weekends, according to garage records (EarthTech, 2006).

A new parking usage survey was performed in 2010 between 7:00 a.m. and 6:30 p.m. on two typical weekdays for street segments at and adjacent to the Memorial site, as opposed to those within one block of the Memorial site surveyed by the 2006 TIS (Table 3-6).

Table 3-6: Existing Available Memorial Site Parking

Time	Number of Empty Parking Spaces			
	Wednesday (On-Site)	Wednesday (Off-Site)	Thursday (On-Site)	Thursday (Off-Site)
7AM-8AM	33	62	38	64
8 AM-9AM	18	62	30	60
9 AM-10 AM	7	57	15	57
10 AM-11 AM	6	22	4	21
11 AM-Noon	8	14	6	8
Noon-1 PM	16	10	12	14
1 PM-2 PM	6	19	12	10
2 PM-3 PM	3	11	15	17
3 PM-4 PM	9	22	21	27
4 PM-5 PM	21	57	33	56
5 PM-6 PM	34	69	46	69
6 PM-6:30	46	71	47	63
Daily Average	33%	38%	44%	37%

Source: AECOM, 2010

Weekdays were chosen because those days would be the prevailing conditions, and they are typically busier than weekends. Wednesday and Thursday were selected to represent two average weekdays. The parking use survey did not include those metered or permitted spaces that were within one block of the site and were also on a street section that did not border the Memorial. The purpose of this new study was to assess existing parking conditions within the project site and its vicinity throughout the day, as opposed to only two mid-day hours. Based on the 2010 observations, an average of 33 and 44 percent of curb metered parking spaces at the Memorial site was available on the two weekdays surveyed (AECOM, 2010b). An average of 37 and 38 percent of available on-street metered parking at streets bordering the site (Independence Avenue and 4th and 6th Streets) was available (AECOM, 2010b).

3.6 VEGETATION

The site is located in an urban environment, in which the natural environment has been previously disturbed, developed, and partially restored. Limited vegetation on the site consists of landscaped grasses, shrubbery, trees, and community gardens.

The NPS parcel consists primarily of grassed, open space, occupied primarily with clusters of community garden plots of varying shapes and sizes, and a few small to medium trees. The DDOT parcel consists of the site roadways with open, grassed area between Maryland Avenue and the spur road parking lane, and a narrow strip of grassed area on the traffic island of Maryland Avenue. The GSA parcel contains minimal grassed areas with an open paved plaza with tree boxes, planters, and a below-grade, grassed patio. There is a narrow grass strip between the curb of Independence Avenue and the associated sidewalk on the northern perimeter of the site. The total vegetated area of the Memorial site is 0.9 acres.

There are 44 trees on the site (19 in the plaza, 25 along the street and throughout the site). Of the street trees, approximately 8 trees are large (20 inches or greater in diameter), 8 are medium-sized (less than 20 inches and greater than 6 inches in diameter), and 9 are small (6 or less inches in diameter). On the NPS parcel, there are 9 trees, including the street trees; there are 9 trees on the DC parcel, including 4 along Independence Avenue; and 26 trees on the GSA parcel, including 8 street trees.

Table 3-7: Existing Trees by Parcel

	NPS	GSA	DDOT
Street Trees	8	8	9
Plaza or Site Tree	1	16	
Total	9	26	9

The dominant species is Willow Oak (*Quercus phellos*) on Maryland Avenue south of Independence Avenue (Casey Tree Foundation Inventory, 2002, 2005, 2006), while the maple is the dominant street tree for Independence Avenue (NPS, 2010b). In the plaza, tree varieties include the Thornless Honeylocust, Southern Magnolia, Star Magnolia, and Littleleaf Linden. Beyond the plaza and street trees, there are five American Hornbeam trees and three concrete planters with junipers in the sunken courtyard.

3.7 VISITOR USE AND EXPERIENCE

The site primarily attracts employees seeking outdoor space for break times and lunch. The DED uses the site several times each year for events because the plaza can accommodate gatherings of the DED employees in the LBJ Building. Community gardeners use the 38 plots of the 0.15-acre community garden area. Visitors also use the existing exercise equipment at the NPS parcel. A large bell, owned by DED, sits in the LBJ Plaza.

Beyond the confines of the site, the adjacent monumental core attracts millions of visitors annually. The National Mall hosts an estimated 25 million visits each year. Special events, such as festivals and demonstrations, can draw hundreds of thousands of people to the National Mall. The adjacent museums attract over ten million people each year. Given its proximity to NASM and NMAI, many people pass by the Memorial site on their way to Metro or other locations.

Pedestrian and Bicycle Circulation

The Eisenhower Memorial site and the surrounding area provide a generally pedestrian-friendly environment, which includes sidewalks, crosswalks, pedestrian signals, proximity of National Mall trails, open park space, museums and other pedestrian attractions. Sidewalks exist along streets of the study area, and crosswalks have pedestrian signals except at the mid-block intersection of Maryland Avenue and Independence Avenue.

The 2010 transportation study analyzed pedestrian counts taken at the site during peak periods (AECOM, 2010). Peak periods for this purpose are defined as

- Weekday morning (7:00 to 9:00 a.m.)
- Weekday mid-day (12:00 to 2:00 p.m.)
- Weekday evening (4:00 to 6:00 p.m.)
- Weekend peak hour (Saturday 12:00 to 2:00 p.m.)

The analysis included the following intersections:

- Independence Avenue with 4th Street
- Independence Avenue with Maryland Avenue
- Independence Avenue with 6th Street
- Maryland Avenue with 6th Street

The analysis indicated that a total of 1,138 people were counted in the morning, 1,468 were counted midday, 2,922 were counted in the afternoon, and 4,154 were counted on Saturday. These values are well below the maximum capacity of the facilities. During large permitted events with high levels of attendance, a higher volume of pedestrians effectively use these intersections.

The site vicinity contains established bicycle patterns and encourages bicycle use. Madison Drive and Jefferson Drive along the National Mall are designated off-street trails. A signed bike route along 4th Street provides direct bicycle access to the site. There are no bicycle racks at the site. The recently launched Capital BikeShare also serves as an available public transit mode, with a bike station for rentals at 7th and C Streets, at the L'Enfant Plaza Metro station.

3.8 WATER RESOURCES

The Eisenhower Memorial site is located within the Potomac River drainage basin, a sub-basin of the Chesapeake Bay Watershed. The site drains towards the Tidal Basin and the Washington Channel. No permanent bodies of surface water are located on or near the site. The closest surface water bodies to the site, the Tidal Basin and the Washington Channel, lie within one mile of the Memorial and drain to the Potomac River (approximately 0.7 miles to the southwest).

Of the 4-acre site, approximately 3.3 acres (79 percent) of the site is made up of impervious surfaces, such as structures, streets, walkways, and parking areas. The permeable surfaces of the area are a combination of vegetated areas on the NPS parcel and the grassy areas of the Maryland Avenue ROW. Stormwater at the site infiltrates into the soil not covered by impervious surfaces at varying rates. Once saturated, these surfaces may behave as impervious surfaces. As a result, temporary puddles may occur. Stormwater runoff drains down slope, and requires stormwater collection systems to manage the runoff.

Currently, there are no stormwater retention facilities on the Memorial site. Stormwater is collected through five stormwater drains along the curbside of the roadways within and adjacent to the site, and discharged either to the District's combined storm and sanitary sewer system, or directly to the Potomac River. Some site runoff within the plaza is first captured by trench drains, which are then connected to the piped storm drain system. Stormwater from the site is directed either to the west into a 5 foot 8 inch diameter culvert along 6th Street, or to a 24-inch pipe culvert crossing 4th Street, near the intersection with Independence Avenue. The area in front of the LBJ Building is picked up by trench drains that connect

to a 15-inch pipe along Maryland Avenue that connects to the 24-inch pipe culvert at the intersection with 4th Street.

The District's combined sewer interceptor lines lead to the Blue Plains Treatment Facility where combined stormwater and sewage are treated to standards in accordance with the Facility's National Pollutant Discharge Elimination System (NPDES) permit prior to release as treated effluent to the Potomac River. In general, pollutants from roadways, such as fuel, oil, antifreeze, grease from moving and parked vehicles, sediment from disturbed or exposed soil, and solid wastes collected in catch basins or storm drains, can contaminate stormwater runoff. Therefore, contaminated stormwater can adversely affect the treatment process at the Blue Plains Facility.

4.0 ENVIRONMENTAL CONSEQUENCES

This page is intentionally left blank

4.1 GENERAL METHODOLOGY FOR ESTABLISHING IMPACT THRESHOLDS AND MEASURING EFFECTS BY RESOURCE

This Environmental Consequences chapter analyzes both beneficial and adverse impacts that would result from implementing the alternatives considered in this EA. This chapter also includes definitions of impact thresholds (e.g., negligible, minor, moderate, and major), methods used to analyze impacts, and the analysis used for determining cumulative impacts. As required by CEQ regulations implementing NEPA, a summary of the environmental consequences for each alternative, which can be found in Chapter 2: Alternatives, is provided in Table 2.7.1. The resource topics presented in this chapter, and the organization of the topics, correspond to the resource discussions contained in Chapter 3: Affected Environment of this EA.

General Methodology for Establishing Impact Thresholds and Measuring Effects by Resources

The following elements were used in the general approach for establishing impact thresholds and measuring the effects of the alternatives on each resource category:

- General analysis methods as described in guiding regulations, including the context and duration of environmental effects;
- Basic assumptions used to formulate the specific methods used in this analysis;
- Thresholds used to define the level of impact resulting from each alternative;
- Methods used to evaluate the cumulative impacts of each alternative in combination with unrelated factors or actions affecting park resources; and
- Methods and thresholds used to determine if impairment of specific resources would occur under any alternative.

4.1.1 General Analysis Methods

The analysis of impacts follows CEQ guidelines and Director's Order 12 procedures (NPS, 2001) and is based on the underlying goal of providing long-term protections, conservation, and restoration of native species and cultural landscapes. This analysis incorporates the best available scientific literature applicable to the region and setting, the species being evaluated, and the actions being considered in the alternatives.

As described in Section 1, NPS created an interdisciplinary science team to provide important input to the impact analysis. For each resource topic addressed in this chapter, the applicable analysis methods are discussed, including assumptions and impact intensity thresholds. Impacts described in this section are direct unless otherwise indicated.

4.1.2 Basic Assumptions

As stated above, the analysis of impacts follows CEQ guidelines and Director's Order 12 procedures (NPS, 2001) and incorporates the best available scientific literature applicable. However, applicable literature is not always available. In such cases, analysis may require assumptions of specific conditions. Assumptions used for

analysis in this EA are identified and explained for each resource, as needed.

4.1.3 Impact Thresholds

Determining the impact thresholds is a key component in applying NPS *Management Policies* and Director's Order 12. These thresholds provide the reader with an idea of the intensity of a given impact on a specific resource. The impact threshold is determined primarily by comparing the effect to a relevant standard based on applicable or relevant/appropriate regulations or guidance, scientific literature and research, or best professional judgment. Because definitions of intensity vary by impact topic, intensity definitions are provided separately for each impact topic analyzed in this document. Intensity definitions are provided throughout the analysis for negligible, minor, moderate, and major impacts. In all cases, the impact thresholds are defined for adverse impacts. Beneficial impacts are addressed qualitatively.

Potential impacts of the action alternatives are described in terms of type (beneficial or adverse); context; duration (short-or long-term); and intensity (negligible, minor, moderate, major). Definitions of these descriptors include:

Beneficial: A positive change in the condition or appearance of the resource or a change that moves the resource toward a desired condition.

Adverse: A change that declines, degrades, and/or moves the resource away from a desired condition or detracts from its appearance or condition.

Context: The affected environment within which an impact would occur, such as local, park-wide, regional, global, affected interest, society as a whole, or any combination of these. Context is variable and depends on the circumstances involved with each impact topic. As such, the impact analysis determines the context, not vice versa.

Duration: The duration of the impact is described as short-term or long-term. Duration is variable with each impact topic; therefore, definitions related to each impact topic are provided in the specific impact analysis narrative.

Intensity: Because definitions of impact intensity (negligible, minor, moderate, and major) vary by impact topic, intensity definitions are provided separately for each impact topic analyzed.

4.1.4 Cumulative Impacts Analysis Method

The CEQ regulations to implement NEPA require the assessment of cumulative impacts in the decision making process for federal actions. 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 nonfederal) or person undertakes such other actions” (40 CFR 1508.7). As stated in the CEQ handbook, “Considering Cumulative Effects” (1997), cumulative impacts need to be analyzed in terms of the specific resource, ecosystem, and human community being affected and should focus on effects that are truly meaningful. Cumulative impacts are considered for all alternatives, including the No Action Alternative.

Cumulative impacts were determined by combining the impacts of the alternative being considered with other past, present, and reasonably foreseeable future actions. Therefore, it was necessary to identify other ongoing or reasonably foreseeable future projects and plans at NAMA and, if applicable, the surrounding area. Table 4-1 summarizes these actions that could affect the various resources at the site, along with the plans and policies of both the park and surrounding jurisdictions, which were discussed in Section 2. Additional explanation for most of these actions is provided in the narrative following the table.

The analysis for cumulative impacts was accomplished using four steps:

Step 1: Identify Resources Affected. Fully identify resources affected by any of the alternatives. These include the resources addressed as impact topics in Sections 3 and 4 of this document.

Step 2: Set Boundaries. Identify an appropriate spatial and temporal boundary for each resource. The temporal boundaries are noted at the top of Table 4-1. and the spatial boundary for each resource topic is listed under each topic.

Step 3: Identify Cumulative Action Scenario. Determine which past, present, and reasonably foreseeable future actions to include with each resource. These are listed in Table 4-1 and described below.

Step 4: Cumulative Impact Analysis. Summarize the impacts of other actions, plus impacts of the proposed action to arrive at the total cumulative impact. This analysis is included for each resource in Section 4.

Table 4-1: Summary of Cumulative Projects

Impact Topic	Study Area	Present Actions	Future Actions
Cultural Resources: Archeology	Area of Potential Effect (APE)	National Mall Plan, Mall Turf Rehabilitation, Switzer Building Improvements, Potomac Park Levee, NMAAHC, perimeter security projects within the nation's capital	American Veterans Disabled for Life Memorial, disposition of GSA properties along Maryland Avenue, the National Museum of Women's History, Museum of the American Latino, Redesign of Union Square, Sylvan Theatre Area, and Constitution Gardens;
Cultural Resources: Historic Resources		Vietnam Veterans Memorial Visitors Center, National Mall Plan, and FOB 8	American Veterans Disabled for Life Memorial, Redesign of Union Square
Cultural Resources: Visual Resources	APE	FOB 8, Mary E. Switzer Building, perimeter security projects within the nation's capital	Disposition of GSA properties along Maryland Avenue
Park Operations and Management	NAMA	Potomac Park Levee, Jefferson Seawall Rehabilitation, Martin Luther King, Jr. Memorial, National Mall Plan; DC World War I Memorial, Mall Turf Rehabilitation, Lincoln Memorial Reflecting Pool and Grounds Rehabilitation	Vietnam Veterans Memorial Visitors Center, American Veterans Disabled for Life Memorial, Jefferson Memorial Vehicular Security Barriers, and Washington Monument Security Screening. Redesign of Union Square, the Sylvan Theater Area, and Constitution Gardens
Soils	Adjacent sites	None	None

Impact Topic	Study Area	Present Actions	Future Actions
Transportation: Traffic	Approximately 2 blocks in each direction. See resource analysis.	FOB 8, Mary E. Switzer Building, DDOT bike lane striping, Constitution Avenue Street Improvements	American Veterans Disabled for Life Memorial
Transportation: Parking	Approximately 2 blocks in each direction. See resource analysis.	FOB 8, Mary E. Switzer Building	
Vegetation	Adjacent sites	FOB 8, Mary E. Switzer Building	
Visitor Use and Experience	NAMA	Vietnam Veterans Memorial Visitors Center, National Mall Plan, National Aquarium, perimeter security projects within the nation's capital, NMAAHC, Potomac Park Levee, Jefferson Seawall Rehabilitation, Mall Turf Rehabilitation, Lincoln Memorial Reflecting Pool and Grounds Rehabilitation, Constitution Avenue Street Improvements, Martin Luther King, Jr. National Memorial, National Gallery East Building Renovations	American Veterans Disabled for Life Memorial, National Museum of Women's History, National Museum of the American Latino, Madison Drive Streetscape Improvements, Jefferson Memorial Vehicular Security Barriers, and Washington Monument Security Screening, Redesign of Union Square, Sylvan Theatre Area, and the Constitution Gardens
Water Quality	Watershed	FOB 8, Mary E. Switzer Building	

Descriptions of Cumulative Projects

Mary E. Switzer Building Renovation and Site Improvements: The Switzer Building is located south of C Street, between 3rd and 4th Streets, directly to the southeast of the LBJ Building. As part of a major modernization of the building, planned improvements include the transformation of a surface parking lot to a landscaped plaza, the installation of perimeter security features, public art, and a concession stand.

Federal Office Building (FOB) 8 Renovation and Site Improvements: FOB 8 is located one block east of the Switzer Building. A renovation of both the building and the site is underway. Similar to the Switzer Building, site improvements at FOB 8 will include perimeter security and the conversion of a surface parking lot to a landscaped plaza.

Perimeter Security Projects within the Nation's Capital: Numerous perimeter security projects are planned, have been approved, or have been recently completed within vehicular rights-of-way. These security improvements are widespread, including those immediately around the Switzer Building, on Capitol Hill northeast of the Switzer Building, on the Mall, and in the downtown. Near the project site, permanent perimeter security measures have been approved at FOB 8 and the Switzer Building, and are planned over the long-term at the Cohen Building. In addition, permanent security measures have been installed at the Humphrey Building and the Ford House Office Building. On Capitol Hill, permanent perimeter security is widespread including around the Capitol complex, the Library of Congress buildings, and the Rayburn House Office Building, among others. North of the project site, along the Mall, permanent perimeter security has been installed or approved for installation at

the majority of the Smithsonian museums including NMAI, NASM, the Hirshhorn Museum and Sculpture Garden, the Smithsonian Institution Building, the National Museum of Natural History, and the National Museum of American History. Permanent perimeter security improvements have been proposed or temporary measures have been installed at a number of buildings between the 3rd and C Streets area, and the Tidal Basin further west. Across the Mall, temporary perimeter security measures have been installed around buildings within the Federal Triangle, and permanent security measures are being considered for several of these buildings, including the headquarters of the U.S. Department of Commerce and the National Archives. Perimeter security measures have also been proposed, approved, or constructed at a number of buildings east and west of Federal Triangle.

American Veterans Disabled for Life Memorial: The American Veterans Disabled for Life Memorial is planned for a two-acre landscaped parcel one block east and north of the Switzer Building. Bordered by 2nd Street, Washington Avenue, and ramps to I-395, the memorial will include a reflecting pool, treed walkways, and a landscaped area, all with commanding views of the U.S. Capitol Building.

Vietnam Veterans Memorial Visitor Center: This center will educate students and visitors about the Vietnam War and the Memorial itself. The Visitor Center will be located in the northwestern corner of the National Mall, west of the Vietnam Veterans Memorial, on the east side of 23rd Street between the Lincoln Memorial Circle and Constitution Avenue.

Martin Luther King, Jr. Memorial: The Martin Luther King, Jr. Memorial was recently completed at a four-acre parcel located on

the northwestern side of the Tidal Basin within West Potomac Park. The site includes the memorial, the re-alignment of West Basin Drive, a 3,000 square foot visitor services facility, and perimeter security elements.

National Museum of African American History and Culture: The Smithsonian Institution is planning to establish and construct a museum dedicated to African American History and Culture on a five-acre site at the southwest intersection of Constitution Avenue and 14th Street NW. Depending upon the final design, the museum would be approximately five levels above ground with two levels below ground. Access points would be from Constitution Avenue to the north and from the National Mall to the south.

National Mall Plan: The NPS's National Mall Plan lays out management policies and strategies to restore the National Mall. It focuses on cultural resources, visitor circulation, natural resource protection, visitor amenities, health and public safety, and park operations.

Bike Lane Striping: DDOT is scheduled to install a bike lane on 4th Street near the Eisenhower Memorial.

National Women's History Museum: This private institution is planning to establish and construct a museum dedicated to reclaiming women's history and creating an accurate historical record inclusive of women at the intersection of Independence Avenue and 12th Street SW.

Potomac Park Levee: This project would introduce an improved levee system in the area between 23rd Street and 17th Street and along the north side of the Reflecting Pool. At 17th Street, just south of Constitution Avenue, a closure structure would be built with

abutments that support posts and panels that would be erected during a flood emergency. At 23rd Street and along the Reflecting Pool, existing low spots in the levee would be filled and brought to an elevation that complies with USACE standards.

Lincoln Memorial Reflecting Pool and Grounds Rehabilitation: This project would rehabilitate and enhance the infrastructure, circulation, and accessibility around the Lincoln Memorial east plaza. At the Reflecting Pool, upgrades to the structural and water systems would improve its functionality and sustainability and formalize walkways along the north and south edges of the pool. Site furnishings throughout the project area would be refurbished and reconfigured.

Constitution Avenue Street Improvements: Constitution Avenue NW between 23rd Street NW and 15th Street NW would be rehabilitated; streetscape improvements would introduce new street lighting and storm sewer upgrades.

Madison Drive Streetscape Improvements: Madison Drive would be rehabilitated with enhancements to streetscape elements.

Jefferson Seawall Rehabilitation: This project would rehabilitate the Thomas Jefferson Memorial plaza, seawall, and staircases in a manner that improves pedestrian circulation and visitor safety.

National Aquarium Renovation: The National Aquarium is located in the Herbert C. Hoover Building, which is currently under renovation. The improvements would relocate the Aquarium's entrance to Constitution Avenue. It would also improve the quality of exhibits and facilities.

Disposition of Government Property in SW by GSA: GSA plans to dispose of properties in Southwest DC along Maryland Avenue, west of the Memorial site. This would make underutilized parcels, some of which currently function as open space, available for development.

National Museum of the American Latino: This organization has preliminarily identified four sites as potential locations for this future museum: the Yates Building and South Monument, near the intersection of 14th Street and Independence; the Witten Building on Independence Avenue, currently home to the USDA; the Smithsonian Arts and Industries Building along Independence Avenue; and a site at the U.S. Capitol Grounds. The museum would be approximately 300,000 to 350, 000 square feet of building space.

DC War Memorial Restoration: This project would clean and restore the stone of the Memorial, install new bluestone paving, and replace the vault hatch cover in the memorial chamber. All renovations would be based on historical documentation and support the original design of the 1930s.

Mall Turf Rehabilitation: NPS seeks to improve the vegetation and soil on the Mall by removing and replacing the existing soil and irrigation system in portions of the Mall and installing new curb and gutter profiles around turf panels.

Jefferson Memorial Vehicular Security Barrier: NPS proposes the installation of permanent vehicle barriers and security monitoring at the Jefferson Memorial. This would replace the temporary concrete jersey barriers around the Memorial and the parking area

that was closed to vehicular traffic in 2001 to provide security to the Memorial and to protect its visitors and staff.

Washington Monument Security Screening: NPS proposes to replace and improve the existing visitor screening facility at the base of the Washington Monument, replacing the existing temporary facility and improve the overall security of the Monument in a manner that maintains and preserves the visitor experience and cultural landscape of the Washington Monument Grounds.

Redesign of Union Square, Sylvan Theater Area, and Constitution Gardens: These projects building on the foundation of the National Mall Plan, which called for improvements to these spaces. NPS seeks to redesign Union Square as a symmetrical and formally laid out civic square that is flexible and suitable for multiple uses, including large First Amendment demonstrations and national celebrations, as well as general tourism. The redesign of the Sylvan Theater area would include a multi-purpose entertainment facility. For Constitution Gardens, the improvements would include upgrading the pedestrian circulation system, improving soils, reconstructing the lake to be self-sustaining, constructing a flexible performance space, and adding a multipurpose visitor facility that would coordinated with the Potomac Park levee and plans for the canal Lockkeeper's House, which may be relocated from 17th Street and Constitution Avenue.

National Gallery East Building Exterior Renovations: This project would remove and reinstall the marble veneer on the exterior of the building. Once the repairs are complete, the East Building and landscaping would be restored to their original appearance.

4.2 CULTURAL RESOURCES

4.2.1 Archeological Resources

Methodology and Assumptions

As archeological resources exist essentially in subsurface contexts, potential impacts on archeological resources are assessed according to the extent to which the proposed alternatives would involve ground disturbing activities such as excavation or grading. In support of this EA and in order to comply with Section 106 of the NHPA, a Phase 1A archeological study was undertaken for the Eisenhower Memorial site. This study considered past archeological investigations within the project area as provided by the DC SHPO, historic maps, census records, historic photos, and studies relating to the history of Southwest Washington. In addition, site reconnaissance was completed in October, 2010. Although these records and investigations provide some information on the potential for archeological materials to be present in the project area, they do not constitute a complete inventory of archeological resources and can only be used as predictive tools.

Potential effects to historical archeological resources are assumed to be local to the Washington, DC area, unless identified as regional within the analysis. Potential effects to prehistoric archeological resources are assumed to have regional impacts, unless otherwise identified in the analysis in this document.

Study Area

The APE for archeological resources is the four-acre Project Site, as defined in Figure 3-1. It encompasses the GSA parcel, the Maryland Avenue roadway, and the NPS parcel.

Impact Thresholds

A proposed alternative is considered to have an impact on archeological resources when it results in the whole or partial destruction of the resource. The impact thresholds for archeological resources outlined here take into account both the degree to which the alternative has the potential to destroy an archeological resource and the degree to which the losses could be compensated by mitigation strategies, such as archeological data recovery or preservation in place.

Under Section 106 of the National Historic Preservation Act (NHPA), an undertaking must be evaluated for its effects on resources eligible for listing on the National Register of Historic Places (NRHP). Resources can meet four eligibility criteria, and must also be found to have sufficient integrity. The Phase IA archeological study presents a discussion of archeological potential within the project area, but no archeological resources have been identified. The impacts discussion is therefore based on archeological potential and not on known archeological resources.

- *Negligible.* The impact is barely measurable, with no perceptible adverse or positive consequences. Under Section 106, this would be considered *no adverse effect*.
- *Minor.* A minor adverse impact on archeological sites with the potential to yield important information in prehistory or history is detectable and measurable, but does not diminish the overall integrity of the resource. For purposes of Section 106, a determination of minor impact would be considered *no adverse effect*.

- *Moderate.* A moderate adverse impact is sufficient to cause a noticeable change, substantially affecting archeological sites with the potential to yield information, even if most of the resource can be avoided, and resulting in loss of overall integrity. For purposes of Section 106, a determination of moderate impact would be considered an *adverse effect*.
- *Major.* A major adverse impact consists of highly noticeable disturbance, degradation, or destruction of an archeological resource that results in the loss of most or all of the site and its potential to yield important information. For the purposes of Section 106, a determination of major impact would be considered an *adverse effect*.
- *Beneficial Impacts.* The site would be actively stabilized or preserved in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* to accurately depict its form, features, and character as it appeared during its period of significance. For purposes of Section 106, the determination of effect would be no adverse effect.
- *Duration.* All impacts to archeological resources are considered to be long-term since they result in the loss of non-renewable cultural resources.

Archeological Impacts of No Action Alternative

Under the No Action Alternative, there would be no ground-disturbing activities on the site as the Eisenhower Memorial would not be constructed. Thus, there would be no direct or indirect impacts to archeological resources and there would be no adverse effect under Section 106.

Cumulative Impacts

With no ground-disturbing activities on the site under the No Action Alternative, there would be no cumulative impacts to archeological resources.

Conclusion

Under the No Action Alternative, there would be no ground-disturbing activities on the site as the Memorial would not be constructed. Thus, there would be no direct, indirect, or cumulative impacts to archeological resources and no adverse effect under Section 106.

Archeological Impacts of Alternative 1

As part of Alternative 1, Maryland Avenue would be restored to its historic alignment and remain open to traffic. The columns and grove of trees within the Memorial would occupy both sides of Maryland Avenue in a circular arrangement, with the visitor services facilities located to the south. The installation of the blocks, reliefs, ranger station, book sales area, utilities, restrooms, and large trees would involve excavation of up to ten feet in depth, and the columns would involve disturbance of up to 60 feet in depth. These depths could impact sub-surface archeological deposits in Reservation D (the NPS parcel), Square 492 (the GSA parcel), and the Maryland Avenue right-of-way.

At the current time, impacts to archeological resources cannot be fully evaluated because subsurface testing has not yet been conducted and no archeological sites have yet been identified. Possible impacts to archeological resources could result from ground disturbance related to installing columns, relief elements, or landscaping components. Possible impacts of this alternative could range from negligible to moderate. However, these impacts would be mitigated through a phased approach to archeological investigation, ongoing consultation through the Section 106 process as agreed to in an MOA, and dissemination of information. If archeological impacts are negligible or minor, there would be no adverse effect under Section 106; if impacts are moderate, there would be an adverse effect under Section 106.

NPS is pursuing a phased approach to the identification and evaluation of archeological resources beginning with a Phase 1A study and geoarcheological consultation. These would focus on the areas of higher sensitivity for archeological resources, and applying

the criteria of adverse effect. All such work would follow the “Guidelines for Archaeological Investigations in the District of Columbia” (1998, as amended), the “Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation” (1983), and NPS “Director’s Order 28: Cultural Resource Management” (1998).

Cumulative Impacts

To the extent that they involve ground disturbing activities in areas of archeological sensitivity, several planned and current projects have the potential to contribute to cumulative impacts on archeological resources in the Nation’s Capital. In particular, the Potomac Park Levee project and the Switzer Building Site Improvements are both being conducted in areas with identified archeological sites. Assessments of archaeological potential have not yet been conducted for the American Veterans Disabled for Life Memorial, implementation of the National Mall Plan, the disposition of GSA properties along Maryland Avenue, and ongoing or planned perimeter security projects within the Nation’s Capital. Other projects such as the Museum of Women’s History and the Museum of the American Latino do not yet have project sites identified, and the assessment of archeological potential has not yet been conducted. If located in an area of archeological sensitivity, these projects (for which no archeological assessment has yet been conducted) would also have potential to impact archeological resources due to ground-disturbing activities. If important archeological resources are encountered as part of these other projects, the cumulative projects could result in long-term negligible to moderate adverse impacts on archeological resources.

As stated above, Alternative 1 could result in long-term negligible to moderate adverse impacts on archeological resources. If important archeological resources are encountered as part of construction of the Memorial, the incremental impact of this action, when considered with other cumulative projects, could contribute to long-term moderate cumulative impacts on archeological resources.

Mitigation

The NPS is continuing Section 106 consultation to evaluate and mitigate adverse effects on historic properties, including archeological resources, through a Memorandum of Agreement (MOA) developed by NPS, the DC SHPO, NCPH, and the EMC. The MOA would include stipulations to insure an appropriate level of archeological documentation. Archeological documentation would occur prior to project construction. Mitigation of adverse effects would be accomplished by archeological documentation and in-place preservation, followed by publication of the results to the scientific community and the public. Among the vehicles to disseminate findings to the public is the e-Memorial, which would provide an online source of information about Eisenhower and the Memorial site.

If during construction, archeological resources are discovered, all work in the immediate vicinity of the discovery would be halted until the resources can be identified and documented and an appropriate mitigation strategy developed. If necessary, consultation with the DC Historic Preservation Officer, NPS, and/or the NPS Regional Archeologist will be coordinated to ensure that the protection of resources is addressed. In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions

outlined in the Native American Graves Protection and Repatriation Act (25 USC 3001) of 1990 would be followed.

Conclusion

Due to the fact that there is the potential for sub-surface archeological deposits on the Memorial site, and that the installation of the blocks, reliefs, and large trees would involve up to 10 feet of excavation, as well as up to 60 feet of disturbance for the columns, there could be an adverse impact, ranging from negligible to moderate, on archeological resources. If there is no impact or if the impact is negligible or minor, there is no adverse effect under Section 106. If there is a moderate impact, then there would be an adverse effect under Section 106. However, these impacts would be mitigated through a program of archeological investigation that would be implemented prior to construction.

Archeological Impacts of Alternative 2

In Alternative 2, the arrangement of the columns, reliefs, and grove of trees would be similar to Alternative 1, but Maryland Avenue would be closed to traffic. This alternative would include the addition of amphitheater-style seating south of the roadway, and the visitor restroom facilities would be located in the northwest section of the site. The construction of the columns, reliefs, amphitheater seating, and trees would involve excavation that could impact sub-surface archeological deposits in both the GSA and NPS parcels and in the Maryland Avenue right-of-way.

At the current time, impacts to archeological resources cannot be fully evaluated because subsurface testing has not yet been conducted and no archeological sites have yet been identified. Possible impacts to archeological resources could result from ground disturbance related to installing columns, relief elements, or landscaping components. Possible impacts of this alternative could range from negligible to moderate. However, these impacts would be mitigated through a phased approach to archeological investigation, ongoing consultation through the Section 106 process as agreed to in an MOA, and dissemination of information. If archeological impacts are negligible or minor, there would be no adverse effect under Section 106; if impacts are moderate, there would be an adverse effect under Section 106.

NPS is pursuing a phased approach to the identification and evaluation of archeological resources beginning with a Phase 1A study and geoarcheological consultation. These would focus on the areas of higher sensitivity for archeological resources, and applying the criteria of adverse effect. All such work would follow the “Guidelines for Archaeological Investigations in the District of

Columbia” (1998, as amended), the “Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation” (1983), and NPS “Director’s Order 28: Cultural Resource Management” (1998).

Cumulative Impacts

Under Alternative 2, the cumulative projects would be the same as those described in Alternative 1. If important archeological resources are encountered as part of these other projects, the cumulative projects could result in long-term negligible to moderate adverse impacts to archeological resources. As stated above, Alternative 2 could result in long-term negligible to moderate adverse impacts on archeological resources. If important archeological resources are encountered as part of the Memorial’s construction, the incremental impact of this action, when considered with other cumulative projects, could contribute to long-term moderate cumulative impacts on archeological resources.

Mitigation

The NPS is continuing Section 106 consultation to evaluate and mitigate adverse effects on historic properties, including archeological resources, through an MOA that would include stipulations to insure an appropriate level of archeological documentation. Archeological documentation would occur prior to project construction. Mitigation of adverse effects would be accomplished by archeological documentation and in-place preservation, followed by publication of the results to scientific community and the public. Among the vehicles to disseminate findings to the public is the e-Memorial, which would provide an

online source of information about Eisenhower and the Memorial site.

If during construction, archeological resources are discovered, all work in the immediate vicinity of the discovery would be halted until the resources can be identified and documented and an appropriate mitigation strategy developed. If necessary, consultation with the DC Historic Preservation Officer, NPS, and/or the NPS Regional Archeologist will be coordinated to ensure that the protection of resources is addressed. In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (25 USC 3001) of 1990 would be followed.

Conclusion

Due to the fact that there is the potential for sub-surface archeological deposits on the Memorial site, and that the installation of the blocks, reliefs, amphitheater seating, and large trees would involve up to 10 feet of excavation, as well as up to 60 feet of disturbance for the columns, there could be an adverse impact, ranging from negligible to moderate, on archeological resources. If there is no impact or if the impact is negligible, there is no adverse effect under Section 106. If there is a moderate impact, then there would be an adverse effect under Section 106. However, these impacts would be mitigated through a program of archeological investigation that would be implemented prior to construction.

Archeological Impacts of Alternative 3

In Alternative 3, Maryland Avenue would also be closed to traffic but the arrangement of the reliefs and grove of trees would differ from Alternatives 1 and 2. In this alternative, six columns would be linearly aligned along southern boundary, with two additional columns each on the eastern and western sides of the site. In this alternative, the support building housing the ranger station, restrooms, and book sale area would be located in the southeastern portion of the site. The installation of the blocks, reliefs, ranger station, book sale area, utilities, restrooms, and large trees would involve excavation of up to ten feet in depth. The excavation for the 78-foot columns and columns pile caps would also be approximately 10 feet, and would disturb an additional 50 feet. There is potential for impact on archeological resources with the disturbance required for installation of these elements.

At the current time, impacts to archeological resources cannot be fully evaluated because subsurface testing has not yet been conducted and no archeological sites have yet been identified. Possible impacts to archeological resources could result from ground disturbance related to installing columns, relief elements, or landscaping components. Possible impacts of this alternative could range from negligible to moderate. However, these impacts would be mitigated through a phased approach to archeological investigation, ongoing consultation through the Section 106 process as agreed to in an MOA, and dissemination of information. If archeological impacts are negligible or minor, there would be no adverse effect under Section 106; if impacts are moderate, there would be an adverse effect under Section 106.

NPS is pursuing a phased approach to the identification and evaluation of archeological resources beginning with a Phase 1A

study and geoarcheological consultation. These would focus on the areas of higher sensitivity for archeological resources, and would apply the criteria of adverse effect. All such work would follow the “Guidelines for Archaeological Investigations in the District of Columbia” (1998, as amended), the “Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation” (1983), and NPS “Director’s Order 28: Cultural Resource Management” (1998).

Cumulative Impacts

Under Alternative 3, the cumulative projects would be the same as those described in Alternatives 1 and 2. If important archeological resources are encountered as part of these other projects, the cumulative projects could result in long-term negligible to moderate adverse impacts to archeological resources. As stated above, Alternative 3 could result in long-term negligible to moderate adverse impacts to archeological resources. If important archeological resources are encountered as part of construction of the Memorial, the incremental impact of this action, when considered with these other cumulative projects, could contribute to long-term moderate cumulative impacts to archeological resources.

Mitigation

The NPS is continuing Section 106 consultation to evaluate and mitigate adverse effects on historic properties, including archeological resources, through an MOA that would include stipulations to insure an appropriate level of archeological documentation. Archeological documentation would occur prior to project construction. Mitigation of adverse effects would be

accomplished by archeological documentation and in-place preservation, followed by publication of the results to the scientific community and the public. Among the vehicles to disseminate findings to the public is the e-Memorial, which would provide an online source of information about Eisenhower and the Memorial site.

If during construction, archeological resources are discovered, all work in the immediate vicinity of the discovery would be halted until the resources can be identified and documented and an appropriate mitigation strategy developed. If necessary, consultation with the DC Historic Preservation Officer, NPS, and/or the NPS Regional Archeologist will be coordinated to ensure that the protection of resources is addressed. In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (25 USC 3001) of 1990 would be followed.

Conclusion

Due to the fact that there is the potential for sub-surface archeological deposits in the GSA and NPS parcels, and that the installation of the blocks, reliefs, and large trees would involve up to 10 feet of excavation, as well as up to 60 feet of disturbance for the columns, there could be an adverse impact, ranging from negligible to moderate, on archeological resources. If there is no impact or if the impact is negligible or minor, there is no adverse effect under Section 106. If there is a moderate impact, then there would be an adverse effect under Section 106. However, these impacts would be mitigated through a program of archeological investigation that would be implemented prior to construction.

This page is intentionally left blank

4.2.2 Historic Resources

Methodology and Assumptions

Historic resources located within the APE that are listed in, or potentially eligible for listing in, the NRHP were identified as part of this study through the Section 106 process. For each of the alternatives, a determination was made regarding possible adverse effects under Section 106 and these determinations correlate to the NEPA impacts as indicated in the impact thresholds below.

A range of sources were used in analyzing the impacts to these resources, including National Register nominations, historic maps, and field surveys, as well as a Phase 1A archeological study and two determinations of eligibility that were prepared in support of this document.

Study Area

The study area for historic resources is the Secondary APE, as delineated in Figure 3-1. The area is bounded by the U.S. Capitol Building south to Independence Avenue, west on Independence Avenue to 2nd Street, south on 2nd Street to C Street, west on C Street to 9th Street, north to the centerline of the Mall, and east along the centerline of the Mall to the U.S. Capitol Building.

Impact Thresholds

- *Negligible.* The impact does not result in any noticeable changes to the resource or its visual context. For the purposes of Section 106, a determination of negligible impact would be considered *no adverse effect*.
- *Minor.* A minor adverse impact occurs when there are noticeable changes to the resource or its context, but these changes do not affect the resource's character-defining features or integrity. For the purposes of Section 106, a determination of minor impact would be considered *no adverse effect*.
- *Moderate.* A moderate adverse impact results in a change to one or more of the resource's character-defining features, but would not diminish the integrity of the resource to the extent that its NRHP eligibility would be lost. For the purposes of Section 106, a determination of moderate impact would be an *adverse effect*.
- *Major.* A major adverse impact results in substantial and highly noticeable changes to character-defining features such that the integrity of the resource would be compromised to the extent that it may no longer be eligible for listing in the National Register. For the purposes of Section 106, a determination of major impact would be an *adverse effect*.

Historic Resources Impacts of No Action Alternative

Historic Structures and Districts

Under the No Action Alternative, the Eisenhower Memorial would not be constructed on the site. As a result, historic structures and districts within the Secondary APE, including the L'Enfant Plan, the LBJ Building and its designed landscape, the Orville and Wilbur Wright Buildings, the Wilbur Cohen Building, and the U.S. Botanic Garden would remain unchanged. Thus, direct and indirect impacts on historic structures and districts would be negligible and there would be no adverse effect under Section 106.

Cultural Landscapes

Under the No Action Alternative, the Eisenhower Memorial would not be constructed on the site. As a result, the Mall, located north of the Memorial site, would remain unchanged. Thus, impacts on cultural landscapes would be negligible and there would be no adverse effect under Section 106.

Cumulative Impacts

Projects within the area surrounding the Memorial site would include the Switzer Building site improvements, the FOB 8 exterior improvements, the disposition of GSA properties along Maryland Avenue, and various perimeter security projects, which could result in impacts on historic resources. The projects would result in long-term minor to moderate adverse impacts on historic structures and districts.

As stated above, the No Action Alternative would result in negligible long-term adverse impacts on historic structures and districts, and cultural landscapes. Given that there would be no construction on

the Memorial site under the No Action Alternative, when combined with the cumulative projects, long-term cumulative impacts on historic resources would be negligible.

Conclusion

Under the No Action Alternative, the Eisenhower Memorial would not be constructed on the site. Resources within the Secondary APE, including the L'Enfant Plan, the Mall and its associated buildings, the LBJ Building and its designed landscape, the Orville and Wilbur Wright Buildings, the Wilbur Cohen Building, and the U.S. Botanic Garden would remain unchanged. Thus, there would be negligible direct, indirect, and cumulative impacts on historic resources. In addition, there would be no adverse effect under Section 106.

Historic Resources Impacts of Alternative 1

Historic Structures and Districts

The removal of the existing plaza and its replacement with the Eisenhower Memorial would result in the loss of much of the historic fabric of the designed landscape at the LBJ Building. These elements include the vegetation, paving materials, and small-scale features, such as the benches. However, the plaza would continue to be used as a public gathering space, combining paved areas with landscaping, fundamentally similar to its current use.

In addition to the loss of material elements of the landscape, the installation of the Eisenhower Memorial would result in changes to the historic spatial relationships between the building and its designed landscape. The siting of new planting beds directly adjacent to the north face of the building would encroach upon the structure, and the removal of the entry terraces and placement of a bed directly north of the northeast entrance would alter the historic connection between indoor and outdoor spaces. This disconnection between the building and the landscape would also be reinforced by the adherence to a strict grid in the placement of the trees across the Memorial. Altering these spatial relationships would impact the setting of the LBJ Building. However, Alternative 1 would employ rectilinear paths that would reflect the grid in the ground plane of the existing plaza and would provide a similar tripartite composition that nearly centers on the building.

The Eisenhower Memorial under Alternative 1 would also alter reciprocal views between the LBJ Building and surrounding historic properties. The Memorial would introduce built forms reaching 65 feet high that would be evident in views from the site to the adjacent Wilbur Cohen Building, the Wilbur and Orville Wright

Buildings, and NASM. The columns, together with the blocks and sculptural reliefs, could result in intermittent views from the site. The grid of trees would serve to restrict views of the east and west ends of the base of the building more than the No Action Alternative, but could allow the upper floors to be evident from adjacent historic properties. Overall, there would be moderate adverse impacts on the LBJ Building and its designed landscape due to the loss of historic fabric of the plaza and the alteration of historic spatial relationships between the building and its landscape through the implementation of Alternative 1. This would constitute an adverse effect under Section 106. However, the Building would remain eligible for listing on the NRHP.

Reservation 5 (the NPS parcel) would be altered from an exercise course and community gardens to a portion of the Memorial. Although the use of the property would change, it would be consistent with L'Enfant's placement of key monuments within the city's squares.

Under Alternative 1, Maryland Avenue would be restored to its historic alignment and would remain open to vehicle traffic. This would result in a beneficial impact on the L'Enfant and McMillan Plans. However, as discussed further in Section 4.2.3, the placement of the built forms of five columns just outside of the cartway, but within the historic right-of-way, would alter the openness of the right-of-way and its associated primary view corridor for pedestrians among the street trees that line Maryland Avenue (see Figure 4-1). Overall, these changes to the site would result in a minor long-term adverse impact on the L'Enfant and McMillan Plans and no adverse effect under Section 106. Although the Memorial elements would be visible from Independence Avenue and 4th Street

(see Figure 4-.2 and 4-.3), the elements would not interrupt these two historic rights-of-way or their associated view corridors.

The implementation of Alternative 1 would impact additional resources adjacent to, but outside of, the Memorial site. The Memorial elements would be visible from the Wilbur and Orville Wright Buildings, and the Wilbur Cohen Building. However, the Memorial would not directly affect the properties' character defining features. In addition, the indirect visual impacts would be to the sides of the buildings and not to their primary elevations. Long-term adverse impacts would be indirect and minor and there would be no adverse effect under Section 106.

Due to their location outside of the Maryland Avenue cartway, and the height of the tree canopy along Maryland Avenue, long-term impacts on the U.S. Capitol are anticipated to be negligible; the Memorial's built forms would have limited visibility from the U.S. Capitol. Since the Memorial would not noticeably alter the visual context of the U.S. Botanic Garden, long-term impacts on this resource would be negligible. There would be no adverse effects to these resources under Section 106. The Memorial would not be visible from the Hubert Humphrey Building, and therefore there would be no effect on that building.

Cultural Landscapes

Alternative 1 would include eight columns that would be 65' high, which would be major vertical elements within the Memorial, and would be highly visible from NASM and the Hirshhorn Museum. However, the Memorial would be placed within an existing urban context and the columns would not exceed the height of adjacent buildings. Although the Memorial would alter views of buildings from the Mall, it would not obstruct such views. Furthermore, the

Memorial would not obstruct views along 4th Street. These columns would not be visible from Union Square. The historic circulation of 4th Street would not be changed as a result of the Memorial. Thus, long-term adverse impacts on these Mall buildings would be indirect and minor. There would be no adverse effect to the cultural landscapes of the Mall or to Union Square under Section 106.

Cumulative Impacts

In the vicinity of the Memorial site, projects at FOB 8 and the Switzer Building both include perimeter security elements, which could result in long-term moderate impacts on the L'Enfant Plan. Like Alternative 1, these projects would place built elements outside of the cartways, but within historic rights-of-way, thereby altering spatial relationships and historic views and vistas.

The National Mall Plan calls for a range of improvements to that iconic cultural landscape. The long-term impacts on cultural resources under the Mall Plan would be negligible to major and adverse as a result of changes to the design of Union Square, the introduction of food service facilities, and changes to historic circulation patterns; impacts would be negligible to moderate and beneficial as a result of improvements to the landscape.

As described above, Alternative 1 would result in long-term moderate adverse impacts to the LBJ Building and plaza due to the loss of the LBJ Building plaza and its relationship to the building, long-term beneficial impacts to the L'Enfant Plan due to the reestablishment of the historic alignment of Maryland Avenue, and long-term minor adverse impacts to the L'Enfant Plan due to the placement of built forms at the edge of the Maryland Avenue cartway. In addition, there could be long-term minor adverse cumulative impacts to the Mall when Alternative 1 is considered

with elements of the National Mall Plan. There could be moderate long-term cumulative impacts on the L'Enfant Plan as a result of Alternative 1 when combined with ongoing or planned perimeter security projects within the city. There would be no cumulative impacts on other historic resources as a result of Alternative 1.

Mitigation

In an effort to minimize impacts on historic properties, and as part of the NHPA Section 106 process, the NPS, the DC SHPO, NCPC, and the EMC are developing a Memorandum of Agreement (MOA). The MOA will outline measures that will seek to avoid, minimize, or mitigate the impact of proposed the Eisenhower Memorial on the LBJ Building and its plaza, the L'Enfant Plan, and adjacent historic properties. This could include measures to address the size and scale of the built elements and help fulfill the design principles, as well as a Historic American Landscape Survey (HALS) for the LBJ Building plaza. The MOA will document the mitigation measures and stipulate that consultation will continue through the detailed design process.

Conclusion

Overall, there would be moderate adverse impacts on the LBJ Building and its designed landscape due to the loss of historic fabric of the plaza and the alteration of historic spatial relationships between the building and its landscape through the implementation of Alternative 1. These impacts would constitute an adverse effect under Section 106, but would not cause the LBJ Building to be ineligible for the NRHP. There would be beneficial impacts on the L'Enfant and McMillan Plans from the reestablishment of the historic alignment of Maryland Avenue, and long-term minor adverse impacts due to the placement of built forms at the edge of

the Maryland Avenue cartway. These impacts would not constitute adverse effects under Section 106. There would be long-term indirect and minor adverse impacts on NASM and the Hirshhorn Museum; because the impacts would be minor, there would be no adverse effect to the cultural landscape of the Mall or Union Square under Section 106. In addition, there would be long-term minor indirect adverse impacts on the Wilbur and Orville Wright Buildings, and the Wilbur Cohen Building. Since the Memorial would not noticeably alter the visual context of the U.S. Botanic Garden or the U.S. Capitol Building, impacts on these resources would be negligible.

Historic Resources Impacts of Alternative 2

Historic Structures and Districts

The impacts to the LBJ Building and its designed landscape would be similar to those described under Alternative 1. The removal of the existing plaza and its replacement with the Eisenhower Memorial under Alternative 2 would result in the loss of much of the historic fabric of the designed landscape at the LBJ Building. It would also alter key historic spatial relationships between the building and its landscape, in particular the relationship between indoor and outdoor spaces. However, Alternative 2 would employ rectilinear paths that would reflect the grid in the ground plane of the existing plaza and would provide a similar tripartite composition that nearly centers on the building.

In Alternative 2, the Eisenhower Memorial would also alter reciprocal views between the LBJ Building and surrounding historic properties. The Memorial would introduce built forms reaching 50 feet high that would be evident in views between the LBJ Building and the adjacent Wilbur Cohen Building, Wilbur and Orville Wright Buildings, the NASM, and the Hirshhorn Museum. The grid of trees under Alternative 2 would serve to restrict views of the base of the building more than the No Action Alternative, but could allow the upper floors to be evident from adjacent historic properties.

Overall, adverse impacts to the LBJ Building and its designed landscape would be moderate, due to the loss of historic fabric of the plaza, the alteration of key spatial relationships between the building and its site, and the change in reciprocal views between the LBJ Building and adjacent historic properties. This would constitute an adverse effect under Section 106. The Building would remain eligible for listing on the NRHP.

Reservation 5 would be altered from an exercise course and community gardens to a portion of the Memorial. Although the use of the property would change, it would be consistent with L'Enfant's placement of key monuments within the city's squares.

Under Alternative 2, Maryland Avenue would be restored to its historic alignment; however, it would only be open to pedestrian traffic. The reestablishment of the historic alignment would result in a beneficial impact on the L'Enfant and McMillan Plans. In addition, the orientation of built structures, including the ranger station and bookstore buildings, to the Maryland Avenue cartway would reinforce the roadway's diagonal alignment. As discussed further in Section 4.2.3, the placement of five columns just outside of the historic cartway, but within the historic right-of-way, would alter the openness of the right-of-way and its associated primary view corridor for pedestrians between the street trees that line Maryland Avenue (see Figure 4-5). Although the Memorial elements would be visible from Independence Avenue and 4th Street (see Figure 4-6 and 4-7), the elements would not interrupt these two historic rights-of-way or their associated view corridors. Overall, these changes to the site would result in a long-term minor adverse impact on the L'Enfant and McMillan Plans and no adverse effect under Section 106.

The implementation of Alternative 2 would impact additional resources adjacent to, but outside of, the Memorial site. The Memorial elements would be visible from the Wilbur and Orville Wright Buildings, and the Wilbur Cohen Building. However, the Memorial would not directly affect the properties' character defining features. In addition, the indirect visual impacts would be to the sides of the buildings and not to their main elevations. Long-term

adverse impacts on these resources would be indirect and minor and there would be no adverse effect under Section 106.

Due to their location outside of the Maryland Avenue cartway, and the height of the tree canopy along Maryland Avenue, the Memorial's built forms would have limited visibility from the U.S. Capitol. Thus, long-term impacts on the U.S. Capitol Building would be negligible. Since the Memorial would not noticeably alter the visual context of the U.S. Botanic Garden, long-term impacts on this resource would be negligible. There would be no adverse effects on these resources under Section 106. The Memorial would not be visible from the Hubert Humphrey Building, and therefore there would be no effect on that building.

Cultural Landscapes

Alternative 2 would include eight 50-foot columns which would be visible from the adjacent NASM and Hirshhorn Museum, both located on the Mall north of the Memorial site. However, they would be placed within an existing urban context and would not exceed the height of these buildings. The columns would not be visible from Union Square. The Memorial would not change 4th Street circulation. Long-term impacts to the Mall and Union Square would be indirect and minor, and there would be no adverse effect under Section 106.

Cumulative Impacts

Under Alternative 2, the cumulative projects would be the same as those in Alternative 1. As described above, Alternative 2 would result in long-term moderate adverse impacts to the LBJ Building and plaza due to the loss of the LBJ Building plaza and its relationship to the building, long-term beneficial impacts to the

L'Enfant Plan due to the reestablishment of the historic alignment of Maryland Avenue, and long-term minor adverse impacts to the L'Enfant Plan due to the placement of built forms at the edge of the historic Maryland Avenue cartway. There could be moderate long-term adverse cumulative impacts on the L'Enfant Plan as a result of Alternative 2 when combined with ongoing or planned perimeter security projects within the city. In addition, there could be long-term minor adverse cumulative impacts to the Mall when Alternative 2 is considered with elements of the National Mall Plan. There would be no cumulative impacts on other historic resources as a result of Alternative 2.

Mitigation

The mitigation measures for Alternative 2 are identical to those identified for Alternative 1. An MOA is being prepared that will outline measures seeking to avoid, minimize, or mitigate the impact of the proposed Eisenhower Memorial on the LBJ Building, the L'Enfant Plan, and adjacent historic properties, including measures to address the size and scale of the built elements and help fulfill the design principles. An additional mitigation measure could include a Historic American Landscape Survey (HALS) for the LBJ Building plaza. The MOA will document the mitigation measures and stipulate that consultation will continue through the detailed design process.

Conclusion

Overall, there would be moderate adverse impacts on the LBJ Building and its designed landscape due to the loss of historic fabric of the plaza and the alteration of historic spatial relationships between the building and its landscape through the implementation of Alternative 2. These impacts would constitute an adverse effect

under Section 106. There would be beneficial impacts on the L'Enfant and McMillan Plans from the reestablishment of the historic alignment of Maryland Avenue, and long-term minor adverse impacts due to the placement of built forms at the edge of the historic cartway. These impacts would not constitute adverse effects under Section 106. There would be long-term indirect and minor adverse impacts on NASM and the Hirshhorn Museum; because the impacts are minor, there would be no adverse effect to the cultural landscape of the Mall or Union Square under Section 106. There would be minor long-term indirect visual impacts on the adjacent Mall buildings, the Wilbur and Orville Wright Buildings, and the Wilbur Cohen Building. Since the Memorial would not noticeably alter the visual context of the U.S. Capitol Building or the U.S. Botanic Garden, impacts on these resources would be negligible.

Historic Resources Impacts of Alternative 3

Historic Structures and Districts

As under Alternatives 1 and 2, Alternative 3 would result in the removal of the existing plaza and the loss of much of the historic fabric of the designed landscape at the LBJ Building. However, the plaza would continue to be used as a public gathering space, combining paved areas with landscaping, fundamentally similar to its current use.

In addition to the loss of material elements of the landscape, the installation of the Eisenhower Memorial under Alternative 3 would result in changes to the historic spatial relationships between the building and its designed landscape. The placement of the uninterrupted tapestry between much of the building and the Memorial landscape would serve to physically divide them, dramatically altering this fundamental relationship. However, due to its 15-18' height above grade, views, as well as pedestrian access, would be afforded underneath the tapestry. A woven tapestry would be moderately transparent, thereby limiting the views between the building and the Memorial landscape. A welded tapestry would be highly transparent and views would be afforded through the tapestry. The tapestries would be set back from the LBJ Building façade one bay on each end, allowing views to the corners of the Buildings. The openness of the design directly in front of the entrances of the building would recognize the entries, and the height of the bottom of the tapestry would be consistent with the height of the first floor of the building, thereby referencing the building design in the landscape. Finally, the design would provide a similar tripartite composition to the existing plaza that centers on the LBJ Building.

Under Alternative 3, the design of the Memorial would alter reciprocal views between the LBJ Building and surrounding historic properties, primarily due to the placement of the tapestries. The views impacted would include those to and from the LBJ Building, the Wilbur Cohen Building, and the Wilbur and Orville Wright Buildings. The placement of the tapestries on the eastern, southern, and western sides of the Memorial site would serve to visually separate the Memorial from surrounding resources. However, due to its 15-18' height above grade, views and pedestrian access would be afforded underneath the tapestry. A woven tapestry would be moderately transparent, thereby limiting the views. A welded tapestry would be highly transparent and views would be afforded through the tapestry.

Overall, adverse impacts to the LBJ Building and its designed landscape would be moderate, due to the loss of historic fabric of the plaza, the alteration of key spatial relationships between the building and its site, and the change in reciprocal views between the LBJ Building and adjacent historic properties. This would constitute an adverse effect under Section 106, but the Building would remain eligible for listing on the NRHP.

Reservation 5 would be altered from an exercise course and community gardens to a portion of the Memorial. Although the property's use would change, it would be consistent with L'Enfant's placement of key monuments within the city's squares.

As discussed in Section 4.3, the placement of the built forms of four columns and the tapestry in the northeastern corner of the site, outside of the cartway, but within the historic right-of-way, would alter the openness of the right-of-way and its associated primary view corridor for pedestrians among the street trees that line

Maryland Avenue (see Figure 4-9). Overall, these changes to the site would result in a long-term moderate adverse impact on elements of the L'Enfant and McMillan Plans and thus an adverse effect under Section 106. The Plans would remain listed on the NRHP. Although the Memorial elements would be visible from Independence Avenue and 4th Street (see Figures 4-10 and 4-11), the elements would not interrupt these two historic rights-of-way or their associated view corridors. In addition, the on-site building, placed parallel to 4th Street would reinforce the roadway's north-south alignment.

The implementation of Alternative 3 would impact additional resources adjacent to, but outside of, the Memorial site. The Memorial elements would be visible from the Wilbur and Orville Wright Buildings, and the Wilbur Cohen Building, due to the high visibility of the Memorial's built forms. However, the Memorial would not directly affect the properties' character defining features. In addition, the indirect visual impacts would be to the sides of the buildings and not to their main elevations. Long-term adverse impacts on these resources would be indirect and minor and there would be no adverse effect under Section 106.

Due to their location outside of the Maryland Avenue cartway and the height of the tree canopy along Maryland Avenue, the Memorial's built forms would be slightly visible in the view from the Capitol steps southwest along Maryland Avenue. Thus, long-term impacts on the U.S. Capitol Building would be minor. Since the Memorial would not noticeably alter the visual context of the U.S. Botanic Garden, long-term impacts on this resource would be negligible. There would be no adverse effects to these resources under Section 106. The Memorial would not be visible from the Hubert Humphrey Building, and therefore there would be no effect on that building.

Cultural Landscapes

Alternative 3 would include ten columns and three tapestries that would reach an average height of 78 feet and would be highly visible from NASM and the Hirshhorn Museum. However, they would be placed within an existing urban context and would be consistent in height with adjacent buildings, including the LBJ Building to the south. The columns would not be seen from Union Square. The Memorial would not change 4th Street circulation as it approaches and crosses the Mall. Long-term adverse impacts on these buildings would be indirect and minor, and there would be no adverse effect under Section 106.

Cumulative Impacts

Under Alternative 3, the cumulative projects would be the same as those in Alternatives 1 and 2. As described above, Alternative 3 would result in long-term moderate adverse impacts due to the loss of the LBJ Building plaza and its relationship to the building and long-term beneficial impacts due to the reestablishment of the historic alignment of Maryland Avenue. There would be long-term moderate adverse impacts due to the placement of built forms outside of the Maryland Avenue cartway, but within the historic right-of-way. Additionally, there could be long-term moderate cumulative impacts on the L'Enfant Plan as a result of Alternative 3 when combined with ongoing or planned perimeter security projects within the city. There could be long-term minor adverse cumulative impacts to the Mall when Alternative 3 is considered with the proposed implementation of the National Mall Plan. There would be no cumulative impacts on other historic resources as a result of Alternative 3.

Mitigation

The mitigation measures for Alternative 3 are identical to those identified for Alternative 1. An MOA is being prepared that will outline measures seeking to avoid, minimize, or mitigate the impact of the proposed Eisenhower Memorial on the LBJ Building, the L'Enfant Plan, and adjacent historic properties, including measures to address size and scale of the built elements and help fulfill the design principles. Additional mitigation measures could include a Historic American Landscape Survey (HALS) for the LBJ Building plaza and a physical recognition of the former Maryland Avenue cartway. The MOA will document the mitigation measures and stipulate that consultation continue through the detailed design process.

Conclusion

Overall, there would be moderate adverse impacts on the LBJ Building and its designed landscape due to the loss of historic fabric of the plaza and the alteration of historic spatial relationships between the building and its landscape through the implementation of Alternative 3. These impacts would constitute an adverse effect under Section 106. There would be beneficial impacts on the L'Enfant and McMillan Plans from the reestablishment of the historic alignment of Maryland Avenue, and moderate adverse impacts due to the placement of built forms outside of the historic cartway but within the corridor right-of-way. These impacts would constitute adverse effects under Section 106. There would be long-term indirect and minor adverse impacts on NASM and the Hirshhorn Museum. These impacts would not constitute adverse effects to the cultural landscape of the Mall or Union Square under Section 106. In addition, there would be minor indirect visual impacts on the adjacent Mall buildings, the Wilbur and Orville

Wright Buildings, the Wilbur Cohen Building, and the U.S. Capitol Building. Since the Memorial would not noticeably alter the visual context of the U.S. Botanic Garden, impacts on this resource would be negligible.

This page is intentionally left blank

4.3 VISUAL RESOURCES

Methodology and Assumptions

The aesthetic and visual impact analysis for the Eisenhower Memorial addresses potential changes to key views and vistas that can be attributed to the project. Impacts on views and vistas are determined based on an analysis of the existing quality of the view (including changes as a result of glare), the sensitivity of the view (such as important views from historic and cultural sites), and the anticipated relationship of the proposed design elements to the existing visual environment.

The analysis that follows focuses on three key view corridors, Maryland Avenue, Independence Avenue, and 4th Street, as well as impacts to the visual environment. To evaluate these corridors, photo simulations of three representative view points are presented, including northeast on Maryland Avenue to the U.S. Capitol Building, west on Independence Avenue, north on 4th Street, and south on 4th Street from the Mall. These viewpoints were selected due the sensitivity of these view corridors, but are intended to be representative of the series of views afforded along these corridors. While the analysis included in this section focuses on urban design, references to the Historic Resources section and thereby Section 106 thresholds are provided because these view corridors are also elements of the historic L'Enfant Plan.

Study Area

The study area for visual resources is the secondary APE, as delineated in Figure 3-1.

Impact Thresholds

The impact thresholds for visual resources are described in the following categories:

- *Negligible.* The proposed project would not be visible from the representative viewpoint, or visual changes are so subtle as to be nearly undetectable.
- *Minor.* The proposed project would be visible as a background element in a view or vista that includes buildings or other site features of similar mass and scale. The project may filter views or vistas but would not interfere with the view corridor. Of particular importance are direct views of the Capitol dome.
- *Moderate.* The proposed project would be visible as part of a view or vista that includes buildings or site features of similar mass and scale and may screen or partially interfere with a view corridor, but not interfere with views of the Capitol dome.
- *Major.* The proposed project features would be visible and would contrast with or dominate the existing site features, and may completely block or interfere with a view corridor, including views of the Capitol dome.

Visual Resources Impacts of No Action Alternative

Under the No Action Alternative, the Eisenhower Memorial would not be constructed. There would be no changes to the existing visual environment or key view corridors. See figures 3-22 through 3-24 for photographs of the three view corridors under existing conditions. There would be no changes to the views or experiences from the site or adjacent buildings under the No Action Alternative. Therefore, there would be no direct or indirect impacts on visual resources as a result of the No Action Alternative.

Cumulative Impacts

Since the Eisenhower Memorial would not be constructed, there would be no direct or indirect impacts on visual resources as a result of the No Action Alternative. As such, the No Action Alternative would not contribute on cumulative impacts to visual resources, when considered with other ongoing or planned projects in the vicinity of the site.

Conclusion

Since the Eisenhower Memorial would not be constructed, there would be no changes to the visual context or key views. Long-term direct, indirect, and cumulative impacts would be negligible.

Visual Resources Impacts of Alternative 1

Maryland Avenue

Under Alternative 1, a circular colonnade would frame the vista northeast along the Maryland Avenue corridor to the U.S. Capitol Building, a key vista within L'Enfant's Plan for the city. The colonnade would include three columns north of Maryland Avenue and five columns to the south. Blocks and sculptural reliefs would be located outside of the realigned roadway, or cartway, which is the primary view corridor. The location of these built elements would obstruct views of NMAI on the north side of the corridor, and introduce built forms into the south side of the corridor where it currently appears as open space. The vista would continue to be framed by trees, which would highlight the direct view of the Capitol dome. The prominence of the built elements would be increased during the fall and winter months when the leaves are off the trees. The return of Maryland Avenue to its historic alignment would provide additional visual connection to the U.S. Capitol. Overall, long-term adverse impacts on this vista under Alternative 1 would be minor, as the Eisenhower Memorial would help define the open character of the view to the U.S. Capitol. While some consulting parties have objected the scale and placement of columns, NPS considers the columns to be a minimal intrusion into the Maryland Avenue vista. This minor adverse impact on the vista under Alternative 1 contributes to the overall minor adverse impact on the L'Enfant Plan, as described in Section 4.2.2.



Figure 4-1: Existing (above) and proposed (below) views northeast along Maryland Avenue under Alternative 1

Independence Avenue

In the vistas east and west along Independence Avenue under Alternative 1, the Eisenhower Memorial would be largely shielded from view by existing trees during the spring and summer months. Figure 4-2 provides a view west on Independence Avenue and is intended to be representative of views along the corridor. During the winter, when leaves are off of the trees, portions of the Memorial, including columns, blocks, and sculptural reliefs, would be visible on the south side of the Avenue. The columns and trees would be shorter than the adjacent Wilbur Wright and Wilbur Cohen Buildings, and the new street trees along Independence Avenue would reinforce a consistent visual line. Neither the built forms nor the trees would encroach upon or obstruct views along the corridor, and the wide existing tree-lined character of the roadway would be maintained. Overall, Alternative 1 would have negligible long-term impacts on this view during summer months and minor long-term adverse impacts during fall and winter months. This minor adverse impact on the vista contributes to the overall minor adverse impact on the L'Enfant Plan, as described in Section 4.1.2.



Figure 4-2: Existing (above) and proposed (below) views west along Independence Avenue under Alternative 1

4th Street

Alternative 1 would remove existing street trees along the west side of 4th Street and replace them with new street trees. Looking north, the Memorial street trees would reinforce the visual line toward the National Building Museum and maintain the street's tree-lined character. No portion of the colonnade or other Memorial features would be visible. Thus, long-term impacts on the 4th Street corridor looking north would be negligible under Alternative 1. As such, the negligible impact would not contribute to an overall adverse impact on the L'Enfant Plan, as discussed in Section 4.1.2.



Figure 4-3: Existing (above) and proposed (below) views north on 4th Street under Alternative 1

The Mall at 4th Street

Under Alternative 1, landscape trees, columns, and block memorial elements would be visible looking southwest from the Mall on 4th Street. Two columns would be partially visible at the eastern portion of the Memorial. However, due to existing street trees near NASM and the trees planned at the Memorial, the visibility of the columns would be minimal during spring and summer months. Two Memorial relief blocks would also be visible at the eastern portion of the Memorial. Street trees and landscape trees at both the Memorial and NASM sites would partially screen these elements, although portions of them would be visible below the tree canopy. At 20-40 feet in height at installation, street trees and shade trees within the site would screen much of the face of the LBJ Building during spring and summer months; however, the upper stories and the penthouse would emerge above the tree canopy. During winter months, when the leaves are off the trees, the built elements of the Memorial would be more visible, as would the north face of the LBJ Building. Overall, Alternative 1 would have a long-term minor adverse impact on this view.



Figure 4-4: Existing (above) and proposed (below) views southwest to Memorial site under Alternative 1

Surrounding Visual Environment

Alternative 1 would increase the total number of trees at the site to 85, including the replacement of several smaller trees with larger, fuller trees. The tree canopy would be thicker than existing vegetation throughout most of the site, but would be thinner at the Memorial's central plaza and would be more consistent along Maryland Avenue. The tree canopy, columns, and other built Memorial elements of Alternative 1 would result in a more defined character of the site.

View to and from the LBJ Building would be altered by the trees and built elements of Alternative 1. The nearest trees within the Memorial would be located approximately 50 feet from the LBJ Building face, although trees within the Promenade would be approximately 44 feet from the building. The increase in the number and quality of trees at the site would not substantially alter views to and from the building, although some ground and second floor areas would experience a degree of visual change due to leaf cover. The 65-foot columns would also obscure some views to and from windows on the northern façade of the building. Generally, views of the site would change from a minimally vegetated, sparse plaza and roadway to that of a park setting. The light received by the windows of the northern building face would be minimally diminished on the first and second stories due to the increase in tree canopy. This would not interfere with views out of the windows or with the indirect light received over the majority of the Building, and would therefore not substantially alter the working environment with the LBJ Building. As a result of Alternative 1, views and light would be filtered to the lower levels of the LBJ Building through trees. Therefore, Alternative 1 would result in

long-term minor adverse impacts on views to and from the LBJ Building and the working environment within it.

Views from the Wilbur Cohen and the Wilbur Wright Buildings and NASM would be altered from the existing plaza and roadway to that of a park setting. The trees and columns would not substantially impede views from those buildings across the site at the buildings' lower levels. Therefore, there would not be a substantial change in the working environment at these buildings.

Mitigation

To reduce the impact of Alternative 1 on the Maryland Avenue view corridor and to help fulfill the design principles, and as part of the NHPA Section 106 process, the NPS, the DC SHPO, GSA, and the EMC are developing an MOA that would stipulate that consultation will continue through the detailed design process. This agreement would allow for the design to advance while incorporating elements, such as changes to the placement of built features to maintain the open character of the vista, which would mitigate adverse impacts to visual resources.

Cumulative Impacts

The disposition of several GSA parcels along Maryland Avenue, to the west of the Memorial site, could result in a beneficial impact on views northeast on Maryland Avenue if the diagonal streetwall becomes more defined and the street trees are consistently sited along the roadways. Alternatively, if the disposition of GSA property on Maryland Avenue did not result in a more defined street wall, the impacts on views northeast on Maryland Avenue would be negligible.

As described above, Alternative 1 would result in long-term minor adverse impacts on the vista northeast on Maryland Avenue. When combined with the cumulative project described above, Alternative 1 would result in long-term minor adverse impacts on views northeast on Maryland Avenue. There would be no cumulative impacts on views southwest from the Mall at 4th Street, north on 4th Street, or on Independence Avenue. There would be minor cumulative impacts on views to and from the LBJ Building and the working environment within.

Conclusion

Alternative 1 would have a long-term minor adverse impact on key view corridors in the vicinity of the Memorial site. There would be a long-term minor adverse impact on the vista northeast on Maryland Avenue, due to the framing of the vista with built elements; a long-term minor adverse impact on the vista west on Independence Avenue during the winter months; a long-term minor adverse impact on the view southwest from the Mall at 4th Street, and a long-term minor adverse impact on views to and from the LBJ Building. Long-term impacts to the view north on 4th Street would be negligible. There would be long-term minor adverse impacts on views to and from the LBJ Building.

Visual Resources Impacts of Alternative 2

Maryland Avenue

Under Alternative 2, a circular colonnade would frame the vista northeast along the Maryland Avenue corridor toward the U.S. Capitol Building, a key vista within L'Enfant's Plan for the city. The colonnade would include three columns north of Maryland Avenue and five columns to the south. Blocks and sculptural reliefs would be located outside of the realigned roadway, or cartway, which is the primary view corridor. The location of these built elements would partially obstruct views of the NMAI on the north side of the corridor, and introduce built forms into the south side of the corridor where it currently appears as open space. However, the existing tree-lined character of the vista would be maintained which would highlight the direct view of the Capitol dome. The prominence of the built elements would be increased during the winter months when the leaves are off the trees. The return of Maryland Avenue to its historic alignment would provide additional visual connection to the U.S. Capitol. While some consulting parties have objected the scale and placement of columns, NPS considers the columns to be a minimal intrusion into the Maryland Avenue vista.



Figure 4-5: Existing (above) and proposed (below) views northeast along Maryland Avenue under Alternative 2

Overall, long-term adverse impacts on this vista under Alternative 2 would be minor, as the Eisenhower Memorial would help define the open character of the vista of the U.S. Capitol. This minor impact on this vista under Alternative 2 contributes to an overall minor impact on the L'Enfant Plan, as described in Section 4.2.2.

Independence Avenue

In the vistas east and west along Independence Avenue under Alternative 2, the Eisenhower Memorial would be largely shielded from view by existing trees during the spring and summer months. Figure 4-6 provides a view west on Independence Avenue and is intended to be representative of views along the corridor. During the winter, when leaves are off of the trees, portions of the Memorial, including columns, blocks, and sculptural reliefs, would be visible on the south side of the Avenue. The columns and trees would be shorter than the adjacent Wilbur Wright and Wilbur Cohen Buildings, and the new street trees along Independence Avenue would reinforce a consistent visual line. Neither the built forms nor the trees would encroach upon or obstruct the vista, and the wide existing tree-lined character of the roadway would be maintained. Overall, Alternative 2 would have negligible long-term impacts on this vista during summer months and minor long-term adverse impacts during winter months. While some consulting parties have objected the scale and placement of columns, NPS considers the columns to be a modest intrusion into the Independence Avenue vista.



Figure 4-6: Existing (above) and proposed (below) views east along Independence Avenue under Alternative 2

The minor impact on the Independence Avenue vista contributes to the overall minor adverse impact on the L'Enfant Plan, as discussed in Section 4.2.2.

4th Street

Alternative 2 would remove existing street trees along the west side of 4th Street and replace them with new street trees, thereby maintaining the existing tree-lined character of the vista. Looking north, the Memorial street trees would reinforce the visual line toward the National Building Museum. No portion of the colonnade or other Memorial features would be visible. Thus, long-term impacts on the 4th Street corridor looking north would be negligible under Alternative 2. As such, this would not contribute to the overall minor impact on the L'Enfant Plan, as discussed in Section 4.2.2.



Figure 4-7: Existing (above) and proposed (below) views north along 4th Street under Alternative 2

The Mall at 4th Street

Under Alternative 2, landscape trees and block memorial elements would be visible looking southwest from the Mall at 4th Street. At 50 feet, the columns on the right side of the view would not be visible. At 20-40 feet in height at installation, street trees and shade trees at both the Memorial and NASM sites would partially screen the Memorial's built elements, although portions of the elements would be visible below the tree canopy. Street trees and landscape trees within the site would screen much of the face of the LBJ Building during spring and summer months, however the upper stories and the penthouse would emerge above the tree canopy. During winter months, when the leaves are off the trees, the built elements of the Memorial would be more visible, as would the north face of the LBJ Building. Overall, Alternative 2 would have a long-term minor adverse impact on this view.



Figure 4-8: Existing (above) and proposed (below) views southwest to Memorial site under Alternative 2

Surrounding Visual Environment

Alternative 2 would increase the total number of trees at the site to 104. The increased number and improved quality of trees would result in a thicker tree canopy. The tree cover would be thinner at the central Memorial area, and would be more consistent along the Maryland Avenue pedestrian-only cartway. The trees, columns, and other built Memorial elements of Alternative 2 would result in a more defined character of the site.

Within the Memorial, the trees nearest to the LBJ Building would be located approximately 50 feet from the building face, although trees within the Promenade would be approximately 35 feet from the building. The increase in the number and quality of trees at the site would minimally reduce the views to and from the first and second floors of the LBJ Building. The 50-foot columns would also obscure some views to and from windows on the northern façade of the building. From the upper floors, views of the plaza would change from a minimally vegetated, sparse plaza and roadway to that of a landscaped park setting. The light received by the windows of the northern building face would not be substantially reduced at the first and second floors due to the increased tree canopy. This would not interfere with views out of the windows or with the indirect light received over the majority of the building. Therefore, Alternative 2 would result in long-term minor adverse impacts on views to and from the LBJ Building and to the working environment in the LBJ Building.

Views from the Wilbur Cohen and the Wilbur Wright Buildings and NASM would be altered from the existing plaza and roadway to that of a park setting. Unlike existing conditions, trees and columns would not substantially impede views from those buildings across

the site at the buildings' lower levels, and would therefore not substantially alter working environment within the adjacent buildings.

Mitigation

To reduce the impact of Alternative 2 on the Maryland Avenue view corridor and to help fulfill the design principles, and as part of the NHPA Section 106 process, the NPS, the DC SHPO, GSA, and the EMC are developing an MOA that would stipulate that consultation will continue through the detailed design process. This agreement would allow for the design to advance while incorporating elements, such as changes to the placement of built features to maintain the open character of the vista, which would mitigate adverse impacts to visual resources.

Cumulative Impacts

The cumulative projects would be the same as those described under Alternative 1, which could result in long-term beneficial impacts to the Maryland Avenue vista. As described above, Alternative 2 would result in long-term minor adverse impacts on the vista northeast on Maryland Avenue. When combined with the cumulative project described above, Alternative 2 would result in minor long-term adverse cumulative impacts on the vista northeast on Maryland Avenue. There would be no cumulative impacts on views southwest from the Mall at 4th Street, north on 4th Street, or on Independence Avenue. There would be long-term minor adverse cumulative impacts on views to and from the LBJ Building and to the working environment in the LBJ Building.

Conclusion

Alternative 2 would have a long-term minor adverse impact on key view corridors in the vicinity of the Memorial site.. There would be a long-term minor adverse impact on the vista northeast on Maryland Avenue, due to the framing of the vista with built elements; a long-term minor adverse impact on the vista west on Independence during the winter months; and a long-term minor adverse impact on the view southwest from the Mall at 4th Street. Long-term impacts on the vista north on 4th Street would be negligible. There would be long-term minor adverse impacts on views to and from the LBJ Building and its working environment.

Visual Resources Impacts of Alternative 3

Maryland Avenue

Under Alternative 3, two columns that would be part of the linear colonnades lining portions of 4th and 6th Streets and the south edge of the Memorial site would be visible, as would their associated tapestries. One relief block at the northeast portion of the site would also be slightly visible within the view corridor. The columns and relief block would be located 21 feet beyond either side of the former roadway (cartway) and would frame the vista northeast along the Maryland Avenue corridor towards the U.S. Capitol Building, a key vista within L'Enfant's Plan for the city. In addition, the existing tree-lined character of the vista would be maintained. The extensive number of trees would strengthen the perception of the Memorial as open space and help define the view toward the Capitol dome. The prominence of the built elements would be increased during the winter months when the leaves are off the trees. While the existing trees that have grown into the view corridor would be removed, opening the view of the Capitol Building, the monumental scale of the columns would exaggerate the relative size of the Capitol.



Figure 4-9: Existing (above) and proposed (below) views northeast along Maryland Avenue under Alternative 3

Overall, long-term adverse impacts on this vista under Alternative 3 would be moderate, as the Memorial would highlight the primary vista and would not block views of the Capitol dome. This moderate adverse impact on the Maryland Avenue vista contributes to the overall moderate adverse impact on the L'Enfant Plan as discussed in Section 4.2.2.

Independence Avenue

In the vistas east and west along Independence Avenue under Alternative 3, the features of the Memorial would be slightly visible. Figure 4-10 provides a view west on Independence Avenue and is intended to be representative of views along the corridor. Columns would be located along part of the roadway, visible below the trees, supporting metal tapestries at the east and west ends of the site. The northwestern-most column, placed 31 feet south of the Independence Avenue curb, would not be located in the Independence Avenue right-of-way. During the winter months, when the leaves are off the trees, the Memorial elements would be more visible. While they would partially obstruct views of the east façade of the Wilbur Wright Building, neither the built forms nor the trees would obstruct views along the corridor, which has an inconsistent street wall, and the existing wide tree-lined character of the roadway would be maintained.



Figure 4-10: Existing (above) and proposed (below) views west along Independence Avenue under Alternative 3

Overall, Alternative 3 would have long-term minor adverse impacts on this view corridor. This minor impact contributes to the overall minor adverse impact on the L'Enfant Plan as documented in Section 4.2.2.

4th Street

Alternative 3 would remove existing street trees along the west side of 4th Street and replace them with new street trees, thereby maintaining the existing tree-lined character of the vista. Alternative 3 would also place a colonnade along 4th Street, aligned with the second bay of the LBJ Building. Looking north, the Memorial street trees would reinforce the visual line toward the National Building Museum. The eastern façade of the building housing the restrooms, ranger contact station, and book sales would be aligned on 4th Street with the LBJ Building and would be visible. The columns aligned with 4th Street would not be visible from views looking north along 4th Street. The introduction of these built forms at the edge of the vista would help frame the Memorial block. Thus, long-term adverse impacts on the vista north on 4th Street would be minor. This minor adverse impact contributes to the overall minor adverse impact on the L'Enfant Plan as documented within Section 4.2.2.



Figure 4-11: Existing (above) and proposed (below) views north along 4th Street under Alternative 3

View from the Mall at 4th Street

Under Alternative 3, landscape trees, two tapestries, and their supporting columns would be visible looking southwest from the Mall on 4th Street. From this location, views of the tapestries would be perpendicular. The bottom of the tapestries would be 15-18 feet off the ground, and the columns and tapestries would be 80 feet high. The tapestries, as well as street and shade trees ranging in height from 20 to 40 feet at installation, would screen a portion of the face of the LBJ Building; the eastern corner of the Building and a small area of the penthouse would be unobstructed. If the transparency of the tapestry installed were similar to that of the woven mock-up as shown in Figure 2-17, views to the LBJ Building would be filtered. If the transparency of the tapestry installed were similar to that of the welded mock-up as shown in Figure 2-18, views to the LBJ Building would be clearly afforded through the tapestry.

Based on the degree of transparency demonstrated by the tapestry samples and mock-ups and a low level of reflectivity, long-term adverse impacts would be moderate. NPS has determined that the columns and tapestries would partially filter views from the Mall along 4th Street to the Memorial and thus would have a moderate impact on the



Figure 4-12: Existing (above) and proposed (below) view southwest to the Memorial site under Alternative 3

resource. However, some consulting parties consider the impacts to be major due to a differing opinion regarding the scale and placement of the columns, and the degree of transparency of the tapestries.

Surrounding Visual Environment

Alternative 3 would increase the total number of trees at the site to 81. The increased number and improved quality of trees would result in a thicker tree canopy. The trees would form an alley observing the Maryland Avenue cartway. The tree canopy would be thinner at the central Memorial area near the relief blocks and the central Memorial area, and would be more consistent along the edges outside the Maryland Avenue cartway.

Under Alternative 3, the columns, built Memorial elements and tapestries would result in a more defined character on the Memorial site and would provide visual cues. The tapestries would help define the site and create the atmosphere of an urban room. Although they would provide a symbolic barrier, the tapestries would be largely transparent, and would retain views of the skies and adjacent buildings.

Within the Memorial, three relatively shorter trees would be located approximately 50 feet from the LBJ Building face; taller trees would be located in the center of the Memorial, approximately 95 feet from the LBJ Building. In addition, trees within the Promenade would be approximately 20 feet from the building. The increase in the number and quality of trees at the site would cause a limited reduction in views to and from the first and second floors of the LBJ Building and therefore cause a limited change in its working environment.

The 80-foot columns on the southern side of the site would be located approximately 55 feet from the LBJ Building's façade. These columns would obscure some views from additional windows on the northern façade of the building. The southern tapestries would be attached to the columns at a distance of 70 feet from the LBJ Building's northern façade. This distance is similar to the height of the LBJ Building cornice, and consistent with the surrounding urban context. Given the moderate transparency of the woven tapestry, views to and from the LBJ Building would be partially filtered. However because the welded tapestry would be substantially transparent, the Memorial elements would minimally diminish views from the lower floors. Views from the upper floors would not be obscured. The views of the Memorial site from the LBJ Building would be enhanced by a greener landscaped park setting.

As a result of Alternative 3, indirect light would be filtered to the lower levels of the LBJ Building through trees and through a transparent tapestry. Currently, the north-facing side of the LBJ Building receives little direct light its windows. The tapestry, in either woven or welded form, would not further decrease direct light. This would result in no change to the working environment at the upper levels of the building and a minimal change to the LBJ Building working environment on the lower levels.

From the Wilbur Cohen and the Wilbur Wright Buildings and NASM, the tapestries would be visible. However, given the moderate transparency of the woven tapestry and the substantial transparency of the welded tapestry, views from the lower floors of the Wilbur Cohen and Wilbur Wright Buildings would be minimally filtered, but views from the upper floors would not be obscured and therefore would not alter the existing working environment. The views would change from the existing plaza and roadway to that of

a park setting. From NASM, the views of the Memorial site would be unobstructed, and the view to the LBJ Building would be filtered by the tapestries.

Overall, Alternative 3 would result in long-term moderate adverse impacts on views within the surrounding visual context.

Mitigation

To reduce the impact of Alternative 3 on the Maryland Avenue view corridor and to help fulfill the design principles, and as part of the NHPA Section 106 process, the NPS, the DC SHPO, GSA, and the EMC are developing an MOA that would stipulate that consultation will continue through the detailed design process. This agreement would allow for the design to advance while incorporating elements, such as changes to the placement of built features to maintain the open character of the vista, which would mitigate adverse impacts to visual resources. An additional mitigation measure could include physical recognition of the former Maryland Avenue cartway.

Cumulative Impacts

The cumulative projects would be the same as those described under Alternative 1, which could result in long-term negligible to beneficial impacts on views along Maryland Avenue. As described above, Alternative 3 would result in long-term moderate adverse impacts on visual resources. When combined with the cumulative projects, Alternative 3 would result in long-term moderate adverse cumulative impacts on views northeast on Maryland Avenue. There would be minor adverse cumulative impacts to views along Independence Avenue. There would be no cumulative impacts on views southwest from the Mall at 4th Street or, north on 4th Street.

There would be long-term moderate adverse cumulative impacts on views within the surrounding visual context and minor changes to the working environment of adjacent buildings.

Conclusion

Alternative 3 would impact key view corridors in the vicinity of the Memorial site. There would be a long-term moderate adverse impact on the vista northeast on Maryland Avenue due to the framing of the view with built elements; a long-term minor adverse impact on the vistas along Independence Avenue and north on 4th Street; and a long-term moderate adverse impact on the view southwest from the Mall at 4th Street. There would be long-term moderate adverse impacts on views to and from the LBJ Building. There would be long-term moderate adverse impacts on views within the surrounding visual context.

4.4 PARK OPERATIONS AND MANAGEMENT

Methodology and Assumptions

Park operations and management, for the purpose of this analysis, refers to the quality and effectiveness of the park staff to maintain and administer park resources and facilities and to provide for an effective visitor experience. This includes an analysis of the condition and maintenance of facilities used to support park operations. The impact analysis is based on the current description of park operations presented in Section 3.0: Affected Environment.

Study Area

The study area for operations and management is the NAMA boundaries, including staffing, facilities, and budget.

Impact Thresholds

Impact thresholds are as follows:

- *Negligible*: Park operations would not be impacted or the impact would not have a noticeable or appreciable impact on park operations.
- *Minor*: Impacts would be noticeable, but would be of a magnitude that would not result in an appreciable or measurable change to park operations.
- *Moderate*: Impacts would be readily apparent and would result in a substantial change in park operations that would be noticeable to staff and the public. Mitigation could be required and may be effective.

- *Major*: Impacts would be readily apparent and would result in a substantial change in park operations that would be noticeable to staff and the public and would require the park to readdress its ability to sustain current park operations.
- *Duration*: Short-term impacts would occur during the construction of the alternative and the first two years of its operation; long-term impacts extend beyond the construction of the alternative.

Park Operations and Management Impacts of No Action Alternative

Under the No Action Alternative, existing park management and operations would continue. NPS would continue its operation of NAMA with current staffing levels, unless otherwise dictated by budgetary constraints. Current maintenance levels would continue for parks and memorials.

NPS would continue to maintain the northwest portion of the project site. This would include mowing the grass and maintaining the exercise equipment. NPS would continue to offer public safety services for the site, although no staff member would be specifically posted at the site. The community garden would continue to operate at the site, pending a change in the special use permit status.

GSA and DDOT would continue to maintain their respective areas within the project site. GSA would maintain the plaza and the landscaping within the plaza and the planter boxes around the LBJ Building. DDOT would continue to maintain the Maryland Avenue ROW and all sidewalks adjacent to the site. Maintenance by DDOT

includes mowing, snow removal, and repairs to paved areas as needed.

Because there would be no change to the operation of the NPS parcel, there would be no impacts on park operations and management as a result of the No Action Alternative.

Cumulative Impact

Under the No Action Alternative, there would be no change in park operations and management. Thus, there would be no cumulative impacts on this resource area as a result of the No Action Alternative.

Conclusion

The No Action Alternative would continue existing NAMA operation and management practices, both for the project site and for NAMA as a whole. Because no changes would result as part of the No Action Alternative, no impact on park management and operations would occur.

Park Operations and Management Impacts of Alternative 1

Alternative 1 would result in an expansion of the land area administered by NAMA. Currently, the site is made up of three parcels, each managed by a different federal entity: NPS, GSA, and the District of Columbia. As part of Alternative 1, GSA and the District of Columbia would transfer the land management responsibilities of these parcels, which total a combined 3.6 acres, to NPS. GSA would retain and manage the LBJ Promenade and NAMA would then manage the contiguous project site. As such, NAMA would be responsible for the increased maintenance and operations of the additional land area.

The implementation of Alternative 1 would result in more maintenance responsibilities than the current NPS parcel. Although the construction of the Memorial would be funded by EMC, the ongoing maintenance and operation of the Memorial would fall to NPS. The design of Alternative 1 would contain built elements, such as colonnades, reliefs, and water features. The colonnades and reliefs, clad in high-quality stone or other material, would require cleaning and graffiti removal as needed. The water features would require diligent care to ensure that water flow and quality is maintained. The water features would also require winterization and reactivation. The re-use of on-site stormwater treatment for irrigation would also require additional maintenance. It is anticipated that no special equipment or skills would be needed to maintain the Memorial, and that maintenance at the site would be similar to that of other memorials within NAMA, such as the Franklin D. Roosevelt and the World War II Memorials.

Alternative 1 would include restroom facilities, a canopy structure, a ranger contact station, and a bookstore. These structures would

require ongoing maintenance. General upkeep of the site, such as trash pickup, snow removal, and cleaning, would increase from the existing minimal needs of the site. Due to the anticipated use by day workers during breaks, it is expected that higher levels of site cleaning/maintenance, relative to other memorials, would be needed.

In addition to the structural maintenance, the Eisenhower Memorial would require a higher level of landscaping than currently exists at the NPS parcel. The Memorial would include a central grove of large deciduous trees, which would need to be monitored to ensure their health. Additional trees and landscaped vegetation would be planted throughout the site. Watering of new trees during periods of drought, mowing, and other landscape services would be needed.

Implementation of Alternative 1 would require staffing at the site for both visitor services and to perform the maintenance described above. Alternative 1 would have a minimum of one Park Ranger stationed at the site during the operating hours daily, which would generate additional staff demands for NAMA. The facility maintenance would require one maintenance mechanic, one gardener, two maintenance workers, and three laborers. The on-site bookstore would be operated by an independent organization, although some NPS staff time would be necessary to manage the contract.

In the short-term, the additional staff required for operation of the Memorial would place more burden on NAMA operations and management. The staff time required for the site would either add more responsibility to existing staff or would add more staff to NAMA operations, potentially resulting in strains on existing budgets. In both scenarios, changes to NAMA management would

be required as resources currently allocated to the park are redistributed. NPS would also be responsible for monitoring activities during the construction phase to ensure that mitigation measures and NPS policies are followed. As a result, the short-term impacts of Alternative 1 on park operations and management would be moderate and adverse.

In the long-term, budgets would be adjusted to address the Eisenhower Memorial and staffing levels would be adjusted or redistributed to adequately serve the Memorial. Therefore, the long-term impacts on park operations and management would be minor and adverse as future maintenance and operational resources increase and are modified.

Cumulative Impact

A number of actions and conditions within NAMA generate demand for the time, staffing and funding needed for construction and management, which could affect park management. Budgets are not assigned to specific memorials or areas of the park, but rather come as one appropriation.

The implementation of the National Mall Plan and the construction of the Martin Luther King, Jr. National Memorial, the American Veterans Disabled for Life Memorial, the Vietnam Veterans Memorial Visitors Center, the Potomac Park Levee, the Jefferson Seawall, the Lincoln Memorial Reflecting Pool Rehabilitation, the Mall Turf Rehabilitation, the Jefferson Memorial Vehicular Security Barriers, the Washington Monument Security Screening, and the Redesign of Union Square, Constitution Gardens, and the Sylvan Theater Area would also place strain on NAMA resources and budgets, due to additional staffing and maintenance requirements.

The energy-efficient components and the sustainable systems incorporated into these projects would lower the operational costs of these facilities. Constitution Avenue and Madison Drive street improvements would enhance roadway conditions and introduce energy efficient features, which would reduce park maintenance and operating costs. Construction activity related to these projects would result in short-term increases in NPS staff responsibilities due to construction monitoring and contract management.

Over the long-term, the projects above would improve NAMA's facilities and require less frequent maintenance. However, their operation would increase staff requirements. Similarly, budgets would be adjusted over time to support additional resources. These projects would have short- and long-term minor adverse cumulative effects on park management and operations, both as part of the National Mall and the other areas within NAMA.

Under Alternative 1, additional duties would be added to NPS staff's managerial and operational responsibilities. This would result in short-term moderate adverse impacts during construction and the first year of operation, and long-term minor adverse impacts on park operations and management. Therefore, the cumulative effect of Alternative 1 and the other projects in the area would result in short-term moderate adverse impacts and long-term minor adverse impacts.

Conclusion

Implementation of Alternative 1 would place additional budgetary, maintenance, and staffing responsibilities on NPS and NAMA. Changes in funding and staffing would be required. However, as the park incorporates new operational needs into their annual budget

and park staffing, these burdens would decline over time as they become less noticeable and incorporated into the long-term activities of NAMA and NPS park staffing and operations. Therefore, short-term adverse impacts on park operations and maintenance would be moderate. Long-term impacts on park operations and maintenance would be minor as future maintenance and operational resources would increase, and as future projects within NAMA would be implemented. The cumulative effect of Alternative 1 and the other projects in the area would result in short-term moderate adverse impacts and long-term minor adverse impacts.

Park Operations and Management Impacts of Alternative 2

Like Alternative 1, Alternative 2 would result in short-term, moderate adverse impacts and long-term minor adverse impacts on park operations and management. Due to land administration transfers from GSA and DDOT, the quantity of land managed by NPS would increase by the same amount as in Alternative 1. The built Memorial features would be similar in number, material, and scale, and, although they would have slightly different elements, they would require similar maintenance, such as cleaning, graffiti removal, and maintenance for the water features and stormwater re-use for irrigation. Like Alternative 1, it is expected that higher levels of site cleaning/maintenance, relative to other memorials, would be needed due to use of the site during office workers' breaks. The bookstore, ranger contact station, and restrooms would also be similar in size and operation.

The Alternative 2 landscape would be more extensive than in Alternative 1, with a larger amount of green space and more trees. However, there would be only a minimal difference in maintenance requirements for the Memorial. The central grove of trees would need to be monitored to ensure their health. Additional trees and landscaped vegetation would be planted throughout the site. Watering of new trees during periods of drought, mowing, and other landscape services would be needed.

Because Alternative 2 is similar to Alternative 1 in terms of scale of park operations and maintenance, staffing requirements for the Memorial would be the same as Alternative 2. A minimum of one Park Ranger would be stationed at the site during operating hours; up to seven additional people would be needed to adequately maintain the site.

Like Alternative 1, Alternative 2 would place additional burdens on NAMA operations and management in the short-term due to the additional staff required for operating the Memorial. Impacts on park operations and management in the short-term would be moderate and adverse.

Like Alternative 1, Alternative 2, budgets and staffing levels would be adjusted or redistributed to adequately serve the Memorial over time. Therefore, the long-term impacts on park operations and management would be minor and adverse as future maintenance and operational resources increase are modified.

Cumulative Impact

Impacts on park operations and management from cumulative actions would be similar to those under Alternative 1, resulting in short- and long-term minor adverse cumulative impacts. Alternative 2 would place additional duties on NPS staff, management and operations, resulting in short-term moderate impacts during the construction and first year of operation. There would be long-term minor impacts on park operations and management. Therefore, the cumulative effect of Alternative 2 and the other projects in the area would result in short-term moderate adverse impacts and long-term minor adverse impacts.

Conclusion

Like Alternative 1, Alternative 2 would result in short-term, moderate adverse impacts during construction of the Eisenhower Memorial and long-term, minor adverse impacts on park operations and management. Implementation of Alternative 2 would place additional budgetary, maintenance, and staffing responsibilities on

NPS and NAMA. Changes in funding and staffing would be required. However, as the park incorporates the new operational needs into their annual budget and park staffing, these burdens would noticeably decline over time. The cumulative effect of Alternative 2 and other projects would result in short-term moderate adverse impacts and long-term minor adverse impacts on park operations and management.

Park Operations and Management Impacts of Alternative 3

Like Alternatives 1 and 2, Alternative 3 would result in short-term, moderate adverse impacts and long-term minor adverse impacts on park operations and management. The land managed by NPS would increase by the same amount as Alternatives 1 and 2, due to land transfers from GSA and DDOT. Most of the built Memorial features would be similar in number, material, and scale, and, although they would have slightly different elements, would require similar maintenance, such as cleaning, graffiti removal, and maintenance for the water features and stormwater re-use for irrigation. Like Alternatives 1 and 2, it is expected that higher levels of site cleaning/maintenance, relative to other memorials, would be needed due to use of the site during office workers' breaks. The bookstore, ranger contact station, and restrooms would also be similar in size and operation.

The major differences in the built Memorial features would be the tapestries and the lack of a water feature. The tapestry elements would be constructed of metal. The anticipated primary maintenance activity associated with the tapestry would be periodic washing. Additional maintenance could include the removal of debris caught in the tapestries or graffiti, should someone find the panels 15 feet above ground accessible. Inspection and monitoring of fasteners and supports could also be required. These activities would require qualified and specially trained staff, pressure-washing equipment, and a cherry picker (or other motorized lift vehicle). NAMA staff has indicated that they currently possess the skills and equipment necessary to complete these tasks. Depending upon the manufacturing method, the tapestries themselves could need repairs, such as welding. NAMA staff includes metal workers,

but staff has indicated that NAMA would consider hiring outside services to perform the work.

The Alternative 3 landscape would be more extensive than in Alternatives 1 and 2, with more green space and more trees. However, these variances between the three alternatives would result in minimal additional maintenance requirements for the Memorial. The central grove of trees would need to be monitored to ensure their health. Additional trees and landscaped vegetation would be planted throughout the site. Watering of new trees during periods of drought, mowing, and other landscape services would be needed.

Because Alternative 3 is similar to Alternatives 1 and 2 in terms of scale of park operations and maintenance, the staffing requirements for the Memorial would be the same as Alternatives 1 and 2. A minimum of one Park Ranger would be stationed at the site during operating hours; up to seven additional people would be needed to adequately maintain the site.

Like Alternatives 1 and 2, Alternative 3 would place additional burdens on NAMA operations and management in the short-term due to the additional staff required for operating the Memorial. This would result in short-term moderate adverse impacts.

Like Alternatives 1 and 2, Alternative 3 would mean that NAMA staffing levels would be adjusted or redistributed to adequately serve the Memorial over time. Therefore, the long-term impacts on park operations and management would be minor and adverse as future maintenance and operational resources increase and budgets are modified.

Cumulative Impact

Impacts on park operations and management from cumulative actions would be similar to those under Alternatives 1 and 2, resulting in short- and long-term minor adverse cumulative impacts. Alternative 3 would place additional duties on NPS staff, management, and operational responsibilities. This would result in short-term moderate adverse impacts during construction and the first year of operation, and long-term minor impacts on park operations and management. Therefore, when combined with the cumulative projects, there would be short-term moderate cumulative impacts and long-term minor adverse cumulative impacts as a result of Alternative 3.

Conclusion

Like Alternatives 1 and 2, Alternative 3 would result in short-term, moderate adverse impacts during construction of the Eisenhower Memorial and long-term, minor adverse impacts on park operations management. Implementation of Alternative 3 would place additional budgetary, maintenance, and staffing responsibilities on NPS and NAMA. Changes in funding and staffing would be required. As the park incorporates new operational needs into their annual budget and park staffing, these burdens would decline over time as they became incorporated into the long-term activities of NAMA and NPS. The cumulative effect of Alternative 3 and other projects would result in short-term moderate adverse impacts and long-term minor adverse impacts.

This page intentionally left blank

4.5 SOILS

Methodology and Assumptions

Potential impacts on soils are determined based on the extent of disturbance to natural/undisturbed soils, the potential for soil erosion, limitations associated with the soils, and the change in productive soils. Analysis of potential impacts is based on on-site inspection of soils within the project area, review of existing literature and maps, and information provided by NPS and other agencies.

Study Area

The study area for soils is the Memorial site boundaries. It is expected that construction activities would not occur outside this area.

Impact Thresholds

The following thresholds were used to determine the magnitude of impacts on soil resources:

- *Negligible.* Soils would not be impacted or the impact would be below or at the lower levels of detection.
- *Minor.* Impacts on soils would be detectable. Impacts on undisturbed areas would be small. Mitigation would be needed to offset adverse impacts and would be relatively simple to implement and would likely be successful.
- *Moderate.* Impacts on soils would be readily apparent and result in a change to the soil character over a relatively wide area. Mitigation measures would be necessary to offset adverse impacts and would likely be successful.
- *Major.* Impacts on soils would be readily apparent and substantially change the character of the soils over a large area both in and around the Memorial site. Mitigation measures to offset adverse impacts would be needed, with no guarantee of success.
- *Duration.* Short-term impacts would occur during construction of the Memorial; long-term impacts extend beyond the implementation of the alternative.

Soils Impacts of No Action Alternative

The No Action Alternative would continue existing uses and management practices, which would not result in further soil disturbance. As part of the No Action Alternative, the soils, which are primarily urban fill, would continue to be primarily covered by impervious surfaces or by grass. Productive soils make up 0.9 acres of the site, including the existing 0.15 acres of soil used by the community garden that would continue to be in production. Any amendments, such as fertilizer or compost, added to soils by gardeners would improve soils and their productivity in the short- and long-term. Therefore, the short- and long-term impacts on soils would be beneficial.

Cumulative Impact

Cumulative construction projects on adjacent properties, such as the Mary E. Switzer Building Renovation and Site Improvements, FOB 8 Renovation and Site Improvements, and National Mall Turf

Rehabilitation, would disturb and remove soils from their respective project areas during construction. Therefore, these projects would result in short-term minor adverse impacts on soils. Both the Switzer Building and FOB improvements include the transformation of parking lots into landscaped plazas, which would have long-term beneficial impacts on soils. The National Mall Turf Rehabilitation would improve soils in order to better match the needs of vegetation, resulting in long-term beneficial impacts on soils.

As described above, the No Action Alternative would result in short- and long-term beneficial impacts on soils. Therefore, the cumulative effect of the No Action Alternative and the other projects in the area would result in short-term minor adverse impacts and long-term beneficial impacts.

Conclusion

The No Action Alternative would not cause any new soil disturbance within the site. The use of 0.15 acres of soil for food production by the community gardens would continue, including the possible addition of soil amendments. The No Action Alternative would result in short-term minor adverse impacts and long-term beneficial impacts on soils. Combined with cumulative projects, the No Action Alternative would result in short-term minor adverse cumulative impacts and long-term beneficial cumulative impacts on soils.

Soils Impacts of Alternative 1

Alternative 1 would impact soils through ground disturbance and removal. Alternative 1 calls for the removal of pavement from roadways, curbs, sidewalks and plazas, as well as vegetated areas. This would occur through the demolition, potential grading, and excavation of the site. Alternative 1 would remove 0.9 acres of soil out of production, replacing it with 0.84 acres of productive soil, for a net loss of 0.06 acres. The new productive soil would then be revegetated with landscaped plant materials. This disturbance of soils and loss of productive soils would lead to short- and long-term minor adverse impacts on soils as a result of Alternative 1.

The existing soils on-site that are primarily urban fill possibly contain petroleum hydrocarbons from previous land uses (AECOM, 2010b). Approximately 15 to 25 feet of fill material was likely placed over the original ground surface decades ago (EarthTech, 2005). Therefore, excavated soils may not be an appropriate source of material for re-use as fill on the site and new fill material would be used. Environmental soil sampling and laboratory testing would determine whether soils to be excavated are contaminated and at what levels, in order to address site worker safety and soil reuse and/or disposal requirements.

Mitigation

The following construction-related measures would be taken to mitigate impacts on soils:

- Prior to construction, an erosion and sedimentation control plan that establishes measures to prevent erosion of cleared

areas and the transport of soil and sediment would be prepared.

- During construction, soils exposed by clearing, grading, excavation, or construction would be stabilized. Soils would be stockpiled using appropriate best management practices.
- Soils excavated would be subject to sampling and testing, should indicators of petroleum-impacted soils present themselves during excavation and construction.
- If determined to contain petroleum hydrocarbons, the soils would be removed and disposed of in accordance with a DDOE-approved safety and remediation plan.
- Appropriate regulatory notification would occur.
- Impacted soils would be segregated through field screening.
- Waste characterization samples would be collected.
- Soils would be disposed of at an appropriate waste disposal facility.
- Removal activities would be documented.

Cumulative Impact

For Alternative 1, cumulative project impacts would be the same as for the No Action Alternative. As described above, Alternative 1 would result in short- and long-term minor adverse impacts to soils. Therefore, the cumulative effect of Alternative 1 and the other

projects in the area would result in short- and long-term minor adverse impacts on soils.

Conclusion

Under Alternative 1, existing soils would be disturbed and a small amount would be removed from production. There would be a net loss of 0.06 acres of open space. The disturbance of existing soils would be limited to the construction phase. Mitigation measures, described above, would be employed if contaminated soils were found. Therefore, both the short-term and long-term impacts to soils would be adverse and minor. Alternative 1 would result in short- and long-term minor adverse cumulative impacts to soils.

Soils Impacts of Alternative 2

Like Alternative 1, Alternative 2 would impact soils through ground disturbance and removal. Alternative 2 calls for the same removal of pavement from roadways, curbs, sidewalks and plazas, and vegetated areas as Alternative 1. This would occur during the demolition, potential grading, and excavation of the site. The disturbance of soils would lead to short-term, minor adverse impacts on soils.

Additionally, Alternative 2 would remove 0.9 acres of soil replacing it with 1.51 acres of soil, for a net gain of 0.61 acres. The new productive soil would then be revegetated with landscaped plant materials. The increase of productive soils would lead to long-term beneficial impacts to soils.

As described in Alternative 1, the existing soils on-site are primarily urban fill, possibly containing petroleum hydrocarbons from previous uses and may therefore not be an appropriate source of material for re-use as fill. Environmental soil sampling and laboratory testing would determine whether soils to be excavated are contaminated and at what levels, in order to address site worker safety and soil reuse and/or disposal requirements.

Mitigation

The same soil disturbances would take place under Alternatives 1 and 2 and the soils found on-site would not change between alternatives. Therefore, the mitigation measures for Alternative 2 would be the same as those described in Alternative 1.

Cumulative Impact

Cumulative project impacts on soils would be the same as for the No Action Alternative and Alternative 1. As described above, Alternative 2 would result in short-term minor adverse impacts and long-term beneficial impacts on soils. Therefore, the cumulative effect of Alternative 2 and the other projects in the area would result in short-term minor adverse cumulative impacts and long-term beneficial cumulative impacts on soils.

Conclusion

Alternative 2 would result in short-term minor adverse impacts and long-term beneficial impacts on soils. Alternative 2 would disturb existing soils and would increase the amount of productive soils. Mitigation measures would be employed if contaminated soils were found. The disturbance of existing soils would be limited to the construction phase. When combined with cumulative projects, Alternative 2 would result in short-term minor adverse cumulative impacts and long-term beneficial impacts on soils.

Soils Impacts of Alternative 3

Like Alternatives 1 and 2, Alternative 3 would impact soils through ground disturbance and removal. Alternative 3 calls for the same removal of pavement from roadways, curbs, sidewalks and plazas, and vegetated areas as Alternatives 1 and 2. This would occur during the demolition, potential grading, and excavation of the site. Soil disturbance would lead to short-term minor adverse impacts on soils.

Alternative 3 would remove 0.9 acres of soil, replacing it with 1.68 acres of soil, for a net gain of 0.78 acres. The new productive soils would then be revegetated with landscaped plant materials. The increase of productive soils would lead to long-term, beneficial impacts on soils.

The existing soils on-site are primarily urban fill and possibly contain petroleum hydrocarbons from previous uses. Approximately 15 to 25 feet of fill material was likely placed over the original ground surface decades ago. Therefore, excavated soils may not be an appropriate source of fill for re-use at the site and new fill material would be used. Alternative 3 would use the same environmental soil sampling and laboratory testing as Alternatives 1 and 2. These tests would determine whether soils to be excavated are contaminated and at what levels in order to address site worker safety and soil reuse and/or disposal requirements.

Mitigation

The same soil disturbances would take place under Alternatives 1, 2, and 3. Therefore, the mitigation measures for Alternative 3 would be the same as those described in Alternatives 1 and 2.

Cumulative Impact

Cumulative project impacts on soils would be the same as for the other alternatives described above. As described above, Alternative 3 would result in short-term minor adverse impacts and long-term beneficial impacts on soils. Therefore, the cumulative effect of Alternative 3 and the other projects in the area would result in short-term minor adverse cumulative impacts and long-term beneficial cumulative impacts on soils.

Conclusion

Like Alternatives 1 and 2, Alternative 3 would cause short-term minor adverse and long-term beneficial impacts on soils. Alternative 3 would disturb existing soils and would increase the amount of productive soils. Mitigation measures would be employed if contaminated soils were found. The disturbance of existing soils would be limited to the construction phase. When combined with cumulative projects, Alternative 2 would result in short-term minor adverse cumulative impacts and long-term beneficial impacts on soils.

This page is intentionally left blank

4.6 TRANSPORTATION

4.6.1 Vehicular Traffic

The primary purpose of this analysis is to determine the potential impacts on traffic as a result of the alternatives considered. This section examines the configuration and geometry of the roadways that would occur due to road closures or realignments, as well as the impact on traffic conditions. Sources of information for this environmental consequences description include communication with project engineers, analysis of traffic in the study area based on the DDOT's Average Daily Traffic reports, and a traffic analysis.

Methodology and Assumptions

The analysis for the impact on roadways and intersections was performed in compliance with traffic operations/geometrics, DDOT standards, and safety standards. Where applicable, design modifications are presented to improve site and network conditions. Delays at intersections are measured in terms of LOS.

The 2015 Future Without Project traffic volumes forecast out from the existing conditions, which are described in Section 3.4.1. To determine Future With Project traffic volumes, traffic anticipated to be generated by the Memorial was added to Year 2015 Future Without Project traffic volumes. Those volumes were then redistributed based on either closing Maryland Avenue to traffic between 6th Street and Independence Avenue, or keeping Maryland Avenue open to traffic. Traffic signal timing for existing conditions was not modified in the analysis for Future with Project and Future without Project conditions to allow for a direct comparison.

The traffic analysis makes several assumptions for future traffic volumes in 2015, the year in which the Memorial would be fully operational. To produce Year 2015 Future without Project traffic volumes, a 1.6% annual growth rate estimate was applied to existing Year 2010 traffic volumes. Trip generation data for the Eisenhower Memorial was established in the 2006 Transportation Impact Study (EarthTech, 2006), which was then used as the basis for trip generation in the 2010 analysis. The assumptions include the following:

- Daily visitor trips are assumed to be 1% of annual visitation.
- Hourly visitor trips are 10% of daily trips.
- Visitor trips by automobile make up 16% of all visitor trips.
- Average visitor automobile occupancy rate is three.
- Employee modal split is assumed to be 50/50 between private automobile and transit.
- Employees using automobiles would drive alone.
- Most employees would enter during the morning peak hour and leave during the evening peak hour.
- Employee mid-day trips are minimal.

Study Area

The study area, discussed in more detail in Chapter 3: Affected Environment, includes the following roadways:

- Independence Avenue;
- Maryland Avenue;
- 4th Street;
- 6th Street;
- 7th Street; and
- Regional roadway access.

Intersections for the study area include those directly adjacent to the site (previously described):

- Independence Avenue at 4th Street (signalized);
- Independence Avenue at Maryland Avenue(west) (yield sign);
- 6th Street at Independence Avenue (signalized);
- 6th Street at Maryland Avenue (signalized);
- 7th Street at Independence Avenue (signalized); and
- 7th Street at Maryland Avenue (signalized).

Additional intersections around the site, but in the study area include:

- 3rd Street at Independence Avenue (signalized);

- Independence Avenue at Maryland Avenue (east, at NMAI) (yield sign); and
- 4th Street at Jefferson Drive (signalized).

Impact Thresholds

Generally, LOS C and above are considered satisfactory. In urbanized areas, such as Washington, DC, LOS D is considered satisfactory. The following thresholds were used to determine the magnitude of impacts on transportation:

- *Negligible*: The impact would be a change that would not be perceptible or would be barely perceptible by transportation system users.
- *Minor*: The impact would have a change to travel times or transportation system utility. The impact would be noticeable but would result in little inconvenience to transportation system users.
- *Moderate*: The impact would result in a change to the travel time or system utility of a large number of transportation system users and would result in a noticeable change in travel time or convenience. A moderate increase in delay may be anticipated, but it is not expected to cause failure of nearby facilities that cannot be mitigated through proactive management. *Major*: There would be a substantial impact on the travel time or system utility of a large number of transportation system users, and this would result in a highly noticeable change in travel times or convenience, leading to failure or near-failure of nearby facilities, with little or no potential for mitigation.

“Failure” as used in these thresholds and in the transportation analysis is defined as traffic delays with long average wait times at signals, with travelers during the peak hour frequently having to wait through one or more cycles to clear the intersection. Please see the description of Levels of Service, see Table 3-3.

- *Duration.* Short-term impacts occur during construction of the alternative; long-term impacts would be those persisting or resulting after construction of the alternative.

Traffic Impacts of No Action Alternative

Under the No Action Alternative, the roadway configuration at the site would remain. The Maryland Avenue segment between 6th Street and Independence Avenue and associated spur road would not be changed. The roadways would continue to provide vehicular access via the intersections at 4th and 6th Streets and Independence Avenue. The site would continue to provide on-street parking opportunities for GSA and visitors of the LBJ Building.

In order to establish traffic conditions under the No Action Alternative, the same intersections identified in Section 3.4.1 were analyzed for year 2015, the year in which the Eisenhower Memorial would begin operation. The models used in this analysis assumed an average increase in vehicular traffic in the area of 1.6 percent. Analysis for the No Action Alternative (Future Without Project) condition indicates LOS results similar to existing conditions, with slightly more delay, consistent with normal traffic growth (AECOM, 2010d). Results indicate that in 2015 without the project, nearly all intersections in the study area would operate at an overall LOS C or better; one intersection would operate at LOS D during each peak

hour period (the intersection varies based on the hour). The LOS results for 2015 are summarized in Table 4-2.

LOS models are not typically conducted for the years between the existing and Future Without Project conditions. The traffic conditions in the intervening years between 2010 and 2015 would be expected to increase at a linear rate, falling between the 2010 and 2015 conditions. In 2011, the conditions would be closer to 2010 conditions; in 2014, the conditions would be closer to those in 2015.

The No Action Alternative would result in four intersections functioning at LOS D, which would not result in failure at these intersections. The additional delay at these intersections would be a few seconds and would not impede the ability to go through a signal during one cycle. Therefore, the No Action Alternative would result in minor adverse impacts on traffic.

Table 4-2: Level of Service for Future Without Project (Year 2015)

Location	AM Peak		Mid-Day Peak		PM Peak		Saturday Peak	
	Delay/Sec	LOS	Delay/Sec	LOS	Delay/Sec	LOS	Delay/Sec	LOS
4 th Street at Independence Avenue	13	B	13	B	18	B	19	B
Independence Avenue at Maryland Avenue (west)	15	C	15	B	15	C	14	B
6 th Street at Independence Avenue	17	B	8	A	14	B	8	A
6 th Street at Maryland Avenue	15	B	16	B	18	B	11	B
7 th Street at Independence Avenue	20	B	17	B	23	C	17	B
7 th Street at Maryland Avenue and C Street	11	B	9	A	9	A	8	A
3 rd Street at Independence Avenue	25	C*	22	C	48	D	29	C
Independence Avenue at Maryland Avenue (east at NMAI)	32	D	26	D	14	B	25	D
4 th Street at Jefferson Drive	9	A	16	B	10	B	15	B
4 th Street at C Street	16	B	13	B	14	B	13	B
6 th Street at C Street and Garage Entrance	15	B	14	B	15	B	15	B

Source: AECOM, 2010

* LOS levels in red and bold represent a decline in LOS; those in green and bold represent an improvement in LOS.

Cumulative Impacts

Other projects in the site vicinity, such as the American Veterans Disabled for Life Memorial and improvements to federal buildings, would potentially cause cumulative impacts on roads and intersections. As planned, the American Veterans Disabled for Life Memorial would result in a realignment of C Street and the elimination of an on-ramp to I-295. The on-ramp to I-295 is minimally used. C Street would become a continuous linear roadway crossing 2nd and 1st Streets and Washington Avenue. Renovations of FOB 8 and the Mary E. Switzer Building would include bulb-outs, which are curb extensions that narrow the roadway to slow traffic while providing additional pedestrian refuge, and other traffic-calming measures.

These cumulative projects would result in short-term minor- to-moderate adverse impacts on traffic in the vicinity of the site as a result of road closures, lane blockages, and changes to the roadway during construction.

Once completed, these cumulative projects would have long-term beneficial impacts on vehicular traffic in the vicinity of the project site due to improved accessibility and safety.

As described above, the No Action Alternative would result in long-term minor adverse impacts on vehicular traffic. When combined with the cumulative projects, the No Action Alternative would result in long-term beneficial cumulative impacts on vehicular traffic. Construction activity resulting from the combined actions would result in short-term minor adverse cumulative impacts on vehicular traffic.

Conclusion

Under the No Action Alternative, no changes to roadway or intersection configurations would occur. Traffic levels would increase, resulting in a minimal decline in LOS at three intersection peak periods and an improvement at one intersection peak period. Therefore, minor adverse impacts on roadways and intersections would occur as a result of the No Action Alternative. In addition, short-term cumulative impacts would be minor and adverse and long-term cumulative impacts would be beneficial.

Traffic Impacts of Alternative 1

Alternative 1 would alter existing roadway patterns by restoring Maryland Avenue to its original L'Enfant alignment, changing the location of the intersection of Maryland Avenue with Independence Avenue, and removing the spur road and the intersection of Maryland Avenue with 4th Street. Instead, the alignment of Maryland Avenue east of 6th Street would extend diagonally across the Memorial, intersecting with Independence Avenue near the northeast corner of the site, creating a fifth-leg condition with 4th Street.

The overall LOS results would decline with implementation of this alternative when compared to expected future conditions without the project, as shown in Table 4-3. Similar to the No Action Alternative, results of the analysis indicate that most intersections in the study area would operate at an overall LOS C or better. Two intersections would operate at LOS D during the morning peak hour, one intersection would operate at LOS D during the mid-day peak hour, one intersection would operate at LOS D in the evening peak hour, and one intersection would operate at LOS D during the Saturday peak hour (AECOM, 2010d). Additionally, the fifth leg intersection of Independence Avenue and 4th Street with Maryland Avenue would result in an LOS E during peak evening and peak Saturday hours. Overall, this represents a decline at six intersection peak hour periods and an improvement at one intersection peak hour period.

The proposed realignment of Maryland Avenue's intersection at Independence Avenue would affect the existing LOS. This intersection would otherwise be expected to function at LOS B or C, but the realignment of Maryland Avenue would drop the service to

LOS C, D, or E, depending upon the time and day. At LOS E, vehicles would not be able to pass through the intersection in one traffic light cycle. Two, or even three, traffic light cycles would be needed, resulting in delays of approximately 86 seconds. Traffic performance would change due to lost time for clearance and the additional phase to accommodate the Maryland Avenue approach. There would also be additional waiting time for pedestrians to cross the intersection due to the additional signal phase and longer clearance times. A relocated stop bar for eastbound traffic on Independence Avenue would improve safety, enabling vehicles from Maryland Avenue to safely merge onto or cross Independence Avenue, and the curb bulb-outs would enhance pedestrian safety. As a result of the decline in LOS at the intersection of Maryland and Independence Avenues and 4th Street, Alternative 1 would result in moderate adverse impacts on traffic.

Although some visitors would arrive to the site via a chartered bus, the Memorial would not likely become a tour bus destination. Visitors would likely come to the site via public transportation, walking, individual vehicle, or vehicular tour providers, similar to existing conditions. It is not anticipated that the Memorial would be a required stop for tour buses. However, tour buses may bring visitors to the site on key days for commemoration, such as anniversaries of historic events. Therefore, there would be a negligible impact on traffic due to tour buses.

During the construction of the Memorial, the movement of construction materials, equipment, and workers to the Memorial would likely constrict rights-of-way in the immediate area. Specific travel lanes would include northbound 6th Street traffic, southbound 4th Street traffic, and eastbound Independence Avenue. The reconfiguration and reconstruction of Maryland Avenue would lead

Table 4-3: Level of Service for Future Without Project (Year 2015) (directly below) and Alternative 1 Future With Project Conditions (Year 2015)

Location	AM Peak		Mid-Day Peak		PM Peak		Saturday Peak	
	Delay/Sec	LOS	Delay/Sec	LOS	Delay/Sec	LOS	Delay/Sec	LOS
4 th Street at Independence Avenue	13	B	13	B	18	B	19	B
Independence Avenue at Maryland Avenue (west)	15	C	15	B	15	C	14	B
6 th Street at Independence Avenue	17	B	8	A	14	B	8	A
6 th Street at Maryland Avenue	15	B	16	B	18	B	11	B
7 th Street at Independence Avenue	20	B	17	B	23	C	17	B
7 th Street at Maryland Avenue and C Street	11	B	9	A	9	A	8	A
3 rd Street at Independence Avenue	25	C	22	C	48	D	29	C
Independence Avenue at Maryland Avenue (east at NMAI)	32	D	26	D	14	B	25	D
4 th Street at Jefferson Drive	9	A	16	B	10	B	15	B
4 th Street at C Street	16	B	13	B	14	B	13	B
6 th Street at C Street and Garage Entrance	15	B	14	B	15	B	15	B

Location	AM Peak		Mid-Day Peak		PM Peak		Saturday Peak	
	Delay/Sec	LOS	Delay/Sec	LOS	Delay/Sec	LOS	Delay/Sec	LOS
4 th Street at Independence Avenue and Maryland Avenue	40	D*	26	C	73	E	71	E
6 th Street at Independence Avenue	21	C	8	A	15	B	8	A
6 th Street at Maryland Avenue	11	B	16	B	18	B	11	B
7 th Street at Independence Avenue	22	C	17	B	30	C	17	B
7 th Street at Maryland Avenue and C Street	8	A	9	A	7	A	8	A
3 rd Street at Independence Avenue	25	C	22	C	48	D	27	C
Independence Avenue at Maryland Avenue (east, at NMAI)	32	D	26	D	13	B	34	D
4 th Street at Jefferson Drive	9	A	16	B	10	B	15	B
4 th Street at C Street	16	B	13	B	14	B	13	B
6 th Street at C Street and Garage Entrance	15	B	14	B	14	B	15	B

Source: AECOM, 2010

* LOS levels in red and bold represent a decline in LOS; those in green and bold represent an improvement in LOS.

to temporary road closures and rerouting of vehicles around the site, resulting in short-term minor adverse impacts on traffic and potential confusion by motorists.

Mitigation

The following mitigation measures are proposed to enable Maryland Avenue to function as a fifth leg at Independence Avenue and 4th Street. The stop bar for eastbound Independence Avenue would be moved approximately 100 feet to the west, resulting in a loss of vehicle storage space and longer signalization clearance time for traffic passing through the intersection in the eastbound direction. The relocated stop bar would improve safety, enabling vehicles from Maryland Avenue to safely merge onto or cross Independence Avenue.

The intersection design would be altered, making Maryland Avenue one-way in a west-to-east direction, to enhance safety and traffic operations. Making the street one-way may improve the LOS at the intersection of 6th Street and Maryland Avenue as a result of the one-way operation that would eliminate the Maryland Avenue westbound traffic demand approaching the intersection (AECOM 2010d). A curb bulb-out would be provided at each end of this segment of Maryland Avenue to create a single lane entrance and exit condition. The crossing width would be shorter for pedestrians crossing Maryland Avenue, enhancing pedestrian safety.

The LOS at the intersection of 6th Street and Maryland Avenue could improve as a result of the one-way operation, eliminating the westbound traffic demand approaching the intersection. The conflicting vehicular movement between the through traffic and left

turn movement would be eliminated at 4th Street and Independence Avenue when intersecting with Maryland Avenue.

Signage would be placed at key locations and intersections to alert and safely re-direct vehicles during construction.

Cumulative Impacts

For Alternative 1, cumulative project impacts would be the same as for the No Action Alternative. As described above, Alternative 1 would result in short-term minor adverse impacts and long-term moderate adverse impacts on vehicular traffic. Cumulatively, Alternative 1 would result in short-term minor adverse cumulative effects and long-term moderate adverse effects on vehicular traffic.

Conclusion

Under Alternative 1, the intersection of Maryland Avenue with Independence Avenue would be realigned at the northwest corner of the site. The LOS of the intersection would decline at six intersection peak hour periods and improve at one intersection peak hour period.

Crossing times for pedestrians would increase. Three intersections would function at LOS D; one intersection would function at LOS E at evening and Saturday peak hours, resulting in moderate adverse impacts on traffic with mitigation including traffic calming and changes to the stop bar for Independence Avenue traffic to improve the safety of the intersection and that could improve the LOS at the nearby Maryland Avenue and 6th Street intersection. Negligible long-term impacts would occur due to tour bus traffic. Overall, construction-related impacts would be short-term and minor, due to road closures and re-routing of traffic due to construction.

Therefore, short-term minor and long-term major adverse impacts on vehicular traffic would occur as a result of the Alternative 1. Alternative 1 would result in short-term minor adverse and long-term moderate adverse cumulative impacts on adjacent streets.

Traffic Impacts of Alternative 2

Alternative 2 would alter the existing roadway pattern by closing Maryland Avenue to vehicular traffic between 4th and 6th Streets. The spur road and the mid-block intersection between 4th and 6th Streets would be removed as part of Alternative 2. Instead, eastbound traffic from Maryland Avenue would turn right or left on 6th Street.

As shown in Table 4-4 below, results of the analysis for Alternative 2 indicate that most intersections in the study area would operate at an overall LOS C or better, with Independence Avenue at Maryland Avenue (east, NMAI) operating at LOS D during each of the peak hours except the evening peak hour. During the evening peak hour, 3rd Street at Independence Avenue would operate at LOS D. In comparison to future conditions without the project, two intersections would drop from LOS B to LOS C and one intersection would improve from LOS B to LOS A (7th Street at Maryland Avenue and C Street, morning peak) (AECOM, 2010d). In each case, the amount of additional time required at each intersection would be a matter of a few seconds and would allow vehicles to move through the intersection in one light cycle.

As result of the change in the roadway configuration, motorists heading east on Maryland Avenue at 6th Street would be required to turn left, then turn right at Independence Avenue, in order reach the location where Maryland Avenue and Independence Avenue currently meet mid-block. Extrapolating from the LOS data, it is estimated that these new turns would add a few seconds to a trip.

Overall, the long-term impacts on traffic as a result of Alternative 2 would be adverse and minor.

Because there would be no intersection of Maryland and Independence Avenues at the site, the changes to the road network at Independence Avenue and 4th Street described in Alternative 1 would not be necessary.

The closure of Maryland Avenue through the site would produce continuous sidewalks along Independence Avenue between 6th and 4th Streets, and along 6th Street between Independence Avenue and C Street, thereby enhancing pedestrian access to the Eisenhower Memorial and the LBJ Building. In addition, the LOS experienced by the motoring public would generally remain constant. The need for roadway modifications to Independence Avenue, as well as maintaining the awkward intersection, would be eliminated by the closure of Maryland Avenue (AECOM, 2010d).

As in Alternative 1, some visitors would arrive to the site via a chartered bus, but the Memorial would not likely become a tour bus destination under Alternative 2. Visitors would likely use another form of transportation. However, tour buses may bring visitors to the site on key days for commemoration, such as anniversaries of historic events. Therefore, there would be a negligible impact on traffic due to tour buses.

The movement of construction materials, equipment, and workers to the Memorial would likely constrict rights-of-way in the immediate area. Specific travel lanes would include northbound 6th Street traffic, southbound 4th Street traffic, and eastbound Independence Avenue. This construction activity would result in short-term minor adverse impacts on vehicular traffic and potential confusion by motorists when encountering the new configuration.

Mitigation

Changes to the street network could potentially confuse motorists who were accustomed to the previous road configuration. Therefore, these changes would require temporary signage placed at key locations and intersections to alert and safely re-direct vehicles during construction. Motorists would become accustomed to the new traffic pattern in advance of the Memorial's completion because the site would be closed off by construction barriers and fencing during construction.

Cumulative Impacts

For Alternative 2, cumulative projects and their respective impacts, independent of Alternative 2, would be the same as for the No Action Alternative and Alternative 1. As described above, Alternative 2 would result in short- and long-term minor adverse impacts on vehicular traffic. Cumulatively, Alternative 2 would result in short-term minor adverse cumulative effects and long-term minor adverse cumulative effects on vehicular traffic at areas adjacent to the site.

Table 4-4: Existing Level of Service Conditions (directly below) and LOS for Alternative 2 Future With Project Conditions (Year 2015)

Location	AM Peak		Mid-Day Peak		PM Peak		Saturday Peak	
	Delay/Sec	LOS	Delay/Sec	LOS	Delay/Sec	LOS	Delay/Sec	LOS
4 th Street at Independence Avenue	13	B	13	B	18	B	19	B
Independence Avenue at Maryland Avenue (west)	15	C	15	B	15	C	14	B
6 th Street at Independence Avenue	17	B	8	A	14	B	8	A
6 th Street at Maryland Avenue	15	B	16	B	18	B	11	B
7 th Street at Independence Avenue	20	B	17	B	23	C	17	B
7 th Street at Maryland Avenue and C Street	11	B	9	A	9	A	8	A
3 rd Street at Independence Avenue	25	C	22	C	48	D	29	C
Independence Avenue at Maryland Avenue (east at NMAI)	32	D	26	D	14	B	25	D
4 th Street at Jefferson Drive	9	A	16	B	10	B	15	B
4 th Street at C Street	16	B	13	B	14	B	13	B
6 th Street at C Street and Garage Entrance	15	B	14	B	15	B	15	B

Location	AM Peak		Mid-Day Peak		PM Peak		Saturday Peak	
	Delay/Sec	LOS	Delay/Sec	LOS	Delay/Sec	LOS	Delay/Sec	LOS
4 th Street at Independence Avenue	14	B	12	B	18	B	16	B
Independence Avenue at Maryland Avenue (west)	N/a	N/a	N/a	N/a	N/a	N/a	N/a	N/a
6 th Street at Independence Avenue	21	C*	8	A	15	B	8	A
6 th Street at Maryland Avenue	11	B	16	B	18	B	11	B
7 th Street at Independence Avenue	22	C	17	B	30	C	17	B
7 th Street at Maryland Avenue and C Street	8	A	9	A	7	A	8	A
3 rd Street at Independence Avenue	25	C	22	C	48	D	27	C
Independence Avenue at Maryland Avenue (east, at NMAI)	32	D	26	D	13	B	34	D
4 th Street at Jefferson Drive	9	A	16	B	10	B	15	B
4 th Street at C Street	16	B	13	B	14	B	13	B
6 th Street at C Street and Garage Entrance	15	B	14	B	14	B	15	B

Source: AECOM, 2010

* LOS levels in red and bold represent a decline in LOS; those in green and bold represent an improvement in LOS.

Conclusion

Under Alternative 2, Maryland Avenue would be closed to vehicular traffic within the Memorial site. The intersections of Maryland Avenue at the site would be removed, resulting in a minor change in traffic. Tour buses would result in negligible long-term impacts on traffic. Short-term, minor impacts would occur as a result of construction requiring re-routing of traffic and possible lane closures. Therefore, long- and short-term minor adverse impacts on traffic would occur as a result of Alternative 2. The cumulative impacts would be short- and long-term minor adverse impact on traffic on adjacent streets.

Traffic Impacts of Alternative 3

From a traffic-engineering standpoint, Alternatives 2 and 3 are identical. Like Alternative 2, Alternative 3 would alter the existing roadway pattern by closing Maryland Avenue to vehicular traffic between 4th and 6th Streets. The mid-block intersection between 4th and 6th Streets, and the spur road, would be removed as part of Alternative 2. Instead, eastbound traffic from Maryland Avenue would turn right or left on 6th Street. The changes in LOS at intersections are the same as Alternative 2: in comparison to future conditions without the project, two intersections would drop from LOS B to LOS C and one intersection would improve from LOS B to LOS A (AECOM, 2010d). Also as result of the change in the roadway configuration in Alternatives 2 and 3, the travel time for motorists heading east on Maryland Avenue at 6th Street would add a few seconds to a trip.

As a result of the travel time and intersection LOS changes, Alternative 3 would result in long-term minor adverse impacts on vehicular traffic.

Because there would be no intersection of Maryland and Independence Avenues at the site, the changes to the road network at Independence Avenue and 4th Street described in Alternative 1 would not be necessary.

Although some visitors would arrive to the site via a chartered bus, the Memorial would not likely become a tour bus destination. Visitors would likely come to the site via public transportation, walking, individual vehicle, or vehicular tour providers, similar to existing conditions. It is not anticipated that the Memorial would be a required stop for tour uses. However, tour buses may bring

visitors to the site on key days for commemoration, such as anniversaries of historic events. Therefore, there would be a negligible impact on traffic due to tour buses.

Under Alternative 3, the movement of construction materials, equipment, and workers to the Memorial would likely constrict rights-of-way in the immediate area. It is also possible that at the time of their installation, motorists would slow down as they pass the site to view the tapestries. This would be a temporary condition, as motorists become inured to the Memorial over time, similar to other noted structures in Washington. As a result, Alternative 3 would result in short-term minor adverse impacts on vehicular traffic and potential confusion by motorists when encountering the new configuration.

Mitigation

Mitigation for Alternative 3 would be the same as for Alternative 2. Changes to the street network could potentially confuse motorists who were accustomed to the previous road configuration. Therefore, these changes would require temporary signage placed at key locations and intersections to alert and safely re-direct vehicles during construction. Motorists would become accustomed to the new traffic pattern in advance of the Memorial's completion because the site would be closed off by construction barriers and fencing during construction.

Cumulative Impacts

For Alternative 3, cumulative projects and their respective impacts, independent of Alternative 2, would be the same as for the No Action Alternative and Alternatives 1 and 2. As described above,

Alternative 3 would result in short- and long-term minor adverse impacts on vehicular traffic. In combination with the short-term minor adverse impacts as a result of cumulative construction projects and the long-term beneficial impacts of their completion, Alternative 3 would result in short- and long-term minor adverse cumulative impacts at adjacent streets.

Conclusion

Under Alternative 3, Maryland Avenue would be closed to vehicular traffic within the Memorial. The awkward intersections of Maryland Avenue at the site would be removed. Tour buses visits to the site would be limited. Overall, construction-related impacts would be short-term and minor, resulting from construction-related land closures and the re-routing of traffic. Therefore, Alternative 3 would result in short- and long-term minor adverse impacts on traffic. Cumulative impacts would be short- and long-term minor and adverse.

4.6.2 Parking

Methodology and Assumptions

The primary purpose of this environmental consequences analysis is to determine the potential impacts on parking as a result of the alternatives considered. The parking analysis examined the existing number of spaces available against the number of parking spaces available upon implementation of the alternatives. Additionally, the analysis considered the demand for parking spaces generated by visitors to the Memorial.

Trip generation data for the Eisenhower Memorial was established in the 2006 Transportation Impact Study (EarthTech, 2006), which was then used as the basis for trip generation in the 2010 analysis. The assumptions identified in the 2006 Transportation Impact Study, which was then carried through in the 2010 analysis. These are described below.

Because no Memorial of this scale is located off the Mall, there is no precedent for parking generation for the Memorial. Instead, estimates for the number of visits each year to the Memorial is based on the visits to the nearby NASM and NMAI. EMC assumes that the people entering those Museums from the south entrances, estimated to be approximately 30 percent of museum visitors, would be the most likely to visit the Memorial (Benton, 2011). Additionally, not all people who are visiting these museums would be interested in visiting the Memorial. Based on cultural institution visitor patterns (Doering and Perkarik, 1997), it is estimated that approximately thirty percent of visitors would be interested in seeing the NASM or NMAI, as well as the

Memorial. Using these parameters, EMC estimates that approximately 600,000 people would visit the Memorial.

Visitation to the Memorial would be expected to vary depending on the date and time. The parking analysis is designed to analyze the highest number of people that would be expected at the Memorial at one time, thus estimating the maximum number of parking spaces that would be needed by visitors at the site. The peak day would be the single day of the year in which the most people visited the Memorial, which was estimated to be one percent of annual visitors. The peak hour would be the hour in that day in which the most people visited the Memorial, which was estimated to be ten percent of peak day visitors.

The analysis also makes assumptions about vehicle usage. It is estimated that approximately 16 percent of people visiting the Memorial will drive a vehicle. Of these, it is assumed that three people would be in each vehicle (NPS, 2003). Once they have arrived, it is assumed that visitors will share parking among two or three attractions within walking distance. Therefore, the shared parking assumption is 2.5 places. A table illustrating these calculations is shown on the next page.

In addition to the 13 parking spaces needed by visitors to the site, NPS staff has indicated that three parking spaces would be needed to operate the Memorial.

Table 4-5: Parking Assumption Calculations

Calculation	Multiplier/Divisor	Total
Combined NASM and NMAI Annual Visits:	4.9 million and 1.7 million	6.6 million visitors
Percent entering Museums from the southern entrances:	30 percent	2 million visits (rounded)
Percent of those entering the Museums from the southern entrances anticipated to visit the Memorial:	30 percent	600,000 visits
Percent of Annual Visitors comprising the Peak Daily Visitors:	1 percent	6,000 visitors
Percent of Peak Daily Visitors Comprising the Peak Hourly Visitors:	10 percent	600 visitors
Percent of visitors traveling via automobile:	16	96 persons
Number of people per vehicle:	3	32 cars
Number of attractions people would visit, thereby sharing parking among the attractions:	2.5	13 parking spaces (rounded)

The parking analysis uses the Parking Principles publication (National Highway Research Board, 1971) to determine acceptable walking distances from parking to final trip destinations: 390 feet for curb parking and 700 feet for garage parking. When applied to the Eisenhower Memorial, the parking meeting, this criteria limits parking to those spaces located within one block of the memorial site.

Study Area

The study area includes parking available within one block of the project site in each direction. The boundaries of the parking study area are Jefferson Drive to the north, 7th Street to the west, C Street to the south, and 3rd Street to the east.

Impact Thresholds

The following thresholds were used to determine the magnitude of impacts on parking:

- *Negligible.* Parking availability would not be impacted or the impact would be below or at the lower levels of detection.
- *Minor.* Impacts on parking availability would be detectable, although motorists would be able to find parking within one block of the site. Mitigation would be needed to offset adverse impacts. It would be relatively simple to implement and would likely be successful.
- *Moderate.* Impacts on parking availability would be readily apparent and visitors would have difficulty finding available parking near the site. Mitigation measures would be

necessary to offset adverse impacts and would likely be successful.

- *Major.* Impacts on parking availability would be readily apparent and substantially change the character of parking in the vicinity, with visitors having great difficulty finding available parking. Mitigation measures necessary to offset adverse impacts would be needed and extensive, with no guarantee of success.
- *Duration.* Short-term impacts occur during the construction of the alternative; long-term impacts extend beyond the construction of the alternative.

Parking Impacts of No Action Alternative

Under the No Action Alternative, improvements would not be undertaken at the project site. The 67 existing on-site parking would remain along Maryland Avenue and along 4th Street to the east of the site. These would continue to be used by federal employees that continuously pay meter fees, visitors to the LBJ Building and surrounding office buildings, tourists visiting nearby attractions, and others. In addition to on-site parking, 104 on-street metered parking spaces in the vicinity of the site would remain. No on-street parking spaces outside the Memorial site would be removed. The 634 parking garage would also remain. The existing weekday availability of parking spaces off-site would continue to be between 37 and 38 percent, as shown described in Section 3.4.2. As a result of the No Action Alternative, there would be no impact on parking.

Cumulative Impacts

Because there would be no impacts as a result of the No Action Alternative, there would be no cumulative impacts.

Conclusion

As a result of the No Action Alternative, no changes to parking would take place and there would be no cumulative impacts. The No Action Alternative would result in no impacts on parking.

Parking Impacts of Alternative 1

Under Alternative 1, Maryland Avenue would be reconfigured to its original L'Enfant alignment, resulting in the loss of 67 existing parking spaces. As such, the installation of a two-lane Maryland Avenue would remove the available parking along the current roadway and spur. The reconfigured parking would remove on-site parking spaces used by employees in and visitors to nearby buildings, museum visitors, and others. Alternative 1 would add bus parking for tour buses on 4th Street, directly adjacent to the site.

Based on expected visitation and vehicular use patterns described in this section's Methodology and Assumptions and calculations show in Table 4-5, , the Eisenhower Memorial would be expected to generate demand for 13 spaces from visitors who drive to the site. NPS personnel driving to the site would generate demand for three additional spaces (AECOM, 2010d). Two designated parking spaces for NPS personnel would be placed onsite. As a result of the Memorial, 13 parking spaces for visitors and one parking space for NPS personnel would be needed, for a total of 14 spaces.

The on-street curb parking supply reduction and increased demand as a result of the Memorial would be marginal. Combining the 67 spaces removed and the demand for 14 parking spaces generated as a result of Alternative 1, a total of 81 parking spaces would be needed to offset these changes, which could be absorbed by the existing 906 on-street and garage parking spaces within one block of the Memorial (AECOM, 2010d).

Those employees that continuously pay meter fees, visitors to the LBJ Building and surrounding office buildings, tourists visiting nearby attractions, and others who had previously parked at the

site would find parking in street sections adjacent to the site (the 300 blocks of 4th and 6th Streets and the 400 block of Independence Avenue) or in neighboring areas. Accessible parking would continue be available in the area at the parking garage at 6th and C Streets.

When the spaces directly adjacent to the Memorial are full, motorists would park in on-street metered parking spaces beyond the directly adjacent street sections and in the nearby garage that has excess capacity. However, the cost of the garage (\$8 per hour, with a daily maximum of \$34) would be more than the on-street parking (\$2 per hour, with a two-hour maximum). Some motorists would find the cost prohibitive, and would therefore need to find parking beyond one block of the site.

As a result of Alternative 1, motorists would be able to find parking within one block of the Memorial site despite the removal of spaces on Maryland Avenue. Those unwilling or unable to park in garage spaces would park further than one block from the Memorial. Therefore, Alternative 1 would result in long-term minor adverse impacts to parking.

Construction of the Memorial would result in additional parking restrictions along Independence Avenue, 4th Street, and 6th Street as the Memorial would be constructed. Construction would have short-term moderate adverse affects on parking during periods when these spaces would be unavailable.

Mitigation

In order to inform visitors of the parking opportunities available, visitors would be informed of parking areas in pre-arrival information, such as on the website or in brochures. Signs for parking would be posted. Visitors would be encouraged to use alternate forms of transportation, such as bus or rail, to reach the site. These alternate transportation opportunities would also be made available in pre-arrival information. NPS already provides Metro information its Washington parks websites. The L'Enfant and Federal Center SW Metro stations are within three blocks of the Memorial site. A total of 28 bus routes (Metrobus, DC CIRCULATOR, and Maryland Transit Administration) and the L'Enfant Virginia Rail Express station provide service within one block of the Memorial site.

Although the parking study measures only within one block of the Memorial, it is generally acceptable to park more than one block away in a dense urban environment. This is consistent with other neighborhoods and attractions throughout Washington.

Cumulative Impacts

Other projects in the area would potentially affect parking in the study area. The reduction in parking as a result of the site improvements, which would convert surface parking to landscaped plazas, for FOB 8 and the Mary E. Switzer Building, would decrease parking availability for employees and visitors to those facilities, sending drivers elsewhere to search for parking. However, a reduction in parking at the facilities is also expected to result in an overall decline in parking demand due to changes in behavior (GSA, 2010).

The construction associated with these projects would block some on-street parking in the vicinity temporarily. This would result in short-term moderate adverse cumulative impacts.

As stated above, Alternative 1 would result in short-term moderate and long-term minor adverse impacts on parking. When combined with the cumulative projects, impacts to parking in the short-term would be adverse and moderate and the long-term impacts would be adverse and minor.

Conclusion

As a result of Alternative 1, on-street parking at the site would decrease by 67 spaces and the demand for public parking would increase by 14 parking spaces. The existing on-street and garage parking supply would be able to absorb this increase in demand and reduction in available spaces, although costs at the garage would be greater than metered spaces on-street. Based on this information, Alternative 1 would result in long-term minor adverse impacts on parking availability. Construction would have a short-term moderate adverse affect on parking. When combined with the cumulative projects, Alternative 1 would have short-term moderate and long-term minor adverse impacts on parking.

Parking Impacts of Alternative 2

Like Alternative 1, Alternative 2 would result in short- and long-term minor impacts on parking. The parking impacts of Alternative 2 would be the same as Alternative 1, as the same number (67) of spaces on-site would be removed and the same bus parking would be provided on 4th Street. The reconfigured parking would remove spaces current on-site parking spaces used by federal employees, museum visitors, and others.

Based on expected visitation and vehicular use patterns described in this section's Methodology and Assumptions, the Eisenhower Memorial would be expected to generate demand for 13 spaces from visitors who drive to the site. NPS personnel driving to the site would generate demand for three additional spaces (AECOM, 2010d). Two designated parking spaces for NPS personnel would be placed on-site. As a result of the Memorial, 13 parking spaces for visitors and one parking space for NPS personnel would be needed, for a total of 14 parking spaces.

The incremental changes in supply and demand would be absorbed by the 906 existing parking meters and garage spaces within one block of the Memorial. Those employees that continuously paid meter fees, visitors to the LBJ Building and surrounding office buildings, tourists visiting nearby attractions, and others who had previously parked at the site would find parking in neighboring areas. Those unwilling or unable to park in garage spaces would park further than one block from the Memorial and walk to their destination. Accessible parking would be provided in the area. These changes in parking supply and demand would result in long-term minor adverse impacts on parking.

Construction of the Memorial would result in additional parking restrictions along Independence Avenue, 4th Street, and 6th Street as the Memorial would be constructed. Construction would have a potentially moderate short-term, adverse affect on parking during periods when these spaces would be unavailable.

Mitigation

In order to inform visitors of the parking opportunities available, parking areas would be included in pre-arrival information, such as on the website or in brochures. Signs for parking would be posted. Visitors would be encouraged to use alternate forms of transportation, such as bus or rail, to reach the site. NPS already provides Metro information its Washington parks websites. The L'Enfant and Federal Center SW Metro stations are within three blocks of the Memorial site. A total of 28 bus routes (Metrobus, DC CIRCULATOR, and Maryland Transit Administration) and the L'Enfant Virginia Rail Express station provide service within one block of the Memorial site.

Although the parking study measures only within one block of the Memorial, it is generally acceptable to park more than one block away in a dense urban environment. This is consistent with other neighborhoods and attractions throughout Washington.

Cumulative Impacts

Alternative 2 would have the same cumulative project impacts as Alternative 1. As stated above, Alternative 1 would result in short-term moderate adverse impacts and long-term minor impacts to parking. When combined with the cumulative projects, impacts to

parking in the short- term would be moderate and adverse; long-terms would be minor and adverse.

Conclusion

Like Alternative 1, as a result of Alternative 2, on-street parking at the site would decrease by 67 spaces and parking demand would increase by 14 spaces. The existing on-street and garage parking supply would be able to absorb this increased demand and reduction in available spaces, although costs at the garage would be greater than the on-street metered parking. Construction would have a short-term moderate, adverse affect on parking. Therefore, Alternative 2 would result in short-term moderate adverse impacts and long-term minor, adverse impacts on parking. When combined with the cumulative projects, Alternative 2 would have short-term moderate adverse and long-term minor adverse impacts on parking.

Parking Impacts of Alternative 3

Like Alternatives 1 and 2, Alternative 3 would result in short- and long-term minor impacts on parking. The parking impacts of Alternative 3 would be the same as Alternative 1. The same number (67) of spaces on-site would be removed and the same bus parking would be provided on 4th Street. The reconfigured parking would remove spaces current on-site parking spaces used by federal employees, museum visitors, and others.

Based on expected visitation and vehicular use patterns described in this section's Methodology and Assumptions, the Eisenhower Memorial would be expected to generate demand for 13 spaces from visitors who drive to the site. NPS personnel driving to the site would generate demand for three additional spaces (AECOM, 2010d). Two designated parking spaces for NPS personnel would be placed on-site. As a result of the Memorial, 13 parking spaces for visitors and one parking space for NPS personnel would be needed, for a total of 14 parking spaces.

These incremental changes in supply and demand would be absorbed by the 906 existing parking meters and garage spaces within one block of the Memorial. Rangers and other NPS personnel would reach the site through alternative transportation or would park in areas designated for NPS. Those employees that continuously paid meter fees, visitors to the LBJ Building and surrounding office buildings, tourists visiting nearby attractions, and others who had previously parked at the site would find parking in neighboring areas. Those unwilling or unable to park in garage spaces would park further than one block from the Memorial and walk to their destination. Accessible parking would be

provided in the area. These changes in parking supply and demand would result in long-term minor adverse impacts on parking.

Construction of the Memorial would result in additional parking restrictions along Independence Avenue, 4th Street, and 6th Street as the Memorial would be constructed. Construction would have a short-term moderate adverse affect on parking during periods when these spaces would be unavailable.

Mitigation

In order to inform visitors of the parking opportunities available, visitors would be informed of parking areas in pre-arrival information, such as on the website or in brochures. Signs for parking would be posted. Visitors would be encouraged to use alternate forms of transportation, such as bus or rail, to reach the site. NPS already provides Metro information its Washington parks websites. The L'Enfant and Federal Center SW Metro stations are within three blocks of the Memorial site. A total of 28 bus routes (Metrobus, DC CIRCULATOR, and Maryland Transit Administration) and the L'Enfant Virginia Rail Express station provide service within one block of the Memorial site.

Although the parking study measures only within one block of the Memorial, it is generally acceptable to park more than one block away in a dense urban environment. This is consistent with other neighborhoods and attractions throughout Washington.

Cumulative Impacts

Alternative 3 would have the same cumulative project impacts as Alternatives 1 and 2. As stated above, Alternative 1 would result in

short- term moderate adverse and long-term minor adverse impacts on parking. When combined with the cumulative projects, impacts to parking in the short-term moderate and adverse and long-term impacts would be adverse and minor.

Conclusion

Like Alternatives 1 and 2, on-street parking at the site would decrease by 67 spaces for Alternative 3. The existing on-street and garage parking supply would be able to absorb this increased demand and reduction in available spaces, although costs at the garage would be greater than those at on-street metered parking. Construction would have a potentially minor, short-term adverse affect on parking. Alternative 3 would result in a minor, adverse impact on parking availability. When combined with the cumulative projects, Alternative 3 would have short-term moderate adverse impacts and long-term minor adverse impacts on parking.

This page is intentionally left blank

4.7 VEGETATION

Methodology and Assumptions

Available information on the vegetation present at the existing site, especially mature trees and landscape, was compiled and reviewed. Impacts on vegetation were determined based on the general characteristics of the site and vicinity, site observations, and the removal of vegetation.

Study Area

The study area for vegetation is the Eisenhower Memorial site. The cumulative study area is adjacent properties.

Impact Thresholds

The following thresholds were used to determine the magnitude of impacts on vegetation:

- *Negligible.* Vegetation would not be impacted or the impact would be below or at the lower levels of detection.
- *Minor.* Impacts on vegetation would be detectable. Impacts to undisturbed areas would be small. Mitigation would be needed to offset adverse impacts and would be relatively simple to implement and would likely be successful.
- *Moderate.* Impacts on vegetation would be readily apparent and result in a change to vegetation over a relatively wide area. Mitigation measures would be necessary to offset adverse impacts and would likely be successful.

- *Major.* Impacts on vegetation would be readily apparent and substantially change the character of vegetation over a large area both in and out of the project site. Mitigation measures necessary to offset adverse impacts would be needed and extensive, with no guarantee of success.
- *Duration.* Long-term impacts would extend beyond the construction of the alternative.

Vegetation Impacts of No Action Alternative

Under the No Action Alternative, no vegetation would be removed from the site. The existing street trees would remain, as would the plaza trees in tree boxes. Bushes in plant boxes and other landscaping materials would remain. The grass area on the NPS parcel and the spur road median would remain. The vegetable plants and flowers included in the community garden would continue to be replanted, per the discretion of the gardener. Because the No Action Alternative would maintain existing conditions, there would be no conflict with the NCPC design principles. Therefore, the No Action Alternative would result in no impacts on vegetation.

Cumulative Impacts

The No Action Alternative would result in no impacts on vegetation. Therefore, no cumulative impacts would occur as a result.

Conclusion

No on-site change to vegetation would occur as a result of the No Action Alternative. Cumulative impacts of other projects would be

negligible. Therefore, the No Action Alternative would result in no impact on vegetation.

Vegetation Impacts of Alternative 1

Implementation of Alternative 1 would remove existing vegetation from the site, including 38 trees, some of which have diameters of 20 inches or more. The Alternative 1 design would place approximately 63 trees in a grid pattern throughout the site, with approximately 12 street trees framing the site (six mature trees on 4th and 6th Streets would be maintained). Additionally, there would be a central grove of trees at the core of the Memorial that would be mature and large in scale. These trees would expand the existing tree canopy at the site. Other trees throughout the site and along the street would be medium in size, larger than trees typically installed as street trees. All of these would be deciduous trees chosen to be compatible with the local climate and would be subject to NPS approval. A row of trees would also serve to separate the LBJ Promenade in front of the LBJ Building from the Memorial. Street trees installed along Independence Avenue and 4th and 6th Streets would be consistent with the established street trees for those roadways. Before changes would be made, a special tree removal permit and a public space permit would be obtained from DDOT.

As part of Alternative 1, new systems would be introduced to improve the growing conditions for new trees. The soil mix installed would be more appropriate for the establishment and growth of new trees and would help to improve site drainage. Root beds would be expanded to accommodate large trees.

Existing planter boxes along the northern edges of the LBJ Building would be removed. Instead, three new planter boxes would be installed, framing the entrances to the building. Grass, groundcover, and other landscape materials, such as flowers or shrubs, would be installed in the remaining portion of the site. Additionally, the LBJ

Promenade in front of the LBJ Building may contain trees, grass, or other plant materials. Vegetation would cover 0.84 acres of the site. The plants used for the landscape of the site would be native or non-invasive adaptive species.

The proposed landscape plan would place additional trees on-site and a comparable acreage of vegetated area. Therefore, Alternative 1 would result in long-term beneficial impacts on vegetation.

During construction of the Memorial, existing vegetation would be removed. As a result, Alternative 1 would cause short-term moderate impacts on vegetation.

Cumulative Impacts

The redevelopment of FOB 8 and the Mary E. Switzer Building would remove existing trees and vegetation and surface parking lots as part of the construction process. Street trees would be replaced with new trees. Additional lawn, plantings, and trees would be installed as part of the reconfiguration of parking lots into landscaped plazas. These actions would result in long-term beneficial impacts on vegetation.

As described above, Alternative 1 would result in short-term moderate adverse impacts and long-term beneficial impacts on vegetation. Therefore, the cumulative effect of Alternative 1 and the other projects in the area would result in long-term beneficial cumulative impacts on vegetation.

Conclusion

Under Alternative 1, grass, modest landscape plantings, community garden vegetables and flowers, and 38 trees would be replaced by 79 trees and more extensive landscape plantings. Although mature trees would be removed to construct Alternative 1, many large trees would be installed as part of the project. Also, several smaller trees at the site, particularly those along the street, would be replaced by larger trees. The quality of the trees would improve as a result of Alternative 1 and would be sustained due to soil and drainage improvements. The vegetation would establish the character of the Memorial, serve to frame the site, separate the LBJ Promenade, and introduce and define the LBJ Building's entrances. Therefore, Alternative 1 would result in short-term moderate adverse impacts and long-term beneficial impacts on vegetation. When combined with cumulative projects, Alternative 1 would result in short-term moderate adverse impacts and long-term beneficial cumulative impacts on vegetation.

Vegetation Impacts of Alternative 2

Alternative 2 would remove the existing vegetation from the site by removing 38 trees and placing approximately 79 trees in a grid pattern throughout the site; approximately 12 street trees would be planted around the edges of site (six mature trees on 4th and 6th Streets would be maintained). Additionally, there would be a central grove of trees within the Memorial, for a total of approximately 95 new trees. These trees would expand the existing tree canopy at the site. The trees in the grove would be mature and large in scale. The other trees throughout the site and along the street would be medium in size, but more mature than trees typically installed as street trees. All of these would be deciduous trees chosen to be compatible with the local climate. A row of trees would also serve to separate the LBJ Promenade from the Memorial. Street trees installed along Independence Avenue and 4th and 6th Streets would be consistent with the street trees established for those roadways. Before changes would be made, a special tree removal permit and a public space permit would be obtained from DDOT.

As part of Alternative 2, new systems would be introduced to improve the growing conditions for new trees. The soil mix installed would be more appropriate for the establishment and growth of new trees. On-site drainage would be improved. Root beds would be expanded to accommodate large trees.

Existing planter boxes along the northern edges of the LBJ Building would be removed. Instead, a paved surface would extend to the building front. Grass, groundcover, and other landscape materials, such as flowers or shrubs, would be installed throughout the site. Beyond the Memorial, grass or other landscape plantings would primarily cover the ground, with paths running throughout the site.

The LBJ Promenade in front of the LBJ Building may also contain trees, grass, or other plant materials. Vegetation would cover 1.51 acres of the site. The plants used for the landscape of the site would be native or non-invasive adaptive species.

Given the improved quality of the new vegetation and the increased amount of vegetated area, Alternative 2 would result in long-term beneficial impacts on vegetation.

During construction of the Memorial, existing vegetation would be removed. As a result, Alternative 2 would cause short-term moderate impacts on vegetation.

Cumulative Impacts

The cumulative projects and impacts would be the same as those described in Alternative 1. Alternative 2 would result in long-term beneficial impacts to vegetation. Therefore, the cumulative effect of Alternative 2 and the other projects in the area would result in long-term beneficial cumulative impacts on vegetation.

Conclusion

Under Alternative 2, grass, modest landscape plantings, community garden vegetables and flowers, and 38 trees would be replaced by 95 trees and more extensive landscape plantings. Although mature trees would be removed to construct Alternative 2, many larger trees would be installed as part of the project. Also, many immature trees at the site, particularly those along the street, would be replaced by larger trees. The quality of the trees would improve as a result of Alternative 2 and would be sustained due to soil and drainage improvements. The vegetation would establish the

character of the Memorial, serve to frame the site, separate the LBJ Promenade, and introduce and define the LBJ Building's entrances. Therefore, Alternative 2 would result in short-term moderate adverse impacts and long-term beneficial impacts on vegetation. When combined with cumulative projects, Alternative 2 would result in short-term moderate adverse impacts and long-term beneficial cumulative impacts on vegetation.

Vegetation Impacts of Alternative 3

Implementation of Alternative 3 would remove the existing vegetation from the site, and place approximately 81 trees throughout the site, including the seven mature trees on 4th and 6th Streets. The trees throughout the site would be placed in a non-linear pattern. There would also be a central grove of trees within the Memorial, but the trees in the grove would be mature and large in scale. The other trees throughout the site and along the street would be medium in size and more mature than trees typically installed as street trees. These trees would expand the existing tree canopy at the site. All of these would be deciduous chosen to be compatible with the local climate. A row of trees would also serve to separate the LBJ Promenade in front of the LBJ Building from the Memorial. Street trees installed along Independence Avenue and 4th and 6th Streets would be consistent with the established street trees for these roadways.

As part of Alternative 3, new systems would be introduced to improve the growing conditions for the establishment of new trees and drainage on-site. The soil mix installed would be more appropriate for new trees. Drainage at the site would be improved. Root beds would be expanded to accommodate large trees.

Existing planter boxes along the northern edges of the LBJ Building would be removed. Beyond the central Memorial area, grass or other landscape plantings would primarily cover the ground, with paths running throughout the site. The promenade in front of the LBJ Building may also contain trees, grass, or other plant materials. Vegetation would cover 1.98 acres of the site. The plants used for the landscape of the site would be native or non-invasive adaptive species.

During construction of the Memorial, existing vegetation would be removed. As a result, Alternative 3 would cause short-term moderate impacts on vegetation.

Given the improved quality of the new vegetation and the increased amount of vegetated area, Alternative 3 would result in long-term beneficial impacts on vegetation.

Cumulative Impacts

The cumulative projects and their impacts would be the same as those described in Alternatives 1 and 2. Alternative 3 would result in long-term beneficial impacts on vegetation. When combined with cumulative projects, Alternative 3 would result in long-term beneficial cumulative impacts on vegetation.

Conclusion

Under Alternative 3, grass, modest landscape plantings, community garden vegetables and flowers, and 44 trees would be replaced by 81 trees and more extensive landscape plantings. Although mature trees would be removed as part of Alternative 3, many large trees would be installed as part of the project. Also, many immature trees at the site, particularly those along the street, would be replaced by larger trees. Therefore, the quality of the trees would improve as a result of Alternative 3 and would be sustained due to improvements in soil and drainage. The vegetation would serve to establish the character of the Memorial, frame the site, separate the LBJ Promenade, and introduce and define the LBJ Building's entrances. Therefore, Alternative 3 would result in short-term moderate adverse impacts and long-term beneficial impacts on vegetation. When combined with cumulative projects, Alternative 3 would

result in short-term moderate adverse impacts and long-term beneficial cumulative impacts on vegetation.

4.8 VISITOR USE AND EXPERIENCE

Methodology and Assumptions

This analysis considered the area's current uses and the potential effects of constructing a presidential memorial on the visitor experience and use at the site. The Eisenhower Memorial could affect the activities and the type of visitor experience and use/visitation at the Memorial and the surrounding area. The visual character of the National Mall area and noises experienced by the visitors were also considered.

As described in Section 4.6.2, EMC estimates the total annual visitors to be approximately 600,000.

Study Area

The study area for visitor use and experience is the project site and the broader National Mall area.

Impact Thresholds

The following thresholds were used to determine the magnitude of impacts on visitor use and experience:

- *Negligible:* Visitors would likely be unaware of any effects associated with implementation of the alternative. There would be no noticeable change in visitor use and experience or in any defined indicators of visitor satisfaction or behavior.
- *Minor:* Changes in visitor use and/or experience would be slight and detectable but would not appreciably limit critical

characteristics of the visitor experience. Visitor satisfaction would remain stable.

- *Moderate:* A few critical characteristics of the desired visitor experience would change and/or the number of participants engaging in a specified activity would be altered. Some visitors who desire their continued use and enjoyment of the activity/visitor experience might pursue their choices in other available local or regional areas. Visitor satisfaction would begin to decline.
- *Major:* Multiple critical characteristics of the desired visitor experience would change and/or the number of participants engaging in an activity would be greatly reduced or increased. Visitors who desire their continued use and enjoyment of the activity/visitor experience would be required to pursue their choices in other available local or regional areas. Visitor satisfaction would markedly decline.
- *Beneficial:* Characteristics of the desired visitor experience would improve and/or the number of participants engaging in an activity would increase. Visitor satisfaction would increase.
- *Duration:* Short term impacts would occur during the time of construction. Long-term impacts would last beyond the construction phase.

Visitor Use and Experience Impacts of No Action Alternative

Under the No Action Alternative, the project site would continue to offer the same visitor use and experience as the current site. No new facilities or attractions would be installed at the site. Visitor use would not increase. Instead, existing use patterns and numbers would remain stable. Visitors to the site, particularly workers on break from nearby offices, and DED would be able to use the existing outdoor plaza and seating.

The 38 community garden plots at the site would remain. Those people using the 38 community garden plots would continue to garden at the site. The exercise course by the gardens would also remain. Visitors to the site would be able to use the bars, benches, and other equipment offered by the course.

The site would also continue to serve as open space in support of other NAMA sites. The project site lies between the National Mall and two Metro Stations: Federal Center SW to the southeast of the site and L'Enfant Plaza to the southwest. The Smithsonian Museums, such as the NASM and NMAI, are located across Independence Avenue from the project site. The No Action Alternative would continue to afford visitors access to NAMA and the National Mall access from numerous public transportation service locations by providing sidewalks and an open plaza to walk across in order to most efficiently reach the destination.

The existing signalized intersections with crosswalks across Independence Avenue would remain. Similarly, the pedestrian connections across Maryland Avenue would continue to occur at yield or stop sign-controlled intersections. Sidewalks along

roadways and the plaza would remain intact. No amenities or accommodations for cyclists would be installed.

Because visitors would be able to use the plaza, community gardens, exercise equipment, and open space in support of other NAMA sites, the No Action Alternative would result in long-term beneficial impacts on visitor use and experience.

Cumulative Impacts

There are a number of projects related to visitor use and experience that are relevant to the Eisenhower Memorial. First, the American Veterans Disabled for Life Memorial is planned for a site two blocks east of the project site. The American Veterans Disabled for Life Memorial is scheduled for completion in November 2011. Unlike the Eisenhower Memorial, the American Veterans Disabled for Life Memorial is not directly adjacent to the National Mall or Independence Avenue. This project would enhance the visitor experience, resulting in long-term beneficial impacts.

Within NAMA and just beyond its borders, a number of other visitor attractions would be created. The National Museum of African American History and Culture, Martin Luther King, Jr. National Memorial, Vietnam Veterans Memorial Visitors Center, National Museum of Women's History, National Museum of the American Latino, the Redesign of Constitution Gardens, Union Square and the Sylvan Theater Area, the restoration of the DC War Memorial and the renovation of the National Aquarium would all offer nearby attractions for visitors to Washington, DC and the Eisenhower Memorial. The Mall Turf Rehabilitation, Jefferson Memorial Vehicular Security Barriers, the and Washington Monument Security Screening would augment the existing visitor facilities.

These projects would enhance the visitor experience, resulting in long-term beneficial impacts.

As described above, the No Action Alternative would result in long-term beneficial impacts on visitor use and experience. When combined with the short-term adverse impacts and long-term minor adverse impacts and beneficial impacts of the cumulative projects, the No Action Alternative would result in short-term moderate adverse cumulative impacts and long-term beneficial cumulative impacts on visitor use and experience.

Conclusion

Employees of nearby offices would continue to use the site for lunch and breaks. Community gardeners would continue to use the NPS parcel and visitors would continue to use the exercise course. DED would be able to use the site as an outdoor gathering space. Pedestrians would continue to use existing amenities. The long-term cumulative impacts would be beneficial. As a result of these factors, the No Action Alternative would result in beneficial impacts on visitor use and experience.

Visitor Use and Experience Impacts of Alternative 1

Alternative 1 would create a new memorial to President Eisenhower that would attract many new visitors to the site. The Memorial is not expected to lure the majority of its visitors on its own; instead, it is assumed that most visitors would come to the project site as part of a larger visit to the National Mall and its other nearby memorials. From this perspective, the Eisenhower Memorial would help attract additional visitors to other, nearby memorials, museums, and site in the National Mall area.

As a distinct destination within the National Mall area, the Eisenhower Memorial would likely experience greater than average visitation in the first few years before stabilizing at typical visitation levels. EMC projects that, after the initial years, the Eisenhower Memorial would be expected to draw approximately 600,000 visitors annually. The visitation number for the Eisenhower Memorial would be expected to be lower than other Memorials, such as the Korean War Memorial and the World War II Memorial, which received 3,117,046 and 4, 118, 528 visitors, respectively (NPS, 2011), due to their more prominent location on the Mall.

Alternative 1 would replace the existing open plaza with a more defined memorial space dedicated to President Eisenhower that focuses on a central grove of trees to symbolize the man, surrounded by large built elements to educate visitors about his life and accomplishments. The reliefs and other built elements would tell Eisenhower's story, providing an informative experience while at the site. The benches under the tree canopy would offer an opportunity of a quiet gathering place for contemplation. This would maintain the existing open space and enhance the visitor

experience at the site, which, in its current condition, provides little draw to visitors.

Under Alternative 1, the landscaping of the Memorial would offer office workers from nearby buildings a greener landscape. Trees would provide more shade than the current conditions at the site. Alternative 1 would also offer additional amenities for both destination and casual visitors, including restrooms for comfort, a bookstore to learn about President Eisenhower and buy related materials, and a dedicated on-site Park Ranger to answer visitor questions and provide tours.

Benches, restrooms, and seat-level walls would provide seating and a canopy would provide visitors with shelter from rain or the sun. The canopy would accommodate groups of up to 300 people, with other space at the site available to accommodate many more. Potential users of the canopy include tour groups, DED and other federal agencies, and attendees of special events hosted at the site, such as an annual remembrance event. Because there are no easily accessible public restrooms east of the Washington Monument, the facilities at the Memorial would serve visitors to this portion of NAMA. The Memorial would provide amenities and educational experiences to a large number of people, resulting in long-term beneficial impacts on visitor use and experience.

Under Alternative 1, the entrances would limit access to Independence and Maryland Avenues, 4th and 6th Streets, and the promenade. Sidewalks would surround the Memorial and would be provided along Maryland Avenue, which would continue to operate as a functional roadway. Visitors to the Eisenhower Memorial would be required to pay attention to vehicular traffic when crossing Maryland Avenue within the site. Vehicular traffic through the site

would be intrusive and detract from the quiet, contemplative space intended as a place of reverence to President Eisenhower. Bicycle racks would also be provided at the Memorial.

As part of Alternative 1, the permitted community gardens would be removed. The exercise course and equipment would also be removed. The DED's commemorative bell would also be removed. As a result of the removal of the community gardens and exercise course, visitors would be required to go elsewhere for these activities. This would result in moderate adverse impacts on visitor use and experience for these particular user groups.

Under Alternative 1, visitors to the site could directly enter the site from most directions. Along 4th and 6th Streets and Independence Avenue, sidewalks directly connect to the paved Memorial. Signalized intersections across Independence Avenue at 6th Streets and Maryland Avenue at 6th Street would continue to provide walk signals to visitors. Bisecting the site, Maryland Avenue would also provide pedestrian access. Because the open roadway would go through the Memorial, pedestrian improvements, such as a cross walk and signage, would be installed for safety. Signalized crosswalks would be incorporated in the 4th Street and Independence and Maryland Avenues intersection. Access from the LBJ Building would predominantly be from the sloped entrance to the Memorial along the southern border. The LBJ Promenade would access 4th Street via stairs and 6th Street directly. In order to comply with the Architectural Barriers Act, a ramp would be located next to the stairs at the 4th Street access to the LBJ Promenade and all sidewalks would be compliant. Bicycle racks would be provided at the Memorial.

Although lighting would primarily focus on the Memorial features, additional lighting would be used to illuminate pedestrian pathways, seating areas, and handrails. The relief blocks, water feature, and planter areas would be lit, making them clearly visible at night to visitors. Wherever seating areas or handrails occur, pedestrian lighting would be used to provide visible pathways. Additional lighting would be distributed at the site to provide illumination to areas where memorial- or seating-based lighting would not occur. By providing well-lit pathways, visitors would be able to navigate the site safely at night. The Memorial design does not offer extensive shelter from the elements, except for the temporary shelter from sun and rain provided by the canopies along the LBJ Promenade, in keeping with the Memorial's scale of visitation.

Alternative 1 would temporarily disrupt site use during construction. During construction, existing amenities, such as seating, would be removed. Additionally, the roadways, plaza, and existing vegetated areas would be disturbed and removed during the construction process. Visitors would be prohibited from entering during this period, resulting in short-term moderate adverse impacts.

Cumulative Impacts

The cumulative projects and their long-term impacts would be beneficial, the same as those described in the No Action Alternative. Construction of the American Veterans Disabled for Life Memorial, National Museum of African American History and Culture, Vietnam Veterans Memorial Visitors Center, National Museum of Women's History, National Museum of the American Latino, the Redesign of Constitution Gardens, Union Square, and the Sylvan Theater Area,

the restoration of the DC War Memorial and the renovation of the National Aquarium projects described above, as well as the Jefferson Memorial Seawall Rehabilitation, Potomac Park Levee, Madison Drive Streetscape Improvements, the Constitution Avenue Street Improvements, and Lincoln Memorial Reflecting Pool Rehabilitation would result in re-rerouting and temporary closures of areas within NAMA. Construction activities would result in short-term minor impacts on visitor use and experience.

As described above, Alternative 1 would result in short-term minor adverse impacts and long-term beneficial impacts on visitor use and experience. When combined with the short-term adverse impacts and long-term minor adverse impacts and beneficial impacts of the cumulative projects, Alternative 1 would result in short-term moderate adverse cumulative impacts and long-term beneficial cumulative impacts on visitor use and experience.

Conclusion

Under Alternative 1, visitors to the site would have the opportunity to learn about President Eisenhower in a quiet and contemplative environment. Alternative 1 would offer visitor amenities and provide another attraction for visitors to the National Mall, as well as offer a greener and more shaded landscaped gathering space. Pedestrian connections and bicycle racks would be provided. The promenade would offer a respite area for nearby office workers. All of these changes would result in beneficial impacts. Additionally, the removal of community gardens and the exercise course would result in moderate adverse impacts.

Alternative 1 would result in short-term moderate adverse impacts during construction due to limited site access. The overall long-

term impacts on visitor use and experience would be beneficial. Combined with the cumulative projects, Alternative 1 would result in short-term moderate adverse impacts and long-term beneficial impacts on visitor use and experience.

Visitor Use and Experience Impacts of Alternative 2

Alternative 2 would result in a similar visitor use and experience as Alternative 1. Like Alternative 1, Alternative 2 would provide a central Memorial grove and built elements to create a quiet park setting in which to contemplate Eisenhower's accomplishments. Alternative 2 would be expected to receive the same number of visitors to the Memorial as Alternative 1 and would help attract additional visitors to other nearby memorials, museums, and sites in the National Mall area. The same level of amenities, such as restroom facilities and a book sales area, would be provided in Alternative 2. This enhanced open space would result in beneficial impacts on visitor use and experience.

Under Alternative 2, the landscape of the Memorial would offer office workers from nearby buildings a greener landscape. Trees would provide more shade than the current conditions at the site.

The entrances would limit access to Independence and Maryland Avenues, 4th and 6th Streets, and the LBJ Promenade. Under Alternative 2, the entrances to the Memorial would be more defined than in Alternative 1; visitors to the site could directly enter the site from most directions. Along 4th Street, two paths would extend from the street into the site. From 6th Street, the main point of entry would be the Maryland Avenue cartway, which would be visible through a paved pedestrian corridor. From Independence Avenue, the main point of entry to the Memorial would be its intersection with the Maryland Avenue cartway at the northeast corner of the site. A less formal entry point would be a path from Independence Avenue at the northwest portion of the site. Bisecting the site, the observed Maryland Avenue cartway would also provide pedestrian access. Access from the LBJ Building would predominantly be from

stairs and a ramp at the LBJ Promenade leading down to the Memorial. The LBJ Promenade would connect to 6th Street at the same grade, while it would connect to 4th Street, which is lower, by stairs and a ramp, in compliance with the Architectural Barriers Act.

Alternative 2 would continue to offer signalized crosswalks at the intersections of Independence Avenue with 4th and 6th Streets, and Maryland Avenue's intersection with 6th Street. Unlike Alternative 1, Alternative 2 would close Maryland Avenue to vehicular access. This would provide a calmer, more contemplative experience in which to reflect upon President Eisenhower. Additionally, it would increase pedestrian safety by removing the potential hazards of an open roadway through the site. The adjacent roads have sidewalks and signalized intersections to facilitate safe pedestrian crossing. Bicycle racks would be installed at the Memorial. Additional pedestrian safety and bicycle amenities would result in beneficial impacts.

As part of Alternative 2, the permitted community gardens would be removed. The exercise course and equipment would also be removed. As a result of the removal of the community gardens and exercise course, visitors would be required to go elsewhere for these activities. This would result in moderate adverse impacts on visitor use and experience for this particular user groups.

Like Alternative 1, Alternative 2's lighting would primarily focus on the Memorial feature; additional lighting would be used to illuminate pedestrian pathways, seating areas, and handrails. By providing well-lit pathways, visitors would be able to navigate the site safely at night. The Memorial design does not offer extensive shelter from the elements, except for the temporary shelter from

sun and rain provided by the canopies attached to relief blocks, in keeping with the Memorial's scale of visitation.

Alternative 2 would temporarily disrupt site use during construction. During construction, existing amenities, such as seating, would be removed. Additionally, the roadways, plaza, and existing vegetated areas would be disturbed and removed during the construction process. Visitors would be prohibited from entering during this period, resulting in moderate short-term impacts.

Cumulative Impacts

The cumulative projects and their impacts would be the same as those described in Alternative 1. Alternative 2 would result in short-term moderate impacts and long-term beneficial impacts on visitor use and experience. When combined with cumulative projects, Alternative 2 would result in short-term minor adverse and long-term beneficial cumulative impacts on vegetation.

Mitigation

In order to minimize impacts to visitors during construction, NPS would provide information regarding construction on its NAMA website and distribution lists. This would ensure that visitors understand the changes in use that would occur at the site as a result of the Memorial construction.

Conclusion

Under Alternative 2, visitors to the site would have the opportunity to learn about President Eisenhower in a quiet and contemplative environment without the distraction of cars passing through

Maryland Avenue. Alternative 2 would provide another cultural attraction to visitors at the National Mall, as well as offer a greener landscaped gathering space. Alternative 2 would provide pedestrian connections and bicycle racks. The promenade would offer a respite area for nearby office workers. All of these amenities would result in beneficial impacts. In contrast, the removal of community gardens and the exercise course would result in moderate adverse impacts. Alternative 2 would result in short-term moderate adverse impacts during construction due to closure of the site. Although there would be long-term moderate adverse impacts to a relatively small number of visitors as a result of some amenities being removed, the long-term impacts on visitor use and experience would be beneficial. Cumulatively, Alternative 2 would result in short-term moderate adverse impacts and long-term beneficial impacts on visitor use and experience.

Visitor Use and Experience Impacts of Alternative 3

Alternative 3 would result in very similar visitor use and experience. Somewhat similar to Alternatives 1 and 2, Alternative 3 would provide a central Memorial plaza area with built elements and trees to create a quiet gathering space within a park setting in which users would contemplate Eisenhower's accomplishments. Alternative 3 would be expected to receive the same number of visitors to the Memorial as Alternatives 1 and 2 and would help attract additional visitors to other nearby memorials, museums, and sites in the National Mall area. The same level of amenities, such as restroom facilities and a book sales area, would be provided in Alternative 3.

Under Alternative 3, the Memorial landscape would offer office workers from nearby buildings a greener landscape than Alternatives 1 and 2. Trees would provide more shade than the current conditions at the site. Additional seating would be incorporated into the landscape design. This seating would be partially shaded by trees, providing visitors respite from the sun.

Under Alternative 3, the entrances to the Memorial would be from clearly identifiable paths; although visitors to the site could directly enter the site from most directions. From 4th Street, a paved connection to the Memorial would be located mid-block, near the restrooms and book sales area. From 6th Street the main point of entry would be a paved path north of the Maryland Avenue cartway. From Independence Avenue, the main points of entry to the Memorial would be from two paved pathways leading into the central Memorial area. Bisecting the site, the observed Maryland Avenue cartway would also provide informal pedestrian access. Access from the LBJ Building would be predominantly from the

stairs and a ramp at the LBJ Promenade leading down to the Memorial. The LBJ Promenade would connect to 6th Street at the same grade. It would connect to 4th Street, which is lower, by stairs and a ramp, in compliance with the Architectural Barriers Act.

Alternative 3 would continue to offer signalized crosswalks at the intersections of Independence Avenue with 4th and 6th Streets, and Maryland Avenue's intersection with 6th Street. Alternative 3 would close Maryland Avenue to vehicular access. This would provide a calmer, more contemplative experience in which to reflect upon President Eisenhower. The adjacent roads have sidewalks and signalized intersections to facilitate safe pedestrian crossing. Bicycle racks would be installed at the Memorial. These pedestrian safety and bicycle amenities would result in beneficial impacts.

Under Alternative 3, although lighting would primarily focus on the Memorial features, additional lighting would be used to illuminate pedestrian pathways, seating areas, and handrails. The relief blocks, tapestries, and planter areas would be lit, making them clearly visible to visitors. Wherever seating areas or handrails occur, pedestrian lighting would be used to provide visible pathways. Additional lighting would be distributed throughout the site to provide illumination to areas where memorial- or seating-based lighting would not occur. These would include areas of the LBJ Building. By providing well-lit pathways, visitors would be able to navigate the site safely at night. The Memorial design does not offer extensive shelter from the elements, except for the temporary shelter from sun and rain provided by canopies attached to columns along the LBJ Promenade, in keeping with the Memorial's scale of visitation.

As part of Alternative 3, the permitted community gardens would be removed. The exercise course and equipment would also be removed. As a result of the removal of the community gardens and exercise course, visitors would be required to go elsewhere for these activities. This would result in moderate adverse impacts on visitor use and experience for these particular user groups.

Alternative 3 would temporarily disrupt site use during construction. During construction, existing amenities, such as seating, would be removed. Additionally, the roadways, plaza, and existing vegetated areas would be disturbed and removed during the construction process. Visitors would be prohibited from entering during this period, resulting in short-term moderate adverse impacts.

Cumulative Impacts

Under Alternative 3, the cumulative projects and their impacts would be the same as those described in Alternatives 1 and 2. Alternative 3 would result in short-term moderate impacts and long-term beneficial impacts on visitor use and experience. When combined with cumulative projects, Alternative 3 would result in short-term minor adverse long-term beneficial cumulative impacts on vegetation.

Conclusion

Under Alternative 3, visitors to the site would have the opportunity to learn about President Eisenhower in a quiet and contemplative environment, without the distraction of cars passing through on Maryland Avenue. Alternative 3 would provide another cultural attraction to visitors at the National Mall, as well as offer a greener

landscaped gathering space. Alternative three would include pedestrian connections and bicycle racks. The promenade would offer a respite area for nearby office workers. All of these amenities would result in beneficial impacts. In contrast, the removal of community gardens and the exercise course would result in moderate adverse impacts. Alternative 3 would result in short-term moderate adverse impacts due to construction. Although there would be some long-term moderate adverse impacts to a relatively small number of visitors as a result of some amenities being removed, the long-term impacts on visitor use and experience would be beneficial. Alternative 3 would result in short-term moderate adverse impacts and long-term beneficial cumulative impacts on visitor use and experience.

4.9 WATER RESOURCES

Methodology and Assumptions

The NPS Management Policies (2006) states that the NPS will “take all necessary actions to maintain or restore the quality of surface waters and ground waters within the Parks, consistent with the Clean Water Act and all other applicable federal, state, and local laws and regulations” (NPS, 2001a sec 4.6.3). A water quality standard defines the water quality goals of a given water body by designating uses to be made of the water, setting minimum criteria to protect the uses, and preventing degradation of water quality through anti-degradation provisions. The anti-degradation policy is only one portion of a water quality standard. Part of this policy (40 CFR 131.12(a)[2]) strives to maintain water quality at existing levels if it is already better than the minimum criteria. Anti-degradation should not be interpreted to mean that “no degradation” can or will occur, as even in the most pristine waters, degradation may be allowed for certain pollutants as long as it is temporary and short-term.

This analysis assumes that the non-vegetated areas proposed in the concept plans for the site would be covered by impervious surfaces. Once more detailed plans are finalized, certain non-vegetated elements, such as pathways, may ultimately consist of pervious material. This would result in less impervious surface than is described below.

Study Area

The issue of impervious surfaces and water infiltration is focused on the project site; however, the study area for water resources is the Chesapeake Watershed.

Impact Thresholds

The following thresholds were used to determine the magnitude of impacts on water resources:

- *Negligible.* Impacts (chemical, physical, or biological) would not be detectable, would be within water quality standards or criteria, and would be within historical or desired water quality conditions. All permit requirements would be met. Impacts on water or wastewater treatment facilities would not be detectable.
- *Minor.* Impacts (chemical, physical, or biological) would be detectable but would be within water quality standards or criteria and within historical or desired water quality conditions. All permit requirements would be met. Impacts on water or wastewater treatment facilities would be detectable, but would not affect or disrupt plant operations or water demands. Mitigation, if needed, would be simple and successful.
- *Moderate.* Impacts (chemical, physical, or biological) would be detectable but would be at or within water quality standards or criteria; however, historical baseline or desired water quality conditions would be temporarily altered. Necessary permits could be obtained and requirements would be met most of the time. Impacts on water or wastewater treatment facilities would be detectable, and could infrequently affect or disrupt plant operations or water demands from other customers. Mitigation measures to offset potential adverse impacts could be extensive, but would be successful.
- *Major.* Impacts (chemical, physical, or biological) would be detectable and would be frequently altered from the

historical baseline or desired water quality conditions and/or chemical, physical, or biological water quality standards or criteria would temporarily be slightly and singularly exceeded. There would be substantial difficulty obtaining permits or meeting permit requirements. Necessary permits could be obtained and requirements would be met some of the time. Impacts on water or wastewater treatment facilities would be detectable, and would frequently affect or disrupt plant operations or water demands from other customers. Mitigation measures to offset potential adverse impacts would be extensive and their success could not be guaranteed.

- *Duration.* Short-term impacts would take less than one year to recover after the disturbance or change occurs; long-term impacts would take longer than one year to recover after the disturbance or change occurs.

Water Resources Impacts of No Action Alternative

Stormwater runoff is precipitation that does not soak into the ground, but instead flows over the land's hard, paved or saturated surface into the nearest water body. It can affect the water quality, by carrying pollutants to the surface water into which it flows.

The No Action Alternative would not change the existing stormwater management conditions. The existing amount of impervious surface area, which is 3.27 acres (79%) of the 4.17-acre site, would remain. Stormwater runoff would continue to be collected through curbside drains, or by trench drains in the plaza, that connect to the District's pipe drain system. Existing pervious surfaces on the site, such as tree boxes and grass areas would continue to absorb water at their respective varying rates. In

addition, the No Action Alternative would not change the existing groundwater conditions of the site. No construction activities would occur that would displace ground water or affect groundwater penetration. The continuation of existing stormwater management would result in long-term negligible adverse impacts on water resources.

No soils would be disturbed, minimizing potential soil erosion and sedimentation during stormwater events. The site would remain relatively level.

Cumulative

The Mary E. Switzer Building and FOB 8 improvements would reduce the amount of impervious surfaces at those sites, which would reduce the amount of stormwater runoff. These projects would incorporate low-impact design techniques to minimize runoff, resulting in long-term beneficial impacts on water resources.

The construction of these projects would result in short-term minor adverse impacts on water resources due to soil disturbance and the increased potential for sediment in stormwater runoff.

As stated above, the No Action Alternative would result in long-term negligible adverse impacts on water resources. When combined with the short-term minor adverse impacts and long-term beneficial impacts on water resources, the No Action Alternative would result in long-term beneficial cumulative effects on water resources. Construction activity resulting from these cumulative actions would result in short-term minor adverse cumulative impacts on water resources.

Conclusion

The No Action Alternative would not change the existing stormwater management or groundwater conditions, alter the amount of impervious surfaces, or disturb soils on the project site. Pollutants from roadways would continue to contaminate stormwater runoff from the site, resulting in long-term negligible adverse impacts. When combined with cumulative projects, the No Action Alternative would result in short-term minor adverse cumulative impacts to water resources, and long-term beneficial cumulative impacts to water resources.

Water Resources Impacts of Alternative 1

Alternative 1 would alter water resource conditions at the site by adding approximately 0.06 acres of impermeable surface, totaling 3.33 acres, which would cover approximately 80% of the site. This would be a result from the realignment of Maryland Avenue and the other paved surfaces within the site, including the hardscape elements within the central portion of the site. This change would produce a minimal increase in stormwater runoff, resulting in negligible impacts on water quality.

In accordance with Executive Order 13514 DDOE requires more stringent provisions for water quality treatment for all impervious areas generated by project design, regardless of the extent of existing impervious conditions. Similarly, as a result of the Energy Independence and Security Act of 2007(EISA), federal projects of 5,000 square feet or more must maintain or return to pre-development hydrological conditions.

The stormwater control methods described below would meet the pre-development requirements for EISA and DDOE. The grade of the site's paved perimeter, which had previously been sidewalk, would drain to the surrounding streets, and use DDOT/DC Water water quality catch basins/inlets to treat those areas. Curbs would also contain breaks at tree wells, allowing stormwater runoff from the street to enter the tree well and filter through the soil. Because only the perimeter area of the site would drain into existing facilities, the amount of stormwater quantity addressed by the existing facilities would decline, resulting in long-term negligible adverse impacts.

The interior portions of the site would drain toward on-site stormwater management systems. Within the Eisenhower

Memorial, a stormwater retention facility would be installed below ground. Stormwater would be collected and would reach the vault via interior storm drains and inlets, or vaults. This collected stormwater would then be re-used for on-site landscape irrigation and/or for toilet flushing.

The site is currently relatively flat, although there are slight changes in elevation from the sidewalk to the building entrances; these elevations would remain the same. Although the Alternative 1 would incorporate slopes to direct stormwater runoff, the overall topography of the site would change little. The existing low velocities of stormwater flow would continue, resulting in minimal conveyance of sediment. These low velocities would pose a minor potential for conveyance of sediment into the stormwater collection system, resulting in a long-term negligible adverse impact.

Construction activities would cause temporary soil disturbance through the removal and replacement of sidewalks, plazas, and vegetation, thus exposing soil under the paved areas and vegetation. The exposed soils would potentially be subject to erosion due to stormwater runoff. However, the potential erosion would be temporary, as the disturbance of soil upon the completion of the project would be minimized through mitigation. This would result in short-term minor adverse impacts to water resources.

Based on the results of a 2010 geotechnical study at the site, the water table is expected to be between 21 and 28 feet below grade (AECOM, 2010a). Excavation for the Memorial is expected to be above the water table. However, the installation of some features, such as the columns, would reach the water table. Temporary dewatering of the site would be necessary, pumping groundwater

encountered from construction using a sump pit or a temporary pumping station, and would be limited in scope.

Mitigation

In order to address the potential erosion caused during construction, an erosion and sedimentation control plan and a stormwater management plan should be prepared. An erosion and sedimentation control plan includes measures to prevent erosion of cleared areas and the transport of soil and sediment. The stormwater management plan would address stormwater runoff and potential pollutant discharge. Implementation of mitigation measures specified in the sedimentation control plan and the stormwater management plan would avoid or minimize impacts on water resources.

Cumulative Impact

The cumulative projects and their affects would be the same as those described in the No Action Alternative. As stated above, Alternative 1 would result in short-term minor adverse impacts and long-term negligible adverse impacts on water resources. When combined with the short-term minor adverse impacts and long-term beneficial impacts on water resources, Alternative 1 would result in long-term beneficial cumulative effects on water resources. Construction activity resulting from these cumulative actions would result in short-term minor adverse cumulative impacts on water resources.

Conclusion

Alternative 1 would increase the impervious surface area from 79% to 80%. The amount of pervious surface available for groundwater

to infiltrate would decrease slightly. Stormwater from the sidewalk area would drain into existing stormwater inlets, resulting in a decrease of the overall amount of stormwater entering the existing DC Water system. The interior portion of the project site would slope to drain into on-site stormwater storage facilities that would be installed underground. Construction activities may include de-watering, if groundwater is encountered. However, given the limited range of such activities, they would likely have a short-term minor impact on groundwater. Stormwater could indirectly affect soils during site construction. Therefore, Alternative 1 would result in a short-term minor adverse impact on water resources, and a long-term negligible adverse impact on water resources. When combined with cumulative projects, Alternative 1 would result in short-term minor adverse cumulative impacts to water resources, and long-term negligible adverse cumulative impacts to water resources.

Water Resources Impacts of Alternative 2

Alternative 2 would change the water resource conditions of the site by removing approximately 0.61 acres of impermeable surface, primarily through the removal of the paved plaza and Maryland Avenue. As a result, impervious surfaces would cover approximately 64% of the site. The change in impervious surface would cause a decline in stormwater runoff.

Like Alternative 1, Alternative 2 would address water quality treatment for the existing impervious areas, as well as those generated by the Memorial design concepts, regardless of the extent of existing impervious conditions. Like Alternative 1, Alternative 2 would drain the interior portions of the Memorial toward on-site stormwater management systems. This collected stormwater would then be re-used for landscape irrigation and/or for toilet flushing.

Alternative 2 would have limited changes in topography, and therefore a minor potential for conveyance of sediment into the stormwater collection system, resulting in a long-term negligible adverse impact.

Like Alternative 1, construction activities under Alternative 2 would cause temporary soil disturbance through the removal and replacement of sidewalks, plazas, and vegetation, thus exposing soil under the paved areas and vegetation. However, this effect would be temporary and largely mitigated. The disturbance of soil upon project completion would be limited.

If construction activities reach the water table, temporary de-watering of the site would be necessary. Temporary de-watering would pump groundwater encountered from construction using a sump pit or a temporary pumping station, and would be limited in

scope. Therefore, the short-term impacts of Alternative 2 on water resources would be minor and adverse.

Mitigation

The mitigation would be the same as Alternative 1.

Cumulative Impact

The cumulative projects and their affects would be the same as those described in the No Action Alternative. As stated above, Alternative 2 would result in short-term minor adverse impact and long-term negligible adverse impacts on water resources. Cumulatively, Alternative 2 would result in short-term minor adverse effects and long-term negligible adverse effects on water resources.

Conclusion

Alternative 2 would reduce the impervious surface area of existing conditions from 79% to 64%. This would reduce the amount of stormwater on-site. The interior portion of the site would slope to drain internally to on-site stormwater storage facilities, decreasing the amount of stormwater entering the DC water system. Stormwater could indirectly affect soils during site construction. De-watering would be used if the water table is encountered during construction. Therefore, Alternative 2 would result in a short-term, minor adverse impacts on water resources and long-term negligible adverse on water resources. When combined with cumulative projects, Alternative 2 would result in short-term, minor adverse impacts and long-term negligible adverse on water resources.

Water Resources Impacts of Alternative 3

Alternative 3 would change the stormwater management conditions of the site by removing approximately 1.07 acres of impermeable surface, primarily from the removal of the paved plaza and Maryland Avenue as a through roadway. As a result, impervious surfaces would cover approximately 53% of the site, or 2.2 acres. This change would result in moderate decrease in stormwater runoff, resulting in long-term negligible adverse impacts.

Like Alternatives 1 and 2, Alternative 3 would address water quality treatment for the existing impervious areas, as well as those generated by the project design, regardless of the extent of existing impervious conditions. Interior portions of the Memorial would drain toward on-site stormwater management systems. Upon treatment, this water would then be re-used for landscape irrigation and/or as gray-water for toilet flushing.

Like Alternatives 1 and 2, Alternative 3 would have limited changes in topography and therefore a minor potential for sediment runoff into the stormwater collection system, resulting in long-term negligible adverse impacts.

Like Alternative 1 and 2, construction activities under Alternative 3 would cause temporary soil disturbance through the removal and replacement of sidewalks, plazas, and vegetation, thus exposing soil under the paved areas and vegetation. However, this would be temporary, as the disturbance of soil upon the completion of the project would be limited. If construction activities reach the water table, de-watering of the site would be necessary. This would pump groundwater encountered from construction using a sump pit or a temporary pumping station, and would be limited in scope.

Therefore, the short-term impacts of Alternative 3 would be minor and adverse.

Mitigation

The mitigation would be the same as Alternatives 1 and 2.

Cumulative Impact

The cumulative projects and their affects would be the same as those described in the No Action Alternative. As stated above, Alternative 3 would result in short-term minor adverse impacts and long-term negligible adverse impacts on water resources. When combined with the short-term minor adverse impacts and long-term beneficial impacts to water resources of the cumulative projects, Alternative 3 would result in long-term negligible adverse cumulative effects on water resources. Construction activity resulting from these cumulative actions would result in short-term minor adverse cumulative impacts on water resources.

Conclusion

Alternative 3 would reduce the impervious surface area from 79% to 58%, which would reduce the amount of stormwater on-site. The interior portion of the site would slope to drain internally to on-site stormwater storage facilities, which would decrease the amount of stormwater from within the Eisenhower Memorial site. Overall, Alternative 3 would result in short-term, minor adverse impacts and long-term negligible adverse impacts on water resources. When combined with cumulative projects, Alternative 3 would result in short-term minor adverse impacts and long-term negligible adverse on water resources.

This page is intentionally left blank

5.0 CONSULTATION AND COORDINATION

This page is intentionally left blank

5.1 AGENCY CONSULTATION AND COORDINATION

Public agencies and individuals were involved in the development of this EA through the public scoping process and the Section 106 consultation process. In February, 2010, a series of meetings were held to acquaint the parties involved with the project and to receive initial thoughts on the design concepts. The first such meeting occurred with the property owners (NPS and GSA); a second meeting followed with the agencies that have responsibility for reviewing the Memorial design, including DC SHPO, CFA, NCPC, and others; and a final meeting was held with a number of District of Columbia agencies, such as DCOP and DDOT, and other interested parties, such as DC Preservation League, ANC 6A, Committee to Save Our Mall, and the American Council on Historic Preservation.

NPS initiated the formal scoping process on April 19, 2010, when NPS distributed letters to cooperating agencies and stakeholders. In addition to mailing these notices, there were also notices included in the Federal Register and on NPS's Planning, Environment, and Public Comment (PEPC) website, which NPS uses to notify the public about NPS activities and actions. The public comment period was closed on May 30, 2010. Comments received during this period were taken into consideration in the development of this EA.

In addition, meetings took place with stakeholders through the coordinated Section 106 and NEPA processes. NPS initiated the Section 106 process by sending a letter to the DC SHPO and to the advisory Council on Historic Preservation on April 12, 2010. The first coordinated Section 106 and NEPA meetings occurred on April 22, 2010. Attendees included representatives from the Smithsonian Institution, NCPC, the Committee for 100, and DC Water; a community gardener; and private citizens. The focus of the meeting

was to provide background for the project and to describe the three initial design concepts. A second Section 106 Consulting Parties meeting took place on May 21, 2010. The purpose of this meeting was to: (1) review the design alternatives, (2) present the history of the site and the historic alignments of Maryland Avenue, SW, (3) discuss the historic resources in the area, and (4) determine the Area of Potential Effect. Additional Section 106 Consulting Parties meetings took place on March 30, 2011, June 20, 2011, and August 30, 2011 to review progressions of the design. The Section 106 process is ongoing, and outcomes will be formalized in an MOA. That document will identify measures to be undertaken in order to mitigate adverse effects to cultural resources. It is anticipated that continued consultation with the Consulting Parties would be called for in the MOA.

In addition to the NEPA and Section 106 processes, the design team made several presentations to government bodies and agencies. On April 21, 2010, the design teams presented three preliminary concepts to National Capital Memorials Advisory Commission for review (due to its advisory, rather than approval, capacity, NCMAC is not required to comply with NEPA). An informational presentation was made to CFA on May 20, 2010. NCPC heard an informational presentation on June 3, 2010. At these times, each body provided initial feedback and questions regarding the design concepts. These comments were considered as part of the design process. As the tenant of the neighboring Lyndon Baines Johnson Building, the Department of Education was also briefed on the design concepts in May, 2010.

CFA considered the conceptual plan on January 10, 2011, when it approved the design. NCPC had a reviewed and provided comments

on conceptual designs of the three alternatives contained in the EA. No formal action was taken by NCPC in its review of the concept designs.

The following federal and district agencies heard informational presentations of the three designs and provided initial feedback:

- U.S. Department of the Interior-NPS,
- General Services Administration (GSA),
- U.S. Department of Education,
- U.S. Commission on Fine Arts (CFA),

- National Capital Memorial Advisory Commission (NCMAC),
- National Capital Planning Commission (NCPC),
- District of Columbia State Historic Preservation Office, and
- District of Columbia Department of Transportation

Before construction, these bodies will review the final concept. Some of the approvals from NPS, NCMAC, CFA, and NCPC will occur before the NEPA process is completed, while others will occur after the process.

6.0 LIST OF PREPARERS

This page is intentionally left blank

6.1 LIST OF PREPARERS

AECOM (EA Preparers)

Alan Harwood, AICP
Project Director/Senior Environmental Planner

Claire Sale, AICP
Project Manager/Environmental Planner

Stephanie Dyer-Carroll, AICP
Cultural Resource Specialist

Christy Dolan, RPA
Cultural Resource Specialist

Heather Gibson, Ph.D., RPA
Cultural Resource Specialist

Melissa Hatcher
Senior Environmental Planner

Judith Charles
Senior Environmental Planner

Susan Bemis
Planner

Edward Switzer, LEED AP
Environmental Planner

Cary Simmons
Landscape Architect

Mike Jelen, PE
Senior Transportation Manager

Ian Bricknell, PE, C. Eng
Senior Transportation Engineer

Nick Dais, PE, PTOE
Senior Traffic Engineer

Sean Rousseau, PE
Traffic Engineer

Joseph Huesmann, PE
Senior Civil Engineer

This page is intentionally left blank

7.0 GLOSSARY AND ACRONYMS

This page is intentionally left blank

7.1 GLOSSARY OF TERMS

Affected Environment — The existing environmental conditions to be affected by a proposed action and alternatives at the time the project is implemented.

Alignment — The arrangement or relationship of several disparate configuration components along a common vertical or horizontal line or edge.

Best Management Practices (BMP) — Methods that have been determined to be the most effective, practical means of preventing or reducing pollution or other adverse environmental impacts.

Contributing Resource — A building, site, structure, or object that adds to the historic significance of a property or district.

Council on Environmental Quality (CEQ) — Established by Congress within the Executive Office of the President with passage of the National Environmental Policy Act of 1969. CEQ coordinates federal environmental efforts and works closely with agencies and other White House offices in the development of environmental policies and initiatives.

Cultural Resources — Archaeological, historic, or visual resources including prehistoric and historic districts, sites, buildings, objects, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reason.

Cumulative Impacts — Under NEPA regulations, the incremental environmental impact or effect of an action together with the effects of past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions.

Enabling Legislation — The law that gives appropriate officials the authority to implement or enforce regulations.

Endangered Species — Any species that is in danger of extinction throughout all or a significant portion of its range. The lead federal agency for the listing of a species as endangered is the U.S. Fish and Wildlife Service and it is responsible for reviewing the status of the species on a five-year basis.

Environmental Assessment (EA) — An environmental analysis prepared pursuant to the National Environmental Policy Act to determine whether a federal action would significantly affect the environment and thus require a more detailed environmental impact statement (EIS) or would not significantly affect the environment and thus conclude with a FONSI.

Environmental Impact Statement (EIS) — A report that documents the information required to evaluate the environmental impact of a project. It informs decision makers and the public of the reasonable alternatives that would avoid or minimize adverse impacts or enhance the quality of the environment.

Executive Order — Official proclamation issued by the president that may set forth policy or direction or establish specific duties in connection with the execution of federal laws and programs.

Finding of No Significant Impact (FONSI) — A document prepared by a federal agency showing why a proposed action would not have a significant impact on the environment and thus would not require preparation of an

Environmental Impact Statement (EIS). A FONSI is based on the results of an Environmental Assessment (EA).

Floodplain — The flat or nearly flat land along a river or stream or in a tidal area that is covered by water during a flood.

Mall — The area west of the United States Capitol between Madison and Jefferson Drives from 1st to 14th streets NW/SW. The east end of the Mall from 1st to 3rd streets NW/SW between Pennsylvania Avenue and Maryland Avenue is also known as Union Square. The Mall is characterized by the east–west stretch of lawn bordered by rows of American elm trees and framed by museums and other cultural facilities.

Massing — The conceptual form of a building that conveys proportion and size.

Monumental Core — The monumental core is the central area of federal Washington that includes the National Mall and the areas immediately beyond it, including the United States Capitol, the White House and President’s Park, Pennsylvania Avenue and the Federal Triangle area, East and West Potomac Parks, the Southwest Federal Center, the Northwest Rectangle, Arlington Cemetery, and the Pentagon.

National Environmental Policy Act (NEPA) — The Act as amended, articulates the federal law that mandates protecting the quality of the human and natural environment. It requires federal agencies to systematically assess the environmental impacts of their proposed activities, programs, and projects including the “no build” alternative of not pursuing the proposed action. NEPA requires agencies to consider alternative ways of

accomplishing their missions in ways that would be less damaging to the environment.

National Historic Preservation Act of 1966 (16 U.S.C. 470 et seq.) — The Act that established a program for the preservation of historic properties throughout the nation, and for other purposes.

National Mall — The area comprised of the Mall, the Washington Monument, and West Potomac Park. It is managed by the National Park Service’s National Mall & Memorials Parks.

National Register of Historic Places (NRHP) — A register of districts, sites, buildings, structures, and objects important in American history, architecture, archeology, and culture, maintained by the secretary of the interior under authority of Section 2(b) of the Historic Sites Act of 1935 and Section 101(a)(1) of the National Historic Preservation Act of 1966, as amended.

Record of Decision (ROD) — The ROD closes the EIS process. The ROD presents the basis for the decision, summarizing any mitigation measures to be incorporated in the project, and documenting any required section 4(f) approval.

Remediation — The removal of contaminants or pollution from soil, groundwater, sediment, or surface water for the protection of human health and the environment.

Scoping — Scoping, as part of NEPA, requires soliciting public and agency comments on the proposed action and its possible effects; establishing the depth of environmental analysis needed; determining analysis procedures, data needs, and task assignments.

Threatened Species — Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Viewshed — A viewshed includes a total visible area from a particular fixed vantage point.

Vista – A distant or long view, especially one seen through some opening such as an avenue or corridor, street wall, or the trees that frame an avenue or corridor; a site offering such a view.

Wetlands — The U.S. Army Corps of Engineers and the Environmental Protection Agency jointly define wetlands as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” Wetlands generally include swamps, marshes, bogs, and similar areas.

7.2 ACRONYMS

ACHP	Advisory Council on Historic Preservation	NASM	National Air and Space Museum
APE	Area of Potential Effect	NCMAC	National Capital Memorial Advisory Commission
ADT	Average Daily Traffic	NCPC	National Capital Planning Commission
CFR	Code of Federal Regulations	NEPA	National Environmental Policy Act
CFA	Committee of Fine Arts	NMAAHC	National Museum of African American History and Culture
CEQ	Council on Environmental Quality	NMAI	National Museum of the American Indian
CWA	Commemorative Works Act	NHPA	National Historic Preservation Act
DDOE	District Department of the Environment	NHRP	National Register of Historic Places
DCOP	District of Columbia Office of Planning	NAGPRA	Native American Graves Protection and Repatriation Act
DEd	U.S. Department of Education	NPS	National Park Service
DDOT	District Department of Transportation	PEPC	Planning, Environment, and Public Comment website
EA	Environmental Assessment	PA	Programmatic Agreement
EJ	Environmental Justice	SHPO	State Historic Preservation Office
EMC	Dwight D. Eisenhower Memorial Commission	SOF	Statement of Findings
EPA	Environmental Protection Agency	TCP	Traditional Cultural Property
FOB	Federal Office Building	USFWS	United States Fish and Wildlife Service
FONSI	Finding of No Significant Impact	VOA	Voice of America
FIRM	Flood Insurance Rate Map	VRE	Virginia Railway Express
GSA	U.S. General Services Administration	WMATA	Washington Metropolitan Area Transit Authority
HHS	U.S. Department of Health and Human Services		
LOS	Level of Service		
NAMA	National Mall & Memorial Parks		

8.0 REFERENCES

This page is intentionally left blank

8.1 REFERENCES

- AECOM. 2010a. *Geotechnical Engineering Report: Eisenhower Memorial Project*. Arlington, VA.
- AECOM. 2010b. *Environmental Hazards Report: Eisenhower Memorial Project*. Arlington, VA.
- AECOM. 2010c. *Maryland Avenue Closure Parking Revenue Study: Eisenhower Memorial Project*. Arlington, VA.
- AECOM. 2010. d. *Maryland Avenue Closure Analysis/Traffic Study Final Report: Eisenhower Memorial Project*. Arlington, VA.
- Benton, John F., Associate Director for Management and Public Programs, NASM, 2011. Personal communication with Daniel Feil, Executive Architect, EMC, January 5.
- Casey Trees Foundation. 2002, 2005, and 2006. Tree Inventory, <http://www.caseytrees.org/geographic/>, accessed May 2010. Washington, DC.
- Dafin, Joseph G., Fire Protection Engineer, GSA NCR. 2006. Personal communication with Daniel Feil, Executive Architect, EMC, August 3.
- DC Water Resources Research Center (DC WRRC). 1993. *Urban Land Use Activities and the Ground Water: A Background Survey of the District of Columbia*. Washington, DC.
- District of Columbia Office of Planning (DCOP). 2006. *Comprehensive Plan for the National Capital: District Elements*. Washington, DC.
- Earth Tech, Inc. 2005. *Preliminary Underground Conditions Assessment, Utilities and Soils Investigation, Traffic Circulation and Parking Assessment, Eisenhower Memorial Site Study*. Alexandria, VA.
- Earth Tech, Inc. 2006. *Draft Traffic Impact Study, Eisenhower Memorial Site Study*. Alexandria, VA.
- Eisenhower Memorial Commission (EMC). 2006. *Site Evaluation, Preferred Site*. Washington, DC.
- EMC. 2005. *Site Selection Report*. Washington, DC.
- Federal Emergency Management Agency (FEMA). 2010 Flood Insurance Rate Map. Washington, DC, Community Panel Number 1100010019C); Effective date September, 2010.
- General Services Administration (GSA). 2010. *Mary E. Switzer Building Site Improvements Finding of No Significant Impact and Environmental Assessment*. Washington, DC.
- Klem, Daniel, Professor of Ornithology and Conservation Biology, Muhlenberg College,. 2011. Personal communication with Kristen Murphy, NEPA Specialist, NPS, September 6.
- Koppie, Craig, Endangered Species Biologist, NPS. 2011. Personal communication with Scott Bates, Regional Wildlife Biologist, NPS, September 6.
- National Highway Research Board. 1971. *Parking Principles*. Highway Research Board Special Report Issue Number: 125. Washington, DC.

- National Park Service (NPS), 2011. NPS Public Use Statistics Office. <http://www.nature.nps.gov/stats/viewReport.cfm>, accessed January, 2011. Washington, DC.
- NPS, 2010. *National Mall Plan/ Environmental Impact Statement*. Washington, DC.
- NPS, 2006. *NPS Management Policies*. Washington, DC.
- NPS, 2006a. *Director's Order 12: Conservation Planning, Environmental Impact Analysis and Decision-making*. Washington, DC.
- NPS, 2003. *DC Visitor Transportation Survey*. Washington, DC.
- NPS and Disabled Veterans Memorial Foundation. 2005. *Proposed American Veterans Disabled for Life Memorial Environmental Assessment*. Washington, DC.
- NPS and Eisenhower Memorial Commission. 2006. *Proposed Dwight D. Eisenhower Memorial Site Selection Environmental Assessment*. Washington, DC.
- NPS, Advisory Council on Historic Preservation, and National Council of State Historic Preservation Officers, 2008. *Programmatic Agreement among the National Park Service, Advisory Council on Historic Preservation and the National Conference of State Historic Preservation Officers for Compliance with Section 106 of the NHPA*. Washington, DC.
- National Capital Planning Commission (NCPC). 1997. *Extending the Legacy: Planning America's Capital for the 21st Century*. Washington, DC.
- NCPC. 2001. *Memorials and Museums Master Plan*. Washington, DC.
- NCPC. 2004. *Comprehensive Plan for the National Capital: Federal Elements*. Washington, DC.
- NCPC. 2009. *Monumental Core Framework Plan: Connecting New Destinations with the National Mall*. Washington, DC.
- NCPC. 2010. *Capital Space: A Park System for the Nation's Capital*. Washington, DC.
- Smithsonian Institution, Office of Design and Construction. 1993. *Finding of No Significant Impact and Environmental Assessment for the National Museum of the American Indian on the National Mall*. Washington, DC.
- Smithsonian Institution. 2011. <http://newsdesk.si.edu/about/stats>, accessed August 1, 2011. Washington, DC.

APPENDIX A

DRAFT IMPAIRMENT DETERMINATION

This page is intentionally left blank

APPENDIX A: DRAFT IMPAIRMENT DETERMINATION

NPS Management Policies 2006, Section 1.7, explains the prohibition on impairment of park resources and values: “While Congress has given the Service the management discretion to allow impacts within parks, that discretion is limited by the statutory requirement (generally enforceable by the federal courts) that the Park Service must leave park resources and values unimpaired unless a particular law directly and specifically provides otherwise. This, the cornerstone of the Organic Act, establishes the primary responsibility of the National Park Service. It ensures that park resources and values will continue to exist in a condition that will allow the American people to have present and future opportunities for enjoyment of them.”

According to NPS *Management Policies, 2006*, Section 1.4.5, *What Constitutes impairment of Park Resources and Values*, impairment is “an impact that, in the professional judgment of the responsible National Park Service Manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values.” It also states that an impact to any park resource or value may, but does not necessarily, constitute impairment. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is

- necessary to fulfill specific purposes identified in the park’s establishing legislation;
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- identified in the park’s management plan or other relevant NPS planning documents as being of significance.

An impact would be less likely to constitute an impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of park resources or values and it cannot be further mitigated.

Per section 1.4.6 of *Management Policies 2006*, park resources and values that may be impaired include:

- The park’s scenery, natural and historic objects, and wildlife, and the processes and condition that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes and smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structure, and objects; museum collections; and native plants and animals;
- appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;
- the park’s role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and
- any additional attributes encompassed by the specific values and purposes for which the park was established.

Section 1.4.7 of *Management Policies 2006* states, “[i]n making a determination of whether there would be an impairment, an NPS

decision maker must use his or her professional judgment. This means that the decision-maker must consider any environmental assessments or environmental impact statements required by the National Environmental Policy Act of 1969 (NEPA); consultations required under Section 106 of the National Historic Preservation Act (NHPA); relevant scientific and scholarly studies; advice or insights offered by subject matter experts and others who have relevant knowledge or experience; and the results of civic engagement and public involvement activities relating to the decision.

NPS Management Policies 2006 further define "professional judgment" as "a decision or opinion that is shaped by study and analysis and full consideration of all the relevant facts, and that takes into account the decision-maker's education, training, and experience; advice or insights offered by subject matter experts and others who have relevant knowledge and experience; good science and scholarship; and, whenever appropriate, the results of civic engagement and public involvement activities relation to the decision."

As described in the EA, implementation of the NPS preferred alternative will not result in impairment of park resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified in the park's management plan or other relevant NPS planning documents as being of significance.

This determination on impairment has been prepared for the preferred alternative described in Chapter 2 of this EA. An impairment determination is made for all resource impact topics

analyzed for the Preferred Alternative. An impairment determination is not made for visitor use and experience or Park management and operations because impairment findings relate back to park resources and values, and these impact areas are not generally considered to be park resources or values according to the Organic Act, and cannot be impaired in the same way that an action can impair park resources and values.

The NPS has determined that implementation of the Preferred Alternative will not result in impairment of park resources and values of the National Mall and Memorial Parks. In reaching this determination, the design of the Eisenhower Memorial EA was reviewed to reaffirm the Park's purpose and significance, resource values, and resource management goals and desired future conditions. Based on a thorough analysis of the environmental impacts described in this EA, the public comments received, and the application of the provisions of the NPS Management Policies 2006, the NPS concluded that the implementation of the Preferred Alternative will not result in impairment of any of the resources and values of the National Mall and Memorial Parks. Although the action alternative entails physical changes and would add a new memorial to the existing the National Mall and Memorial Parks, the Preferred Alternative would have beneficial impacts to the project area's natural resources, would not alter historic fabric, and would be in keeping with NPS management policies and goals.

Cultural Resources

Archeology

Overall, the Preferred Alternative would not result in an impairment archeology. Given the proximity of the project site to Tiber, Goose, and St. James Creeks, prehistoric use of the area is likely. However,

intensive urban development may have already impacted such sites and features. Given the historic development on the project site, it is possible that sub-surface features associated with the mid-19th to mid-20th century residential and commercial uses remain capped below fill in at the Memorial site. Archeological resources at the site provide information about the history of the area, and are therefore necessary to the purpose and cultural integrity of the park. The Preferred Alternative would involve up to 10 feet of excavation for the installation of the blocks, reliefs, and large trees, as well as up to 60 feet of disturbance for the columns. To ensure the protection of archeological resources and minimize any potential adverse impacts, NPS is pursuing a phased approach to the identification and evaluation of archeological resources beginning with a Phase 1A study and geoarcheological consultation focusing on the areas of higher sensitivity for archeological resources, and applying the criteria of adverse effect. All work would follow the “Guidelines for Archaeological Investigations in the District of Columbia” (1998, as amended), the “Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation” (1983), and NPS “Director’s Order 28: Cultural Resource Management” (1998).

Historic Structures and Districts

There would be no impairment to any historic structures or districts as a result of implementing the Preferred Alternative. The Memorial site is bordered and bisected by streets identified in the historic L’Enfant Plan. The National Mall, a cultural landscape, lies to the north of the site. The Orville and Wilbur Wright Buildings and the Wilbur Cohen Building border the site, the Hubert Humphrey Building, the U.S. Botanical Garden, and the U.S. Capitol, all of which are listed, eligible, or likely to be eligible for listing in the future in the National Register of Historic Places, have visual connections to the site. The National Mall is under the stewardship of the NPS, and

represents a physical expression of the L’Enfant Plan, and is therefore necessary to fulfill the park’s purpose. The National Mall is a material element of the cultural integrity and enjoyment of the park.

Overall, the Preferred Alternative would result in beneficial impacts on the L’Enfant and McMillan Plans from the reestablishment of the historic alignment of Maryland Avenue and the removal of parking from the roadway, and moderate adverse impacts due to the placement of built forms at the edge of the Maryland Avenue cartway. In addition, there would be minor indirect visual impacts on the adjacent Mall buildings, the Wilbur and Orville Wright Buildings, the Wilbur Cohen Building, and the U.S. Capitol Building. Since the Memorial would not noticeably alter the visual context of the U.S. Botanic Garden, impacts to this resource would be negligible. Because it would result in minor to moderate adverse impacts, as well as beneficial impacts, to cultural resources. These impacts however, are not necessary to fulfill specific purposes identified in the park’s establishing legislation, nor are key to the natural or cultural integrity of the park or would inhibit opportunities for enjoyment of the park..

Cultural Landscapes

The Mall was a key component of the L’Enfant and McMillan plans for the city. In 2006, a cultural landscape inventory was completed for the Mall which identified contributing features and concluded that the Mall clearly has national significance. This resource is fundamental to the purpose of the Park, as NPS is charged with preserving and managing the Mall, and is a key element in the parks cultural integrity and the visitor experience. A cultural landscape inventory was also conducted for Union Square, which functions as

an intermediate landscape between the central landscape of the Mall and the U.S. Capitol Grounds

The Preferred Alternative would include ten columns and three tapestries that would reach an average of 78 in height and would be highly visible from NASM and the Hirshhorn Museum, but would not be visible from Union Square. The columns would be placed within an existing urban context and would be consistent in height with adjacent buildings, including the LBJ Building to the south. The Preferred Alternative would not result in impairment of park resources because the long-term adverse impacts on these buildings would be indirect and minor.

Visual Resources

Overall, the Preferred Alternative would not result in an impairment of visual resources associated with this area of the park. Two major view corridors that define the site, Maryland Avenue and 4th Street, are recognized as contributing vistas within the National Register nomination for the L'Enfant Plan. Maryland Avenue, which bisects the site, has visual connections to the U.S. Capitol. Other important views and vistas include Independence Avenue and views from the National Mall. The National Mall is under the stewardship of the NPS, and represents a physical expression of the L'Enfant Plan, and is therefore necessary to fulfill the park's purpose. The National Mall is a material element of the cultural integrity and enjoyment of the park.

The Preferred Alternative would result in a long-term moderate adverse impact on the vista northeast on Maryland Avenue due to the framing of the view with built elements; a long-term minor adverse impact to the vistas west on Independence Avenue and north on 4th Street; and a long-term moderate adverse impact on

the view southwest from the Mall at 4th Street. There would also be long-term moderate adverse impacts on views to and from the LBJ Building. These impacts however, are not necessary to fulfill specific purposes identified in the park's establishing legislation, nor are key to the natural or cultural integrity of the park or would inhibit opportunities for enjoyment of the park.

Soils

The Preferred Alternative would not result in an impairment of soils. The majority of the Memorial site is currently covered with 8-19 feet of fill material, followed by varying degrees of sand/silty clays, gravel, and sand. Productive soils make up 0.9 acres of the site. Because one of the purposes of NAMA is to preserve, interpret, and manage federal park lands in the national capital, including green spaces, soils are a resource necessary to fulfill the purposes of the park, as they are a key component of a functional green space. As such, they are an element of the opportunity for enjoyment of the park. The Preferred Alternative would decrease the amount of impervious surfaces and improve the soil matrix and drainage at the site, resulting in long-term beneficial impacts to soils in the project area. Although the proposed Memorial would result in soil disturbance and excavation, short-term impacts would only occur during construction and would not harm the long-term integrity of the soils in the project area.

Vegetation

The Preferred Alternative would not result in impairment to vegetation in the project area because the increased vegetation, including increases in the number and quality of the trees, would have long-term beneficial impacts. The total existing vegetated area of the Memorial site is 0.9 acres. The vegetation consists of

landscaped grasses, shrubbery, 44 trees, and community gardens. Because one of the purposes of NAMA is to preserve, interpret, and manage federal park lands in the national capital, including green spaces, vegetation is a resource necessary to fulfill the purposes of the park, as it is a key component of green space. The Preferred Alternative would replace the existing trees with 69 new trees that would be more robust and, in some cases, larger. The total vegetative area of the site would increase to 1.74 acres. The Preferred Alternative would result in the removal of existing vegetation during construction, but these impacts would be short-term and would not harm the long-term viability of vegetation in the project area.

Water Resources

The Preferred Alternative would not result in impairment water resources. There are no permanent bodies of surface water at the site. 79 percent of the site is covered by impervious surfaces. The stormwater runoff, which can carry pollutants from roadways, from the site drains into the combined storm and sanitary sewer system, or directly into the Potomac River. Groundwater has been detected between 21 and 28 feet at the site.

The Preferred Alternative would reduce the impervious surface area from 79% to 47%, which would reduce the amount of stormwater on-site. The interior portion of the site would slope to drain internally to on-site stormwater storage facilities, which would decrease the amount of stormwater runoff from within the Eisenhower Memorial site. Groundwater would be encountered at the site, which would require temporary de-watering of affected areas. Because the Preferred Alternative would result in short-

term, minor adverse impacts and long-term negligible adverse impacts on water resources..

This page is intentionally left blank

APPENDIX B

COORDINATION AND CONSULTATION

This page is intentionally left blank



United States Department of the Interior

NATIONAL PARK SERVICE
National Mall & Memorial Parks
900 Ohio Drive, S.W.
Washington, D.C. 20024-2000



D66 (NCR-NAMA)

April 12, 2010

Mr. Reid Nelson
Director
Office of Federal Agency Programs
Advisory Council on Historic Preservation
1100 Pennsylvania Avenue, N.W., Suite 803
Washington, D.C. 20004

Dear Mr. Nelson:

The National Park Service (NPS) has initiated consultation with the District of Columbia State Historic Preservation Officer (DCSHPO) regarding the establishment of a national memorial to Dwight D. Eisenhower, an undertaking which will have an effect upon historic properties under Section 106 of the National Historic Preservation Act.

The NPS and the Eisenhower Memorial Commission (the Commission) propose to establish the memorial on a site located at Maryland and Independence Avenues, and 4th and 6th Streets in southwest Washington, DC. The site includes portions of Reservation 5 adjacent to the National Mall and affords views of the U.S. Capitol Building. Congress authorized the proposed memorial to be "an appropriate permanent memorial to Dwight D. Eisenhower to perpetuate his memory and his contributions to the United States." The National Memorial to Dwight D. Eisenhower is an undertaking, in accordance with 36 CFR 800.3 of the regulations of the Advisory Council on Historic Preservation (ACHP).

The Commission, created in October 1999 by Public Law 106-79, is charged with memorializing Dwight D. Eisenhower's military achievements, presidential accomplishments, and lifetime of public service. Congress directed the Commission to consider and formulate plans for a permanent memorial, "including its nature, design, construction and location."

The establishment of the Eisenhower Memorial was the subject of Section 106 consultation and an environmental assessment (EA) in 2006. The EA resulted in the selection and approval of the site for the memorial. The site is located on land administered by the NPS, the lead federal agency for this project, and on land administered by the General Services Administration (GSA), as well as the District of Columbia.

In accordance with the National Environmental Policy Act (NEPA), the NPS and the Commission are currently preparing an EA on the development of the preferred memorial design. The GSA is a cooperating agency in this process. The NPS and the Commission intend to coordinate Section 106 consultation and review with NEPA per ACHP regulations (36 CFR 800.8). (NEPA). The NPS plans to consult the public per 800.3(e) in public meetings and through our Planning, Environment, and Public Comment (PEPC) website – www.parkplanning/nps.gov. It is anticipated that these outreach efforts will

TAKE PRIDE[®]
IN AMERICA 

accommodate both NEPA and the 106 process. The first meeting open to the public will be a public scoping meeting to be held from 6:00 to 8:00 p.m. on Thursday, April 22, 2010 in Room M09, of the Old Post Office Building, 1100 Pennsylvania Avenue N.W., Washington, DC 20004.

Conceptual design for the memorial are in the early stages of development. The Commission's design team, lead by Gehry Partners, intend to explore various concept alternatives, including the potential for closure of a segment of Maryland Avenue to vehicular traffic and the removal of limited structures on the site. The alternative designs will also address the constraints of the site, including adjacent building heights, setbacks from the perimeter streets and the Lyndon Baines Johnson Department of Education Building, and the preservation of the Maryland Avenue view corridor alignment with the U.S. Capitol Building.

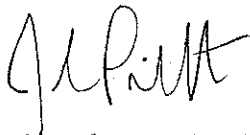
The NPS and the Commission acknowledge that construction and operation of the memorial could adversely affect historic resources. Key issues include the alignment of Maryland Avenue as envisioned in the L'Enfant Plan, the Maryland Avenue vista and historic cartway, the historic building lines on Independence Avenue, 4th Street, and 6th Street, the west elevation of the Department of Education Building, and the historic character of the Independence Avenue side of the National Mall.

We have enclosed a working list of consulting parties and a copy of the Area of Potential Effect information prepared in 2006 for your information. Both items are intended as a basis of discussion, subject to modification, so as to expedite the consultation process. We also anticipate that a Phase 1a and, if necessary, a Phase 1b archeological review of the site will be undertaken by the Commission to determine if archeological resources might be impacted by the design and construction of a the proposed alternatives.

At this conceptual design stage, the NPS is not prepared to make a formal determination of effect for the Dwight D. Eisenhower Memorial project, but looks forward to consultation with the (DCSHPO) on this and other steps in the process.

Because of the sensitive nature of the project site, and the potential for adverse effects, we are happy to invite the active participation of the Council in the Section 106 process. Please indicate whether you wish to do so or have any other questions about the undertaking by contacting me or Mark Isaksen, Chief, Resource Management, National Mall and Memorial Parks at (202) 245-4711.

Sincerely,



Superintendent, National Mall and Memorial Parks

Enclosure

cc:

Mr. Reid Nelson
Advisory Council on Historic Preservation

Ms. Nancy Witherell
National Capital Planning Commission

Bcc:

NAMA-Files

NAMA-Chrono

NAMA-Talken-Spaulding

NAMA-Lorenzetti

NAMA-Piltzecker

PWheelock:sab:04-12-10:Dwight D. Eisenhower_SHPO_Nelson



United States Department of the Interior

NATIONAL PARK SERVICE
National Mall & Memorial Parks
900 Ohio Drive, S.W.
Washington, D.C. 20024-2000



D66 (NCR-NAMA)

April 12, 2010

Mr. David Maloney
State Historic Preservation Officer
District of Columbia Office of Planning
2000 14th Street N.W., 4th floor
Washington, DC 20009

Dear Mr. Maloney:

Subject: Section 106 Consultation – National Memorial to Dwight D. Eisenhower

The National Park Service (NPS) wishes to formally initiate consultation with the District of Columbia Historic Preservation Office under Section 106 of the National Historic Preservation Act regarding the establishment of a national memorial to Dwight D. Eisenhower. The NPS and the Eisenhower Memorial Commission (the Commission) propose to establish the memorial on a site located at Maryland and Independence Avenues, and 4th and 6th Streets in southwest Washington, DC. The site includes portions of Reservation 5 adjacent to the National Mall and affords views of the U.S. Capitol Building. Congress authorized the proposed memorial to be “an appropriate permanent memorial to Dwight D. Eisenhower to perpetuate his memory and his contributions to the United States,” The National Memorial to Dwight D. Eisenhower is an undertaking, in accordance with 36 CFR 800.3 of the regulations of the Advisory Council on Historic Preservation (ACHP). The NPS is aware of and appreciates your participation in the earlier Section 106 consultation that occurred in 2006 and in concept design reviews already held on the project.

The Commission, created in October 1999 by Public Law 106-79, is charged with memorializing Dwight D. Eisenhower’s military achievements, presidential accomplishments, and lifetime of public service. Congress directed the Commission to consider and formulate plans for a permanent memorial, “including its nature, design, construction and location.”

The establishment of the Eisenhower Memorial was the subject of Section 106 consultation and an Environmental Assessment (EA) in 2006. The EA resulted in the selection and approval of the site for the memorial. The site is located on land administered by the NPS, the lead federal agency for this project, and on land administered by the General Services Administration (GSA), as well as the District of Columbia.

In accordance with the National Environmental Policy Act (NEPA), the NPS and the Commission are currently preparing an EA on the development of the preferred memorial design. The GSA is a cooperating agency in this process. The NPS and the Commission intend to coordinate Section 106 consultation and review with NEPA per ACHP regulations (36 CFR 800.8). (NEPA). The NPS plans to

TAKE PRIDE[®]
IN AMERICA 

consult the public per 800.3(e) in public meetings and through our Planning, Environment, and Public Comment (PEPC) website – www.parkplanning/nps.gov. It is anticipated that these outreach efforts will accommodate both NEPA and the 106 process. The first meeting open to the public will be a public scoping meeting to be held from 6:00 to 8:00 p.m. on Thursday, April 22, 2010 in Room M09, of the Old Post Office Building, 1100 Pennsylvania Avenue N.W., Washington, DC 20004.

Conceptual design for the memorial are in the early stages of development. The Commission's design team, lead by Gehry Partners, intend to explore various concept alternatives, including the potential for closure of a segment of Maryland Avenue to vehicular traffic and the removal of limited structures on the site. The alternative designs will also address the constraints of the site, including adjacent building heights, setbacks from the perimeter streets and the Lyndon Baines Johnson Department of Education Building, and the preservation of the Maryland Avenue view corridor alignment with the U.S. Capitol Building.

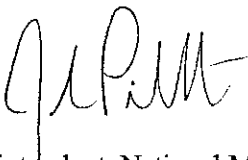
The NPS and the Commission acknowledge that construction and operation of the memorial could adversely affect historic resources. Key issues include the alignment of Maryland Avenue as envisioned in the L'Enfant Plan, the Maryland Avenue vista and historic cartway, the historic building lines on Independence Avenue, 4th Street, and 6th Street, the west elevation of the Department of Education Building, and the historic character of the Independence Avenue side of the National Mall.

We have enclosed a working list of consulting parties and a copy of the APE information prepared in 2006 for your consideration. Both items are intended as a basis of discussion, subject to modification, so as to expedite the consultation process. We also anticipate that a Phase 1a and, if necessary, a Phase 1b archeological review of the site will be undertaken by the Commission to determine if archeological resources might be impacted by the design and construction of a the proposed alternatives.

At this conceptual design stage, the NPS is not prepared to make a formal determination of effect for the Dwight D. Eisenhower Memorial project, but looks forward to consultation with the District of Columbia Preservation Office on this and other steps in the process.

Thank you again for your help on this important project. If you have any questions, please do not hesitate to call me or Mark Isaksen, Chief, Resource Management, National Mall and Memorial Parks at (202) 245-4711.

Sincerely,



Superintendent, National Mall and Memorial Parks

Enclosure

cc:

Mr. Reid Nelson
Advisory Council on Historic Preservation

Ms. Nancy Witherell
National Capital Planning Commission

Bcc:

NAMA-Files

NAMA-Chrono

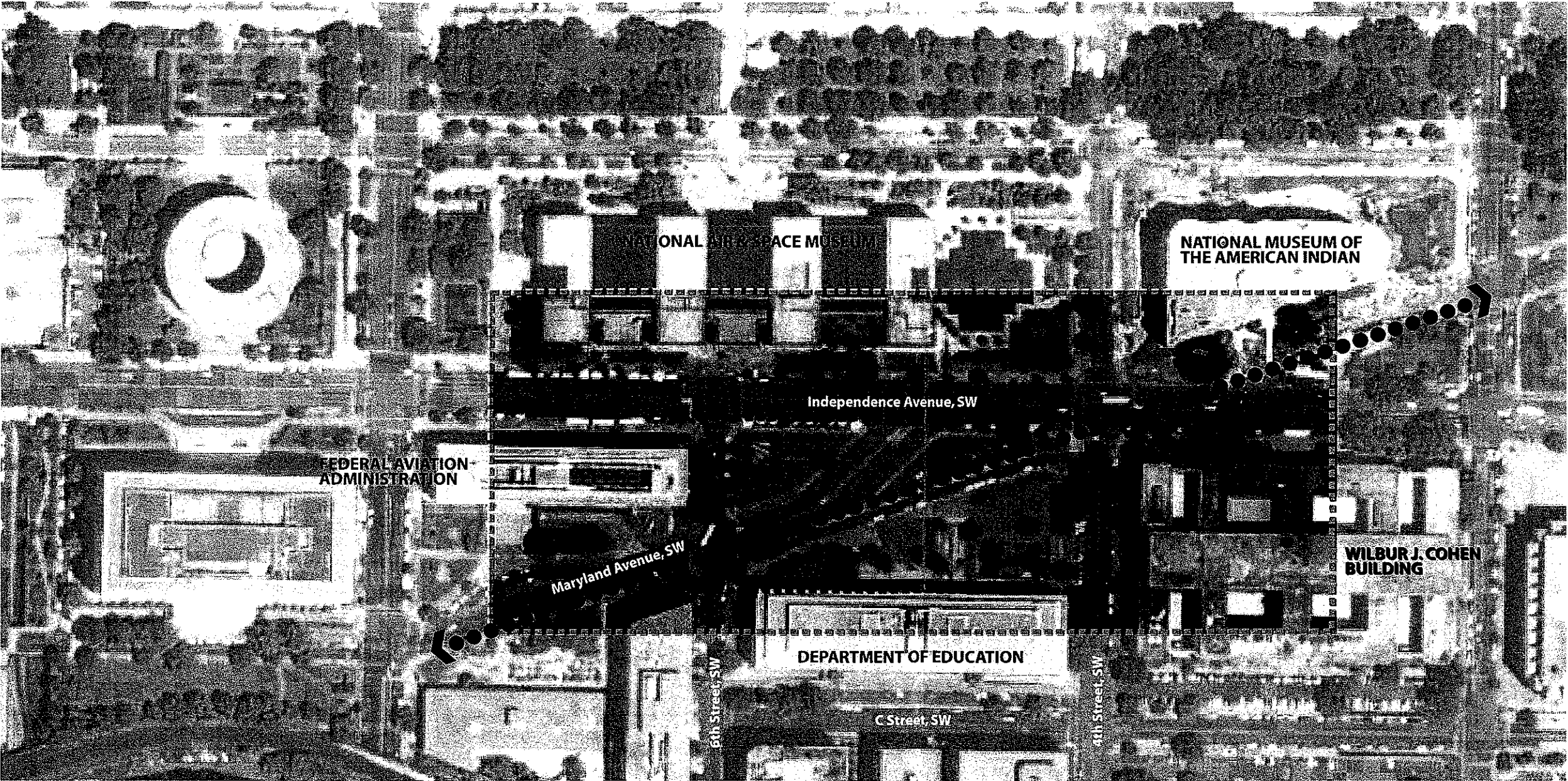
NAMA-Talken-Spaulding

NAMA-Lorenzetti

NAMA-Piltzecker

| PWheelock:sab:04-12-10:Dwight D. Eisenhower SHPO_Letter

Historic Preservation
Site Context



- Area of potential effect: visual perimeter of site and L'Enfant street corridors
- Adjoining public and cultural heritage uses
- Maryland Avenue right-of-way and view corridor
- L'Enfant Streets right-of-ways and View Corridors
- Buildings eligible for the National Register of Historic Places

Note: Preliminary area of potential effect is based upon initial recommendation of DC State Historic Preservation Office, 8/05



**PREFERRED
MEMORIAL SITE**



**PROPOSED AREA OF
POTENTIAL EFFECT**



**MARYLAND AVENUE
VIEW CORRIDOR**

This page is intentionally left blank

APPENDIX C

NCPC SITE SELECTION APPROVAL

This page is intentionally left blank

COMMISSION ACTION

NCPC File No. 6694



DWIGHT D. EISENHOWER MEMORIAL

Approval of Site and Design Principles

Bound by Independence Avenue, 4th and 6th Streets, SW,
and the Department of Education Headquarters
Washington, DC

Submitted by the National Park Service

September 7, 2006

Commission Action Requested

Approval of site selection and design guidelines pursuant to Public Laws 106-79, 107-117, 109-220, and the Commemorative Works Act (40 U.S.C. 8905).

Commission Action

Approves the site for the Dwight D. Eisenhower Memorial in the area bound by Independence Avenue, 4th and 6th Streets, SW and the Department of Education Building, as shown on NCPC Map File No. 1.71(73.10)42093, provided that the applicant design the Memorial using the Section 106 consultation process to meet, to the Commission's satisfaction, the following design principles:

Design Principles:

1. Preserve reciprocal views to and from the U.S. Capitol along Maryland Avenue, SW.
2. Enhance the nature of the site as one in a sequence of public spaces embellishing the Maryland Avenue vista.
3. Create a unified memorial site that integrates the disparate parcels into a meaningful and functional public gathering place that also unifies the surrounding precinct.
4. Reflect L'Enfant Plan principles by shaping the Memorial site as a separate and distinct public space that complements the Department of Education Headquarters and other surrounding buildings.
5. Respect and complement the architecture of the surrounding precinct.
6. Respect the building lines of the surrounding rights-of-way and the alignment of trees along Maryland Avenue.
7. Incorporate significant green space into the design of the memorial.

Does not adopt the applicant's draft design guidelines as submitted, and notes that additional or more detailed design guidelines may be developed and be incorporated in a Section 106 Memorandum of Agreement as consultation continues.

Finds that potential effects to the historic Maryland Avenue right-of-way and associated views and vistas merit special attention, and therefore underscores the requirement that the applicant obtain prior to and during design development the views of the District of Columbia Historic Preservation Officer (DC SHPO) and consulting parties through the Section 106 consultation process.

Notes that the Executive Director has issued a Finding of No Significant Impact (FONSI) for the site selection subject to the development and implementation of appropriate mitigation through adherence to the Design Principles and the Section 106 consultation process.

Deborah B. Young
Secretary to the National Capital Planning Commission

APPENDIX D

NCPC COMMENTS ON CONCEPT DESIGN ALTERNATIVES

This page is intentionally left blank

COMMISSION ACTION

NCPC File No. 6694



DWIGHT D. EISENHOWER MEMORIAL

BOUNDED BY INDEPENDENCE AVENUE, 4TH STREET, AND 6TH STREETS, SW, AND
BY THE
LYNDON B. JOHNSON - DEPARTMENT OF EDUCATION HEADQUARTERS
BUILDING

Southwest Washington, DC

Submitted by United States Department of the Interior – National Park Service

February 3, 2011

Commission Action Requested

Approval of comments on concept design alternatives, pursuant to Public Law 107-117, 109-220 and the Commemorative Works Act, as amended (40 U.S.C. 8905).

Commission Action

The Commission:

Supports the applicant's efforts to develop a memorial that utilizes modern and innovative ways to commemorate President Dwight D. Eisenhower in a manner that is unlike any other Presidential memorial in Washington, DC, including the possible use of the woven stainless steel tapestries as a memorial element with modifications.

Finds that the proposed concept designs are not yet consistent with the Commission's 2006 site approval action that requires the applicant to use the Section 106 process to design the Memorial to meet, to the Commission's satisfaction, the established design principles.

Finds that relative to the design principles the Maryland Roadway (Alternative #1) concept design satisfies the following principles:

- Enhance the nature of the site as one in a sequence of public spaces embellishing the Maryland Avenue vista.
- Reflect L'Enfant Plan principles by shaping the Memorial site as a separate and distinct public space that complements the Department of Education Headquarters and other surrounding buildings.
- Respect and complement the architecture of the surrounding precinct.
- Respect the building lines of the surrounding rights-of-way and the alignment of trees along Maryland Avenue.

And does not satisfy:

- Preserve reciprocal views to and from the U.S. Capitol along Maryland Avenue, SW.
- Create a unified memorial site that integrates the disparate parcels into a meaningful and functional public gathering place that also unifies the surrounding precinct.
- Incorporate significant green space into the design of the memorial.

Finds that relative to the design principles the Maryland Promenade (Alternative #2) concept design satisfies the following principles:

- Enhance the nature of the site as one in a sequence of public spaces embellishing the Maryland Avenue vista.
- Create a unified memorial site that integrates the disparate parcels into a meaningful and functional public gathering place that also unifies the surrounding precinct.
- Reflect L'Enfant Plan principles by shaping the Memorial site as a separate and distinct public space that complements the Department of Education Headquarters and other surrounding buildings.
- Respect and complement the architecture of the surrounding precinct.
- Respect the building lines of the surrounding rights-of-way and the alignment of trees along Maryland Avenue.
- Incorporate significant green space into the design of the memorial.

And does not satisfy:

- Preserve reciprocal views to and from the U.S. Capitol along Maryland Avenue, SW.

Finds that relative to the design principles the Maryland Park (Alternative #3) concept design satisfies the following principles:

- Enhance the nature of the site as one in a sequence of public spaces embellishing the Maryland Avenue vista.
- Incorporate significant green space into the design of the memorial.

And does not satisfy:

- Preserve reciprocal views to and from the U.S. Capitol along Maryland Avenue, SW.
- Create a unified memorial site that integrates the disparate parcels into a meaningful and functional public gathering place that also unifies the surrounding precinct.
- Reflect L'Enfant Plan principles by shaping the Memorial site as a separate and distinct public space that complements the Department of Education Headquarters and other surrounding buildings.
- Respect and complement the architecture of the surrounding precinct.
- Respect the building lines of the surrounding rights-of-way and the alignment of trees along Maryland Avenue.

Notes that the design principles are included as required mitigation in the Executive Director's Finding of No Significant Impact (FONSI) for site selection and must be met to mitigate otherwise potentially significant environmental impacts.

Notes that the applicant is required to develop the design through the Section 106 consultation process to fully meet the design principles to better relate the Memorial to the surrounding context, and to avoid, minimize, or mitigate any identified adverse effects as required by the National Historic Preservation Act.

Deborah B. Young
Secretary to the National Capital Planning Commission