
HERBERT C. HOOVER BUILDING EXTERIOR IMPROVEMENTS DRAFT ENVIRONMENTAL ASSESSMENT



WASHINGTON, DC

**PREPARED BY: U.S. GENERAL SERVICES ADMINISTRATION, IN COOPERATION WITH THE NATIONAL PARK SERVICE, THE
U.S. DEPARTMENT OF COMMERCE, AND THE NATIONAL CAPITAL PLANNING COMMISSION**

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DRAFT ENVIRONMENTAL ASSESSMENT

Responsible Agency:
General Services Administration

Cooperating Agency:
**National Park Service
U.S. Department of Commerce
National Capital Planning Commission**

Abstract:

The General Services Administration (GSA), in cooperation with the National Park Service, the U.S. Department of Commerce, and the National Capital Planning Commission, has prepared this Environmental Assessment (EA) for exterior improvements to the Herbert C Hoover Building in Washington, DC. The project includes ADA compliant ramps, a new entrance for the National Aquarium, and the installation of permanent perimeter security. This EA considers the environmental effects of implementing the No Action (no build) alternative and two action alternatives.

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1.0

PURPOSE AND NEED

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1.0 PURPOSE AND NEED

1.1 INTRODUCTION

The headquarters of the U.S. Department of Commerce (DOC), the Herbert C. Hoover Building (HCHB), is located at 1401 Constitution Avenue between 14th and 15th Streets, NW and Pennsylvania and Constitution Avenues, NW, just north of the National Mall and the Washington Monument, and east of the Ellipse (Page 1-3, Figure 1-1). Completed in 1932, the HCHB is seven stories high, has six courtyards, and comprises more than 1.9 million gross square feet of space. The building is owned by the General Services Administration (GSA) and occupied primarily by the DOC, however, the White House Visitor Center, operated by the National Park Service (NPS), and the National Aquarium (NAQ) also use space within the facility.

GSA is undertaking a major renovation of the HCHB. As part of this renovation, GSA is proposing a new entrance to the NAQ on Constitution Avenue, ADA ramps at entrance points, and permanent perimeter security. The impacts that the ADA improvements, new entrance, and perimeter security would have on the human environment are the subject of this Environmental Assessment (EA).

GSA is preparing this EA in accordance with NEPA, the Council on Environmental Quality (CEQ) regulations implementing NEPA [40 Code of Federal Regulations (CFR) 1500-1508 (1986)], the National Historic Preservation Act (NHPA) of 1966, as amended, and GSA's PBS *NEPA Desk Guide*. The National Capital Planning Commission (NCPC), DOC, and NPS are cooperating agencies in this effort.

This EA identifies two action alternatives and a No Action alternative. Potential environmental impacts are identified for each of the alternatives, including short-term construction-related impacts, long-term operational impacts, and cumulative impacts resulting from the implementation of the proposed action together with ongoing or planned projects in the area. In addition, recommended mitigation measures are provided to address adverse impacts. The study area for the assessment of impacts is generally within a one-block radius of the site, however, this area may expand or contract based on the resource discipline.

Ongoing and future renovation activities at the HCHB include façade cleaning, repointing and painting of exterior windows, and the installation of emergency generators and utility connections. It also includes the restoration of existing windows during installation of blast window protection; replacement of the flat roofs, electrical distribution, plumbing, and HVAC

systems; abatement of hazardous materials; installation of a new fire alarm and sprinkler system; remediation of existing structural issues; insulation of interior perimeter walls; retrofitting of stairwells to mitigate seismic collapse; upgrading accessibility features; and the restoration of the historic corridors. While these activities are not the subject of this EA, activities associated with the ongoing renovation work and utilities could have cumulative impacts to resource areas being analyzed in this EA. Ongoing renovation work is being completed in phases. Phase I is underway and has already been the subject of NEPA analysis. Phase I was determined to meet the criteria for a Categorical Exclusion in accordance with GSA's implementing regulations for NEPA. Future phases of the renovation work will be the subject of separate NEPA analysis. These activities can occur independently of the proposed action and are not dependent upon the proposed action for their justification. Prior to the commencement of any future renovation activities, GSA will ensure compliance with NEPA and Section 106 of the NHPA.



Figure 1-1
Project Site and the Surrounding Area
Source: EDAW, 2009

1.2 BACKGROUND

Designed principally by Louis Ayers, who represented the architectural firm of York and Sawyer on the Board of Consultants for the Federal Triangle, the monumental Neo-Classical style building was constructed between 1927 and 1932 to house the Department of Commerce (Page 1-4, Figure 1-2). The HCHB was one of a series of buildings that comprise the Federal Triangle. First conceived by the McMillan Commission at the turn of the 20th Century, the Federal Triangle is a 75-acre complex of government office buildings located between the U.S. Capitol and the White House; the HCHB forms the western end of the Triangle. The historic Federal Triangle buildings, including the HCHB, are contributing elements within the Pennsylvania Avenue National Historic Site.

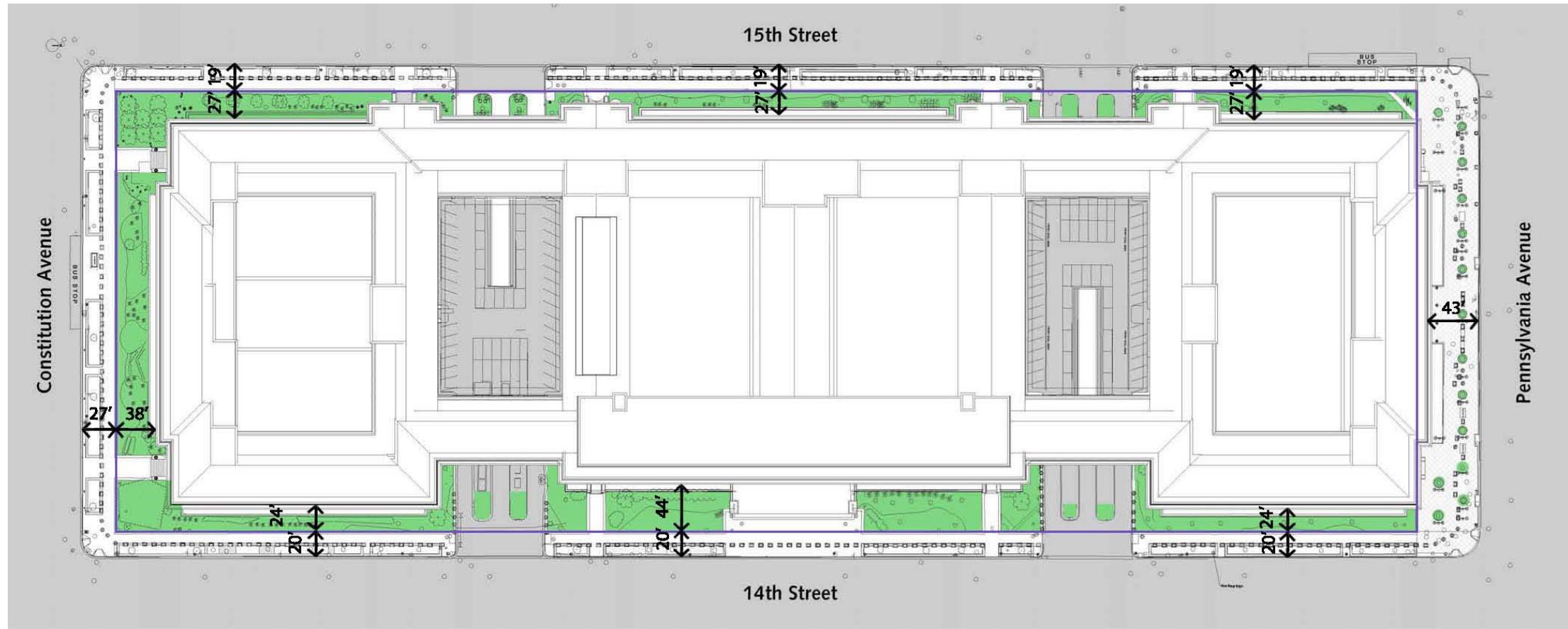


Figure 1-2
North Elevation of the HCHB
Source: EDAW, 2009

The massive HCHB is rectangular in plan, measuring approximately 320 feet by 1,020 feet. It has six interior courtyards accessed by drives along 14th and 15th Streets, NW (Page 1-7, Figure 1-3). Landscaped planting beds surround the building on 15th Street, Constitution Avenue, and 14th Street. The structure is seven stories high and contains more than 3,300 rooms joined by 1,000-foot long unbroken corridors. At the time it was constructed, the HCHB was the largest office building in the world.

The DOC currently occupies the majority of the building. Managed by the National Park Service (NPS), the White House Visitor Center is located in the north end of the structure and is accessed through an entrance on Pennsylvania Avenue (Page 1-4, Figure 1-2). The NAQ occupies space in the basement of the building.

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- Landscaped Areas
- Property Line

Figure 1-3
Existing Site Plan
Source: GGA, 2009

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1.3 PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose of and need for the proposed action is to enhance the building and building site and provide Level IV protection for the facility. The proposed action includes ADA improvements, a new entrance for the NAQ, and a permanent perimeter security measures.

DOC has proposed improvements to entrances around the HCHB. In accordance with the Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA), when rehabilitating, modernizing, or renovating a historic building, permanent upgrades to meet ADA standards are required. Improvements are necessary to bring the building up to ADA and/or Architectural Barriers Act (ABA) standards. A new entrance for the National Aquarium along Constitution Avenue would enhance the facility and make it more accessible to visitors.

In addition, DOC proposes to provide permanent perimeter security around the HCHB. Temporary planters currently serve a security function, but are unplanned and not visually consistent with the historic character of the structure (Page 1-10, Figure 1-4). Permanent security measures are necessary. These measures would be developed in accordance with the Interagency Security Committee (ISC) Security Design Criteria for New Federal Office Buildings and Major Modernization Projects approved by a concurrent of ISC membership on September 29, 2004. The ISC Security Design Criteria require that security measures be based on a building-specific risk assessment resulting in a recommended Level of Protection. The level of protection is determined by tenant function missions, adjacent facilities and targets, significance of the facility, and building size and location. The risk assessment for the HCHB has determined that a Level IV standard of protection is necessary. Designation as a Level IV facility implies that the building will house at least 450 federal employees and is likely to be: over 150,000 sf; have a high-volume of public contact; and house tenant agencies that could include high-risk law enforcement and intelligence agencies, courts, judicial offices, and highly sensitive government records. The proposed permanent perimeter security measures were developed to provide the level of protection that is required by the risk assessment. The two action alternatives were developed to reduce vulnerability from threats identified within the assessment.



Figure 1-4
Temporary Perimeter Security Measures along 14th Street
Source: EDAW, 2009

1.4 PUBLIC INVOLVEMENT AND AGENCY COORDINATION

1.4.1 Public Involvement and Agency Coordination

GSA initiated the public scoping process on February 11, 2009 through the distribution of letters to regulatory and review agencies requesting comment on the ADA improvements, new NAQ entrance, and permanent perimeter security at the HCHB. In addition, a notice was posted on the GSA website announcing the agency's intention to prepare an EA and to solicit public comment during the scoping period. The public comment period was open through March 13, 2009. Comments received during this period were taken into consideration in the development of this EA.

Consultation meetings have taken place through the coordinated Section 106 and NEPA process. The first consultation meeting occurred on March 11, 2008 and included GSA, the DC State Historic Preservation Office (SHPO), NCPC, and other interested agencies and individuals. The second consultation meeting occurred on May 26, 2009. Consultation meetings will continue throughout the environmental and historic preservation review process.

1.4.2 Public and Agency Comments on the EA

Organizations, agencies and individuals are encouraged to comment on the contents of this EA. Those listed in the notification list in the Appendix were notified by mail or email of the availability of the EA. In addition, the HCHB Exterior Improvements EA has been posted on GSA's website, on NCPC's website, and a copy of the EA is available for review at the offices of the National Capital Planning Commission at 401 Ninth Street, NW, North Tower, Suite 500, Washington, DC; Martin Luther King, Jr. Memorial Library, 901 G Street, NW, Washington, DC 20001; and GSA NCR, 301 7th Street, SW, Room 7600, Washington, DC, 20407.

Comments on the EA must be submitted during the 30-day comment period. This period began on October 16, 2009 and concludes on November 16, 2009. Comments should be mailed, emailed, or faxed to:

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1.5 ENVIRONMENTAL ISSUES CONSIDERED

This EA has been prepared to assess the impacts that the proposed ADA improvements, new NAQ entrance on Constitution Avenue, and permanent perimeter security would have on the natural and man-made environment. Resource areas considered include:

- cultural resources (historic, archaeological, and visual resources);
- socioeconomic resources (land use, planning policies, public space, visitation and visitor experience, and economic and fiscal resources);
- natural resources (vegetation and water resources);
- transportation (vehicular circulation, parking, public transportation, and pedestrian circulation);
- utilities/infrastructure (utilities, stormwater management, and hazardous materials);
- air quality; and
- noise.

A number of issues were considered for evaluation at the outset of the process, but were eliminated from detailed study within the EA because there would be no impacts or impacts would be negligible. These issues, and the rationale for their elimination, are as follows:

Demographics and Environmental Justice: The addition of a new entrance, ADA improvements and permanent perimeter security would not directly affect the demographics of the area. In addition, there would be no disproportionately high and adverse effects on human health or the human environment of minority and/or low-income populations. Thus, there would be no impacts to demographics or environmental justice as a result of the proposed action.

Geology, Topography, and Soils: The HCHB lies within an area known to contain fill. In addition, the site was heavily disturbed due to the construction of the HCHB. Thus, impacts to geology, topography and soils are unlikely.

Wildlife: Wildlife on the HCHB site is limited to urban species, such as grey squirrels, house sparrows, and pigeons. These species would likely be temporarily dispersed during construction. However, urban wildlife would be expected to return to the site once construction is complete.

Solid Waste: The proposed improvement would not result in a long-term increase in solid waste generated at the site. There would be a short-term increase in solid waste during construction; however, this increase would be minimal. Thus, solid waste was dismissed from detailed analysis within this EA.

2.0

ALTERNATIVES

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2.0 ALTERNATIVES

2.1 INTRODUCTION

This EA evaluates two action alternatives and a No Action alternative. The two action alternatives differ in the location and treatment of perimeter security around the HCHB. The other components of the alternatives, the ADA improvements and new entrance to the NAQ, are consistent between the two action alternatives.

2.2 ALTERNATIVES CONSIDERED BUT DISMISSED FROM DETAILED ANALYSIS

GSA has considered numerous designs that would replace the temporary planters currently located around the perimeter of HCHB. A wide array of options with differing degrees of threat protection were considered. One of the alternatives considered would not have employed perimeter security elements. Due to the level of threat identified, this alternative would have required the hardening of the entire HCHB. However, it was determined that this measure would have been cost prohibitive and would have resulted in a substantial loss of the building's historic fabric. As a result, this alternative was dismissed from detailed analysis within the EA.

Another alternative considered was setting the security features even further back from the building face, in order to achieve the 50' standoff distance recommended to achieve a medium level of security. This would have required extending the sidewalk into the current roadway. This was determined to be unacceptable due to the impacts to areas roadways and thus was dismissed from detailed analysis. The two alternatives considered within this EA were refined during the public scoping process and represent a range of potential design options.

2.3 ALTERNATIVE A: PREFERRED ALTERNATIVE

Under Alternative A, ADA improvements would be undertaken at the HCHB site (Page 2-5, Figure 2-1). Handicapped accessible ramps would be installed on either side of the main entrance on 14th Street, at the two entrances that flank the south motor court on 15th Street, at a new entrance to the NAQ on Constitution Avenue, and inside two of the motor courts. At the Secretary's entrance on 15th Street (the northern entrance to the southern motor court), the doorway would require slight widening to meet ADA requirements. In addition, raised crosswalks would be constructed across the four entrances to the

motor courts on 14th and 15th Streets, such that the crosswalks would be level with the sidewalks. Finally, curb ramps would be installed at each of the four corners of the site and at the north and south entrances to the motor courts on 14th Street.

In addition to ADA improvements, a new entrance would be constructed for the new NAQ location on Constitution Avenue (Page 2-7, Figure 2-2). The entrance pavilion would span the length of the building's central colonnaded bay, projecting approximately 37 feet from the face of the building, and rising six feet above the sidewalk grade along Constitution Avenue. A 42-inch wall would define the edges of the new entrance, breaking at the center of the structure to allow entry to the space below. Access would be provided through ramps that would run behind the low wall to doors partially below grade. The new entrance structure would be constructed primarily of glass and would contain a large fish tank that would be visible both from the entrance ramps and from the inside of the building (Page 2-8, Figure 2-3).

Under Alternative A, permanent perimeter security would be constructed a minimum of two feet from the curblines on Constitution Avenue, 15th Street, Pennsylvania Avenue, and 14th Street. These elements would replace the existing temporary planters that encircle the building (Page 2-9, Figure 2-4). The minimum two-foot setback from the curb is intended to allow car doors to swing open. Permanent security elements could include tree boxes, fence panels, bollards, and hardened street furnishings such as benches, lightpoles, and bike racks. The elements would generally be approximately 36" high with a maximum clear space of 48", while still meeting ADA guidelines. Bollards would be employed at each of the four corners, at the building entrances, and at the entrances to the motor courts. At the corners and at the driveways, the bollards would cross the sidewalk. Retractable bollards would replace the current clamshell-style barriers at each of the entrances to the motor courts. The retractable bollards would be approximately 30" high and would be spaced approximately 48" apart on center. On 15th Street, the retractable bollards would be a single line near the curb. On 14th Street, there would be two rows of retractable bollards at each of the entrance drives set back substantially from the sidewalk.

There would also be changes to the landscaping at the HCHB. The landscaped panels would generally be retained on 15th Street, and on 14th Street north and south of the main entrance. At the building's main entrance, the landscaped areas would be modified in order to accommodate the new ADA ramps. The large planting bed on Constitution Avenue would also require removal due to the new entrance.

On the roadways surrounding the site, the existing street trees would be replaced, due to the location of perimeter security elements along the curblin. In addition, several magnolias around the building would be removed or relocated (Page 2-11, Figure 2-5). On 14th Street, the southernmost magnolia (#4) would be relocated to the corner of 15th Street and Constitution Avenue, and the northernmost magnolia (#1) would be removed due to its health. On Constitution Avenue, the magnolia adjacent to the eastern steps (#5) would be relocated to the corner of Constitution Avenue and 14th Street, and the magnolia adjacent to the western steps (#6) would be removed due to the construction of the NAQ entrance. On Fifteenth Street, the two southernmost magnolias (#7 and #8) would be removed due to the location of the ADA ramps. Magnolia #9 would be removed due to the utility improvements occurring with the overall building renovation. Those magnolias that would be removed have been determined to have insufficient root systems to survive relocation.

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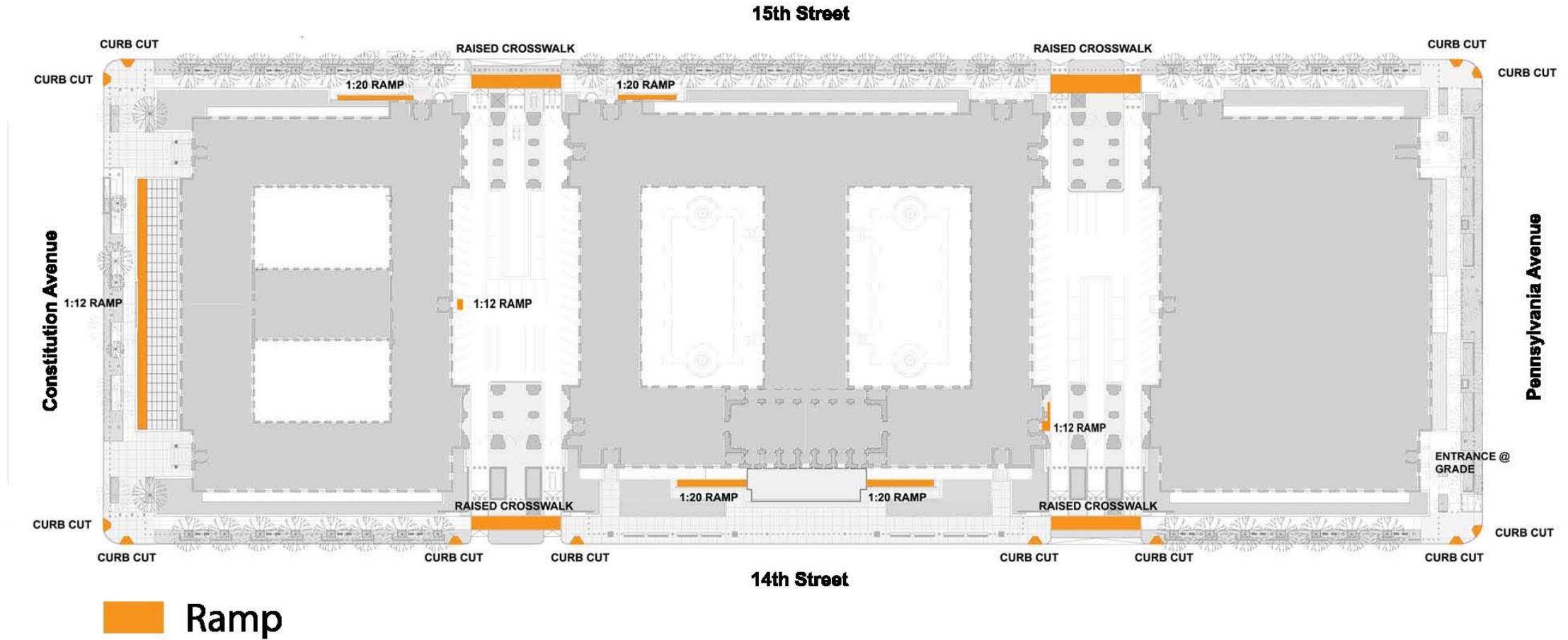


Figure 2-1

Proposed ADA Improvements at the HCHB

Source: GGA, 2009

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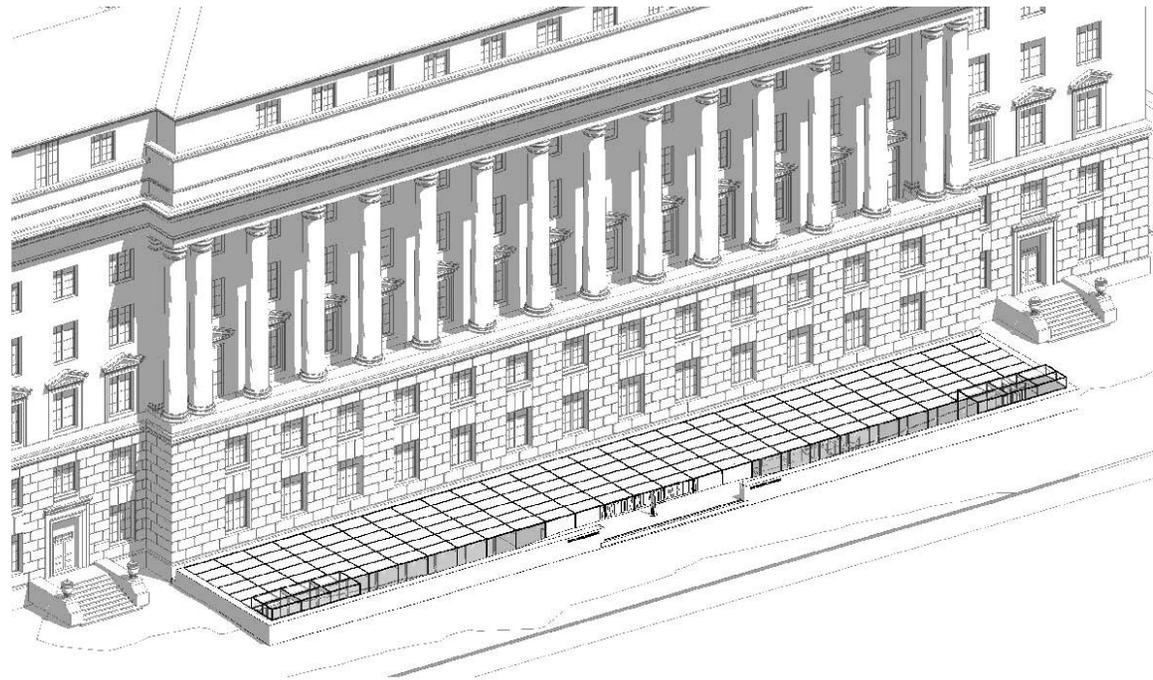


Figure 2-2
Perspective Showing the New Entrance to the NAQ on Constitution Avenue
Source: GGA, 2008



Herbert C. Hoover Building Modernization

GGA

Figure 2-3
Section Through New Entrance to NAQ on Constitution Avenue
Source: GGA, 2008

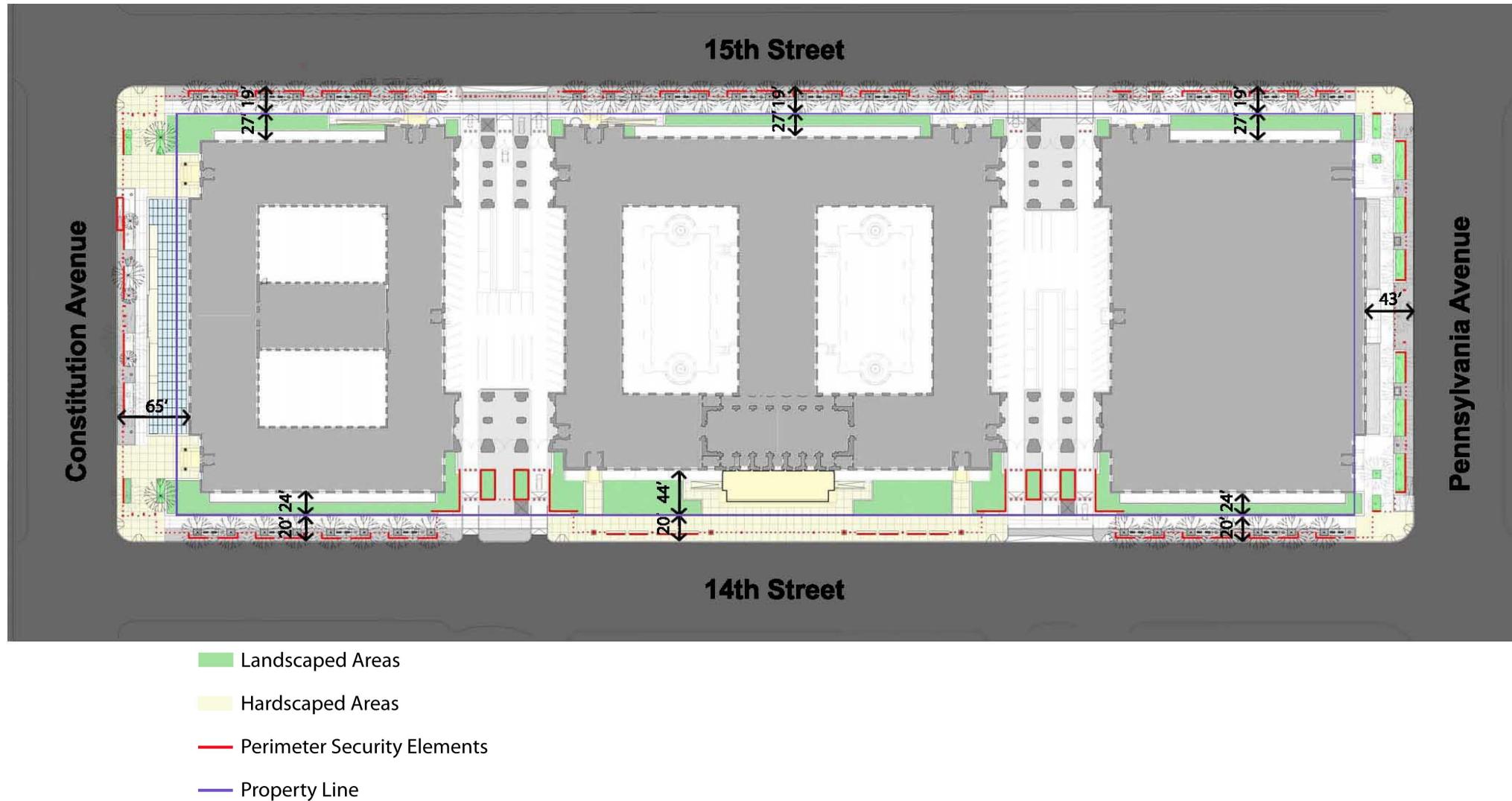


Figure 2-4
Alternative A Perimeter Security Plan
Source: GGA, 2009

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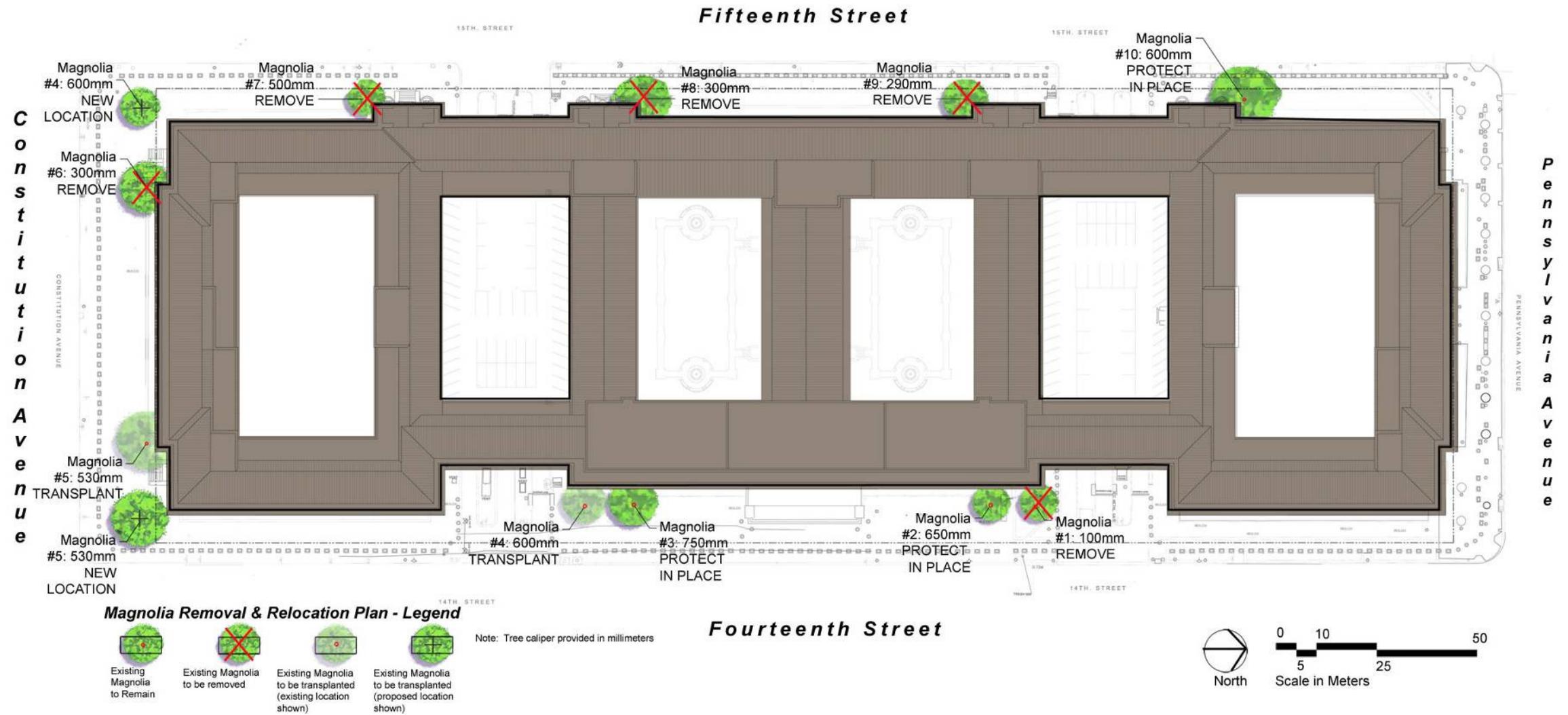


Figure 2-5
Magnolia Removal and Relocation Plan
Source: Rhodeside and Harwell, 2009

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2.4 ALTERNATIVE B

Under Alternative B, ADA improvements would be undertaken at the HCHB, including handicapped accessible ramps at the building entrances, raised crosswalks at the motor courts, and curb ramps at the corners of the site. These improvements would be identical to those proposed under Alternative A (Page 2-5, Figure 2-1). In addition, a new entrance would be constructed for the NAQ on Constitution Avenue. The entrance would be the same as that proposed under Alternative A (Page 2-7, Figure 2-2 and Page 2-8, Figure 2-3).

Under Alternative B, permanent perimeter security would be constructed at the property line, between the sidewalk and the building face, on 14th and 15th Streets, replacing the existing temporary planters that encircle the building (Page 2-15, Figure 2-6). Permanent security elements could include fence panels, seatwalls, terrace walls, bollards, and hardened benches. The elements would generally be approximately 36" high with a maximum clear space of 48", while still meeting ADA guidelines. On Pennsylvania Avenue, a combination of bollards and tree boxes would be employed. These elements would be sited between the sidewalk and the curblin since there is no established building yard. On Constitution Avenue, the new entrance pavilion would be hardened to serve a security function. On each of the four elevations, bollards would be employed at the entrances to the building. In addition, bollards would define the edges of two small plazas located immediately east and west of the new entrance pavilion on Constitution Avenue. Further, retractable bollards would replace the existing clamshell-style barriers at each of entrances to the motor courts. The retractable bollards would be approximately 30" high and would be spaced approximately 48" apart on center. On 15th Street, the retractable bollards would be in a single line inside of the sidewalk. On 14th Street, there would be two rows of retractable bollards at each of the entrance drives set back substantially from the sidewalk.

There would also be changes to the landscaping at the HCHB. The landscaped panels would generally be maintained on 15th Street, and on 14th Street north and south of the main entrance. At the building's main entrance, the landscaped areas would be modified in order to accommodate the new ADA ramps. The large planting bed on Constitution Avenue would also require removal due to the new entrance.

The street trees on Constitution Avenue, 14th Street and 15th Streets would not be disturbed by the installation of perimeter security elements, the NAQ entrance, or the ADA improvements. On Pennsylvania Avenue, the placement of perimeter security measures along the curblin would require the replacement of the existing street trees. In addition, several magnolias around the building would be removed or relocated (Page 21, Figure 2-5). On 14th Street, the southernmost magnolia (#4) would be relocated to the corner of 15th Street and Constitution Avenue, and the northernmost magnolia (#1) would be removed due to its health. On Constitution Avenue, the magnolia adjacent to the eastern steps (#5) would be relocated to the corner of Constitution Avenue and 14th Street, and the magnolia adjacent to the western steps (#6) would be removed due to the construction of the NAQ entrance. On Fifteenth Street, the two southernmost magnolias (#7 and #8) would be removed due to the location of the ADA ramps. Magnolia #9 would be removed due to the utility improvements occurring with the overall building renovation. Those magnolias that would be removed have been determined to have insufficient root systems to survive relocation.



- Landscaped Areas
- Hardscaped Areas
- Perimeter Security Elements
- Property Line

Figure 2-6
 Alternative B Perimeter Security Plan
 Source: GGA, 2009

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2.5 NO ACTION ALTERNATIVE

Under the No Action Alternative, exterior improvements would not be undertaken at HCHB. The entrance to the NAQ would remain on 14th Street, and temporary perimeter security measures would continue to be employed around the outside of the building. In addition, ADA accessible ramps would not be installed and thus the building would not meet current standards for accessibility. However, utility improvements associated with the building renovation would still occur, and thus some disturbance to the landscape panels and the street trees would occur.

2.6 COMPARISON OF ALTERNATIVES

The relocation of the NAQ entrance and ADA compliant ramps would be consistent for both Alternative A and Alternative B. In accordance with the Americans with Disabilities Act, when rehabilitating, modernizing, or renovating a historic building, permanent upgrades to meet ADA standards are required. Improvements are necessary to bring the building up to ADA and/or Architectural Barriers Act standards. Both action alternatives would provide ADA compliant ramps, raised crosswalks, and curb ramps at each entrance the motor courts along with all four corners. The relocation of the NAQ entrance would seek to attract tourists to the facility by providing an enhanced entrance at a more prominent location.

The major difference between the two action alternatives is the location of the permanent perimeter security features. Both alternatives could employ a series of tree boxes, fence panels, bollards, and hardened street furnishings to accomplish this. Alternative A locates these features as close as allowable to the curblines. This design seeks to maximize the amount of defended standoff between any potential threats and the building face. Alternative A best meets the purpose and need of the project by providing the largest defended standoff and maximizing the level of protection for HCHB.

Alternative B locates the proposed security features along the landscaped edge of the site on three sides, rather than along the curblines. Alternative B would thus provide permanent perimeter security, however, it would not provide the same level of protection as under Alternative A.

Under the No Action Alternative, improvements would not occur at the site and the temporary planters would remain. This would not meet GSA's purpose and need for the proposed action. Tables 2-1 and 2-2 compare the dimensions and impacts of each of the alternatives.

**Table 2-1
Approximate Distances from Building Face and Curbline to Perimeter Security**

Building Side	Existing: Building Face to Building Yard	Approximate Distance from Building Face to Perimeter Security		Existing: Building Face to Curbline	Approximate Distance from Curbline to Perimeter Security	
		Alt. A	Alt.B		Alt. A	Alt. B
15 th Street, NW	27'	44'	27'	46'	2'	19'
Pennsylvania Avenue	0'	37'	37'	43'	6'	6'
14 th Street, NW	24'	40'	24'	44'	4'	20'
Constitution Avenue	11'	59'	32'	65'	6'	33'

Note: These are typical distances along each of the roadways. Due to the irregularity in the building footprint, distance between the building yard and building face varies.

Table 2-2: Comparison of Impacts

Resource	Alternative A	Alternative B	No Action Alternative
Archaeological Resources	Potential moderate impact	Potential minor to moderate impact	Negligible impact
Historic Resources	Minor to moderate adverse impacts to HCHB, L'Enfant Plan, Pennsylvania Ave. National Historic Site; negligible impacts to adjacent properties	Moderate adverse impacts to HCHB; minor to moderate adverse impacts to Pennsylvania Ave. National Historic Site; minor impacts to L'Enfant Plan; negligible impacts to adjacent properties	Negligible impact
Visual Resources	Minor adverse impact on 14 th and 15 th Streets; minor to moderate on Constitution Avenue; moderate adverse impacts on Pennsylvania Avenue.	Minor adverse impact on 14 th and 15 th Streets; minor to moderate on Constitution Avenue; moderate adverse impacts on Pennsylvania Avenue.	Negligible impact
Land Use	Beneficial long-term impact from relocation of NAQ entrance	Beneficial long-term impact from relocation of NAQ entrance	Negligible impact
Planning Policies	Moderate adverse impact	Minor adverse impact	Negligible impact
Public Space	Moderate adverse impact.	Minor adverse impact	Negligible impact
Economic/Fiscal Resources	Beneficial impact	Beneficial impact	Negligible impact
Visitation and Visitor Experience	Minor adverse impact due to pedestrian flow; beneficial impact from relocation of NAQ entrance	Beneficial impact from relocation of NAQ entrance	Negligible impact
Vegetation	Moderate adverse impact.	Minor to moderate adverse impact.	Negligible impact
Water Resources	Negligible impact	Negligible impact	Negligible impact

Resource	Alternative A	Alternative B	No Action Alternative
Vehicular Circulation	Short-term moderate adverse impacts; long-term negligible impacts	Short-term moderate adverse impacts; long-term negligible impacts	Negligible impact
Parking	Short-term minor adverse impact; negligible long-term impact	Short-term minor adverse impact; negligible long-term impact	Negligible impact
Public Transportation	Negligible impact	Negligible impact	Negligible impact
Pedestrian Circulation	Short and long-term moderate adverse impacts	Short and long-term minor adverse impacts	Negligible impact
Utilities	Negligible impact	Negligible impact	Negligible impact
Air Quality	Short-term minor adverse impacts and negligible long-term impacts	Short-term minor adverse impacts and negligible long-term impacts	Negligible impact
Noise Levels	Short-term minor to moderate adverse impacts and negligible long-term impacts	Short-term minor to moderate adverse impacts and negligible long-term impacts	Negligible impact

2.7 SELECTION OF PREFERRED ALTERNATIVE

GSA and the U.S. Department of Commerce have identified Alternative A as the preferred alternative. Alternative A best meets the purpose and need for providing Level IV security required for this building. A number of organizations including the Interagency Security Committee (ISC), General Service Administration, and Department of Defense recognize the importance of providing a safe and secure environment for Level IV buildings and recommend, at minimum, a 50 foot standoff distance to preserve life and protect facility assets. A 50-foot defended standoff distance is not achievable at HCHB because that action would result in the obstruction of public streets, therefore, even the preferred alternative reflects the assumption of increased risk by GSA and tenant agencies.

According to independent blast studies of the HCHB by the Hinman Group and the Systech Group, Inc., an explosive device detonated at the curb causes far less facade, window, and structural damage and can provide a safer level of protection for the building's occupants who include the Secretary of Commerce, federal employees, contractors, visitors, guests, and foreign dignitaries.

Alternative B (the building yard alternative) would not meet the purpose and need to provide for a Level IV security at the building. This alternative represents an even further reduction of defended standoff from Alternative A. If an explosive device is detonated at this proposed perimeter security line, major structural loss to several floors was calculated to occur. Significant façade and window failure could increase the number of personal injuries and lives lost.

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3.0

AFFECTED ENVIRONMENT

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3.0 AFFECTED ENVIRONMENT

3.1 CULTURAL RESOURCES

This section documents the potential archaeological, historic, and visual resources of the HCHB and surrounding area. This information was derived from various sources including National Register nominations, field surveys, historic maps, and previous studies. It was determined that the only impacts to archeological resources would occur as a result of ground disturbing activities. Therefore, the Area of Potential Effects (APE) for archeological resources includes the area between the face of the HCHB and the curblines on the north, east, south, and west sides of the building (Page 3-2, Figure 3-1). Through the Section 106 process, the APE for historic resources was defined based on the potential for the proposed security improvements to be visible from historic properties surrounding the site. Thus, the APE is bounded by 12th Street, NW between Pennsylvania Avenue and Madison Drive; west on Madison Drive to 14th Street, NW; south on 14th Street to Independence Avenue, SW; west on Independence Avenue to 17th Street, NW; north on 17th Street, NW to Pennsylvania Avenue, NW; east on Pennsylvania Avenue to 15th Street, NW; south on 15th Street to F Street, NW; east on F Street to 13th Street, NW; south on 13th Street to Pennsylvania Avenue, NW; and southeast on Pennsylvania Avenue to 12th Street, NW. This area is illustrated in Figure 3-1. The APE is identical to the study area for visual resources.

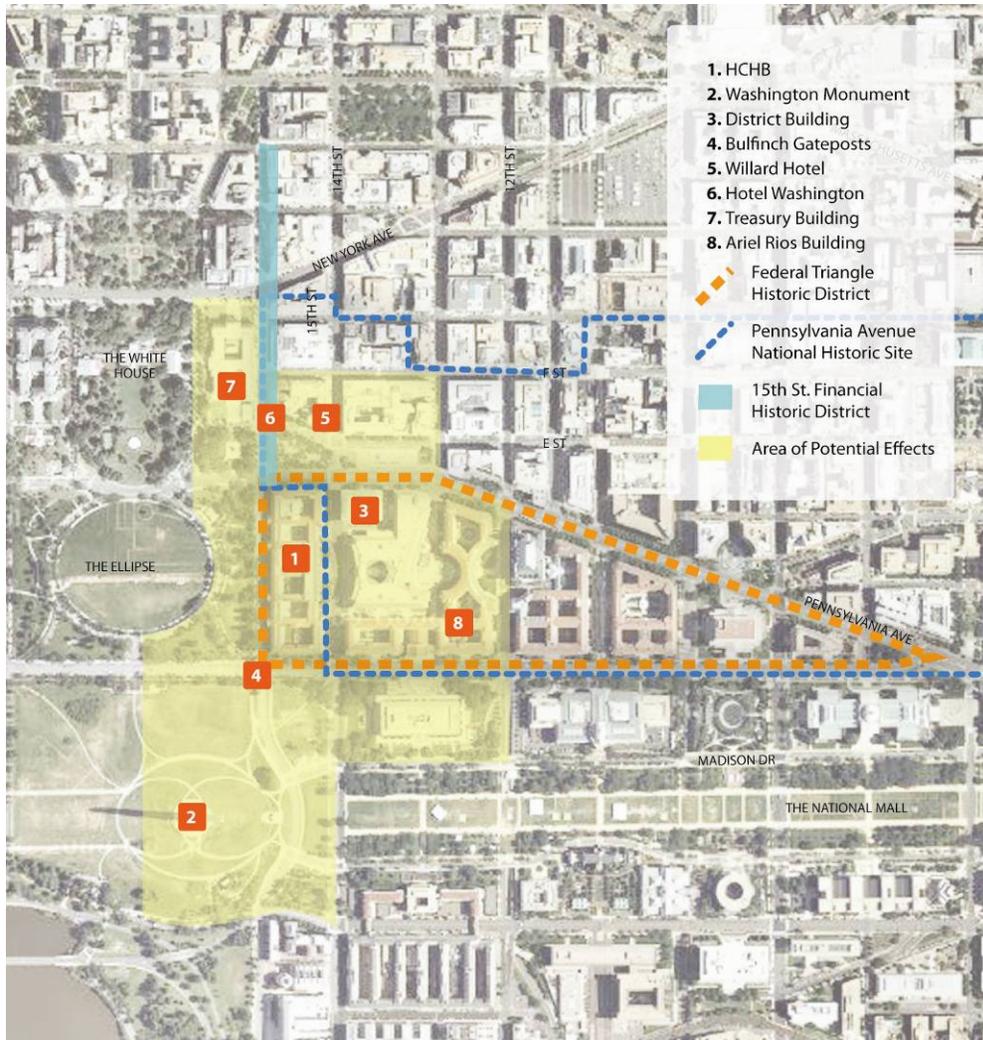


Figure 3-1
Area of Potential Effects

Source: EDAW 2009

3.1.1 Archaeological Resources

Prior to the 19th Century, Tiber Creek, also known as Goose Creek, roughly followed the current alignment of Constitution Avenue. A small tributary to the Potomac River, the creek drained a large portion of the downtown area, emptying to the Potomac River at approximately 17th Street. The southern portion of the HCHB site lies within the historic creek bed and the northern portion of the site comprised parts of the waterway's north bank. The land around the creek was historically marsh. Native American settlements are known to have existed within the Tiber Creek area.

Pierre Charles L'Enfant's Plan dramatically altered the landscape of Washington, DC. Conceived in 1791, the plan called for a canal along the historic alignment of Tiber Creek. The Washington Canal, as it was named, was intended to facilitate the transportation of goods to the center of the city. The first phase of the canal construction occurred between 1810 and 1815, extending the canal from the mouth at 17th Street, NW as far east as 6th Street, NW, including the southern portion of the HCHB site. A towpath was likely constructed on north side of the canal, requiring extensive fill. By the 1860s, the canal was considered to be a health hazard, containing sewage and large amounts of debris. As part of a massive public works campaign in the city, the canal was replaced by a sewer line and B Street was created, running along the southern edge of the HCHB site.

Development of the neighborhood around the HCHB began in the early 19th century with a mix of residential, industrial, and commercial uses. At mid-century, the area was racially and ethnically mixed and contained a large number of boarding houses. By the turn of the century, the neighborhood had become a red light district dominated by saloons and brothels. At this point, discussions began about rehabilitating the area for government office buildings.

According to Sanborn Fire Insurance Maps, the HCHB site was fairly densely developed from the late 19th through the early 20th centuries. By 1888, the site contained lumber yards and warehouses, a boiler shop, a machine shop, and a stone yard. These uses were clustered at the southern end of the site. The northern portion of the site contained residential structures, a wagon shop, a carriage facility, and several liveryies. A later Sanborn map, dating from 1903-1916, documents new uses on the site including a nurses home, an upholstery shop, a print shop, and a wholesale liquor shop. By 1927-1928, the small scale development had been cleared from the southern portion of the site and replaced by a temporary federal building, the U.S. Treasury Department – War Risk Building.

No archaeological studies have been completed on the HCHB site. In 2005, a geoarchaeological study was undertaken by NPS for the lower portion of the Ellipse. While the study did unearth an assemblage of late nineteenth-century architectural rubble, artifacts, bones, and shells, it is believed that these remains were due to the use of the area in the late 19th century for the disposal of debris. The study further concluded that the north bank of Tiber Creek between 17th and 15th Streets, just west of the HCHB site, had been destroyed, and thus Native American and Colonial-era remains were unlikely.

In 2007 and 2008, Phase I and Phase II archaeological surveys were completed for a site south of the HCHB across Constitution Avenue, the future location of the National Museum of African American History and Culture (NMAAHC). The Phase I field investigations indicated that the site contains areas of a preserved natural landscape surface that corresponds to the south bank of Tiber Creek, as well as a possible early nineteenth-century landscape surface that was created in conjunction with the extension of the Washington Canal within the channel of Tiber Creek. The Phase II study focused on the identification of potential prehistoric archaeological resources and 19th century remains of the Washington Canal. The survey resulted in a small collection of prehistoric artifacts. No intact structural features were identified related to the Canal, although the remains of a carriageway was found. This feature may relate to the formal landscaping of the Washington Monument Grounds.

Additional archaeological surveys have been completed for parcels north, east, south, and west of the HCHB. East of the HCHB, Phase II and Phase III surveys were completed as part of the construction of the Ronald Reagan Building, resulting in a large data recovery effort. Surveys west and south of the HCHB site documented additional prehistoric and historic archaeological resources. Due to the location of the HCHB site on Tiber Creek and the previously documented prehistoric resources in the vicinity of the site, there is the potential for prehistoric archeological resources to be present at the HCHB. However, given the disturbance from the construction of the building, intact resources are unlikely within the building yard. Due to the development of the site in the 19th century and the location of the Washington Canal along what is now Constitution Avenue, it is also possible that historic archaeological resources exist on and around the HCHB site.

3.1.2 Historic Resources

Site

HCHB

The largest of the Federal Triangle buildings constructed during the period of significance, the HCHB was designed principally by Louis Ayers as a representative of the architectural firm of York and Sawyer (Page 3-6, Figure 3-2). The monumental Neo-Classical style building was constructed between 1927 and 1932 to house the Department of Commerce. It is a rectangular shaped structure, approximately 320 feet by 1,020 feet, filling almost three city blocks between Pennsylvania and Constitution Avenues, and 14th and 15th Streets, NW. The structure rests on a rusticated base, and has Doric colonnades on its south, east and north sides (Page 3-7, Figure 3-3). There are four Doric pedimented porticoes on its west side (Page 3-8, Figure 3-4), and the structure is capped by a red tile roof. The HCHB forms the western end of the Federal Triangle and is a contributing element within the Federal Triangle Historic District and the Pennsylvania Avenue National Historic Site.



Figure 3-2
The Southern Elevation of the HCHB
Source: EDAW, 2009



Figure 3-3
The Eastern Elevation of HCHB
Source: EDAW, 2009



Figure 3-4
The Western Elevation of HCHB
Source: EDAW, 2009

Federal Triangle

The Federal Triangle is a 75-acre complex of federal office buildings that spans an area between the US Capitol Building and the White House. Conceived by the Supervisory Architect to the Secretary of the Treasury in 1896, The Federal Triangle became a key component of the McMillan Plan just after the turn of the century. With the passage of the Public Buildings Act in 1926, a detailed plan was developed for the area and construction began shortly thereafter. The goal of the project was to provide government agencies with buildings that would meet their specific needs, while also maintaining a consistent

aesthetic expression of the authority of the federal government. The Triangle buildings are characterized by limestone facades, red tile roofs, classically inspired colonnades, and pedimented porticoes. Key buildings within the district include the HCHB, the Old Post Office, the Post Office Department (now called the New Post Office), the District Building, the Internal Revenue Service (IRS) Building, the Justice Department Building, the National Archives, and the Federal Trade Commission Building. The Federal Triangle Historic District was listed in the DC Inventory of Historic Sites in 1968. It has also been determined eligible for listing within the National Register and is a component of the larger Pennsylvania Avenue National Historic Site.

Pennsylvania Avenue National Historic Site

The Pennsylvania Avenue National Historic Site borders the Pennsylvania Avenue between the White House and the Capitol Building. This area was the city's historic commercial core, while Pennsylvania Avenue is the country's national ceremonial route. The Site includes more than 100 contributing features located around the avenue, including buildings of varying styles, statues, memorials, and parks, dating from c. 1791-1930. The area includes the monumental civic buildings that make up the Federal Triangle. The area was designated a National Historic Site and listed in the National Register of Historic Places in 1966. It was listed in the DC Inventory of Historic Sites in 1973.

L'Enfant and McMillan Plans

The L'Enfant Plan is one of the country's most important achievements in urban planning. Completed by Pierre Charles L'Enfant in 1791, the Baroque plan is characterized by a system of radiating avenues, associated vistas, and parks overlaid on an orthogonal grid of streets (Page 3-10, Figure 3-5). It delineates the physical and symbolic character of the city through its arrangement of roadways, views, parks, and buildings.

At the turn of the century, the McMillan Commission expanded on the L'Enfant Plan, extending the Mall to the west and terminating several key visual axes with development of the city's Monumental Core. An example of City Beautiful planning, the McMillan Plan emphasized the creation of formal settings for buildings and the organization of important spaces along central axes. The plan was intended to serve as a long-term guide for the development of the city.



Figure 3-5

L'Enfant Plan for the City of Washington, 1791

Source: NCPC

The Plan of the City of Washington is listed in the National Register of Historic Places as well as the District of Columbia Inventory of Historic Sites. In addition, a draft National Historic Landmark Nomination was completed in 2002. The nominations recognize components of the McMillan Plan that contribute to, extend, or enhance the L'Enfant Plan. The National Register nomination for the L'Enfant Plan identifies historic streets, reservations and appropriations, and vistas that contribute to the plan's significance.

The HCHB is bordered by four L'Enfant roadways. Pennsylvania Avenue, known as "America's Main Street," physically and visually connects the White House and its grounds to the Capitol Building. Both the avenue and its associated vista are

identified as contributing elements to the plan. Laid out in 1931 to form the northern boundary of the Mall, Constitution Avenue is identified as a Major Street under the McMillan Plan, while its associated vista is also a contributing feature. Fourteenth and Fifteenth Streets, NW, which border the site to the east and west, are considered to be contributing streets. In addition to roadways and vistas, there are several Original Appropriations and reservations that surround the site. President's Park, Original Appropriation Number 1, lies directly west of the site, comprising the White House Grounds and the Ellipse-South Grounds. A portion of Original Appropriation Number 2, the National Mall, lies southeast of the site. Original Appropriation Number 3, the Washington Monument Grounds, lie directly south of the Commerce Building. Finally, Reservation 617, Pershing Park, and Reservations 32 and 33, Freedom Plaza, lie north and northeast of the site, respectively.

Other Historic Resources within the APE

National Mall

The National Mall extends from the Capitol Grounds in the east to the Potomac River in the west, and from Constitution Avenue in the north to Independence Avenue in the south, including West Potomac Park, the Washington Monument Grounds, and the Mall as conceived by L'Enfant (Page 3-12, Figure 3-6). 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 National Register in 1966. It is also a component of the National Register Multiple Property Nomination for the L'Enfant Plan. In 2006, a cultural landscape inventory was completed for the portion of the National Mall east of the Washington Monument Grounds. The inventory identified numerous contributing features and concluded that, while not a National Historic Landmark, the Mall clearly has national significance.



Figure 3-6
The National Mall
Source: EDAW, 2009

The Washington Monument

Memorializing the country's first president, the Washington Monument is both an important example of Egyptian Revival architecture and a notable engineering accomplishment (Page 3-13, Figure 3-7). In 1833, the Washington National Monument Society announced its intention to construct a massive monument on the site. The society held design competition and in 1836 Robert Mills was awarded the commission. His vision featured the Washington Monument as a simple Egyptian obelisk surrounded by a colonnaded rotunda. Although construction began in 1848, it stopped due to funding issues and the onset of the Civil War. When construction resumed in 1878, changes were made to Mills' original design, resulting in the unadorned Egyptian obelisk that now visually connects the US Capitol with the Lincoln Memorial along the greensward of the National Mall. The Washington Monument is listed in both the National Register of Historic Places and the DC Inventory of Historic Sites.



Figure 3-7
The Washington Monument from Constitution Avenue
Source: EDAW, 2009

Bulfinch Gatehouses and Gateposts

The Bulfinch Gatehouse and Gateposts were constructed at the foot of the Capitol Grounds after 1814. They were removed from the Capitol Grounds in 1874 and moved to their current locations along the National Mall and the side panels of the Ellipse in 1880. Rusticated gateposts lie south of the HCHB site on Constitution Avenue and are capped with acanthus motifs and volutes (Page 3-14, Figure 3-8). The gateposts and gatehouses were listed in the DC Inventory of Historic Sites in 1964 and in the National Register of Historic Places in 1973.



Figure 3-8
Bulfinch Gateposts along Constitution Avenue

Source: EDAW, 2009

District Building

Designed by the firm of Cope and Stewardson and constructed between 1904 and 1908, the District Building occupies a full city block between D and E Streets, and 13-1/2 and 14th Streets. The Beaux-Arts style building has a rusticated grey granite base with rectangular inset windows (Page, 3-15, Figure 3-9). The second, third and fourth stories are tied together by a line of Corinthian pilasters capped by a full entablature. The fifth, or attic, story is pierced by a series of rectangular windows and adorned with sculptures representing architecture, painting sculpture, music, commerce, engineering, agriculture and statesmanship. The District Building was listed in the DC Inventory of Historic Sites in 1964 and the National Register in 1972.



Figure 3-9
The District Building
Source: EDAW, 2009

Willard Hotel

The Willard Hotel was designed by architect Henry Hardenbergh and constructed between 1900 and 1904. Lauded as DC's first skyscraper, the Willard marries French inspired Beaux-Arts classical details with steel frame and concrete construction (Page, 3-16, Figure 3-10). In keeping with its classical design, each of the facades is organized both vertically and horizontally into three-part compositions. The structure is capped by a convex Mansard roof. The Willard was listed in the DC Inventory in 1964 and the National Register in 1974.



Figure 3-10
The Willard Hotel
Source: EDAW, 2009

The W Hotel (The Hotel Washington)

Constructed between 1917 and 1920, the W Hotel (formerly the Hotel Washington) lies north of HCHB at the corner of Pennsylvania Avenue and 15th Streets. Designed in the style of an Italian Renaissance palazzo, the hotel is eight stories high with a two-story attic (Page 3-17, Figure 3-11). The building has a steel frame and is clad in limestone and brick with intricate sgraffito decoration on the upper stories. It was listed in the DC Inventory of Historic Sites in 1973 and in the National Register in 1995. The building lies within both the Pennsylvania Avenue National Historic Site and the 15th Street Financial Historic District.



Figure 3-11
The W Hotel

Source: EDAW, 2009

Treasury Building

The Treasury Building was erected between 1836 and 1869. The work of a series of master architects over more than 30 years, the US Treasury Building is one of the most outstanding examples of Greek Revival civic architecture in the country (Page 3-18, Figure 3-12). The original design by Robert Mills called for an E-shaped building that would open west to the White House, with a long classical façade on 15th Street. Only a portion of the building was constructed under Mills; in 1855 Thomas U. Walter prepared plans for extending the Treasury Building. His design established the ultimate rectangular layout, porticoed façade, and courtyards. The Treasury Building was listed in the DC Inventory in 1964 and as a National Historic Landmark in 1971. It is also contained within the Pennsylvania Avenue National Historic Site and the Fifteenth Street Financial Historic District.



Figure 3-12
U.S. Treasury Department
Source: EDAW, 2009

15th Street Financial Historic District

The 15th Street Financial Historic District is a linear collection of monumental Beaux-Arts commercial buildings that runs north from the HCHB. The buildings were constructed between 1900 and 1930 to house the city's leading financial institutions, and are characterized by monumental forms, the use of classical vocabulary, and strong sculptural details. The 15th Street Financial Historic District was listed in the DC Inventory in 1981 and determined eligible for listing in the National Register in 1984.

Ariel Rios Federal Building

The Ariel Rios Federal Building, originally known as the New Post Office, was constructed in the early 1930s as part of the McMillan Plan, which sought to redevelop the Federal Triangle. The building was designed by the architects William Adams Delano and William T. Aldrich and epitomizes the neoclassical styling of the buildings located within the Federal Triangle. It is semicircular in design and with a Doric colonnade on the building's west elevation. The structure is located across from the Old Post Office and, as its name would indicate, housed the Post Office Department until 1971 when the United States Postal Service replaced the Department. The building was renamed the Ariel Rios Federal Building in 1985 and currently houses the Environmental Protection Agency. It is a contributing element within Federal Triangle and the Pennsylvania Avenue National Historic Site.

3.1.3 Visual Resources

Methodology

This section documents the existing visual character of the HCHB and the surrounding area. The study area for visual resources was determined by estimating the visibility of the HCHB, and the proposed exterior improvements, to viewers from public places and adjacent historic resources. Views are afforded along the roadways that border the site, including 14th Street, NW, 15th Street, NW, Constitution Avenue, and Pennsylvania Avenue. Views are also available from open spaces surrounding the HCHB, including the National Mall, south of the site, Pershing Park, north of the site, Freedom Plaza, northeast of the site, and the Ellipse (President's Park South), west of the site.

Visual Environment

14th Street, NW/East of the Site

14th Street, NW is a wide, two-way street that borders the HCHB on its east side. Both sides of the roadway are defined by mid-rise buildings, with narrow building yards. The sidewalk along 14th Street adjacent to the HCHB is approximately eight feet wide. Mature street trees and planting beds flank the sidewalks, lending a green character to views along the face of the building. A line of planters is located between the sidewalk and the curblin. These elements are not consistent with the historic character of the building and form a visual barrier between the pedestrian space and the roadway.

14th Street and its associated view corridor connect the National Mall and Washington Monument with Pershing Park and other points north of the site. The view corridor is framed by mid-rise buildings of varying vintages. Looking north from the site along 14th Street, the foreground of the view is open, framed by the trees and grass at Pershing Park and Freedom Plaza (Page 3-21, Figure 3-13). The more distant view up 14th Street is distinctly urban, tightly defined by buildings and street trees (Page 3-23, Figure 3-15). The view south from the site is defined by the massive forms of the HCHB and the Ronald Reagan Building to the east. The west side of the street is lined by mature trees. The view to the south terminates at the Mall due to the large tree canopies (Page 3-22, Figure 3-14).



Figure 3-13
View north on 14th Street, NW from Pennsylvania Avenue
Source: EDAW, 2009



Figure 3-14
View south on 14th Street, NW from Pennsylvania Avenue
Source: EDAW, 2009



Figure 3-15
View north on 14th Street, NW from Constitution Avenue
Source: EDAW, 2009

Constitution Avenue, South of the Site

Constitution Avenue is a broad, two-way avenue that borders the HCHB on its south side. It is a major element in the McMillan Plan, forming the northern edge of the National Mall. East of the site, a series of monumental federal office buildings line the north side of Constitution Avenue, while a number of museums line the south side of the street along the National Mall. A sloped grassy parcel lies immediately south of the HCHB, across Constitution Avenue (Page 3-25, Figure 3-16). This is the future site of the National Museum of African American History and Culture. The Washington Monument, a prominent visual feature in the DC landscape, lies southwest of the site. The sidewalk adjacent to the HCHB is 10 feet wide and is bordered by a line of concrete planters. These planters are not consistent with the character of the building and form a visual barrier between the pedestrian space and the roadway.



Figure 3-16
The Washington Monument, Southwest of the Project Site
Source: EDAW, 2009

Views along Constitution Avenue are framed by lines of street trees. These trees vary in size and species, forming an irregular green edge along the view corridor. Looking west from the HCHB, views are heavily vegetated, due to the National Mall south and west of the site, and the Ellipse east of the site (Page 3-27, Figure 3-18). Views to the east include monumental buildings

on both the north and south sides of the street (Page 3-26, Figure 3-17). Views are afforded to the south and southwest of the National Mall, and the Washington Monument and its grounds.



Figure 3-17
View east on Constitution Avenue from 14th Street, NW
Source: EDAW, 2009



Figure 3-18
View west on Constitution Avenue from 14th Street, NW
Source: EDAW, 2009

15th Street, NW/West of the Site

15th Street, NW is a broad two-way street that borders the HCBH on its west side. The HCHB is set close to the sidewalk and a line of planters that function as temporary security elements is located between the sidewalk and the curblineline. These features are not consistent with the historic character of the building and form a visual barrier between the pedestrian space and the roadway. Across 15th Street, the Ellipse is an open grassy park, dotted by trees and bisected by paths and roadways (Page 3-29, Figure 3-19).



Figure 3-19
View Looking Southwest across the Ellipse
Source: EDAW, 2009

15th Street, NW and its associated view corridor connect the Ellipse and National Mall south and west of the site with the US Department of Treasury Building and other points north. Views to the north along 15th Street are framed by mid-rise buildings and intermittent street trees (Page 3-32, Figure 3-21). Such views include the east elevation of the Treasury Building. Looking south from the site, mature trees flank both sides of the roadway. The view corridor terminates at the National Mall. Views are also afforded to the west of the open space of the Ellipse. To the southwest, views include the National Mall and the top of the Washington Monument, visible above the treeline (Page 3-31, Figure 3-20).



Figure 3-20
View south on 15th Street, NW from mid-block
Source: EDAW, 2009



Figure 3-21
View north on 15th Street, NW from mid-block
Source: EDAW, 2009

Pennsylvania Avenue/ North of the Site

Pennsylvania Avenue is a broad, two-way avenue that borders the HCHB on its north side. It is a major element in the L'Enfant Plan, as it physically and visually connects the Ellipse and the White House, west of the project site, with the U.S. Capitol Building, east of the project site. On the north side of the site, the sidewalk is 11 to 14 feet wide and physically and visually divided from the roadway by a series of planters. These elements are not consistent with the historic character of the HCHB. North of the site, across Pennsylvania Avenue, Pershing Park slopes up to a seating area and small kiosk (Page 3-34, Figure 3-22). The park is largely grass and is dotted by small trees. Beyond the park, midrise buildings, including the historic Willard Hotel and W Hotel, line the north side of the roadway.



Figure 3-22
 Pershing Park, north of the Site
 Source: EDAW, 2009

Views to the east along Pennsylvania Avenue are framed on the south side of the roadway by a consistent line of mature street trees (Page 3-35, Figure 3-23). The north side of the view is more open, due to Freedom Plaza just northeast of the project site. The view terminates at 13th Street, where Pennsylvania Avenue turns slightly to the south. Views northwest along the

Pennsylvania Avenue corridor are framed by a consistent line of street trees on the south side of the roadway, adjacent to the HCHB (Page 3-36, Figure 3-24). The north side of the view is more open, due to the expansive grass and trees that make up Pershing Park. These views terminate at a small guardhouse and the trees that line the edge of the Ellipse.



Figure 3-23
View east on Pennsylvania Avenue from 14th Street, NW
Source: EDAW, 2009



Figure 3-24
View west on Pennsylvania Avenue from 14th Street
Source: EDAW, 2009

3.2 SOCIOECONOMIC RESOURCES

3.2.1 Land Use

The rectangular, 3300-room HCHB occupies nearly three city blocks in northwest DC. The primary tenant of the HCHB is the US DOC. Other uses also exist within the building, including the NAQ, which currently occupies the basement of the center portion of the building, and the White House Visitor Center, which occupies the north end of the HCHB and is managed by the NPS. The White House is the home and office of the President of the United States and a major civic space. These two attractions draw large crowds of tourists with the NAQ reporting 172,744 visitors (excluding free visits) in 2008 and the White House Visitor Center reporting 556,627 visitors in 2008.

The HCHB is located within the Federal Triangle. A principal element of the McMillan Plan, the Federal Triangle is a collection of government office buildings spanning the area between the White House and the US Capitol. Office buildings in the vicinity of the HCHB include:

- The Old Post Office Building
- The Ronald Reagan Building and International Trade Center
- The Robert F. Kennedy Department of Justice Building (Department of Justice headquarters)
- The Ariel Rios Building
- The Internal Revenue Service Headquarters
- The Federal Trade Commission Headquarters

In addition to office uses, there are numerous recreational amenities in the vicinity of the HCHB. Adjacent and to the north of the HCHB, at 14th Street and Pennsylvania Avenue, NW, is Pershing Park. This park features a fountain which doubles as an ice rink in the winter months, as well as a small memorial to John J. Pershing, the General of the Armies in World War I. Adjacent and to the west of Pershing Park, the General Sherman Memorial is situated on a small parcel of open space. Northeast of the HCHB, Freedom Plaza includes a large fountain, a statue of Kazimierz Pulaski, and inlaid stonework which depicts significant parts of the historic L'Enfant plan for the Nation's Capital. President's Park South, commonly called the Ellipse, is a 52-acre public park located immediately south of the White House fence, and adjacent to the western facade of the HCHB. This connects to the National Mall, an expanse of open space that runs from the Lincoln Memorial in the west to the Capitol

Grounds in the east. The Washington Monument Grounds, considered part of the National Mall, abuts the project site to the south. The Monument itself, culturally significant as a United States Presidential Memorial and an important example of Egyptian Revival design, is located southwest of the HCHB.

Cultural uses in the vicinity of the site include museums, a theater, and the White House. The National Museum of American History (NMAH) and the National Museum of Natural History (NMNH) are located southeast of the HCHB on the National Mall. The historic National Theatre, located at 1321 Pennsylvania Avenue NW, has been in operation as a nonprofit since 1835 and offers a diverse range of stage performances, free programs, and other services to the public. The White House Building, located just northwest of the project site, also functions as a major civic space and cultural institution, and is open to the public for tours.

Three hotel uses are located in the area surrounding the project site. The JW Marriot Hotel, a 15-story facility, is located at 1331 Pennsylvania Avenue NW. The historic Willard Intercontinental Washington hotel is positioned one block north of the project site at 1401 Pennsylvania Avenue, NW. The W Hotel (the former Hotel Washington) is located at 515 15th Street, NW.

Transportation and parking uses are also prevalent in the area surrounding the HCHB. Two primary arterials, Pennsylvania and Constitution Avenues NW, border the site on the north and south, respectively. The Federal Triangle Metrorail Station is located east of the project site on 12th Street, NW, between Pennsylvania and Constitution Avenues, NW. More than 10 WMATA bus stops are also located in the vicinity of the project site, primarily running along Pennsylvania and Constitution Avenues, NW.

3.2.2 Planning Policies

Zoning

The HCHB, a federally owned property in the District of Columbia, is not subject to local zoning regulations. The National Capital Planning Commission (NCPC) instead regulates new design and renovation of federal buildings in the Nation's Capital, pursuant to the District of Columbia Zoning Enabling Act of 1938 (ch. 534, 52 Stat.802 and DC ST § 6-641.15) . Expressed in the Act, NCPC holds "in lieu of zoning" approval authority for height, bulk, number of stories, and open space for projects on federal property. NCPC makes decisions regarding these attributes on a case-by-case basis.

Comprehensive Plan for the National Capital, Federal Elements

The *Comprehensive Plan for the National Capital, Federal Elements* is used by NCPC as the primary planning tool and guide for federal facilities in Washington, DC. Goals, objectives, and planning policies for the growth and development of the Nation's Capital are included in the Plan. Several of the Federal Elements are of particular relevance to the proposed HCHB exterior improvements: the Federal Workplace Element, the Federal Environment Element, and the Preservation and Historic Features Element.

The Federal Workplace Element states that the federal government should:

- Design such improvements in accordance with guidance included in *The National Capital Urban Design and Security Plan (and related policies)*.
- Incorporate security needs into the design of buildings, streetscapes, and landscapes using urban design principals in a manner that: enhances and beautifies the public realm, resulting in coherent and welcoming streetscapes; does not excessively restrict or impede operational use of sidewalks or pedestrian, handicap, or vehicular mobility; and does not impact the health of existing mature trees.
- Design projects in a manner that does not impede commerce and economic vitality, but balances the need for perimeter security with the need to enhance and maintain the vitality of urban areas.
- Design security barrier lines and elements that complement and enhance the character of the area in which they will be located and that respect the historic context of the area when applicable.
- Design security elements to respond to site-specific conditions, such as vehicle approach speed and angles, in order to minimize the size of security elements when possible.
- Place security elements in the building yard, rather than in public space where possible.

The Federal Environment Element states that the federal government should:

- Encourage the use of innovative and environmentally friendly “Best Management Practices” in site and building design and construction practice, such as green roofs, rain gardens, and permeable surface.
- Enhance the environmental quality of the national capital by replacing street trees where they have died or where they have been removed due to development.

- Encourage the use of native plant species, where appropriate.

The Preservation and Historic Features Element states that the federal government should:

- Protect and enhance the vistas and views, both natural and designed that are an integral part of the national capital's image.
- Promote continuity in the historic design framework of the nation's capital by protecting and enhancing the elements, views, and principles of the L'Enfant Plan.
- Protect the settings of historic properties, including views to and from the sites where significant, as integral parts of the historic character of the property.

Comprehensive Plan for the National Capital, District Elements

The *District Elements* of the Comprehensive Plan serve to guide planning decisions pertaining to non-federal lands and facilities within the District of Columbia. Updated in 2006, the *District Elements* are comprised of Citywide and Area Elements. The Area Elements are of relevance to the proposed perimeter security and renovation project in that they focus on issues that are unique to particular parts of the District. The policies set forth in the Area Elements are "place-based", non-prescriptive, and seek to provide a sense of local priorities and to recognize the varying dynamics at work in each part of the city.

The Federal Triangle, in which the project site is situated, is located within the boundaries of the "Central Washington" Area Element. Relevant Policies and Actions recommended under this Element pertain to pedestrian experience, transportation, and urban design standards. Policy CW-1.1.17: *Making Central Washington's Streets More Pedestrian-Friendly* seeks to enhance Central Washington's pedestrian network and improve pedestrian safety. Recommended measures include:

- Improving certain streets for pedestrian use;
- Providing safe and accessible pedestrian waiting space on the widest thoroughfares;
- Maintaining sufficiently wide sidewalks and regulating sidewalk obstructions;
- Restricting curb cuts and parking garage access along major streets;
- Providing safe and accessible pedestrian detours at construction sites;
- Encouraging sidewalk widening within private development; and

- Enforcement of traffic and parking laws, such as no parking zones.

Policy CW-1.1.14: *Central Washington Multi-modal Transportation System* addresses transportation issues and upgrades and aims to:

“Develop and maintain a balanced multi-modal transportation system for Central Washington which makes optimal use of the existing street network, the Metrorail and commuter rail networks, the bus system, and public spaces including sidewalks and alleys. Mass transit should be supported as the dominant form of transportation to, from, and around the area.”

Action CW-1.1.C: *Central Washington Urban Design Planning* recommends the following actions:

“Continue to develop plans and guidelines for the design of buildings, streets, and public spaces in Central Washington. Design guidelines should help implement the Comprehensive Plan by reinforcing the unique identity of Central Washington’s sub-areas and neighborhoods, improving connections to the National Mall, encouraging pedestrian movement, creating active street life, preserving historic resources, promoting green roofs and other sustainable design principles, and achieving high quality architectural design.”

Additional policies under the Historic Preservation and Urban Design Elements are further applicable to the HCHB Exterior Improvements Project. These include:

Policy HP-2.3.5: *Enhancing Washington’s Urban Design Legacy* recommends that projects:

“Adhere to the design principles of the L’Enfant and McMillan Plans in any improvements or alterations to the city street plan. Where the character of the historic plan has been damaged by intrusions and disruptions, promote restoration of the plan through coordinated redevelopment and improvement of the transportation network and public space.”

Policy UC-3.1.2: *Management of Sidewalk Space* recommends that projects:

“Preserve the characteristically wide sidewalks of Washington’s commercial districts. Sidewalk space should be managed in a way that promotes pedestrian safety, efficiency, comfort, and provides adequate space for tree boxes. Sidewalks should enhance the visual character of streets, with landscaping and buffer planting used to reduce the impacts of vehicle traffic.”

Policy UD-3.2.3: *Site Planning and Design Measures to Increase Security* recommends that projects:

“Encourage architectural design and site planning methods that minimize perimeter security requirements and have a reduced impact on the public realm. Such measures include separating entryways, controlling access, “hardening” of shared walls, and the selection of more resilient building materials.”

Policy UD-3.2.4: *Security Through Streetscape Design* recommends that projects:

“Develop and apply attractive, context-sensitive security measures in the design of streets, plazas, and public spaces. These measures should use an appropriate mix of bollards, planters, landscaped walls, vegetation, and street furniture rather than barriers and other approaches that detract from aesthetic quality.”

National Capital Framework Plan

The *National Capital Framework Plan*, released in the summer of 2008, offers a comprehensive approach to easing demand for construction on the National Mall while creating lively urban spaces throughout the city. The result of collaborative planning efforts between NCPC and the U.S. Commission of Fine Arts (CFA), the Plan provides a blueprint for creating new destinations for cultural attractions throughout the city, and improving connections among them. Further, the Framework Plan serves as a tool to guide strategic decisions to coordinate federal and local interests, identifying opportunities to coordinate land use, urban design, and transportation improvements.

The principal goals of the Plan are to:

- Plan for the future needs of the federal government, including space for new memorials, museums, public gathering spaces, and federal offices in a way that contributes to sustainable city life;

- Preserve the historic open space of the National Mall and protect it from overbuilding; and
- Extend the special civic qualities of the National Mall and the vitality and vibrancy of the city into the adjacent federal precincts.

The Plan identifies four major precincts surrounding the National Mall that are targeted for revitalization as new cultural centers and destinations that exude special civic qualities. The four precincts are: Northwest Rectangle, Federal Triangle, Southwest Rectangle, and East Potomac Park. The Framework Plan examines opportunities to enhance these precincts in new ways to meet the future needs of the federal government, while also protecting the city's open space and public realm.

The Framework Plan seeks to reconnect the downtown with the National Mall through the Federal Triangle. The Plan specifically states that the Federal Triangle should: “exhibit the purpose of the federal government, America’s diverse national heritage, and the best of American art, architecture, landscape architecture, and urban design. It should have lovely and animated city streets and public spaces; welcoming public buildings; flexible and convenient public transit service; sustainable and accessible streets and buildings; and federal, local, and private development.” Specific strategies to achieve this goal include the following:

- Establish a new destination on Pennsylvania Avenue by concentrating a mix of office, culture and hospitality uses on Pennsylvania Avenue between 9th and 12th Streets, NW;
- Enhance the public realm by establishing a welcoming, interconnected system of lively and beautiful streets, introducing sustainable public spaces, and improving the pedestrian experience and symbolic importance of Pennsylvania Avenue and the Federal Triangle.

The National Capital Urban Design and Security Plan (2002) and Urban Design and Security Plan Policies and Objectives (2005)

The *National Capital Urban Design and Security Plan*, adopted by NCPC in 2002, seeks to balance the security needs and requirements of federal agencies with the need to protect the historic urban fabric of Washington's Monumental Core. According to the Plan, security elements for federal buildings should be achieved in a manner that does not compromise the aesthetic qualities and functioning of the public realm, be it pedestrian circulation, vehicular mobility, commerce, or the aesthetic experience of visitors.

The Plan's goals are as follows:

- Provide appropriate levels of perimeter security for sensitive buildings and their occupants against threats generated by unauthorized vehicles approaching or entering them.
- Provide security in the context of a city-wide program of streetscape enhancement and public realm beautification, rather than as a separate or redundant system of components whose only purpose is security.
- Expand the palette of elements that can gracefully provide perimeter standoff security, avoiding the monotony of endless lines of jersey barriers or bollards, which only invoke defensiveness.
- Produce a coherent strategy for deploying specific families of streetscape and security elements in which priority is given to achieving aesthetic continuity along streets, and within areas, rather than solutions selected solely by the needs of a particular building under the jurisdiction of one public agency.
- Provide perimeter security in a manner that does not impede the City's commerce and vitality, pedestrian or vehicular mobility, or operational use of sidewalks within the Monumental Core or downtown.

The Plan offers a wide variety of physical security elements for use in perimeter security projects. Such traditional streetscape elements as bollards and low-standing walls, along with more innovative solutions such as “hardened” or fortified benches, streetlights, planters, fences, and curbside hedges with embedded security measures are all recommended as components of building perimeter security. These elements are designed to be applied in such a way that responds to different contexts and the varying security needs of each distinct downtown area.

The NCPC Security Plan was amended in 2005 by the adoption of the *Urban Design and Security Plan Policies and Objectives*. The intention of the Policies and Objectives is to clarify issues related to the contextual design, vehicular and pedestrian controls, and the placement and design of physical security elements. The objectives and policies serve to guide federal agencies in the evaluation, planning, and design of proposed perimeter security projects.

The policies and objectives include the following:

- Strike a balance between physical perimeter security for federal buildings and the vitality of the public realm.
- Encourage a multi-faceted approach to selection of appropriate security measures that considers intelligence information, operational and procedural measures (such as surveillance and screening), and design strategies (such as structural engineering, window glazing, emergency egress, and physical perimeter barriers).
- Use intelligence information, operational controls, and physical design measures to protect against vehicle-borne explosives.
- The placement of physical security barriers in public space is discouraged and should be minimized.
- For existing buildings in urban areas, perimeter security barriers should be located within the building yard when the face of the sensitive building to the outside edge of the building yard is a minimum of 20 feet. If the distance from the face of the building to the outside edge of the building yard is less than 20 feet, then perimeter security barriers may be permitted in public space adjacent to the building.
- Perimeter security barriers at intersections, corners and near cross walks or other highly used pedestrian areas should be minimized; barriers that are needed should be located to allow safe pedestrian waiting areas and pedestrian movement.
- The design of security barriers, including their mass, form and materials should respond to the architectural and landscape context in which they are located and complement and aesthetically enhance the special character of the associated building and precinct.
- Perimeter security barriers in public space should incorporate decorative tree wells, planters, light poles, signage, benches, parking meters, trash receptacles and other elements and public amenities typically found in a streetscape.

Comprehensive Design Plan for the White House and President's Park

Undertaken in 2000, the Design Plan for Present's Park seeks to provide a framework for future management of the area that will respect past traditions and meet future needs. Regarding the HCHB, the plan states that the White House Visitor Center should be expanded beneath Baldrige Hall to provide space for a new theater, museum, and educational programs. Guiding principles that are relevant to the HCHB exterior improvements include:

- The traditional vistas from the White House to the north and south, as well as vistas towards the White House, will be respected at all times.
- The quality of the pedestrian experience will remain a high priority in all designs.
- The needs to accommodate service, security, and ceremonial functions will be met in a manner that is consistent with the dignity and importance of the site.

District of Columbia Bicycle Master Plan

The District of Columbia's *Bicycle Master Plan* establishes recommendations for bicycle facilities within DC. The Potomac Heritage Trail runs along Pennsylvania Avenue. As such, the following policy is relevant to the HCHB:

- Facilitate and support the development of regional and national trail routes through the District of Columbia.

DC Department of Transportation Design and Engineering Manual

The DDOT *Design and Engineering Manual* establishes standards for sidewalks and tree boxes that are relevant to the detailed design of the proposed project. In particular, the document provides guidance on sidewalk widths under differing conditions, and guidance on the size and spacing of street trees.

DC Department of Transportation (DDOT) Departmental Order 301.03

In December 2003, DDOT issued Departmental Order 301.03 as a guiding policy for evaluating security requests in public space. The policy states the following:

- Security measures installed to protect buildings shall require a Public Space Permit from the Government of the District of Columbia.
- DDOT encourages security perimeters to be established within privately owned space or federal public space adjacent to buildings (i.e. not on sidewalks, curbs, gutters, streets, or public alleys).

- Perimeter barriers shall be no closer than two (2) feet from the curb line and shall not impede pedestrian traffic flow from the curb line to the sidewalk, and shall not present unreasonable barriers to pedestrians traveling within the sidewalk.

Tree Removal Permit

The Urban Forestry Administration, acting under DDOT, requires permits for the removal of street trees. The Urban Forest Preservation Act of 2002, effective June 12, 2003 (D.C. Law 14-309; D.C. Official Code 8-6501.01 *et seq.* (the act)), established an urban forest preservation program requiring a Special Tree Removal Permit prior to the removal of a tree with a circumference of 55 inches or more. If a tree removal permit is approved, the Urban Forestry Administration will require the replacement of lost trees (based on caliper), either on the site or in a comparable area.

3.2.3 Public Space

The District of Columbia Department of Transportation, Public Space Management

The District Department of Transportation (DDOT) has management and oversight responsibility for the use and occupancy of the public space. According to DDOT, public space is defined as all the publicly owned property between the property lines on a street and includes, but is not limited to, the roadway, tree spaces, sidewalks, and alleys. At the HCHB, the sidewalks and areas between the walks and the curblines on 14th Street, Constitution Avenue, and 15th Street are considered to be public space, as they are beyond the building's property line. On Pennsylvania Avenue, the building face extends beyond the property line. Public space along Pennsylvania Avenue is unique in that the NPS takes jurisdiction over space located between the face of the building and the curblines.

DDOT encourages that security perimeters be established within privately-owned space or federal public space adjacent to buildings, not on sidewalks, curbs, gutters, streets, or public alleys. In the event that perimeter security elements are proposed within public space, a Public Space Permit must be obtained from DDOT. Further, DDOT requires that perimeter barriers be no closer than two feet from the curb line and neither block pedestrian traffic flow from the curb line to the sidewalk, nor present unreasonable barriers to pedestrians traveling within the sidewalk.

District of Columbia Public Realm Design Handbook

The *District of Columbia Public Realm Handbook* was created to document policies, procedures, and guidelines on how to properly approach public space. In the handbook, the public realm refers to key elements in the city's public right-of-way, including roadways, sidewalks, planting areas, intersections, alleys, plazas, and other open spaces that comprise the arteries and focal points of the urban framework. The document seeks to document how the public realm should look in terms of materials, visual quality, and landscaping, and to define some standard guidance for enhancing the public realm within the city. Specific topics addressed within the handbook include pavement options, landscaping and street trees, site amenities, lighting, low impact development, features in the roadway, plazas and open space, public art, and coordination.

GSA: Achieving Great Federal Public Spaces

Although not directly related to DDOT's public space policy and review, GSA has published guidelines titled *Achieving Great Federal Public Spaces: A Property Manager's Guide*. This publication was released in 2007 as part of GSA's efforts to evaluate and improve public spaces and transform federal spaces into civic places. According to this guide, GSA buildings and public spaces should:

- Reflect the dignity and accessibility of government;
- Be secure and welcoming;
- Improve tenant satisfaction and building revenue;
- Provide a forum for tenant activity and public use; and
- Act as a catalyst for downtown revitalization.

The guide presents an overall strategy for improvement of a facility's public spaces, from physical enhancements to partnerships with communities, to better management practices. It recognizes a key challenge to be the need to increase security at federal facilities while providing welcoming public spaces.

3.2.4 Visitation and Visitor Experience

According to the Washington, DC Convention and Tourism Association, DC welcomed 16.2 million visitors in 2007, a 7% increase over 2006 levels. One of the most popular activities for visitors to DC is touring museums and historical sites. The Smithsonian Institution operates the majority of the museums in the downtown area, including the nearby NMNH and NMAH. The Smithsonian recorded 25.2 million visitors in 2008 at all of their DC facilities. The National Park Service operates facilities on the National Mall, including the Washington Monument southwest of the HCHB.

The HCHB houses two visitor destinations, the NAQ and the White House Visitor Center. The NAQ hosted 172,744 visitors in 2008. These visitors accessed the facility through an entrance on 14th Street leading to an elevator to access the basement level where the actual aquarium is located. Although there is a sign, the NAQ is overlooked by many visitors that come to the nearby National Mall and Smithsonian museums (Page 3-50, Figure 3-25). The White House Visitor Center is accessed through an entrance on Pennsylvania Avenue, and provides visitor orientation, displays dedicated to the history of the White House, and a small book shop. The Visitor Center hosted 556,627 visitors in 2008.



Figure 3-25
Sign for National Aquarium
Source: EDAW, 2009

3.2.5 Economic/Fiscal Resources

The White House Visitor Center within the HCHB contains a small book and the DOC cafeteria is open to federal employees and their guests. East of the project site, the Ronald Reagan Building includes an eatery open to the public. Food and retail service is also available to the public at the NMAH and NMNH, and a number of restaurants exist east and north of the HCHB. The three primary hotels in the vicinity of the project site, the JW Marriot, the W Hotel, and the historic Willard Intercontinental, also provide commercial tax revenue for the District.

The project site for the proposed perimeter security project is owned by the federal government. As such, it does not currently generate tax revenue for the District. However, revenue is generated for the District from parking meters that line the streets surrounding the project site. In Fiscal Year 2008, each parking meter located within the District generated an average of \$39,232.00, with citywide totals reaching approximately \$67.3M.

3.3 NATURAL RESOURCES

3.3.1 Vegetation

Vegetation at the HCHB consists primarily of a series of street trees, manicured lawns, and planting beds (Page 3-55, Figure 3-26). Consistent throughout the site are manicured grass lawns and planting beds containing perennial flowers and shrubs. Several small pines approximately 1.2 inches (30 mm) in diameter and Crab Apple trees approximately 12 inches (300 mm) in diameter are also found within these beds. These features most commonly occurred abutting the HCHB. Most of the trees on the site were found along the street providing a shaded canopy for the sidewalks. A series of magnolia trees are located around the base of the building.

Original drawings indicate that the current landscaping was not part of the original design. Instead, these documents show a simple landscape, volumetric in nature with bands of box hedges lining the areaway walls, juniper employed as a ground cover, and groupings of arborvitae (*Thuja*), yews (*Taxus*), and pines (*Pinus*) at the corners of the planted areas. The magnolias located around the base of building were planted in the 1960s and may have been part of a landscaping effort undertaken by the Society for a More Beautiful National Capital and Lady Bird Johnson.

The following section details the existing vegetative conditions of the site providing information on species, number of specimens, health and size (in diameter).

Pennsylvania Avenue, NW: Along Pennsylvania Avenue, NW are fifteen, 2 inch (50 mm) to 15 inch (390 mm) caliper willow oak trees (*Quercus phellos*). Four of the trees along Pennsylvania Avenue are considered to be unhealthy (Page 3-52, Figure 3-26).

14th Street, NW: Along 14th Street, NW heading south the first group of trees is located between the entrance to the HCHB and the intersection with Pennsylvania Avenue. This group consists of three ginkgo bilobas (*Ginkgo biloba*) ranging in size from 8 inches to 12 inches in diameter (200 to 300 mm), one 12-inch (300 mm) pin oak (*Quercus palustris*), one 18-inch (450 mm) black oak (*Quercus velutina*), and one 6-inch (150 mm) white oak (*Quercus alba*). Of these six trees, the pin oak, the black oak and one 8-inch ginkgo are considered unhealthy. Continuing south on 14th Street the next group of trees is located near the entrance to the HCHB. The species found there are eight oak trees (one pin, two willow, and five white) ranging in diameter from 2 inches (50 mm) to 24 inches (600 mm) and four magnolia (*Magnolia virginia*) trees ranging in diameter from 4 inches (100 mm) to 30 inches (760 mm). A 6-inch willow oak, a 4-inch magnolia and a 16-inch pin oak from this group are

considered unhealthy. The final group of trees on 14th Street exists south of the entrance before the intersection with Constitution Avenue, NW. This grouping of trees consists of five oak trees (four white and one pin) ranging in diameter from 1.2 inches (30 mm) to 12 inches (300 mm) and three ginkgo bilobas, ranging in size from 4 inches (100 mm) to 12 inches (300 mm) in diameter. Two ginkgo bilobas and the 1.2-inch white oak are considered unhealthy.

Constitution Avenue, NW: Along Constitution Ave, NW there is one American elm (*Ulmus americana*) 8 inches (200 mm) in diameter, four Chinese elm (*Ulmus parviflora*) trees ranging in diameter from 8 inches (200 mm) to 12 inches (300 mm), and two magnolia trees, 21 inches (530 mm) and 12 inches (300 mm) in diameter. The 12-inch magnolia and two Chinese elms are considered unhealthy.

15th Street, NW: Along 15th Street, NW heading north the first group of trees is located between the southern entrance to the interior courtyard and the intersection with Constitution Avenue. This group consists of five oak trees (three willow, one pin, and one black) ranging in diameter from 6 inches (150 mm) to 16 inches (400 mm), and one magnolia tree 12 inches (300 mm) in diameter. In addition, there is one 48-inch American elm along the curblin and two crepe myrtles (*Lagerstroemia fauriei*), 9 inches (230 mm) in diameter, in the median at the entrances to the interior courtyard. One pin, one willow, and one black oak in this group are considered unhealthy. The next group of trees is found between the two entrances to the interior courtyard. This group is comprised of eight oak trees (three black, two willow, one white and one pin) ranging in diameter from 2 inches (50 mm) to 27.5 inches (700 mm) and two magnolia trees both approximately 12 inches (290 and 300 mm) in diameter. Three of the black oaks and the pin oak are considered to be unhealthy. The last group of trees exists between the intersection with Pennsylvania Avenue and the northern entrance to the interior courtyard. This group consists of four oak trees (three willow and one black) ranging in size from 4 inches (100 mm) to 31.5 inches (800 mm) in diameter, and one magnolia tree, 24 inches (600 mm) in diameter. One willow and one black oak in this group are considered unhealthy.

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3.3.3 Water Resources

Based on prior studies for adjacent sites, it is anticipated that groundwater would be encountered at depths ranging from 15 to 25 feet below the surface. The most likely source of the groundwater is Tiber Creek, which was incorporated into the Washington City Canal and eventually the sewer system in 19th century. No surface water bodies or wetlands exist on the site.

Floodplains are areas along the shores of a waterbody that accommodate excess flows in the event of a flood. The Federal Emergency Management Agency (FEMA) maps these floodplains to aid in planning, design, policy, and insurance rates. They classify the floodplains by the extent that the water would surge inland during 100-year flood and 500-year flood events. The HCHB is located outside of the limits of the 100-year floodplain, however, in 2007 FEMA proposed modifying the base 100-year floodplain elevations in the District. It is unlikely that these modifications to the floodplain map will be made, as construction on the new levee system is anticipated to start in 2009.

3.4 TRANSPORTATION

3.4.1 Vehicular Circulation

The HCHB is located within the conventional city street grid in downtown Washington, DC. The roadways bordering the site include 14th and 15th Streets on the east and west sides, respectively, and Constitution and Pennsylvania Avenues, on the south and north sides respectively. Regional access to the area is provided by Interstate 395 (I-395) to the south, over the 14th Street Bridge and both I-395 and Interstate 295 (I-295) located to the southeast, at the end of 9th Street, NW. The characteristics of each of the local perimeter roadways are identified below:

14th Street, NW: According to the District Department of Transportation's (DDOT) roadway classification system, 14th Street, NW is classified as a principal arterial. With its direct connection into and out of the city over the 14th Street Bridge, 14th Street is among of the most heavily travelled roadways in the District. As it passes the HCHB, 14th Street provides three travel lanes in the northbound direction, one of which permits left turn movements onto Pennsylvania Avenue only; and three travel lanes in the southbound direction, including one dedicated left turn lane onto Constitution Avenue.

As it heads southbound, 14th Street provides direct access out of the District via the 14th Street Bridge, transitioning into I-395. This interstate provides direct links onto the Washington Beltway (Interstate 495) and Interstate 95 (I-95), one of the nation's most significant and heavily travelled north-south corridors.

15th Street, NW: Fifteenth Street, NW, is also a principal arterial within the vicinity of the HCHB. This roadway serves as a main north-south corridor within the city and provides three southbound travel lanes, with the western-most lane is a dedicated right turn lane onto Constitution Avenue. No left turn movements are permitted. In the northbound direction, 15th Street provides two travel lanes, the right hand lane permitting travel northbound straight through the intersection or right-turn movements onto Pennsylvania Avenue.

Constitution Avenue: In the vicinity of the HCHB, Constitution Avenue is classified as a principal arterial. As it passes the site, Constitution Avenue provides two westbound straight movement-only travel lanes and one westbound dedicated left turn left allowing movement onto 15th Street, NW. As it passes the central portion of the building, the lanes split, and a striped median separates the turning lane from the straight-through travel lanes. This allows space for an additional eastbound travel lane near the eastern end of the building. The eastbound lanes consist of two travel lanes that widen into three travel lanes near the

eastern portion of the building, permitting vehicles to pass straight through the 14th Street intersection. The right-hand lane also allows southbound turns onto 14th Street.

Pennsylvania Avenue: Pennsylvania Avenue is a principal arterial within the District, serving as both a major travel pathway and a ceremonial route. The road runs on a diagonal from the U.S. Capitol Building towards the White House, however, it is disjointed at 15th Street, NW. It resumes approximately three blocks north of the intersection with 15th Street and passes in front of the White House. As it passes the HCHB, Pennsylvania Avenue provides a total of three travel lanes in the westbound direction; two dedicated left turn lanes onto 15th Street southbound, and one dedicated right turn lane onto 15th Street northbound. In the eastbound direction, Pennsylvania Avenue provides a total of two travel lanes. The southern lane allows for right turn movements onto 14th Street southbound and the northern lane allows for left turn movements onto 14th Street northbound.

Two motor courts are provided within the building. They are accessed off of 14th and 15th Streets. Security barriers are located at these entrances to allow for screening of the vehicles prior to admittance to the secure areas.

3.4.2 Parking

Although on-street parking is permitted in the general vicinity of the HCHB, parking along the perimeter is somewhat restricted and consists of a combination of metered parking, zoned parking, and government vehicle only parking. A total of approximately 65 parking spaces are provided along the building's perimeter; however, several of the spaces are not demarcated, therefore the number of spaces identified is approximate. Of these 65 spaces, the following provides an explanation of the location and limitations:

Pennsylvania Avenue, NW: Parking is restricted on Pennsylvania Avenue, between 14th and 15th Streets. There is one Metrobus stop and one Tourmobile stop within the block.

14th Street, NW: Approximately twenty-three parking spaces are located along the west side of 14th Street. Portions of 14th Street are also reserved for Metrobus stops at either end of the block. The main entrance and several entrances to interior parking are provided near the central area of the facility along 14th Street. On the opposite side of the street from the HCHB similar parking regulations are present consisting of no parking zones, Metro bus zones, drop-off only zones, and zones that do not allow parking between 7:00 AM and 7:00 PM.

15th Street, NW: Eleven metered spaces are provided near the southern portion of the building. Additionally, there are approximately fourteen undivided parking spaces for government vehicles near the central portion of the building. Finally, entrances to the interior surface parking are provided along this roadway, near the northern portion of the building. Parking located in the HCHB's interior courtyards consists of 118 government parking spaces between two lots. Along the western side of 15th Street is a no parking zone until mid-block. South of this zone is a two-hour bus only parking zone.

Constitution Avenue: Fifteen metered parking spaces are located along the southern perimeter of the HCHB. A portion located in the middle of the block is dedicated as a Metro bus stop. Additional metered spaces and a vendor stand are located on the south side of the Avenue. Parking is only permitted between 9:30 AM and 4:00 PM.

Additional parking throughout the area is available in several managed and privately operated parking garages. The closest garage to the building is located across 14th Street, beneath the Ronald Reagan & International Trade Center building. The next closest garage is Allright Parking Washington, Inc. located at 1331 Pennsylvania Avenue on the opposite side of Pershing Park from the HCHB.

3.4.3 Public Transit

As a result of its prominent location, the HCHB provides easy access to three out of the five Metrorail lines of the WMATA Metrorail system. The Federal Triangle station (Blue and Orange lines) is the closest Metrorail station to the HCHB, located two city blocks to the east, along 12th Street, NW. Additional metro stations in the area include the Smithsonian station (Blue and Orange lines) located at 12th Street, SW and Independence Avenue and Metro Center (Red, Blue, and Orange lines), located approximately five blocks to the northeast at 12th Street, NW and G Street. These lines provide access to additional transit options, including regional rail service at Union Station and flight service at Reagan National Airport.

The second major component of the public transit system serving the area is WMATA's Metrobus. Several bus stops and route lines exist in proximity to the project site. Four routes run along Constitution Avenue, the Ronald Reagan Washington National Airport-Pentagon-DC Line (13A, 13B, 13F, 13G) connecting downtown Washington to northern Virginia, the Massachusetts Avenue Line (N3) connecting northwest DC with the National Mall, the Benning Road-Potomac Park Line (X1) connecting northeast DC with the National Mall, and the Anacostia-Eckington Line (P1) connecting the Anacostia and Eckington communities to downtown DC. Two routes run along 14th Street, the 14th Street Line (52, 53) connecting northeast DC to the National Mall along 14th Street, and the Mount Vernon Express Line (11Y) connecting Mount Vernon to the National Mall. Three lines run along Pennsylvania Avenue, the Pennsylvania Avenue Line (32, 36), the Wisconsin Avenue Limited Line (37) and the Pennsylvania Avenue Limited Line (39), connecting northwest DC and Georgetown to the National Mall. Two bus stops are found along 14th Street, one at its intersection with Constitution Avenue and one at its intersection with Pennsylvania Avenue. One bus stop is found along Constitution Avenue and another is found on Pennsylvania Avenue. Several other bus lines such as the D.C. Circulator, operated by the DDOT Mass Transit Administration, the Tourmobile, and Maryland Transportation Authority commuter buses also service the site and have stops along Pennsylvania Avenue.

3.4.4 Pedestrian/Bicycle Circulation

Sidewalks border the HCHB on each of its sides. Federal employee entrances to the building are located on 14th and 15th Streets. The public entrance to the NAQ is located on 14th Street, while the entrance to the White House Visitor Center is located on Pennsylvania Avenue. All signalized intersections within the area include demarcated crosswalks supplemented by visual and audible pedestrian signals.

The site's central location within downtown DC allows visitors to walk to nearby museums, monuments, galleries, gardens, and other cultural and visitor attractions on and along the Mall. Connections to these points of interest are provided via sidewalks around the perimeter of the HCHB and crosswalks at each intersection within the vicinity of the building. The east-west axis of the Mall is the most popular route for pedestrian traffic in the area. The White House is located one block away and is a major pedestrian destination for visitors to the Nation's Capital. It is also the location of many offices housing workers who access the public transit located at the HCHB or east of the HCHB. High pedestrian activity corridors include the sidewalks along both sides of Pennsylvania, Constitution, and Independence Avenues, and 14th and 15th Streets. These corridors provide access to the Metro stations, museums, and monuments within the vicinity of the HCHB, along with the National Mall. Freedom Plaza, located along Pennsylvania Avenue to the north of the International Trade Center Building, is also a popular pedestrian destination.

Pedestrian flows are the heaviest during the morning and afternoon "rush hours" when employees are arriving at and leaving their offices. Many of the attractions on the National Mall open around 9 AM, further contributing to heavy pedestrian flow in the morning. Outside of rush hours, pedestrian flows are lighter until around mid-day when employees are on lunch breaks. Heavier pedestrian flows can also be attributed to events occurring on the National Mall, which are frequent and a major draw for the region.

Off-street bicycle trails exist south of the site on the National Mall. In addition, the Potomac Heritage Trail runs north of the site along Pennsylvania Avenue; a bicycle lane is proposed along this roadway. An on-route separated bicycle facility is also proposed along 15th Street by the Ellipse.

3.5 UTILITIES AND INFRASTRUCTURE

3.5.1 Utilities

A utility survey of the HCHB was conducted in March 2008. This survey provides the basis for the following discussion. On Pennsylvania Avenue an electrical line and an 18-inch (457 mm) sanitary sewer line are located between the center line of the road and the curb. Underneath the sidewalk adjacent to Pennsylvania Avenue an electrical line and a 24-inch (610 mm) water line are present.

14th Street, NW: On 14th Street, NW a 54-inch (1,372 mm) concrete sewer pipe and three electrical lines are located between the center line of the road and the curb. Underneath the sidewalk adjacent to 14th Street, an electric line and a 23-inch (580 mm) water line span the entire block. A telecom line enters the building mid-block. Other utility lines enter and exit to the building at two points along 14th Street, a northern point and southern point. At the northern point, a 4-inch (102 mm) gas line, a 4-inch (102 mm) water line, an electrical line, and a steam tunnel enter the building, and two 5-inch (127 mm) sewer lines, and two 12-inch (305 mm) stormwater drains exit the building. At the southern point, a gas line, a 6-inch (152 mm) water line, and an electrical line enter the building, and a 5-inch (127 mm) sewer line exits the building. An additional 16-inch (406 mm) sanitary sewer line runs south of the southern connection point to the end of 14th Street, NW.

15th Street, NW: On 15th Street, NW a 12-inch (305 mm) water line, a sanitary sewer line, an electric line, and a 72-inch (1,829 mm) by 78-inch (1,981 mm) steam tunnel run between the center line of the road and the curb. The water line enters the building at five points, four connections being made with 6-inch (152 mm) pipes and one connection made with a 4-inch (102 mm) pipe. Sewer, stormwater, and electrical lines run underneath the sidewalk along 15th Street. The sewer and stormwater lines exit the building at six locations. Pipes range from 6 inches (152 mm) to 8 inches (204 mm) in diameter for sewer and between 10 inches (254 mm) and 12 inches (305 mm) in diameter for stormwater. A 4-inch (102 mm) gas line enters the building slightly north of the southern entrance to the interior courtyard. Steam tunnels enter the building at both entrances to the interior courtyard.

Constitution Avenue, NW: On Constitution Avenue a 24-inch (610 mm) water line, an 87-inch (2,210 mm) stormwater drain, and a telecom line are found between the centerline of the road and the curb. The telephone line enters the building near the

corner of Constitution Avenue and 15th Street, NW. Two electrical lines and a 120-inch (3,048 mm) by 132-inch (3,352 mm) sanitary sewer line are located underneath the sidewalk.

Substantial upgrades to utility systems will be undertaken as part of the building renovation.

3.5.2 Hazardous Materials

On the exterior of HCHB, no contaminants are known to be present. This would include VOCs, USTs, asbestos and other contaminants that could potentially harm employees and visitors alike. Due to the historic nature of HCHB, it is possible for some contaminants to be encountered while the building renovation is completed. This would include hazardous materials common to older buildings such as asbestos in the tile floors, lead paint found on and around the windows, and VOCs in the basement on the Constitution Avenue side where a printing press used to be.

As part of the building renovation, an underground storage tank (UST) will be installed within the building yard along 15th Street near Constitution Avenue. The tank will hold diesel fuel to fire a backup generator for emergency power. It will have double walls and an internal monitoring system, therefore contamination would be highly unlikely. GSA considered natural gas generators but they did not provide the necessary start up time per the national fire code. Placement of the UST below the motorcourt is not possible due to the below-grade parking.

3.5.3 Stormwater Management

Stormwater on the site drains away from the building and is collected in storm drains and combined sewer lines located along the periphery of the site, as noted in the Utilities section. Combined sewer lines that convey both stormwater and sanitary sewage are located along the perimeter of the site. Stormwater is treated at the Blue Plains Wastewater Treatment Plant. However, under extreme stormwater events, combined sewer overflows (CSOs) may be released directly into the Potomac River, impacting water quality. The governing body for stormwater management in DC is the Stormwater Management Section of the Department of Consumer and Regulatory Affairs.

3.6 AIR QUALITY

The Clean Air Act (CAA) of 1970 and the CAA Amendments of 1977 and 1990 require the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) for protection of public health and welfare, with particular emphasis on the health of “sensitive” populations such as asthmatics, children, and the elderly. In compliance, the EPA created two types of national air quality standards: Primary standards set limits to protect public health and Secondary standards set limits to protect public welfare. The NAAQS considered certain criteria air pollutants of concern. Those include: carbon monoxide (CO), ozone (O₃), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), lead (Pb), particulate matter equal to or less than 10 microns in size (PM₁₀), and fine particulate matter (PM_{2.5}).

The EPA assesses regional compliance with the NAAQS and classifies those regions not in compliance as “non-attainment” areas. The Metropolitan Washington air quality region, which includes Washington, DC and 10 surrounding counties in Virginia and Maryland, is currently designated as moderate non-attainment for the federal eight-hour ozone standard and non-attainment for the fine particulate (PM_{2.5}) standard. The Washington DC metropolitan area is also located within an ozone transport region. The Metropolitan Washington Air Quality Committee (MWAQC), as the region’s lead air quality planning agency, has undertaken planning efforts to bring the region into compliance with the NAAQS.

For non-attainment regions, the EPA requires the preparation of regional attainment plans in order to reach compliance with the NAAQS. Federal agencies responsible for an action in a non-attainment area are required to determine if the action either conforms to the prepared regional attainment plan or is exempt from conformity determinations. According to the EPA, federal actions are exempt from conformity determinations where the total of all reasonably foreseeable direct and indirect emissions of non-attainment pollutants: (1) would be less than their specified emission rate thresholds, known as *de minimis* limits, and (2) would be less than 10 percent of the area’s annual emission budget. The general conformity *de minimis* limits for ozone nonattainment areas inside an ozone transport region are 50 tons per year for volatile organic compounds (VOC) and 100 tons per year for nitrogen oxides (NO_x). The *de minimis* limit for direct emissions of PM_{2.5} is 100 tons per year.

3.7 NOISE LEVELS

Noise can be defined as disruptive or unwelcome sound. Noise regulations in the District establish maximum permissible sound levels for operational noise, an activity, or noise source on a property, based on time of day and land use category (i.e. commercial, industrial, residential). The site for the proposed project is located in an area that is zoned institutional. The maximum allowable noise limit for these areas is 65 dBA (A-weighted decibels) during the daytime and 60 dBA at night. Exceptions to the maximum allowable noise levels in the District include noise resulting from construction activities and noise emitting from emergency vehicles. From 7:00 a.m. to 7:00 p.m. on any weekday, noise levels resulting from construction or demolition (excluding pile driving) are limited to a maximum of 80 dBA.

Maximum allowable noise limits are created to protect human activities or land uses that are considered to be noise sensitive receptors. Certain land uses are considered to be noise-sensitive receptors, including residential dwellings, hotels, hospitals, nursing homes, educational facilities, and libraries. NMAH and NMNH both could be classified as noise sensitive receptors because they serve an educational function. The two hotel uses in the surrounding area, the JW Marriot Hotel and the Willard Intercontinental, could also both be classified as noise sensitive receptors.

Background or ambient noise at the project site and surrounding area is primarily generated by transportation activity. The volume of noise generated depends upon the time of day, mix of vehicle types, and levels of traffic congestion on adjacent streets. Moving vehicular traffic as well as idling vehicles, such as Metrobuses, contribute to the volume of noise. The ambient noise generated by transportation activity at the site would mostly affect pedestrians on sidewalks, museum grounds, or open space such as the National Mall.

4.0

ENVIRONMENTAL CONSEQUENCES

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4.0 ENVIRONMENTAL CONSEQUENCES

The following chapter assesses the impacts of the proposed action on each of the action alternatives and the No Action alternative. In the analysis, impacts are characterized by several factors including intensity, type, and duration. Definitions of these terms and related assumptions are provided below:

Intensity – The intensity of an impact describes the magnitude of change that the impact generates. For the majority of the resource areas, the intensity thresholds are as follows:

- *Negligible*: There would be no impact, or the impact does not result in a noticeable change in the resource;
- *Minor*: The impact would be slight, but detectable, resulting in a small but measurable change in the resource;
- *Moderate*: The impact would be readily apparent and/or easily detectable;
- *Major*: The impact would be widespread and would substantially alter the resource. A major adverse impact would be considered significant under NEPA.

For specific resource areas, such as visual resources, more specific thresholds are necessary. These are outlined at the beginning of the section.

Type – The impact type refers to whether it is adverse (negative) or beneficial (positive). Adverse impacts would potentially harm resources, while beneficial impacts would improve resource conditions. Within the analysis, impacts are assumed to be adverse unless identified as beneficial.

Duration – The duration of an impact identifies whether it occurs over a restricted period of time (short-term), or persists over a longer period (long-term). For the purposes of this analysis, it is assumed that short-term impacts would occur during the construction of the improvements, while long-term impacts would persist once the construction is complete. For the purposes of this analysis, impacts are assumed to be long-term unless identified otherwise.

In addition to the factors detailed above, impacts may be characterized as direct, indirect, or cumulative. A direct impact is caused by the action and occurs at the same time and place. An indirect impact is caused by the action, but occurs later in time, or farther removed in distance. A cumulative impact occurs when the proposed action is considered together with other past, ongoing, or planned actions.

4.1 CULTURAL RESOURCES

The White House Council on Environmental Quality (CEQ) regulations implementing NEPA require an evaluation of impacts on historic resources as part of an Environmental Assessment (EA) or Environmental Impact Statement (EIS). Potential impacts to historic resources include direct and indirect impacts. The alteration, physical displacement, or demolition of a resource is a direct impact; changes in the use, operation or character of a resource can be either direct or indirect impact; and changes to the visual context are considered indirect impact.

In addition to CEQ regulations implementing NEPA, the National Historic Preservation Act of 1966 (NHPA), as amended, establishes standards for evaluating potential effects to historic resources. The NHPA defines “effect” as an “alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register” (36 CFR 800.16) and requires that the lead agency, in consultation with the SHPO, determine whether the effect is adverse. According to the NHPA, an “adverse effect” occurs “when an undertaking may alter, directly or indirectly, any of the characteristics of the historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association” (36 CFR 800.5).

In accordance with the Advisory Council on Historic Preservation (ACHP) regulations implementing Section 106 of the NHPA, effects on cultural resources are identified and evaluated by (1) determining the area of potential effects, (2) identifying cultural resources present in the area of potential effects that were either listed in, or eligible to be listed in, the National Register of Historic Places, (3) applying the criteria of adverse effect to affected resources, and (4) considering ways to avoid, minimize, or mitigate adverse effects.

As recommended by the CEQ, the Section 106 process is being undertaken concurrent with the environmental review process mandated by NEPA. GSA is the lead agency in the Section 106 process. Consultation will continue throughout the environmental review process.

4.1.1 Archaeological Resources

Alternative A: Preferred Alternative

Under the Preferred Alternative, construction of the perimeter security elements would require excavation at the edges of the block, between the sidewalk and the curblin on 14th and 15th Streets, and Pennsylvania and Constitution Avenues. The construction of the ADA ramps at the 14th and 15th Street entrances, and the new entrance to the NAQ on Constitution Avenue would also disturb these areas near the face of the building. While intact archaeological resources are unlikely against the face of the building, resources could be encountered outside of the building yard due to the excavation required for the installation of the perimeter security elements. In addition, archaeological remains could be encountered during excavation for the NAQ entrance, due to the building's proximity to the former Washington Canal. Overall, impacts could be moderate.

Mitigation Measures

- Appropriate mitigation measures, including potential archaeological studies, should be determined through consultation with the DC SHPO.

Alternative B

Under Alternative B, construction of the perimeter security elements would require excavation between the sidewalk and the face of the building on 14th and 15th Streets, and Constitution Avenue. On Pennsylvania Avenue, excavation would occur between the sidewalk and the roadway. The construction of the ADA ramps at the 14th and 15th Street entrances, and the new entrance to the NAQ on Constitution Avenue would also disturb these areas near the face of the building. While it is unlikely that excavation required for the ADA ramps or the perimeter security elements along 14th and 15th Streets would result in the disturbance of intact archaeological resources, it is possible that resources could be encountered due to the proposed construction of the NAQ entrance on Constitution and the perimeter security elements on Pennsylvania Avenues. Overall, impacts could be minor to moderate.

Mitigation Measures

- Appropriate mitigation measures, including potential archaeological studies, should be determined through consultation with the DC SHPO.

No Action Alternative

Under the No Action Alternative, exterior improvements would not be undertaken at the HCHB. Thus, impacts would be negligible.

4.1.2 Historic Resources

Alternative A: Preferred Alternative

The installation of the handicapped accessible ramps at the main entrance on 14th Street, NW would have direct adverse impacts on the HCHB due to the required alterations to the structure. The installation of the ramps at the entrances on 15th Street would similarly result in the loss of historic fabric, including alterations to the doorway at the Secretary's entrance. Further, the new entrance to the NAQ would alter the Constitution Avenue elevation, introducing a modern element to the historic structure and thus resulting in an adverse impact. The installation of perimeter security features would have indirect visual impacts on reciprocal street level views between the HCHB and adjacent historic parks and properties. However, the security elements would appear as relatively minor features in the foreground of these views. Overall, impacts to the HCHB resulting from Alternative A would be minor to moderate and may constitute an adverse effect under Section 106.

The placement of the security barrier between the sidewalk and the roadway would form physical and visual barriers between the building facades and the roadways. This would permanently alter the continuity of the roadways that border the site and the historic spatial relationships that are hallmarks of the L'Enfant Plan. In addition, it would alter views along Constitution and Pennsylvania Avenues, both identified as contributing vistas within the plan, and would alter the open relationship between the HCHB and surrounding L'Enfant reservations. Impacts to the L'Enfant Plan under Alternative A would be minor to moderate and could result in an adverse effect under Section 106.

The perimeter security improvements would also impact the Federal Triangle Historic District and the Pennsylvania Avenue National Historic Site. Placed between the sidewalk and the roadway, the security elements would distinguish the block from

adjacent contributing resources, interrupting the continuity of the historic district and National Historic Site. Impacts to the Federal Triangle Historic District and the Pennsylvania Avenue National Historic Site would be minor to moderate and could result in an adverse effect under Section 106.

Alternative A would have indirect, negligible to minor, visual impacts on adjacent historic properties including the National Mall, the Bulfinch Gateposts, the District Building, the Willard Hotel, the W Hotel (Hotel Washington), and the Treasury Building.

Mitigation Measures

- To the extent possible, the physical features that would provide perimeter security should consist of hardened streetscape elements, such as streetlights, trash receptacles, and bike racks, to minimize the number of bollards required.
- Where bollards are unavoidable, the elements should be designed to complement the architectural style of the building.
- To the extent possible, rehabilitation of the HCHB should be achieved in accordance with the Secretary of the Interior's Standards.

Alternative B

The installation of the handicapped accessible ramps at the main entrance on 14th Street, NW would have direct adverse impacts on the HCHB due to the required alterations to the structure. The installation of the ramps at the entrances on 15th Street would similarly result in the loss of historic fabric, particularly at the Secretary's entrance where the doorway would have to be widened. Further, the new entrance to the NAQ would alter the Constitution Avenue elevation, introducing a modern element to the historic structure and thus resulting in adverse impacts. Finally, the installation of the perimeter security elements within the building yard would alter the setting of the historic building. Overall, impacts to the HCHB resulting from Alternative B would be moderate and could constitute an adverse effect under Section 106.

The placement of perimeter security elements along the curblin on Pennsylvania Avenue would divide the building facade from the adjacent roadway. This would alter the continuity of the roadway and the historic spatial relationships that are hallmarks of the L'Enfant Plan. In addition, it would alter views Pennsylvania Avenue, identified as a contributing vista within the plan. Further, it would alter the open relationship between the HCHB and the L'Enfant reservations to the north of the site.

The placement of the security barrier between the sidewalk and the building on 14th and 15th Streets, and Constitution Avenue, would also divide the building from the roadways, altering this important physical relationship. Overall, impacts to the L'Enfant Plan under Alternative B would be minor.

The perimeter security improvements proposed along Pennsylvania Avenue would also impact the Federal Triangle Historic District and the Pennsylvania Avenue National Historic Site. Placed between the sidewalk and the roadway, the security elements would isolate the block from adjacent contributing resources, interrupting the continuity of the historic district and National Historic Site. Impacts to the Federal Triangle Historic District and the Pennsylvania Avenue National Historic Site would be minor to moderate and could result in an adverse effect under Section 106.

Alternative B would have negligible indirect visual impacts on adjacent historic properties including the National Mall, the Bulfinch Gateposts, the District Building, the Willard Hotel, the W Hotel (Hotel Washington), and the Treasury Building.

Mitigation Measures

- Where bollards are unavoidable, the elements should be designed to complement the architectural style of the building.
- To the extent possible, rehabilitation of the HCHB should be achieved in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties.

No Action Alternative

Under the No Action Alternative, exterior improvements would not be undertaken at the HCHB. Thus, the temporary planters would remain in place and there would be no impacts to historic resources.

4.1.3 Visual Resources

The visual impact assessment for the proposed HCHB exterior improvements addresses potential changes to views and vistas that can be attributed to the proposed action. Impacts to views and vistas are determined based on an analysis of the existing quality of the view, 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.

Visual impacts in the analysis presented below are described in the following categories:

- **Negligible visual impact** – The proposed alterations would not result in any visual changes.
- **Minor visual impact** – The proposed alterations would be visible, but would not interfere with views and would not change the character of the existing views.
- **Moderate visual impact** – The proposed alterations would be visible and would interfere with existing views, but would not change the character of the existing views.
- **Major visual impact** – The proposed alterations would be visible as a contrasting or dominant element that interferes with views and substantially changes the character of the existing views.
- **Beneficial visual impact** – The proposed alterations would improve a view or the visual appearance of an area.

Alternative A: Preferred Alternative

Views Along 14th Street, NW

Looking north along 14th Street, NW, toward Pennsylvania Avenue, the line of planters would be replaced by a line of bollards and hardened streetscape features. These elements would be visible at the left edge of the view and would visually and physically separate the sidewalk from the roadway, but would not obstruct views along the corridor. The new street trees would create a consistent green edge between the sidewalk and the roadway, framing views along the corridor. Many of the new trees would initially be smaller than the existing ones. Views along the 14th Street sidewalk would include the new ADA entrance ramps, however, the ramps would not obstruct these views. Views of Pershing Park and Freedom Plaza from the

north end of the 14th Street sidewalk would include the perimeter security elements in the foreground. These elements would disrupt the open relationship between the HCHB and its sidewalk and Pennsylvania Avenue. However, this would not represent a substantial change from current conditions as the temporary measures are currently sited between the sidewalk and the roadway.

Looking south along 14th Street, NW towards the National Mall, the existing line of planters would be removed and a line of bollards and hardened streetscape features would be installed. These elements would be visible at the right edge of the view. The elements would physically and visually separate the sidewalk from the roadway, but would not obstruct views along the corridor. The new street trees would create a consistent green edge between the sidewalk and the roadway, framing views along the corridor. Many of the new trees would initially be smaller than the existing ones. Views of the National Mall, Washington Monument and other points of interest south of the site from the south end of the 14th Street sidewalk would include the perimeter security elements in the foreground. These elements would disrupt the open relationship between the HCHB and its sidewalk, and the greenspace of the National Mall, however, such a condition already exists due to the temporary planters. Views along 14th Street would also be altered by the raised crosswalks that will be placed at the end of 14th Street providing a connection to the National Mall. Overall, impacts to views along 14th Street would be minor, with potential beneficial impacts resulting from the removal of the temporary planters that are unplanned and not visually consistent with the architectural style of the building.

Views Along Constitution Avenue

Looking west along Constitution Avenue, the line of bollards and hardened streetscape features would be visible at the right edge of the view, replacing the existing temporary planters with permanent security features. These elements would physically and visually separate the sidewalk from the roadway, but would not obstruct views along the corridor. The new street trees would create a consistent green edge between the sidewalk and the roadway, framing views along the corridor; however, many of the new trees would initially be smaller than the existing ones. Views west would also include the new entrance to the NAQ and the NMAACH, once constructed. The proposed wall and NAQ entrance would introduce a modern element to the viewshed and would disrupt views of the face of the building. However, the low height of the wall and the glazed nature of the entrance would minimize such impacts. Views of the National Mall, Washington Monument and other points of interest south of the site from the Constitution Avenue sidewalk would include the perimeter security elements in

the foreground. These elements would disrupt the open relationship between the HCHB and its sidewalk, and the greenspace of the National Mall, however, such a condition already exists due the location of the temporary planters.

Looking east along Constitution Avenue, the line of bollards and hardened streetscape features would be visible at the left edge of the view, replacing the existing temporary planters. These elements would physically and visually separate the sidewalk from the roadway, but would not obstruct views along the corridor. The new street trees would create a consistent green edge between the sidewalk and the roadway, framing views along the corridor; however, many of the new trees would initially be smaller than the existing ones. Views east would also include the new entrance to the NAQ. The proposed wall and glazed entry pavilion would introduce a modern element to the viewshed and would disrupt views of the face of the building. However, the low height of the wall and the glazed nature of the pavilion would minimize such impacts. Views of the National Mall, Washington Monument, and other points of interest south of the site from the Constitution Avenue sidewalk would include the perimeter security elements in the foreground. These elements would disrupt the open relationship between the HCHB and its sidewalk, and the greenspace of the National Mall, however, such a condition already exists due to the location of the temporary planters. Overall, impacts to views along Constitution Avenue would be minor to moderate, with potential beneficial impacts resulting from the removal of the temporary planters that are unplanned and not visually consistent with the architectural style of the building.

Views Along 15th Street, NW

Looking north along 15th Street, NW, toward Pennsylvania Avenue, the line of bollards and hardened streetscape features would be visible at the right edge of the view and would visually and physically separate the sidewalk from the roadway, but would not obstruct views along the corridor. The new street trees would create a consistent green edge, framing views along the corridor; however, many of the new trees would initially be smaller than the existing ones. Views along the 15th Street sidewalk would include the new ADA entrance ramps, however, the ramps would not obstruct these views. Views of Pershing Park from the north end of the 15th Street sidewalk would include the perimeter security elements in the foreground as they cross the sidewalk. These elements would disrupt the open relationship between the HCHB and its sidewalk, and Pennsylvania Avenue, however, this would not represent a change from current conditions due to the existing line of temporary planters. In addition, views west from the sidewalk towards the Ellipse would be altered, as the security elements would appear in the foreground. Views of the Ellipse, however, are frequently obstructed by cars and busses parked along the west side of the roadway.

Looking south along 15th Street, NW towards the National Mall, the line of bollards and hardened streetscape features would be visible at the left edge of the view, but would not obstruct views along the corridor. These elements would physically and visually separate the sidewalk from the roadway. The new street trees would create a consistent green edge between the sidewalk and the roadway, framing views along the corridor; however, many of the new trees would initially be smaller than the existing ones. Views of the National Mall, Washington Monument and other points of interest south of the site from the south end of the 15th Street sidewalk would include the perimeter security elements in the foreground as they cross the sidewalk. These elements would disrupt the open relationship between the HCHB and its sidewalk, and the greenspace of the National Mall. However, such a condition already exists due to the temporary planters. Overall, impacts to views along 15th Street would be minor, with potential beneficial impacts resulting from the removal of the temporary planters that are unplanned and not visually consistent with the architectural style of the building.

Views Along Pennsylvania Avenue

Looking west along Pennsylvania Avenue, the existing line of planters would be removed and replaced with a line of bollards and hardened streetscape features. These features would be visible at the right edge of the view and would visually and physically separate the sidewalk from the roadway, but would not obstruct views along the corridor. The new street trees would create a consistent green edge between the sidewalk and the roadway, framing views along the corridor. The new trees would initially be smaller than the existing ones. Views of the Ellipse from the west end of the 14th Street sidewalk would include the perimeter security elements in the foreground. These elements would disrupt the open relationship between the HCHB and its sidewalk, and the greenspace of the Ellipse. In addition, views north from the sidewalk towards Pershing Park would be altered, as the security elements would appear in the foreground.

Looking east along Pennsylvania Avenue, the existing line of planters would be removed and replaced with a line of bollards and hardened streetscape features. These features would be visible at the left edge of the view and would visually and physically separate the sidewalk from the roadway, but would not obstruct views along the corridor. The new street trees would create a consistent green edge between the sidewalk and the roadway, framing views along the corridor; however, the new trees would initially be smaller than the existing ones. Views of Freedom Plaza and areas east of the HCHB from the east end of Pennsylvania Avenue sidewalk would include the perimeter security elements in the foreground. These elements would disrupt the open relationship between the HCHB and its sidewalk, and Pennsylvania Avenue. Overall, impacts to views along the Pennsylvania Avenue would be moderate.

Mitigation Measures:

- To the extent possible, the physical features providing perimeter security along the curblineline should consist of hardened streetscape elements, such as streetlights, trash receptacles, and bike racks, to minimize the visual impact of the improvements.
- The security elements should be designed to complement the architectural style of the building.
- The design and materials of the ADA ramps should be compatible with the existing historic structure to minimize impacts from these elements.

Alternative B*Views Along 14th Street, NW*

Looking north along 14th Street, NW, toward Pennsylvania Avenue, the line of planters would be removed, opening the sidewalk to the street. The new security features placed between the sidewalk and the building face would be visible at the left edge of the view and would partially obscure the base of the building. The installation of perimeter security elements along 14th Street would not require the removal of street trees, however, the utility improvements would result in the replacement of a portion of them. Views from the sidewalk on 14th Street would include the new security elements between the sidewalk and the face of the building. These elements would partially obscure the base of the building and would alter the open relationship between the building and the sidewalk. The new ADA ramps would be visible at the main entrance; however, they would not obstruct views along the roadway or the sidewalk. Views of Pershing Park and Freedom Plaza from the north end of the 14th Street sidewalk would not be altered.

Looking south along 14th Street, NW, toward the National Mall, the line of planters would be removed, opening the sidewalk to the street. The new security features placed between the sidewalk and the building face would be visible at the right edge of the view and would partially obscure the base of the building. The installation of perimeter security elements along 14th Street would not require the removal of street trees; however, the utility improvements would result in the replacement of a large proportion of the trees. Views from the sidewalk on 14th Street would include the new security elements between the sidewalk and the face of the building. These elements would partially obscure the base of the building and would alter the open relationship between the building and the sidewalk. Views of the National Mall and Washington Monument from the south end

of the 14th Street sidewalk would not be altered. Overall, impacts to views would be minor with positive impacts resulting from the removal of the existing temporary planters.

Views Along Constitution Avenue

Looking west along Constitution Avenue, the line of temporary planters would be removed, opening the sidewalk to the street. The new entrance to the NAQ would be visible, introducing a modern element to the viewshed and disrupting views of the face of the building. However, the low height of the wall and the glazed nature of the pavilion would minimize such impacts. Views of the National Mall, Washington Monument and other points of interest south of the site from the Constitution Avenue sidewalk would be improved, as the temporary planters would not appear in the foreground of the view.

Looking east along Constitution Avenue, the line of temporary planters would be removed, opening the sidewalk to the street. The new entrance to the NAQ would be visible, introducing a modern element to the viewshed and disrupting views of the face of the building. However, the low height of the wall and the glazed nature of the pavilion would minimize such impacts. Views of the National Mall, Washington Monument and other points of interest south of the site from the Constitution Avenue sidewalk would be improved, as the temporary planters would not appear in the foreground of the view. These elements currently disrupt the open relationship between the HCHB and its sidewalk, and the greenspace of the National Mall. Overall, impacts to views along Constitution Avenue would be minor to moderate, with beneficial impacts resulting from the removal of the temporary planters, as they are unplanned and not visually consistent with the historic character of the building.

Views Along 15th Street, NW

Looking north along 15th Street, NW, toward Pennsylvania Avenue, the line of planters would be removed, opening the sidewalk to the street. The new security features placed between the sidewalk and the building face would be visible at the right edge of the view and would partially obscure the base of the building. The installation of perimeter security elements along 15th Street would not require the removal of street trees; however, the utility improvements would result in the replacement of a portion of them. Views from the sidewalk on 15th Street would include the new security elements between the sidewalk and the face of the building. These elements would partially obscure the base of the building and would alter the open relationship between the building and the sidewalk. At the south entrances, the new ADA ramps would be visible, but they would not obstruct views along the roadway or the sidewalk.

Looking south along 15th Street, NW, toward the National Mall and the Washington Monument, the line of planters would be removed, opening the sidewalk to the street. The new security features placed between the sidewalk and the building face would be visible at the left edge of the view and would partially obscure the base of the building. The installation of perimeter security elements along 15th Street would not require the removal of street trees; however, the utility improvements would result in the replacement of a portion of them. Views from the sidewalk on 15th Street would include the new security elements between the sidewalk and the face of the building. These elements would partially obscure the base of the building and would alter the open relationship between the building and the sidewalk. Views of the Washington Monument and National Mall from the south end of the 15th Street sidewalk would not be altered. Overall, impacts to views along 15th Street would be minor, with beneficial impacts resulting from the removal of the temporary planters, as they are unplanned and not visually consistent with the historic character of the building.

Views Along Pennsylvania Avenue

Looking west along Pennsylvania Avenue, the existing line of planters would be removed and replaced with a line of bollards and hardened streetscape features. These features would be visible at the right edge of the view and would visually and physically separate the sidewalk from the roadway, but would not obstruct views along the corridor. The new street trees would create a consistent green edge between the sidewalk and the roadway, framing views along the corridor; however, the new trees would initially be smaller than the existing ones. Views of the Ellipse from the west end of the sidewalk would include the perimeter security elements in the foreground. These elements would disrupt the open relationship between the HCHB and its sidewalk, and the greenspace of the Ellipse. In addition, views north from the sidewalk towards Pershing Park would be altered, as the security elements would appear in the foreground.

Looking east along Pennsylvania Avenue, the existing line of planters would be removed and replaced with a line of bollards and hardened streetscape features. These features would be visible at the left edge of the view and would visually and physically separate the sidewalk from the roadway, but would not obstruct views along the corridor. The new street trees would create a consistent green edge between the sidewalk and the roadway, framing views along the corridor; however, the new trees would initially be smaller than the existing ones. Views of Freedom Plaza and areas east of the HCHB from the east end of Pennsylvania Avenue sidewalk would include the perimeter security elements in the foreground. These elements would disrupt the open relationship between the HCHB and its sidewalk, and Pennsylvania Avenue. Overall, impacts to views along the Pennsylvania Avenue would be moderate.

Mitigation Measures:

- Perimeter security elements should be designed to complement the architectural style of the building as to not detract from surrounding historic views.
- The design and materials of the ADA ramps should be compatible with the existing historic structure to minimize impacts from these elements.

No Action Alternative

Under the No Action Alternative, exterior improvements would not be undertaken at the HCHB. Thus, the beneficial impacts to visual resources resulting from the removal of the temporary planters would not occur.

4.2 SOCIOECONOMIC RESOURCES

4.2.1 Land Use

Alternatives A and B

The action alternatives would not alter current land uses on the site or within the surrounding area. The relocation of the entrance to the NAQ would be consistent with the other museums and attractions located along and accessed from Constitution Avenue, including the NMAH, NMNH, and the Washington Monument. It would also be consistent with the Smithsonian Museum of African American History and Culture, planned for a site immediately south of the HCHB. As such, impacts to land use from the two action alternatives would be beneficial.

No Action Alternative

Under the No Action Alternative, exterior improvements would not be installed occur at the HCHB. The NAQ entrance would not be relocated and thus positive impacts would not result from consistent uses on Constitution Avenue.

4.2.2 Planning Policies

Alternative A: Preferred Alternative

Alternative A would comply with portions of the *Comprehensive Plan for the National Capital, Federal Elements* by balancing economic vitality with perimeter security, designing features that complement the visual and historic character of the area and respond to the site-specific needs of HCHB, and replacing street trees. However, contrary to the Plan, Alternative A would result in the removal of existing street trees and would impact pedestrian flow due to the placement of bollards across sidewalks and at corners. The impacts to pedestrian flows are further discussed in Section 4.4.4 of this Environmental Assessment. Further, Alternative A would locate security features within public space and would adversely impact elements of the L'Enfant Plan. Finally, Alternative A would detract from the L'Enfant Plan by creating physical and visual barriers between the sidewalk and the roadways on 14th and 15th Streets, and Pennsylvania and Constitution Avenues. Alternative A would not comply with portions of the District Elements, as it wouldn't encourage pedestrian movement, optimize the use of the sidewalks, or minimize impacts on the public realm. Further, it would not adhere to the principles of the L'Enfant and

McMillan Plans, due to the placement of perimeter security elements along the curblines. However, it would preserve the wide sidewalks surrounding the building.

Alternative A would comply with portions of the NCPC *Security Plan* and the subsequent *Policies and Objectives*. As suggested by the Plan, the design would employ a range of streetscape elements hardened for security purposes and would respond to the architectural context of the HCHB. Regarding the installation of barriers in public space, the *Policies and Objectives* allow for barriers in public space if the distance from the face of the building to the outer edge of the building yard is less than 20 feet, but also state that the placement of barriers in public space is discouraged and should be avoided. Additionally, Alternative A would impact pedestrian circulation for the area's employees and tourists. A discussion of the impacts to pedestrian circulation can be found in Section 4.4.4. Finally, the *Policies and Objectives* discourage the placement of security elements at corners, as they inhibit pedestrian flow.

The Preferred Alternative would not fully comply with the *National Capital Framework Plan's* vision for the Federal Triangle as the proposed action would not enhance connections between the Federal Triangle and Downtown and would not improve the pedestrian experience. Instead, the placement of permanent perimeter security measures along the curblines would hinder open pedestrian flow between the site and the surrounding area. Alternative A would not hinder the development of the Potomac Heritage National Trail and thus it complies with the *DC Bicycle Master Plan*. It also would not hinder the implementation of the *Comprehensive Design Plan for the White House and President's Park*, although the security elements could interrupt the vista along the Pennsylvania Avenue sidewalk to and from the White House Grounds. Finally, under Alternative A the street trees on the site would be replaced with new trees. To comply with the Urban Forest Preservation Act of 2002, a Special Tree Removal Permit would be required for any trees with circumferences larger than 55 inches. This permit will require coordination with the Urban Forestry Administration, under the DC Department of Transportation. Overall, impacts to planning policies would be moderate.

Mitigation Measures

- In keeping with NCPC *Security Plan* and *Policies and Objectives*, as well as the *Comprehensive Plan for the National Capital: District Elements*, the form and materials of the proposed perimeter security elements should respond to the HCHB and its surroundings.
- Coordinate with DDOT regarding design standards established within their *Design and Engineering Manual*.

Alternative B

Alternative B would comply with portions of the *Comprehensive Plan for the National Capital, Federal Elements*, as it would not impede commerce and would not impact existing street trees. However, contrary to the Plan, Alternative B would locate security features within public space on Constitution Avenue. Alternative B would adversely impact the setting of the historic HCHB due to the location of security elements within the historic building yard. In accordance with the *Comprehensive Plan for the National Capital: District Elements*, Alternative B would preserve the wide sidewalks surrounding the site. However, it would not adhere to the principles of the L'Enfant and McMillan Plans, due to the placement of perimeter security elements along the curblines on Pennsylvania Avenue.

Alternative B would comply with portions of the *NCPC Security Plan* and the subsequent *Policies and Objectives*. As suggested by the Plan, the design would respond to the architectural context of the HCHB. In addition, security elements would be placed within the building yard on 14th and 15th Streets. Regarding the installation of barriers in public space, the *Policies and Objectives* allow for barriers in public space if the distance from the face of the building to the outer edge of the building yard is less than 20 feet, but also state that the placement of barriers in public space is discouraged and should be avoided. The barriers would be placed within public space on Constitution Avenue. Additionally, Alternative B would impact pedestrian circulation for the area's employees and tourists, as bollards would cross the sidewalk on Pennsylvania Avenue.

Alternative B would not fully comply with the *National Capital Framework Plan's* vision for the Federal Triangle as the proposed action would not enhance connections between the Federal Triangle and downtown and would not improve the pedestrian experience. Instead, the placement of permanent perimeter security measures along the curblines on Pennsylvania Avenue would hinder open pedestrian flow between the site and the surrounding area. It also would not hinder the implementation of the *Comprehensive Design Plan for the White House and President's Park*, although the perimeter security elements could interrupt the vista along the Pennsylvania Avenue sidewalk to and from the White House Grounds. In addition, Alternative B would not hinder the development of the Potomac Heritage National Trail and thus it complies with the *DC Bicycle Master Plan*. Overall, impacts to planning policies would be minor.

Mitigation Measures

- In keeping with *NCPC Security Plan* and *Policies and Objectives*, as well as the *Comprehensive Plan for the National Capitol: District Elements*, the form and materials of the proposed perimeter security elements should respond to the HCHB and its surroundings.
- Coordinate with DDOT regarding design standards established within their *Design and Engineering Manual*.

No Action Alternative

Under the No Action Alternative, exterior improvements would not be undertaken at the HCHB. Thus, the HCHB would not comply with the *NCPC Security Plan*.

4.2.3 Public Space

Alternative A: Preferred Alternative

Alternative A would not comply with DDOT's objective of keeping perimeter security measures out of their property or restricting pedestrian flows. Alternative A proposes to locate the security features along the curb along 14th Street and 15th Street, SW, Constitution Avenue and Pennsylvania Avenue, maximizing the distance between security threats and the building. This configuration would achieve the highest level of security but would also require that DDOT to grant a Public Space Permit. DDOT also requires that proposed security features do not impede pedestrian flow. The bollards across the sidewalk and at the corners would hinder flow, especially during peak periods. Overall, impacts to public space would be moderate.

- As the design progresses, coordinate with DDOT regarding guidelines presented in their *Design and Engineering Manual* and *Public Realm Handbook*.
- As the design progresses, GSA should further investigate the precise location and design of the security elements along Pennsylvania Avenue in order to accommodate furnishings required during presidential inaugurations.

Alternative B

Alternative B would not comply with DDOT's objective of keeping perimeter security measures out of public space, as Alternative B proposes to locate the security features outside of the property line on Pennsylvania Avenue and Constitution

Avenue. However, on Pennsylvania Avenue the sidewalk is the property of the National Park Service. On 14th Street and 15th Street, the security elements would be located within the building yard. DDOT also requires that proposed security features do not impede pedestrian flow. The bollards that cross the sidewalk on Pennsylvania Avenue would hinder flow, especially during peak periods. Overall, impacts to public space would be minor.

- As the design progresses, coordinate with DDOT regarding guidelines presented in their *Design and Engineering Manual* and *Public Realm Handbook*.
- As the design progresses, GSA should further investigate the precise location and design of the security elements along Pennsylvania Avenue in order to accommodate furnishings required during presidential inaugurations.

No Action Alternative

Under the No Action Alternative, exterior improvements would not be undertaken at the HCHB. The existing temporary planters would remain within public space on each of the four sides of the building. These planters would not comply with GSA safety standards or the purpose and need for the proposed action.

4.2.4 Visitation and Visitor Experience

Alternatives A and B

Under the action alternatives a new entrance would be constructed for the NAQ on Constitution Avenue. The new glazed entrance would improve the visibility of the facility and thus would likely increase visitation. With the construction of the NMAAHC south of the site, there would be additional visitors in the area, contributing to a cumulative increase in visitors in the immediate area. The proposed action would not impact visitation at the White House Visitor Center.

The new entry pavilion on Constitution Avenue would also improve visitor experience, as it would allow visitors to adjacent Smithsonian Museums to easily access the facility. In addition, the new entrance would allow light into the NAQ and would be ADA compliant. The placement of security elements along the curblin under Alternative A could impact pedestrian flow in the area, and thus adversely impact visitor experience. However, the inclusion of hardened benches could enhance the pedestrian experience by providing a place to sit and relax. Impacts to visitation and visitor experience would be beneficial, with minor adverse impacts under Alternative A as a result of the placement of perimeter security barriers across the sidewalks.

No Action Alternative

Under the No Action Alternative, exterior improvements would not be undertaken at the HCHB. Thus, there would be no increase in visitation or improvement of visitor experience at the NAQ.

4.2.5 Economic/Fiscal Resources

Alternatives A and B

The proposed NAQ entrance could increase visitation to the facility and thus have a beneficial impact on local restaurants and retail establishments.

No Action Alternative

Under the No Action Alternative, exterior improvements would not be undertaken at the HCHB. Thus, there would be no impact to economic or fiscal resources on the site or within the surrounding area.

4.3 NATURAL RESOURCES

4.3.1 Vegetation

Alternative A: Preferred Alternative

Under Alternative A, the street trees would be removed and replaced due to the location of the perimeter security elements. Around the site's perimeter this would include fifteen oaks on Pennsylvania Avenue; seventeen oaks and five ginkgos along 14th Street, NW; fourteen oaks and two crepe myrtles along 15th Street, NW; and three American elms and three Chinese elms along Constitution Avenue.

Within the planting beds around the site, several of the magnolias would be removed or relocated. On 14th Street, a 24" magnolia (#4 in Figure 2-5, Page 2-7) would be relocated to the corner of 15th Street and Constitution Avenue, while a 4-inch specimen (#1) would be removed due to poor health. The two additional magnolias on 14th Street, #2 and #3, would be preserved in their current locations. On Constitution Avenue, a 21-inch magnolia (#5) would be relocated to the corner of 14th Street and Constitution Avenue, and a 12-inch specimen (#6) would be removed. The latter tree has been determined to be unhealthy. On 15th Street, three magnolias would be removed: a 20-inch (#7), a 12-inch (#8), and an 11-inch (#9). The removal of #9 would be due to the utility improvements being undertaken as part of the building renovation. A 24-inch specimen (#10) would be preserved in place. As the Section 106 process progresses, GSA will evaluate the historic potential of the magnolia trees.

Due to the installation of the ramps at the 14th Street entrance, the size of the adjacent planting beds would be reduced. Further, the NAQ entrance would require the removal of the large central planting bed on Constitution Avenue. The installation of utilities as part of the building renovation may alter the layout and composition of the beds along 14th and 15th Streets. Overall, impacts to vegetation would be moderate.

Mitigation Measures

- Coordinate with the Urban Forestry Administration and obtain Special Tree Removal Permits as necessary.

Alternative B

Under Alternative B, the street trees would be removed along Pennsylvania Avenue due to the location of the perimeter security elements. On 14th and 15th Streets, and Constitution Avenue, perimeter security elements would not disturb the trees along the curblineline. However, a large proportion of the street trees on 14th and 15th Streets would be replaced with the utility upgrades at the building.

Within the planting beds around the site, several of the magnolias would be removed or relocated. On 14th Street, a 24-inch magnolia (#4 in Figure 2-5, Page 2-7) would be relocated to the corner of 15th Street and Constitution Avenue, while a 4-inch specimen (#1) would be removed due to poor health. The two additional magnolias on 14th Street would be preserved in their current locations. On Constitution Avenue, a 21-inch magnolia (#5) would be relocated to the corner of 14th Street and Constitution Avenue, and a 12-inch specimen (#6) would be removed. The latter tree has been determined to be unhealthy. On 15th Street, three magnolias would be removed: a 20-inch (#7), a 12-inch (#8), and an 11-inch (#9). The removal of #9 would be due to the utility improvements being undertaken as part of the building renovation. A 24-inch specimen (#10) would be preserved in place. As the Section 106 process progresses, GSA will evaluate the historic potential of the magnolia trees.

Due to the installation of the ramps at the 14th Street entrance, the size of the adjacent planting beds would be reduced. The NAQ entrance would further require the removal of the large central planting bed on Constitution Avenue. The installation of utilities as part of the building renovation may alter the layout and composition of the beds along 14th and 15th Streets. Overall, impacts to vegetation would be minor to moderate.

Mitigation Measures

- Coordinate with the Urban Forestry Administration and obtain Special Tree Removal Permits as necessary.

No Action Alternative

Under the No Action Alternative, exterior improvements would not be undertaken at the HCHB. Thus, impacts to existing vegetation would be negligible.

4.3.2 Water Resources

Alternatives A and B

Due to the absence of surface water on-site, impacts to water resources are anticipated to be negligible. Since the HCHB does not currently lie within the 100-year floodplain, construction would not be required to comply with associated regulations.

No Action Alternative

Under the No Action Alternative, exterior improvements would not be undertaken at the HCHB. Thus, impacts to water resources would be negligible.

4.4 TRANSPORTATION

4.4.1 Vehicular Circulation

Alternative A: Preferred Alternative

The movement of construction materials, equipment, and workers to the HCHB would likely temporarily constrict roadways in the immediate area, on 14th and 15th Streets, and Pennsylvania and Constitution Avenues. While road closures would be unlikely, lane restrictions may occur. Disruptions could be particularly problematic on the southbound lanes of 14th Street, since it is a major thoroughfare, connecting DC with Virginia over the 14th Street Bridge. There could be a cumulative impact to vehicular circulation if construction at the HCHB and the NMAAHC occur simultaneously. Overall, construction-related impacts would be short-term and moderate.

Once completed, there is the potential for vehicle queuing at the entrances to the motor courts; however the number of vehicles accessing the courts is limited. In addition, cars are already subject to screening at each of the four entrances and thus the proposed improvements should not degrade vehicular circulation beyond existing conditions. Long-term impacts would thus be negligible.

Mitigation Measures

- Minimize construction vehicle traffic and equipment during AM and PM peak hours.
- Coordinate construction schedules with nearby projects, including the NMAAHC, to minimize impacts on area roadways.
- Coordinate with District of Columbia Fire and Emergency Services throughout the design process to ensure that emergency vehicle access is maintained.

Alternative B

The movement of construction materials, equipment, and workers to the HBHC would likely constrict roadways in the immediate area, on 14th and 15th Streets, and Pennsylvania and Constitution Avenues. Disruptions could be particularly problematic on the southbound lanes of 14th Street, since it is a major thoroughfare, connecting DC with Virginia over the 14th

Street Bridge. There could be a cumulative impact to vehicular circulation if construction at the HCHB and the NMAAHC occur simultaneously. Overall, construction-related impact would be short-term and moderate.

Once completed, there is the potential for vehicle queuing at the entrances to the motor courts; however the number of vehicles accessing the courts is limited. In addition, cars are already subject to screening at each of the four entrances and thus the proposed improvements should not degrade vehicular circulation beyond existing conditions. Long-term impacts would thus be negligible.

Mitigation Measures

- Minimize construction vehicle traffic and equipment during AM and PM peak hours.
- Coordinate construction schedules with nearby projects, including the NMAAHC, to minimize impacts on area roadways.
- Coordinate with District of Columbia Fire and Emergency Services throughout the design process to ensure that emergency vehicle access is maintained.

No Action Alternative

Under the No Action Alternative, exterior improvements would not be undertaken at the HCHB. Thus, impacts to vehicular circulation would be negligible.

4.4.2 Parking

Alternatives A and B

Under the action alternatives, construction activities would temporarily impact parking availability on the roadways bordering the HCHB. Specifically, the parking spaces that would be affected are located on the south side of Pennsylvania Avenue, the west side of 14th Street, the north side of Constitution Avenue, and east side of 15th Street. Many of these spaces require a permit, and are thus not open to the public. As such, impacts to public parking would be short-term and minor. There would be no long-term impacts to parking availability in the area.

No Action Alternative

Under the No Action Alternative, exterior improvements would not be undertaken at the HCHB. Thus, impacts to parking would be negligible.

4.4.3 Public Transportation

Alternative A

Under Alternative A, perimeter security measures would be installed along the curblineline. These security elements have the potential to restrict pedestrian circulation at the bus stops surrounding the HBHC, two on 14th Street, one on Constitution Avenue, and one on Pennsylvania Avenue. However, this should not represent a substantive restriction over current conditions, since temporary planters already line the space between the sidewalk and the curblineline. Although visitation may increase at the NAQ, due to its increased visibility on Constitution Avenue, it is unlikely to substantively impact public transportation services, as most visitors would likely already be on the National Mall visiting other attractions and traveling to the site by foot. Thus, impacts would be negligible.

Mitigation Measures

- Perimeter security would remain porous around bus stops to aid in pedestrian movement.

Alternative B

Under Alternative B, perimeter security measures would be installed along the curblineline on Pennsylvania Avenue. The security elements have the potential to restrict pedestrian circulation to the bus stop on Pennsylvania Avenue. However, this should not represent a substantive restriction over current conditions, since temporary planters already line the space between the sidewalk and the curblineline. Although visitation may increase at the NAQ, due to its increased visibility on Constitution Avenue, it is unlikely to substantively impact public transportation services, as most visitors would likely already be on the National Mall visiting other attractions and traveling the site by foot. Thus, impacts to public transportation are anticipated to be negligible.

Mitigation Measures

- Perimeter security would remain porous around bus stops to aid in pedestrian movement.

No Action Alternative

Under the No Action Alternative, exterior improvements would not be undertaken at the HCHB. Thus, impacts would be negligible.

4.4.4 Pedestrian and Bicycle CirculationAlternative A: Preferred Alternative

Construction activities at the HCHB would cause temporary sidewalk closures and thus disruptions to pedestrian circulation on the roadways that border the site. These disruptions could be minimized by undertaking the perimeter security and exterior building improvements simultaneously. Short-term impacts to pedestrian circulation would be moderate.

Under Alternative A, bollards would cross the sidewalks at each of the four corners of the site, restricting pedestrian flow along these heavily traveled walkways. Pedestrians coming from the Metro station, located beneath the Ariel Rios Building, would encounter some bollards at the 14th Street crosswalk. Bollards would also cross the sidewalk on 14th Street at the entrances to the motor courts. Should vehicle queuing occur at these entry points whether there are bollards or not, pedestrian flow along the 14th Street could be impeded if proper traffic control is not maintained. Further, while the temporary planters currently separate the sidewalk from the roadway, altering what was originally an open relationship between the sidewalk and the roadway, the improvements under Alternative A would make this a permanent condition. This relationship could be further strained by the completion of the NMAAHC and an increase of tourist traffic. The proposed ADA improvements would enhance pedestrian facilities at the HCHB by improving accessibility. Overall, long-term impacts to pedestrian circulation would be moderate, with beneficial impacts resulting from the proposed ADA improvements.

Although the Potomac Heritage Trail runs along Pennsylvania Avenue, the improvements are restricted to the area inside of the curbline and thus impacts to bicycle circulation should be negligible.

Mitigation Measures

- During construction of the security elements, employ appropriate signage and flagging to minimize impacts to pedestrian safety.
- Throughout the design process, coordinate with the National Park Service to ensure proper access is maintained to the White House Visitor Center.

Alternative B

Construction activities at the HCHB would cause temporary sidewalk closures and thus disruptions to pedestrian circulation on the roadways that border the site. These disruptions could be minimized by undertaking the perimeter security and exterior building improvements simultaneously. Short-term impacts to pedestrian circulation would be moderate.

Under Alternative B, bollards would cross the sidewalk on Pennsylvania Avenue at the northeast and northwest corners of the site. This would disrupt pedestrian flow along Pennsylvania Avenue. Further, while the temporary planters currently separate the sidewalk from the roadway on Pennsylvania Avenue, altering what was originally an open relationship between the sidewalk and the roadway, the improvements under Alternative B would make this a permanent condition. On 14th and 15th Streets and Constitution Avenue, however, the temporary planters would be removed and the open relationship between the roadway and the sidewalk would be restored. On 14th and 15th Streets, at the entrances to the motor courts, there is the potential for the interruption of pedestrian flow if vehicular queuing occurs, as waiting cars could block the sidewalk. This relationship could be further strained by the completion of the NMAAHC and an increase of tourist traffic. However, the removal of the temporary planters between the sidewalk and the curblines would enhance the sense of openness. The proposed ADA improvements would enhance pedestrian facilities at the HCHB by improving accessibility. Overall, long-term impacts to pedestrian circulation would be minor, with beneficial impacts resulting from the proposed ADA improvements.

Although the Potomac Heritage Trail runs along Pennsylvania Avenue, the improvements are restricted to the area inside of the curblines and thus impacts to bicycle circulation should be negligible.

Mitigation Measures

- During construction of the security elements, employ appropriate signage and flagging to minimize impacts to pedestrian safety.

No Action Alternative

Under the No Action Alternative, exterior improvements would not be undertaken at the HCHB. The temporary planters that run along the edges of the sidewalks would continue to restrict pedestrian flow.

4.5 UTILITIES AND INFRASTRUCTURE

4.5.1 Utilities

Alternatives A and B

On Pennsylvania Avenue, installation of security features and the relocation of the NAQ entrance could potentially temporarily disturb a 24-inch (610 mm) water line and an electrical line that both run under the sidewalk. To ensure that the water line is not compromised, the DC Water and Sewer Authority (WASA) might require that a preconstruction survey be completed.

On 14th Street, NW, construction of security features could potentially disturb several utility lines including water lines, sewer lines, a telecom line, gas lines, stormwater sewer lines, and electrical lines. At the northern end of the block, the 4-inch (102 mm) gas line, the 4-inch (102 mm) water line, the electrical line and the steam tunnel that enter the building along with the two 5-inch (127 mm) sewer lines and the two 12-inch (305 mm) stormwater drains that exit the building could be impacted by the construction. At the southern end of the block, the gas line, the 6-inch (152 mm) water line, and the electrical line that enter the building along with the 5-inch (127 mm) sewer line may be impacted. To ensure the water and sewer lines are not compromised, the DC WASA might require that a preconstruction survey be completed. For the electrical lines, PEPCO will need to be contacted to ensure this line is kept intact.

On 15th Street, NW, construction of security features could potentially disturb several utility lines that include a water line, which runs underneath the street, along with a sewer line, a steam tunnel, a gas line, a stormwater line, and an electrical line that run under the sidewalk. The telecom and gas lines, which are not being replaced, will be protected during both the installation of the perimeter security and the utility replacement work. The water line enters the building at five locations with four 6-inch (152 mm) pipes and one 4-inch (102 mm) pipe. The sewer lines and stormwater drains will be encountered at six locations and pipes will range in size from 6-inch (102 mm) to 8-inch (204 mm) for the sewer lines and between 10-inch (254 mm) and 12-inch (305 mm) in diameter for the stormwater lines. Other utilities that may be disturbed includes a 4-inch (102 mm) gas line that enters the building near the main entrance to the building. To ensure the water and sewer lines are not compromised, the DC WASA might require that a preconstruction survey be completed. For the electrical lines, PEPCO will need to be contacted to ensure this line is kept intact.

On Constitution Avenue, construction of security features and the relocation and construction of the National Aquarium entrance could affect a telephone line, two electrical lines, and a sanitary sewer line. The telephone line enters the building near the corner of Constitution Avenue and 15th Street, NW. Both the electric lines and the 120-inch (3,048 mm) by 132-inch (3,352 mm) sanitary sewer lines run underneath the sidewalk and could be disturbed by construction. To ensure the sewer line is not compromised, the DC WASA might require that a preconstruction survey be completed.

Utility improvements will be undertaken as part of the building renovation. If possible, the perimeter security installation, NAQ entrance, and ADA improvements will be coordinated with the replacement of the utility lines. If the utility improvements and perimeter security installation can be completed simultaneously, impacts would be negligible. If the two efforts must occur separately, impacts would be minor.

Possible Mitigation Measures

- Coordinate with DC WASA to determine if a preconstruction survey is necessary.
- Coordinate with PEPCO to ensure all electrical lines will remain intact and are safe to work around.
- Low-water landscaping will be implemented and will comply with LEED standards.

No Action Alternative

Under the No Action Alternative, exterior improvements would not be undertaken at the HCHB. Thus, impacts to utility systems would be negligible.

4.5.2 Hazardous Materials

Alternatives A and B

The action alternatives do not propose to introduce any new hazardous waste materials or contamination to the site. Thus, impacts would be negligible.

No Action Alternative

Under the No Action Alternative, exterior improvements would not be undertaken at the HCHB. Thus, impacts to hazardous materials would be negligible.

4.5.3 Stormwater Management

Alternatives A and B

The HCHB is located within a highly urbanized portion of downtown Washington, DC. As such, stormwater management is achieved through a system of storm drains and combined sewer lines located along the periphery of the building. There could be minor short-term construction-related impacts to stormwater due to increased sediment flows, however, this would be minimized by implementing best management practices. Long-term impacts to stormwater management would be negligible.

Mitigation Measures

- Employ stormwater best management practices during construction to minimize sediment loads in stormwater runoff.

No Action Alternative

Under the No Action Alternative, exterior improvements would not be undertaken at the HCHB. Thus, impacts to stormwater management would be negligible.

4.6 AIR QUALITY

Alternatives A and B

The main source for potential air quality impacts that would result from the action alternatives would take place during the construction period. These emissions would come from three sources: (1) construction equipment emissions; (2) fugitive dust from soil excavation and site disturbance; (3) emissions from construction worker vehicles commuting to the site. Emissions produced during construction would vary daily depending on the equipment and type of activity, however, due to the limited construction proposed, project-generated emissions would be expected to be below *de minimis* levels. Thus, the project would be exempt from an air conformity determination. Overall, short-term impacts to air quality are anticipated to be minor and long-term impacts are anticipated to be negligible.

Mitigation Measures

- Appropriate best management practices should be implemented during construction to reduce, minimize, or eliminate construction vehicle and equipment emissions and fugitive dust.

No Action Alternative

Under the No Action Alternative, exterior improvements would not be completed at the HCHB. Thus, impacts to air quality would be negligible.

4.7 NOISE LEVELS

Alternatives A and B

The District limits weekday construction and demolition noise to 80 dBA Leq from 7 AM to 7 PM, unless a variance is granted. Given the scope of the construction activities, it is unlikely that noise levels would reach this threshold. The movement of heavy trucks could also generate noise in the vicinity of the site. Visitors to the museums south and southeast of the site, could be impacted by construction-related noise impacts. Overall, short-term construction-related impacts would be minor to moderate. Once completed, long-term impacts would be negligible.

Mitigation Measures

- Employ appropriate best management practices to control noise at its source.

No Action Alternative

Under the No Action Alternative, perimeter security and building modifications would not be completed at the HCHB. Thus, there would be no impact to noise levels on the site or within the surrounding area.

4.8 CUMULATIVE IMPACTS

Cumulative impacts result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. The following planned or ongoing projects were considered in the cumulative impacts analysis for the HCHB:

National Museum of African American History and Culture

The National Museum of African American History and Culture (NMAAHC) is proposed for a site immediately south of the HCHB on the National Mall. This new Smithsonian museum is the first national museum to be devoted exclusively to the documentation of African American life. Design is underway for the facility and it is scheduled to open in 2015.

National Mall Plan

The National Park Service's National Mall and Memorial Parks is developing a plan and environmental impact statement (EIS) for the National Mall. The HCHB is located adjacent to that project site's northern boundary, Constitution Avenue. The plan will seek to balance the use of parks with the preservation of their natural and cultural resources over the next 50 years.

HCHB Utility Improvements

As part of the building renovation, utility improvements will be undertaken at HCHB. These improvements will remedy life-safety issues within the building. The installation of the new lines and connections will require that portions of the adjacent roadways and the HCHB building yard are disturbed. In addition, a new backup generator will necessitate the installation of an underground storage tank (UST) near the corner of 15th Street and Constitution Avenue. The tank will hold diesel fuel. The hardscaping and landscaping would be replaced upon completion of utilities work and does not represent long-term impacts to roadways, sidewalks, or landscaping.

Perimeter Security Projects within the Nation's Capital

Numerous perimeter security projects are planned, have been approved, or have been recently completed within Washington, DC (Figure 4-1). In addition, several roadways have been closed for security purposes. These security improvements are widespread, including those immediately around the HCHB, south on the National Mall, east around the U.S. Capitol Building, and west around the White House. Immediately around the HCHB, temporary perimeter security measures have been installed at the buildings within Federal Triangle. Permanent perimeter security is now being proposed for the National Archives Building several blocks east of the HCHB. South of the HCHB, along the National Mall, permanent perimeter security has been installed or approved for installation at the majority of the Smithsonian museums including NMAI, the National Air and Space Museum, the Hirshhorn Museum, the Smithsonian Castle, the National Museum of Natural History, and the National Museum of American History. Permanent perimeter security has also been installed at the White House and its grounds northwest of the HCHB, and it has been installed or proposed at several buildings west of the Ellipse.

4.8.1 Historic Resources

The installation of perimeter security elements, particularly along the curbline, has the potential to generate cumulative impacts to historic resources, when considered together with the other perimeter security projects that have been recently completed or are planned within D.C. Over time, the installation of perimeter security at the curbline at the HCHB could increase the likelihood that property owners install perimeter security, since its placement outside of the sidewalk increases the potential threat to adjacent buildings. This could generate minor adverse cumulative impacts to adjacent historic structures located within the APE, including the Washington Monument, the Ariel Rios Building, the Willard Hotel, and the W Hotel (Hotel Washington). In addition, there could be cumulative impacts to the L'Enfant Plan. The relationship between the roadways, building yards, and reservations are important features of the plan. Perimeter security placed between the sidewalk and the roadway interrupt these relationships, and the installation of perimeter security elements at the HCHB could set a precedent for other buildings along Pennsylvania Avenue. Overall, cumulative impacts to historic resources could be moderate.

4.8.2 Archaeological Resources

The proposed exterior improvements, when considered together with the utility improvements at the HCHB, have the potential to create a cumulative impact to archaeological resources, due to the increased area and depth of site disturbance.

4.8.3 Visual Resources

The installation of permanent perimeter security at the HCHB, when considered together with other constructed or planned perimeter security within the area of visual influence, has the potential to adversely impact visual resources. Impacts would be greater if security is placed along the curblineline, as it would interrupt the open visual relationship between the sidewalks and the roadways. Further, security elements crossing the sidewalk would interrupt continuous views from the walkways. In addition to perimeter security, the new entrance to the NAQ, when considered together with the NMAAHC, could have cumulative impacts to views along Constitution Avenue and the National Mall. Overall, cumulative impacts to visual resources could be moderate adverse if security is placed at the curblineline and minor adverse if it is placed within the building yard.

4.8.4 Public Space

The proposed exterior improvements to the HCHB have the potential to create cumulative impacts to public space. The installation of perimeter security elements along the curblineline, when considered together with other perimeter security projects completed or planned within Washington, DC, could adversely impact public space. The potential widespread installation of security elements within DC, if located outside of building property lines, would interrupt the continuity of the area sidewalks, creating a moderate adverse impact to public space.

4.8.5 Visitation and Visitor Experience

The proposed exterior improvements to the HCHB have the potential to create cumulative impacts to visitation. The NMAAHC, proposed for a site directly south of the HCHB, will draw large numbers of visitors to this portion of the National Mall. The new entrance to the NAQ has the potential to increase its visibility. The new entrance, when considered together with the construction of the NMAAHC, has the potential to increase visitation and improve visitor experience within this portion of the National Mall.

4.8.6 Vegetation

As documented in section 4.3.1, the proposed perimeter security elements, new NAQ entrance, and ADA improvements would result in the removal or relocation of many of the magnolias surrounding the HCHB. In addition, the installation of permanent perimeter security under Alternative A would require the replacement of all of the street trees on the site. Under Alternative B, the street trees would only be disturbed along Pennsylvania Avenue. However, the utility improvements that may be undertaken as a part of the building renovation would require extensive trenching and thus necessitate the removal and replacement of a large proportion of the trees along 14th and 15th Streets. In addition, the utility improvements would disturb the vegetation in the planting beds within the building yard on 14th and 15th Streets. Thus, the proposed exterior improvements, when considered together with the utility improvements, may contribute to a moderate adverse cumulative impact to vegetation on the HCHB site. To mitigate this impact, GSA will salvage plants that are removed and reuse them at other facilities. In addition, once the utility work is complete, the panels will be re-landscaped.

4.8.7 Pedestrian Circulation

Alternative A would impede pedestrian flow along each of the sidewalks bordering the site. Alternative B would impede pedestrian flow along Pennsylvania Avenue and at the intersections of Pennsylvania Avenue and 14th and 15th Streets. This, coupled with the potential increase in visitation to the area due to the NMAAHC, would have a moderate adverse cumulative impact on pedestrian circulation.

In addition, the placement of perimeter security elements within the sidewalks at the HCHB could contribute to a moderate adverse cumulative impact to the pedestrian circulation network in the area (generally within two blocks of the site), if adjacent buildings also install perimeter security outside of the building yards. These elements would hinder pedestrian flow, particularly during peak periods, resulting in a moderate adverse impact to pedestrian circulation.

Pedestrian circulation within the area could, however, be improved due to the proposed ADA improvements at the HCHB when considered together with the new connections proposed under the National Mall Plan. These include raised crosswalks at 14th and 15th Streets and Constitution Avenue. This could result in beneficial impacts to pedestrian circulation in the immediate area.

4.8.8 Hazardous Materials

An underground storage tank would be installed along 15th Street as part of the utility improvements to supply emergency generated to service backup life-safety systems in the building. Natural gas was considered but cannot be used because the start up time for generators of the size required would not comply with National Fire Protection Association (NFPA) standards. Fuel cells will also be pursued along with other alternate energy sources with funding provided by the American Recovery and Reinvestment Act (ARRA), however, this technology would be for normal use as a supplement for energy consumption and offset cost. Thus, the need for a quick start up and high capacity service in the event of an emergency necessitates the USTs to service the generators. As a precautionary measure, the USTs fuel ports would be equipped with spill containment. In addition, GSA will comply with all applicable laws and regulations regarding installation and operation of the UST. When the utility improvements are considered together with the exterior improvements to the building and site, cumulative impacts to hazardous materials are unlikely.

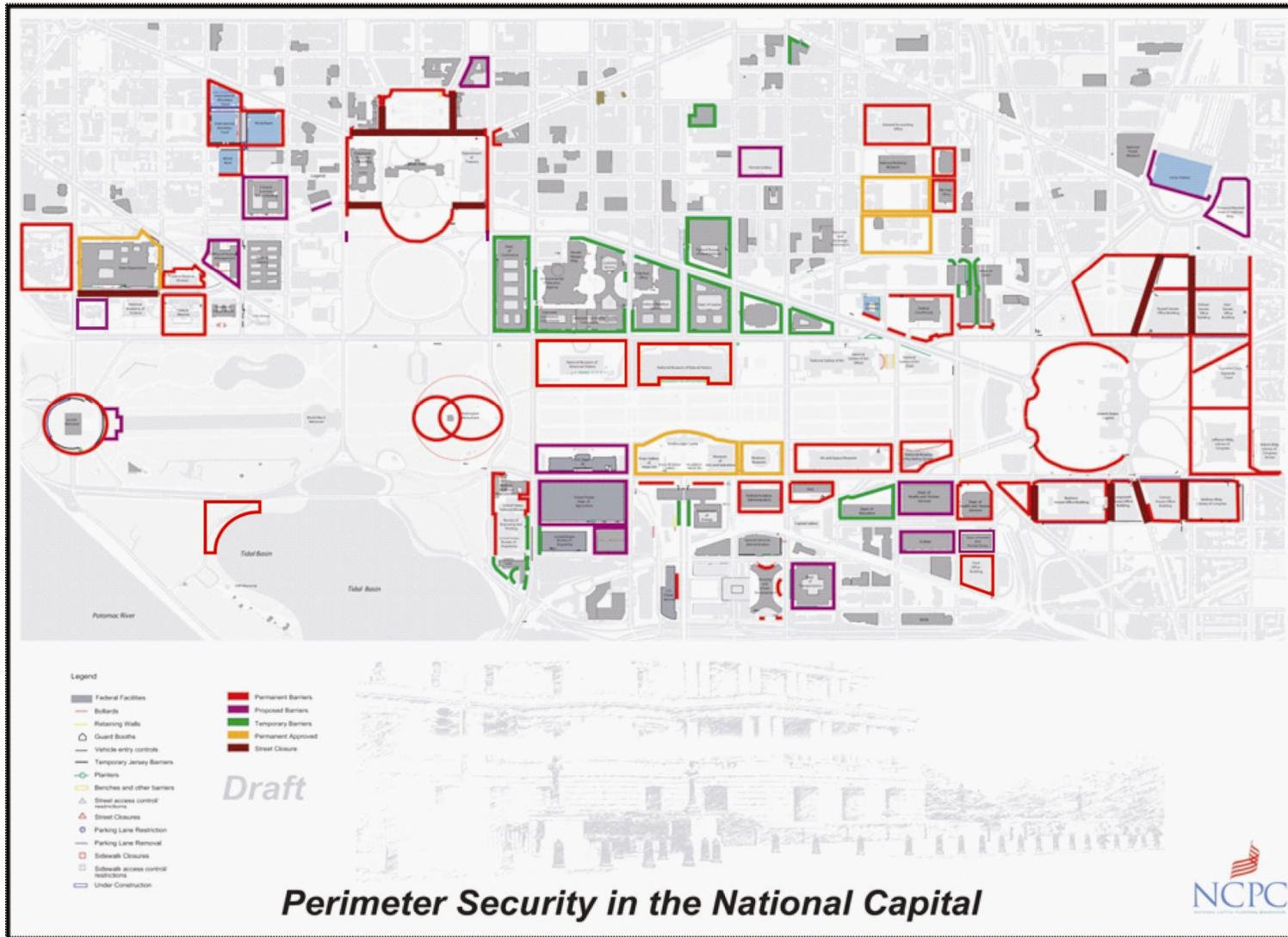


Figure 4-1: District-wide Perimeter Security Projects
Source: NCPC, 2007; EDAW, 2009 (Revisions)

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APPENDIX

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