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National Park Service
U.S. Department of the Interior

Independence National Historical Park
Philadelphia, Pennsylvania

Deshler-Morris and Bringhurst Houses Utilities and Exhibit Rehabilitation

Environmental Assessment/Assessment of Effect



January 18, 2005

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U.S. Department of the Interior
National Park Service
Deshler-Morris and Bringhurst Houses
Utilities and Exhibit Rehabilitation
Environmental Assessment/Assessment of Effect

Independence National Historical Park
Philadelphia, Pennsylvania
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Proposed Action:
The National Park Service is proposing to rehabilitate utilities and exhibits at the Deshler-Morris and Bringhurst Houses in Independence National Historical Park. Both houses are threatened with antiquated utilities, inadequate fire/intrusion alarms, hazardous materials, deteriorating historic fabric, and a lack of basic visitor facilities (including accessible public restrooms). To correct these needs, this project would replace and relocate a 40-year old heating, ventilation, and air conditioning system; provide a complete fire suppression system; provide emergency electrical lighting; upgrade intrusion alarms; provide a video communications link with the park headquarters (eight miles away); complete overdue repairs on the original wood and masonry; replace leaking roofs; provide subsurface drainage; provide new exhibits and a new orientation area; provide universally accessible ramps; improve structural supports; and upgrade plumbing and electrical systems. This document assesses the impacts related to the proposed action, which include both beneficial and adverse negligible, minor, and moderate impacts to soils and topography, historic structures, archeological resources, cultural landscapes, museum objects, visitor use and experience, circulation and site access, hazardous materials, and park operations and infrastructure.

Note to Reviewers and Respondents:
If you wish to comment on the Environmental Assessment/Assessment of Effect, please mail, fax, or email your comments to the address below. Because the public review period is 30 days, comments must be postmarked by February 18, 2005. Please note that names and addresses of people who submit comments become part of the public record. If you wish for us to withhold your name and/or address from the record, please state your preference prominently at the beginning of your letter or email. We are required to make all comments available for public inspection in their entirety. Thank you for your cooperation.

Mary Bomar, Superintendent
Independence National Historical Park
Attn: Review of DMB Rehabilitation
143 S. Third Street
Philadelphia, PA 19106
Fax: 215-597-1548
Email to claire_rozdilski@nps.gov

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INTRODUCTION: PURPOSE & NEED

INTRODUCTION

The National Park Service (NPS) is considering rehabilitating utilities and exhibits at the Deshler-Morris and Bringhurst Houses in Independence National Historical Park (NHP). Both houses are threatened with antiquated utilities, inadequate fire/intrusion alarms, hazardous materials, deteriorating historic fabric, and a lack of basic visitor facilities (including accessible public restrooms). Building repairs would greatly reduce physical threats, preventing further damage to original historic fabric, furnishings, and museum collections, and allow for abatement of hazardous materials. In particular, heating, ventilation, and air conditioning (HVAC) systems would be relocated from the Deshler-Morris House to the Bringhurst House to reduce the threat of fire at Deshler-Morris. Adding universally accessible ramps and interpretive exhibits would help meet basic visitor needs and expectations. New utility and alarm systems would reduce emergency maintenance and security checks by staff.

In addition, the NPS is considering landscape treatments for the Bringhurst courtyard as presented in the *Deshler-Morris/Bringhurst Site Cultural Landscape Treatment Plan* (Susan Maxman & Partners and John Milner Associates, Inc. 2003). The Bringhurst landscape would be rehabilitated in a manner that supports the interpretive program of the site and complements the adjacent Deshler-Morris House garden. The design would address visitor circulation within the site and between structures, universal accessibility throughout the site and to the first floor of both structures, staff connections between the buildings, site security, and the relationship of the site to the surrounding community.

This Environmental Assessment/Assessment of Effect (EA/AOE) analyzes the proposed action and alternatives and their impacts on the natural, cultural, and human environment. This EA/AOE has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended; regulations of the Council on Environmental Quality (CEQ) (40 CFR 1508.9); *NPS Director's Order 12* (DO 12)*: Conservation Planning, Environmental Impact Analysis, and Decision-making*; and the National Historic Preservation Act (NHPA) of 1966, as amended (36 CFR 800).

PROJECT BACKGROUND

HISTORY AND SIGNIFICANCE OF THE PARK

Congress authorized Independence NHP on June 28, 1948 (Public Law 80-795, 62 Stat. 1061 16 USC 407 [1988]), and the park was formally established on July 4, 1956. The purpose of the park, derived from ideas expressed in its authorizing legislation, is to "preserve its stories, buildings, and artifacts as a source of inspiration

for visitors to learn more about the ideas and ideals that led to the American Revolution and the founding and growth of the United States." The park is located in the commonwealth of Pennsylvania and in the city and county of Philadelphia in the heart of the city, including all or portions of 17 city blocks. In all, the park includes 45 contiguous acres in downtown Philadelphia in the Society Hill and Old City neighborhoods and one parcel eight miles to the northwest in the Germantown neighborhood (the Deshler-Morris/Bringhurst complex). The park is important nationally and internationally for many reasons: it contains Independence Hall World Heritage Site and several National Historic Landmarks (NHL) (First Bank, Merchants' Exchange Building, Second Bank, American Philosophical Society Hall, Carpenters' Hall, and Christ Church), and a number of momentous events that shaped this country have occurred in these structures.

Since the 1950s, the NPS has restored and reconstructed some of the buildings in the park based on extensive historical research. Also undertaken was a series of cooperative agreements with private religious and cultural institutions within park boundaries to ensure the continued preservation of their structures.

DESHLER-MORRIS AND BRINGHURST HOUSES

The Deshler-Morris House is one of the most historically important homes in Philadelphia. The house first served as headquarters for British General Howe after the Battle of Germantown in 1777. Also known as the Germantown "White House," this site was later home to President Washington and his family in 1793 and 1794. In 1793, Washington used the house as a refuge and meeting place for his cabinet to escape the yellow fever epidemic in the capital city of Philadelphia. At least four cabinet meetings were held in the house to discuss critical political issues facing the new republic.

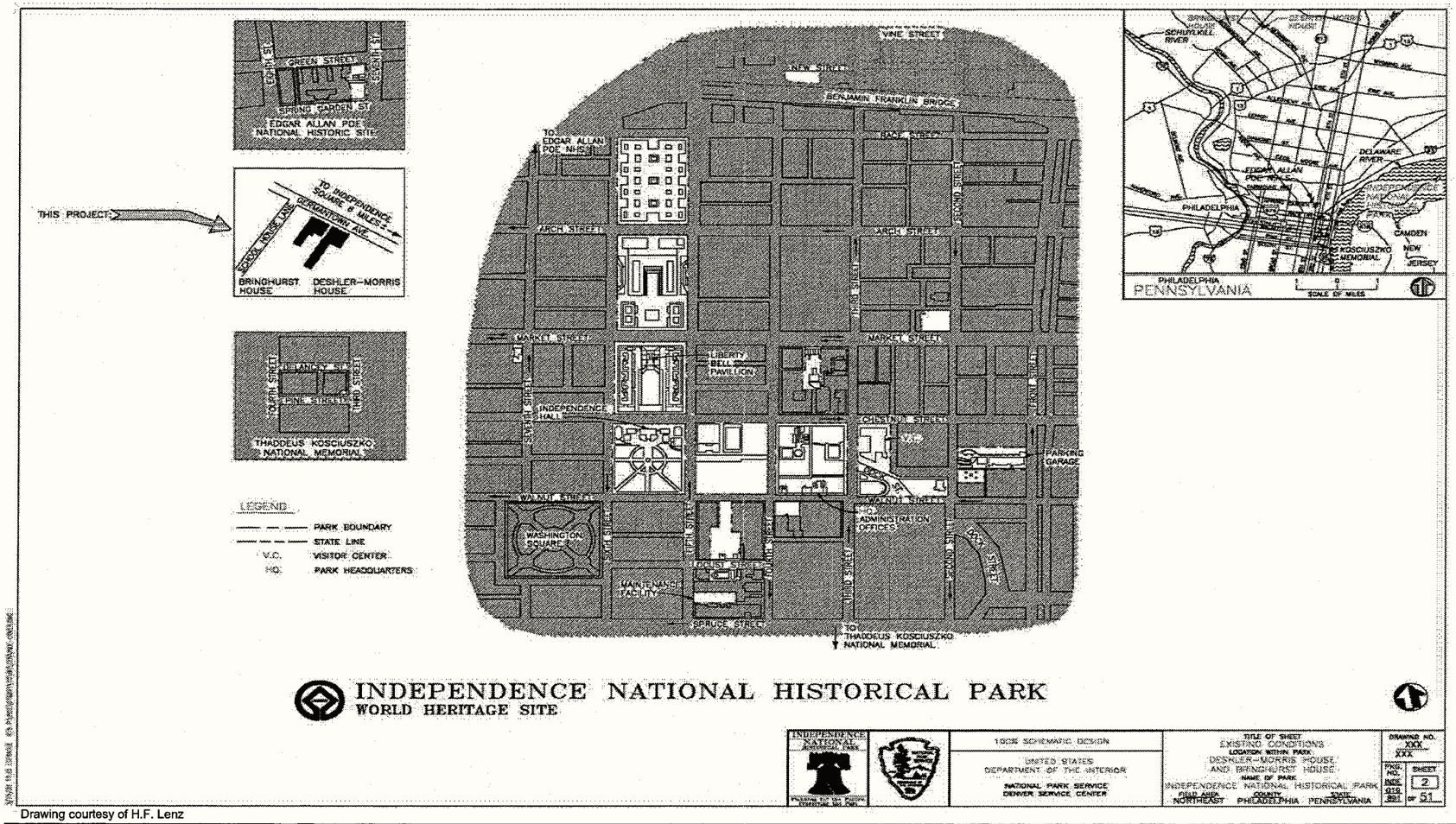
The Deshler-Morris/Bringhurst complex includes the Deshler-Morris House, the Bringhurst House, and a garden behind the Deshler-Morris House (Figure 1). The Deshler-Morris House was donated to the NPS in 1948 and is the oldest existing presidential residence in the United States. It is listed on the National Register of Historic Places (NRHP) and is one of the most intact 18th century wooden structures in America, retaining 80% of its original fabric. In 1973, the adjoining Bringhurst House was acquired to serve as a visitor orientation and exhibit space for tours of the Deshler-Morris House; however, the Bringhurst House is currently empty, including a vacant employee housing unit on the second floor.

Located to the north of the Deshler-Morris House, the Bringhurst House, built cirica 1830, comprises a building history of over 300 years. The house is an interesting blend of Georgian and Victorian architecture, although the majority of the details of the latter have been removed. The portion of the house which fronts Germantown Avenue contains the earliest architectural elements. Since its donation in 1973, this property has been maintained by the NPS. The building is listed on the NRHP as a contributing resource in the Colonial Germantown National Historic Landmark District. According to a report issued by the NPS in 1995, the Bringhurst House is a "richly developed vernacular structure…" which "contributes greatly to the interpretation and appreciation of the townscape of Germantown" (McGimsey 1995). The structure is also noteworthy for the rare survival of corbelled stone floor joist supports in the basement. The same NPS report noted that it is "possible that the cellar represents one of the earliest identified structures surviving in downtown Germantown and dates from the late 17th to the early 18th century" (McGimsey 1995). Due to the fact that this building has both a commercial and a residential past, the interior of the building has been exceedingly altered and much has been lost.

Deshler-Morris and Bringhurst Houses Utilities and Exhibit Rehabilitation
Figure 1: Area Map

U.S. Department of Interior
National Park Service

Independence National Historical Park
Philadelphia, Pennsylvania



INDEPENDENCE NATIONAL HISTORICAL PARK
WORLD HERITAGE SITE

INDEPENDENCE NATIONAL HISTORICAL PARK	1935 SCHEMATIC DESIGN	TITLE OF SHEET: EXISTING CONDITIONS LOCATION WITHIN PARK: DESHLER-MORRIS HOUSE AND BRINGHURST HOUSE NAME OF PARK: INDEPENDENCE NATIONAL HISTORICAL PARK FIELD AREA: NORTHEAST COUNTY: PHILADELPHIA STATE: PENNSYLVANIA	DRAWING NO. XXX XXX
	UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE DENVER SERVICE CENTER		PKG. NO. 419 891 SHEET 2 OF 51

Drawing courtesy of H.F. Lenz

RELATIONSHIP TO OTHER PLANS

GENERAL MANAGEMENT PLAN

The 1997 *General Management Plan* (GMP) developed by the NPS is intended to serve over the long-term to guide management of Independence NHP. The plan identifies goals and strategies for the park's future development, presenting a new vision for the park in the 21st century that reaches beyond strictly preserving and interpreting the past to protect cultural resources, enrich interpretive and educational opportunities, improve visitor orientation and services, and enhance heritage tourism. At the Deshler-Morris/Bringhurst complex, the GMP calls for use of the Bringhurst House's first floor as a staging/orientation area for tours of the Deshler-Morris House. Additional information would be provided throughout the park to visitors about the house and its importance in an effort to encourage more people to visit the site.

LONG RANGE INTERPRETIVE PLAN

A *Long Range Interpretive Plan* (LRIP), which defines the overall vision and long-term (5-10 years) interpretive goals of a site, has been developed for the Deshler-Morris House/Bringhurst House complex. (Independence NHP 2003). The LRIP analyzes existing personal services and media offered at the site; identifies themes, audiences, and desired experiences; and describes a mix of services and facilities necessary to achieve management objectives. The Deshler-Morris House has one primary theme, defined as those stories that must be communicated to every visitor because they are essential to understanding the historical significance of the site's resources. The primary interpretive theme for the Deshler-Morris House is: "As the temporary 'White House,' the Deshler-Morris House served as a refuge for President Washington from the yellow fever epidemic raging in the capital city of Philadelphia in the fall of 1793, then as a country retreat for the First Family in the summer of 1794." The Deshler-Morris House has three secondary themes, defined as themes that enrich and enhance the primary themes. Secondary themes include the Battle of Germantown, Germantown as an urban village, and historic preservation and material culture as demonstrated through the continued preservation of the Deshler-Morris House and period collections. These four themes are central parts of the planned exhibits in the Bringhurst House.

PURPOSE AND NEED FOR ACTION

The continued preservation and maintenance of both houses and the valuable furnishings and resources contained within them is the driving force behind this project. There are two main objectives for the renovation of the Deshler-Morris and Bringhurst Houses: 1) remove all potential sources for fire from the structures (particularly from the Deshler-Morris House), and 2) provide new systems that do not intrude on the historic fabric of the museum house. Long overdue building and utility repairs would greatly reduce physical threats, preventing further damage to original historic fabric, furnishings, and museum collections. Adding accessible public restrooms and interpretive exhibits would help meet basic visitor expectations. New utility and alarm systems would reduce emergency maintenance and security checks by staff. In addition, the adaptive reuse of the Bringhurst House as a visitor orientation center and the renovation of the staff apartment would greatly enhance security for the Deshler-Morris House. It would also contribute greatly to providing a welcoming link between the Deshler-Morris House and the general

public. Currently, visitors are not adequately oriented to the Deshler-Morris House and its historic significance. Without historic context for the house and its interpretation, visitors may become confused. Visitation is further limited by the lack of visitor services, including accessible public restrooms, which means that visitors stay at the house only briefly.

Both houses are threatened with antiquated utilities, inadequate fire/intrusion alarms, hazardous materials, deteriorating historic fabric, and a lack of basic visitor facilities (including accessible public restrooms). Mechanical and electrical systems and utilities have aged, and certain structural and architectural elements have deteriorated over the years and are a threat to the continued existence of the structures. Mechanical and electrical systems in the Deshler-Morris House are potential fire threats. HVAC equipment located in the Deshler-Morris House represents a potential fire or water damage hazard to the structure and is also a source of noise. This noise is disruptive to tours of the house to the point where visitors can not hear what tour guides are saying.

The buildings are not compliant with Americans with Disabilities Act (ADA) accessibility regulations. Both buildings must be accessed via stairs; a transformer located between the buildings makes that walkway too narrow to be universally accessible; and the site does not contain accessible public restrooms.

There are no existing fire suppression systems in either the Deshler-Morris or Bringhurst Houses. The lack of fire suppression, the remoteness of the site from the main park, and the use of wood framing make the houses extremely vulnerable to a catastrophic loss. The existing fire detection systems are outdated and have old sensors and panels. The existing systems also do not meet park standards.

The existing intrusion detection and alarm systems in the Deshler-Morris and Bringhurst Houses include brittle wiring without conduit, are subject to squirrel and rodent damage, are outdated, and have old sensors and panels with no repair parts available. The system also does not meet park standards and is insufficient to meet the present perceived level of threat.

To correct these needs, specific project components include:

- replace and relocate a 40-year old HVAC system;
- provide a complete fire suppression system;
- provide emergency electrical lighting; upgrade intrusion alarms; provide a video communications link with the park headquarters (eight miles away);
- complete overdue repairs on the original wood and masonry;
- replace leaking roofs;
- provide subsurface drainage;
- produce exhibits for a new orientation area;
- provide handicapped accessible ramps and public restrooms;
- improve structural supports;
- upgrade plumbing and electrical systems;
- allow for an apartment unit for onsite security;
- allow for staff administrative space on the second floor of the Bringhurst House; and
- add a visitor film and new exhibits and refurbish historic furnishings.

PLANNING ISSUES

Issues and concerns affecting this proposal were identified from past NPS planning efforts and input from environmental groups and state and federal agencies. Although many issues were recognized, the NPS has identified the following as the most important.

Preservation of historic fabric. The Deshler-Morris House retains more than 80% of its original fabric. The Fire Safety Institute has developed a guide for the installation of fire protection systems in the Deshler-Morris House to minimize impacts to historic walls, ceilings, and floors. These criteria should also be used as guidance regarding the installation of all new mechanical and electrical systems.

Hazardous materials. Based on Environmental Protection Agency (EPA) and Occupational Safety and Health Administration (OSHA) requirements, lead-based paint (LBP) and asbestos-containing materials (ACM) must both be measured before demolition or renovation may begin. The presence of these materials poses a threat to health and safety for visitors, construction workers, and park employees. Abatement criteria should be used to ensure a safe and healthy environment.

Visitor services and accessibility. Visitor services and site accessibility are both issues that must be addressed in the construction of a new facility or the renovation of an older one. Under the ADA and Uniform Federal Accessibility Standards, a historic site must be made universally accessible to the highest extent feasible, though exceptions and programmatic substitutions are possible if significant historic structures or features would be impacted.

Threat of fire. The presence of ignition sources in the Deshler-Morris House increases the likelihood of fire within the historic structure. Ignition sources should be removed to the maximum extent feasible from the Deshler-Morris House, and the new fire detection and alarm system must be effective at notifying park security of a potential fire, alert occupants to evacuate the building and, at the same time, minimize disturbance to the historic fabric during and after installation. The design must meet the requirements of National Fire Protection Association (NFPA) 914 and include enhancements that provide equivalencies due to the inability of the architectural elements to meet present code required egress without adverse impact on historic fabric.

Security. The site is in need of an intrusion detection and alarm system. The lack of an effective security system leaves the building vulnerable to damage or vandalism and slow response to incidents. A new system must be effective at notifying park security of a potential intrusion and minimize the disturbance to the historic fabric during and after the installation.

HVAC performance. At the Deshler-Morris House, the existing HVAC system is noisy and often overpowers interpretive speakers. The new HVAC system must be effective at conditioning the space for human occupancy and materials conservation, while minimizing the fire and water damage risks and potential noise disturbance to visitors and staff.

IMPACT TOPICS

Specific impact topics were developed for discussion focus and to allow comparison of the environmental consequences of each alternative. These impact topics were identified based on federal laws, regulations, and Executive Orders; *NPS Management Policies 2001* (NPS 2000); NPS knowledge of resources; and site reconnaissance. These include: natural and physical resources (such as soils and topography), cultural resources (archeology, cultural landscapes, historic structures, and museum objects), visitor experience, circulation and site access, hazardous materials, and park operations and infrastructure. A brief rationale for the selection of each impact topic is given below. Each of these impact topics are discussed in detail in "Chapter 3: Affected Environment."

NATURAL AND PHYSICAL RESOURCES

NEPA policy calls for an examination of the impacts on all components of affected ecosystems. The NPS would ensure that the environmental costs and benefits of proposed operations, development, and resource management are fully evaluated before taking actions that may impact the natural resources of parks.

SOILS AND TOPOGRAPHY

Because the proposed action involves ground-disturbing activities, soils and topography are addressed as impact topics.

CULTURAL RESOURCES

The NHPA, NEPA, NPS Organic Act (16 USC 1-4), *NPS Management Policies 2001* (NPS 2000), NPS DO 12, and NPS DO 28: *Cultural Resource Management Guidelines* require the consideration of impacts on cultural resources either listed in or eligible to be listed in the NRHP. Cultural resources include historic structures, archeological resources, and cultural landscapes.

HISTORIC STRUCTURES

In order for a structure or building to be listed on the NRHP, it must have a significant association with events or persons important in the past (Criteria A and B), represent a significant manmade expression of culture or technology (Criterion C), or have the ability to yield important information about prehistory or history (Criterion D). In addition, a structure must possess historic integrity of those features necessary to convey its significance, i.e. location, design, setting, workmanship, materials, feeling, and association (see National Register Bulletin #15, *How to Apply the National Register Criteria for Evaluation*). The Deshler-Morris House is individually listed on the NRHP, and the Bringhurst House is listed as a contributing feature of the Colonial Germantown NHL District. Because this project could impact the historic fabric of both of these structures, historic structures is included as an impact topic.

ARCHEOLOGICAL RESOURCES

Minimal archeological investigations were conducted at the Deshler-Morris House in 1975 in conjunction with the NPS restoration of the house. The property was also subject to limited archeological monitoring in 2000; however, no dedicated archeological investigations have been conducted at the Bringhurst House. There would be ground-disturbing activity associated with this project and the installation of new utility systems and the cultural landscape treatment plan; therefore archeological resources are considered as an impact topic.

CULTURAL LANDSCAPES

As described by the NPS *Cultural Resource Management Guideline* (DO 28), a cultural landscape is "a reflection of human adaptation and use of natural resources and is often expressed in the way land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built. The character of a cultural landscape is defined both by physical materials, such as roads, buildings, walls, and vegetation, and by use reflecting cultural values and traditions." A *Cultural Landscape Treatment Plan* (Susan Maxman & Partners and John Milner Associates 2003) has been developed for the Deshler-Morris/Bringhurst complex to rehabilitate the Bringhurst House landscape in a manner that supports the interpretive program of the site and complements the adjacent Deshler-Morris garden area. Documentation of the cultural landscape presented in this treatment plan has been supplemented with information provided in the *Historic Structure/Furnishings/Grounds Report Deshler-Morris House Bringhurst House Historical Data Section* (Anna Coxe Toogood, June 1980). The impacts of implementing the *Cultural Landscape Treatment Plan*, as well as impacts to cultural landscapes from rehabilitating utilities at the site, will be considered in this document.

MUSEUM OBJECTS

The NPS defines a museum object as "a material thing possessing functional, aesthetic, cultural, symbolic, and/or scientific value, usually movable by nature or design. Museum objects include prehistoric and historic objects, artifacts, works of art, archival material, and natural history specimens that are part of a museum collection" (DO 28). The interior of the Deshler-Morris House is furnished with objects that interpret the period of George Washington's residency in 1793-1794. The collections are representative of those found in similar households of that period and include furniture, carpets, table and kitchenware, paintings, textiles, and toys. The impact of the alternatives on these objects will be considered in this document.

VISITOR USE AND EXPERIENCE

Enjoyment of park resources and values by the people of the Unites States is part of the fundamental purpose of all parks (NPS 2000). The NPS strives to provide opportunities for forms of enjoyment that are uniquely suited and appropriate to the natural and cultural resources found in parks. The proposed project was developed to enhance the visitor experience at the Deshler-Morris/Bringhurst complex by improving access and circulation, adding new interpretive exhibits, and restoring historic structures. The new interpretive exhibits will include stories of Washington and his slaves, told as part of the four themes in the LRIP.

CIRCULATION AND SITE ACCESS

The proposed project includes enhancements to the pedestrian circulation system and improved universal accessibility throughout the site. Therefore, circulation and site access is included as an impact topic.

HAZARDOUS MATERIALS

Asbestos-containing materials and LBP were found during testing of the Deshler-Morris and Bringhurst Houses. Construction within the houses could disturb these materials; therefore, hazardous materials is included as an impact topic.

PARK OPERATIONS AND INFRASTRUCTURE

The proposed project includes substantial infrastructure improvements and would affect park operations in terms of maintenance, security, and interpretive staff requirements. Park operations and infrastructure is therefore included as an impact topic.

IMPACT TOPICS CONSIDERED BUT DISMISSED FROM DETAILED ANALYSIS

The following impact topics and environmental considerations were identified but eliminated from further analysis because they do not apply to the proposed alternatives or the existing conditions at the project area.

NATURAL AND PHYSICAL RESOURCES

VEGETATION

Vegetation at the site is primarily a factor of the cultural landscape; therefore, vegetation would be considered as a subtopic within that theme. To the extent possible, indigenous species or vegetation introduced to the area before the 18th century is used. The Deshler-Morris garden consists of a variety of trees, shrubs, groundcovers, grasses, and perennials. The Bringhurst courtyard area contains primarily grass.

WETLANDS

Executive Order 11990 (*Protection of Wetlands*) and NPS 77-1: *Wetland Protection* require an examination of impacts to wetlands. Because there are no wetlands listed on the National Wetland Inventory (NWI) maps and no surface waters within 1.3 miles of the site, there are no jurisdictional or NPS-defined wetlands within the project area; therefore, wetlands were dismissed as an impact topic.

FLOODPLAINS

Executive Order 11988 (*Floodplain Management*) and NPS 77-2: *Floodplain Management* require examination of impacts to floodplains and potential risk involved in placing facilities within floodplains. The project area is located within an area that is not subject to normal flooding from a 100-year flood and is located approximately 1.3 miles northeast of the nearest stream; therefore, the project would not affect floodplain functions or values.

GEOLOGY

No appreciable geologic resources exist in the area of the project. Geologic resources was therefore dismissed as an impact topic.

WILDLIFE AND WILDLIFE HABITAT

There is an inherent amount of wildlife habitat value associated with all vegetation, including the urban lawn and garden setting of the site. The action alternatives and the cultural landscape treatments proposed would not impact the overall habitat of the site. Therefore, wildlife and wildlife habitat was dismissed as an impact topic.

SPECIAL STATUS SPECIES

The United States Fish and Wildlife Service (FWS) noted that except for occasional transient species, no federally listed or proposed threatened or endangered species under their jurisdiction are known to occur within the project's impact areas; therefore, no further consultation is required under the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 USC 1531 et seq.) (FWS 2003). The impact to special status species, therefore, would be negligible, and special status species was dismissed as an impact topic.

AIR QUALITY

The 1963 Clean Air Act, as amended (42 USC 7401 et seq.) requires land managers to protect air quality. Section 118 of the Clean Air Act requires parks to meet all federal, state, and local air pollution standards. *NPS Management Policies 2001* (NPS 2000) addresses the need to analyze potential impacts to air quality during park planning. The Philadelphia area is nonattainment for ozone. Emissions from hauling material, operating equipment, and other construction activities would not exceed normal variation. The park's air quality would be unaffected by the proposal; therefore, air quality was dismissed as an impact topic.

SOUNDSCAPES AND NOISE

In accordance with *NPS Management Policies 2001* (NPS 2000) and NPS DO 47: *Sound Preservation and Noise Management*, an important part of the NPS mission is preservation of natural soundscapes associated with national park units. Natural soundscapes exist in the absence of human-caused sound. The natural ambient soundscape is the aggregate of all the natural sounds that occur in park units, together with the physical capacity for transmitting natural sounds. Natural sounds occur within and beyond the range of sounds that humans can perceive and can be transmitted through air, water, or solid materials. The frequencies, magnitudes, and durations of human-caused sound considered acceptable vary among NPS units, as well as potentially throughout each park unit, being generally greater in developed areas and less in undeveloped areas. Based on the scope of the project and the surrounding commercial/ residential development, there would be no basic change to soundscapes or noise. Therefore, soundscapes and noise were dismissed as an impact topic. Changes in indoor noise levels would be addressed as impacts to visitor use and experience.

LIGHTSCAPES

In accordance with *NPS Management Policies 2001* (NPS 2000), the NPS strives to preserve natural ambient landscapes, which are natural resources and values that exist in the absence of human caused light. However, the site is located in an urban area, and the project would not add a noticeable amount of light.

CULTURAL RESOURCES

INDIAN TRUST RESOURCES

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

No Indian trust resources were identified in Independence NHP. The lands comprising the park are not held in trust by the Secretary of the Interior for the benefit of Indians due to their status as Indians. Therefore, Indian trust resources was dismissed as an impact topic.

ETHNOGRAPHIC RESOURCES

Ethnographic resources are defined by the NPS as any "site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it" (DO 28). The park has not identified any known ethnographic resources within the project area.

ENVIRONMENTAL JUSTICE

Executive Order 12898 (*General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*) requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. Because the proposed action involves the stabilization of historic resources on park property, it would not have health or environmental effects on minorities or low-income populations or communities as defined in the EPA's *Draft Environmental Justice Guidance* (1996). Therefore, environmental justice was dismissed as an impact topic.

LOCAL ECONOMY AND LAND USE

Because the park exists in a large metropolitan area with a complex and dynamic economic base, implementation of the proposed action would neither change local and regional land use nor appreciably impact local businesses or other agencies. Implementing the proposed action could provide a negligible beneficial impact to the economy of nearby Philadelphia neighborhoods (e.g. minimal increases in employment opportunities for the construction workforce and revenues for local businesses and

government generated from construction activities and workers). Any increase, however, would be temporary and negligible, lasting only as long as construction. Therefore, local economy and land use was dismissed as an impact topic.

ALTERNATIVES

INTRODUCTION

This section describes various management alternatives for upgrading utilities and exhibits at the Deshler-Morris/Bringhurst complex in Independence NHP. Alternatives for this project were developed to reduce physical threats to the buildings, preserve and restore historic fabric, upgrade various utility systems, and improve the visitor experience. A No Action Alternative and two action alternatives were evaluated.

SUSTAINABILITY

The NPS has adopted the concept of sustainable design as a guiding principle of facility planning and development. The objectives of sustainability are to design facilities to minimize adverse effects on natural and cultural values, to reflect their environmental setting, and to maintain and encourage biodiversity; to construct and retrofit facilities using energy-efficient materials and building techniques; to operate and maintain facilities to promote their sustainability; and to illustrate and promote conservation principles and practices through sustainable design and ecologically sensitive use. Essentially, sustainability is living within the environment with the least impact on the environment. The NPS Preferred Alternative subscribes to and supports the practices of sustainable planning, design, and upgrade of the utilities and exhibits at the Deshler-Morris/Bringhurst complex. In fact, geothermal heat-pump systems are considered "green" technology.

ALTERNATIVE A (NO ACTION ALTERNATIVE)

The No Action Alternative, Alternative A, provides a basis for comparing the management direction and environmental consequences of the NPS Preferred Alternative. Should the No Action Alternative be selected, the NPS would respond to future needs and conditions associated with the Deshler-Morris/ Bringhurst complex without changes in present management and operations practices (Figure 2). Physical threats to the houses, including continued physical deterioration and potential water and fire damage, would continue to be addressed with existing detection systems and through routine monitoring and maintenance as outlined in the park's operation and management practices. Valuable architectural features, furnishings, and objects in the houses would continue to be preserved as conditions allow according to NPS standards. Security at the site would continue to be monitored via the current, outdated security system and optimal response times to alarms would remain at present levels. Visitor experience and site circulation would remain in noncompliance with ADA accessibility standards, though current efforts to accommodate accessibility to the extent feasible would continue. The objects and buildings would be exhibited to the public in their present condition and interpretation would continue to be guided by the site's long-range interpretive plan where physically and financially feasible. Visitor services and

orientation would continue to be minimal (including a lack of accessible public restrooms). The Bringhurst House would remain as an uninterpreted, private utility building and courtyard would continue to present a modern landscape.

ELEMENTS COMMON TO THE ACTION ALTERNATIVES

Based on HF Lenz/John Milner Architects *Final Existing Conditions, Programming & 100% Draft Alternatives Report* (2003) and *Value Analysis Study* (2003), several architectural and site utility modifications would be made to both houses. Several of these elements are common to the action alternatives, including:

ARCHITECTURAL ELEMENTS

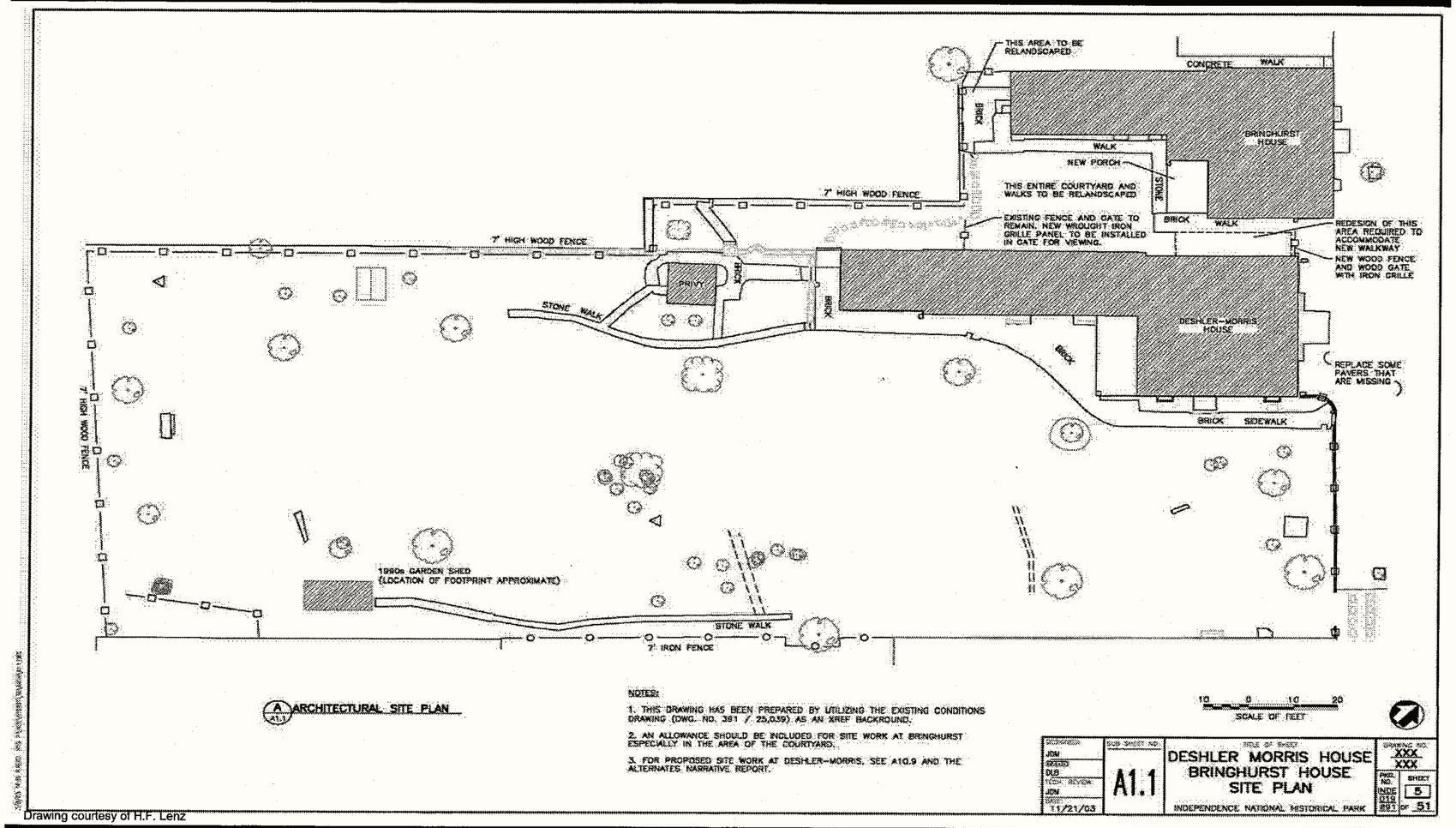
Repairs to the exteriors and interiors of the houses would be made (Figures 3-6). Both of the action alternatives also include restorative treatments for the altered exterior of the Bringhurst House. Associated actions include reconstruction of the deteriorated front steps with like materials, the reapplication of stucco to the façade of the building, restoration of the roof dormers removed from the front roof slope in the 20th century, and replacement of the existing metal roof on the rear slope of the main block with a slate roof to match the existing slate on the front slope. Hazardous materials throughout the houses would also be abated. In addition to these repairs, several architectural modifications would be made. These include:

- The modern greenhouse would be removed from the rear of the Bringhurst House;
- A modern door on west (rear) elevation of the Bringhurst House ell would be removed and replaced with a window;
- A new door would be constructed on the Bringhurst House south elevation to serve as the visitor's primary point of egress and ADA compliant entrance/exit;
- A new, single-story porch would be constructed along rear elevation of the main block of the Bringhurst House to create an ADA compliant entry;
- Shutters would be installed on the first-floor windows of the Bringhurst House;
- A new staircase would be constructed to the second floor in the Bringhurst House ell to create a second means of egress;
- A new staircase would be constructed from the second to the third floor in the Bringhurst House to restore the original means of attic access removed in the 20th century;
- Recent 20th century partition walls on the first and second floors of Bringhurst House would be removed;
- The first floor in the Bringhurst House ell would be reframed and lowered to meet the floor level in the main block in order to facilitate a new basement access stair and accessible restrooms;
- A ramp would be installed to provide accessibility to the existing porch on the west façade of the Deshler-Morris House; and
- A drainage system would be installed along the foundation of the Bringhurst House to rectify moisture infiltration problems; deteriorated structural members in the basements of Deshler-Morris and Bringhurst Houses would be stabilized with footings and screw jacks.

Deshler-Morris and Bringhurst Houses Utilities and Exhibit Rehabilitation
Figure 2: Site Plan

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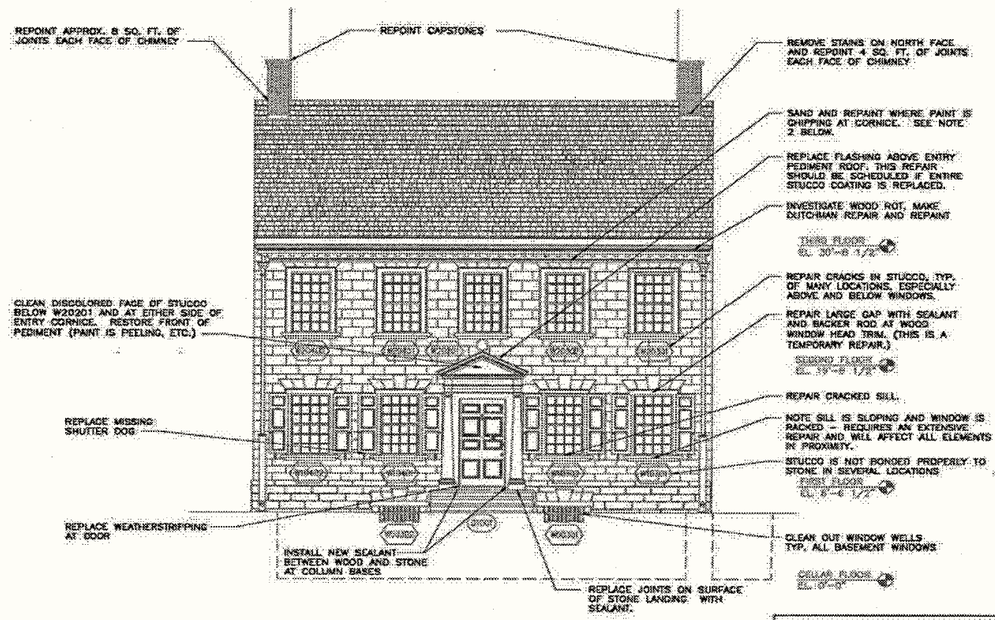


Drawing courtesy of H.F. Lenz

Deshler-Morris and Bringhurst Houses Utilities and Exhibit Rehabilitation
Figure 3: Deshler-Morris Proposed East Elevation

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A/A3.0 EAST ELEVATION – PROPOSED

STUCCO ALTERNATE: REPLACE SCORED STUCCO ON ENTIRE FACADE TO ASSURE A SEAMLESS REPAIR.

NOTES:

1. THIS DRAWING HAS BEEN PREPARED BY UTILIZING THE EXISTING CONDITIONS DRAWING (DWG. NO. 391 / 25,038) AS AN XREF BACKROUND.
2. CERTAIN REPAIRS REQUIRE CONSULTATION WITH THE NPS ON THE DEGREE OF REPAIR AND CONSERVATION THAT IS NECESSARY. AN ALLOWANCE SHOULD BE INCLUDED FOR THESE REPAIRS WHERE NOTED.
3. ALL PAINTED WOODWORK REQUIRES CLEANING AND SOME RESTORATION INCLUDING CONSOLIDATION.
4. UNLESS NOTED OTHERWISE, PAINT AT WINDOW FRAMES, TRIM, SILLS, AND SHUTTERS IS IN FAIR TO GOOD CONDITION.
5. UNLESS NOTED OTHERWISE, ALL FLASHING ON SILLS TO BE REPLACED.
6. REFER TO FLOOR PLANS FOR NOTES ON WINDOW AND DOOR RESTORATION.

4 0 4 8
SCALE OF FEET

DESIGNED	DRAWN	CHECKED	DATE
JDN	MDSD	DLB	11/21/03

SUB SHEET NO. A3.0

TITLE OF SHEET: DESHLER-MORRIS HOUSE EAST ELEVATION PROPOSED
INDEPENDENCE NATIONAL HISTORICAL PARK

DRAWING NO. XXX XXX
PROJ. NO. INDE 018 RS1
SHEET 12 OF 51

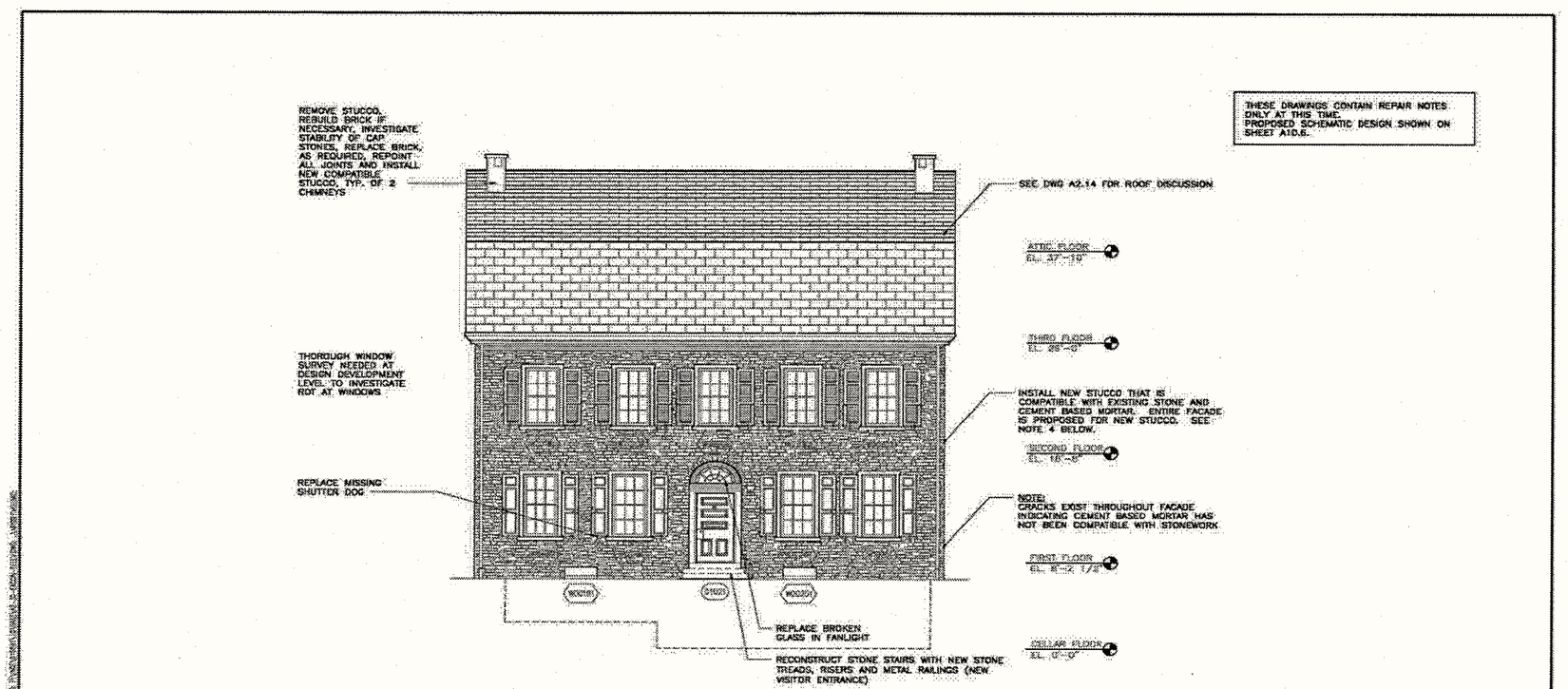
Drawing courtesy of H.F. Lenz

Deshler-Morris and Bringhurst Houses Utilities and Exhibit Rehabilitation
Figure 4: Bringhurst House Proposed East Elevation

Erratum: Please note that the drawing does not show the proposed restoration of two dormers removed in the 1960s as described in the text.

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A3.8 EAST ELEVATION — PROPOSED

NOTES:

1. THIS DRAWING HAS BEEN PREPARED BY UTILIZING THE EXISTING CONDITIONS DRAWING (DWG. NO. 391 / 25,039) AS AN XREF BACKROUND.
2. SEE FLOOR PLANS FOR NOTES ON WINDOWS AND DOORS.
3. ALL GUTTERS, DOWNSPOUTS AND ASSOCIATED DRAINS TO BE CLEANED, TYP. OF ALL SYSTEMS THAT WILL NOT BE REPLACED — THIS APPLIES TO ALL ELEVATIONS U.N.O.
4. INVESTIGATE TO DETERMINE IF STUCCO WAS ORIGINALLY SCORED. ESTIMATE STUCCO PRICE BOTH WAYS — "SMOOTH" OR DEGORATIVELY SCORED TO RESEMBLE STONE.
5. THE VITETTA REPORT INDICATES NUMEROUS AREAS OF WOOD ROT IN WINDOW FRAMES, TRIM, SILLS ETC. ON MANY OF THE BRINGHURST WINDOWS. DUE TO RECENT PAINTING, THIS IS DIFFICULT TO ASCERTAIN. IT IS PROPOSED THAT A THOROUGH SURVEY BE CONDUCTED DURING DESIGN DEVELOPMENT TO DETERMINE THESE AREAS.

4 0 4 8 SCALE OF FEET

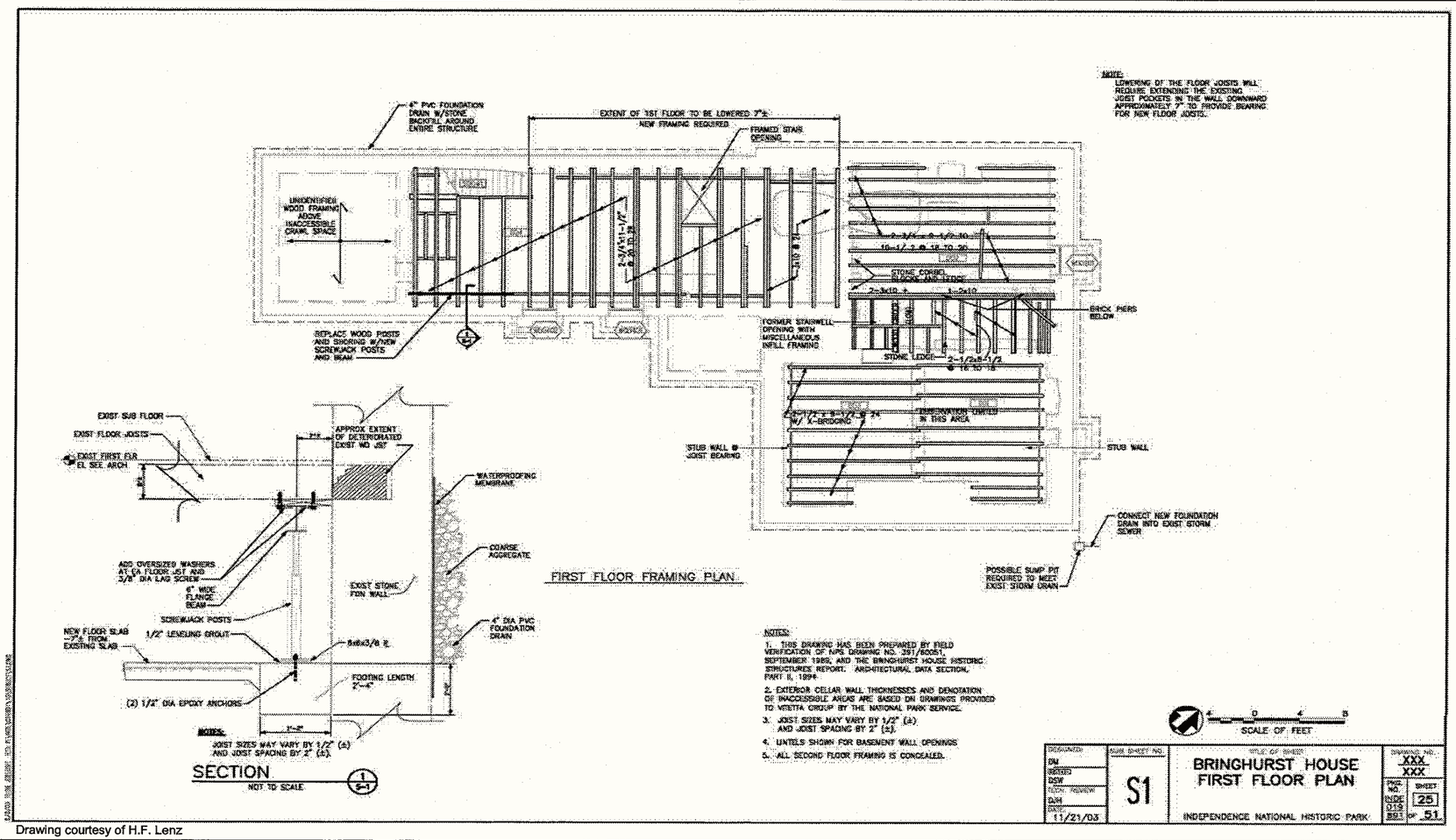
DESIGNED: JSW	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
DRAWN: RLB	A3.8	BRINGHURST HOUSE EAST ELEVATION PROPOSED	XXX XXX
CHECKED: JSW		INDEPENDENCE NATIONAL HISTORICAL PARK	PROJ. NO. 019 / INDEX 391
DATE: 11/21/03			SHEET 16 OF 51

Drawing courtesy of H.F. Lenz

Deshler-Morris and Bringhurst Houses Utilities and Exhibit Rehabilitation
Figure 6: Bringhurst House First Floor Plan

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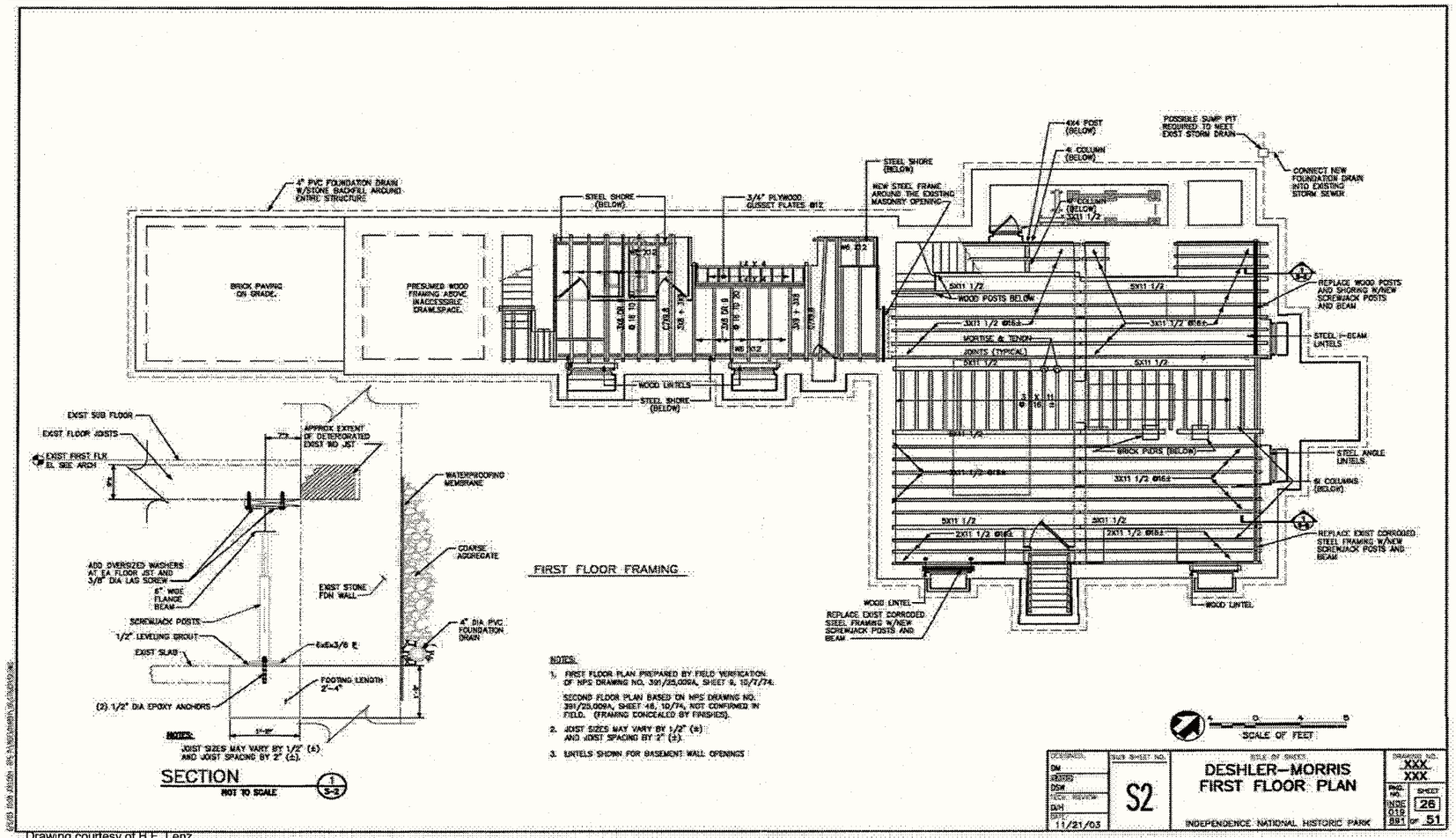


Drawing courtesy of H.F. Lenz

Deshler-Morris and Bringhurst Houses Utilities and Exhibit Rehabilitation
Figure 5: Deshler-Morris First Floor Plan

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Drawing courtesy of H.F. Lenz

STRUCTURAL ELEMENTS

Structural improvements to both houses would also be made (Figures 5-6). These efforts would be designed to improve the houses without affecting historic fabric or character. Actions would include inserting steel supports around existing masonry, replacing corroded steel framing, replacing wood posts with new screwjack posts and beams, replacing or adding to existing floor slabs, and partial reframing the rear wing of the Bringhurst House.

UTILITY SYSTEMS

FIRE SUPPRESSION

A wet-pipe sprinkler system with dry valves or dry pendants in special areas would be installed in both houses. This system was chosen because it would have the least impact on the historic scene based on the ease of concealing piping.

FIRE ALARM

A new addressable fire alarm overlaid with an insipient fire detection system would be installed in both houses. A new digital type, addressable fire detection and alarm system has been installed throughout Independence NHP, and the new system at the Deshler-Morris and Bringhurst Houses would be compatible with that system. The park plans to use programmable logic controllers (PLCs) to interface the building devices to the "head end" back at the central monitoring station. The use of PLCs should eliminate dependence on any one system vendor.

Although the existing fire alarm conductors would not support the addressable system, new conductors should use existing conduit pathways as much as possible. Air handling equipment would have supply and return air smoke detection, and new devices would be selected to adhere to ADA requirements. The new system would be comprised of addressable devices to allow for pinpointing the origin of an alarm. Remote annunciator panels would be placed in manned areas to facilitate a response to an alarm.

INTRUSION ALARM

A new intrusion detection and alarm system that includes perimeter entry detection, interior monitoring, and video cameras would be installed in both houses. The security system would incorporate motion detection, door access controls, cameras, breakglass, and water and natural gas monitoring as well as other factors. This data shall be transmitted to the park's security headquarters at the Visitor Center Command Center via phone modem or other means as necessary to facilitate a useful system. All devices would be addressable, and the alarms would be silently transmitted to the Command Center.

PLUMBING

Existing fixtures would be replaced with low consumption fixtures, including toilets with 1.6 gallons per flush, urinals with 1.0 gallon per flush, and lavatories with a vandal resistant 0.5 gallon per minute flow control.

ELECTRICAL

A new transformer, owned by Pennsylvania Electric Company (PECO), would be installed above grade on the building site (PECO would decide the type and size). All existing panel boards would be removed from the Bringhurst House, and a new 225-ampere panel would be installed in the basement to serve as the main distribution panel for both houses. Additional 100-ampere panels would be added to serve the proposed upstairs apartment. In addition, all existing receptacles and devices would be replaced or rewired, using existing pathways as much as possible in areas where historic fabric is present. Lighting fixtures would be replaced and rewired. In addition, lighting would be designed to create an environment that protects any historic artifacts while providing for the enjoyment of the visitor. The negative effects to artifacts created by basic interior electrical lighting would be reduced by using motion detection that limits exposure.

To accommodate potential emergencies, fixtures would be added as required to meet necessary egress and emergency lighting levels. A new uninterruptible power supply (UPS) system would be installed in the basement of the Bringhurst House to deliver emergency power to egress lighting and fire alarm and security systems.

VISITOR ACCESS

DESHLER-MORRIS HOUSE

The house would continue to operate as a house museum, typically open to the public five days a week April through mid-December, with private appointments possible year-round. The first floor would be made more accessible for visitors with disabilities. Visitors would enter the house via the door on the south elevation of the 1752 ell. Accessible entry would be via the porch on the west elevation of the 1772 portion of the house where new ramps and/or regrading of the existing pavement would make the entrance accessible (Figure 7). Full programmatic accessibility of the Deshler-Morris House through a CD video house tour would be available to visitors at the Bringhurst House.

The second floor would be made available for tours, but access to this floor would be only via the existing stairs. Storage activities on the third floor would be discontinued and the space would remain inaccessible to the public. None of the proposed actions would prevent interpretation of this space at a later date. The basement would be used to house some environmental systems; however, the majority of the existing systems would be relocated and the basement cleared of potential hazards. The grounds at the Deshler-Morris House are fully accessible at present, and would remain so. It is envisioned that small tour groups, up to 15 people per guide, would view the house. A full video tour of the interpreted areas of the house would be available at the Bringhurst House visitor center for those visitors who may require it.

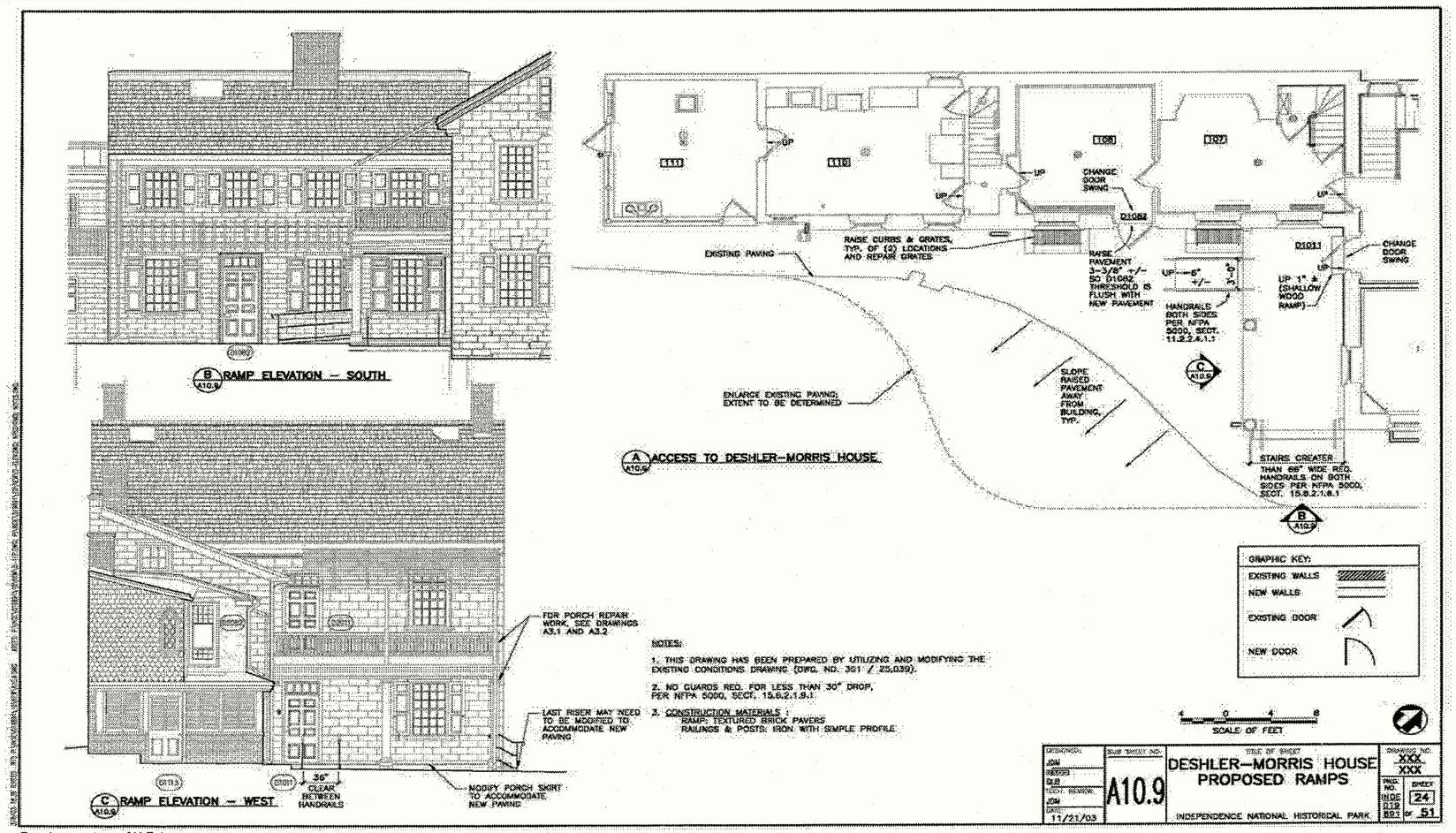
BRINGHURST HOUSE

The house would be used as a new visitor center for the Deshler-Morris House. There would be two possible visitor entrances to the house: the existing front door on Germantown Avenue and a new ADA accessible entry located at the rear of the house off of the courtyard. The first floor would contain an exhibit room, a small theater, visitor amenities including accessible restrooms, and staff support spaces.

Deshler-Morris and Bringhurst Houses Utilities and Exhibit Rehabilitation
Figure 7: Deshler-Morris House Proposed Ramps

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National Park Service

Independence National Historical Park
Philadelphia, Pennsylvania



Drawing courtesy of H.F. Lenz

The second floor would be comprised of the existing apartment for one to two residents, a meeting room, an office, and possible staff support spaces including a restroom, closets, and a kitchenette. The basement would be used to house various environmental systems for both houses. The outside rear courtyard would hold groups of up to 49 visitors at a time. Upon entry into the house, large groups would be split between the theater and the exhibits.

EXHIBITS

The exhibits to be installed in the Bringhurst visitor center will focus on Deshler-Morris House/Bringhurst complex as President Washington's temporary "White House." The Franks/Deshler-Morris House/Bringhurst complexMB house was the refuge from Philadelphia's yellow fever epidemic of 1793 and the country retreat in 1794. Washington's cabinet met at the house in November, 1793, when Franks DMB House became a center of the executive branch of government. The major concerns were the fragility of the new national government and post-Revolution issues such as international neutrality, internal unrest and protest, westward expansion, contact and conflict with native peoples, the contradictions inherent in the struggle for independence and the continuation of slavery, regionalism, federalism, shared power, and the development of political parties. During the summer retreat of 1794, government was not a major issue and the important stories are social: the country life-style, family, and household interrelationships, expeically the Washington grandchildren and enslaved, indeuntured and domestic servants.

Three secondary themes enrich and enhance the above primary theme. The first secondary theme is the Battle of Germantown in 1777 between colonial and British troops. With British Commander General Howe using the Franks/Deshler-Morris House/Bringhurst complex as his headquaters, the British Army repulsed Washington's attack at Germantown. This British victory secured the capture of Philadelphia and forced the Americans to a winter camp beyond Philadelphia at Valley Forge. The battle impacted the civilian life of Germantown and the surrounding countryside. The battle connects political and military history and also connects the Revolution and local historic houses.

Germantown as an "Urban Village" is the second secondary theme that focuses on the history of the largely German settlement that began as a rural community in 1682. Its relationship with Philadelphia that later became a city is part of the story that will be told. Transportation, commerce, industry, the arts, population, and class stratification are all subtopics that could be appropriately interpreted under this theme as are factors that contributed to Germantown's distinctiveness-imigration, multiculturalism, and religion. The history of Germans and Blacks in Germantown provide case studies in tolerance and intolerance, ethnic and racial pride, and the preservation of distinctive cultures in a developing urban American community.

Preservation and material culture of Deshler-Morris and Bringhurst houses is the final secondary theme and extends the history of Germantown into the twentieth century and into the historic preservation movement. The park explores why the house was preserved and what decisions affected how it has been interpreted. The park further introduces the architecture, furnishings, and gardens of the house as they exist today. Changing styles, forms, and practitioners of cultural and artistic expression (decorative arts, music, and dance) since the house construction are interpreted. Audiences will consider questions such as who "owns" history and how historic interpretations have changed over the decades.

Embedded in each of these exhibit themes are issues of racial and ethnic pride of German-and African-Americans, multiculturalism, and slavery and abolition. These contemporary issues will also be represented in the costumed actors playing out the above 18th century themes in the Deshler-Morris House. The historic furnishings in the Deshler-Morris House will also be refurbished.

The film to be shown in the Bringhurst House will feature stories of three women with different relationsips to President Washington-First Lady Martha Washington and her granddaughter Nelley and the Washington's enslaved servant, Oney Judge. The movie will include available, period portraits of the two former ladies and will present interpretations based on primary historical documents. Family relationships that took place in the parlor, the tea room, kitchen, and the bedrooms of Martha and Nelly will be presented. Events such as entertaining, household management, relations to Oney, music, pets, family rituals, health and country living, are presented. The film is being developed in coordination with women's history celebrations and features new personal ways of looking at the President and his summer household.

LANDSCAPE TREATMENT

Several elements of the landscape treatment plan are common to the action alternatives. Behind the Bringhurst House, one large open area (approximately 880 square feet) would accommodate a fluid circulation flow between the Bringhurst House and the Deshler-Morris House. The largest gathering area would be oriented towards the porch that would be added along the west elevation of the Bringhurst House. A long, seat wall, which could accommodate approximately 20 visitors, would separate the paved portion of the courtyard from the landscaped area. Benches and large planters would line the southern edge of the courtyard to add visual interest and diversity to the windowless wall of the Deshler-Morris House.

The transformer would be removed from the area in between the two houses and relocated to an above ground location in the rear of the Bringhurst House. Brick paving would be continued throughout the courtyard area to provide continuity of materials between the Bringhurst House garden and Germantown Avenue, and a new universally accessible path would connect the rear of the Deshler-Morris House with the Bringhurst courtyard and adjacent bank parking area.

Fencing would remain around the perimeter of the site, but new gates with iron grill insets would be added to provide visual continuity between the street and the Deshler-Morris and Bringhurst House grounds. Improved grading would ensure positive drainage away from all building foundations.

CONSTRUCTION STAGING

All construction staging activity would be restricted to the bank parking area behind the Bringhurst House property. The NPS would negotiate with the property owner to utilize this space, ensuring that all construction staging impacts occur outside the Deshler-Morris and Bringhurst house sites.

MITIGATION OF THE ACTION ALTERNATIVES

Mitigation measures presented here would be common to the action alternatives. These actions have been developed to lessen any adverse effects of the alternatives.

All final design and construction drawings would be reviewed by a historic architect, cultural resource specialist, and archeologist to assess further potential impacts to historic resources and to consider modifications designed to avoid impacting potentially significant resources. At this time, the nature and significance of archeological resources impacted by the proposed actions cannot be determined. Many areas of the Deshler-Morris and Bringhurst house grounds and building interiors have not been archeologically investigated, and there has been no determination as to the NRHP eligibility of identified archeological resources or the site's potential to yield important historical information. Due to the lack of archeological data, on-going archeological review will continue throughout the project to ensure the protection of resources.. If archeological resources are discovered during construction, all work would stop until the resource is properly recorded by a qualified archeologist.

A Memorandum of Agreement (MOA) was negotiated between Independence NHP and the Pennsylvania State Historic Preservation Officer (SHPO). The MOA stipulates the mitigation measures to be undertaken throughout the project in order to avoid or minimize adverse effects to cultural resources. A copy of the MOA, which was signed on December 2, 2004, is found in Appendix B. In compliance with the Native American Graves Protection and Repatriation Act of 1990, the NPS would also consult concerned tribal representatives for the proper treatment of human remains and funerary and sacred objects in the unlikely event these should be discovered during the course of the project. No Native American graves are anticipated within the project area.

The NPS would also prepare and implement Erosion and Sediment Control Plans that comply with Pennsylvania regulations. To limit compaction impacts to vegetative health on the site, construction traffic and vehicles would be limited, if possible, to within 25 feet of the vegetation. The NPS would oversee onsite contractors, conduct regular field inspections, and take prompt action against non-compliance, if necessary.

ALTERNATIVE B (NPS PREFERRED ALTERNATIVE)

The NPS Preferred Alternative presents the NPS proposed action and defines the rationale for the action in terms of resource protection and management, visitor and operational use, cost, and other applicable factors.

In addition to those elements described above as common to both action alternatives, Alternative B would include a closed loop geothermal heat-pump (GHP) system for heating and cooling both the Deshler-Morris and Bringhurst Houses (Figure 8). The basic elements of a GHP system include a:

- Ground loop – system of fluid-filled plastic pipes buried in the ground near the building;
- Heat pump – removes heat from the fluid in the pipes, concentrates it, and transfers it to the building (for cooling, this process is reversed); and
- Air delivery system – conventional ductwork used to distribute heated or cooled air throughout the building.

The closed-loop system would circulate a solution of water and antifreeze through a series of sealed loops of piping. Twelve wells would be installed, requiring holes to be bored 450 feet into the ground for each well. Long, hairpin-shaped loops of pipe would then be inserted. The holes would be grouted for water tightness, and the pipes would be connected to a header in a trench leading back to the Bringhurst House basement. The pipes would be joined to the header using a process known as heat fusion in which two sections of plastic pipe are trimmed and cleaned, aligned, heated to the melting point, brought together, and allowed to cool. Heat fusion results in a joint that is actually stronger than the pipe itself. For reliability, all underground piping must be thermally fused, rather than mechanically coupled. The trench and header would be four feet below grade.

Geothermal heat pumps use electricity to heat and cool, just like a conventional heat pump. However, unlike a conventional heat pump, GHPs use the relatively constant temperature of the earth as a source of heat in the winter and as a repository for heat in the summer. In the winter, the fluid passing through the underground loops of piping is warmed by the earth's heat. The collected heat is extracted and concentrated by the heat pump, and distributed through the building's ductwork. To cool the building in the summer, this process is reversed – the heat pump moves heat from the indoor air into the underground loops, where it is transferred to the relatively cooler ground (U.S. Department of Energy 2003). Alternative B would also include some differences in landscape treatments. To reflect Germantown's horticultural history, the landscaped area would contain a variety of small fruit trees. This would provide an opportunity to interpret this aspect of both the community and the site. A stepping stone path would meander through the landscaped area and include interpretive signs. This path would also provide access to a privacy gate, which would control access to the staff/tenant entrance.

ALTERNATIVE C

Alternative C would include elements described as common to the action alternatives. However, in lieu of the geothermal heat-pump system, Alternative C would include a more traditional heating and cooling system. This system would be housed in the Bringhurst House basement.

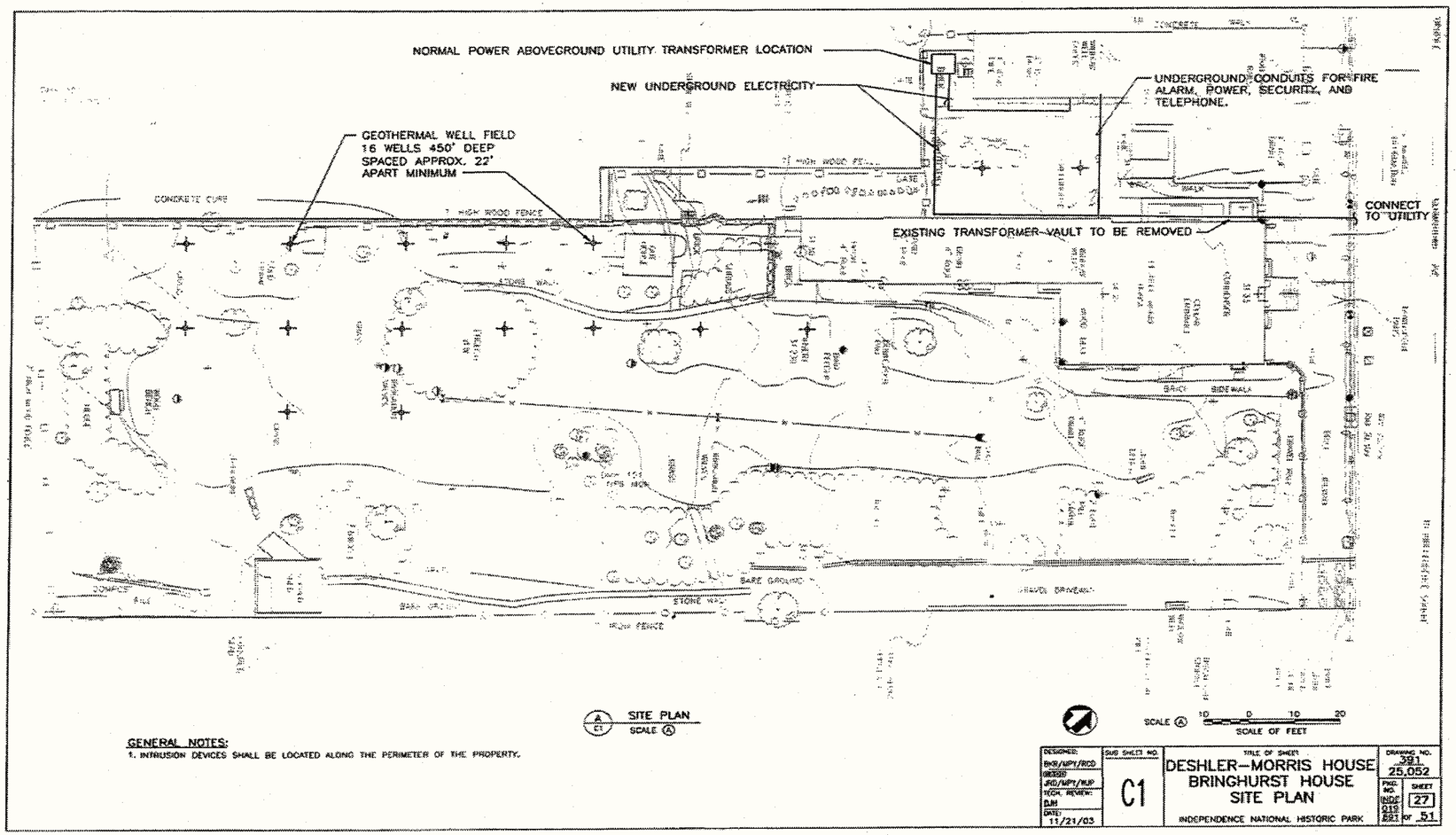
Boilers and pumps would be removed from both the Deshler-Morris and Bringhurst Houses, and a new, single boiler would be located in the basement of the Bringhurst House to serve both houses. New hot water piping would be run below grade to the Deshler-Morris House to serve the new air handling equipment and duct coils. New hot water piping would be installed in the Bringhurst House to the new air handling unit, and the existing convectors and cast iron fin-tube that serve the first floor would be cleaned, inspected, and painted for reuse.

The existing chiller would be replaced with a new air cooled chiller that would be located in the back of the Bringhurst House property. The chilled water pumps would be located in the Bringhurst House and new piping would be routed below grade to the Deshler-Morris House.

Deshler-Morris and Bringhurst Houses Utilities and Exhibit Rehabilitation
Figure 8: Deshler-Morris House/Bringhurst House Civil Site Plan

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Philadelphia, Pennsylvania



Drawing courtesy of H.F. Lenz

ALTERNATIVES CONSIDERED BUT DISMISSED

Other alternatives considered are described in the HF Lenz/John Milner Architects *Final Existing Conditions, Programming & 100% Draft Alternatives Report* (2003) and were dismissed for a variety of reasons, including:

BUILDING INTERIOR ALTERNATIVES

BRINGHURST HOUSE

The house would be divided into two zones: the east half contains an exhibit and audio visual (AV) (theater) room with accessible restrooms across the main hall. The west half would contain a new stair located next to the existing stair, an area for staff, and an additional new stair to access the apartment above. An accessible entry would begin on a new porch and continue through the existing foyer into the visitor center. This alternative was dismissed based on its inability to meet identified interpretive and visitor services needs. Specifically, it did not provide for separate exhibit and theater spaces in order to allow simultaneous AV presentations and exhibition viewing. Furthermore, the location of the public restrooms at the front of the building versus in the service wing to the rear unnecessarily restricted potential exhibition space.

STRUCTURAL ALTERNATIVES

Two additional alternatives were considered for securing the existing first floor joists along the eastern basement wall in the 1772 addition of the Deshler-Morris House. The same alternatives were considered but rejected for replacing the wood shoring that supports the first floor in the basement of the Bringhurst House. These alternatives were rejected based on adverse impacts to the historic fabric of the structures.

- A treated stud wall would be built tightly beneath the existing floor joists and extending to the concrete slab below. This option would require extensive slab removal and the placement of a continuous thickened slab along the wall, which would reduce floor area in the basement.
- A steel angle would be bolted to the existing stone wall to provide bearing for another steel angle which would be bolted to the existing floor joist. This option would require multiple holes to be drilled into the existing stone foundation walls and floor joists.

UTILITY SYSTEMS

PLUMBING

Two plumbing alternatives were considered during the project's planning phases but were rejected due to lack of technical feasibility.

- Waterless urinals would be installed in public restrooms. A disposable trap inserted in the urinal closet would replace the conventional water-filled urinal's trap drain. Low consumption closets and lavatories would also be used.
- A gray water system would be installed to treat waste water from sinks, showers, clothes washers, etc. to recycle and use to flush urinals and water closets.

FIRE SUPPRESSION

Two alternatives for fire suppression were considered but rejected because they would result in additional impacts to the historic structures.

- A high pressure, NFPA 750 class I mist system would be installed in lieu of standard fire sprinklers. Individual building systems would consist of thermally-activated nozzles (similar to sprinklers) with water supplied through high-pressure stainless steel tubing. Nozzles would be space approximately 13 feet apart along the ceiling or sidewall.
- A pre-action sprinkler system would be installed throughout each building. The system is a series of pipes that contains compressed air. When a zone specific heat sensor senses accelerating temperatures, an electronic valve opens and water flows into this area. If heat continues to rise, the fusible link in the sprinkler head opens and water discharges.

FIRE ALARM

Two alternatives for fire detection were considered but rejected because they would not improve the ability to identify the location of a fire or facilitate faster staff response time to a fire emergency.

- The existing Notifier 4800 fire alarm panel would remain in place and be upgraded to accommodate visual alarms. Horn/strobe and single strobe devices would be added as required to comply with NFPA and ADA fire alarm standards. All existing fire alarm devices would be replaced with similar, non-addressable devices.
- New fire alarm panels with the capability to monitor addressable units would be installed in the same locations as existing panels.

ELECTRICAL

Alternatives for normal electrical power were rejected because of environmental impacts.

- The existing transformer would be reused in its present location between the two houses.
- A new transformer, located in the basement of the Bringhurst House, would supply power to both houses.

The following emergency power alternatives were considered but rejected:

- A generator system would deliver emergency power to egress lighting and fire and security systems. An indoor generator system would create a fire hazard; therefore, the alternative does not meet the purpose and need of the project to eliminate fire threats from the historic houses.
- Fixtures with individual battery packs would be added as necessary to meet necessary egress and emergency lighting levels. Emergency power would not be available for security or fire alarm systems. In addition, battery pack fixtures on the wall would impact the historic fabric and aesthetics.

INTRUSION ALARM

The following alternative was considered but determined to be technically infeasible due to lack of compatibility with existing Independence NHP security systems.

- All new exterior detection devises would be installed including magnetic contacts on doors and glass break sensors on all accessible windows, with wireless devices specified where aesthetics are a priority. New motion detectors would be installed in all public areas and connected to the security system. Natural gas and water sensors would be incorporated, and the current red-phone system would be expanded to provide greater coverage and easier access from all parts of the house.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

The Environmentally Preferred Alternative is defined by the CEQ as "the alternative that will promote the national environmental policy as expressed in the National Environmental Policy Act [Section 101 (b)]." Section 101 (b) states that the Environmentally Preferred Alternative should:

(1) "Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.
(2) Ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings.
(3) Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.
(4) Preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice.
(5) Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities.
(6) Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources."

Generally, these criteria mean the Environmentally Preferred Alternative is the alternative that causes the least damage to the biological and physical environment and that best protects, preserves, and enhances historic, cultural, and natural resources. In this case, the NPS Preferred Alternative is also the Environmentally Preferred Alternative. Although the No Action Alternative might meet some of these criteria, it in no way fulfills them to the level the preferred action would nor does it meet the purpose and need of the project.

Alternative B is both the NPS Preferred Alternative and the Environmentally Preferred Alternative. Both action alternatives would provide for rehabilitation and restoration of the historically significant Deshler-Morris and Bringhurst Houses, and allow for those resources to be interpreted and accessed by the public (criteria 1 and 4). Hazardous materials in the houses would be properly removed and abated, and improvements would be made to safety systems in both houses (criteria 2 and 3). However, Alternative B would also include installation of a geothermal heat-pump system for heating and cooling the houses. This system is considered a green technology and represents a proven, sustainable method for providing

heating and cooling to buildings by using the earth as a source or repository of heat as needed (criteria 6). Alternative C, on the other hand, would use a traditional HVAC system, not considered green technology, which would require some outdoor mechanics.

Table 1 provides a summary of the environmental consequences related to each alternative.

Table 1: Summary of Environmental Consequences

Resource	Alternative A	Alternative B	Alternative C
Soils and Topography	No changes would be made to the project site or surrounding area that would impact soils and/or topography. The impact would be long-term, adverse, and negligible.	Soil would be disturbed for new walkways and grading that would create positive drainage. Twelve wells would be drilled to a depth of 450 feet, 6-8 inches in diameter. Small utility trenches would connect the wells to each other, connect the wells to the heating equipment in the Bringhurst House and connect the systems in the Bringhurst House with the Deshler-Morris House. This would create a short-term, minor, adverse impact.	Soil would be disturbed for new walkways and grading that would create positive drainage. A trench would be dug between the Bringhurst and Deshler-Morris Houses to connect utilities. The impact would be long-term, adverse, and negligible.
Historic Structures	Structures would continue to deteriorate. Threats to the historic fabric of these structures would remain. The deterioration and threats could impact the integrity of the houses. The impact would be long-term, minor to moderate, and adverse.	Standardized repairs and rehabilitation would provide moderate beneficial impacts to both structures. The installation of the geothermal pumps would not impact the historic integrity of the structures. The impact would range from long-term, moderate and beneficial to long-term, moderate and adverse.	Standardized repairs and rehabilitation would provide moderate beneficial impacts to both structures. The installation of the HVAC system would not impact the historic integrity of the structures. The impact would range from long-term, moderate and beneficial to long-term, moderate and adverse.

Table 1: Summary of Environmental Consequences

Resource	Alternative A	Alternative B	Alternative C
Archeological Resources	There would be no changes at the site that would impact resources. There would be no impact.	Archeological mitigation would be determined following review of design drawings. The potential impacts could be negligible, long-term minor to moderate and adverse, or long-term minor to moderate and beneficial.	Archeological mitigation would be determined following review of design drawings. The potential impacts could be negligible, long-term minor to moderate and adverse, or long-term minor to moderate and beneficial.
Cultural Landscapes	There would be no changes made to the current landscape. There would be no impact.	Renovation of the Bringhurst House courtyard, new systems installations, and accessibility improvements alter the non-historic cultural landscape to a minor to moderate degree, incorporating historic planting treatments. The impacts would be negligible or long-term, minor to moderate, and beneficial.	Renovation of the Bringhurst House courtyard, new systems installations, and accessibility improvements alter the non-historic cultural landscape to a minor to moderate degree. The impacts would be negligible or long-term, minor, and beneficial.
Museum Objects	Museum objects stored or displayed within the Deshler-Morris House would be at risk of damage from fire, structural damage, or vandalism. The impact would be adverse and minor to moderate over the long-term.	The proposed structural rehabilitation work, drainage improvements, exterior and interior fabric repairs, and new fire detection, fire suppression, security, and electrical systems in the Deshler-Morris House significantly contribute to the security and protection of the collections from identified threats such as fire, theft, vandalism, and degradation resulting from poor atmospheric conditions. The impact would be moderate and beneficial over the long term.	The proposed structural rehabilitation work, drainage improvements, exterior and interior fabric repairs, and new fire detection, fire suppression, security, and electrical systems in the Deshler-Morris House significantly contribute to the security and protection of the collections from identified threats such as fire, theft, vandalism, and degradation resulting from poor atmospheric conditions. The impact would be moderate and beneficial over the long term.

Table 1: Summary of Environmental Consequences

Resource	Alternative A	Alternative B	Alternative C
Visitor Use and Experience	No changes to the current experience would be made. Although the museum house would still be open it would lack adequate structures, fences, and security. The overall impact would be long-term, minor to moderate, and adverse.	Improvements would be made to circulation and site access to make them ADA accessible. The garden would be enhanced to reflect its historic context and to provide opportunities for visitors to stop and enjoy the setting. The overall impact would be long-term, moderate, and beneficial.	The garden would be developed but in a more controlled manner that provides more visitor space but less interpretation. The overall impact would be long-term, moderate, and beneficial.
Circulation and Site Access	The current site access and circulation patterns would remain. Pathways would continue to be narrow and in some places uneven. Most paths would also lack ADA accessibility. The entryways to the houses would all lack ADA accessibility. The overall impact would be long-term, moderate, and adverse.	Circulation and access would be improved to allow for universal accessibility as well as fluid circulation between buildings and additional access and space in the garden areas. The overall impact would be long-term, moderate, and beneficial.	Effects would be similar to those of Alternative B.
Hazardous Materials	Hazardous materials (LBP and ACM) would remain in both houses, creating a health and safety threat for workers and visitors. The impact would be long-term, moderate, and adverse.	As part of the renovation process, ACM, LBP, mercury, and PCBs would be abated. Despite a short-term adverse impact during the process, the overall impact would be long-term, moderate, and beneficial.	As part of the renovation process, ACM, LBP, mercury, and PCBs would be abated. Despite a short-term adverse impact during the process, the overall impact would be long-term, moderate, and beneficial.
Park Operations and Infrastructure	There would be no change to staffing or park operations. The utilities and environmental systems would remain. The fire threat would remain as would security and intrusion. The overall impact would be long-term moderate, and adverse.	Security systems and environmental controls would be improved or introduced. A geothermal heat pump would also be added to replace the current HVAC unit. The overall impact would be long-term, moderate, and beneficial.	Security systems and environmental controls would be improved or introduced. A new HVAC system would also be installed. The overall impact would be long-term, minor, and beneficial.

AFFECTED ENVIRONMENT

INTRODUCTION

Independence NHP, located in Philadelphia, contains numerous resources important to the birth of this nation, including the Liberty Bell and Independence Hall, where both the Declaration of Independence and U.S. Constitution were discussed and adopted. In addition, the park interprets events and the lives of the diverse population during the years when Philadelphia was the capital of the United States from 1790 to 1800. The Deshler-Morris House, separated from the city center by approximately six miles, was the home of President George Washington and his cabinet in 1793, during a yellow fever epidemic in Philadelphia, and by the President and his family in the summer of 1794 as a country retreat.

This chapter describes the existing environmental conditions in and around the Deshler-Morris/Bringhurst complex. The chapter is organized by resource topic, and the existing conditions are described for each topic. Detailed information on resources at the Deshler-Morris and Bringhurst Houses and in Independence NHP may be found in the park's General Management Plan (NPS 1997), the Long Range Interpretive Plan (Independence NHP 2003), various cultural and natural resource studies for the site, and other studies done within the park. A summary of the resources associated with this project follows.

NATURAL AND PHYSICAL RESOURCES

Natural and physical resources examined in detail include soils and topography, vegetation, and hazardous materials. Resources dismissed from further consideration were discussed in Chapter 1 of this document.

SOILS AND TOPOGRAPHY

Drainage at the rear of the site is problematic (Susan Maxman & Partners and John Milner Associates, Inc. 2003). Stormwater from the adjacent bank parking lot flows through the rear gate and floods the Bringhurst House's rear, at-grade staff entrance. In addition, the brick patio near the rear staff entrance does not drain well, as settling of the brick in this location has caused a depression where water is allowed to collect. There is also poor drainage around the foundation of the Bringhurst and Deshler-Morris Houses, as some elevations in the yard are higher than those around the edge of the building. Ponding water in this area contributes to the deterioration of the foundation and other structural components.

CULTURAL RESOURCES

HISTORIC STRUCTURES

The affected environment contains two historic structures listed on the National Register of Historic Places. Both structures also contribute to the Colonial Germantown National Historic Landmark District. The ca. 1750 Deshler-Morris House was individually listed on the National Register of Historic Places in 1972 for its significant association with President George Washington and his governance of the nation and as a well-preserved example of Georgian architecture. The Deshler-Morris House served as George Washington's residence for two seasons in 1793 and 1794 and was the site of several presidential cabinet and staff meetings important to his presidency. These meetings, which included Thomas Jefferson and Alexander Hamilton, addressed issues such as the new nation's position toward post-revolutionary France. The Deshler-Morris House is additionally significant as a well-preserved example of Georgian architecture and interior finishes. The house retains approximately 80% of its original fabric.

The ca. 1830 Bringhurst House is also listed on the National Register of Historic Places as a contributing element in the Colonial Germantown National Historic Landmark District. According to a report issued by the NPS in 1995, the Bringhurst House is a "richly developed vernacular structure..." which "contributes greatly to the interpretation and appreciation of the townscape of Germantown" (McGimsey 1995). As such, the characteristics of the property that convey its significance include location, setting, and exterior elements of design, materials, workmanship, and feeling. Though the interior of the Bringhurst House has been altered in the 20th century, the structure is noteworthy for the rare survival of corbelled stone floor joist supports in the basement. The same NPS report noted that it is "possible that the cellar represents one of the earliest identified structures surviving in downtown Germantown and dates from the late 17th to the early 18th century" (McGimsey 1995).

The Colonial Germantown National Historic Landmark District is a district of residences of prosperous German-Americans. The district lines Germantown Avenue between Windram Avenue and East Sharpnack Street and is significant as the site of a flourishing German-American community in the 18th century and for its diverse collection of Germanic influenced buildings.

DESHLER-MORRIS HOUSE

Exterior

The Deshler-Morris House is a two and a half-story, stone masonry, Georgian-style dwelling built in several stages between ca. 1750 and ca. 1880. The house has an L-shaped plan, consisting of a ca. 1772 main block fronting on Germantown Avenue, a two-story ca. 1750 ell that originally served as the main block of the dwelling, and two, two-story ell extensions dating from 1839 and ca. 1880. With the exception of the ca. 1880 ell extension, all parts of the Deshler-Morris House are constructed of mortared stone covered in stucco. The ca. 1880 addition has a brick masonry first story and a wood frame second story. The remnants of the foundation of a narrow, two-story 1909 addition remains on the west elevation of the main block. This addition, and a second addition set immediately to the south, originally housed modern plumbing fixtures. Both were removed during a 1975 restoration undertaken by NPS (Adlerstein 1982).

The 1772 main block of the Deshler-Morris House presents a highly detailed architectural scheme. The building has a centered front entrance with a pedimented door surround with Doric columns and a full entablature; symmetrical fenestration of twelve-over-twelve light double hung wood sash; and stucco covering scored to look like ashlar masonry. The main block retains a full-length porch with a flat roof and square column supports on the rear (west) elevation, dating to the period of construction (Adlerstein 1982). The earliest part of the Deshler-Morris House, which now functions as its primary ell[1], retains few architectural elements and materials from its ca. 1750 construction due to continuous changes in use. Like the main block, this stone structure is covered in stucco and the covering is scored on the south elevation to look like ashlar masonry. The 1839 addition to ell was constructed to serve as a kitchen and is mortared rubble construction covered in stucco. A wood frame second story sheathed in clapboards was added to the extension in 1865 (Adlerstein 1982). The 1880s addition to the 1839 ell extension was used as a wash house, office, and warehouse space. The brick first story of the addition has a hipped roof and the wood-frame second floor, which only covers half the area of the first floor, has shed roof. The second story is accessible only via the first floor roof through a door from 1839/1884 addition (Adlerstein 1982).

Interior

The interior of the main block of the Deshler-Morris House has a typical Germantown house plan. The first floor consists of a central hall with two rooms on the south and a large single room and rear corner stair hall on the north side. The two front rooms have fireplaces on the north or south wall, surrounded by an elaborate Federal paneling scheme. The scheme includes overmantel panels with crossettes, mantel pieces on modillions with billeted cornices, and plain panels over the firebox with crossettes and marble firebox lintels and sides. The paneling in the north chamber is a replica installed in 1949 during an NPS restoration. The rear sitting room on the south side of the house has a smaller, corner fireplace with less elaborate but high quality paneling. The stair hall and the staircase are ornamented with imitation wood-grained wainscoting (Adlerstein 1982). The second-floor plan is identical to the first floor, including fireplace placement. The third floor has three small rooms and two closets off an L-shaped hall.

The interior of the ell is presently divided into two rooms on each floor, with a winder staircase located in the northeast corner of the structural space. The north rooms on both stories have fireplaces on the north wall. This plan is similar to the original layout for the structure but reflects many changes. The fireplace on the first floor was removed at an unknown date, along with a corner cabinet and the original winder staircase to the second floor. The fireplace present today was reconstructed in the 1975 NPS restoration of the property. The second floor is less altered, and retains its original partition, fireplace, and corner cabinet (Adlerstein 1982). The basement of the Deshler-Morris House contains the HVAC and electrical systems that serve the structure. The basement has a poured concrete floor pad to accommodate these systems.

□

[1] An extension at right angles to the length of a main building, giving to the ground plan a form resembling the letter L; sometimes less properly applied to a narrower, or lower, extension in the direction of the length of the main building; a wing. *Webster's Revised Unabridged Dictionary, © 1996, 1998*

BRINGHURST HOUSE

Exterior

The Bringhurst House has a complex physical history spanning two centuries, from the early 18th century to the late 20th century. In its present state, the Bringhurst House is a two and a half-story, mortared stone structure with a steeply pitched gambrel roof with flared eaves. A two-story ell with a shed roof projects from the rear elevation. The ca. 1840 main block of the house has a five-bay façade with a centered entrance, topped with a fanlight. The bay spacing is uneven across the facade, though windows are identically sized, six-over-six light double hung sash. The stucco covering was removed from the façade of the house ca. 1960, exposing the crudely laid underlying rubble stone masonry. The gable ends of the main block remain stuccoed. The ca. 1850 brick ell has two sections: a large, rectangular section attached to the rear of the main block and a smaller, two story brick addition on the west end of the primary ell.

Portions of the basement level of the main block of the Bringhurst House date from the first house on the property, thought to have been constructed before 1720. Between ca. 1720 and ca. 1750, another house was constructed on the basement of this early house. The majority of the existing first and second stories of the main block of the Bringhurst House date from a complete reconstruction of the second house on the property in the late 1830s. Two more intensive renovation campaigns produced the house in its present form. Owners removed the original gable roof on the main block ca. 1895, replacing it with the present gambrel roof and effectively adding a half-story to the formerly two-story building and eliminating the rear lean-to. Another renovation in 1960 resulted in the removal of two dormers from the front roof slope, and the removal of the stucco covering from the front of the building.

Interior

The interior of the Bringhurst House has undergone a series of alterations during the 20th century. In its present state, the first floor of the main block has a central hall extending from the front door to a rear entrance. The hall is flanked by two rooms on the south and one room and the stair hall on the north. The present room configuration was created ca. 1960 while the building was in commercial use. Originally, the first floor appears to have consisted of a large single room on either side of the central hall. Most finishes and materials are modern, though two fireboxes, some mid 19th-century door and window trim, and the dogleg staircase remain on the first floor. The first floor of the ell consists of a long hall along the south wall accessing a series of small rooms. All walls and finish materials in this area are modern, though the rear room retains a glazed china cabinet, and the original exterior door on the earlier section of ell is also extant.

The second floor is similar in plan with a large room south of the central hall subdivided into two smaller rooms. The north room on the second floor retains many historic features such as a wood mantel, a mix of mid 19th-century doors, and door and window casings. The second floor of the ell most recently served as a staff apartment and has been completely reconfigured and finished with modern materials. A pull-down staircase accesses the third floor and replaces the original open stringer stair to the above space. The third floor contains four rooms.

The basement level of the Bringhurst House exists primarily under the ell and the north side of the main block. Though largely rebuilt with the late 1830s reconstruction of the Bringhurst House, the portion of the basement under the main block retains corbelled stone floor joist supports from the first period of construction on the site in the early to mid 18th century. Corbelled stone joist supports are a rare structural element, and previous NPS studies of the Bringhurst House have stated that it is "...possible that cellar represents one of the earliest identified structures surviving in downtown Germantown, and dates from the late seventeenth to the early eighteenth century" (McGimsey 1995).

ARCHEOLOGICAL RESOURCES

DESHLER-MORRIS HOUSE

Minimal archeological investigations were conducted at the Deshler-Morris House in 1975 in conjunction with NPS restoration of the house. The investigations included areas along the exterior of the building and beneath the various structures comprising the ell. Archeologists also monitored excavations necessary for restoration work in the basement and conduit trench excavation on other parts of the site. Because much of the construction work in the basement areas was completed prior to archeological monitoring, investigations in these areas are incomplete (Inashima 1995).

Archeological resources found during the 1975 investigations included a sealed basement entrance to the ca. 1750 portion of the ell; a cistern, traces of a gravel walk, and an oyster shell midden south of the ca. 1750 ell; and the base of a fireplace in the ell basement. Investigations in the ell extensions revealed remnants of the base for a 19th-century kitchen stove and a second cistern. Miscellaneous pottery and glass shards dating from the mid 18th century and later were found throughout the excavated areas (Inashima 1995).

In 2000, archeological monitoring was conducted south and west of the ca. 1772 main block of the Deshler-Morris House in conjunction with the replacement of brick sidewalks. Monitoring revealed remnants of stone paving suggesting the presence of a mid 18th-century drive leading to Germantown Avenue (Inashima 1995).

No archeological investigations have been conducted on the garden portion of the Deshler-Morris House lot or in the vicinity of the 1884 privy.

BRINGHURST HOUSE

To date, no dedicated archeological investigations have been conducted at the Bringhurst House. In 1975, archeologists monitored the excavation of a conduit trench between the Deshler-Morris and Bringhurst Houses as part of an archeological investigation of the Deshler-Morris House. The construction of the 1909 additions to the north elevation of the Deshler-Morris House main block and ell heavily disturbed the soil in this area, and investigators found no archeological resources (Crozier 1975).

CULTURAL LANDSCAPE

To date, the NPS has not conducted a dedicated cultural landscape study for the Deshler-Morris House. The NPS has a draft *Cultural Landscape Treatment Plan* for the Bringhurst House site authored by Susan Maxman & Partners and John Milner Associates, Inc. (2003), which includes some information on the Deshler-Morris House site. Information from this report and from *Historic Structure/Furnishings/ Grounds Report Deshler-Morris House Bringhurst House Historical Data Section* (Anna Coxe Toogood 1980) was used to compile the cultural landscapes section of this document.

DESHLER-MORRIS HOUSE

Spatial Organization

Located on the west side of Germantown Avenue, the Deshler-Morris House property consists of a narrow, but deep urban lot measuring 100 feet wide at the road frontage and 277 feet deep. The Deshler-Morris House takes up approximately one-third of the total lot size, with the remaining two-thirds of the property being devoted to a late 20th-century ornamental garden. The dwelling has a greater setback than other properties on Germantown Avenue, resting approximately 16 feet from the street. In addition to the Deshler-Morris House, the grounds contain an 1884 brick privy, a modern storage shed, and a cold frame. The entire rear portion of the property is enclosed with a combination of wood and metal fencing.

Land Use

The land behind the Deshler-Morris House has been used continuously over the course of the occupation of the house, initially as a kitchen garden and orchards, and later as an ornamental garden. After NPS purchased the Deshler-Morris House in 1948, there were only limited funds to keep up the grounds. The landscape grew wild until the 1970s, when a park volunteer used her time and funds to redesign the garden space. The present garden scheme and layout has no correlation to historic designs or planting schemes (Toogood 1982). This portion of the Deshler-Morris House lot is open to the public as part of the historic house museum operated on the site by the NPS.

Circulation

Vehicular access to the Deshler-Morris House site from Germantown Avenue is limited to a 116-foot long, 11-foot wide gravel drive extending from a gate in the fence along Germantown Avenue and along the south property boundary. Pedestrian circulation features around the Deshler-Morris House consist of a series of brick sidewalks and patios. A 16-foot wide brick paved sidewalk lines the frontage of the house along Germantown Avenue, leading to the marble steps and landing to the front door of the house. A 3-foot, 10-inch wide dry laid brick sidewalk extends from the frontage along the south side of the house and widens into a brick patio at the intersection of the main block and ca. 1750 portion of the ell. A second brick sidewalk continues along the south elevation of the ell and ell extensions, ending in another brick patio at the end of the ca. 1880 ell extension. The NPS installed the brickwork along Germantown Avenue and the south elevations of the Deshler-Morris House in 1997. From the rear of the ell extension, two slate steps lead west to the 1884 privy, and a concrete step leads north to the Bringhurst House grounds. An older, dry laid brick sidewalk circles around the privy structure. Secondary pedestrian circulation elements include a gravel walk along the inside of the fencing along Germantown Avenue south of the house, a slate path extending from the privy area along the north boundary of the lot and the

rear garden, and a stone path from the modern shed to the gravel drive (Susan Maxman & Partners and John Milner Associates, Inc. 2003).

Vegetation

Vegetation on the Deshler-Morris House property consists of a variety of trees, shrubs, groundcovers, grasses, and perennials. Most vegetation was planted in the late 20th century; however there are several trees and a boxwood hedge in the garden that predate the 20th century. The NPS transplanted a remnant of a boxwood hedge to its present location in 1948 from a portion of the former Deshler-Morris property that was not donated to NPS. This boxwood is believed to date from the occupation of David Deshler, who reportedly had an elaborate ornamental boxwood garden on the property. The garden also includes large trees estimated to be greater than 100 years old southeast of the ell and south of the privy (Toogood 1982).

Secondary Buildings and Structures

The sole remaining historic outbuilding on the Deshler-Morris House lot is the 1884 privy. The brick structure is approximately 10-foot square and has a hipped roof. The interior, which can accommodate up to ten people at a time, is divided into four areas with wood frame, plastered walls (Adlerstein 1982). A modern storage shed is situated toward the southwest corner of the house lot, and a modern cold frame is located on the opposite side of the lot from the storage shed.

Small Scale Features

The entire Deshler-Morris House property is fenced with a combination of wood and metal fencing. On the Germantown Avenue frontage, an ornamental wood plank fence on a granite base encloses the rear garden area. A gate providing access to the gravel driveway and a pedestrian gate are located along this fence. The remainder of the Deshler-Morris lot is surrounded by iron fencing on the south boundary, and additional plank wood fencing on the east and north boundaries. This fencing continues to include the rear area of the Bringhurst House lot.

Other small scale features on the Deshler-Morris grounds include painted wood window well covers on the basement elevation; a curvilinear brick drainage channel in the brick patio behind the ca. 1880 ell extension; and a variety of ornamental planting pots, birdbaths, a sundial, and a small stone statue in the Deshler-Morris House gardens.

Views

The wooden fence surrounding the Deshler-Morris House lot obstructs public view into the patio or garden spaces. Views inside the Deshler-Morris House lot are largely characterized by the ornamental plantings in the rear garden and the rear and side elevations of surrounding buildings.

BRINGHURST HOUSE

Spatial Organization

The Bringhurst House is located immediately north of the Deshler-Morris House. The two buildings are separated by a narrow alleyway, obstructed in part by the remnants of the foundation of the 1909 north

addition to the Deshler-Morris House. The Bringhurst House is situated at the street line on a small, rectangular urban house lot. The L-shaped mass of the house covers nearly three-quarters of the lot, leaving only a small grass yard at the south corner of the lot. This exterior space is surrounded by a wood fence, which also encloses the rear of the Deshler-Morris property. Historically, the Bringhurst lot was similar in size to the Deshler-Morris House, but a portion of the lot was sold and now serves as a paved parking area for a local bank.

Land Use

Historically the land behind the Bringhurst House housed the saddle and coach making businesses started by different generations of the Bringhurst Family and as garden and orchard space (Toogood 1982). The remaining grounds at the Bringhurst House are currently not open to the public.

Circulation

There is no vehicular access to the Bringhurst House site. Pedestrian circulation is facilitated by a series of brick walkways. A five-foot wide brick sidewalk lines lot frontage on Germantown Avenue, providing access to the marble steps and landing leading to the front door of the Bringhurst House. A narrow brick sidewalk between the Bringhurst and Deshler-Morris Houses provides access from the street to the rear yard. Here, the brick walk meets a slate sidewalk lining the rear elevation of the main block of the house and the south elevation of the ell. The slate sidewalk ends in a brick patio area at the rear of the ell. Slate stepping stones connect the brick patio south to the fence accessing the Deshler-Morris grounds.

Vegetation

The rear yard of the Bringhurst House is grassed, but there is no additional vegetation on the site. A large maple tree on the northwest adjoining property provides some shade cover.

Secondary Buildings and Structures

The rear yard of the Bringhurst House contains a modern glass and metal greenhouse structure set in the intersection of the main block and ell of the house.

Small Scale Features

The rear yard of the Bringhurst House is fenced with a seven-foot high wood plank fence, which continues to enclose the rear grounds of the Deshler-Morris House. The fence has three gates accessing the Deshler-Morris House grounds. A small length of fence with a gate is located between the Bringhurst and Deshler-Morris Houses on Germantown Avenue. The fence supports an informational sign about tours of the Deshler-Morris House. An iron gate blocks the alley between the Bringhurst House and the property to the north.

Views

The views from the rear yard of the Bringhurst House are largely characterized by the side and rear elevations of surrounding buildings.

MUSEUM OBJECTS

The interior of the Deshler-Morris House is furnished with objects that interpret the period of George Washington's residency in 1793-1794. The collections are representative of those found in similar households of that period, but are not directly associated with the Washington Family or other previous occupants of the house. The collections include furniture, carpets, table and kitchenware, paintings, textiles, and toys. On the first floor, the hall, parlor, dining room, and sitting room are fully furnished to reflect those uses. The present furnishings were installed in the late 1970s. The ca. 1750 portion of the first floor is interpreted as service area, with front and rear kitchens. On the second floor, two rooms are furnished to interpret George and Martha Washington's bedroom and Nellie Curtis' bedroom, and another is furnished as Washington's library. Servants' quarters are interpreted on the second floor of the ca. 1750 portion of the house. The second floor of the ca. 1850 ell features a collection of late 18th century children's toys. The third floor is not interpreted but houses collections storage for the Museum Branch,Cultural Resource Management (CRM) Division.

The Bringhurst House does not contain any historic furnishings or objects.

VISITOR USE AND EXPERIENCE

Although there are several historic homes in Germantown, the house is separated from major historic sites in center city Philadelphia and Valley Forge, Pennsylvania. Access by public transportation is possible but not a much-used alternative for visitors. A new system of highway signs, including a blue and white site marker, is now in place to guide visitors through northwest Philadelphia to the site. However, the perceived remoteness of the house from center city, in the minds of some audiences, converts to discomfort or concerns for safety. Approximately 1,800 people visited the site in 2002, a very small fraction of the nearly 4.85 million total visits to the park that year.

Furnishings in the house focus on the Washington occupancy. A park-produced brochure introduces the history of the house and provides wayfinding directions. Several special events and walking tours link the house to its Germantown neighborhood. Entrance fees to the house were recently suspended, as they generate little revenue and their impact on visitation is uncertain. Emphasis on certain aspects of the story, the house and furnishings and George Washington, for example, has tended to limit interpretation of other appropriate stories like Washington's leadership during the critical early years of the republic and the entire Washington household, including his immediate family and servants. The story currently lacks inclusivity. The *Long Range Interpretive Plan* of 2003 addressed these issues. The park completed a long range interpretive plan in 2003 to address these issues.

The house itself is small with virtually no space for group activities. The Bringhurst House offers some on-site space, but the potential is unrealized. Physical ADA access is limited. Visitor amenities like food or drink are not readily available.

CIRCULATION AND SITE ACCESS

Marble steps provide access to the interiors of each of the houses from Germantown Avenue. The brick sidewalk along Germantown Avenue varies between 7 feet in front of the Bringhurst House and 16 feet in front of the Deshler-Morris House.

Within the Bringhurst House courtyard, a three-foot wide slate sidewalk follows the south and west elevations of the Bringhurst House. A brick walkway connects to this sidewalk in between the two houses. At the rear of the Bringhurst House, the slate walkway terminates at a 10-foot by 13-foot brick courtyard. Slate stepping stones also link this patio with the rear of the Deshler-Morris House. None of the building entries served by these paths are universally accessible. A brick sidewalk follows the south side of the Deshler-Morris House and widens to accommodate a patio area located off the 1772 and 1750s portions of the house. Neither entrance to the house from this patio is universally accessible. A portable fiberglass ramp is used to access a wooden porch serving the 1772 doorway. The brick sidewalk continues from the patio area to the rear of the house and terminates in a small patio behind the 1880 addition. A series of brick and slate stone pathways, averaging between two and two and a half feet in width, circle the garden and lead to a gate accessing the neighboring bank parking lot. The topography of the grounds is flat enough to provide for universal accessibility.

Three gates provide access to the Bringhurst courtyard and Deshler-Morris garden. Each is constructed of wood, reinforced by iron strapping, and can be locked to provide security. A wrought iron railing is located along the entry to the front of the Bringhurst House, and a wooden gate is located along the front of the Deshler-Morris garden.

HAZARDOUS MATERIALS

In 1996, a survey was conducted to determine the general location and condition of asbestos-containing materials (ACM) and lead based paint (LBP), to give recommendations for the management of hazardous materials identified, and to determine drinking water quality (Law Engineering and Environmental Services, Inc. 1996). At the Deshler-Morris and Bringhurst Houses, samples of ACM were obtained and analyzed, and the locations of ACM were depicted on drawings. In addition, the presence of LBP was determined by x-ray fluorescence (XRF) or by collecting and analyzing paint ship samples. For the residential portion of the Bringhurst House, the presence of lead was tested for by XRF, paint chip, dust, and soil sampling according to the U.S. Department of Housing and Urban Development (HUD) *Lead-Based Paint: Interim Guidelines for Hazard Identification and Abatement in Public and Indian Housing* (HUD 1990). Specific information on these elements can be found in the report, *Report of Hazardous Materials Survey for New Hall, Pemberton House, Bringhurst House, and Deshler-Morris House, Philadelphia, Pennsylvania.*

PARK OPERATIONS AND INFRASTRUCTURE

Independence NHP includes a campus-style security and access control system, as well as security staff. Campus security and access control is headquartered in the Visitor Center Command Center.

DESHLER-MORRIS HOUSE

Existing conditions at the Deshler-Morris House are described in the Vitetta Group's Building Assessment Report (1997) and in the *Final Existing Conditions and Programming and 100% Draft Alternatives Report Deshler-Morris/Bringhurst Houses* (H.F. Lenz 2003). A summary of this information is provided below.

HVAC

The air conditioning system consists of chilled water supplied by a chiller with a remote air cooled condensing unit which uses R22 refrigerant. There are two inline chilled water pumps, one duty operation and the other stand-by, which serves an air-handling unit and three fan coil units.
The air conditioner's condensing unit is located in an area that would be difficult to service due to the inadequate service clearances. The chiller, pumps, and air handling unit are located in the basement. The basement has low ceilings and is confined; therefore, it would be difficult to make any major repairs on the equipment located there. The chiller, condensing unit, and pumps are approximately 25 to 30 years old and should be replaced.

The heating system consists of a gas-fired cast iron boiler and five hot water circulating pumps that serve three heating zones. Zone 1 consists of two inline pumps, one duty operation and the other stand-by, serving the air handling unit. Zone 2 consists of two inline pumps, one duty operation and the other stand-by, serving the fan coil units. Zone 3 consists of one inline pump serving duct mounted reheat coils.

The boiler and pumps appear to be in good condition and appear to have been replaced within the last 5 to 10 years. Although the heating system is in good condition, it should be removed from Deshler-Morris House because of the potential fire risk.

There are two canister type humidifiers, located in the basement, with flexible hoses to duct-mounted manifolds in the supply air ducts. The humidifiers have not been operable for sometime. The air distribution system may be contaminated as the humidification spray manifolds are installed in acoustically lined ductwork which facilitates the growth of bacteria and mold.

The air handling system consists of a constant volume air-handling unit with multipliable zone reheat coils to provide heating in the winter. The supply and return ductwork is routed through inconspicuous places such as closets, fireplace chimneys, and chases behind corner cabinets. There are various types of supply registers and grilles: cast iron, brass, steel, and aluminum. They are also in various places: in the floor, inside of fireplaces, on the walls, and in the ceilings. Most are well-integrated into the architecture, but there are a few that are out of character. The return air system consists of a large grille in the floor near the stairs on the first floor, two small floor grilles on the first floor in the 1750 section, and a side wall grille in the second floor of the 1750 section.

There are three four-pipe fan coil units – one horizontal floor-mounted in the basement, one vertical floor-mounted in the first floor kitchen in the 1834 section, and a ducted horizontal unit in the second floor in the 1850 section. The fan coil units are approximately 5 to 7 years old and appear to be in fair condition. They do not match the character of the structure, and there have been reports that there were freezing problems with the pipes that serve the second floor unit. These units should be replaced with a different type of system or the piping should be rerouted to the second floor unit.

PLUMBING

The Deshler-Morris House is supplied by a 2-inch domestic water service. The main services the hot water boiler, the steam humidifier, the domestic water services in the basement and the first floor, and the site irrigation. The domestic water piping and valves appeared to be in good condition, and no leaks or deterioration of pipe joints were observed. The Deshler-Morris House has a 2-inch gas service that feeds the hot water boiler. The gas piping appears to be in good condition.
The house is fitted with rainwater gutters and both round and rectangular downspouts. These have no noticeable cracks.

FIRE SUPPRESSION

Presently, there is no fire suppression system in the Deshler-Morris House.

ELECTRICAL

The current electrical service for the Deshler-Morris House is derived from an oil-filled transformer owned by PECO. The transformer is located in a vault between the Deshler-Morris House and the Bringhurst House. The transformer is fed from an underground manhole on Germantown Avenue via a single feed. The electrical rating and physical condition of the transformer could not be obtained through inspection due to a large steel grate covering the vault. Through inspection of the distribution panelboard, the service from the transformer has been identified as 208/120 volt, three-phase power.

The transformer feeds the main distribution panelboard in the basement of the Deshler-Morris House through underground conduit. This panelboard, labeled "MDP" is rated at 400 amps. MDP then feeds panels LP1, LB, and LP to distribute power to the rest of the facility. A 100-amp breaker is also designated for the chiller safety switch in MDP.

Panels MDP, LB, and LP1 are all located in the basement of the Deshler-Morris House. Panel LP is located just outside the kitchen on the first floor. Panel LB has a main circuit rated at 150 amps and is used mainly as the supply for the mechanical equipment and smoke detectors for the Deshler-Morris House. Panel LP contains a 100-amp main circuit breaker and is designated for receptacles, lighting, and the kitchen equipment. Panel LP1 contains no main circuit breaker but is of the "main lug only" type and is used for receptacles throughout the Deshler-Morris House. All of the panels in the house seem to be in working condition and all of the distribution equipment is at least 25 years old.

FIRE ALARM

The fire alarm panel that serves the Deshler-Morris House is located in the basement and is manufactured by Notifier. Although all devices appear to be in working order, a test of the fire alarm system has not been performed to verify the proper operation of the system.

SECURITY

The current security system in the Deshler-Morris House consists of motion detectors throughout the buildings accompanied by magnetic contacts in selected basement areas. Two security panels are located on the first floor. The security devices appear to be the original structures installed in the 1970s. More detailed information can be found in the NFPA Draft Case Study Report prepared by the Fire Safety Institute.

BRINGHURST HOUSE

HVAC

There are various types of cooling systems in the building. The first floor is cooled by residential through the wall and window air conditioners. The second floor is served by two different units. One unit serves a two room apartment with a package air conditioning/gas-fired furnace. The unit is located in a closet and ducted vertically into the attic above, then ducted horizontally to ceiling diffusers in the rooms that the unit serves. The other unit serves the second floor of the main house with a package air conditioner located on the floor of the third floor ducted horizontally across the floor to ceiling diffusers in the second floor ceiling.

The wall/window units are approximately seven to twelve years old and are near the end of their life expectancy. The unit in the third floor that serves the second floor is in poor condition. The other unit that serves the second floor is in good condition. At a minimum, all the wall/window units and the unit in the third floor should be replaced.

The heating system consists of a gas-fired cast iron boiler and two inline circulating pumps that serve two heating zones, one pump per zone. Zone 1 serves hot water convectors and cast iron baseboard on the first floor. Zone 2 serves hot water convectors and cast iron baseboard on the second floor. The boiler and pumps appear to be in fair condition and are approximately 10 to 15 years old. The boiler is located in the basement where there seems to be a moisture problem, which would shorten the life expectancy of the boiler.

PLUMBING

The Bringhurst House has a 1-inch domestic water service that feeds the hot water boiler and the domestic water services. The water service is distributed throughout the building, supplying a clothes washer on the first floor, lavatories on the first and second floors, and a kitchen on the second floor.

A 4-inch main in the basement exits the building and has no noticeable cracks or leaks. There is a 1½ inch gas service in the Bringhurst House that supplies the hot water boiler, an air handling unit (AHU), and a gas fireplace. The gas piping appears to be in good condition.

The Bringhurst House is fitted with rainwater gutters and both round and rectangular downspouts. There were no noticeable cracks.

FIRE SUPPRESSION

Currently, there is no fire suppression system in the Bringhurst House.

ELECTRICAL

The current electrical service for the Bringhurst House is derived from an oil-filled transformer owned by PECO. The transformer is located in a vault between the Deshler-Morris House and the Bringhurst House and is fed from an underground manhole on Germantown Avenue via a single feed. The electrical rating and physical condition of the transformer could not be obtained through inspection due to a large steel grate covering the vault. The transformer feeds three meters located in the basement. These three meters then feed the four panels (P1, P2, P3, and P4) located throughout the house. It is not clearly apparent which meters feed which panels.

Panel P1 is a 100-amp main circuit breaker located directly beneath the service meters. Several of the breakers are not labeled as to the devices that they feed; however, the labeled breakers indicate that a dryer, receptacles, and a fire alarm system are fed from this panel. Panel P2 is located on the first floor and has a 125-amp main lug. Most of the breakers are not labeled. The only labeled circuits feed the greenhouse and a washer. Panels P3 and P4 are located on the second floor of the Bringhurst House. Panel P3 is equipped with a 125-amp main lug and is used for general receptacles and lighting, as well as two air conditioning circuits. Panel P4 is equipped with a 125-amp main lug and is responsible for general receptacle loads as well as a 240-volt heater.

Throughout the house, different types of wiring were noticed, including conduit and wire, Romex, and flexible metallic cable. The lack of consistency in wiring methods indicates that the electrical upgrades throughout the years were coordinated and performed by different companies or individuals.

FIRE ALARM

The fire alarm panel that serves the Bringhurst House is located in the basement. Fire alarm devices are located throughout the house and appear to be in working order. A test of the fire alarm system could not be performed to verify the proper operation of the system.

SECURITY

The security system in the Bringhurst House is comprised mainly of motion detectors and magnetic contacts located on doors. Also present is an intercom system and doorbells with electric strike

capabilities. Both motion detectors in the basement are not working. The intercom to the second floor apartment was also shown as inoperable. A test of the security system could not be performed to ascertain the functionality of each device.

ENVIRONMENTAL CONSEQUENCES

INTRODUCTION

This section describes the environmental consequences associated with the alternatives. It is organized by impact topic, which distills the issues and concerns into distinct subjects for discussion analysis. NEPA requires consideration of context, intensity, and duration of adverse and beneficial impacts (direct, indirect, and cumulative) and measures to mitigate for impacts. NPS policy also requires that impairment of resources be evaluated in all environmental documents; therefore, this discussion is also included for each impact topic.

METHODOLOGY FOR ASSESSING IMPACTS

As required by NEPA, potential impacts are described in terms of type (beneficial or adverse and direct or indirect), context (site-specific, local, or regional), duration (short-term or long-term), and level of intensity (negligible, minor, moderate, or major). Overall, these impact analyses and conclusions were based on the review of existing literature and park studies, information provided by experts within the park and other agencies, professional judgments and staff insights, consultations with the Pennsylvania SHPO, and public input.

TYPE

Beneficial: A positive change in the condition or appearance of the resource or a change that moves the resource toward a desired condition.
Adverse: A change that moves the resource away from a desired condition or detracts from its appearance or condition.

Direct: An effect that is caused by an action and occurs at the same time and place.
Indirect: An effect that is caused by an action but is later in time or farther removed in distance but still reasonably foreseeable.

CONTEXT

Context is the affected environment within which an impact would occur, such as local, park-wide, regional, global, affected interests, society as a whole, or any combination of these. Context is variable and depends on the circumstances involved with each impact topic.

Site-specific: The impact would affect the project site.
Local: The impact would affect the park.
Regional: The impact would affect localities, cities, or towns surrounding the park.

DURATION

For all resources and values, the duration of impacts in this document is defined as follows:

Short-term: Impacts that occur only during construction or last less than one year.
Long-term: Impacts that last longer than one year.

LEVEL OF INTENSITY

Because level of intensity definitions (negligible, minor, moderate, or major) vary by impact topic, they are provided separately for each impact topic.

IMPAIRMENT

In addition to determining the environmental consequences of the preferred and other alternatives, *NPS Management Policies 2001* (NPS 2000) and DO 12: *Conservation Planning, Environmental Impact Analysis and Decision-Making*, require analysis of potential effects to determine whether or not actions would impair park resources.

A fundamental purpose of the NPS, as provided for in its Organic Act (1916) and reaffirmed by the General Authorities Act (1970), as amended in 1978, and recognizing a national park system, begins with a mandate to conserve park resources and values. However, the laws do give the NPS the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of the park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the NPS the management discretion to allow certain impacts within parks, that discretion is limited by the statutory requirement that the NPS must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including opportunities that otherwise would be present for the enjoyment of those resources and values. An impact would be more likely to constitute an impairment to the extent it affects a resource or value whose conservation is:

(1) Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
(2) Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
(3) Identified as a goal in the park's general management plan or other relevant NPS planning documents.

Impairment may result not only from NPS activities in managing the park, but also visitor activities, or activities undertaken by concessionaires, contractors, and others operating in the park. An impairment determination is provided for each impact topic, where appropriate, within the conclusion section of each alternative.

CUMULATIVE IMPACTS

Impacts can be direct, indirect, or cumulative. As previously noted, direct impacts are caused by an action and occur at the same time and place as the action, while indirect impacts are caused by the action and occur later or farther away but are still reasonably foreseeable. The CEQ regulations, which implement NEPA, require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as impacts which result when the impact of the proposed action is added to the impacts of other present and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions (40 CFR 1508.7).

To determine the potential cumulative impacts, existing and future projects at Independence NHP and in the surrounding area were identified. These included lands administered by the NPS; the commonwealth of Pennsylvania; and the city of Philadelphia. Projects were determined by meetings and phone calls with county and city governments and state land managers. Potential projects identified as cumulative actions included any planning or development activity that was currently being implemented or that would be implemented in the reasonably foreseeable future.

These cumulative actions are evaluated in the cumulative impact analysis in conjunction with the impacts of a particular natural resource, cultural resource, visitor use, or the socioeconomic environment. Because some of these cumulative actions are in the early planning stages, the evaluation of cumulative effects was based on a general description of the project. Cumulative impacts are considered for all alternatives and are presented at the end of each impact topic discussion. The following projects were identified:

LIBERTY BELL CENTER

On October 9, 2003, the Liberty Bell was moved from its old home at the Liberty Bell Pavilion to the new Liberty Bell Center. The move was carefully planned out and monitored to ensure the Bell's safety. The new Liberty Bell Center features over 80 exhibits. These exhibits include an outdoor area representing the site that was once used by George Washington and John Adams while Philadelphia was the nation's capital. The Liberty Bell is housed in a glass structure at the end of the center. The glass structure provides a direct view of Independence Hall. This project has the potential to impact soils, vegetation, historic structures, archeological resources, cultural landscapes, visitor use and experience, circulation and site access, as well as park operations and infrastructure.

INDEPENDENCE MALL

The new mall, which is currently in the design phase, would encompass three city blocks. The first block would contain the Liberty Bell Center as well as a rest area for visitors. The second block will contain the Independence Visitor Center, the Independence Park Institute, Free Quaker Meeting House, and a newly renovated underground parking garage. The third block would contain the National Constitution Center and a park maintenance facility. This project has the potential to impact soils, vegetation, hazardous materials, archeological resources, cultural landscapes, visitor use and experience, circulation and site access, as well as park operations and infrastructure.

UTILITIES IMPROVEMENT PROJECT (UIP)

The Utilities Improvement Project (UIP) stems from the park's strategic plan. The goal of this project is to upgrade important electrical, water, heating, cooling, security, and fire protection systems for park structures. This project has the potential to impact soils, hazardous materials, historic structures, visitor use and experience, as well as park operations and infrastructure.

NATURAL AND PHYSICAL RESOURCES

SOILS AND TOPOGRAPHY

METHODOLOGY

All available information on soils potentially impacted in various areas of the park was compiled. Where possible, map locations of sensitive soils were compared with locations of proposed developments and modifications of existing facilities. Predictions about short- and long-term site impacts were based on previous projects with similar soils and recent studies. The thresholds of change for the intensity of an impact are defined as follows:

Negligible: Soils and topography would not be affected or the effects to soils and topography would be below or at the lower levels of detection. Any effects to soils and topography would be slight.

Minor: The effects to soils and topography would be detectable, and effects to soil area and topography would be small. Mitigation may be needed to offset adverse effects and would be relatively simple to implement and likely be successful.

Moderate: The effects on soils and topography would be readily apparent and result in a change to the soil character and topography over a relatively wide area. Mitigation measures would be necessary to offset adverse effects and likely be successful.

Major: The effects on soils and topography would be readily apparent and would substantially change the character of the soils and topography over a large area in and out of the park. Mitigation measures to offset adverse effects would be needed, extensive, and their success could not be guaranteed.

IMPACTS OF ALTERNATIVE A

There would be no change in topography at the site, although foot traffic in the yard would continue to cause some soil compaction. Erosion would occur across the site and around the houses due to poor drainage. The effect to soils and topography would be adverse, long-term, and negligible.

Cumulative Impacts

Non-federal actions that have occurred on adjacent lands, in combination with future actions at Independence NHP, have resulted in and would continue to result in soil loss and conversion of prime farmlands throughout the region. Present and reasonably foreseeable future actions that would have an effect on soils and/or topography within the park include negligible impacts from the Liberty Bell Center, Independence Mall, and the UIP. All of these projects would require soil displacement and/or grading. Overall, these projects represent a long-term, minor adverse impact to soils. The effects of Alternative A would not contribute noticeably to the long-term, minor, adverse impact to soils in the area.

Conclusion

The overall impact to soils and topography under the No Action Alternative would be **adverse, long-term, and negligible**. The No Action Alternative would not contribute noticeably to the short-term, minor adverse cumulative impacts to soils and topography. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to soils and topography.

IMPACTS COMMON TO THE ACTION ALTERNATIVES

Actions within the courtyards of both the Deshler-Morris and Bringhurst Houses would impact a majority of the soils across the site. Soils in the Bringhurst courtyard area would be impacted by the removal of existing site features including paved areas and a greenhouse. A new accessible walkway connecting the Bringhurst courtyard with the rear of the Deshler-Morris House would disturb a minimal amount of soil. While this soil is disturbed, water utility connections for outdoor irrigation would be added. Upon completion, grading would assure positive drainage away from all building foundations. Because these actions would permanently disturb soils at a nearly imperceptible level, the actions would have an adverse, long-term, negligible impact to soils.

IMPACTS OF ALTERNATIVE B

Installation of a geothermal heat-pump system would impact soils at the site, particularly over the short-term. Soils would be disturbed along the perimeter of the site and in the Bringhurst courtyard for drilling 12 wells, 450-feet deep and approximately 6-8 inches in diameter each. This work would require use of heavy equipment, which would be brought into the site and could cause some soil compaction in the immediate area. In addition, the wells would be connected at four feet below grade by a header pipe. This would require trenching to install and connect the wells to each other and the Bringhurst House. Soil would be removed from the trench, stored alongside, and backfilled as soon as the pipe was installed. There would be a short-term, adverse impact to soils; however, once construction was complete, the site would be restored, and the overall impact to soils would be short-term, adverse, and minor.

Cumulative Impacts

Non-federal actions that have occurred on adjacent lands, in combination with future actions at Independence NHP, have resulted in and would continue to result in soil loss and conversion of prime farmlands throughout the region. Present and reasonably foreseeable future actions that would have an effect on soils and/or topography within the park include negligible impacts from the Liberty Bell Center, Independence Mall, the UIP, and the Community Area Preservation Project. All of these projects would require soil displacement and/or grading. Overall, these projects represent a long-term, minor adverse impact to soils. The effects of Alternative B would contribute an appreciable increment to the long-term, minor, adverse impact to soils in the area.

Conclusion

The overall impact to soils and topography from the proposed action would be **short-term, minor, and adverse**. Alternative B would contribute an appreciable increment to short-term, minor, adverse cumulative impacts in the area. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to soils and topography.

IMPACTS OF ALTERNATIVE C

Alternative C would not have impacts to soils and topography other than those common to the action alternatives.

Cumulative Impacts

Non-federal actions that have occurred on adjacent lands, in combination with future actions at Independence NHP, have resulted in and would continue to result in soil loss and conversion of prime farmlands throughout the region. Present and reasonably foreseeable future actions that would have an effect on soils and/or topography within the park include negligible impacts from the Liberty Bell Center, Independence Mall, the UIP, and the Community Area Preservation Project. All of these projects would require soil displacement and/or grading. Overall, these projects represent a long-term, minor impact to soils. The effects of Alternative C would contribute a noticeable increment to the long-term, minor adverse impact to soils in the area.

Conclusion

The overall impact to soils and topography from Alternative C would be **long-term, adverse, and negligible** and would contribute a noticeable increment to the short-term minor adverse cumulative impacts in the area. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to soils and topography.

CULTURAL RESOURCES

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

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

CEQ regulations and the NPS's DO 12 also call for a discussion of the appropriateness of mitigation, as well as an analysis of how effective the mitigation would be in reducing the intensity of a potential impact, e.g. reducing the intensity of an impact from major to moderate or minor. Any resultant reduction in intensity of impact due to mitigation, however, is an estimate of the effectiveness of mitigation under NEPA only. It does not suggest that the level of effect as defined by Section 106 is similarly reduced. Although adverse effects under Section 106 may be mitigated, the effect remains adverse.

A Section 106 Summary is included in the impact analysis sections for historic structures, archeology, and cultural landscapes under the action alternatives. The Section 106 Summary is intended to meet the requirements of Section 106 and is an assessment of the effect of the undertaking (implementation of the alternative) on cultural resources based upon the criterion of effect and criteria of adverse effect found in the Advisory Council's regulations. Therefore, this document is to be used as a combined NEPA/Section 106 process for compliance with the NHPA of 1966, as amended. Prior notification has been given to the Pennsylvania SHPO and the ACHP regarding this matter according to 36 CFR 800.8 (a) (3) (c), and a copy of the notification letter is included in this document.

HISTORIC STRUCTURES

METHODOLOGY

In order for a structure or building to be listed in the National Register of Historic Places, it must be associated with an important historic context, i.e. possess significance – the meaning or value ascribed to the structure or building, *and* have integrity of those features necessary to convey its significance, i.e. location, design, setting, workmanship, materials, feeling, and association (see NPS 1990). For purposes of analyzing potential impacts to historic structures/buildings, the thresholds of change for the intensity of an impact are defined as follows:

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

Minor: Adverse Impact – Impact would not affect the character defining features of a National Register of Historic Places eligible or listed structure or building. For the purposes of Section 106, the determination of effect would be *no adverse effect.*

Beneficial Impact – Stabilization/preservation of character defining features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. For purposes of Section 106, the determination of effect would be *no adverse effect.*

Moderate: Adverse Impact – Impact would alter a character defining feature(s) of the structure or building but would not diminish the integrity of the resource to the extent that its National Register eligibility is jeopardized. For the purposes of Section 106, the determination of effect would be no adverse effect.

Beneficial Impact – Rehabilitation of a structure or building in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. For purposes of Section 106, the determination of effect would be *no adverse effect.*

Major: Adverse Impact – Impact would alter a character defining feature(s) of the structure or building, diminishing the integrity of the resource to the extent that it is no longer eligible to be listed in the National Register. For purposes of Section 106, the determination of effect would be *adverse effect.*

Beneficial Impact – Restoration of a structure or building in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. For purposes of Section 106, the determination of effect would be *no adverse effect.*

IMPACTS OF ALTERNATIVE A

The Deshler-Morris House would continue to be threatened by fire through the presence of ignition sources such as furnaces and boilers within the building and inadequate detection and suppression systems. Security and visitor experience would continue to be inadequate, and the site would not comply

with ADA accessibility requirements. Completion of necessary repairs and restorative treatments would be prolonged, with the potential for further building deterioration. This deterioration could continue to the point that the integrity of the features of the house which make it eligible for the NRHP are diminished. The Bringhurst House would continue to be an underutilized accessory space facing similar security, fire, and physical threats. Use of the building and grounds would continue to be hampered by a lack of ADA accessibility. The impact would be minor to moderate and adverse over the long-term.

Cumulative Impacts

Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on historic structures include negligible impacts from the Liberty Bell Center, and minor to moderate, adverse impacts from the Utilities Improvement Project (UIP). The Liberty Bell Center project would result in changes in the use of historic structures. The UIP would alter historic structures by installing modern utilities within them. Overall, these projects would have a long-term, minor to moderate adverse impact on historic structures. The No Action Alternative would contribute an appreciable increment to long-term, minor to moderate adverse cumulative impacts in the region.

Conclusion

The No Action Alternative would have a **minor to moderate, adverse, long-term impact** on the integrity of the historic structures, and contribute an appreciable increment to long-term, minor to moderate adverse cumulative impacts on historic structures in the region. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to historic structures.

IMPACTS COMMON TO THE ACTION ALTERNATIVES

The proposed structural, drainage, and exterior and interior fabric repairs and rehabilitation work at the Deshler-Morris and Bringhurst Houses proposed in both action alternatives would be performed in accordance with the Secretary of the Interior's *Standards for the Treatment of Historic Properties*. These actions would result in moderate beneficial impacts to both structures.

The installation of new fire detection, fire suppression, security, and electrical systems in the Deshler-Morris and Bringhurst Houses would impact both historic structures. The installation of new systems would be designed to maximize preservation of historic fabric and minimize visual intrusion. Impacts from system installation and implementation to each building are discussed below. Impacts from the heating and cooling systems to the Bringhurst House are discussed in the sections pertaining to the two action alternatives. The replacement of existing plumbing fixtures at the Deshler-Morris and Bringhurst Houses with low consumption fixtures would result in a negligible, adverse impact to both properties.

Deshler-Morris House

Under both action alternatives, heating and cooling systems would be relocated from the Deshler-Morris House to the Bringhurst House basement. The new systems would be connected to the Deshler-Morris House via a preexisting conduit between the buildings and use preexisting ductwork at the Deshler-Morris House. Neither system would require additional cuts in the historic fabric of the interior or exterior of the building. Both alternatives also propose installation of an air handling unit in the basement of the Deshler-Morris House. The new unit would be significantly smaller than the systems presently housed in the basement, and would not pose a danger to the structure, as no combustion elements are present. Therefore, these actions would result in a negligible, adverse impact to the fabric and visual character of the Deshler-Morris House.

The installation of new fire suppression and detection systems would impact the interior fabric at the Deshler-Morris House through the routing of conduit and piping through the existing walls, ceilings, and floors; installation of outlets for sprinkler heads in walls or ceilings; and installation of new alarm panels. The project would employ guidelines developed by the Fire Safety Institute to minimize impacts to historic fabric during the installation of the new fire suppression system, and the installation of the new fire detection system would use existing conduit pathways as much as possible. With these guidelines in place, the proposed action has the potential to result in long-term, minor adverse impacts to significant interior historic fabric at the Deshler-Morris House. Because of the ease of concealing piping for the wet-pipe sprinkler system and the strategic placement of alarm panels in hidden locations, the new fire suppression system would have a minimal visual impact on the historic interior of the Deshler-Morris House. The installation of the new safety systems would also have a long-term, minor, beneficial impact on the property in that the systems would contribute to the preservation of the structure by preventing fire damage.

The installation of new electrical and intrusion detection systems would take advantage of the existing conduits and wall cuts for placement of new wiring and alarm panels. All existing light fixtures would be reused or replaced in the same location. Some installation of additional security equipment and lighted egress signage would be necessary, resulting in long-term, minor, adverse impacts to historic interior fabric and visual character at the Deshler-Morris House. However, the installation of the new safety systems would also have a long-term minor beneficial impact on the property in that the systems would contribute to the preservation of the structure by preventing occurrences of vandalism and theft.

In order to provide accessible entry for visitors and staff from Germantown Avenue to the Bringhurst House courtyard, the remnants of the foundation of a 1909 addition to the main block of the Deshler-Morris House would be removed and the excavated space filled. The Deshler-Morris House is architecturally significant as a well-preserved example of Georgian architecture, with dependencies reflecting the structure's historical development. The 1909 plumbing addition to the Deshler-Morris was part of its history development; however the remnant foundation can not convey the function of the addition, or its role in the building's history of use. Therefore, it is believed that the foundation does not contribute to the significance of the Deshler-Morris House, and that its removal would result in a minor, adverse impact to the Deshler-Morris House.

The relocation of staff support spaces from the Deshler-Morris House to the Bringhurst House would result in the removal of modern kitchen and cabinet fixtures from the first floor of the ca. 1839 ell extension and a restoration of original wall finishes in accordance with the Secretary of the Interior's *Standards for the Treatment of Historic Properties*. This action would have a moderate, beneficial impact on the structure by removing modern intrusions and rehabilitating a portion of the interior space.

Bringhurst House

Both of the action alternatives include restorative treatments for the Bringhurst House. Associated actions include reconstruction of the deteriorated front steps with like materials, the reapplication of stucco to the façade of the building, restoration of the roof dormers removed in the 20th century, and restoration of a slate shingle finish on the rear roof slope of the main block to match the existing slate on the front slope. These actions would have a long-term, moderate beneficial impact on the Bringhurst House through the rehabilitation and restoration of exterior character defining features that convey the architectural significance of the building and aid in its ability to contribute to the Colonial Germantown National Historic Landmark District. Interior rehabilitative work such as removing inappropriate modern partitions in many of the first-floor rooms and reconstructing an open staircase between the second and third floors would have a moderate, beneficial impact by rehabilitating portions of the interior of the building.

Additional exterior work proposed at the Bringhurst House such as the removal of a modern greenhouse addition; the construction of a single-story, accessible porch on the rear elevation of the main block; the installation of new shutters on the first-floor ell windows; and the replacement of the deteriorated tar roof on the ell with a new rubber roof would be carried out according to the Secretary of the Interior's *Standards for the Treatment of Historic Properties*. These actions would result in long-term, negligible or minor, adverse impacts and would not significantly alter features of the property which convey significance or allow it to contribute to the Colonial Germantown Historic District.

The action alternatives also include renovation of the Bringhurst House interior to serve as a visitor center and staff support space. In addition to the removal of modern partition walls, this action would entail installing two new staircases in the ell, creating accessible public restrooms on the first floor of the ell, constructing a staff restroom and kitchenette on the second floor, and adding storage closets at several locations. The proposed renovation work would necessitate removal of the existing late 19th-century ell staircase and the lowering of the level of the first floor on the east side of the ell to meet the floor level of the main block for accessibility. The new, lowered floor structure would be constructed of new materials.

Most of the proposed interior renovations at the Bringhurst House would not affect the exterior physical features of the house necessary to convey its architectural significance or which allow it to contribute to the Colonial Germantown Historic District. The majority of the proposed actions would impact the ell, which has been significantly altered and repartitioned within the last 50 years. The existing space retains minimal historic fabric aside from exterior walls and floors. Because the ell interior is already significantly altered, the installation of the two new staircases and accessible public restrooms would have a minor adverse impact on the Bringhurst House. The removal of the existing late 19th-century staircase, the removal of ca. 1850 flooring and joists in the ell, the construction of a new staff bathroom at the east end of the hall on the second floor of the main block, and the construction of closets in the north room on

the second floor of the main block would result in a moderate adverse impact to the structure. Surviving historic fabric (i.e. floors) would be altered and the original interior plan of the second floor of the building would be changed. However, these features are not necessary to convey the architectural significance of the property or its contribution to the Colonial Germantown Historic District.

Because the interior of the Bringhurst House has been significantly altered and does not contribute to the historic significance of the property, the installation of new safety and electrical systems would have a negligible, adverse impact on the structure. The installation of a new intrusion detection and electrical systems would similarly have a negligible, adverse impact on the Bringhurst House, as the interior is not historically significant.

IMPACTS OF ALTERNATIVE B

Piping from the geothermal well field would enter the west basement wall of the main block below grade to connect with the system pumps inside the building. Two fabric cuts of four to six inches in diameter would be required to carry the piping into the basement space. Piping to connect the pump system to the Deshler-Morris House would be routed through an existing chase between the buildings, and would not require additional fabric cuts. While most interior spaces at the Bringhurst House have been severely altered and do not contribute to the historic significance of the building, the National Park Service has identified the basement area as being potentially significant. The basement may be the remains of one of the earliest identified structures surviving in downtown Germantown and contains rare corbelled stone floor joist supports (McGimsey 1995). All efforts would be made to minimize impacts to historic fabric in the Bringhurst House basement and to avoid the corbelled floor joists, which are located approximately eight feet above the basement floor level. Other impacts of the proposed actions are described as impacts common to the action alternatives. The overall impact of Alternative B to the significant areas of the Bringhurst House basement would be long-term, minor, and adverse.

Cumulative Impacts

Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on historic structures include negligible impacts from the Liberty Bell Center, and minor to moderate, adverse impacts from the UIP. The Liberty Bell Center project would result in changes in the use of historic structures. The UIP would alter historic structures by installing modern utilities within them. Overall, these projects would have a long-term, minor to moderate adverse impact on historic structures. Alternative B would contribute an appreciable increment to long-term, minor to moderate, adverse cumulative impacts in the region.

Conclusion

The intensity of impact to historic structures under Alternative B ranges would include both **beneficial and adverse moderate impacts**, and Alternative B would contribute an appreciable increment to cumulative impacts in the region. None of the assessed actions would damage the character-defining features of the two historic structures or affect their eligibility for the National Register as individual structures or as contributing elements in an historic district. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in

the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to historic structures.

Section 106 Summary

The implementation of Alternative B would not alter, directly or indirectly, any of the characteristics of the Deshler-Morris or Bringhurst Houses that qualify the properties for inclusion in the National Register of Historic Places. Nor would implementation of the alternative diminish the properties' integrity of location, design, setting, materials, workmanship, feeling, or association to such a degree that the properties would no longer be eligible for listing on the National Register. Furthermore, all work being conducted on historically significant fabric is being carried out in accordance with the Secretary of the Interior's *Standards for the Treatment of Historic Properties*. Therefore, in accordance with the Advisory Council on Historic Preservation's regulations (36 CFR Part 800.5, Assessment of Adverse Effects), the NPS proposes that implementation of Alternative B would result in a determination of ***no adverse effect*** to historic structures.

IMPACTS OF ALTERNATIVE C

In addition to the impacts described as common to the action alternatives, a traditional HVAC system would be installed in the basement of the Bringhurst House and would make use of existing ductwork or duct routes to heat and cool the Bringhurst and Deshler-Morris Houses. The traditional HVAC system would require additional piping to run between the Deshler-Morris and Bringhurst Houses and to the Bringhurst House from a new air cooled chiller located at the rear of the property. The piping may require additional cuts in the foundation at the Bringhurst House; however efforts would be made to avoid impacts to historically significant portions of the foundation structure. Therefore, the impact to historic fabric would be long-term and adverse, but minor.

Cumulative Impacts

Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on historic structures include negligible impacts from the Liberty Bell Center, and minor to moderate, adverse impacts from the UIP. The Liberty Bell Center project would result in changes in the use of historic structures. The UIP would alter historic structures by installing modern utilities within them. Overall, these projects would have a long-term, minor to moderate adverse impact on historic structures. Alternative C would contribute an appreciable increment to long-term, minor to moderate, adverse cumulative impacts in the region.

Conclusion

Alternative C would have a **long-term, minor, adverse impact** to historic structures and would contribute an appreciable increment to cumulative impacts. None of the assessed actions would damage the character-defining features of the two historic structures or affect their eligibility for the National Register as individual structures or as contributing elements in a historic district. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific

purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to historic structures.

Section 106 Summary

The implementation of Alternative C would not alter, directly or indirectly, any of the characteristics of the Deshler-Morris or Bringhurst Houses that qualify the properties for inclusion in the National Register of Historic Places. Nor would implementation of the alternative diminish the properties' integrity of location, design, setting, materials, workmanship, feeling, or association to such a degree that the properties would no longer be eligible for listing on the National Register. Furthermore, all work being conducted on historically significant fabric is being carried out in accordance with the Secretary of the Interior's *Standards for the Treatment of Historic Properties*. Therefore, in accordance with the Advisory Council on Historic Preservation's regulations (36 CFR Part 800.5, Assessment of Adverse Effects), the NPS proposes that implementation of Alternative C would result in a determination of ***no adverse effect*** to historic structures.

ARCHEOLOGICAL RESOURCES

METHODOLOGY

Certain important research questions about human history can only be answered by the actual physical material of cultural resources. Archeological resources have the potential to answer, in whole or in part, such research questions. An archeological site(s) can be eligible to be listed in the National Register of Historic Places if the site(s) has yielded, or may be likely to yield, information important in prehistory or history. An archeological site(s) can be nominated to the National Register in one of three historic contexts or levels of significance: local, state, or national (see NPS 1990). For purposes of analyzing impacts to archeological resources, thresholds of change for the intensity of an impact are based upon the potential of the site(s) to yield information important in prehistory or history, as well as the probable historic context of the affected site(s):

Negligible: Impact is at the lowest levels of detection – barely measurable with no perceptible consequences, either adverse or beneficial, to archeological resources. For purposes of Section 106, the determination of effect would be *no adverse effect*.

Minor: Adverse Impact – Disturbance of a site(s) results in little, if any, loss of significance or integrity and the National Register eligibility of the site(s) is unaffected. For purposes of Section 106, the determination of effect would be *no adverse effect*.

Beneficial Impact – Maintenance and preservation of a site(s). For purposes of Section 106, the determination of effect would be *no adverse effect*.

Moderate: Adverse Impact – Disturbance of a site(s) does not diminish the significance or integrity of the site(s) to the extent that its National Register eligibility is jeopardized. For purposes of Section 106, the determination of effect would be *adverse effect.*

Beneficial Impact – Stabilization of a site(s). For purposes of Section 106, the determination of effect would be *no adverse effect.*

Major: Adverse Impact – Disturbance of a site(s) diminishes the significance and integrity of the site(s) to the extent that it is no longer eligible to be listed in the National Register. For purposes of Section 106, the determination of effect would be *adverse effect.*

Beneficial Impact – Active intervention to preserve a site(s). For purposes of Section 106, the determination of effect would be *no adverse effect.*

IMPACTS OF ALTERNATIVE A

There would be no changes at the site that would impact known or unknown archeological resources, and therefore there would be no impacts to archeological resources.

Cumulative Impacts

Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on archeological resources include negligible to minor adverse impacts from the Liberty Bell Center and Independence Mall. Both of these projects would result in ground disturbing activities that could impact archeological resources. Overall, these projects have a short- to long-term, negligible to minor adverse impact on archeological resources. The No Action Alternative would not contribute to short- or long-term, negligible to minor adverse cumulative impacts in the region.

Conclusion

The No Action Alternative would have **no impact** on archeological resources and would not contribute to short- or long-term, negligible to minor adverse cumulative impacts in the region. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to archeological resources.

IMPACTS COMMON TO THE ACTION ALTERNATIVES

Several actions common to the action alternatives have the potential to impact identified and unidentified archeological resources. Resolution of water infiltration into the basements of the Deshler-Morris and Bringhurst Houses with the installation of a foundation drainage system would require excavation along the exteriors of the foundations of both structures. The foundation perimeter of the Deshler-Morris House was investigated in 1975 and monitored in 2000 for archeological resources, at which time several resources valuable in augmenting documentary evidence for the building were identified along the south

elevations of the main block and ell (Inashima 1995). Precautions would be taken to avoid identified archeological resources in this area. The foundation perimeter at the Bringhurst House has never been investigated for archeological resources.

Stabilization of structural members in the basements of the Deshler-Morris and Bringhurst Houses would necessitate removal of small areas of the concrete slab flooring and excavation below the slab surface to install footings for screw jacks. Portions of the basement of the Deshler-Morris House were investigated for archeological resources in 1975, but these areas were limited to the ell. No archeological investigations or monitoring has been conducted in the basement of the 1772 main block where the proposed work would take place. No archeological investigations have been conducted in the basement at the Bringhurst House.

The proposed design for interior renovations in the Bringhurst House ell would require the floor level on the east side of the ell to be lowered. This action would lower headroom in the basement and violate fire safety standards in that area. To rectify this situation, the basement floor area under the lowered first floor would need to be excavated and a new, lower concrete slab poured in place. No archeological investigations have been conducted in the basement of the Bringhurst House. This action, as well as the construction of a new stairwell in the Bringhurst House ell, also has the potential to reveal archeological material underneath earlier floor surfaces. No interior archeological investigations have been conducted at the Bringhurst House.

The proposed design for the renovation of the Bringhurst House courtyard and connection to the Deshler-Morris House grounds would involve construction of a new brick patio area in the Bringhurst House courtyard and a brick walkway between the Bringhurst House and Deshler-Morris House grounds. In order to make the walkway accessible, regrading would be necessary. Some archeological investigation was conducted in 1975 along the north elevation of the Deshler-Morris House. These investigations found that the area had been disturbed during construction of an addition to the Deshler-Morris House at this location in 1909 (no longer extant). No archeological investigations have been conducted on the remainder of the grounds at the Bringhurst House or in the area of the proposed walkway.

The proposed design for the Bringhurst House courtyard also includes the removal of the remnants of a foundation for a portion of the 1909 addition on the north elevation of the Deshler-Morris House. The foundation remnants would be removed in order to facilitate access from Germantown Avenue to the Bringhurst House courtyard through this alley space. Based on 1975 archeological investigations west of the foundation remnants which found this area was previously disturbed by construction, it is likely that this area has little archeological potential. No additional investigations have been conducted on the narrow alley area between the Bringhurst and Deshler-Morris Houses.

It is probable that the installation of new fire suppression, electrical, and security systems in the Deshler-Morris and Bringhurst Houses would have the potential to affect identified or unidentified archeological resources through the excavation of new conduit trenches and removal or penetration of wall and floor surfaces.

At this time, the nature and significance of archeological resources impacted by the proposed actions cannot be determined. Many areas of the Deshler-Morris and Bringhurst house grounds and building interiors have not been archeologically investigated, and there has been no determination as to the National Register eligibility of identified archeological resources or the site's potential to yield important historical information. In order to mitigate potentially adverse impacts to identified and unidentified archeological resources, a qualified archeologist would monitor all ground-disturbing activities and removal of flooring at the Bringhurst House. If archeological resources are discovered during construction, all work would stop until the resources can be properly recorded by a qualified archeologist. If the resources are determined to be eligible for the National Register, appropriate measures would be implemented to either avoid or mitigate their loss or disturbance (e.g. data recovery excavations or other means) in further consultation with the SHPO. With these measures in place, the proposed actions would have potential impacts that include negligible, minor, and adverse; minor and beneficial; and moderate and beneficial.

IMPACTS OF ALTERNATIVE B

Due to a lack of archeological data, ground-disturbing activities, particularly trenching associated with installing the geothermal heat-pump system and irrigation, would require on going archeological review. Pending review of specific design drawings, Phase I – III studies and archeological monitoring may be required. If archeological resources are discovered during construction, all work would stop until properly recorded by a qualified archeologist. If the resources are determined to be eligible for the National Register, appropriate measures would be implemented to either avoid or mitigate their loss or disturbance (e.g. data recovery excavations or other means) in further consultation with the SHPO. With these measures in place, the proposed actions would have potential impacts that include negligible, minor, and adverse; minor and beneficial; and moderate and beneficial.

Cumulative Impacts

Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on archeological resources include negligible to minor adverse impacts from the Liberty Bell Center and Independence Mall. Both of these projects would result in ground disturbing activities that could impact archeological resources. Overall, these projects have a short- to long-term, negligible to minor adverse impact on archeological resources. Alternative B would contribute appreciable increments to short- or long-term, negligible to minor, adverse cumulative impacts in the region.

Conclusion

Alternative B would potentially have a **minor to moderate adverse impact** on archeological resources and would contribute appreciable increments to short- or long-term, negligible to minor adverse cumulative impacts in the region. The extent of these resources is unknown and an archeologist would monitor all construction activities. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to archeological resources.

Section 106 Summary

The implementation of Alternative B would not alter, directly or indirectly, any of the characteristics of the Deshler-Morris or Bringhurst Houses or surrounding resources that qualify the properties for inclusion in the National Register of Historic Places, nor would implementation of the alternative diminish the properties' known or unknown archeological resources. Furthermore, all work being conducted on the soil surface or subsurface is being carried out in accordance with the Secretary of the Interior's *Standards for the Treatment of Historic Properties*. Therefore, in accordance with the Advisory Council on Historic Preservation's regulations (36 CFR Part 800.5, Assessment of Adverse Effects), the NPS proposes that implementation of Alternative B would result in a determination of ***no adverse effect*** to archeological resources.

IMPACTS OF ALTERNATIVE C

Under Alternative C, there would be some additional ground disturbance associated with the installation of an air cooled chiller behind the Bringhurst House and installation of piping to connect it to the heating and cooling systems in the Bringhurst House basement. However, due to the lack of archeological data, on going archeological review will continue throughout the project to ensure the protection of resources. Pending review of specific design drawings, Phase I – III studies and archeological monitoring may be required. If archeological resources are discovered during construction, all work would stop until properly recorded by a qualified archeologist. If the resources are determined to be eligible for the National Register, appropriate measures would be implemented to either avoid or mitigate their loss or disturbance (e.g. data recovery excavations or other means) in further consultation with the SHPO. With these measures in place, the proposed actions would have potential impacts that include negligible, minor, and adverse; minor and beneficial; and moderate and beneficial.

Cumulative Impacts

Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on archeological resources include negligible to minor adverse impacts from the Liberty Bell Center and Independence Mall. Both of these projects would result in ground disturbing activities that could impact archeological resources. Overall, these projects have a short- to long-term, negligible to minor adverse impact on archeological resources. Alternative C would contribute appreciable increments to short- or long-term, negligible to minor adverse cumulative impacts in the region.

Conclusion

Alternative C could have a **minor to moderate adverse impact** on archeological resources and would contribute appreciable increments to short- or long-term, negligible to minor adverse cumulative impacts in the region. These activities would contribute minor to moderate increments to cumulative impacts in the area. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to archeological resources.

Section 106 Summary
The implementation of Alternative C would not alter, directly or indirectly, any of the characteristics of the Deshler-Morris or Bringhurst Houses or surrounding resources that qualify the property for inclusion in the National Register of Historic Places, nor would implementation of the alternative diminish the properties' known or unknown archeological resources. Furthermore, all work being conducted on the soil surface or subsurface is being carried out in accordance with the Secretary of the Interior's *Standards for the Treatment of Historic Properties*. Therefore, in accordance with the Advisory Council on Historic Preservation's regulations (36 CFR Part 800.5, Assessment of Adverse Effects), the NPS proposes that implementation of Alternative C would result in a determination of ***no adverse effect*** to archeological resources.

CULTURAL LANDSCAPES

METHODOLOGY

Cultural landscapes are the result of the long interaction between people and the land, the influence of human beliefs and actions over time upon the natural landscape. Shaped through time by historical land-use and management practices, as well as politics and property laws, levels of technology, and economic conditions, cultural landscapes provide a living record of an area's past, a visual chronicle of its history. The dynamic nature of modern human life, however, contributes to the continual reshaping of cultural landscapes, making them a good source of information about specific times and places, but at the same time rendering their long-term preservation a challenge.

In order for a cultural landscape to be listed in the National Register, it must possess significance (the meaning or value ascribed to the landscape) *and* have integrity of those features necessary to convey its significance. The character defining features of a cultural landscape include spatial organization and land patterns; topography; vegetation; circulation patterns; water features; and structures/buildings, site furnishings, and objects (see NPS 1996). For purposes of analyzing potential impacts to cultural landscapes, the thresholds of change for the intensity of an impact are defined as follows:

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

Minor: Adverse Impact – Impact would not affect the character defining patterns or features of a National Register of Historic Places eligible or listed cultural landscape. For the purposes of Section 106, the determination would be *no adverse effect.*

Beneficial Impact – Preservation of character defining features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. For the purposes of Section 106, the determination of effect would be *no adverse effect.*

Moderate: Adverse Impact – Impact would alter a character defining pattern(s) or feature(s) of the cultural landscape but would not diminish the integrity of the landscape to the extent that its National Register eligibility is jeopardized. For the purposes of Section 106, the determination of eligibility would be *no adverse effect.*

Beneficial Impact – Rehabilitation of a landscape or its patterns and features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. For purposes of Section 106, the determination of effect would be *no adverse effect.*

Major: Adverse Impact – Impact would alter a character defining pattern(s) or feature(s) of the cultural landscape, diminishing the integrity of the resource to the extent that it is no longer eligible to be listed in the National Register. For the purposes of Section 106, the determination of effect would be *adverse effect.*

Beneficial Impact – Restoration of a landscape or its patterns and features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. For the purposes of Section 106, the determination of effect would be *no adverse effect.*

IMPACTS OF ALTERNATIVE A

There would be no changes to the setting or landscape of the houses. The treatment of the Bringhurst House courtyard would remain non-historic with few landscape features, and the Deshler-Morris landscape, which is modern (dating to the 1970s), would also remain unchanged. The No Action Alternative would have no impact on cultural landscapes.

Cumulative Impacts

Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on cultural landscapes include negligible impacts from the Liberty Bell Center and Independence Mall. Both of these projects would result in changes to the landscape, but would not have a noticeable impact based on the surrounding area. Overall these projects would have a long-term, negligible impact on cultural landscapes. The No Action Alternative would contribute an imperceptible increment to the long-term, negligible cumulative impacts in the area.

Conclusion

The No Action Alternative would have **no impact** to cultural landscapes and would contribute an imperceptible increment to the long-term, negligible cumulative impacts in the area. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to cultural landscapes.

IMPACTS COMMON TO THE ACTION ALTERNATIVES

The cultural landscapes constituted by the urban house lots of the Deshler-Morris and Bringhurst Houses would be impacted under both action alternatives by the conversion of the Bringhurst House to a visitor center, the installation of new security and electrical systems, and efforts to make both structures and portions of the associated grounds accessible to visitors and staff with disabilities. The installation of new security and electrical systems would impact the cultural landscapes of both houses by introducing new, minor visual elements. These elements may include door access controls, surveillance cameras, and a new electrical transformer behind the Bringhurst House. The new transformer would be installed above grade and screened with appropriate fencing, minimizing visual intrusion. As the present landscape treatment and features in these areas of the Deshler-Morris and Bringhurst House lots are modern and contain no historic-designed landscape elements, the proposed actions would result in a negligible impact to the cultural landscape. Additional impacts associated with the conversion of the Bringhurst House to a visitor center and accessibility are addressed below.

Deshler-Morris House

The cultural landscape of the Deshler-Morris House would be impacted under both action alternatives by regrading the courtyard to provide accessible entry to the ca. 1750 ell, installation of a wood ramp to make the rear porch accessible, and construction of an accessible walkway between the grounds of the Deshler-Morris and Bringhurst Houses. The present landscape treatment at the Deshler-Morris House lot is primarily modern (dating from the 1970s) and contains no historic-designed landscape elements beyond natural specimen. The proposed actions would not remove the large trees on the grounds, resulting in a negligible, adverse impact to the cultural landscape. Regrading the courtyard has the potential to affect the health of nearby trees; however, best management practices would be employed to avoid and minimize impacts from related work to these features.

Bringhurst House

Both action alternatives would attempt to create a more historic landscape treatment in the Bringhurst courtyard, including paving the primary portion of the currently grassed courtyard, adding landscape plantings, and improving circulation between the houses. As the treatment of this area is not currently historic and contains only minimal landscape features, this action would have a minor, beneficial impact on the cultural landscape at the Bringhurst House.

IMPACTS OF ALTERNATIVE B

The landscape at the Deshler-Morris House would be temporarily disturbed by the installation of the geothermal heat-pump system; however, once installed, there would be no surface evidence of the system. The present landscape treatment and features in these areas of the Deshler-Morris House lot are modern (dating from the 1970s) and contain no historic-designed landscape features beyond natural specimen. During installation, soil compaction could impact the health of the large trees and the boxwoods at the rear of the lot which date from the 18th century. To minimize impacts to the vegetation, specifically the boxwoods which are more susceptible, construction traffic and vehicles should be limited in this area. If possible, vehicles should not come within at least 25 feet of the vegetation. With these measures in place, the proposed actions would result in an adverse, negligible impact to the cultural landscape.

At the Bringhurst House, plantings, surface treatments, and removing the transformer between the houses would help to restore the courtyard to a more historic feel. In particular, the addition of fruit trees would recount the 18th-century orchards that many Germantown homes had on their grounds. In addition, a stepping stone path with interpretive signs through the Deshler-Morris garden would describe the 18th-century conditions of the site and allow visitors to interact with the vegetation. The overall impact to the cultural landscape would be long-term, beneficial, and moderate.

Cumulative Impacts
Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on cultural landscapes include negligible impacts from the Liberty Bell Center and Independence Mall. Both of these projects would result in changes to the landscape, but would not have a noticeable impact based on the surrounding area. Overall these projects would have a long-term, negligible, adverse impact on cultural landscapes. Alternative B would contribute an appreciable increment to the long-term, negligible cumulative impacts in the area.

Conclusion
Alternative B would have a **moderate, beneficial impact** on cultural landscapes and would contribute an appreciable increment to the long-term, negligible cumulative impacts in the region. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to cultural landscapes.

Section 106 Summary
The implementation of Alternative B would not alter, directly or indirectly, any of the characteristics of the Deshler-Morris or Bringhurst Houses that qualify the properties for inclusion in the National Register of Historic Places, nor would implementation of the alternative diminish the properties' integrity of location, design, setting, materials, feeling, or association. Furthermore, all work being conducted is being carried out in accordance with the Secretary of the Interior's *Standards for the Treatment of Historic Properties*. Therefore, in accordance with the Advisory Council on Historic Preservation's regulations (36 CFR Part 800.5, Assessment of Adverse Effects), the NPS proposes that implementation of Alternative B would result in a determination of ***no adverse effect*** to cultural landscapes.

IMPACTS OF ALTERNATIVE C

The effects of Alternative C would be similar to those of Alternative B. Additional impacts include the installation of a new air cooled chiller behind the Bringhurst House. Although this action adds a new physical element to the cultural landscape, efforts would be made to screen the unit from view. As the present landscape treatment and features in these areas of the Deshler-Morris House lot are modern and contain no historic landscape elements, the proposed actions would result in a negligible, adverse impact to the cultural landscape.

Cumulative Impacts

Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on cultural landscapes include negligible impacts from the Liberty Bell Center and Independence Mall. Both of these projects would result in changes to the landscape, but would not have a noticeable impact based on the surrounding area. Overall these projects would have a long-term, negligible, adverse impact on cultural landscapes. Alternative C would contribute an appreciable increment to the long-term, negligible cumulative impacts in the area.

Conclusion

Alternative C would have a **moderate, beneficial impact** on cultural landscapes and would contribute an appreciable increment to the long-term, negligible cumulative impacts in the region. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to cultural landscapes.

Section 106 Summary

The implementation of Alternative C would not alter, directly or indirectly, any of the characteristics of the Deshler-Morris or Bringhurst Houses that qualify the properties for inclusion in the National Register of Historic Places, nor would implementation of the alternative diminish the properties' integrity of location, design, setting, materials, feeling, or association. Furthermore, all work being conducted is being carried out in accordance with the Secretary of the Interior's *Standards for the Treatment of Historic Properties*. Therefore, in accordance with the Advisory Council on Historic Preservation's regulations (36 CFR Part 800.5, Assessment of Adverse Effects), the NPS proposes that implementation of Alternative C would result in a determination of ***no adverse effect*** to cultural landscapes.

MUSEUM OBJECTS

METHODOLOGY

Museum collections (historic artifacts, natural specimens, and archival and manuscript material) may be threatened by fire, theft, vandalism, natural disasters, and careless acts. The preservation of museum collections is an ongoing process of preventative conservation, supplemented by conservation treatment when necessary. The primary goal is preservation of artifacts in as stable condition as possible to prevent damage and minimize deterioration. For purposes of analyzing potential impacts, the thresholds of change for the intensity of an impact are defined as follows:

Negligible: Impact is at the lowest level of detection – barely perceptible, with no perceptible consequences, either adverse or beneficial to museum collections.

Minor: Adverse Impact – Impact would affect the integrity of few items in the museum collection but would not degrade the usefulness of the collection for future research and interpretation.

Beneficial Impact – Impact would stabilize the current condition of the collection or its constituent components to minimize degradation.

Moderate: Adverse Impact – Impact would affect the integrity of many items in the museum collection and diminish the usefulness of the collection for future research and interpretation.

Beneficial Impact – Impact would secure the condition of the collection as a whole or its constituent parts from the threat of degradation.

Major: Adverse Impact – Impact would effect the integrity of most items in the museum collection and destroy the usefulness of the collection for future research and interpretation.

Beneficial Impact – Impact would secure the condition of the collection as a whole or its constituent components from the threat of further degradation.

IMPACTS OF ALTERNATIVE A

Museum objects stored or displayed within the Deshler-Morris House would be at risk of damage from fire, structural damage, vandalism, and an atmospheric environment not conducive to material preservation. The impact to museum objects would be adverse and minor to moderate over the long-term as conditions in the house continue to deteriorate.

Cumulative Impacts

Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on museum objects include long-term, moderate, beneficial impacts from the Liberty Bell Center. The center would provide more space for display and increased protection. Alternative A would contribute appreciable increments to the long-term, moderate, beneficial cumulative impacts in the region.

Conclusion

Alternative A would have a **long-term, minor to moderate, adverse impact** to museum objects and would contribute appreciable increments to the long-term, moderate, beneficial cumulative impacts in the region. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to museum objects.

IMPACTS COMMON TO THE ACTION ALTERNATIVES

The proposed structural rehabilitation work, drainage improvements, exterior and interior fabric repairs, and new fire detection, fire suppression, HVAC, security, and electrical systems in the Deshler-Morris House significantly contribute to the security, protection, and preservation of the collections from identified threats such as fire, theft, vandalism, and degradation resulting from poor atmospheric conditions. These actions would result in a moderate, beneficial impact to the collections over the long term.

IMPACTS OF ALTERNATIVE B

Alternative B would not have impacts additional to those common to the action alternatives.

Cumulative Impacts

Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on museum objects include long-term, moderate, beneficial impacts from the Liberty Bell Center. The center would provide more space for display and increased protection. Alternative B would contribute appreciable increments to the long-term, moderate, beneficial cumulative impacts in the region.

Conclusion

Alternative B would have a **long-term, moderate, beneficial impact** to museum objects and would contribute appreciable increments to the long-term, moderate, beneficial cumulative impacts in the region. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to museum objects.

IMPACTS OF ALTERNATIVE C

Impacts from Alternative C are described as common to the action alternatives.

Cumulative Impacts

Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on museum objects include long-term, moderate, beneficial impacts from the Liberty Bell Center. The center would provide more space for display and increased protection. Alternative C would contribute appreciable increments to the long-term, moderate, beneficial cumulative impacts in the region.

Conclusion

Alternative C would have a **long-term, moderate, beneficial impact** to museum objects and would contribute appreciable increments to the long-term, moderate, beneficial cumulative impacts in the region. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in

the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to museum objects.

VISITOR USE AND EXPERIENCE

METHODOLOGY

NPS Management Policies 2001 (NPS 2000) state that the enjoyment of park resources and values by the people of the United States is part of the fundamental purpose of all parks and that the NPS is committed to providing appropriate, high-quality opportunities for visitors to enjoy the parks.

Part of the purpose of Independence NHP is to offer opportunities for recreation, education, inspiration, and enjoyment. Consequently, one of the park's management goals is to ensure that visitors safely enjoy and are satisfied with the availability, accessibility, diversity, and quality of park facilities, services, and appropriate recreational opportunities.

Observation of visitation patterns combined with the assessment of what is available to visitors under current management was used to estimate the effects of the actions in the various alternatives in this document. The impact on the ability of the visitor to experience a full range of park resources was analyzed by examining resources and objectives presented in the Independence NHP significance statement. The potential for change in visitor use and experience proposed by the alternatives was evaluated by identifying projected increases or decreases in understanding of the sites and other visitor uses and determining whether or how these projected changes would affect the desired visitor experience, to what degree, and for how long.

Negligible: Visitors would not be affected, or changes in visitor use and/or experience would be below or at the level of detection. The visitor would not likely be aware of the effects associated with the alternative.

Minor: Changes in visitor use and/or experience would be detectable, although the changes would be slight. The visitor would be aware of the effects associated with the alternative, but the effects would be slight.

Moderate: Changes in visitor use and/or experience would be readily apparent. The visitor would be aware of the effects associated with the alternative and would likely be able to express an opinion about the changes.

Major: Changes in visitor use and/or experience would be readily apparent and would be severely adverse or exceptionally beneficial. The visitor would be aware of the effects associated with the alternative and would likely express a strong opinion about the changes.

IMPACTS OF ALTERNATIVE A

The Deshler-Morris House would continue to operate as a museum house open to the public five days a week (April through December) with private appointments possible year round. However, the visitor experience would continue to be hindered by the poor condition of the structures, fences, and security measures that make the site appear unwelcoming, and the lack of visitor services. In addition, an aging and noisy HVAC system would continue to disrupt tours of the site. The impact to visitor experience would continue to be long-term, minor to moderate, and adverse.

Cumulative Impacts

Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on visitor use and experience include long-term, moderate, beneficial impacts from the Liberty Bell Center and Independence Mall, as well as long-term, minor, beneficial impacts from the Utility Improvement Project. Overall, these projects would have a long-term, moderate, beneficial impact on visitor use and experience. Alternative A would contribute appreciable increments to these long-term, moderate, beneficial cumulative impacts in the area.

Conclusion

Alternative A would have a **long-term, minor to moderate, adverse impact** on visitor use and experience and would contribute appreciable increments to long-term, moderate, beneficial cumulative impacts. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to visitor use and experience.

IMPACTS COMMON TO THE ACTION ALTERNATIVES

The Deshler-Morris House would be closed for approximately 18 months while work is completed. The grand reopening would provide an opportunity to have new strategies for wayfinding and new programming in place. These things would help visitors know that the house and the opportunity to visit it exists, find the house without confusion, and feel comfortable when they arrive. New exhibits and accessible public restrooms would be added to the Bringhurst House, which would serve as the welcome and introduction for the Deshler-Morris House. New HVAC systems would reduce noise within the houses and increase visitor comfort.

The main floor of both houses would be made universally accessible. Main access to the Deshler-Morris House would be provided via the door on the south elevation of the 1752 ell and accessible entry would be provided via the porch on the west elevation of the 1772 portion of the house. The second floor would be made available for tours via the existing stairs. A full video tour would be available to those visitors who require it.

IMPACTS OF ALTERNATIVE B

Along with those impacts common to the action alternatives, Alternative B would seek to enhance the Bringhurst House courtyard. In its current condition, the courtyard does not present an historic landscape. According to historical records, a wide variety of fruit trees existed in the Germantown area. Alternative B would present the garden as it may have been and allow visitors an opportunity to walk among the trees and appreciate the impact such an environment has on the community. Interpretive signs and waysides would also be established to explain the significance of the garden and to allow for a place to stop and enjoy it. The impact to visitor use and experience would be long-term, moderate, and beneficial.

Cumulative Impacts

Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on visitor use and experience include long-term, moderate, beneficial impacts from the Liberty Bell Center and Independence Mall, as well as long-term, minor, beneficial impacts from the Utility Improvement Project. Overall, these projects would have a long-term, moderate, beneficial impact on visitor use and experience. Alternative B would contribute appreciable increments to these long-term, moderate, beneficial cumulative impacts in the area.

Conclusion

Alternative B would have a **long-term, moderate, beneficial impact** to visitor use and experience and would contribute appreciable increments to these long-term, moderate, beneficial cumulative impacts in the area. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to visitor use and experience.

IMPACTS OF ALTERNATIVE C

In addition to impacts common to the alternatives, interpretation would be added throughout the gardens, along with pathways and landscaping in the Bringhurst courtyard consistent with the historic setting. The garden interpretation would be presented primarily through interpretive parterre gardens rather than an orchard setting. Alternative C would have a long-term, moderate, beneficial impact on visitor use and experience.

Cumulative Impacts

Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on visitor use and experience include long-term, moderate, beneficial impacts from the Liberty Bell Center and Independence Mall, as well as long-term, minor, beneficial impacts from the Utility Improvement Project. Overall, these projects would have a long-term, moderate, beneficial impact on visitor use and experience. Alternative C would contribute appreciable increments to these long-term, moderate, beneficial cumulative impacts in the area.

Conclusion

Alternative C would have a **long-term, moderate, beneficial impact** to visitor use and experience and would contribute appreciable increments to long-term, moderate, beneficial cumulative impacts in the region. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to visitor use and experience.

CIRCULATION AND SITE ACCESS

METHODOLOGY

The purpose of park trails is to enhance visitor experience while providing safe and efficient circulation around park resources. The thresholds of change for the intensity of an impact are defined as follows:

Negligible: Circulation and site access would not be affected, or the effects would be at the lower levels of detection and would not have an appreciable effect on traffic flow. There would be no changes in the site accessibility.

Minor: The effect would be detectable, but would be of a magnitude that would not have an appreciable effect on traffic flow. There would be no noticeable changes in the circulation patterns or site accessibility. If mitigation was needed to offset adverse effects, it would be simple and likely successful.

Moderate: The effects would be readily apparent, and would result in a substantial change in circulation patterns, congestion, and /or site accessibility, in a manner noticeable to the public. Mitigation would be necessary to offset adverse effects and would likely be successful.

Major: The effects would be readily apparent and would result in a substantial change in circulation in a manner noticeable to the public and be markedly different from the present circulation patterns and site accessibility. Mitigation measures to offset adverse effects would be needed, would be extensive, and their success would not be guaranteed.

IMPACTS OF ALTERNATIVE A

Under the No Action Alternative, the current site access and circulation patterns would remain. The pathways would continue to be narrow and in some places uneven. These paths would also lack ADA accessibility in many cases. The entryways to the houses would all lack ADA accessibility. Alternative A would have long-term, moderate, adverse impact on circulation and site access.

Cumulative Impacts

Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on circulation and site access include negligible to moderate impacts from the Liberty Bell Center and the Independence Mall. These projects would result in new attractions in new locations within the region. The intensity of these projects would depend on the crowds and development within the surrounding area. Overall these projects would have a long-term, negligible to moderate beneficial and adverse impacts on circulation and site access. Alternative A would contribute appreciable increments to these long-term, negligible to minor adverse cumulative impacts.

Conclusion

Alternative A would have a **long-term, moderate, adverse impact** to visitor use and experience and would contribute appreciable increments to long-term, negligible to minor adverse cumulative impacts in the region. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to circulation and site access.

IMPACTS COMMON TO THE ACTION ALTERNATIVES

Under the action alternatives, brick paving would be extended throughout the courtyard area. Not only would this improve access but it would standardize the type of materials between the garden and Germantown Avenue. A new path would be constructed to connect the rear of the Deshler-Morris House with the Bringhurst courtyard and the bank's parking area. The stepping stone path that currently links the visitor courtyard with the staff patio could be relaid with bricks to provide better accessibility. All of these improvements would be made to provide ADA accessibility around the site. These improvements would have a long-term, moderate, beneficial impact on accessibility and site access.

IMPACTS OF ALTERNATIVE B

There would be no impacts additional to those common to the action alternatives.

Cumulative Impacts

Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on circulation and site access include negligible to moderate adverse and beneficial impacts from the Liberty Bell Center and the Independence Mall. These projects would result in new attractions in new locations within the region. The intensity of these projects would depend on the crowds and development within the surrounding area. Overall these projects would have a long-term, negligible to moderate beneficial and adverse impacts on circulation and site access. Alternative B would contribute appreciable increments to these long-term, negligible to minor beneficial cumulative impacts.

Conclusion

Alternative B would have a **long-term, moderate, beneficial impact** to visitor use and experience and would contribute appreciable increments to these long-term, negligible to minor beneficial cumulative impacts. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to circulation and site access.

IMPACTS OF ALTERNATIVE C

Impacts to circulation and site access related to Alternative C are described under "Impacts Common to the Action Alternatives." There would be no additional impacts.

Cumulative Impacts

Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on circulation and site access include negligible to moderate beneficial and adverse impacts from the Liberty Bell Center and the Independence Mall. These projects would result in new attractions in new locations within the region. The intensity of these projects would depend on the crowds and development within the surrounding area. Overall these projects would have a long-term, negligible to moderate beneficial and adverse impacts on circulation and site access. Alternative C would contribute appreciable increments to these long-term, negligible to minor beneficial cumulative impacts.

Conclusion

Alternative C would have a **long-term, moderate, beneficial impact** to visitor use and experience and would contribute appreciable increments to long-term, negligible to minor beneficial cumulative impacts. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to visitor use and experience.

HAZARDOUS MATERIALS

METHODOLOGY

Law Engineering and Environmental Services, Inc. completed a survey of hazardous materials at the Deshler-Morris and Bringhurst Houses in August 1996. Asbestos, lead-based paint, and drinking water quality were tested, and recommendations for their treatment were made. The existing conditions and recommendations have been reviewed and incorporated into architectural and schematic design plans for renovations at the two houses.

Negligible: Condition of Materials

- Lead based paint (LBP) is not present, or may be present in good condition (undamaged and unlikely to be damaged by water, physical contact, vibration etc.);
- Asbestos-containing material (ACM) is not present or is non-friable and in good condition;
- There are no fuel containing underground storage tanks (USTs) or aboveground storage tanks (ASTs) present in the project area, or there are no impacts to the project area USTs or ASTs anticipated from this proposal;
- Small amounts of other hazardous materials are stored in the project area in appropriate containment and compliance with OSHA regulations.

Impact to materials: No anticipated effect on hazardous materials present in the project area.
Impact to health and safety: No measurable impact to human health and safety.

Minor: Condition of Materials

- LBP and/or ACM are present in conditions that would require operational maintenance to restore it to good condition;
- There are ASTs present and newly installed USTs (with leak protection) or USTs were removed with no indication of a risk of contamination;
- Small to moderate amounts of other hazardous materials are stored in the project area in appropriate containment and compliance with OSHA regulations.

Impact to materials: Anticipated impacts would require additional maintenance or preventive measures to maintain the condition of materials.
Impact to health and safety: Additional preventive measures would be required to ensure no release of materials or impact to human health and safety.

Moderate: Condition of Materials

- LBP and/or ACM are present in conditions that would require abatement activities;
- There are ASTs present and newly installed USTs (with leak protection) or former USTs and ASTs with a history of releases;
- Moderate to large amounts of other hazardous materials are stored in the project area without appropriate containment and out of compliance with OSHA regulations.

Impact to materials: Anticipated impacts would require abatement and operational (proper storage, etc.) activities to remove the hazardous materials prior to the project implementation.
Impact to health and safety: Abatement and operational (proper storage, etc.) activities are required prior to implementation of the project to ensure that there is no release of materials or environmental contamination from the subject materials.

Major: **Condition of Materials**

- LBP and/or ACM are present in conditions that constitute a release of material into the environment and immediate containment and abatement activities are required;
- There may be ASTs and USTs present with evidence of recent or ongoing leaks or spills;
- Moderate to large amounts of other hazardous materials are stored in the project area without appropriate containment and are currently leaking, or releasing materials into the environment.

Impact to materials: Regardless of anticipated impacts from the proposed action, response activities to contain and remediate the materials are required. Implementation of the proposal without mitigation measures would severely aggravate the conditions of the subject materials.
Impact to health and safety: Implementing the proposal without initial remedial activities would result in an immediate change to the risk to human health and the environment.

IMPACTS OF ALTERNATIVE A

Hazardous materials, including LBP and ACM, would remain in both the Deshler-Morris and Bringhurst Houses, requiring continuous monitoring and maintenance to protect the health and safety of both workers and visitors. As the park has no plans to address abatement of these materials independent of this project, the impact would be long-term, moderate, and adverse.

Cumulative Impacts

Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on hazardous materials include moderate impacts from the Utilities Improvement Project (UIP). The UIP would potentially impact ACM and/or LBP as the new utilities were installed. Overall, the project would have a short-term, moderate adverse impact as these materials were impacted. After abatement procedures were preformed, however, the project would have a long-term, moderate, beneficial impact as the materials would be removed or secured. The No Action alternative would contribute an appreciable increment to the long- and short-term, moderate, adverse and beneficial cumulative impacts in the region.

Conclusion

The overall impact to hazardous materials of Alternative A would be **long-term, moderate, and adverse** and Alternative A would contribute an appreciable increment to the long- and short-term, moderate, adverse and beneficial cumulative impacts in the region. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to hazardous materials.

IMPACTS COMMON TO THE ACTION ALTERNATIVES

For buildings scheduled to be renovated, the National Emission Standard for Hazardous Air Pollutants (NESHAP) (40 CFR 61 subpart M) states that all ACM that would be disturbed by the renovation or demolition activities must be abated prior to beginning renovation. Therefore, as part of the renovation of these houses, ACM would be abated by a licensed contractor prior to any construction activity.

Similarly, surfaces coated with lead-based paint that would be disturbed (e.g. dry sanded, blasted, torched, or abraded) during maintenance, renovation, and/or demolition activities and could expose workers or occupants to lead hazards would be properly abated by an experienced or licensed lead abatement contractor prior to the activity.
There would be a short-term, adverse impact during construction. Following abatement, threats from hazardous materials would be eliminated, and the overall impact of the alternative would be moderate, beneficial, and long-term.

IMPACTS OF ALTERNATIVE B

There would be no impacts additional to those common to the action alternatives.

Cumulative Impacts

Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on hazardous materials include moderate, beneficial impacts from the Utilities Improvement Project. The UIP would potentially impact ACM and/or LBP as the new utilities were installed. Overall, the project would have a short-term, moderate, adverse impact as these materials were impacted. After abatement procedures were preformed, however, the project would have a long-term, moderate, beneficial impact as the materials would be removed or secured. Alternative B would contribute an appreciable increment to the long- and short-term, moderate, adverse and beneficial cumulative impacts in the region.

Conclusion

The overall impact of Alternative B on hazardous materials at the site would be **long-term, moderate, and beneficial**, and Alternative B would contribute an appreciable increment to the long- and short-term, moderate, adverse and beneficial cumulative impacts in the region. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to hazardous materials.

IMPACTS OF ALTERNATIVE C

There would be no impacts additional to those common to the action alternatives.

Cumulative Impacts

Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on hazardous materials include moderate beneficial impacts from the Utilities Improvement Project. The UIP would potentially impact ACM and/or LBP as the new utilities were installed. Overall, the project would have a short-term, moderate adverse impact as these materials were impacted. After abatement procedures were preformed, however, the project would have a long-term, moderate, beneficial impact as the materials would be removed or secured. Alternative C would contribute an appreciable increment to the long- and short-term, moderate, adverse and beneficial cumulative impacts in the region.

Conclusion

The overall impact of Alternative C on hazardous materials at the site would be **moderate, beneficial, and long-term** and Alternative C would contribute an appreciable increment to the long- and short-term, moderate, adverse and beneficial cumulative impacts in the region. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to hazardous materials.

PARK OPERATIONS AND INFRASTRUCTURE

METHODOLOGY

Park operations, for the purpose of this analysis, refers to the quality and effectiveness of the infrastructure and the ability to maintain the infrastructure used in the operation of the park in order to adequately protect and preserve vital resources and provide for an effective visitor experience. This includes an analysis of the condition and usefulness of the facilities and developed features used to support the operations of the park.

Staff knowledgeable of these issues were contacted, and members of the planning team evaluated the impacts of each alternative. The thresholds of change for the intensity of an impact are defined as follows

Negligible: Park operations and infrastructure would not be affected, or the effects would be at low levels of detection and would not have an appreciable effect on park operations and infrastructure.

Minor: The effect would be detectable but would be of a magnitude that would not have an appreciable effect on park operations and infrastructure. If mitigation was needed to offset adverse effects, it would be simple and likely successful.

Moderate: The effects would be readily apparent and would result in a substantial change in park operations and infrastructure in a manner noticeable to staff and to public. Mitigation measures would be necessary to offset adverse effects and would likely be successful.

Major: The effects would be readily apparent, would result in a substantial change in park operations and infrastructure in a manner noticeable to staff and the public, and would be markedly different from existing operations. Mitigation measures to offset adverse effects would be needed, would be extensive, and their success could not be guaranteed.

IMPACTS OF ALTERNATIVE A

Under the No Action Alternative, there would be no change to staffing or park operations. The fire threat to the Deshler-Morris House would remain as would security and intrusion problems across the site including the numerous false alarms the current system causes. Security personnel would continue to

drive eight miles to respond to the numerous false alarms. Other utilities and environmental systems would remain and fail to provide vital fire suppression protection. Alternative A would have a long-term, moderate, adverse impact on park operations and infrastructure.

Cumulative Impacts

Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on park operations and infrastructure include long-term, moderate, beneficial impacts from the Liberty Bell Center and Independence Mall, as well as long-term, minor, beneficial impacts from the Utilities Improvement Plan. The Liberty Bell Center and Independence Mall would create new facilities and staff positions, while the infrastructure plan would provide new utilities and infrastructure elements to existing buildings. Alternative A would contribute a noticeable increment to these long-term, minor, beneficial cumulative impacts.

Conclusion

Alternative A would have a **long-term, moderate, adverse** impact to park operations and infrastructure and would contribute a noticeable increment to these long-term, minor, beneficial cumulative impacts. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to park operations and infrastructure.

IMPACTS COMMON TO THE ACTION ALTERNATIVES

Installation of intrusion detection and alarm systems that provide building perimeter entry detection, interior monitoring video, and property detection would provide early detection and help to reduce incidents of vandalism at the site. The system would provide earlier notification of an intruder on the grounds, as well as the location of the intruder, and allow park security officers to respond more efficiently. There would, however, be a slightly higher potential for false alarms. Overall, the impact to park operations would be long-term, moderate, and beneficial.

IMPACTS OF ALTERNATIVE B

Under Alternative B, along with the actions presented above a geothermal heat-pump system would be installed in the yard. The pump would be an efficient means of heating and/or cooling the buildings using earth's natural temperature. The alternative would require a considerable amount of disturbance for trenching, drilling, and surface water control. However, once installed it would require minimal maintenance and would also create minimal visual or noise disturbances compared to other options. The geothermal pump is also considered green technology based on its efficiency and durability. The impact of Alternative B on park operations and infrastructure, including actions common to both alternatives, would be long-term, moderate, and beneficial.

Cumulative Impacts

Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on park operations and infrastructure include long-term, moderate, beneficial impacts from the Liberty Bell

Center and Independence Mall, as well as long-term, minor, beneficial impacts from the Utilities Improvement Plan. The Liberty Bell Center and Independence Mall would create new facilities and staff positions, while the infrastructure plan would provide new utilities and infrastructure elements to existing buildings. Alternative B would contribute a noticeable increment to these long-term, minor, beneficial cumulative impacts.

Conclusion

Alternative B would have a **long-term, moderate, beneficial impact** to park operations and infrastructure and would contribute a noticeable increment to these long-term, minor, beneficial cumulative impacts. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to park operations and infrastructure.

IMPACTS OF ALTERNATIVE C

Along with those impacts common to the action alternatives, Alternative C would implement a traditional HVAC system in the basement of the Bringhurst House. This alternative would not create the initial disturbance as Alternative B would. However, after installation, the system would be more readily visible on the historic landscape and would create a greater noise impact than Alternative B. Furthermore, it is not considered green technology based on its lack of efficiency or durability. The overall impact of Alternative C on park operations and infrastructure would be long-term, minor, and beneficial.

Cumulative Impacts

Present and reasonably foreseeable future actions in the area of Independence NHP that would have an effect on park operations and infrastructure include long-term, moderate, beneficial impacts from the Liberty Bell Center and Independence Mall, as well as long-term, minor, beneficial impacts from the Utilities Improvement Plan. The Liberty Bell Center and Independence Mall would create new facilities and staff positions, while the infrastructure plan would provide new utilities and infrastructure elements to existing buildings. Alternative C would contribute a noticeable increment to these long-term, minor, beneficial cumulative impacts.

Conclusion

Alternative C would have a **long-term, minor, beneficial impact** to park operations and infrastructure and would contribute a noticeable increment to these long-term, minor, beneficial cumulative impacts. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the park's establishing legislation, (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of park resources or values related to park operations and infrastructure.

CONSULTATION & COORDINATION

INTRODUCTION

NEPA requires federal agencies preparing environmental assessments to consult with stakeholders, including the general public and regulatory agencies, early in the planning process. This process, known as scoping, helps to determine important issues and eliminate those that are not; allocate assignments among the interdisciplinary team members and/or other participating agencies; identify related projects and associated documents; identify other permits, surveys, consultations, etc., required by other agencies; and create a schedule that allows adequate time to prepare and distribute the environmental document for public review and comment before a final decision is made. This chapter documents the scoping process for this project, and includes the official list of recipients for the document.

BRIEF HISTORY OF PLANNING AND PUBLIC INVOLVEMENT

A press release was published in local newspapers to inform interested public of the project. In addition, a public workshop is being planned that would allow stakeholders, adjacent property owners, and other interested individuals to view proposed actions and comment on the project.

The FWS was consulted regarding the presence of rare, threatened, and endangered species in the project area. This coordination resulted in a determination that no such species are present in the area and that no further consultation under section 7 of the Endangered Species Act is necessary.

A Memorandum of Agreement (MOA) was negotiated between Independence NHP and the Pennsylvania State Historic Preservation Officer (SHPO). The MOA stipulates mitigation measures to be undertaken throughout the project in order to avoid or minimize adverse effects to cultural resources. A copy of the MOA, which was signed on December 2, 2004, is found in Appendix B. This document also contains assessments of effect for cultural resources required under section 106.

LIST OF RECIPIENTS

This EA/AOE will be on formal public review for 30 days and has been distributed to a variety of interested individuals, agencies, and organizations, as listed below. This document is available on the Internet at http://www.nps.gov/inde.

STATE AGENCIES

Pennsylvania Historical and Museum Commission, Bureau for Historic Preservation

LOCAL AGENCIES AND OFFICIALS

Mayors Executive Office – Ms. Joyce Wilkerson

CONSULTING PARTNERS AND INDIVIDUALS

African-American Museum – Mr. Bernard Chavis
American History Theater – Mr. Bill Sommerfield and Ms. Pamela Sommerfield
American Philosophical Society – Dr. Richard Dunn and Dr. Mary Dunn
Dr. Adrienne Anderson
Avenging the Ancestors Coalition – Mr. Michael Coard, Esq.
Brennan & Associates – Mr. Sean Brennan
Mr. John Burkhalter
Carpenters' Company
Mr. Winchell Carroll
Chestnut Hill College – Dr. David Contosta
Cheyney University – Dr. Shirley Turpin-Parham
Citizens Bank – Ms. Geraldine Gooden
Ms. Eleanor Morris Cox
Mr. William Deshler
Deshler Morris House Committee – Mr. William Alan Kingsley and Mr. Bernard J. Enright
Generations Unlimited – Ms. Sacaree Rhodes
Germantown Friends' Meeting – Mr. Richard Wade
Germantown Historical Society – Ms. Mary Dabney
Germantown Monthly Meeting – Ms. Deborah W. Frazer
Greater Philadelphia Tourism Marketing Corporation – Ms. Meryl Levitz and Ms. Patricia Washington
Grumblethorpe House Committee – Mr. Thomas Glasgow
Historic Germantown Preserved – Mr. Stephen Hague
The Historical Society of Pennsylvania – Dr. David Moltke-Hansen
Impacting Your World Christian Center – Ms. Alexis Anderson
Independence Hall Association – Mr. Doug Heller and Mr. Ed Lawler
Independence Visitor Center – Mr. William Moore
International Visitors Council – Ms. Nancy Gilboy
Johnson House Historic Site – Ms. Najah Palm
Kappa Alpha Psi, Philadelphia Alumni Center
The Library Company of Philadelphia
Mid Atlantic Research Center for the Humanities – Dr. Howard Gillette
Mr. Robert Morris
Ms. Karen Morris-Stevens
National Constitution Center – Mr. Richard Stengel

Philadelphia Convention and Visitors Bureau – Ms. Tanya Hall and Mr. Tom Muldoon
Philadelphia Heritage Inc. – Ms. Amy Needle
Philadelphia Historic Northwest Coalition – Ms. Janet Greenstein Potter
The Philadelphia Inquirer – Mr. Acel Moore and Mr. Stephen Salisbury
Philadelphia Museum of Art – Ms. Cheryl McClenny Booker
The Philadelphia New Observer – Ms. Marilyn Jewett
The Philadelphia Tribune Co. - Ms. Linn Washington
St. Joseph's University, Ad Hoc Historians – Dr. Randall Miller
Ms. Jalna Schuler
Dr. Tom Schwartz
Sentry Federal Credit Union
Mr. Craig Starkey
Temple University – Dr. Charles Blockson
Mr. Ron Thompson
Tri State Coalition Board – Ms. Prudance Haines
Ms. Deborah Cloud Vaughan
Villanova University, History Department – Dr. Charlene Mires
Wachovia Bank – Ms. Peale Roberts
WHYY – Mr. Ken Finkel and Mr. Joel Rose
Ms. Jacqueline J. Wiggins
Ms. Barbara Witherow-Summers
Ms. Ann Wood

REFERENCES

ACRONYMS

ACHP – Advisory Council on Historic Preservation
ACM – Asbestos-containing materials
ADA – Americans with Disabilities Act
AHERA – Asbestos Hazard Emergency Response Act
AHU – Air handling unit
AOE – Assessment of Effect
AST – Above ground storage tank
AV – Audio visual
CEQ – Council on Environmental Quality
DO – Director's Order
EA – Environmental Assessment/Assessment of Effect
EPA – United States Environmental Protection Agency
FWS – United States Fish and Wildlife Service
GHP – Geothermal heat-pump
GMP – General Management Plan
HUD – United States Department of Housing and Urban Development
HVAC – Heating, ventilation, and air conditioning
Independence NHP – Independence National Historical Park
LBP – Lead-based paint
LRIP – Long Range Interpretive Plan
MOA – Memorandum of Agreement
NEPA – National Environmental Policy Act
NESHAP – National Emission Standard for Hazardous Air Pollutants
NFPA – National Fire Protection Association
NHL – National Historic Landmark
NHPA – National Historic Preservation Act
NPS – National Park Service
NRHP – National Register of Historic Places
NWI – National Wetland Inventory
OSHA – Occupational Safety and Health Administration
PECO – Pennsylvania Electric Company
PLC – Programmatic logic controller
SHPO – State Historic Preservation Officer

UIP – Utilities Improvement Project
UPS – Uninterruptible power supply
UST – Underground storage tank
XRF – X-ray fluorescence

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LIST OF PREPARERS AND CONTRIBUTORS

PREPARERS

VANASSE HANGEN BRUSTLIN, INC.

Nancy Barker, PWS	Environmental Services Manager	18 years experience	Guidance of the NEPA process, document review, and project management
Dawn Frost	Environmental Planner/ Preservation Planner	4 years experience	Section 106 coordination, document review
Scott Smizik	Environmental Planner	2 years experience	Document preparation
Elaine Stiles	Preservation Planner	5 years experience	Section 106 coordination, document preparation
Tricia Wingard	Environmental Scientist/ Project Manager	5 years experience	Guidance of the NEPA process, document review, and project management

CONTRIBUTORS

INDEPENDENCE NHP

Susan Edens	Cultural Landscape Architect
Doris Fanelli	Cultural Resource Manager
James Mueller	Chief Historian, Compliance Coordinator
Steve Sitarski	Unit Division Chief
Charles Tonetti	Historical Architect

DENVER SERVICE CENTER

Joe Crystal	Project Manager
Lynn Weege	Mechanical Engineer
Paul Wharry	Natural Resource Specialist
Eric Petersen	Cultural Resource Specialist

PHILADELPHIA SUPPORT OFFICE

Shaun Eyring	NEPA/106 Coordinator
Jacquelyn Katzmire	Regional Environmental Coordinator

SUSAN MAXMAN & PARTNERS

Missy Maxwell	Landscape Architect

JOHN MILNER ASSOCIATES, INC.

Rob McGinnis	Landscape Architect
Krista Schneider	Landscape Architect

APPENDIX A

AGENCY CORRESPONDENCE

United States Department of the Interior

NATIONAL PARK SERVICE
Independence National Historical Park
143 S. 3rd Street
Philadelphia, PA 19106

IN REPLY REFER TO

DEC 10 2012

H30 (INDE)

Mr. David Densmore, Field Supervisor
U.S. Fish and Wildlife Service
315 Allen Street, Suite 322
State College, PA 16801-4850

Dear Mr. Densmore:

Independence National Historical Park is initiating planning to rehabilitate the utilities and exhibits of its Deshler-Morris and Bringhurst Houses located respectively at 5442 and 5448 Germantown Avenue, Philadelphia, Philadelphia County, Pennsylvania. I am requesting a current list of federally-listed threatened or endangered species, species of concern, or any other special status species that might occur at the above address. Information concerning the designated critical habitats for any of these species would also be appreciated.

This letter will serve as a record that the National Park Service is initiating informal consultation with your agency pursuant to the requirements of the Endangered Species Act of 1973 (with subsequent amendments) and the NPS *Management Policies* of 2001.

You may reach the Park's compliance coordinator, Dr. James W. Mueller, for questions or information at 215-597-7127.

We appreciate your continuing assistance with National Park Service projects.

Sincerely,

for Dennis R. Reidenbach
Acting Superintendent

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pennsylvania Field Office
315 South Allen Street, Suite 322
State College, Pennsylvania 16801-4850

January 17, 2003

Dennis R. Reidenbach
U.S. National Park Service
Independence National Historical Park
143 S. 3rd Street
Philadelphia, PA 19106

Dear Mr. Reidenbach:

This responds to your letter of December 10, 2002, requesting information about federally listed and proposed endangered and threatened species within the vicinity of the Deshler-Morris and Bringhurst Houses located in the City of Philadelphia, Philadelphia County, Pennsylvania. The following comments are provided pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) to ensure the protection of endangered and threatened species.

Except for occasional transient species, no federally listed or proposed threatened or endangered species under our jurisdiction are known to occur within the projects' impact areas. Therefore, no biological assessment nor further consultation under the Endangered Species Act are required with the Fish and Wildlife Service. This determination is valid for two years from the date of this letter. If the proposed projects have not been fully implemented prior to this, an additional review by this office will be necessary. Also, should projects' plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered. A compilation of certain federal status species in Pennsylvania is enclosed for your information.

This response relates only to endangered or threatened species under our jurisdiction based on an office review of the proposed projects' location. No field inspection of the projects' areas has been conducted by this office. Consequently, this letter is not to be construed as addressing potential Service concerns under the Fish and Wildlife Coordination Act or other authorities.

Requests for information regarding State-listed endangered or threatened species should be directed to the Pennsylvania Game Commission (birds and mammals), the Pennsylvania Fish and Boat Commission (fish, reptiles, amphibians and aquatic invertebrates), and the Pennsylvania Department of Conservation and Natural Resources (plants).

Please contact Michael Schmaus of my staff at 814-234-4090 if you have any questions or require further assistance.

Sincerely,

David Densmore
Supervisor

Enclosure

RECEIVED JAN 21 2003

		FYI	ACTN			FYI	ACTN
SUPT				PAO			
ASUP				RVP			
ADM				SAF			
CRM				UIP			
IVS				UNS			
MAINT							

Comments

CC: CFILE

FEDERALLY LISTED AND PROPOSED SPECIES THAT NO LONGER OCCUR IN PENNSYLVANIA

COMMON NAME	SCIENTIFIC NAME	STATUS**	FORMER DISTRIBUTION
MAMMALS			
Canada lynx	*Lynx canadensis*	PT	north-central PA (Tioga Co.)
Delmarva Peninsula fox squirrel	*Sciurus niger cinereus*	E	mature forests of southeastern PA (Delaware and Chester Co.)
Eastern cougar	*Felis concolor couguar*	E	state-wide
Grey wolf	*Canis lupus*	E	state-wide
MOLLUSKS			
Fanshell*	*Cyprogenia stegaria*	E	Ohio River drainage
Orange pimpleback*	*Plethobasus striatus*	E	Ohio River drainage
Pink mucket pearly mussel*	*Lampsilis abrupta*	E	Ohio River drainage
Ring pink mussel*	*Obovaria retusa*	E	Ohio River drainage
Rough pigtoe*	*Pleurobema plenum*	E	Ohio River drainage
INSECTS			
American burying beetle	*Nicrophorus americanus*	E	state-wide
Karner blue butterfly	*Lycaeides melissa samuelis*	E	pine barrens, oak savannas (wild lupine habitat) (Wayne Co.)
Northeastern beach tiger beetle	*Cicindela dorsalis dorsalis*	T	along large rivers in southeastern PA
PLANTS			
Eastern prairie fringed orchid	*Platanthera leucophaea*	T	wet prairies, bogs (Crawford Co.)
Sensitive joint-vetch	*Aeschynomene virginica*	T	freshwater tidal marshes of Delaware river (Delaware and Philadelphia Co.)
Virginia spiraea*	*Spiraea virginiana*	T	along Youghiogheny River (Fayette Co.)
Smooth coneflower	*Echinacea laevigata*	E	serpentine barrens (Lancaster Co.)

Revised 10/19/00

* *It is possible that remnant populations of some of these species (indicated with an *) may still occur in Pennsylvania, however, there have been no confirmed sightings of these species for over 70 years.*

** *E = Endangered, T = Threatened, PT = Proposed Threatened*

The following is a partial list of additional species that no longer occur in Pennsylvania: moose, bison, wolverine, passenger pigeon, Bachman's sparrow, greater prairie-chicken, olive-sided flycatcher, Bewick's wren, eastern tiger salamander, blue pike, butterfly mussel, Diana fritillary butterfly, precious underwing moth, deertoe mussel, marbled underwing moth, cobblestone tiger beetle, mountain clubmoss, crested yellow orchid, red milkweed, American barberry, small white lady's-slipper, etc, etc

U.S FISH AND WILDLIFE SERVICE
315 SOUTH ALLEN ST., SUITE 322, STATE COLLEGE, PA 16801

FEDERALLY LISTED, PROPOSED AND CANDIDATE SPECIES (in Pennsylvania)

Common Name	Scientific Name	Status[1]	Distribution (by County and/or Watershed)
FISHES			
Shortnose sturgeon[2]	*Acipenser brevirostrum*	E	Delaware River & other Atlantic coastal waters
REPTILES			
Bog turtle	*Clemmys muhlenbergii*	T	Current - Adams, Berks, Bucks, Chester, Cumberland, Delaware, Franklin, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton, Schuylkill, York Historic - Crawford, Mercer, Philadelphia Co
Eastern massasauga rattlesnake	*Sistrurus catenatus catenatus*	C	Current - Butler, Crawford, Mercer and Venango Co. Historic - Allegheny and Lawrence Co
BIRDS			
Bald eagle	*Haliaeetus leucocephalus*	T	Suitable habitats across the state. Recent nesting in Butler, Cameron, Centre, Chester, Crawford, Dauphin, Erie, Forest, Huntingdon, Lancaster, Lebanon, Mercer, Northumberland, Pike, Tioga, Venango, Warren, Wayne and York Co. Wintering concentrations occur near ice-free sections of rivers, lakes and reservoirs, including the Delaware River.
Piping plover	*Charadrius melodus*	E	Migratory. No nesting in Pennsylvania since 1950s. Designated critical habitat on Presque Isle, Erie Co
MAMMALS			
Indiana bat	*Myotis sodalis*	E	Winter hibernacula: Armstrong, Blair, Lawrence, Luzerne, Mifflin and Somerset Co.
MOLLUSKS			
Dwarf wedgemussel	*Alasmidonta heterodon*	E	Current - Delaware River (Wayne Co.). Historic - Delaware River watershed (Bucks, Carbon, Chester and Philadelphia Co.); Susquehanna River watershed (Lancaster Co.)
Clubshell mussel	*Pleurobema clava*	E	French Creek and Allegheny River watersheds (Clarion, Crawford, Erie, Forest, Mercer, Venango and Warren Co.)
Northern riffleshell	*Epioblasma torulosa rangiana*	E	French Creek and Allegheny River watersheds (Clarion, Crawford, Erie, Forest, Mercer, Venango and Warren Co.)
PLANTS			
Northeastern bulrush	*Scirpus ancistrochaetus*	E	Current - Adams, Bedford, Blair, Carbon, Centre, Clinton, Cumberland, Dauphin, Franklin, Huntingdon, Lackawanna, Lehigh, Lycoming, Mifflin, Monroe, Perry, Snyder and Union Co. Historic - Northampton Co.
Small-whorled pogonia	*Isotria medeoloides*	T	Current - Centre, Chester and Venango Co. Historic - Berks, Greene, Monroe, Montgomery and Philadelphia Co.

[1] *E = Endangered, T = Threatened, PE = Proposed Endangered, PT = Proposed Threatened, C = Candidate* *Revised 12/16/02*

[2] *Shortnose sturgeon is under the jurisdiction of the National Marine Fisheries Service*

U.S. FISH AND WILDLIFE SERVICE
315 SOUTH ALLEN ST , SUITE 322, STATE COLLEGE, PA 16801

United States Department of the Interior

NATIONAL PARK SERVICE
INDEPENDENCE NATIONAL HISTORICAL PARK
143 S. 3rd Street
Philadelphia, PA 19106

IN REPLY REFER TO:

H30(INDE)

RECEIVED
APR 7 2004
NMB - WILLVA

APR 05 2004

Ms. Barbara Franco
State Historic Preservation Officer
Pennsylvania Historical and Museum Commission
Commonwealth of Pennsylvania
300 North St.
Harrisburg, PA 17120

Dear Ms. Franco:

Independence National Historical Park (INHP) is developing plans to rehabilitate utilities and exhibits at the Deshler-Morris and Bringhurst Houses (DMB) in the Germantown section of Philadelphia. DMB is listed on the National Register of Historic Places and part of the Colonial Germantown National Historic Landmark District. This DMB project is part of the Utilities Improvement Project (UIP) and of INHP's 1997 General Management Plan. Your staff has previously contributed to both of these large undertakings through the Section 106 process.

INHP is initiating the compliance process for the DMB project and expects to have an Environmental Assessment available for review during April 2004. In accordance with 36 CFR 800.8(c), we are notifying your office of our intent to use the NEPA process for compliance with Section 106 of the National Historic Preservation Act. We also mentioned this to your staff at our October, 2003, biannual meeting. The Environmental Assessment, a combined NEPA-Section 106 document currently in final preparation, will assess the less-than-significant impacts related to the proposed action.

As always, we look forward to working with your office and staff and the public as we proceed with the compliance process for this project.

We appreciate your contribution to our preservation mission. If you should have any questions, please contact Dr. James Mueller at (215) 597-7127.

Sincerely,

for Mary A. Bomar
Superintendent

Cc: John Fowler, Executive Director, Advisory Council on Historic Preservation

Martha Catlin, Preservationist, Advisory Council on Historic Preservation

Tricia Wingard, Cultural Compliance Specialist, Vanasse Hangen Brustlin, Inc., Williamsburg, VA

United States Department of the Interior

NATIONAL PARK SERVICE
INDEPENDENCE NATIONAL HISTORICAL PARK
143 S. 3rd Street
Philadelphia, PA 19106

IN REPLY REFER TO:

NOV 03 2004

B:6223 (INDE)

Mr. Mark Shaffer
Bureau for Historic Preservation
Commonwealth Keystone Building
400 North Street, 2nd floor
Harrisburg, PA 17120-0093

Dear Mr. Shaffer:

Independence National Historical Park (INHP) is developing plans to rehabilitate utilities and exhibits at the Deshler-Morris and Bringhurst Houses (DMB) in the Germantown section of Philadelphia. Our April 5, 2004, letter outlines the history and significance of the houses and our plans for the combined NEPA-Section 106 compliance. Toward that end, we have included a Memorandum of Agreement (MOA) for your review and concurrence.

As you suggested by phone, the MOA includes the protection of architectural and landscape resources with its dominant focus on archeological values and the mitigative procedures. The signed MOA will be appended to the Environmental Assessment that has already been completed.

We anticipate Ms. Franco's execution of the MOA, and, as always, appreciate your contributions to our preservation program. If you should have any questions, please contact Dr. James Mueller of my staff at (215) 597-7127.

Sincerely,

Mary A. Bomar
Superintendent

Enclosure

CC: Barbara Franco, Bureau for Historic Preservation

APPENDIX B

MEMORANDUM OF AGREEMENT

Commonwealth of Pennsylvania
Pennsylvania Historical and Museum Commission
Bureau for Historic Preservation
Commonwealth Keystone Building, 2nd Floor
400 North Street
Harrisburg, PA 17120-0093
www.phmc.state.pa.us

December 2, 2004

Mary A. Bomar
Independence National Historical Park
143 South 3rd Street
Philadelphia, PA 19106

TO EXPEDITE REVIEW USE
BHP REFERENCE NUMBER

Re: ER 96-0645-101-Y
NPS: MOA for Rehabilitation of Utilities and Exhibits, Dreshler-Morris and Bringhurst Houses, Germantown Avenue, Philadelphia

Dear Ms. Bomar:

The Bureau for Historic Preservation (the State Historic Preservation Office) has reviewed the above named project in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended in 1980 and 1992, and the regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation as revised in 1999. These requirements include consideration of the project's potential effect upon both historic and archaeological resources.

The Bureau for Historic Preservation has executed the enclosed Memorandum of Agreement for the project referenced above. Please forward the Agreement, along with supporting documentation, to the Advisory Council on Historic Preservation for acceptance.

If you need further information please consult Ann Safley at (717) 787-9121.

Sincerely,

Jean H. Cutler
Director

JHC/ras

Memorandum of Agreement
Between
The Pennsylvania State Historic Preservation Office
and
Independence National Historical Park
Regarding
The Resolution of Adverse Effects Upon
Archeological, Architectural, and Landscape Resources
Resulting From The Utility and Exhibit Rehabilitation of
The Deshler-Morris and Bringhurst Houses,
INDE Package 019891

WHEREAS, the National Park Service (NPS) in 1995 entered into a Programmatic Agreement with the Advisory Council on Historic Preservation and the National Conference of State Historic Preservation Officers; and

WHEREAS, Independence National Historical Park (INHP), as a part of the NPS, in 1997 entered into a Programmatic Agreement with the Pennsylvania State Historic Preservation Office (PSHPO), the City of Philadelphia (the City), and the Advisory Council on Historic Preservation and that said Agreement provides for the consultation process among the named parties; and

WHEREAS, INHP, by a contractual instrument, desires to undertake the utility and exhibit rehabilitation (INDE 019891 hereafter) of the Deshler-Morris and Bringhurst (DMB hereafter) houses; and

WHEREAS, detailed construction impacts that will result from said INDE 019891 and detailed information about the DMB-related archeological and landscape resources are presently unknown; and

WHEREAS, DO-12, Conservation Planning, Environmental Impact Analysis, and Decision Making, encourages the completion of Section 106 consultations and NEPA reporting in the same document; and

WHEREAS, DMB is a historic property listed as part of Germantown's National Register of Historic Places Historic District; and

NOW, THEREFORE, the PSHPO and INHP agree that the project shall be implemented in accordance with the following stipulations in order to take into account the effects of the undertaking on the resources at the DMB houses.

Stipulations

1. INHP will insure that the undertaking meets both the *Secretary of Interior's Standards and Guidelines for Archeology and Historic Preservation* (United States Department of the Interior 1983) and the *Secretary of Interior's Standards for the Treatment of Historic Properties with* **Guidelines for the Treatment of Cultural Landscapes** (United States Department of the Interior 1996) and
2. INHP will insure that the Area of Potential Effect (APE) is defined and mapped to include primary construction and at least the following secondary activities: geotechnical and engineering pre-studies, temporary facilities, such as barriers, haul routes, public protection signs, staging areas, construction trailers, and sanitary facilities, clearing, topsoil stripping, and post construction clean-up and that the following steps are taken within the APE:
3. During the design and the construction-drawing stages, every effort will be made to insure that this rehabilitation is a replacement-in-kind undertaking so that minimal penetrations of building fabric and minimal disturbances of landscape features and archeological resources are made;
4. During the design and the construction-drawing stages, maximum use of historical research is made so that reconstructions and restorations are as historically accurate as reasonably possible;
5. During the construction phase, construction barriers may be placed within the APE and adjacent site areas to prevent damage by mechanical and manual equipment to landscape and archeological resources, including, but not limited to, above-ground vegetation and below-ground roots and archeological sensitive areas;
6. Prior to the start of construction and immediately following the availability of substantially complete design drawings, an Archeological Impact Analysis detailing potential effects to known or suspected cultural resources resulting from the proposed construction plans shall be prepared;
7. If the Archeological Impact Analysis indicates that construction impacts are anticipated within the APE and adjacent site areas that have not been subject to sufficient archeological testing and inventory, then the Archeological Impact Analysis will incorporate a Phase II testing plan for the inadequately surveyed area(s);

8. Prior to the start of construction, Phase II field investigations shall be completed in accordance with an approved Testing Plan to inventory and evaluate archeological resources according to the National Register of Historic Places;
9. Within 30 calendar days of the completion of Phase II fieldwork, a Management Summary of Phase II field work including National Register eligibility shall be prepared;
10. If it is determined that National Register significant resources are present within the APE, an Archeological Mitigation Plan shall be prepared detailing how these resources will be protected during construction or how the loss of National Register information and values of those resources will be mitigated;
11. The field investigations identified in the Archeological Mitigation Plan will be carried out prior to the start of construction;
12. Within 30 calendar days of the completion of mitigation fieldwork, a Management Summary shall be prepared and the laboratory processing described in the Archeological Mitigation Plan shall be initiated;
13. During construction, archeological monitoring of the APE and adjacent site areas shall be completed in archeologically sensitive areas and the monitoring results reported in the Technical Report described in Stipulation (14) following;
14. Within 15 months of the completion of fieldwork, a final Technical Report that meets the *Secretary of Interior's Standards and Guidelines for Archeology and Historic Preservation* (United States Department of the Interior 1983) shall be prepared and submitted to the SHPO and other institutions of the archeological community;
15. Within six months of INHP's written acceptance of the Technical Report, the excavated artifact collection shall be properly cleaned, labeled, catalogued (Automated National Catalog System plus), and conserved;
16. Accidental discoveries and their recommended mitigative treatment will be reported by telephone to the PSHPO staff archeologist within two business days of their discovery. The PSHPO staff archeologist would declare concurrence with the recommended mitigation to INHP by telephone within two business days of telephone notification;
17. In the unlikely event that human remains would be encountered on-site, the location of the find would be treated as a crime scene in conformity with the guidelines of the Pennsylvania Historical and Museum

Commission (PHMC) and the City of Philadelphia. In the unlikely event that Native American remains would be encountered, consultations with the Tribal Historic Preservation Officer of the Delaware Indians (Eastern and Western Branches) and with the Stockbridge Munsee would be undertaken and the provisions of the Native American Graves Protection and Registration Act would be followed in addition to following the above-mentioned guidelines of PHMC and the City.

Execution of this Memorandum of Agreement between the PSHPO and INHP is evidence that INHP has taken into account the effects of the INDE 019891 undertaking on the archeological, architectural, and landscape resources that are listed on or potentially eligible for National Register of Historic Places, as mandated by the 1999 and other revisions to Section 106 of the National Historic Preservation Act.

For the Pennsylvania State Historic Preservation Office:

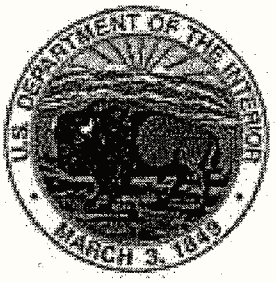
Jean A Cutler DSHPO for 12-2-04

Barbara Franco, SHPO Date

For Independence National Historical Park:

Mary A. Bomar NOV 03 2004

Mary A. Bomar, Superintendent Date





As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

January 2005

United States Department of the Interior – National Park Service