National Park Service
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Olmsted Center
for Landscape Preservation

Cultural Landscape Report for Hampton National Historic Site

Volume II: Treatment and Record of Treatment



"The formal terraces of exquisitely kept grass, the long rows of lemon and orange trees, with the adjacent orangerie and the foreign air of the house, quite disturb ones ideas of republican America."

Henry W. Sargent in *Landscape Gardening*, 1859

Cultural Landscape Report for Hampton National Historic Site

Towson, Maryland

Volume II

Treatment

Record of Treatment

Prepared by
Christopher M. Beagan, Historical Landscape Architect

Olmsted Center for Landscape Preservation
National Park Service, Boston, Massachusetts, 2014

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Cover photograph: Hampton Farm House Complex from the Dairy stream. View looking north, 2012 (Olmsted Center for Landscape Preservation, hereafter OCLP).

Title page image: Gardeners at work in Parterre II of the Falling Gardens. View looking south, 1878 (HAMP 12967).

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This report builds on work initiated in the preceding volumes, including the *Cultural Landscape Report for Hampton National Historic Site, Vol. I: Site History, Existing Conditions, Analysis and Evaluation* (2004), draft *Vol. II: Treatment Plan* (2006), and draft *Vol. III: Formal Garden Planting Plans* (2008). Contributors to these reports include Paul Bitzel, Laurie Coughlan, Lynne Dakin Hastings, Shaun Eyring, Jeanie Hau, Laura Joss, Cheryl Sams O'Neill, Joshua Shields, Michael Tull, and Gay Vietzke.

Foreword

Many elegant improvements were lately made to the garden at Hampton…

—*The American Farmer*, January 1854

Over the course of over 150 years, the owners of Hampton directed the work of a large labor force (indentured, enslaved, and free) to improve the grounds of the estate. The creation of the terraces of the Falling Gardens under Captain Charles Ridgely the Builder has been considered to be one of the largest earth moving projects in eighteenth century America. His nephew Governor Charles Carnan Ridgely directed professionals such as William Russell Birch and William Booth to lay out the grounds and parterres and had an extensive system of pipes installed in 1801 to bring water to his gardens. Third mistress Eliza Ridgely was a noted horticulturist who introduced many exotic species of trees and flowers to the gardens; oversaw the construction of greenhouses, graperies, and garden cottages; had fashionable carpet bedding introduced to the parterres; and generally transforming Hampton into a nationally renowned showplace. With financial pressures increasing in the early twentieth century, Helen Ridgely made practical changes for efficiency's sake, while still planting an astonishing variety of plant material.

The efforts of all these individuals, and many others, have left us with a large and complex landscape with a rich heritage to protect and preserve. This volume articulates both a treatment philosophy for care of the landscape and presents a detailed and lengthy set of recommendations for day-to-day and long-term management. The report's prioritized implementation strategy and maintenance scheme will be an invaluable resource for the park's staff as we plan for the future and seek to accomplish the proposed work. Already, some of the most significant plans have been realized, particularly the rehabilitation of the magnificent Falling Gardens.

After several years of study, the National Park Service had by 2008 produced a partial CLR, Volume II with preliminary treatment recommendations for the overall landscape and portions of the parterre gardens. This current Volume II by the Olmsted Center for Landscape Preservation enhances that draft by addressing additional portions of the park landscape that are essential to supporting the park's primary interpretive themes, particularly the farm landscape. The authors have provided a comprehensive and highly detailed action plan that addresses all aspects of Hampton's cultural landscape. We greatly appreciate the professionalism and hard work of the Olmsted Center's staff including Bob

Page, Christopher Beagan, and Margaret Coffin Brown who have brought this lengthy and important project to a successful conclusion. They were ably assisted by Hampton staff, most notably the park's long-time Horticulturist and Chief of Resource Management, Paul Bitzel. The resulting work will help to preserve, protect, and enhance this national treasure.

Tina Cappetta, Superintendent
Hampton National Historic Site



Figure 0.1. Hampton Mansion from the Great Terrace. View looking northeast, 2013 (OCLP).

INTRODUCTION

Hampton National Historic Site is located in Towson, Maryland just thirteen miles north of downtown Baltimore. The park is situated in a quiet residential neighborhood, immediately to the north of I-695, the Baltimore Beltway (Figures 0.2 and 0.3). The 62.04-acre park is all that remains of a once vast 25,000-acre estate amassed and operated by the Ridgely family for over 200 years. The Hampton landscape is comprised of two distinct components: the 48.02-acre Mansion landscape, located to the south of Hampton Lane, and the 14.02-acre farm landscape, located to the north of Hampton Lane. Together, the component landscapes depict the integration of a once sprawling residential, agricultural, commercial, and industrial enterprise, and remain as tangible vestiges of the political, economic, and social changes that shaped the nation from 1745 to 1948. The National Park Service acquired the majority of the park land by deed of gift from the Avalon Foundation, a Mellon family foundation, in October 1947.

Not only a significant resource for visitors from across the nation and globe, Hampton National Historic Site is well-visited by Towson schools, residents, and neighbors. With a long history, park resources tell many different stories that resonate with a diversity of visitors. Vibrant park interpretive, youth education, and volunteer programs and partnerships engage the public to ensure that the Hampton landscape will be preserved and enjoyed for many generations to come.

For the past three decades, the National Park Service has cared for Hampton National Historic Site, undertaking improvements consistent with National Park Service policies, guidelines, and standards, as well as park planning initiatives. While overall intact in character, the landscape has changed since the transition from private residential to public use, most notably through the loss of some domestic and utilitarian qualities that once characterized the landscape. The natural growth and decline of vegetation, accommodation for public use, need for additional archival and interpretive space, limitations of funding and staffing, and adjacent suburban development have all impacted the historic character of the property. The objective of this report is to outline a program of recommendations and tasks that will preserve what survives of the historic landscape and recapture the landscape's former character to the greatest extent possible.

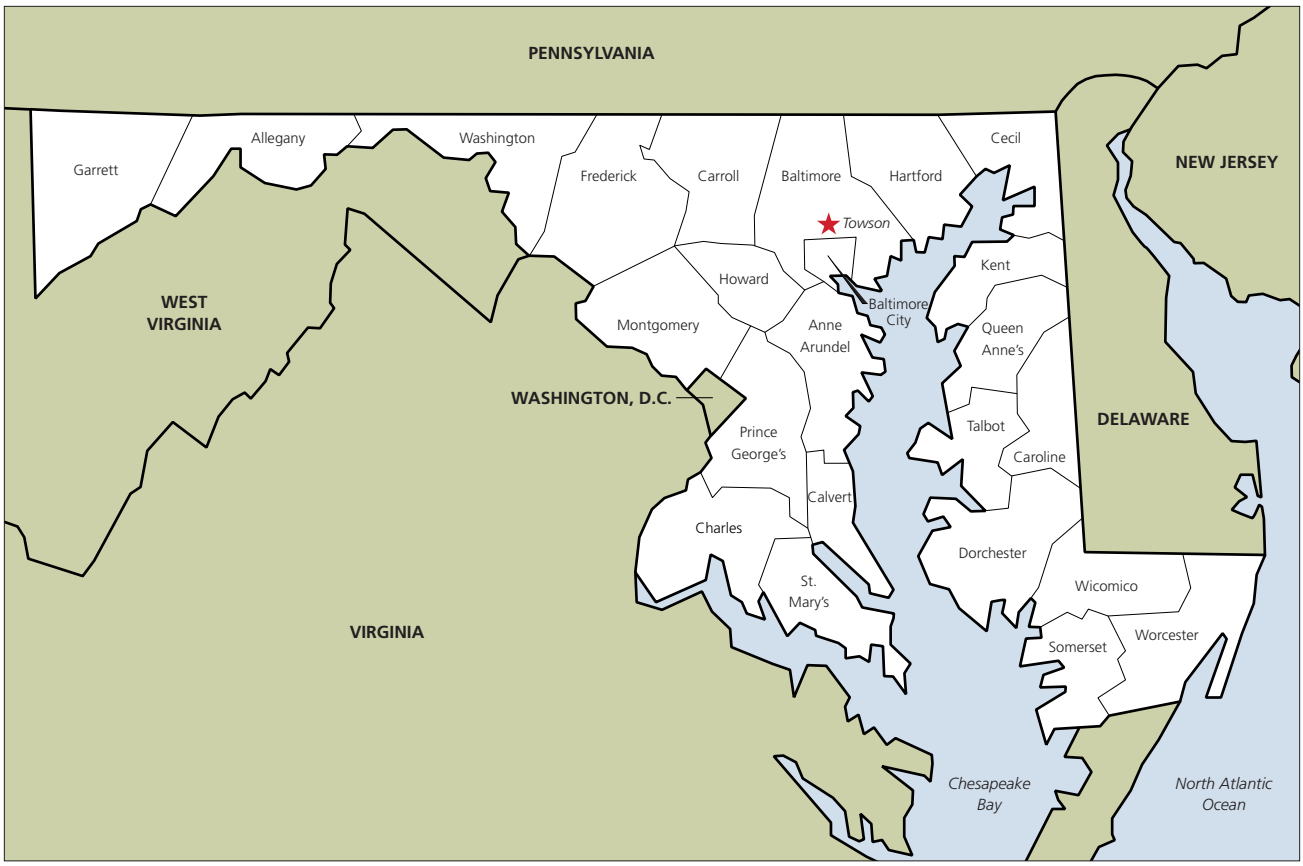


Figure 0.2. Counties of Maryland showing the location of Towson, thirteen miles north of downtown Baltimore. Plan view, 2013 (OCLP).

PURPOSE, SCOPE, AND METHODOLOGY

The National Park Service uses cultural landscape reports as the primary tool to inform treatment and long-term management decisions regarding cultural landscapes. As an element of a cultural landscape report, the treatment volume establishes site-specific guidelines for preserving and enhancing historic landscapes' characteristics and features. This guidance is presented within the context of the landscape's significance, existing conditions, as well as current and proposed uses.[1] This methodology is consistent with *A Guide to Cultural Landscape Reports: Content, Process, and Techniques*, which outlines the purpose, process, content, and format of the cultural landscape report.[2]

This report is organized into four chapters. The first chapter establishes a framework for treatment based on the park's enabling legislation, National Register of Historic Places documentation, *General Management Plan and Environmental Impact Statement*, *Long-Range Interpretive Plan*, and the findings of the *Cultural Landscape Report for Hampton National Historic Site, Vol. I: Site History, Existing Conditions, Analysis and Evaluation* and draft *Cultural Landscape Report for Hampton National Historic Site, Vol. II: Treatment Plan*. This framework articulates a treatment philosophy that describes the desired character of the landscape, establishes a primary treatment approach for the landscape, and identifies a treatment reference date as a benchmark for assessing



Figure 0.3. The greater Towson area showing the location of Hampton National Historic Site. Plan view, 2013 (OCLP).

historic character. Based on this treatment framework, the second chapter of this report describes general treatment recommendations that address broad issues impacting the historic character of the landscape. The third chapter describes specific treatment tasks necessary to enhance the historic character of the landscape while accommodating contemporary site management needs. The fourth chapter includes a summary discussion of implementation considerations, including a table that recommends practical priorities and considerations related to facility management. The report concludes with a record of treatment completed for the Falling Gardens.

The general treatment recommendations and specific treatment tasks included in this report were developed in collaboration with park staff during a workshop held at Hampton National Historic Site on January 12, 2012. During the treatment workshop the team discussed recommendations based on an analysis of resource integrity, directives and goals expressed in existing planning documents, as well as previously unidentified park needs. Follow-up site visits with discussion of preliminary recommendations were completed on May 23–25, 2012 and August 21, 2013.

This report recommends and describes all landscape treatment at the conceptual level. Further planning, design, and compliance will be required for implementation of many of the recommendations. Chapter four of this report

details the relationship between treatment recommendations and the National Park Service Facility Management Software System (FMSS) in an effort to facilitate translation of recommendations into project funding requests. The majority of these recommendations are related to addressing deferred maintenance, new construction, or improving universal accessibility. This report does not address recurring and cyclical maintenance tasks, such as weeding and tree pruning, that are necessary in daily operation of the park and to perpetuate the historic character of the landscape. These types of recommendations are typically addressed in a preservation maintenance plan.

SITE HISTORY SUMMARY

Cultural Landscape Report for Hampton National Historic Site, Volume I contains a detailed narrative of the Hampton site history, supplemented with historical photographs, maps, and period plans. A summary of the site history follows.

Period of Early Development, 1745–90

Prior to European settlement, the area that encompasses Hampton National Historic Site likely served as a hunting ground for the region's two predominant tribes, the Susquehannock and the Shawnee. Twentieth century archeological investigations within the park have revealed a variety of early stone tools and pottery, along with quartz points. In 1652, the colonial government signed a truce with the Susquehannock, and what is now Baltimore County was patented and developed. In 1695, a prominent member of the colonial government, Colonel Henry Darnall, received a 1,500-acre land grant next to the Gunpowder River that he named "Northampton." A portion of this land would later be known as "Hampton." Although the early use of the property is undocumented, these owners may have cultivated tobacco or mined the land for its rich deposits of limestone and iron ore. After Darnall's death in 1712, it appears that Northampton passed through several owners, including Colonel Darnall's son, Henry Darnall, Charles Carroll, and Clement Hill.

In 1745, Colonel Charles Ridgely, who lived near Baltimore, purchased Northampton from Clement Hill's heirs. Ridgely immediately sent agricultural, carpentry, and forest clearing equipment to a small group of slaves at Northampton. His early improvements were designed to support the cultivation of tobacco, which at the time was colonial Maryland's predominant export. In 1760, Ridgely and his two sons, John and Captain Charles, also established the Northampton Ironworks on his property.

Captain Charles Ridgely inherited the estate from his father in 1772. As his responsibility at the family ironworks increased after the death of his older

brother (1771) and father (1772), it appears that Captain Charles Ridgely took residence, at least seasonally, at Northampton. The Hampton Farm House was centrally located within the original 1,500-acre tract, close to all fields in cultivation and near a regularly flowing stream. By the last quarter of the eighteenth century, fields were used for grain production and grazing to support Northampton's growing livestock population. The Northampton landscape also included extensive orchards.

Period of Supremacy, 1790–1829

By 1790, Northampton had been transformed into a single, unified productive unit surrounding the ironworks and a family estate. Construction of the Hampton Mansion began in 1783. Although the new residence was not completed until 1790, Captain Charles Ridgely and his wife, Rebecca, moved into the dwelling toward the end of 1788. Its architecture and landscape suggest that Captain Charles Ridgely's vision for Hampton was in the tradition of a grand country residence. The terraces of the Falling Gardens were designed based on the dimensions of the main block of the house, with parterres laid-out in the European tradition. The Serpentine Walk that was laid-out on the Great Terrace is thought to be among the earliest in America. By Captain Charles Ridgely's death in 1790 he had amassed over 24,000 acres. He was the first of the Ridgely family laid to rest in the somber neoclassical tomb near his garden, at the southeast corner of the East Orchard.

Because Captain Charles Ridgely and Rebecca were childless, he left 12,000 acres of his sprawling estate, including Hampton, to his nephew, Charles Carnan Ridgely. Though sometimes absent due to his political and military roles, Charles Carnan Ridgley conceived the farm as something more than an ordinary grouping of utilitarian buildings and structures. By 1800, a flurry of improvements in the tradition of the improved farm, or *ferme ornée*, marked Ridgely's return to Hampton. The functional, yet ornamental buildings demonstrated a clear design intent, as did Ridgely's interest in rare breeds of livestock, notably cattle and sheep. Despite these physical improvements to the Hampton farm, the agricultural showpiece failed to be profitable as Ridgely broke even.

Period of Sustainability, 1829–72

Upon Charles Carnan Ridgely's death in 1829, the estate passed to his son, John Carnan Ridgely. John Carnan Ridgely's second wife, Eliza Eichelberger, inherited a substantial fortune of her own, which contributed to the affluence of Hampton during their tenure. Eliza Ridgely took the lead on the Mansion grounds, introducing noteworthy exotic plants and trees, garden ornaments, and furnishings. Their tastes in garden design reflected the new fashions they were exposed to on their travels in Europe. A glowing portrait of Hampton appeared

in *The Horticulturist* in 1857: "*Hampton*. . .will strike the visitor. . .as expressing more *grandeur* than anything in America. . .and the impression is soon enhanced by the kind greeting and the suavity of the lady of the mansion, who would grace a palace, or make a kingdom of a cottage."

John Carnan Ridgely might appropriately be characterized as a gentleman farmer. Although his substantial inheritance did not include the labor, animals, or equipment necessary for the family farm's operation, he invested heavily in these resources, including slave labor, shortly after his father's death. At this time, the estate included a large farm complex, with an intricate system of paths and farm roads, quarries, lime kilns, springs, and dispersed housing. John Carnan Ridgely's physical improvements advanced the *ferme ornée* tradition initiated by his father and likely influenced by the contemporary writings of Andrew Jackson Downing.

When both John and Eliza Ridgely died in 1867, the estate passed to their son, Charles Ridgely. Charles Ridgely was abroad with his wife, Margaretta, occasionally over the next five years and died in Rome in 1872. During this time, his correspondence with Hampton's overseers documents the operation of the farm and Mansion grounds. The post-Civil War years were marked by a shift from slave labor to tenant farmers, many of whom found it difficult to make a reasonable living at Hampton. Physical changes to the farm landscape coincided with the division of fields for tenants and the overseer becoming a more permanent position.

Period of Decline, 1872–1945

Margaretta Ridgely survived her husband by more than three decades. Although the estate legally passed to her son, she continued to live at Hampton and to guide improvements to the grounds. National periodicals described the grounds of the Mansion under her hand as well cared for, with many "fine specimen trees" and an "ample" kitchen garden. The again fashionable Italianate Falling Gardens were bedded-out annually, with thousands of flowering annuals. Hampton's orchards persisted, with a wide assortment of apple, cherry, and peach varieties. Around 1875, the marble Mansion gates were constructed on the entrance drive. Margaretta Ridgely and her son's involvement in the establishment of the Hampton Jersey cow herd was significant as well.

Margaretta Ridgely's death in 1904 marked the complete transfer of Hampton to her son, Captain John Ridgely, who lived at Hampton with his wife, Helen. His tenure produced few improvements, although the farm was maintained at an operational level. Like her mother-in-law, Helen Ridgely took a particular interest in the Mansion grounds. She simplified gardening operations, likely in part due to dwindling financial resources, but was still responsible for planting a large variety of flowering plants. The most significant changes to Hampton during this

period, however, were related to larger, changing land use patterns in Towson. The establishment of the Hampton Development Company by the family in 1929 signaled the end of the farm as a major agricultural unit, as the remaining outlying farm acreage was divided and sold.

Upon Captain John Ridgely's death in 1938, Hampton passed to his son, John Ridgely Jr. While John Jr. and Jane lived in the Mansion, stewardship of the Mansion grounds was temporarily divested from the farm for the first time. In 1939, John Jr.'s son and daughter-in-law occupied the Farm House, returning it to a formal residence for two generations of Ridgelys.

Period of Preservation, 1945–Present

During the 1940s, John Ridgely Jr. became concerned with the impact of regional development on the Hampton estate. He expressed these concerns to David Finley, Director of the National Gallery of Art, who visited Hampton in 1945. This meeting marked the beginning the process that led to Hampton's designation as a national historic site.

In 1947, the Avalon Foundation purchased just over forty-three acres of Hampton, including the Mansion, its furnishings, and its immediate grounds. A cooperative agreement among the National Park Service, the Avalon Foundation, and the newly organized Society for the Preservation of Maryland Antiquities (now Preservation Maryland), was approved by President Harry S. Truman on December 19, 1947. The agreement allowed the Society for the Preservation of Maryland Antiquities to serve as custodian of Hampton on behalf of the National Park Service. Secretary of the Interior J.A. Krug designated Hampton a national historic site on June 22, 1948.[3] Following preliminary rehabilitation, the park opened to the public on May 2, 1949.

In 1948, John Jr. and Jane Ridgely moved from the Mansion to the Farm House, where they lived together until John Jr.'s death in 1959. Jane Ridgely retained life tenancy until her death in 1978. During her residency, the Farm House was well cared for, although many of the farm's ancillary buildings fell into disrepair. In 1962, John Ridgely Jr.'s heirs removed three buildings from the farm, including the Cow Barn, a 'quarters,' and a small blacksmith shop, to make way for future housing development. By the end of the third quarter of the twentieth century, the Hampton farm was entirely surrounded by new residential development.

Following Jane Ridgely's death in 1978 and at the urging of Senator Charles Mathias Jr., Congress passed legislation authorizing the addition of the 14.02-acre farm to the park in 1978. In 1979, the National Park Service assumed stewardship of the site from the Society for the Preservation of Maryland Antiquities. Since

that time, the National Park Service has preserved the Hampton landscape and undertaken necessary improvements consistent with law, policy, and park planning documents.

EXISTING CONDITIONS SUMMARY

Situated northeast of the unincorporated community of Towson, Hampton National Historic Site grounds include fields and lawns (North Lawn, West Field, East Orchard, and Farm Landscape), formal gardens with ornate ornamental plantings (Great Terrace and Falling Gardens), forested areas (Cemetery Woods & Ridgely Family Cemetery), and former residential and service areas (Mansion & Domestic Service Cluster, Garden Maintenance Cluster, and Farm House Cluster) (Figure 0.4). Despite the property's current use as a public park, the former residential and agricultural uses of the landscape remain visible in the landscape's myriad characteristics and features. The bucolic landscape provides diversion from surrounding suburban Baltimore development and a sense of the vastness and wealth of the Chesapeake region estate prior to the American Revolution.

Physical evidence suggests that the Hampton Mansion and farm complex were sited in response to topography and natural systems. The Mansion and Domestic Service Cluster are constructed on top of a promontory to take advantage of

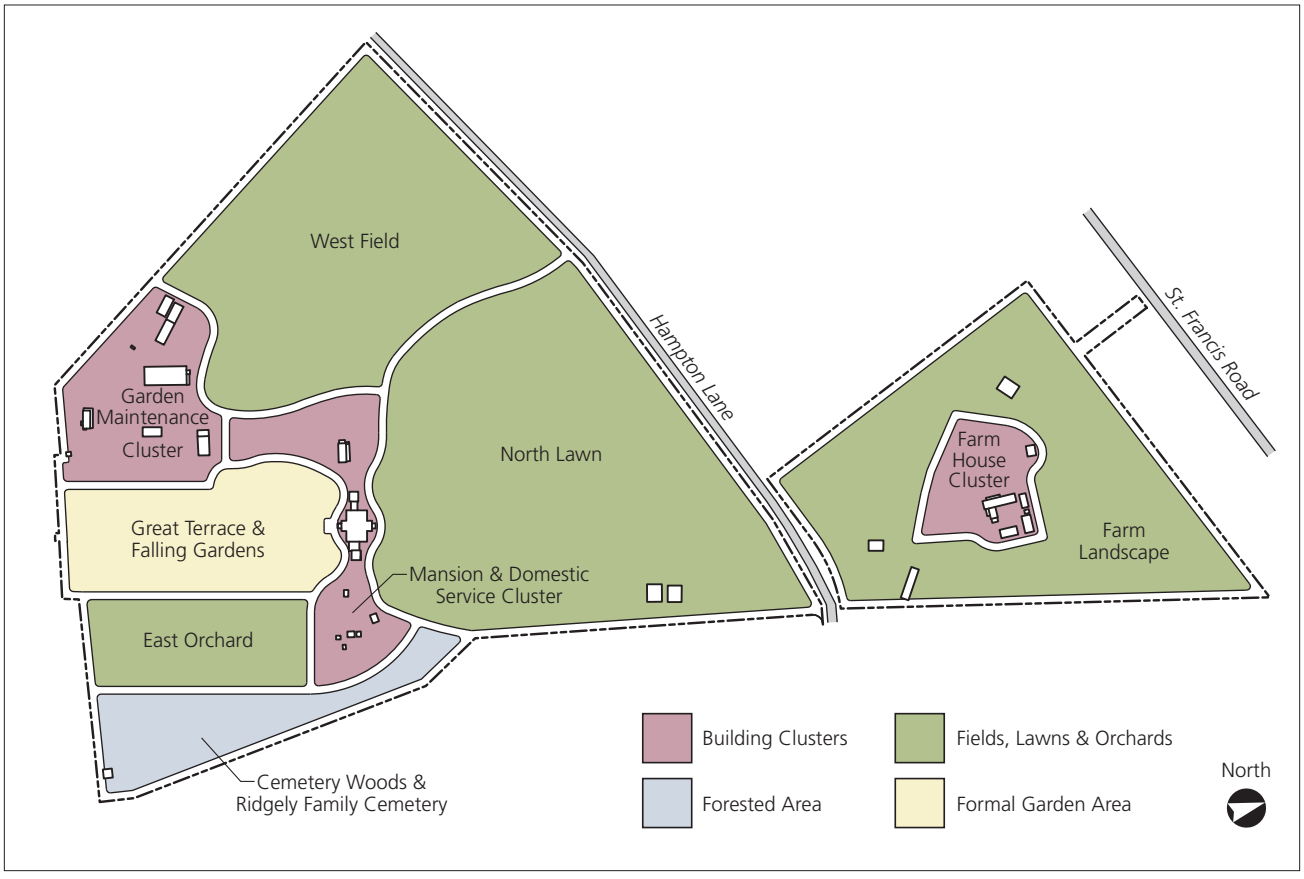


Figure 0.4. Hampton National Historic Site landscape character areas. Plan view, 2013 (OCLP).



Figure 0.5. North Lawn and Farm House Complex from the Mansion. View looking north, 2013 (OCLP).

natural ventilation and views of the Farm House complex and historic Ridgely lands beyond to the north (Figure 0.5). A spring at the southern terminus of the Falling Gardens provided easy access to water for the Mansion. The Farm House was supplied with water from a spring-fed stream at the Dairy. The physical relationship between the elevated Mansion and farm below parallels the social relationship between the Ridgelys and their slaves, servants, and tenant farmers.

Circulation routes within the Mansion landscape largely reflect their historic configurations, with drives and walkways connecting Hampton Lane to historic buildings and landscape areas. Contemporary additions to the historic circulation routes are designed to accommodate visitor parking and universal access to the Orangery and Mansion from the upper parking lot. In addition, a mulched path along Hampton Lane provides passive recreational use. Within the farm landscape, circulation patterns also reflect their historic configurations. The primary circulation route on the farm parcel follows the natural topography to connect Hampton Lane to the Farm House cluster. Contemporary stone dust paths accommodate universal access to key historic buildings and structures within the cluster.

Vegetation at Hampton National Historic Site is varied. Vegetation can be divided into four categories: ornamental plantings, woodlands, vegetative screens, and lawns and fields. The collection of specimen trees at Hampton is central to the significance of the landscape and encompasses hundreds of specimens. Among the most noteworthy trees are state champions: cedar of Lebanon (*Cedrus libani*, 1g), weeping Japanese scholar tree (*Sophora japonica* 'Pendula', 80g), and Austrian pine (co-champion, *Pinus nigra*, 25w), as well as the Baltimore county champion American holly (*Ilex opaca*, 147n). Woodlands stand along the southern, eastern, and portions of the northern property boundary. Along the eastern, western, and



Figure 0.6. Rehabilitated Parterre I of the Falling Gardens from the Great Terrace. View looking southeast, 2013 (OCLP).

northern boundaries, views to adjacent residential development are obscured by vegetative screen plantings. Fine lawn, rough lawn, and meadows characterize the majority of the ground surface of the site, with annuals and perennials in the Falling Gardens and bare understory in Cemetery Woods (Figure 0.6).

Buildings and structures at Hampton National Historic Site are numerous. The most distinguished building, the Mansion, constructed from 1783 to 1790, dominates the landscape to the south of Hampton Lane (Figure 0.7). The oldest building at Hampton National Historic Site, the Farm House, constructed in multiple phases from the early eighteenth century to 1949, dominates the landscape to the north. Nearly all ancillary buildings and structures are arranged in relation to these buildings. Their locations also directed the general site layout, including circulation features and landscape areas, including the Domestic Service Cluster, Falling Gardens, and Garden Maintenance Area. *Cultural Landscape Report for Hampton National Historic Site, Volume I* includes a detailed description of the landscape as it appeared in 2013.

ANALYSIS AND EVALUATION SUMMARY

Hampton National Historic Site was administratively listed on the National Register of Historic Places on October 15, 1966, with the passage of the National Historic Preservation Act. Documentation supporting this nomination was accepted to the National Register on March 11, 2005. According to the National Register documentation, Hampton National Historic Site is nationally significant over the period 1745 to 1948 under Criterion A in the areas of conservation, ethnic heritage (black), and social history; Criterion B in the areas of agriculture,



Figure 0.7. Hampton Mansion from the heart-shaped carriage drive. View looking south, 2013 (OCLP).

industry, and politics/government; Criterion C in the areas of landscape architecture and architecture (criteria considerations D and E); and Criterion D in the area of archeology (historic, non-aboriginal).

The documented period of significance, 1745–1948, encompasses several significant dates, including the purchase of the Northampton tract by Colonel Charles Ridgely (1745); construction of the Mansion (1783–90); Charles Carnan Ridgely's tenure in the Maryland House of Delegates (1790–95), tenure in the Maryland Senate (1796–1800), and position as Maryland's Governor (1815–18); end of slavery in Maryland (1864); purchase of the painting "Lady with a Harp" by the National Gallery of Art (1945); and establishment of Hampton National Historic Site (1948).

Many landscape features and characteristics from the period of significance remain. These characteristics and features include spatial organization, topography, natural systems, views and vistas, circulation, vegetation, buildings and structures, small-scale features, and archeological landscape features. In comparing the historic condition and the existing condition of each of the landscape characteristics and features, *Cultural Landscape Report for Hampton National Historic Site, Volume I* also provides a consolidated list of characteristics and features that contribute or do not contribute to the historic character of the landscape.

Despite Hampton's diminished size, the park landscape retains a high to moderately high level of integrity to the period of significance, with all seven aspects of integrity—location, design, setting, materials, workmanship, feeling, and association—evidenced on the grounds. Only design, setting, and materials are diminished by minor alterations to the site's layout, adjacent suburban development, and the loss of some historic plant materials, paving materials, and

small-scale features, respectively. The park is well maintained by a highly skilled horticultural and landscape maintenance staff, supplemented by a few dedicated volunteers.

TREATMENT SUMMARY

The Hampton National Historic Site cultural landscape will be rehabilitated to reflect its appearance in the pre to post-Civil War era, which coincided with the height of the physical development and condition of the property. Treatment of the landscape to its 1850s to early 1870s appearance will also enable the park to interpret the social and physical changes associated with the end of slavery in Maryland (1864) and the rise of tenant farming.

The cultural landscape retains a moderately high level of historic integrity to the Civil War era. Rehabilitation was selected as the primary treatment approach for its capacity to accommodate repair and replacement for deteriorated and missing historic features, while simultaneously allowing compatible alterations and new additions to facilitate its continued use as a national historic site.

General treatment recommendations address strategies for:

- Perpetuating historic vegetation through preservation maintenance and replacement
- Controlling deer populations through exclusion, scare devices, repellents, or substitute planting
- Managing turf to reflect its historic character and enhance environmental and economic sustainability
- Enhancing the rural character of the farm landscape through placement of objects in the landscape, modification of maintenance practices, and reintroduction of agricultural use through long-term partnerships and temporary farm demonstrations
- Providing compatible park furnishings, including seating, trash/recycling receptacles, lighting, signage, and fencing, that meet contemporary visitor needs without detracting from the historic character of the landscape

Treatment tasks seek to enhance the historic domestic and agricultural character of the landscape while recognizing and balancing implementation and maintenance constraints. Recommendations address a number of specific changes that have occurred in Hampton landscape since the treatment reference date (150 years ago) that impact the historic character of the landscape, including lost and overgrown plant material, missing historic buildings, structures, circulation routes,



Figure 0.8. Long House Granary from Farm Road. View looking southeast, 2013 (OCLP).

and field fences. The greatest opportunities to enhance the historic character of the landscape include rehabilitation of the Domestic Service Cluster in the vicinity of the geothermal well field, rehabilitation of the lower terraces of the Falling Gardens, and rehabilitation of circulation routes and small-scale features in the vicinity of the Dairy and Long House Granary (Figure 0.8).

Contemporary visitor use is also accommodated through recommendations related to compatible universal access improvements to key visitor facilities and sites essential to the park's interpretive program, including the Visitor Contact Station, Orangery, Great Terrace, Falling Gardens, and Farm Road. Other recommended compatible new additions to the Hampton landscape include installation of deer fencing; addition of screen planting along Stable Drive, in the vicinity of the Visitor Contact Station, and along the perimeter of the farm landscape to obscure views of adjacent residential development; and reconfiguration of the upper parking lot to accommodate access from the Visitor Contact Station and minimize intrusion on the historic core surrounding the Mansion. Treatment recommendations also give consideration to the perennials constraints of maintenance and the challenges posed by contemporary pests and diseases, along with the need to make limited species substitutions to address these issues. To this end, this report also incorporates a prioritized implementation strategy that integrates current Facility Management Software System (FMSS) data.

The final chapter of this report includes a summary record of treatment for the upper two terraces of the Falling Gardens, which were rehabilitated in early 2010 to their Ridgley era configuration. Since 2010, the upper two parterres have been bedded out each year with annuals that reflect the historic planting composition

based on the research findings documented in the 2008 draft *Cultural Landscape Report for Hampton National Historic Site, Vol. III: Formal Garden Planting Plans*, included as Appendix B of this report.

Endnotes

1 Robert R. Page, Cathy A. Gilbert, and Susan A. Dolan, *A Guide to Cultural Landscape Reports: Contents, Process and Techniques* (Washington, D.C.: National Park Service, second printing 2005), 81.

2 Robert R. Page, Cathy A. Gilbert, and Susan A. Dolan, *A Guide to Cultural Landscape Reports: Contents, Process and Techniques* (Washington, D.C.: National Park Service, second printing 2005).

3 13 F.R. 3783 (22 June 1948), *Designation of Hampton National Historic Site near Towson, MD*.



Figure 1.1. Hampton Farm House Complex from Farm Road. View looking north, 2013 (OCLP).

1. TREATMENT FRAMEWORK

This chapter describes a philosophical framework that provides context for the treatment recommendations included in this report. This chapter begins with an overview of applicable regulations and policies, park enabling legislation, and current park planning. Based on this framework, a landscape treatment philosophy articulates a guiding vision for the Hampton National Historic Site landscape, including a primary treatment approach and treatment reference date.

NATIONAL PARK SERVICE REGULATIONS AND POLICIES

The treatment framework for the Hampton National Historic Site landscape is guided broadly by the mission of the National Park Service, defined in the Organic Act of 1916, "to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."[1] The application of this mission to cultural landscapes is articulated in *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*, which in turn is interpreted within a hierarchy of National Park Service management regulations and policies.

As a cultural resource, management of the Hampton National Historic Site landscape is defined by *36 Code of Federal Regulations: Parks Forests and Public Property, Part 2: Resource Protection, Public Use and Recreation* (preservation of natural, cultural and archeological resources). The application of these regulations to cultural landscapes is contained within *National Park Service Management Policies* (2006), *Director's Order 28: Cultural Resource Management*, and *NPS-28: Cultural Resource Management Guideline*. Several management standards outlined in *NPS-28* provide a broad philosophical base for all four treatment approaches outlined in *The Secretary of the Interior's Standards* and are directly applicable to the Hampton National Historic Site landscape:

- Land use activities, whether historic or introduced, do not impair archeological resources.
- Uses addressing programmatic needs or park facilities within a cultural landscape, such as visitor centers, parking, interpretive structures, housing, administrative facilities, maintenance yards, and storage areas, are carefully considered in the context of the significance of the landscape.

- Use is monitored and regulated to minimize both immediate and long-term damage.
- Contemporary facilities do not adversely impact the landscape's physical and visual character. New facilities are compatible with the historic character and material of the landscape.
- Contemporary structures to facilitate access, such as ramps, railings, signs, and curb cuts, are designed and located to minimize adverse impacts on the character and features of a cultural landscape.
- Access to a cultural landscape that is vulnerable to damage from human use is limited, monitored, or controlled.
- All treatment and use decisions reflect consideration of effects on both the natural and built features of a cultural landscape and the dynamics inherent in natural processes and continued use.
- Use of destructive techniques, such as archeological excavation, is limited to providing sufficient information for research, interpretation, and management needs.
- All work that may affect cultural landscapes is evaluated by a historical landscape architect and other professionals, as appropriate.
- All modification, repair, or replacement of materials and features is preceded by sufficient study and recording to protect research and interpretive values.
- New work, materials, and replacement features are identified, documented, or permanently marked in an unobtrusive manner to distinguish them from original work, materials, and features.
- A proposed treatment project is initiated by the appropriate programming document, including a scope of work and cost estimate from a cultural landscape report. Such projects include preservation maintenance as well as major treatment. No treatment is undertaken without an approved cultural landscape report or work procedure specifying the work, and Section 106 compliance.
- A treatment project is directed by a historical landscape architect and performed by qualified technicians.
- Representative features salvaged from a cultural landscape are accessioned and cataloged, provided that they fall within the park's scope of collection statement.

- All changes made during treatment are graphically documented with drawings and photographs. Records of treatment are managed as archival materials by a curator or archivist within the park's museum collection.
- Work on historic structures, including modifications to improve drainage and access, does not harm the character-defining features of a cultural landscape.

ENABLING LEGISLATION

The initial 43.295-acre parcel of land to the south of Hampton Lane that was to comprise Hampton National Historic Site was conveyed to the United States by John Ridgely Jr. and Jean R. Ridgely, his wife, by deed dated January 23, 1948. Hampton National Historic Site was established on June 22, 1948 by Secretary of the Interior J.A. Krug. Hampton was the first unit of the National Park System so designated for its architectural significance: "'Hampton' is of national historical significance as a splendid example of a great Georgian Mansion illustrating a major phase of the architectural history of the United States."[2] The secretarial order provided that "the administration, protection, and development of this national historic site shall be exercised by the National Park Service in accordance of the act of August 21, 1935." This act, known as the Historic Sites Act, established "national policy to preserve for public use historic sites, buildings and objects of significance for the inspiration and benefit of the people of the United States."[3]

On November 10, 1978, with the support of United States Senator Charles Mathias Jr. of Maryland, 14.02 acres to the north of Hampton Lane were added to the park "in order to preserve…lands and buildings historically associated with Hampton Mansion."[4] In his testimony in support of the legislation, Senator Mathias stated:

> …The significance of the farm is, simply, that Hampton originally was not just the mansion and its immediate grounds; rather, it was a sprawling plantation… We now have the opportunity to rejoin these two properties in one contiguous and grand Hampton National Historic Site. The acquisition of the Hampton Farm and its rehabilitation would have a dynamic effect upon the mansion as it is currently interpreted. The operation of a revitalized farm complex would dramatically help to transform Hampton from a site of primarily genealogical and architectural interest to what it really was – the centerpiece of a once vast estate, of which the farm was a major component.[5]

The enabling legislation serves as the cornerstone for all planning decisions and provides the most fundamental criteria against which all decisions are vetted.

NATIONAL REGISTER OF HISTORIC PLACES DOCUMENTATION

Hampton National Historic Site was administratively listed on the National Register of Historic Places in 1966 with the passage of the National Historic Preservation Act. Documentation for Hampton National Historic Site was completed in 2005.[6] This historical documentation supports planning decisions related to the park cultural landscape. The National Register of Historic Places documentation indicates that Hampton National Historic Site is nationally significant over the period 1745 to 1948. A summary of the park's significance is provided in the table below.

With regard to the property's significance under Criterion C, the National Register of Historic Places documentation notes that the Mansion and Farm retain a diverse group of resource that preserve a larger, integrated picture of how the property once operated. In addition, the estate reflects a sense of the historic time and place through the extant buildings, landscapes, and collections.[7] The documentation also notes that the park maintains a high level of integrity, with many original buildings and landscape features intact.[8]

RELATIONSHIP TO EXISTING PARK PLANNING

Since its designation, management of Hampton National Historic Site has been supported by planning initiatives consistent with National Park Service policy. Park management is guided by the *Hampton National Historic Site General Management Plan and Environmental Impact Statement* (2012), which is founded in the park's enabling legislation (1948, 1978) and history. In turn, this history

Table 1.1. National Register Significance Summary

Criterion	Category	Period	Specific Date	Event
A	Conservation (historic preservation)	1945–48	1945	Purchase of "Lady with a Harp" initiates preservation of Hampton
			1948	Property transferred to National Park Service
	Ethnic Heritage (black)	1745–1864	1745	Northampton tract purchased by Col. Charles Ridgely
			1864	Slavery outlawed in Maryland
	Social History	1745–1948	—	—
B	Agriculture (Capt. Charles Ridgely)	1745–1948	—	—
	Industry (Capt. Charles Ridgely)	1745–1829	1829	Northampton furnace ceased production
	Politics/Government (Gen./Gov. Charles Carnan Ridgely)	1790–1818	1790–95	Maryland House of Delegates
			1796–1800	Maryland Senate
			1815–18	Maryland Governor
C	Architecture (Criteria Considerations D & E)	1783–1910	1783–90	Mansion constructed
			1910	Last contributing building constructed (Garage)
	Landscape Architecture	1745–1948	—	—
D	Archeology	1745–1948	—	—

is documented in the National Register of Historic Places documentation for Hampton (2005). Management objectives related to the visitor experience and cultural landscape are guided by the *Hampton National Historic Site Long-Range Interpretive Plan* (2010) and the draft *Cultural Landscape Report for Hampton National Historic Site* (2004, 2006). Management of park infrastructure, including those facilities associated with the cultural landscape, is accomplished through the use of computer-aided facility management software, or the National Park Service Facility Management Software System (FMSS). Each of these planning initiatives is described below as they inform and relate to treatment of the Hampton National Historic Site cultural landscape.

GENERAL MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT (2012)

The *Hampton National Historic Site General Management Plan and Environmental Impact Statement* provides a clear definition of the park's purpose, significance, fundamental resources and values, and direction that will guide and coordinate all planning and management for fifteen to twenty years to come. Based on the basic purpose of the National Park System, defined in the Organic Act of 1916, the *General Management Plan and Environmental Impact Statement* articulates the specific purpose of Hampton National Historic Site:

> To preserve unimpaired the natural and cultural resources of this rare commercial, industrial and agricultural estate in the Chesapeake region; and
>
> To stimulate understanding of how national events and social change are revealed in the site's resources and the interrelationships of the family and the works who lived and labored on the estate as it took shape and changed over the 18th and 19th centuries.[9]

The *General Management Plan and Environmental Impact Statement* identifies four goals related to achieving the park's purpose. These goals are central to achieving the desired future condition of the park:

> **Cultural and Natural Resource Management:** Historic structures, landscapes, artifacts, archives, archaeological sites, and natural resources are protected, preserved, and maintained in good condition, and made accessible where appropriate. Scholarly research contributes to knowledge about all of the park's cultural resources and history.
>
> **Interpretation and Visitor Experience:** The public understands and appreciates historical national events and social change though their experience of the site's outstanding collection of resources and through its stories.
>
> **Facilities and Visitor Use:** Park visitors and staff enjoy high quality facilities accessible to all segments of the population. Administrative facilities are safe and efficient.
>
> **Partnerships and Cooperative Actions:** The park works cooperatively with public and private entities that support its mission to protect and interpret park resources.[10]

The plan also identifies fundamental resources, or those features, systems, processes, experiences, stories, scenes, sounds, smells, or other attributes, which are critical to achieving the park's purpose and warrant priority consideration during planning and management. They include: buildings, structures, landscape, and associated archeological resources, museum collections and archives, and the concept that Hampton reflects the American experience as lived by a cross section of social and economic classes, and facilitates understanding of the central role of slavery in shaping American history.[11]

In support of these fundamental resources, treatment of the Hampton National Historic Site landscapes prioritizes enhancing the historic setting through viewshed management, perpetuating the collection of historic vegetation, accommodating universal access, and demonstrating the working aspects of the property in agricultural areas. Of the resources that comprise the park, historic views, vegetation, circulation patterns, and uses are all integral to perpetuating the historic character of the property. The management and interpretation of each of these resources has significant potential to advance the park's planning objectives defined in the *General Management Plan and Environmental Impact Statement*.

Based on a thorough evaluation of three management alternatives, alternative three was selected as the preferred management alterative. Alternative three establishes two management zones within the park: a historic zone, comprised on the bulk of the site's acreage, and a support zone, comprised of the entrance road and parking lot areas, the Stable Drive area, and the Farm Road area (Figure 1.2). Within the historic zone, the park will permit preservation and rehabilitation activities to support interpretive and administrative uses. Within the support zone, the park will permit preservation, rehabilitation, and limited new construction to support park operations.[12]

The *General Management Plan and Environmental Impact Statement* identifies several key concepts related to the cultural landscape. The recommendations included in the following chapters address each of these key concepts in detail:

- Rehabilitation with limited reconstruction will be the primary treatment approach.
- The entire story of the park, from its heyday in the nineteenth century though changes in ownership in the twentieth century, will be interpreted in an expanded visitor experience.
- Adaptive reuse of historic buildings will distribute park functions and uses across the property.
- New facilities will have limited intrusion on the historic character of the cultural landscape.

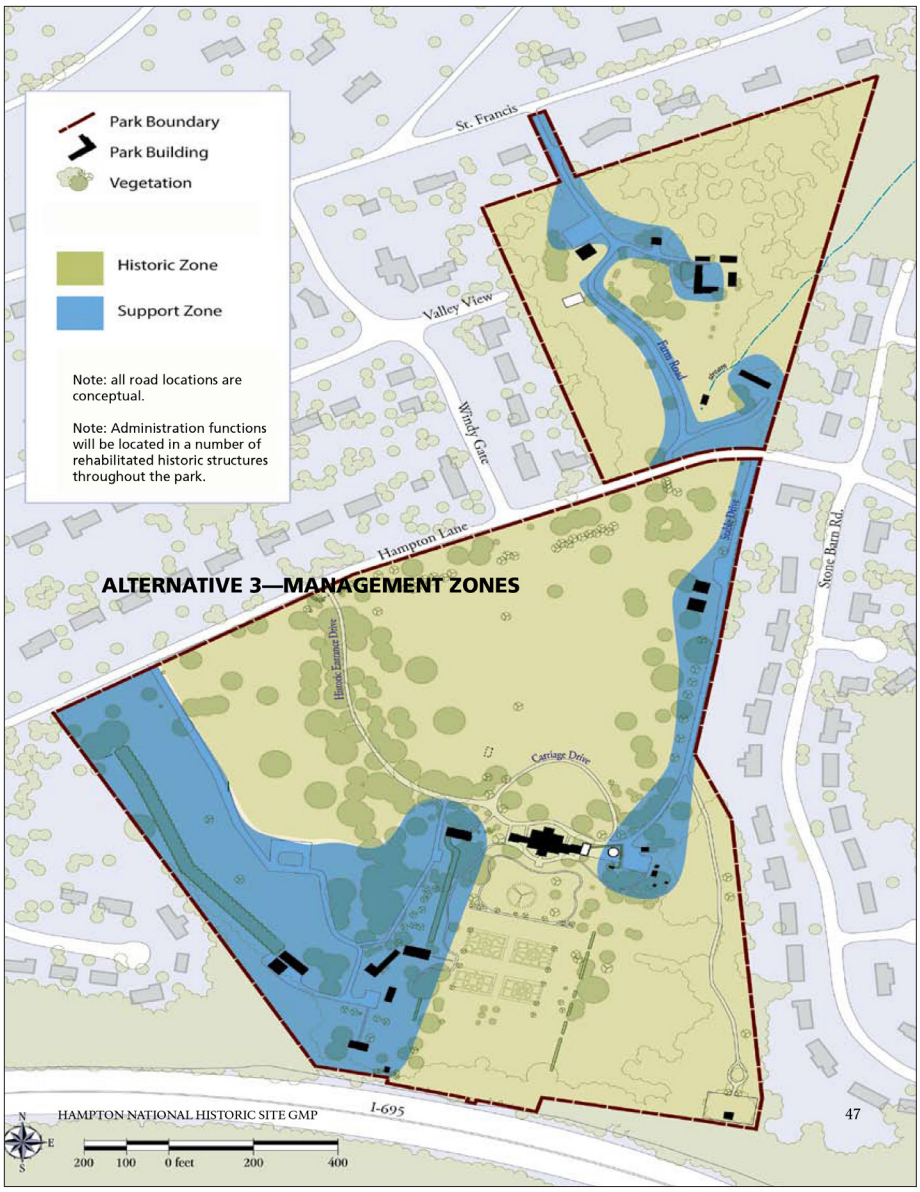


Figure 1.2. Hampton National Historic Site General Management Plan preferred alternative management zones. Plan view, 2012 (HAMP).

- The Summer Kitchen and Corn Crib will be reconstructed to accommodate visitor contact and interpretation.
- The non-historic entrance drive will be relocated and Farm Lane will be realigned.
- A new pedestrian connection will accommodate safe access between the mansion and farm landscapes.
- Historic paths will be modified to accommodate universal access and non-historic paths locations will be minimized.
- Surface treatments will evoke the historic character of the property.

- The West Field and West Orchard will be rehabilitated to evoke their historic character.
- The top terrace of the Falling Gardens will be rehabilitated to its original condition, while the lower terraces, as well as the gardens and fields within the farm landscape, will be managed to evoke their original uses and designs with a limited gardening staff.
- Historic specimen plants within the cultural landscape, regardless of origin or invasive qualities will be stabilized and protected.
- Non-historic plant material, whether native or exotic, will be controlled to preserve the integrity of the landscape.

LONG-RANGE INTERPRETIVE PLAN (2010)

The *Hampton National Historic Site Long-Range Interpretive Plan* provides a vision for the future interpretation, education, and visitor experience of Hampton National Historic Site. The plan highlights key interpretive themes that represent the most important stories and core messages that should be included in the park visitor experience. These interpretive themes are consistent with the *General Management Plan and Environmental Impact Statement* and include:

> The Hampton estate was created an evolved through the actions of diverse groups in a nation struggling to define its own concept of freedom. Hampton was built by wealth derived from agriculture, industry, and commerce. Those endeavors were initiated and management by the Ridgely family – one of the wealthiest and most prominent in the Chesapeake region – but were dependent upon the labor of their employees, indentured servants, and enslaved workers.
>
> The nature of the estate and the enterprises upon which it depended changed and evolved to reflect national events and trends. The Ridgely family owned and managed Hampton for more than 200 years. Over the course of that time, major economic, political and social influences, such as the Revolutionary War, Civil War, the emancipation of slaves, and the development of new technology, affected the profitability of agriculture and other enterprises supporting the estate, as well as its designed landscape and interior spaces.
>
> Hampton's structures, landscape, historic objects, archives, and archeological resources reflect the estate's activities, its diverse communities and their interrelationships. The design and placement of the ornate Georgian mansion, gardens, and the estate outbuildings illustrate the social and economic differences and relationships among the people associated with the estate. The social structure and the diversity of communities are demonstrated by the contrast between the abundance of Ridgely family possession and writings and the limited-existence of surviving artifacts and archives of the workers.[13]

Successful interpretation and successful landscape management are linked. As articulated in *Director's Order 6: Interpretation and Education*, there is a direct and critical connection between resource interpretation and management:

> Sound interpretive planning provides an organized method for making informed choices about a park's interpretive and educational program. It can provide solutions to management problems, with the goals of encouraging preservation of park resources, and fostering increased visitor understanding, appreciation, enjoyment, and stewardship.[14]

The *Long-Range Interpretive Plan* recognizes the core role of the cultural landscape in telling these stories, noting that the need for "expand[ed] interpretive media for outbuildings and grounds," and the need to "continue to include [the] cemetery in future visitor experience planning."[15]

Enhancing interpretation has the potential to enhance stewardship through heightened public awareness of park resources. The *Long-Range Interpretive Plan* reinforces this fact, noting that, "The ultimate goal is the development of a cost-effective, tightly-focused, high quality park interpretive program that effectively addresses management goals, identifies the most important concepts to convey to park visitors and recommends strategies to help parks achieve their mission, protect their resources, and provide the best services to visitors."[16] Many of the recommendations in the following chapters reinforce the interpretive themes identified in the *Long-Range Interpretive Plan*.

CULTURAL LANDSCAPE REPORT DRAFT (2004, 2006)

A three-volume Cultural Landscape Report for Hampton National Historic Site was prepared from 1998 to 2008 by park staff and staff of the Northeast Regional Office. This three-volume format reflects the standard organization of a cultural landscape report. The *Cultural Landscape Report for Hampton National Historic Site, Vol. I: Site History, Existing Conditions, Analysis and Evaluation* (2004) details the site's history in an annotated chronology, documents existing landscape conditions, analyzes the integrity of the landscape, provides an evaluation of the historical significance of the park, and includes general treatment recommendations. The report identifies the historical values associated with the landscape, documenting extant landscape characteristics and associated features, and defining the significance and integrity of the landscape.

However, the general recommendations included in the *Cultural Landscape Report for Hampton National Historic Site, Vol. I* were prepared in advance of the *General Management Plan and Environmental Impact Statement* (2012) and could not anticipate the preferred management alternative or treatment approach directed by the final, accepted plan. The report was also prepared in advance of the accepted National Register of Historic Places documentation for Hampton National Historic Site (2005), so some discrepancies exist between the *Cultural Landscape Report for Hampton National Historic Site, Vol. I* and the final, accepted documentation. In 2014, the Olmsted Center for Landscape Preservation updated

the *Cultural Landscape Report for Hampton National Historic Site, Vol. I* to reflect the findings and guidance included in the National Register documentation and the *General Management Plan and Environmental Impact Statement*.

The *Cultural Landscape Report for Hampton National Historic Site, Vol. II: Treatment Plan* (draft, 2006) articulates a long-term preservation strategy for Hampton National Historic Site's cultural landscape based on its significance, existing conditions, and use. The draft report identifies preservation as the preferred treatment approach for the overall landscape, with detailed drawings that identify historic landscape features to be preserved. The report also defines rehabilitation zones, which include the Falling Gardens, West Field, and farm landscape. Additional drawings included in a volume titled *Cultural Landscape Report for Hampton National Historic Site, Vol. III: Formal Garden Planting Plans* (2008) indicate rehabilitation tasks for the Falling Gardens, including planting plans for all six parterres. However, these volumes were also prepared in advance of the final *General Management Plan and Environmental Impact Statement* (2012) and National Register of Historic Places documentation (2005).

This second volume of the 2014 report constitutes the refinement and completion of the draft *Cultural Landscape Report for Hampton National Historic Site, Volumes II and III* consistent with the direction of the final *General Management Plan and Environmental Impact Statement* and the accepted National Register of Historic Places documentation for Hampton National Historic Site.

FACILITY MANAGEMENT SOFTWARE SYSTEM WORK PLANNING

The National Park Service Facility Management Software System (FMSS) is designed to manage park infrastructure and track costs associated with its care. Accurate FMSS organization and timely updates enable parks to prioritize projects and create funding requests that accurately reflect asset value and condition. FMSS hierarchy consists of a Sites (e.g. Hampton National Historic Site), Asset Types (e.g. Maintained Landscape), Locations (geographic areas, e.g. HAMP Terraces), and assets (features, e.g. turf).

Hampton National Historic Site's cultural landscape is tracked through a number of Asset Types, including Roads, Parking Areas, Trails, Maintained Landscapes, and Buildings. The majority of the assets located with the cultural landscape at Hampton National Historic Site are tracked under the Maintained Landscape Asset Type. A Maintained Landscape typically includes exterior park areas that have been developed and improved to support operations or visitor activities. To be classified as a Maintained Landscape, a landscape must require regular, recurring maintenance and include built features.

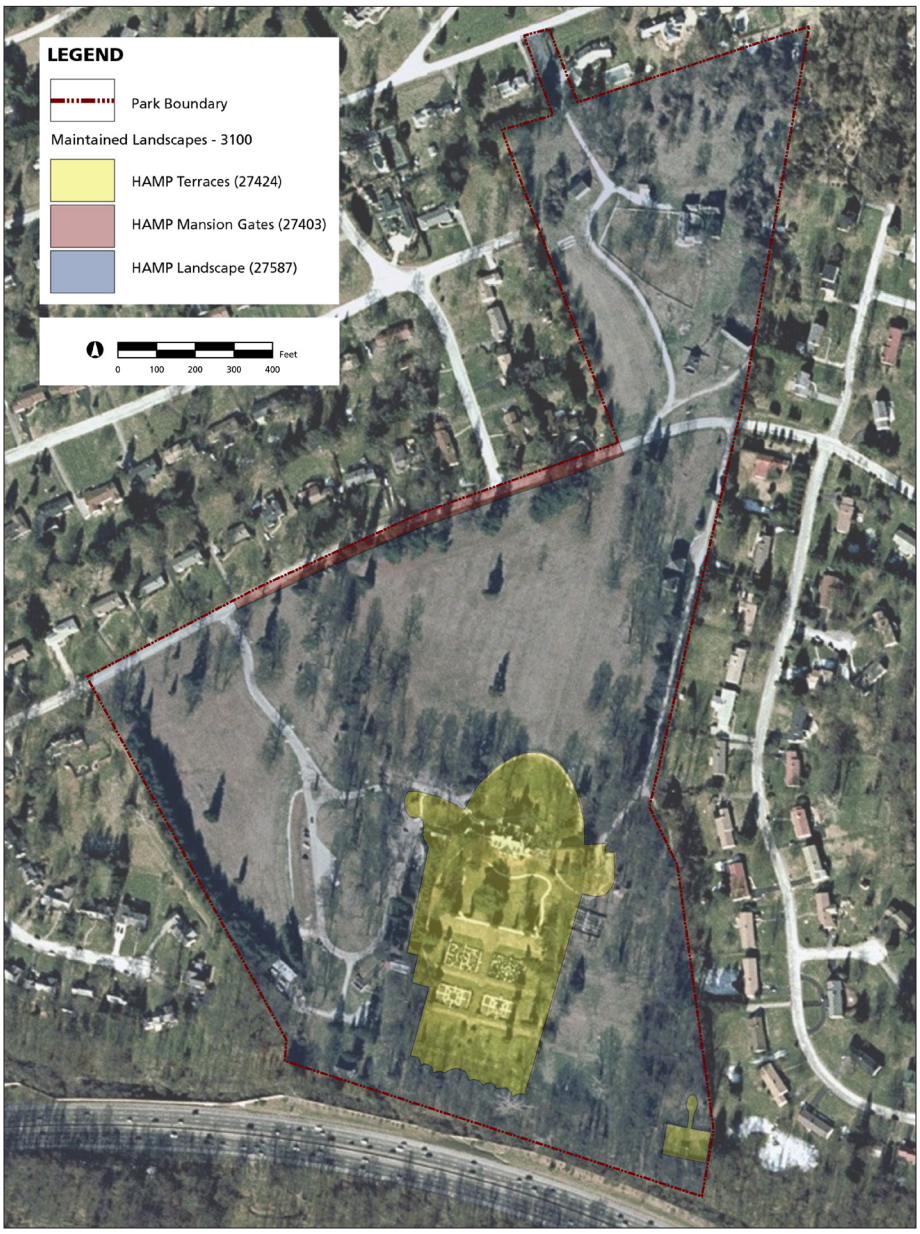


Figure 1.3. Hampton National Historic Site FMSS Maintained Landscapes Asset Type Location/ Asset hierarchy map. Plan view, 2010 (OCLP).

Organization of the Maintained Landscape Asset Type varies by park and should reflect specific areas for which the park needs to track costs. At present, Hampton National Historic Site's Maintained Landscape encompasses three Locations, including HAMP Landscape, HAMP Terraces, and HAMP Mansion Gates (Figure 1.3). These Locations are well-populated with associated assets in the FMSS database, following hierarchy development and condition assessment with Olmsted Center for Landscape Preservation staff in 2010. Because cultural resources management and facilities management use different terminology to plan for and manage cultural resources, the last chapter of this report includes a crosswalk to translate cultural landscape treatment recommendations to FMSS work orders and tasks.

LANDSCAPE TREATMENT PHILOSOPHY

The Hampton National Historic Site landscape treatment philosophy articulates the essential qualities of the landscape that convey its significance and is consistent with broad principles derived from the park's enabling legislation and the preferred management alternative three in the *General Management Plan and Environmental Impact Statement*. The philosophy helps to guide decisions and provide context for the general recommendations and specific treatment tasks included in this report.

HAMPTON LANDSCAPE TREATMENT PHILOSOPHY

Hampton National Historic Site is the surviving core of a once a vast domestic, agricultural, commercial, and industrial enterprise that encompassed over 24,000 acres. The design and use of the landscape is primary to the significance of the national historic site. The designed landscape serves as the setting for one of the most celebrated Georgian houses in America. The ornamental and functional embellishments to the property chronicle over two hundred years of landscape history (1745–1948) and reflect the changing tastes and values of Hampton's occupants.

The design and modification of the Mansion landscape exemplifies residential design trends popular in the mid-Atlantic from the early eighteenth century through the mid-twentieth century. The eighteenth century formal site layout and planting design gave way to picturesque design principles modeled after the English landscape style in the nineteenth century and later to colonial revival improvements in the early twentieth century. Within the Mansion landscape, these styles are evident in the planting composition, planting style, grading, and layout of the grounds.

The farm was once at the core of the Ridgely family's extensive agricultural holdings and is an outstanding example of the *ferme ornée*, or ornamental farm, in which the practical aspects of the working landscape were combined in an aesthetically pleasing scene. Following the abolition of slavery, the farm was subdivided and worked by tenant farmers, transforming once vast fields into a patchwork of smaller plots. Today, the farm landscape represents the last remnant of the quarters system of agriculture employed at Hampton. The transition from slave labor to tenant farming remains evident in the cluster arrangement of the farm and in the diverse buildings and structures related to its historic uses.

Visually and physically integrated, the Mansion and farm landscapes reflect a lifestyle that became largely obsolete after 1864, when the abolition of slavery in Maryland dramatically impacted the Ridgely family's ability to sustain high levels of agricultural production and landscape maintenance. Rehabilitation

seeks to perpetuate and enhance the historic characteristics and features of the landscape to their appearance between the 1850s and early1870s, at the height of the physical development of the property, when the transition from slave labor to tenant farming marked a turning point in the history of the estate.

Within the historic core of the property, defined as the "historic zone" in the *General Management Plan*:

- Alternations and diminutions to the core of the landscape that followed the Civil War as a result of decreased maintenance will be remedied to enhance the sense of time and place that characterized the property at the height of its development. This includes replacing lost and overgrown plant material, reconstructing missing historic buildings and structures, and reestablishing missing field fences.
- Fundamental landscape characteristics and features, including patterns of spatial organization within and between the Mansion and farm landscapes, historic circulation features throughout the Mansion landscape, and historically significant vegetation will be preserved and perpetuated.
- The landscape will continue to receive a high level of skilled care to present the horticultural, agricultural, and ornamental qualities that characterized the property throughout Ridgely family ownership.
- Treatment will take into account the perennial constraints of maintenance, as well as opportunities to enhance stewardship partners.

Along key visitor access routes and the perimeter of the property, defined as the "support zone" in the *General Management Plan*:

- The historic character of the residential and working landscape will be balanced with contemporary park uses, including visitor services and maintenance.
- Compatible new circulation routes will be accommodated so that visitors of all physical abilities might experience and understand this nationally-significant historic landscape.
- Limited new screen plantings will mitigate the impact of the surrounding suburban setting and support a visitor experience that is consistent with the experience of the landscape around the conclusion of the Civil War.
- New park furnishings and signage necessary for public use will be inconspicuous and compatible with the historic setting.
- Landscape improvements will be sustainable.

PRIMARY TREATMENT APPROACH

To implement this treatment philosophy, the recommended primary treatment approach for Hampton National Historic Site is rehabilitation. Rehabilitation accommodates repair and replacement for deteriorated and missing historic features, while simultaneously accommodating compatible alterations and new additions to facilitate Hampton's continued use as a national park.

Rehabilitation is defined as, "the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values."[17] The Secretary of the Interior defines the following ten standards under rehabilitation:

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.

2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize the property will be avoided.

3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.

4. Changes to a property that have acquired historic significance in their own right shall be retained and preserved.

5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration required replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

7. Chemical or physical treatment, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

8. Archaeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

9. New additions, exterior alterations or related new construction will not destroy historic materials, features, and spatial relationships that characterize

the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.[18]

As interpreted in standards one through eight above, rehabilitation emphasizes protection and preservation of extant historic features, repair of deteriorated historic features, and replacement in-kind of severely deteriorated or missing historic features. At the same time, standards nine and ten acknowledge the need to meet changing uses through alterations or new additions while perpetuating the historic character of the property. They allow for repairs and alterations of the cultural landscape to improve the utility and function of landscape features, making a compatible use of a property feasible while preserving those landscape characteristics and features that contribute to its historic significance.

Standards nine and ten above are warranted for Hampton National Historic Site because of the need to adapt the landscape to public visitation and interpretation. Rehabilitation provides the philosophical basis for adding such features as interpretive waysides and altering circulation to accommodate universal accessibility in a manner that is compatible with historic character. Rehabilitation also provides flexibility to address contemporary management considerations, such as altering vegetation to address maintenance and plant disease concerns.

As interpreted in *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*, the standards do not require that landscapes be maintained in a static appearance, but rather that they be managed the preserve and enhance historic character.[19] Managing for historic character means that those aspects of a landscape that illustrate its significance will be perpetuated. Integral to managing for historic character is a site-specific judgment about the importance of some landscape characteristics and features over others. Under rehabilitation, establishing priorities offers an opportunity to maintain the historic appearance of the landscape with limited resources.

TREATMENT REFERENCE DATE

Identification of a treatment reference date provides an objective benchmark for managing historic character in a landscape. A treatment reference date corresponds to a time during the historic period when the landscape reached the height of its development and when the property best illustrated its significance and interpretive themes. Further consideration is given to the level of historic documentation and to existing landscape conditions.

For Hampton National Historic Site, the period of significance extends from 1745, when the original "Northampton" tract was acquired by the Ridgely family, to 1948, when Hampton National Historic Site was established by the Secretary of the Interior. The Hampton landscape saw many modifications over this two hundred year period, including both growth and decline. A treatment date between the 1850s and early 1870s corresponds to the height of the physical development and condition of the landscape. Following the abolition of slavery in Maryland in 1864, paid staff and tenant farmers reduced the Ridgelys' capacity to accommodate sustained high levels of landscape maintenance once provided by slave labor. This change figures prominently in the park's interpretive program and marks a major turning point in both the social history of the estate and in the physical history of the landscape. Furthermore, the remaining portion of the historic landscape maintains a moderately high level of integrity to the Civil War period, and landscape documentation is sufficient to support accurate landscape treatment.

Endnotes

1 An Act to Establish a National Park Service, and for other purposes (National Park Service Organic Act, August 25, 1916), 39 Stat. 535.

2 Designation of Hampton National Historic Site near Towson, MD (22 June 1948, 13 F.R. 3783).

3 Historic Sites Act of 1935 (21 August 1935) 49 Stat. 666; 16 U.S.C. 461.

4 Public Law 95-625 (10 November 1978), *Title XIII–Report and Boundary Expansion, Hampton National Historic Site*.

5 Statement of Sen. Mathias, *Congressional Record* (12 October 1978): 36221–36222, as referenced in GMP, ii.

6 Ann Milkovich McKee, *National Register of Historic Places Registration Form for Hampton* (Washington, D.C.: United States Department of the Interior, National Park Service, 11 March 2005).

7 Ann Milkovich McKee, *National Register of Historic Places Registration Form for Hampton* (Washington, D.C.: United States Department of the Interior, National Park Service, 11 March 2005), Sec. 8, p. 45

8 Ann Milkovich McKee, *National Register of Historic Places Registration Form for Hampton* (Washington, D.C.: United States Department of the Interior, National Park Service, 11 March 2005), Sec. 7, p. 2

9 *Hampton National Historic Site General Management Plan and Environmental Impact Statement* (National Park Service, Northeast Regional Office and Hampton National Historic Site, 2012), 9.

10 *Hampton National Historic Site General Management Plan and Environmental Impact Statement* (National Park Service, Northeast Regional Office and Hampton National Historic Site, 2012), 14.

11 *Hampton National Historic Site General Management Plan and Environmental Impact Statement* (National Park Service, Northeast Regional Office and Hampton National Historic Site, 2012), 11–12.

12 *Hampton National Historic Site General Management Plan and Environmental Impact Statement* (National Park Service, Northeast Regional Office and Hampton National Historic Site, 2012), 36.

13 *Hampton National Historic Site General Management Plan and Environmental Impact Statement* (National Park Service, Northeast Regional Office and Hampton National Historic Site, 2012), 10; *Hampton National Historic Site Long-Range Interpretive Plan* (National Park Service, Harpers Ferry Center and Hampton National Historic Site, June 2010), 22.

14 National Park Service, *Director's Order 6: Interpretation and Education* (2005), Sec. 5.1.

15 *Hampton National Historic Site Long-Range Interpretive Plan* (National Park Service, Harpers Ferry Center and Hampton National Historic Site, June 2010), 29.

16 *Hampton National Historic Site Long-Range Interpretive Plan* (National Park Service, Harpers Ferry Center and Hampton National Historic Site, June 2010), 11.

17 Charles A. Birnbaum and Christine Capella Peters, eds., *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* (Washington, D.C.: U.S. Department of the Interior, 1996), 48.

18 Charles A. Birnbaum and Christine Capella Peters, eds., *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* (Washington, D.C.: U.S. Department of the Interior, 1996), 49.

19 Robert R. Page, Cathy A. Gilbert, and Susan A. Dolan, *A Guide to Cultural Landscape Reports: Contents, Process, and Techniques* (Washington, D.C.: National Park Service, 1998, second printing 2005), 134.



Figure 2.1. Caretaker's Cottage from the Garden Maintenance Area. View looking south, 2013 (OCLP).

2. General Treatment Recommendations

This chapter includes general treatment recommendations for the Hampton National Historic Site landscape. The intent of this chapter is to provide direction for future management decisions on issues that impact the historic character of the landscape. The recommendations included in this chapter are rooted in resource integrity and intended to guide treatment decisions. Recommendations in this chapter are based on the findings of the *Cultural Landscape Report for Hampton National Historic Site, Volume I: Site History, Existing Conditions, Analysis and Evaluation* (2014) and the landscape treatment philosophy defined in this report, and support park planning efforts, including the *General Management Plan and Environmental Impact Statement* (2012). Each of the recommendations in this chapter incorporates sustainable materials and/or practices to advance the overarching environmental and economic sustainability of Hampton National Historic Site. General treatment recommendations are documented on Drawing 1, which is included at the end of this chapter. Specific treatment tasks are included in the next chapter.

PERPETUATE HISTORIC VEGETATION

Hampton's diverse and extensive botanic collection contributes to the significance of the cultural landscape. However, vegetation has changed since the end of the period of significance through natural growth and decline, onset of diseases and pests, and limits of maintenance. Because the botanic collection was developed over time, vegetation varies in age and condition. Preservation maintenance can provide techniques to improve the condition of plants and prolong plant life. However, because all vegetation is living material, plant replacement is inevitable.

Understanding the origin of each plant specimen is essential identifying a replacement strategy to perpetuating its historical significance. A specimen may be significant for its function in the cultural landscape; for its association with an event, person, or trend; or for its unique genetic make-up, rarity, or threatened/endangered status. Depending upon the significance of the specimen and other environmental factors, replacement may necessitate propagation, replacement in-kind, replacement with a substitute species, or removal. Appendix A: Vegetation Inventory catalogues each plant specimen in the Hampton National Historic Site landscape, identifies preservation maintenance needs, and recommends a

replacement strategy based on existing documentation. This appendix is intended to be a living document, to be revised and updated with routine condition assessments and as preservation maintenance work is completed.

PRESERVATION MAINTENANCE

Preservation maintenance refers to "the act of caring for a specific features, area or landscape by protecting, stabilizing, and repairing it on a routine or cyclic basis so that the historic character is not compromised or lost."[1] As it relates to vegetation, preservation maintenance entails identifying deficiencies and working to correct them. The botanic collection at Hampton National Historic Site requires constant attention to perpetuate the character and vigor of specimen plants. Protection and maintenance of the botanic collection is a high priority given the historical significance of the collection (Figure 2.2).

Preservation maintenance actions include irrigating, fertilizing, pruning, thinning, dividing, transplanting, managing pests, and/or cabling to improve condition and prolong the life of a particular specimen plant. Many of these tasks are identified in Appendix A: Vegetation Inventory. However, preparation of a more comprehensive preservation maintenance plan that directs routine and cyclical maintenance, from annual plantings through tree pruning techniques, would be a valuable tool in managing the historic character of Hampton National Historic Site's plant collection.



Figure 2.2. The princess tree (*Paulownia tomentosa*, 18g) on the Great Terrace, planted between 1860 and 1880, warrants specialized preservation maintenance and propagation to ensure that the replacement planting is genetically identical. View looking north, 2013 (OCLP).



Figure 2.3. Overgrown Canadian hemlock (*Tsuga canadensis*, 108m) hedge adjacent to the East Terrace is a replacement of the historic planting, which requires replacement in-kind to perpetuate the historic character of the feature. View looking west, 2013 (OCLP).

REPLACEMENT

When vegetation is damaged or diseased, or it is overgrown and pruning will not rejuvenate the plant, replacement is necessary (Figure 2.3). The decision to remove and replace vegetation should consider the following factors:

- Whether the vegetation still conveys its association with the significance of the landscape in its current state[2]
- The health, vitality, longevity, growth rate, and size of the plant to be removed[3]
- The functional role of the plant in the landscape
- Characteristics unique to the individual plant specimen

A replacement strategy should be identified for each plant specimen based on the origin and horticultural significance of the plant. For Hampton National Historic Site, general replacement strategies include the following:

- **Original historic plantings** will be maintained and propagated for replacement with genetically identical clones. Propagation involves taking cuttings or grafts from live, healthy tissue and the use of special growing facilities to raise the young propagule.[4]
- **Historic replacement plantings** will be maintained and replaced by the same replacement method that was employed previously (either through propagation; in-kind replacement with same species/cultivar nursery stock; or replacement with a substitute species, cultivar, or variety, if necessary due to disease or pests).

- **Compatible contemporary plantings** will be maintained, but will not be replaced unless necessary to perpetuate the historic character of the landscape.[5]
- **Incompatible contemporary plantings** will be removed and will not be replaced.
- **Memorial plantings** may be maintained or moved, but will not be replaced.
- **Forest conservation areas** delineated in the *Hampton Forest Stand Delineation and Forest Conservation Plan* will be maintained in forest as outlined in the *Forest Conservation Plan*.[6]

Contemporary plantings should not be added to the historic landscape unless necessary screen incompatible views. New memorial and commemorative plantings should not be installed.

In some cases, replacement of the original plant species may not be possible. This may be due to changes in growing condition, diseases, pests, or availability of replacement. Compatible substitutions may be necessary. According to the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* for preservation, "new material[s] will match the old in composition, design, color, and texture."[7] As it relates to vegetation, this means matching the size, form, texture, and seasonal character of plantings, including bloom time and color, fruit, and fall foliage.[8] Where a specimen plant was known to have existed, but the exact species cannot be determined, it is appropriate to use a species found elsewhere on the site or a substitute species that has a similar character.

Vegetation features may include individual plants, which function as specimens in the landscape, as well as groupings of plants, such as allées, borders, hedgerows, hedges, and orchards. Vegetation specimens (features) and groupings (aggregate features) serve different functions in the landscape and, accordingly, require different replacement strategies to perpetuate those qualities that distinguish the vegetation. Specimens, identified as individual features, should be treated independently. Single species groupings, identified as aggregate features, should be treated consistently. In instances where balance, symmetry, or uniformity is the intent of the planting, all plants that comprise an aggregate feature should be replaced at the same time.

PROVIDE EFFECTIVE DEER CONTROL

Landscape damage from deer browse has become a major issue in recent decades as the deer population has swelled due to agricultural decline, decreased hunting, lack of predators, mild winters, and suburban development (Figure 2.4). Deer browse is now a year-round concern at Hampton National Historic Site, where deer feed and rub on annual and perennial plantings, hedges, and young trees.

The park currently uses feature-level fencing to exclude deer from browsing the most vulnerable vegetation. Deer control can involve a number of methods, ranging from exclusion to scare devices and repellents. The best approach to providing effective deer control is an integrated pest management (IPM) strategy that employs multiple methods.

EXCLUSION

Fencing is the best long-term strategy to control deer at Hampton National Historic Site. Because deer can jump as high as twelve feet and up to thirty feet in length (although not both at once), the best deer fencing is a twelve-foot high, 12.5 gauge high-tensile steel wire mesh fence type (woven wire, chain liven, welded wire, 'v' mesh, or rigid mesh panels). Deer can also squeeze through gaps larger than 7.5 inches, so fencing should be flush with the ground and with adjoining panels.

A site-wide deer fence approach would entail fencing the entire perimeter of Hampton National Historic Site, including the Hampton Road frontage. Given that this would not be well-suited to the historic character of the park, nor to its residential setting, a feature-level approach is more appropriate. A feature-level deer fence approach would entail fencing the most vulnerable plants or areas



Figure 2.4. Deer near the Ridgely Family Cemetery. Deer browse, in combination with dense shade, has denuded the Cemetery Woods understory. Deer browse and rub also threaten ornamental plantings throughout the park grounds. View looking south, 2012 (OCLP).

that contain the most vulnerable groupings of plants, such as the Falling Gardens. Feature-level deer fencing should also be used to protect individual young plantings, such as the young replacement Biltmore ash (*Fraxinus biltmoriana*), located at the entrance to the Orangery.

SCARE DEVICES AND REPELLENTS

Scare devices and repellents are excellent short-term deterrents to deer browse when:

- Deer drowse occurs over a limited time, such as during late winter
- Deer browse can be predicted, such as along migration routes
- Regular applications of repellents are feasible until the threat of damage has passed

In the long-term, however, deer can become accustomed to bad smells and tastes, strobe lights, and loud noises. Of the chemical repellents, a product called Deer Defeat (www.deerdefeat.com) has been used in national parks with some success. Deer Defeat is an eco-friendly product and is effective year-round. The product is easily applied with a sprayer and affects both an animal's sense of smell and taste.

SUBSTITUTE PLANTINGS

In specific cases, substituting historic plant material that is in decline with compatible, deer-resistant species may be a feasible solution to deer browse. However, substitute species will not necessarily reduce deer rub. Where possible, browse-resistant substitute species have been identified in the specific treatment tasks in the following chapter, as well as in Appendix A: Vegetation Inventory. All plant substitutions are intended to match the size, form, texture, and seasonal character of the historic plantings to the greatest feasible extent.

ESTABLISH A TURF MANAGEMENT STRATEGY

At approximately 48 acres, turf grass accounts for the majority of Hampton National Historic Site's total acreage (62.04). While well-tended turf is an important feature of the historic landscape, maintaining such vast expanses of turf grass can place significant pressure on park resources, including staff time, funding, water, fertilizer, pesticides, and even fossil fuel needed to operate lawn mowers.[9]

For a historic landscape, defining an effective turf management strategy presents the added challenge of balancing the well-kept appearance to be expected of a

national park with the historic appearance of Hampton's turf grass, which may not have appeared well-kept by today's standards. To achieve this balance, the following turf management strategy identifies three historically appropriate management zones—manicured lawn, rough cut lawn, and meadow—and outlines best maintenance practices for each.

Each of the maintenance practices incorporates strategies to reduce demands on staff, budget, and the environment to advance the overarching sustainability of the Hampton National Historic Site landscape. Reducing maintenance demands in some areas has the added benefit of enabling a shift in resources to focus staff time and funding on the most important historic landscape features at Hampton National Historic Site. Turf grass management zones and best practices for each of the zones are summarized as follows.

OVER-SEEDING

Turf grass should be maintained with a broad diversity of grass types that reflect the character of the lawn present at Hampton between the 1850s and early 1870s at the treatment reference date. Unlike modern lawns, nineteenth century lawns were composed of a diverse mix of grass types. To maintain an appropriate character, it is recommended that Zones 1 and 2 are over-seeded every two years, with a custom blend of seed at 2 lbs./1,000 sq. ft. or 90 lbs./acre. Zone 3 should be over-seeded with the same custom blend as needed to sustain the vegetative composition of the meadow. A diverse blend of species will not only enhance the historic character of the Hampton's lawns, but also improve the lawn's ability to withstand adverse environmental conditions, including drought, weeds, pests, and diseases, while enhancing small animal habitats. This custom grass seed

Table 2.1. Historically Appropriate Turf Management Zones and Maintenance Practices

Zone	Character	Over-seeding	Mowing	Fertilization	Weed Thresholds
Zone 1: Manicured Lawn (4.8 acres)*	Formal, manicured appearance; uniform in color and texture; weeds and bare spots unnoticeable	Every two years, with custom blend	Maintained at 2.5–3.5″ with turf mowing equipment	Only as needed	30% max. weed coverage
Zone 2: Rough Cut Lawn (25.2 acres)	Rough, rustic appearance; uniformity in color and texture not as critical	Every two years, with custom blend	Maintained at 5–8″ with turf mowing equipment	Only as needed	50% max. weed coverage
Zone 3: Meadow (18 acres)	Meadow, with grass grown to full seed height; presence of turf paramount to turf quality	Only as needed, with custom blend	Rough cut one to three times a year with field mowing equipment; grows to 16–24″ and is cut to 4–5″	None	Treat only noxious invasive weeds

*Manicured lawns include heart-shaped carriage drive, Mansion front, Great Terrace, Falling Gardens, Ridgely Family Cemetery (until replanted with groundcover, see Task VG-2), and Farm House yard

Note: Other maintenance tasks, including thatch removal, aeration, and leaf removal should be completed only as needed at the beginning or end of the growing season.

blend should be developed with a turf grass specialist and tested on site prior to widespread application. Ernst Conservation Seeds in Meadville, Pennsylvania, is experienced in developing custom seed blends for site specific application.[10]

MOWING

One of the most critical and labor-intensive aspects of maintaining the historic character of Hampton National Historic Site's lawns is appropriate mowing. No turf maintenance practice affects the appearance of lawn more quickly or dramatically than mowing (Figure 2.5). However, mowing puts tremendous stress on plants. As such, it is recommended that when mowing in Zones 1 and 2, no more than one third of the total leaf length should be removed in any one mowing. When more is removed, the resulting turf is weakened and may become susceptible to weed, pest, or disease infestation.

The appropriate frequency of mowing will depend on specific environmental conditions, such as soils, light, and water. Generally, however, Zone 1 should be mown to a height of two and a half to three and a half inches to present a formal, closely clipped, manicured appearance. Mowing in Zone 1 will generally be necessary every seven to ten days during the peak growing season. Zone 2 should be mown to five to eight inches for a rougher, more rustic appearance. Mowing in Zone 2 will generally be necessary every seven to fourteen days during the peak growing season. Zone 3 should be managed as a meadow—allowing turf to mature to full seed head height of twenty-four inches or more. Mowing in this area will only be necessary in mid-spring and late fall each year, primarily to stop establishment of woody plants within the meadow. Mowing in Zone 3 requires



Figure 2.5. Meadow grass in the vicinity of the Dairy stream contrasts with the manicured lawns of the Farm House yard and highlights the contrast in levels of maintenance that characterized the working portions of the farm landscape from the domestic portions during the period of significance. View looking north, 2012 (OCLP).

a tractor with a sickle, rotary, or flail mower to cut vegetation back to four to five inches one to three times a year. Mid-summer mowing in meadow areas should only be undertaken if necessary to control invasive species.

While lawns at Hampton National Historic Site were likely cut with scythe circa 1865, this is not a sustainable contemporary mowing option. Rather, high quality riding rotary mowers capable of cutting a forty-eight to sixty inch swath are recommended for cutting lawns and producing desired visual qualities in Zones 1 and 2. Example rotary mowers include eXmark Lazer Z, Hustler Z4, and Toro Z Master. The use of an add-on stripping kit will mimic the effect of the historic practice of rolling turf after mowing. For areas that are inaccessible by riding mower, a small, twenty-inch push mower will also achieve the desired results. Zone 3 should be cut with a tractor-pulled rotary mower. Manufacturers include Honda, Husqvarna, John Deere, and Toro. Each of the turf management zones should have a dedicated mower set at a dedicated height. Adjusting decks can be time consuming, cumbersome, and often inconsistent.

Hampton National Historic Site might also evaluate converting lawn mowers to propane fuel. Propane powered lawn mowers have the potential to reduce greenhouse gas emissions, improve operational efficiency, and reduce costs. Propane powered mowers have been successfully used by the National Park Service at San Antonio Missions National Historical Park since 2008.

Mowing on slopes greater than fifteen percent can be dangerous. At Hampton National Historic Site, steep areas include the earthen slopes of the Falling Garden terraces, East Orchard terraces, embankment to the west of the upper parking area, embankment to the west of the historic entrance drive, and embankment to the east of the Farm House cluster. In areas where turfgrass requires mowing on slopes that exceed safe operation of zero-turn mowers, such as the top of the slope above the Falling Gardens, the use of string trimmers, slope mowers (such as Deweze all-terrain mowers, rated for a thirty-four degree slope), or boom mowers can help to reduce risks. Based on Servicewide Mowing Operations Stand-Down guidance,[11] at a minimum, Hampton National Historic Site staff should:

- Conduct an Operational Leadership risk assessment using the Green-Amber-Red (GAR) tool.
- Develop, review, and update job hazard analyses (JHAs) for all mowing operations.
- Conduct an inspection of all riding mowers.
- Brief all employees involved in mowing on traffic controls outlined in the Manual on Uniform Traffic Control Devices (MUTCD) when working in proximity to roadways.

- Provide and document refresher training on mowing equipment and procedures.

In select areas, such as the field areas surrounding the farm complex, livestock grazing demonstrations may be an effective method of maintaining turfgrass length. Re-introducing livestock for vegetation management will achieve the dual purpose of maintaining turfgrass and enhancing the historic rural character of the farm landscape.

Both sheep and goats are well-suited to grazing at Hampton National Historic Site. Sheep are docile, less likely to escape, and chew (rather than tear) grass for a more even lawn. However, because sheep have selective eating habits, they may not graze lawn evenly. Sheep will also graze tree bark, so trees within pastures will require protection from animals. Sheep are also historic to Hampton. They are currently used by the National Park Service on a demonstration basis at Martin Van Buren National Historic Site in Kinderhook, New York.

Goats have more diverse dietary preferences, so they will graze more evenly. However, goats are more inquisitive and a higher flight risk. Goats also tear (rather than chew) grass, which may cause damage to lawns. Goats are not historic to Hampton. Goats have been used for vegetation management by the National Park Service at the Roosevelt-Vanderbilt National Historic Sites in Hyde Park, New York since 2009 and at Fort Wadsworth in Gateway National Recreation Area in Staten Island, New York since 2007. In all cases, the parks have contracted with a shepherd, who is responsible for animal care and safety.[12]

SOIL FERTILITY

Soil fertility refers to the ability of soil to supply nutrients required to sustain plant growth. Among the nutrients required by turfgrass, carbon, hydrogen, oxygen, nitrogen, phosphorus, potassium, and calcium are those used in the greatest amounts. Carbon, hydrogen, nitrogen, and oxygen are supplied by air or water; the remainder must come from naturally occurring sources or applied fertilizer.

In the mid-nineteenth century, lawn fertilization consisted of applications of manure (high in organic matter and nitrogen), potash (manufactured salts that are high in potassium), and lime (used to reduce the effects of acidic soil and provide calcium and magnesium). Today, similar results are achieved by using a mulching lawn mower rather than removing clippings and with the application of contemporary fertilizers in proportions that mimic the nutrients in manure and potash. Nutrients in contemporary commercial fertilizers are listed as three numbers separated by dashes, such as 8-3-1, that represent proportions of nitrogen–phosphorus–potassium (N-P-K) contained in the fertilizer.

Organic soil amendments, such as compost, compost tea, and grass clippings, offer natural approaches to improving soil fertility. However, compost can be high in phosphorus, so care should be taken when applying organic amendments as well. Grass clippings are rich in moisture and nutrients. Leaving grass clippings in place provides nutrients to the lawn, and, contrary to popular belief, grass clippings do not contribute to thatch. Leaving grass clippings in place also reduces the labor of collecting, composting, and reapplying. (Leaving or removing clippings in Zone 1 areas should be determined on a case-by case-basis, as clippings may detract from the well-maintained appearance of manicured lawns.)

Lawns should only be fertilized when necessary to increase turf thickness or to out-compete weed growth. Soil testing should also be completed prior to fertilization to reveal when nutrient levels are low. Lawns should only be fertilized when rainfall is expected to be light to reduce potential for nitrogen leaching into aquatic ecosystems. Fertilizing should be avoided altogether in riparian buffer zones. Eutrophication caused by nitrogen run-off is a serious threat to aquatic ecosystems.

Maintaining proper pH is a critical aspect of managing soil fertility. Soil should be tested every two years to check pH levels and nutrient contents. Optimal turf growth occurs at a pH of 6.4–6.8. Slow release sulfur coated fertilizer can be used to lower pH and lime can be used to raise pH. Applications of chemicals to adjust pH should never to exceed 50lbs./1,000 sq. ft./application.

WEED & PEST MANAGEMENT

Integrated pest management (IPM) is a comprehensive strategy to achieve pest control in an environmentally responsible manner that reduces reliance on chemical pesticides. The essential elements of IPM are monitoring, setting action thresholds, using multiple control practices, and keeping records of pest activity and the effectiveness of control actions taken. It is critical that all monitoring findings are reported completely so that accurate data is available for comparison with future surveys. Action thresholds for each of Hampton's three turf management zones are loosely established in Table 2.1, but require refinement for the most common weeds and pests present in Hampton's turf. Control actions include maintaining proper soil pH, mowing to appropriate heights, fencing, applying biological controls (predators, parasites, and diseases) or chemical controls (pesticides and herbicides), and adjusting seed mixes. Pesticides should be selected for effectiveness in pest management, while minimizing threats to human health and the environment. The National Park Service Natural Resource Stewardship and Science Directorate website includes valuable information on the establishment and enhancement of IPM programs: www.nature.nps.gov/biology/ipm/index.cfm

Weeds

The historic lawn at Hampton was likely one of great horticultural diversity. Many of the plants we consider lawn weeds today were viewed as integral parts of the mid-nineteenth century lawn. Proposed acceptable levels of weed populations in the lawn at Hampton National Historic Site vary by zone. In Zone 1, where the most refined visual quality is desired, weed coverage should not exceed thirty percent of the total area. In Zone 2, where rougher turf is desired, weed coverage should not exceed fifty percent of the total area. In Zone 3, where a meadow is desired, only noxious, invasive weeds should be removed. Knowledge of the life cycle of a particular weed species is an important part of its management. While many common lawn weeds can be treated with herbicides, weed monitoring should be integrated into the IPM strategy to define the most appropriate management strategy. Weed populations can be managed manually by removing isolated pockets of weeds and replanting grass.

Insects

Healthy grass can tolerate some feeding by insects, but when too many insects are feeding at the same time, lawn quality can be diminished. Pest management should only be undertaken when pests have exceeded a tolerable threshold. White grubs, or larval Japanese beetle (*Popillia japonica*) are the most troublesome lawn pests in the mid-Atlantic. Clinch bugs (*Blissus* spp.), bluegrass billbugs (*Sphenophorus parvulus*), and sod webworms (*Crambus* spp. and *Parapediasia* spp.) can also be problematic. Routine monitoring for insects is an important part of lawn care at Hampton National Historic Site.

Diseases

Some of the more common cool-season turf diseases are brown patch, dollar spot, fungal diseases, necrotic ring spot, plythuym blights, leaf spot, and melting out. However, given the species diversity proposed for the lawn at Hampton National Historic Site, it is unlikely that a single turf disease will cause a dramatic impact to the lawn. Routine monitoring for disease should be integrated into the turf management strategy.

ENHANCE THE RURAL CHARACTER OF THE FARM LANDSCAPE

With the transition from private to public use, the farm landscape lost some of the rural and domestic qualities that once characterized the property and contributed to its historic character (Figure 2.6). The shift from residential to park maintenance practices that paralleled this change in use has resulted in a

landscape that is well maintained, but missing the evidence of daily life: farm tools leaning on fences, firewood stacked by the doorstep, and fresh laundry air-drying on the line. These lived-in qualities can be hard to identify and difficult to achieve in the landscape without residential occupancy; however, they can have a dramatic impact on perception of authenticity and the visitor experience.

Artifacts, such as buckets in the Dairy, shovels next to the Ash House, or other farm tools staged in public view (tethered to prevent use), can enhance the lived-in character of the historic landscape while enhancing interpretive opportunities. At the same time, modern farm tools used to maintain the Hampton farm, affords opportunities to illustrate the differences between historic and contemporary maintenance practices, highlight sustainable management initiatives, and enhance the overall interpretation of the cultural landscape.

Balancing a well-cared-for appearance expected of a national park with the historically not so well-cared-for appearance of a working farm is also a significant challenge. During the period of significance, the farm landscape and the Mansion landscape were afforded differing levels of care. While the ornamental grounds of the Mansion were meticulously maintained, the farm remained a working landscape where function was favored over detailed care-taking. Lawn and weeds, including full-size trees, lined fences, where cutting or grazing was more difficult.

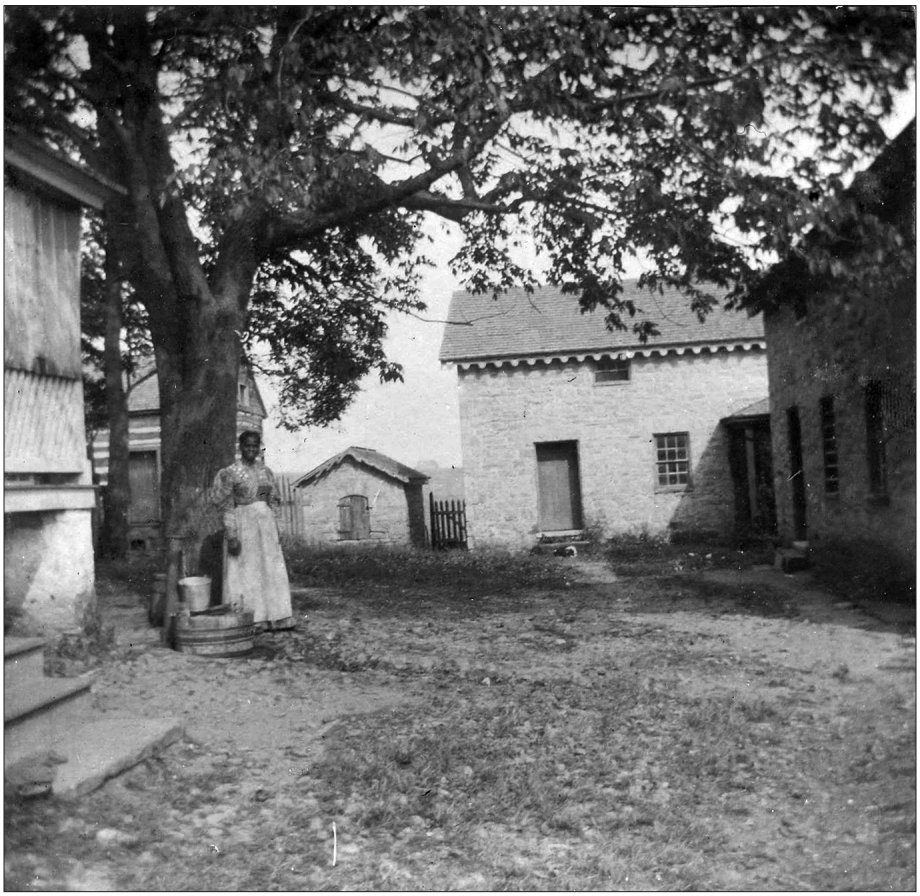


Figure 2.6. Gelatin print showing the rural character of the farm landscape during the period of significance, including objects that contribute to the working and residential qualities of the complex, including a well, fences, shade trees, and steps into buildings. View looking north, c. 1897 (HAMP 44214).

Adjusting maintenance practices, such as mowing, weeding, and edging, within the farm landscape can help to reinforce the contrast in character between the Mansion and farm landscapes. Along fence lines and in fields, frequency of mowing should be reduced and interpretive material provided to inform visitors that variable levels of maintenance are intentional and not the result of neglect. Distinct levels of maintenance also afford interpretive potential to explain to visitors why the Mansion landscape was better cared-for than the farm landscape.

The most striking missing component of the farm landscape is working agriculture (Figure 2.7). Tightening screen planting along the property boundary adjacent to the West Farm Field would make farming easier. Corn, oats, and grass for hay are all historically appropriate crops and suitable for cultivation at Hampton today. While reintroducing agriculture may be outside of the capabilities of the park at present, partnerships can offer opportunities to enhance the rural character of the farm landscape by reestablishing a small-scale working landscape. Agricultural partnerships and leases are in use in a number of national parks in the Northeast Region, including Minute Man National Historical Park in Concord and Lincoln, Massachusetts.

Partnerships with state and local agricultural associations may provide further opportunities to enhance the working qualities of the farm landscape. Potential partner organizations may include: Center for Maryland Agriculture, Maryland Agricultural Resource Council, Maryland Farm Bureau (Baltimore County), Maryland Agricultural Education Foundation, Future Harvest, Johns Hopkins Center for a Livable Future (Bloomberg School of Public Health), and Maryland Horse Breeders Association, among others.

Temporary agricultural demonstrations, such as sheep herding, can be powerful interpretive tools and offer opportunities to enhance educational programming.



Figure 2.7. Rye grass demonstration plots in the West Farm Field heighten the historic agricultural character of the farm. The field should be replanted annually with corn and/or rye grass to evoke the historic use of this field. View looking south, 2012 (OCLP).

Farming demonstrations have been effective in highlighting the agricultural heritage of parks in the region, including Martin Van Buren National Historic Site in Kinderhook, New York. Refer also to sheep and goat references under "establish a turf management strategy" above.

PROVIDE COMPATIBLE PARK FURNISHINGS

Existing park furnishings throughout Hampton National Historic Site consist of a variety of style and types, including historic and contemporary furnishings. Although a single contemporary small-scale feature, such as a bench or sign, has relatively little impact on the historic character of the landscape, the cumulative impact of contemporary small-scale features can be significant. However, contemporary park furnishings are necessary to enhance use and enjoyment of the park while protecting both visitors and resources. Contemporary park furnishings should be:

- **Compatible** to blend into the historic residential site with a traditional design (not highly ornamented) and materials found in the historic landscape
- **Functional** to be comfortable and accommodate a variety of users, including those with disabilities
- **Sustainable** to use materials efficiently and for longevity
- **Low-maintenance** to minimize operation, service, and upkeep
- **Necessary** to encourage desirable activities and minimize clutter in the historic landscape

Where possible, contemporary park furnishings should also employ a unified design throughout the park and visually recede into the landscape. Contemporary furnishings should be maintained and replaced as necessary due to wear. If contemporary furnishings are used infrequently, they should be removed. Specific recommendations related to seating, trash/recycling receptacles, lighting, signage, and fencing follow.

SEATING

Existing benches at Hampton National Historic Site consist of two cast iron benches with a twig motif on the Brick Terrace, one ornate cast iron bench on the Great Terrace overlooking the Falling Gardens, one contemporary teak bench adjacent to the east terrace, and one backless cast stone bench on the median island in the upper parking area. Two contemporary wooden picnic tables and one contemporary metal picnic table are located in the grove of trees to the west of the upper parking lot. Historic cast iron benches remain in storage. However, historic

rustic wooden benches that once stood on the Great Terrace overlooking the Falling Gardens do not survive. The park is preparing to place two new benches that are exact copies of Hampton's historic benches in the Falling Gardens at either end of the first terrace. The benches were purchased with a donation by Amateur Gardeners Club, which was founded by Helen Ridgely.

Existing cast iron benches on the Brick Terrace should be retained (Figure 2.8). The cast iron bench on the Great Terrace should also be retained and supplemented with reproduction rustic wooden benches, as shown in historic photographs, for a mixture of wooden and metal benches in the landscape (Figure 2.9). Since the cast iron bench on the Great Terrace is original, it might appropriately be moved to collection storage and replaced with a reproduction.

Both the teak bench near the East Terrace and the cast stone bench in the upper parking lot should be removed, consistent with reconfiguration of the upper parking lot. The teak bench might appropriately be relocated to the new Visitor Contact Station entrance plaza, to be supplemented with one or two additional, matching benches. Replica outdoor furnishings may be added on the East Terrace before or after reconstruction of the Summer Kitchen. Historic furnishings research is needed to provide sufficient documentation to support implementation of this recommendation.

Movable picnic tables placed on lawn (without concrete pads) provide flexibility for staff and visitors to shift tables to accommodate different group sizes. Adding a wheelchair accessible picnic table to the existing three tables is recommended to accommodate those with mobility impairments. Moveable picnic tables should be placed in storage during times of low use. Following construction of the new Visitor Contact Station and rehabilitation of the West Orchard, moveable picnic tables should be relocated to the lawn area to the northeast of the new Visitor



Figure 2.8. Reproduction of historic cast iron bench on the Brick Terrace to be retained. View looking southeast, 2013 (OCLP).



Figure 2.9. Historic rustic wood furniture along the edge of the Great Terrace to be replicated and placed along the southern edge of the Serpentine Walk for visitor use. Note also mown lawn along the crest of the slope along the left side of the image. View looking west, c. 1900 (HAMP 18576).

Contact Station (current location of the lower parking lot). Moveable picnic tables should also be provided between the Mule Barn and farm parking area to encourage use of the Hampton farm area.

Appropriate moveable picnic tables styles include single-piece welded construction metal frames with wooden (or synthetic wood) table and seat surfaces. Bright-colored synthetic materials and finishes should be avoided as they may detract from the historic character of the landscape.

TRASH/RECYCLING RECEPTACLES

Existing contemporary trash receptacles at Hampton National Historic Site consist of barrel-style receptacles with hinged wooden tops. Trash receptacles are located along the brick walkway to the west of the Mansion, on the median island in the upper parking area, near the picnic tables in the grove of trees to the west of the upper parking lot, and at the North Farm Garage (restrooms). A single recycling receptacle is also located near the picnic tables in the grove of trees to the west of the upper parking lot.

While the existing barrel-style trash receptacles could be difficult for park visitors to distinguish from other historic features, they are consistent with the appearance

of barrels shown in photographs of the farm landscape during the period of significance. All existing trash and recycling receptacles within the "historic zone" outlined in the *General Management Plan and Environmental Impact Statement* should be retained and supplemented with additional receptacles as necessary.

However, the design of the existing barrel-style receptacles poses several challenges, notably, the hinged lids on the receptacles do not close automatically, inviting animals; existing receptacles do not accommodate recycling; and existing receptacles are not universally accessible. These challenges might appropriately be addressed by the addition of compatible new receptacles in the "support zone" defined in the *General Management Plan and Environmental Impact Statement*.

New trash/recycling receptacles are needed adjacent to the picnic tables proposed near the new Visitor Contact Station, on the new Visitor Contact Station entrance plaza, and adjacent to the picnic tables proposed near the Mule Barn. If necessary, a new trash/recycling receptacle might also be appropriately located near the upper parking lot.

New receptacles in the "support zone" should be fully enclosed with spring-loaded, hinged lids, include separate compartments for trash and recycling, and be universally accessible. Spring-loaded, hinged lids will reduce animal access to trash, while separate compartments for trash and recycling will support the park's environmental goals. Appropriate new trash/recycling receptacles should visually recede in the landscape, with a compatible finish, color, and scale. TimberForm Site Furnishings, LandscapeForms, and Anova are just a few companies that manufacture multiple models that meet these parameters. Custom fixtures are also available.

LIGHTING

Existing landscape lighting at Hampton National Historic Site is comprised of pole-mounted, solar-powered lights in the upper parking lot and along portions of the entrance road (Figure 2.10). Small, in-ground light-emitting diode (LED) lights provide illumination on the south façade of the Mansion (Figures 2.11). The park also uses portable landscape lighting for special events held in the evening.

Given that the park is closed at night, lighting is only necessary for special events and security. Because of the prominence of pole lights in the landscape, they detract from the historic character of the park and their use should be minimized. Instead, fixtures should be mounted on contemporary buildings and structures or in mature, non-contributing trees (refer to Appendix A: Vegetation Inventory). Landscape lighting should also support National Park Service sustainability goals, including dark night skies, with full cut-off fixtures. Best practices advocated by the National Park Service night skies initiative include:



Figure 2.10. Free-standing pole lights along the entrance drive are obtrusive and detract from the historic character of the Hampton cultural landscape. View looking southwest, 2012 (OCLP).



Figure 2.11. In-ground LED lights along the south facade of the Mansion are visually unobtrusive and recede in the cultural landscape. View looking northeast, 2012 (OCLP).

- Light only where needed
- Light only when needed (use timers)
- Shield lights and direct them downward
- Select lamps with warmer colors
- Use the minimum amount of light necessary
- Select the most energy efficient lamp and fixture

SIGNAGE

Existing signage at Hampton National Historic Site consists of identity signs, pathfinder signs (pedestrian and vehicular), regulatory signs, and moveable wayside exhibits. Hampton does not suffer from a proliferation of signage, but rather includes an appropriate level of signage, lacking only in a few key locations.

Identity Signs

The primary park entrance signs are located perpendicular to Hampton Lane, near the southwestern corner of the Mansion landscape and to the south of Farm Road (Figure 2.12). The mansion side sign is oriented to the southwest and the farm side sign is oriented to the northeast. A small sign with park hours is also posted at the northwest end of Farm Road.

A new hierarchy of entrance signs is needed to welcome park visitors and direct them to the new Visitor Contact Station. The primary entrance sign should be sited to the northeast of the new entrance drive, perpendicular to the road, where it will be visible to vehicles traveling in both directions along Hampton Lane. This double-sided sign should consist of a monolithic base with a side column (arrowhead on column), as outlined by the National Park Service UniGuide Program.[13]

Secondary entrance signs should be located to the northeast of Farm Road along Hampton Lane perpendicular to the road and at the northwest end of Farm Road, also perpendicular to the road. These double-sided signs should consist of a single post hanging sign with arrowhead on sign panel, as outlined by the National Park Service UniGuide Program.[14] The sign posted at the northwest end of



Figure 2.12. Temporary park identity signs at the visitor entrance road are inadequate and require replacement with a new entrance sign following completion of the new entrance road. The replacement sign should be consistent with the pathfinder sign series, as identified by the NPS UniGuide Program. View looking southeast, 2013 (OCLP).

Farm Road, visible to vehicles entering and exiting the park, might appropriately read "Entering/Leaving, Hampton National Historic Site," consistent with park boundary signs outlined by the National Park Service UniGuide Program.[15]

Tertiary entrance signs are needed at the entrance to Stable Drive and at the Mansion gates to direct visitors to the entrance road. These signs should be mounted parallel to Hampton Lane, read "Hampton National Historic Site, Entrance," and include an arrow to direct visitors toward the entrance road. These small signs should be consistent with park pathfinder signs outlined by the National Park Service UniGuide Program.[16]

Pathfinder Signs

Small wayfinding signs are needed to direct visitors to buildings and landscape attractions spread throughout the park, including the Ridgely Family Cemetery, stables, and crosswalk to the farm (Figure 2.13). Small wayfinding signs should be consistent with park pathfinder signs outlined by the National Park Service UniGuide Program.[17] Sign panel sizes and mounting outlined in the *Visitor Information Sign System, VIS and Wayside Hardware Specification Manual*.[18] The best signs to meet wayfinding need are Trailside (TS) or Upright (UP) Series designs. To minimize their appearance in the landscape, pathfinder signs should not exceed 12"x12" size.

Regulatory Signs

Limited regulatory signs, such as one-way, no not enter, stop, authorized vehicles only, may also be needed along the entrance drive and Farm Road to aid in the safe operation of motor vehicles within the park. These signs should be comprised of



Figure 2.13. Small pathfinder signs, such as this one along Stable Drive/ cemetery road are necessary to direct visitors to park resources. While appropriate in scale and placement, the style of this sign is inconsistent with the NPS UniGuide Program guidance. View looking northeast, 2013 (OCLP).



Figure 2.14. Manual on Uniform Traffic Control Devices (MUTDC) warning signs along Hampton Lane alert drivers to the presence of pedestrians crossing. While a few regulatory and warning signs are needed, their use should be limited to avoid a proliferation of signage throughout the landscape. View looking northeast, 2013 (OCLP).

standard Manual on Uniform Traffic Control Devices (MUTCD) regulatory and warning signs. Regulatory signs should be kept to a minimum, to be used only as necessary (Figure 2.14).

Wayside Exhibits

Existing moveable wayside exhibits are well-suited to use in the landscape at Hampton National Historic Site (Figure 2.15). The flexibility afforded by movable exhibits allows for interpretation without calling attention to the exhibit itself. The mass, color and form of the exhibits are well-suited for limited used in the landscape. Additional moveable wayside exhibits should be placed where they will be seen and used without interfering with appreciation of the historic site features, and spread along a pathway rather than grouped.



Figure 2.15. Sensitively located, moveable interpretive wayside exhibits are well-suited for use in landscape to provide visitors with information about park resources. View looking southeast, 2013 (OCLP).

In addition to existing wayside exhibits at the Orangery, Great Terrace, geothermal well field area, Ridgely Family Cemetery, Ice House, stables, Dairy, Corn Crib foundation, North Farm Garage, Farm House, and Slave Quarters #3, moveable waysides might appropriately be added near Greenhouse #2, where the universally accessible route to the Falling Gardens is proposed; near the rehabilitated East and West Orchards; at the Mule Barn; and at the Long House Granary.

FENCING

Existing fencing at Hampton National Historic Site consists of both historic and contemporary wooden fencing. The park is currently fencing the perimeter of the park with a spilt rail fence to demarcate the park boundary. Low post and chain fence is used to restrict access and keep visitors on designated routes in areas of the Mansion landscape (Figure 2.16).

Due to the diversity of historic fence types at Hampton National Historic Site, fencing is addressed specifically in the next chapter and above under "provide effective deer control." The use of contemporary fencing should be minimized throughout the park. When necessary, contemporary fencing should be compatible with nearby historic fencing in design, materials, and scale.

The use of low post and chain fencing is an appropriately scaled solution to restricting access to closed areas, such as the geothermal well field or the lawn in front of the Orangery. However, matte black or dark green chains are a better color choice over white because they will recede visually in the landscape while remaining an effective access barrier.



Figure 2.16. Low post and chain fencing along the concrete walk to the Mansion is appropriately scaled for use. The visual impact of the fence might appropriately be minimized by painting the white chain black or dark green. View looking east, 2013 (OCLP).

Hampton Garth
Valley View Road
Westellen Road
St. Francis Road
Gateshead Road
Windy Gate Road
Hampton Lane
Baltimore Beltway
Gypsy Lane West
Stone Barn Rd.
SEE DRAWING 2
SEE DRAWING 3
SEE DRAWING 4
SEE DRAWING 5

Cultural Landscape Report

Hampton National Historic Site

Towson, Maryland

Treatment Overview

National Park Service

Olmsted Center for Landscape Preservation

www.nps.gov/oclp

SOURCES

1. Site survey, Johnson Mirmiran & Thompson, Jan. 2002
2. Existing conditions maps, NPS - Philadelphia Support Office, May 2004
3. Orthophtograph, MD Dept. of Natural Resources, 2009
4. Field notes, NPS - OCLP, Jan. & May 2012

DRAWN BY

Christopher Beagan, OCLP, 2014
AutoCAD Map 3D, Adobe Photoshop and Illustrator CS3

LEGEND

- Hampton National Historic Site boundary
- Feature to be removed
- Existing/proposed deciduous tree
- Existing/proposed evergreen tree
- Turf Management Zone 1: Manicured Lawn
- Turf Management Zone 2: Rough Cut Lawn
- Turf Management Zone 3: Meadow
- Accessible walk
- Accessible trail (short sections exceed 5% slope with loose aggregate surface)
- Proposed deer fencing
- (D) (D) Existing/proposed directional signage
- (I) (I) Existing/proposed interpretive signage
- (F) Proposed contemporary site furnishing

NOTE

All features shown in approximate scale and location.

0′ 125′ 250′ 500′

Drawing 1

Endnotes

1 Margaret Coffin Brown and Regina M. Bellavia, *Guide to Developing a Preservation Maintenance Plan for a Historic Landscape* (National Park Service, Olmsted Center for Landscape Preservation, 1998 rev. ed.), 9–10.

2 *Landscape Lines 12: Treatment of Plant Features* (National Park Service, Park Historic Structures & Cultural Landscapes), 11.

3 *Landscape Lines 12: Treatment of Plant Features* (National Park Service, Park Historic Structures & Cultural Landscapes), 11.

4 The spectrum of genetic authenticity associated with plant propagation ranges from clonal (highest level), to subclonial grafting and seedlings (intermediate level), to non-clonal nursery stock (lowest level). Further detail is provided in *Landscape Lines 12: Treatment of Plant Features* (National Park Service, Park Historic Structures & Cultural Landscapes), 13.

5 Compatible features are non-contributing features that are distinguishable from the historic character of the landscape but related to historic materials, size, scale, proportion, and massing.

6 Vanasse Hangen Brustlin, Inc. (VHB). *Hampton National Historic Site Forest Stand Delineation and Forest Conservation Plan* by R. Timothy Davis and J.G. Dramby (Williamsburg, Virginia, May 1, 2012).

7 Charles A. Birnbaum and Christine Capella Peters, eds., *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* (Washington, D.C.: U.S. Department of the Interior, 1996), 19.

8 Lauren Meier and Nora Mitchell, "Principles for Preserving Historic Plant Material" *Preservation Technology Update* 6 (1990), 20.

9 Hampton National Historic Site does not use irrigation, fertilizer, or pesticides on established lawn at present. Herbicide is used on a limited basis to control invasive broadleaf plants.

10 For more information on Ernst Conservation Seeds, see http://www.ernstseed.com/

11 Deputy Directory, Operations /s/ Peggy O' Dell to Regional Directors, 11 May 2012, Servicewide Mowing Operations Stand-Down Memorandum.

12 Refer to David J. Hayes, "Using Goats to Control Invasive Plants and Woody Vegetation on Steep Slope at Vanderbilt Mansion National Historic Site," November 2009 and Steve Hart, "Goats for Vegetation Management," Langston University: http://www.luresext.edu/goats/training/vegetation.pdf.

13 National Park Service, *NPS UniGuide Standards: Volume 1, Park and Facility Identity Sign Design Standards* (1 March 2005), 1.1-3–1.1.4.

14 National Park Service, *NPS UniGuide Standards: Vol. 1*, 1.1-6.

15 National Park Service, *NPS UniGuide Standards: Volume 2, Roadway Sign Design Standards* (1 March 2005), 1.1-4.

16 National Park Service, *NPS UniGuide Standards: Vol. 2*, 1.1-4.

17 National Park Service, *NPS UniGuide Standards: Vol. 2*, 1.1-4.

18 National Park Service, Office of NPS Identity. *Visitor Information Sign System, VIS and Wayside Hardware Specification Manual* (5 December 2008).

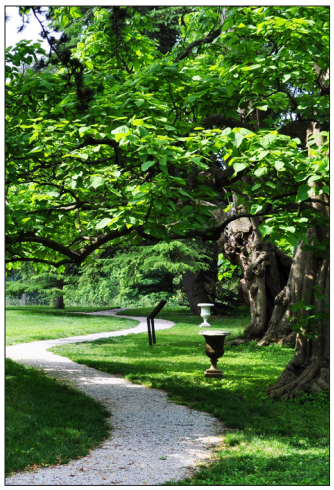


Figure 3.1. The Serpentine Walk on the Great Terrace. View looking south, 2012 (OCLP).

3. TREATMENT TASKS

This chapter includes treatment tasks for the entire Hampton National Historic Site landscape, organized by two geographic areas: the Mansion landscape and the farm landscape. For each landscape area, an overview includes a brief historical analysis of the landscape to provide the general context for treatment tasks. The narrative for each treatment task includes a brief description of the issue that warrants treatment, the desired future condition, actions necessary to achieve the desired condition, additional factors for consideration, and a brief statement that relates each task to current park planning initiatives. Guidance aligns with the *General Management Plan* alternative three, which was selected as the preferred alternative after public comment and agency analysis.

All known deferred maintenance needs for the landscape are addressed below. Some recurring maintenance needs (one to ten years in frequency) are also addressed below, in cases in which those needs are imminent. Capital improvements are also identified below, as they relate to landscape rehabilitation tasks necessary to accommodate contemporary use. Preventative maintenance needs (less than one year in frequency) are not addressed by this report.

Where no specific tasks are identified, preservation is recommended as the default treatment of existing features. Preservation, "the act or process of applying measures necessary to sustain the existing form, integrity, and material of an historic property," will prevent the loss of historic materials and/or spatial relationships, and ensure that historic features are protected in place.[1]

MANSION LANDSCAPE

OVERVIEW

The Mansion landscape is comprised of the forty-eight-acre grounds to the south of Hampton Lane. It is bordered by residential development to the east and west, and by the Baltimore Beltway to the south. Development of this tract of land as a residential property began around 1783 with construction of Hampton. The grounds reached the height of their physical development in the mid-1800s, under the stewardship of John Carnan and Eliza Ridgely. The character of Hampton at this time is reflected in an often quoted portrait that appeared in *The Horticulturist* in 1857: "*Hampton*, the seat of John Ridgely, Esq.,. . .will strike the visitor, accustomed to the cottage *ornée* only, as expressing more *grandeur* than anything

in America."[2] The Mansion grounds continued to be well cared for through subsequent periods of ownership, but never again reflected the high horticultural energy present in the pre-Civil War era.

Managing the character of each of the Mansion grounds' distinct landscape spaces and characteristics is central to perpetuating the historic character of the landscape. The treatment tasks that follow seek to preserve the extant ornamental and functional embellishments that the Ridgelys' made to the property during the period of significance and reestablish missing historic landscape features, while recognizing the constraints of maintenance and the need to accommodate contemporary visitor services and universal access. Tasks are ordered by landscape characteristic and keyed to the treatment Drawings 2–4 at the end of the chapter with task codes (TP: topography, CR: circulation, VG: vegetation, BS: buildings and structures, and SSF: small-scale features).

TASKS

TOPOGRAPHY

TP-1. Regrade the geothermal well field area to minimize construction impacts

Description: The geothermal well field was completed within a portion of Domestic Service Cluster to the east of the East Terrace in 2008 by Constellation Building Services. The work was guided by plans developed by GWWO Inc. in 2004. The well field encompasses an approximate 4,700 square foot area with an electrical connection to the south side of the Mansion, a plumbing connection to the north side of the Mansion (below the heart-shaped entrance drive), and mechanical equipment housed in the 1910 Garage. Construction of the well field necessitated approximate 400-foot deep borings, along with surface regrading of the area (Figure 3.2). The well field should be fine graded to reflect its pre-construction condition, as documented by the January 2002 site survey by Johnson Mirmiran & Thompson, with approximately two feet of grade change, dropping from west to east and concentrated in the eastern third of the area.

Considerations: Although the depth of well field piping is not noted in the as-built drawings, the contractor was required to maintain three-foot (thirty-six inches) of cover on all water mains. With a frost depth of twenty-four to thirty inches, thirty-six inches of minimum cover should permit fine grading (six inches or less) to minimize the impacts of topographic changes associated with construction of the geothermal well field. Implementation of this recommendation should ensure that adjacent historic structures, including the 1910 Garage, Smoke House, Paint House, Privy #2, and Privy #1 are not adversely affected by regrading. Following construction, the well field was surfaced with light colored crushed stone. This material should be removed and the area loamed and seeded for mown lawn.



Figure 3.2. Geothermal well field showing the existing crushed stone surface to be raked, loamed, seeded, and maintained in mown turf. View looking northeast, 2012 (OCLP).

This recommendation is best implemented in conjunction with reestablishment of the East Pathway extension (Task CR-2), reestablishing missing Domestic Service Cluster hedges (Task VG-5), and replacing missing fences associated with the Domestic Service Cluster (Task SSF-2).

Relationship to Park Planning: Regrading the geothermal well field supports the objectives of *General Management Plan* preferred alternative three by broadening the interpretive potential of the landscape to include all who lived and worked at the Mansion, enabling visitors to understand the design and use of the Domestic Service Cluster, a landscape area historically used by servants and slaves in the daily operation and upkeep of Hampton. The Domestic Service Cluster will be included in guided grounds tours, as outlined in the *Long-Range Interpretive Plan*.[3]

CIRCULATION

CR-1. Reestablish missing pedestrian routes within the Ridgely Family Cemetery

Description: Historic photographs of the Ridgely Family Cemetery from 1908 and circa 1910 show a brick pad surrounding the Ridgely Family Vault and an earthen path extending directly from the cemetery gate to the Ridgely Family Vault (Figure 3.3). However, these circulation features are now missing (Figure 3.4). Pedestrian circulation features should be reestablished within the Ridgely Family Cemetery to rehabilitate the landscape to its appearance during the period of significance.

Considerations: Historic photographs show an approximate six-foot wide brick pad surrounding the Ridgely Family Vault on three, if not four, sides. Bricks were laid in a herringbone pattern without an apparent edge course. Field investigation should be completed to determine if bricks remain below existing mown turf. If the brick pad remains, it should be unearthed. If the brick pad is missing, materials

matching remnants and bricks shown in historic photographs used to reconstruct this missing landscape feature. In addition, the approximate twelve-foot wide axial path from the cemetery gate to the Ridgely Family Vault should be surfaced with decomposed granite (DG) to reflect its historic appearance.

Relationship to Park Planning: The Ridgely Family Cemetery is part of the park's self-guided tour. According to the *Long-Range Interpretive Plan*, future visitor programming is anticipated to include a staff-led grounds walk stop at the Ridgely Family Cemetery as well.[4] According to the *General Management Plan*, the cemetery remains a significant element of the original landscape, and the historic landscape should be "managed and maintained through preservation and rehabilitation."[5]



Figure 3.3. Ridgely Family Cemetery and vault showing the historic earthen path from the cemetery gate to the vault, brick pad surrounding the vault, and periwinkle planting throughout the cemetery to be reestablished. View looking south, c. 1910 (HAMP 19351).



Figure 3.4. Existing view of the Ridgely Family Vault, showing the historic path alignment concealed by grass. View looking south, 2013 (OCLP).



Figure 3.5. Existing terminus of the East Pathway to be extended along its historic alignment to meet the entrance to Privy #1. The Rose-of-Sharon visible at center were planted in an effort to replace a similar planting removed for construction of the geothermal well field and may appropriately be removed with rehabilitation of the geothermal well field. View looking east, 2013 (OCLP).

CR-2. Reestablish East Pathway extension in the geothermal well field area

Description: The East Pathway was in place by 1843 and connected the Brick Terrace with Privy #1. Construction of the geothermal well field in 2007–8 necessitated removal of a portion of the pathway close to Privy #1 (Figure 3.5). The winding extension of the loose aggregate East Pathway should be reestablished, consistent with slight regrading and resurfacing of the geothermal well field area with mown turf.

Considerations: The extreme curves in the original path alignment were likely designed to accommodate dense planting to screen views of the privy area from the Brick Terrace and Great Terrace. Although historic plantings cannot be reestablished due to the well field below grade, the historic path alignment can be accommodated. The reestablished path should match the existing path section in material (earth colored, dense graded peastone) and width (approximately five and a half feet).

Relationship to Park Planning: Reestablishment of the East Pathway extension supports the objectives of *General Management Plan* preferred alternative three by broadening the interpretive potential of the landscape to include all who lived and worked at the Mansion, enabling visitors to understand the design and use of the Domestic Service Cluster, a landscape area historically used by servants and slaves in the daily operation and upkeep of Hampton.

CR-3. Resurface the Serpentine Walk to accommodate universal access

Description: Locations of trees on the Great Terrace suggest that the Serpentine Walk was created with construction of the Mansion from 1783 to 1790. Alternatively, the Serpentine Walk may date slightly later to improvements

designed by William Russell Birch sometime between 1798 and 1802. Based on archeological investigation, the Serpentine Walk has been rehabilitated to its original alignment, width (approximately five and a half feet), and materials (earth colored dense graded crushed stone over packed clay). However, the surface treatment of the walk is not universally accessible. Universal access to the Serpentine Walk is needed to provide visual access to the Falling Gardens, which are otherwise inaccessible due to steep grades and historic surface materials on the Falling Garden terraces. The Serpentine Walk should be stabilized with the application of a clear aggregate binder resin to accommodate universal access (Figure 3.6).

Considerations: The Serpentine Walk meets minimum accessibility requirements for thirty-six inches clear width, with a slope well less than 1:20 (5%) and cross-slope less than 1:48 (2%) throughout. The surface of the walk, however, cannot be classified as firm and stable due to the loose aggregate material. Given the low volume of pedestrian traffic, a clear aggregate binder resin should be applied to the existing walk surface in situ.

Binder resin is permeable and should be applied to the dry stone surface in multiple light applications. The addition of sand (color matched) immediately following application of the binder resin will help to create a more slip resistant surface. Adjacent landscape areas should be protected during binder resin application, and application within the drip line of historic trees should be avoided or mitigated.

Relationship to Park Planning: Resurfacing of the Serpentine Walk to accommodate universal access supports National Park Service policy, to "design, construct, and operate all buildings and facilities so they are accessible to, and usable by, persons with disabilities to the greatest extent reasonable, in compliance



Figure 3.6. The existing loose aggregate surface of the Serpentine Walk to be stabilized with the application of a clear aggregate binder resin. View looking northwest, 2012 (OCLP).

with all applicable laws, regulations and standards. . .Accessibility will be provided consistent with preserving park resources, visitor safety, and providing a high-quality visitor experience."[6] These objectives are articulated in *General Management Plan* preferred alternative three, which stipulates, "where possible, paths in historic locations would be modified to allow universal access and non-historic path locations would be minimized."[7]

CR-4. Construct a new universally accessible route to connect the East Terrace and East Pathway to the Serpentine Walk

Description: Historically, the Serpentine Walk was accessed by pedestrians crossing the lawn from the Brick Terrace, East Pathway, or cobblestone path. No direct path connection has been documented. In order to accommodate universal access to the Serpentine Walk, a new, universally accessible pedestrian access route is needed. This path should be added to the eastern side of the Great Terrace to connect the Serpentine Walk to the East Pathway, East Terrace, and concrete walk along the heart-shaped carriage drive beyond. This new path should be minimum thirty-six inches wide, match the Serpentine Walk in material (earth colored dense-graded loose aggregate), and not exceed 1:20 (5%) slope.

Considerations: A less than 1:20 (5%) slope on the new access path is readily accommodated by existing topography in the area, with little additional grading. Like treatment of the Serpentine Walk, the new access path will require aggregate binder resin to ensure a firm and stable surface. This stabilizer should also be applied to the western portion of the East Pathway, which connects the Brick Terrace to the new access path, to facilitate universal access to the Serpentine Walk from multiple points of entry.



Figure 3.7. View along the proposed alignment of the universally accessible route to connect the East Terrace and East Pathway to the Serpentine Walk. View looking south, 2013 (OCLP).

The final path alignment should allow for the historic marble urn to be retained in its existing location. The proposed location of the new access path minimizes intrusion on the historic landscape, while providing the most direct and least steep route from the concrete walk along the heart-shaped carriage drive to the Serpentine Walk (Figure 3.7).

Relationship to Park Planning: The proposed location of the new access path roughly matches the location proposed on the 1952 "Development Plan – Hampton Mansion & Gardens, Part of the Master Plan, Hampton National Historic Site."[8] However, this recommendation was not implemented. As noted in the *General Management Plan*, "all main paths connecting visitor services, mansion and garden, lower house and outbuildings would meet ADA regulations…Modification to and construction of new roads, parking areas and paths would not damage significant cultural features or archeological resources and would be surfaced to evoke the historic character of the estate."[9]

CR-5. Rehabilitate the cobblestone path and reestablish extensions to the Orangery and Garden Maintenance Building

Description: The cobblestone path was extant by circa 1840. Spurs once connected the central path that runs along the western side of the Great Terrace and Falling Gardens to the south side of the Orangery and to the northeast corner of the Garden Maintenance Building (Figure 3.8). A third path extension may have led from the Garden Maintenance Building to the southern side of Greenhouse #2; however, this section requires ground truthing to confirm. Path extensions likely remain below the mown lawn and should be revealed through gentle surface excavation. In addition, the entire length of the white quartz surface of the cobblestone path should be cleaned to eliminate moss on stones and in joints. New polymeric joint sand should be swept into the interstitial spaces between stones and then hardened to stabilize the historic path (Figure 3.9).

Considerations: Excavation of path extensions should be completed using the gentlest tools possible to minimize damage to paving stones below the surface. Cleaning of the path surface should employ environmentally friendly techniques. Test cleaning techniques (and solvents if necessary) on a portion of the path before cleaning the entire length. Hard, wet brushing or light power washing may suffice to remove moss and soil build-up between pavers, but ensure that paving stones do not become dislodged during cleaning. Polymeric joint sand should be used to stabilize paving stones and support long-term preservation of the cobblestone path. Historic documents show brick pavers on the southeast side of the Garden Maintenance Building, which might also appropriately be revealed.

Relationship to Park Planning: Maintaining historic path material is an important objective of the *General Management Plan* preferred alternative three, as it

relates to the overarching objective of the management alternative to evoke the historic feel of the property. Due to historic materials, slope, and alignment of the cobblestone path, the path cannot be made universally accessible along the majority of its length. However, visual and physical access alternatives for difficult to reach landscape areas, such as the Great Terrace and Falling Gardens, are identified both above and below.



Figure 3.8. Cobblestone path from the vicinity of Greenhouse #2 leading around the saucer magnolia to the Garden Maintenance Building. View looking southwest, 1920 (HAMP 9289).



Figure 3.9. Cobblestone path showing soil between paver joints and moss on paver surfaces. View looking north, 2013 (OCLP).

CR-6. Construct a new universally accessible route from the new lower parking lot to Terrace 2 of the Falling Gardens

Description: The Falling Gardens are not currently universally accessible due to steep slopes and limited formal pedestrian circulation routes. An approximate thirty-two-foot grade change over the relatively short distance from the Brick Terrace to Terrace 2 of the Falling Gardens makes universal physical access from the Mansion to the Falling Gardens virtually impossible. However, access to Terrace 2 of the Falling Gardens from the new Visitor Contact Station requires only approximately twenty-two feet of grade change over a much greater distance. A new walkway should be constructed parallel to the entrance drive to accommodate universal pedestrian access from the new Visitor Contact Station to Terrace 2 of the Falling Gardens (Figures 3.10 and 3.11).



Figure 3.10. View along the proposed alignment of the universally accessible route from the lower parking lot to Terrace 2 of the Falling Gardens. View looking east, 2013 (OCLP).



Figure 3.11. View along the proposed alignment of the universally accessible route from the lower parking lot to Terrace 2 of the Falling Gardens. View looking west, 2012 (OCLP).

Considerations: The five-foot wide walkway might appropriately be surfaced with bituminous concrete to visually recede in the surrounding landscape. An approximate six-inch curb will be needed along a short portion of the new walkway (between the walkway and entrance road) to accommodate a running slope of less than 1:20 (5%) as the entrance road ascends to the upper parking lot. In addition, sensitive regrading of topography adjacent to the walkway will be required to implement this recommendation. Archeological monitoring of previously undisturbed areas, such as to the north side of Greenhouse #2, should accompany implementation.

Relationship to Park Planning: Universal physical access to the upper half of the Falling Gardens without significant re-grading is only feasible in this location. As referenced in the *General Management Plan*, universal physical access is a high priority, and "all main paths connecting visitor services, mansion and gardens… would meet ADA regulations."[10] According to the *Long-Range Interpretive Plan*, "trails and pathways will be universally accessible (where possible, without significant grade changes or changes to the historic scene); signage will indicate level of accessibility."[11] This recommendation is well supported in the *Hampton National Historic Site Circulation Plan* by the "future circulation" proposal and recommendation to design a walkway connection from the Visitor Contact Station and lower parking lot to the gardens.[12]

CR-7. Realign the concrete walk to the Orangery

Description: The concrete walk to the Orangery was constructed in 1995 coincident with the addition of the concrete walk from the upper parking lot to the Mansion. The walk currently winds from the heart-shaped carriage drive to the Orangery entrance. The northeasterly alignment of the walk encourages visitors walking from the upper parking lot to cut across the lawn to access the Orangery, rather than use the walk. The walk should be realigned in a northerly orientation to better accommodate visitors arriving from the upper parking area and minimize visual intrusion on the historic landscape (Figure 3.12).

Considerations: The Orangery is located on axis with the outer loop of the heart-shaped carriage drive. Realignment of the concrete walk to align with the outer loop of the heart-shaped carriage drive will allow for the most direct access to the building and minimize the visual impact of this non-contributing circulation feature. The replacement walk should measure five feet in width and be constructed of poured-in-place concrete to match the existing concrete walk from the upper parking lot to the Mansion. The replacement walk should be universally accessible, with a slope less than 1:20 (5%). Implementation of this recommendation will require relocating the non-contributing fire hydrant opposite the Orangery entrance to a less conspicuous location.



Figure 3.12. View along the proposed realignment of the universally accessible walk to the Orangery (highlighted in red). View looking southwest, 2013 (OCLP).

Relationship to Park Planning: The Mansion-side universally accessible restrooms are located in the Orangery, so universal access to this building is critical. As referenced in the *General Management Plan*, universal physical access is a high priority, and "all main paths connecting visitor services, mansion and gardens… would meet ADA regulations."[13] According to the *Long-Range Interpretive Plan*, "trails and pathways will be universally accessible (where possible, without significant grade changes or changes to the historic scene); signage will indicate level of accessibility."[14]

CR-8. Reconfigure the upper parking lot

Description: The upper parking lot was designed by Alden Hopkins in April 1949 and was under construction or complete by 1952. Initially, access to the parking lot was accommodated along the historic entrance drive. The non-contributing entrance road was constructed to connect to the parking lot in 1988. The upper parking lot currently provides twenty-three parking spaces, including six designated as universally accessible (Figure 3.13).

Substantial new parking is being added to the Mansion landscape in concert with construction of the new Visitor Contact Station. This new lot is anticipated to include approximately fifty parking spaces and will serve as the park's primary parking area. With reduced parking pressure on the upper parking lot, the upper lot will be redesigned for use by visitors who are unable to traverse the steep slope from the Visitor Contact Station to the Mansion. This will result in a reduction of parking in the upper parking lot to approximately twelve spaces, including at least two designated as universally accessible.[15] The balance of the spaces might appropriately be signed to discourage use by able-bodied visitors.



Figure 3.13. Existing view of the upper parking lot. The western portion of the lot (to the left) is to be removed to minimize impacts to the core of the historic landscape. View looking south, 2013 (OCLP).

Considerations: The bituminous lot should be reconfigured for single direction travel (south to north), with twelve angled parking (45°) spaces along the eastern side of the lot. Reconfiguring the lot will reduce the visual and physical impact on the Orangery landscape and historic core of the Hampton landscape to the east. All construction will be conducted within previously disturbed areas, with impermeable surfaces reduced by approximately 5,380 square feet.

Improved vehicular circulation within the upper parking lot will eliminate two-way traffic within the lot and reduce vehicular/pedestrian conflicts for improved safety. Busses that must pass through the lot upon departure from the park will find navigating the reconfigured lot less cumbersome due to eliminated winding curves. Reconfiguring the upper parking lot will necessitate a new universally accessible bituminous concrete walk from the parking lot to the concrete walk along the historic entrance drive. This new walk should also meet the proposed new bituminous concrete walk from the Visitor Contact Station to the historic entrance drive. Coincident with this improvement, the non-historic connection to the historic entrance drive should also be removed.

Reconfiguring the upper parking lot will also necessitate removal of one of two remaning historic white ash (*Fraxinus americana*, 35m) that is already in sharp decline and two non-historic azaleas (*Rhododendron* sp., 33m and 34m). The historic white ash might appropriately be replaced slightly to the south following parking lot reconfiguration.

Relationship to Park Planning: As many visitors' first impression of the park, improvements to parking and wayfinding are key objectives of the *Long-Range Interpretive Plan*. The need for rehabilitation of the upper parking lot (parking at Orangery) is specifically addressed in the *General Management Plan* preferred alternative three.[16] In addition, reconfiguration of the upper parking lot reduces

the impact of non-contributing features on the historic landscape, supports improved visitor safety, improved wayfinding, and the overarching sustainability of the cultural landscape by reducing impermeable surfaces.

CR-9. Construct a new pedestrian route from the Visitor Contact Station to the upper parking lot

Description: The Visitor Contact Station is planned for completion in 2014. Site design associated with this new building includes a new lower parking lot and access road, but does not provide for pedestrian circulation between the new building and historic Mansion. A new pedestrian route is needed from the Visitor Contact Station and lower parking lot to the upper parking lot and Mansion beyond. Due to the steep grade change between the upper parking lot and Visitor Contact Station, a universally accessible route is not feasible.[17]

Pedestrian circulation up the slope and along the alignment of the historic entrance drive, rather than from the south side of the Mansion, has the added benefit of providing park visitors with a similar arrival sequence experienced by the Ridgely family riding on horses, in carriages, or in cars in decades past.

Considerations: The new walk should be five feet wide and constructed of bituminous concrete to visually recede in the adjacent mown lawn and meadow landscape. The walk should parallel the realigned entrance drive and drainage swale to the south and east, with the proposed rehabilitated West Orchard to the north and west. Significant regrading will be required to accommodate this new pedestrian route, which may require a running slope in excess of 1:7 (14%) in some areas.

Alternatively, approximately forty stairs may be constructed to accommodate approximately twenty feet of grade change along the steepest portion of the walk. If constructed, stairs should be designed to meet existing topography with multiple short flights to reduce fatigue (each not to exceed four or five steps) and generously sized landings (approximately ten feet in length). Handrails are required on both sides of each flight of stairs to meet universal accessibility guidelines. Bituminous concrete is the most appropriate surface material for the new walk and landings. Stone, such as granite, might appropriately be used for stair risers. Due to washouts and maintenance concerns, loose aggregate and mulch are not suitable surface materials.

Relationship to Park Planning: The *General Management Plan* calls for visitors to "be afforded safe access to and within the park in a manner that protects the character of park resources."[18] Preferred alternative three specifically calls for the relocated entrance drive to "connect to paths to the Mansion for tours of the building, garden, and grounds."[19]

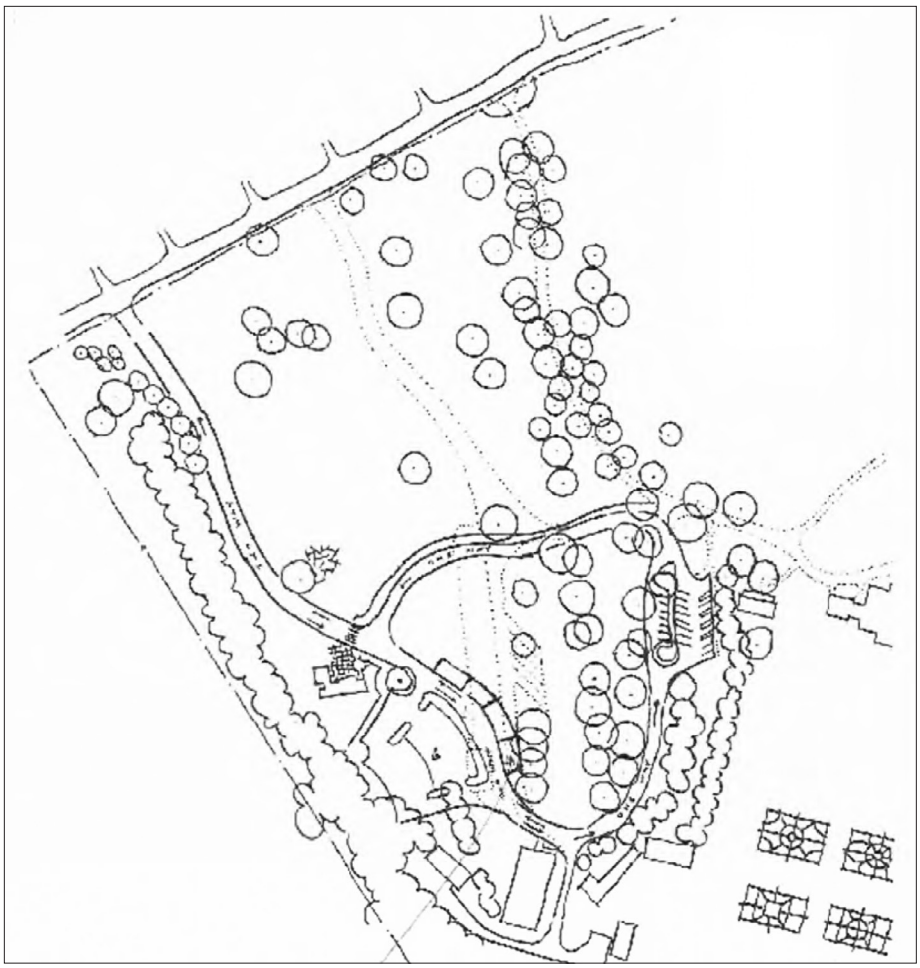


Figure 3.14. Schematic circulation concept for the new entrance road and Visitor Contact Station, including a pedestrian walk along the entrance road to the upper parking area. Plan view, 2010 (Hampton National Historic Site Circulation Plan, Fig. 15).

This recommendation is also well supported in the *Hampton National Historic Site Circulation Plan* by the recommendation to construct a pedestrian walk from the Visitor Contact Station to the Orangery. Preliminary Concept Sketches B and C show a pedestrian route paralleling the realigned entrance drive (Figure 3.14).[20] The *Hampton National Historic Site Circulation Plan* suggests consideration of a staircase due to the steep slope.[21]

CR-10. Construct a new pedestrian connection to the Hampton Lane crosswalk

Description: The Hampton Lane crosswalk was striped in 2012 following preparation of the *Hampton National Historic Site Circulation Plan* (2011) and an analysis of sightlines along Hampton Lane. Locating the crosswalk opposite the mown path across the North Lawn allowed for the greatest sightline to the east (approximately 400 feet). However, access to the crosswalk from the Mansion grounds is interrupted by a steep slope along the northern edge of the North Lawn. To accommodate pedestrian access to the Hampton Lane crosswalk from both the mown path and mulched path, the area should be regraded and surfaced with mulch. This recommendation takes into account and maintains the existing location of the Hampton Lane crosswalk.

Considerations: A split path will allow for easy access for pedestrians using the mown path across the North Lawn and pedestrians coming from Stable Drive by way of the mulched path along Hampton Lane. Regrading work should endeavor to create a pedestrian route with a running slope of less than 1:20 (5%), although both means of access to the new pedestrian connection (mown path and mulched path) are not universally accessible. Grading work should remain largely hidden from the Mansion and North Lawn due to the steep change in slope adjacent to Hampton Lane.

On the opposite side of Hampton Lane, a new pedestrian route is also needed to accommodate pedestrian access between Farm Road and the new crosswalk. Construction of this route will only require slight regrading in the vicinity of Farm Road to allow for a less than 1:20 (5%) running slope. Archeological oversight should coincide with construction, as the project area is within a portion of the tree allée shown on the 1843 *Map of Hampton* on-axis with the Mansion and Farm House.

Relationship to Park Planning: A new pedestrian path system connection between the Mansion and farm is specifically called for by the *General Management Plan*. According to the plan, "it could use the existing East Road past the stables, the mown path through the north lawn, or the original entrance drive from the mansion to the historic gates. A new path on the south side of Hampton Lane would be constructed to connect these three paths with a marked crosswalk and signs for safer crossing of Hampton Lane."[22]The need for an enhanced pedestrian connection between the Mansion and farm, along with the need for traffic calming devices along Hampton Lane, is identified in the *Long-Range Interpretive Plan*.[23]

VEGETATION

VG-1. Replace missing historic trees and existing historic trees in decline throughout the Mansion landscape

Note: This recommendation relates to individual specimen trees located throughout the Mansion landscape. Treatment of individual trees is directed by preservation maintenance needs and replacement strategy outlined in Appendix A: Vegetation Inventory. Individual tree locations are indicated on Drawings 2–5.

Treatment of trees that comprise an aggregate feature, such as hedges, are addressed by specific treatment tasks below.[24] Aggregate features should be treated (i.e. removed and/or replaced) at the same time to ensure that the original design intent is perpetuated.

Description: Specimen trees are central to the significance of the Hampton landscape. For decades, the Ridgely family maintained and expanded their diverse botanic collection. The National Park Service has perpetuated the composition

of the Ridgely family's botanical collection, with the exception of species substitutions due to contemporary disease concerns or to screen incompatible views to contemporary residential development. Over time, however, historic specimen trees have matured and declined, and, in some cases, been removed. Missing historic trees throughout the Mansion grounds should be replaced to perpetuate the historic character of the designed landscape.

Considerations: Historic trees on the Hampton Mansion grounds are well documented by a 1948 tree location sketch prepared by National Park Service Forester W.L. Savage,[25] as well as the 1952 "Development Plan – Hampton Mansion & Gardens, Part of the Master Plan, Hampton National Historic Site."[26] These two plans serve as objective benchmarks for assessing change since the end of the period of significance in 1948. In addition, numerous historic photographs of the Mansion grounds, taken throughout the period of significance, document changes in tree placement and composition throughout time. These photographs should be used to supplement decision-making about tree replacement, particularly when tree replacement or removal is recommended to achieve interpretive objectives.

With approximately 120 specimen trees identified for replanting throughout the Mansion grounds, due either to missing historic trees or poor condition,



Figure 3.15. Maryland State Champion weeping Japanese scholar tree in the center of Parterre V to be propagated for replacement upon decline of the historic specimen. View looking northeast, 2012 (OCLP).

Table 3.1. Pest and Disease Prone Tree Species

Scientific Name	Common Name	Common Disease(s) and Pest(s)
Cornus florida	flowering dogwood	anthracnose and powdery mildew
Fraxinus sp.	ash	anthracnose and emerald ash borer
Juniperus virginiana	eastern redcedar	cedar-apple rust
Picea abies	Norway spruce	cooley spruce gall adelgid
Pinus strobus	white pine	pine bark beetle
Platanus occidentalis	eastern sycamore	anthracnose
Tsuga sp.	hemlock	hemlock woolly adelgid and spider mites
Ulmus americana	American elm	Dutch elm disease

implementation of this recommendation is expected to be ongoing. Replacement plantings should be prioritized by impact to visitor experience and on maintaining the cultural landscape in good condition. For example, replanting of the missing weeping pagoda tree (*Sophora japonica* 'Pendula') in the center of Parterre VI is a high priority, while replanting of the missing black locust (*Robinia pseudoacacia*, 30g) within the area south of the geothermal well field ranks significantly lower (Figure 3.15).

Replacement of missing specimen trees should take in to account contemporary management considerations including impacts due to deer browse and rub, as well as other pests and diseases. Necessary protection from deer is described in the previous chapter. In cases where treatment of diseases and pests is not feasible, substitute species may be considered. Common pest and disease prone tree species include the following (see Table 3.1).

Relationship to Park Planning: Specimen trees, including several Maryland State Champions, are referenced in both the *General Management Plan* and *Long-Range Interpretive Plan*. The cultural landscape is identified as a fundamental resource by the *General Management Plan*. Perpetuation of Hampton's diverse collection of trees is central to maintaining the cultural landscape in good condition. In addition, the park interpretive program highlights historic vegetation and landscape history during the grounds tour offered during the summer months.

VG-2. Replace missing groundcover within the Ridgely Family Cemetery

Description: The earliest photographs of the Ridgely Family Cemetery, dating to 1872, show a fine textured groundcover throughout the cemetery. This treatment is consistent with photographs of the cemetery from 1908 and 1910 (Figure 3.16, also see Figure 3.3). This groundcover was replaced with mown lawn in the twentieth century, likely during the cemetery's stewardship by the Society for the Preservation of Maryland Antiquities, which extended from 1953 to 1990. Lesser



Figure 3.16. Ridgely Family Cemetery and vault showing the historic brick pad surrounding the vault, axial path to the cemetery entrance (to the right), and periwinkle planting throughout the cemetery to be reestablished. View looking southwest, 1908 (HAMP 20526).

periwinkle (*Vinca minor*) groundcover should be reestablished throughout the cemetery to enhance the historic character of the space and improve landscape sustainability.

Considerations: The cemetery floor was planted with periwinkle (*Vinca major* or *minor*) or another fine textured groundcover. Periwinkle does not twine or climb, and poses no threat to the cemetery walls, vault, or markers. During the period of significance, the Ridgely Family Cemetery walls were also clad in English ivy (*Hedera helix*); however, due to structural challenges posed by ivy on brick walls, this wall planting should not be reestablished.

Between the reestablishment missing pedestrian routes within the Ridgely Family Cemetery and replacement of missing groundcover, maintenance of manicured turf will be reduced by approximately 8,370 square feet, reducing mowing requirements. Maintenance of groundcover will require hand weeding once a month during the growing season.

Relationship to Park Planning: The *General Management Plan* identifies deficiency in the Ridgely Family Cemetery planting and specifically calls for rehabilitation of plantings within the walls.[27] The cemetery is open daily for self-guided tours and is included on guided grounds tours when staffing and conditions permit.

VG-3. Establish understory plantings in Cemetery Woods

Description: Cemetery Woods were once largely open, with cemetery road lined with a single row of mixed deciduous and evergreen trees on each side of the road, with an open field and orchard to the east and the East Orchard to the west.

Throughout the late twentieth century, likely during stewardship by the Society for the Preservation of Maryland Antiquities from 1953 to 1990, natural succession resulted in a dense stand of mixed deciduous and evergreen trees throughout the area bordering cemetery road. With this change, the understory was colonized by dense invasive species, both native and exotic. These plants were removed by the National Park Service, and dense shade in conjunction with heavy deer browse has prevented reestablishment of the canopy understory (Figure 3.17). Shade tolerant understory plantings should be reestablished within Cemetery Woods to enhance animal habitat and continue to protect the health of forest area.

Considerations: The Cemetery Woods canopy is also compromised by an increase in Norway maple (*Acer platanoides*), which contribute to heavy shade and demonstrate allelopathic tendencies that interfere with growth of other plants. Norway maples should be removed before establishment of understory plantings. If sufficient space is created through management of invasive trees, historic sugar maples (*Acer saccharum*) might appropriately be replanted to line both side of the road. Helen Ridgely's annotated copy of *Check List of Plants Compiled for the Vicinity of Baltimore* by Basil Sollers (1888) and Helen Ridgely's diaries should be carefully reviewed for reference to plants found in the cemetery area during Helen Ridgely's tenure.[28]

Establishment of understory plantings in Cemetery Woods also provides opportunities to advance the park's natural resource management goals. Many native, non-invasive, shade tolerant species are suitable for planting. Among those species, deer-resistant (not deer-proof) understory plants include, but are not limited to, the species listed in Table 3.2. Deer fencing around portions of Cemetery Woods might also appropriately be considered (see Task SSF-1).

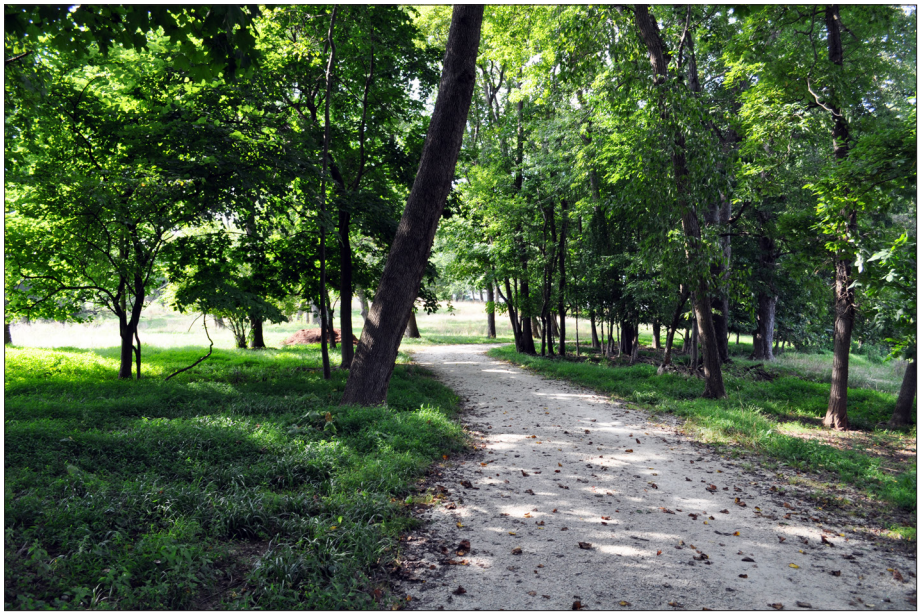


Figure 3.17. Cemetery Woods showing the lack of understory vegetation due heavy deer browse and dense shade cast by invasive Norway maples. View looking north, 2013 (OCLP).

Table 3.2. Maryland Native, Non-invasive, Deer-resistant Understory Species

Scientific Name	Common Name
Understory Trees (partial shade)	
Amelanchier arborea	serviceberry
Cornus florida	flowering dogwood
Ilex opaca	American holly
Magnolia virginiana	sweetbay magnolia
Nyssa sylvatica	black gum
Sassafras albidium	sassafras
Shrubs (partial shade)	
Callicarpa americana	beautyberry
Cephalanthus occidentalis	buttonbush
Cornus sericea	red twig dogwood
Ilex glabra	inkberry
Ilex verticillata	winterberry
Kalmia latifolia	mountain laurel
Leucothoe fontanesia	drooping leucothoe
Lindera benzoin	spice bush
Sambucus canadensis	American elder
Viburnum dentatum	arrowwood viburnum
Herbaceous Plants (full shade)	
Anemonella thalictroides	rue-anemone
Athyrium filix-femina	lady fern
Cimicifuga racemosa	black cohosh
Dryopteris marginalis	wood fern
Matteuccia struthiopteris	ostrich fern
Osmunda regalis var. *spectabilis*	royal fern
Pachysandra procumbens	Allegheny spurge
Polystichum acrostichoides	Christmas fern

Relationship to Park Planning: Cemetery Woods is delineated in the *Hampton Forest Stand Delineation and Forest Conservation Plan*, as part of the 1.11-acre forest protection area designed to mitigate disturbance of the white pine (*Pinus strobus*) stand along the western park boundary in association with construction of the Visitor Contact Station.[29] The Ridgely Family Cemetery and access road are expected to continue to be included on visitor tours. Accordingly, the landscape bordering cemetery road should be maintained in good condition.

VG-4. Rehabilitate the East Orchard

Description: The East Orchard was likely terraced about 1785–90, around the same time as the Falling Gardens. The East Orchard terraces are first depicted on the 1843 *Map of Hampton*, which shows ten paired terraces plated with approximately 310 fruit trees in a geometric north/south organization (Figure 3.18). The last fruit tree was lost in the 1980s, but the distinctive topography of the East Orchard remains (Figure 3.19). Reestablishment of the East Orchard planting to its historic extent is not feasible due to other existing mature vegetation, including a portion of the 1.11-acre forest protection area, and limits of contemporary maintenance. However, a portion of the East Orchard should rehabilitated to allow for interpretation of this historic landscape feature.

Considerations: Although a complete replanting is not feasible, thirty-one of the historic fruit trees should be replanted on the two lower terraces to provide visitors with a sense of how this landscape area was historically used by early generations of the Ridgely family. Trees should be replanted as they grew historically, in a square pattern, twenty-five feet on center, and parallel with the Mansion's façades. Prior to planting, soil should be tested and amended if necessary to accommodate the trees. Replanted trees will require individual exclusion fences to discourage deer browse.

A historic photograph of apple trees at Hampton from circa 1897 shows that fruit trees were standard, or grown on rootstock that allowed each tree to reach its natural height, and pruned into an open bowl form. This form might appropriately be perpetuated in the East Orchard through active management and pruning.

Species and varieties historically grown at Hampton are derived from the "Vault Orchard" plan and shown in the table below. Rehabilitation plantings might

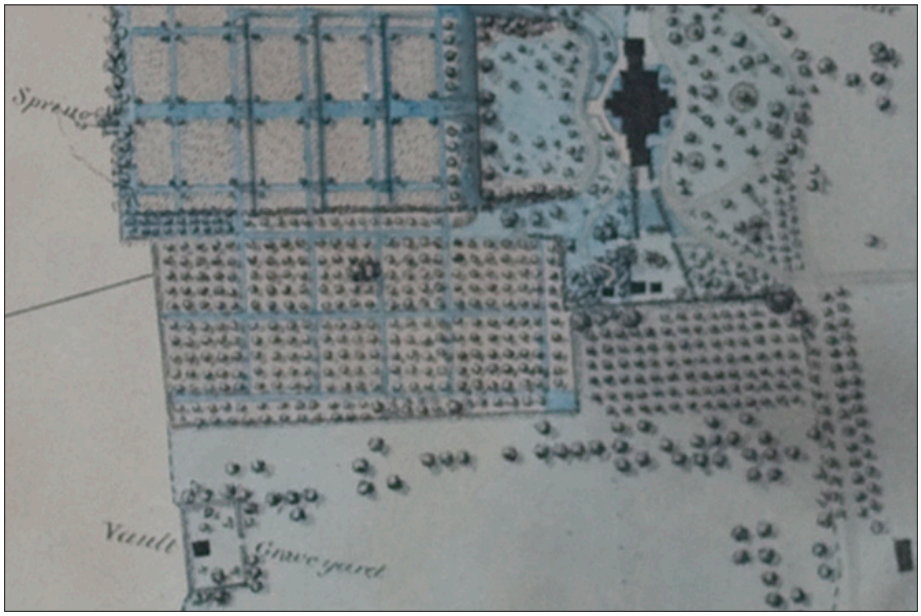


Figure 3.18. Enlargement of the East Orchard as documented by Joshua Barney on his "Map of Hampton." Scattered trees at the bottom of the image may be remnants of Captain Ridgely's 1770s orchard. Plan view, 1843 (HAMP 1127, neg. HAMP 21905).



Figure 3.19. Lower terraces of the East Orchard to be planted with apple trees. View looking west, 2012 (OCLP).

appropriately draw upon these historic varieties (Table 3.3), employ other historically appropriate varieties, or employ contemporary disease-resistant varieties that will reduce ongoing maintenance requirements (Table 3.5). Final determination of fruit tree varieties should also take into account vigor, cropping, pollination characteristic (flowering group, fertility), and disease-resistance. Following the selection of appropriate varieties, rootstocks should be selected that will enable trees to be grown as standards, such as standard Antonovka seedling rootstock.

Relationship to Park Planning: Limited rehabilitation of the East Orchard is consistent with the treatment strategy outlined in the *General Management Plan* preferred alternative three. With respect to the cultural landscape, this alternative seeks to find a hybrid or compromise to full restoration, which will "still allow visitors to understand [the] resources, while providing reasonable and feasible operational and maintenance considerations."[30] Rehabilitation of the East Orchard also supports the *Long-Range Interpretive Plan* objective to illustrate and "assist visitors in understanding the components of [Hampton's] layered landscape."[31] The rehabilitated East Orchard will also offer educational opportunities related to plant science, horticulture, aboriculture, and fruit processing.

Table 3.3. Vault Orchard Fruit Trees (1885)*

Variety	Location on 1885 Plan
Apple (*Malus domestica*)	
Transcendant Crab [sic, Transcendent Crab]	1a (red)
Yellow Fruit	1b (red)
Red Fruit	1c (red)
Summer Queen	2 (red)
Tulpehoecken	3 (red)
Red Astrachan	4 (red)
Early Harvest	5 (red)
King of Tomkins Co. [sic, Tompkins Co.]	6 (red)
York Imperial	7 (red)
Smiths Cider	8 (red)
Winesap	9 (red)
Ben Davis	10 (red)
Cherry (*Prunus serotina*)	
Early Richmond	11 (red)
Black Heart	12 (red)
Yellow Spanish	13 (red)
Napoleon Biggarreau	14 (red)
Black Tartarian	15 (red)
Peach (*Prunus persica*)	
Wagner	1 (black)
Early York	2 (black)
Garfield	3 (black)
Waterloo	4 (black)
Crawfords Early	5 (black)
Crawfords Late	6 (black)
Cooledge's Favorite	7 (black)
Foster	8 (black)

*As documented on the December 1, 1885 "Vault Orchard" plan. The historic Vault Orchard was located to the east of Cemetery Woods in an area now occupied by residential development (HAMP 6972)

Table 3.4. Specialized Fruit Tree Sources

Nursery	Location	Website
Vintage Virginia Apples & Albermarle Ciderworks	North Garden, Virginia	www.albemarlecider works.com/orchard/apple-varieties
Stark Brothers (formerly Miller Nurseries)	Canandaigua, New York	www.starkbros.com/products/fruit-trees
Tower Hill Botanical Garden	Boylston, Massachusetts	www.towerhillbg.org/index.php/visit/plan-your-visit/the-garden/the-apple-orchard
Fedco Trees	Waterville, Maine	www.fedcoseeds.com/trees.htm

Table 3.5. Sample Apple Tree Planting Schemes

Scientific Name	Common Name	Vigor	Cropping	Pollination	Disease Resistance
Scheme A. Historically Appropriate Palette					
Malus domestica 'Ben Davis'	Ben Davis apple	Data not available	Data not available	Self-sterile	Cedar rust: Some susceptibility
Malus domestica 'King of Tompkins County'	King of Tompkins County apple (American)	Large	Data not available	Flowering group 3, Self-sterile, Triploid	Data not available
Malus domestica 'Winesap'	Winesap apple (American)	Average	Good	Flowering group 3, Self-sterile, Triploid	Mildew: Very resistant Fireblight: Some susceptibility Cedar rust: Very resistant
Scheme B. Contemporary, Disease-resistant Palette					
Malus domestica 'Liberty'	Liberty apple (American, late 1900s)	Large	Heavy	Flowering group 3, Self-sterile, Triploid	Scab: Very resistant Mildew: Some resistance Fireblight: Some resistance Cedar rust: Very resistant
Malus domestica 'Macoun'	Macoun apple (American, early 1900s)	Large	Heavy	Flowering group 3, Self-sterile, Diploid	Scab: Some susceptibility Fireblight: Some susceptibility Cedar rust: Some resistance
Malus domestica 'Redfree'	Redfree apple (American, late 1900s)	Average	Good	Flowering group 3, Self-sterile, Diploid	Scab: Very resistant Mildew: Some resistance Fireblight: Some resistance Cedar rust: Very resistant

VG-5. Reestablish missing Domestic Service Cluster hedges

Description: Located primarily to the east of the Mansion, the Domestic Service Cluster was once defined by a series of hedges that defined distinct areas, or rooms, within the cluster. The area closest to the Mansion, the East Terrace, was bordered by hedges to the north, south, and east. To the east, the area now occupied by the geothermal well field was once defined by hedges to the north, south, and east, with the East Terrace to the west. And, to the south of this area, hedges also defined the north, south, and east sides of an area associated with Privy #1. Replacement Canadian hemlock (*Tsuga canadensis*) hedges planted in the 1970s around the East Terrace are all that remain of this historic planting (Figure 3.20). Existing hedges should be removed and all hedges replaced to the extent feasible by the location of the geothermal well field.

Considerations: Replacement of plantings between Privy #1 and the Paint House is not feasible due to the location of the geothermal well field; however, short hedge sections might appropriately be established on the east and west sides of the well field to suggest the historic alignment of this screen planting. In addition, the replacement upright Japanese plum yew (*Cephalotaxus harringtonia* 'Fastigiata') hedge section between the East Pathway and the Pump house should be removed, as this area was not historically planted.

Without fencing, Canadian hemlock (*Tsuga canadensis*) is not a viable replacement species due to deer browse. In addition, hemlock woolly adelgid poses a threat to all hemlock plantings. Upright Japanese plum yew (*Cephalotaxus harringtonia*

'Fastigiata') is recommended as a substitute species. Japanese plum yews are deer-resistant and mature at approximately ten feet in height and are already in use at Hampton along the east side of the Great Terrace. Replacement Upright Japanese plum yew should be planted at approximately five feet on center and maintained at approximately six to eight feet in height. In total, this planting will entail approximately 123 new shrubs.

Alternatively, steeplechase arborvitae (*Thuja* x 'Steeplechase') might be evaluated for use. Steeplechase arborvitaes are also deer-resistant; however, this species matures at approximately twenty feet in height and will require extra maintenance to maintain at an appropriate height of six to eight feet.

Management of existing vegetation along the eastern side of the Domestic Service Cluster may be necessary to enable replacement of missing hedges in the area. Implementation of this recommendation should be completed in conjunction with fine grading of the geothermal well field area (Task TP-1). In the vicinity of the East Terrace, implantation of this recommendation is best completed in conjunction with reestablishment of missing lattice fences (Task SSF-2) and following reconstruction of the Octagon Building (Task BS-1) and Summer Kitchen (Task BS-2).

Relationship to Park Planning: Reestablishment of the missing Domestic Service Cluster hedges is integral to enabling visitors to understand the historic spatial organization and use of this area. Implementation of this recommendation supports the *General Management Plan* preferred alternative three recommendation to expand the visitor experience to include the entire story of the park, while broadening stories to include all those who lived and worked at the Mansion.[32] Replacement hedges also create the setting for the reconstructed Summer Kitchen and Octagon Building, both recommendations of the *General*



Figure 3.20. Overgrown Canadian hemlock hedge along the north side of the East Terrace to be replaced and maintained at a lower height. View looking west, 2013 (OCLP).

Management Plan preferred alternative three. The Domestic Service Cluster will be included in guided grounds tours, as outlined in the *Long-Range Interpretive Plan*.[33]

VG-6. Reestablish wisteria on the south portico

Description: A historic stereograph from 1872 and a historic photograph from circa 1890 are among the earliest to show Chinese wisteria (*Wisteria sinensis*) on Hampton's south portico (Figure 3.21). The vine climbed from both the east and west sides of the staircase to the second story balcony. Wisteria persisted throughout the period of significance, and remains growing at the base of the porch today. However, due to concerns about condition and maintenance of the Hampton Mansion, wisteria is no longer trained to grow on the building façade. A trellis system should be designed and constructed to permit wisteria to climb the south portico pilasters to the second story.

Considerations: Wisteria is a twining vine, which means it grows by sending out shoots that wrap around objects. Twining vines can cause damage to historic clapboard buildings by deterring evaporation and encouraging moisture damage,



Figure 3.21. South facade of the Hampton Mansion showing the south portico draped in Chinese wisteria. View looking northeast, c. 1890 (HAMP 3467).

and loosening and dislodging building materials. However, if twining vines are trained on a removable trellis system, impacts to the historic building can be substantially reduced. As outlined in *Preservation Tech Note: Restoring Vine Coverage to Historic Buildings*, an ideal system would provide an appropriate historic appearance, suit the specific vine growth characteristics, minimize the impact of the anchorage and support structure, and provide direct access to the building for maintenance.[34] This Tech Note is included as Appendix C for additional reference and guidance. Vines will require pruning once a month throughout the growing season.

Relationship to Park Planning: The cultural landscape is identified as a fundamental resource by the *General Management Plan*. Reestablishment of wisteria on the south portico supports the *General Management Plan* goals related to maintaining the cultural landscape in good condition. In addition, the park interpretive program highlights historic vegetation and landscape history during the grounds tour offered during the summer months.

VG-7. Reestablish potted trees on the Great Terrace

Description: Each summer from at least 1833 to 1915, approximately eight citrus trees (orange, lemon, and, in the mid-1800s pomelo) were brought from the Orangery onto the Great Terrace in decorative wooden boxes. Trees were evenly spaced along the northern side of the Serpentine Walk (Figure 3.22). The park should replanted a limited number of citrus trees in reproduction boxes on the Great Terrace to evoke the historic appearance of this landscape feature, which figured prominently in early descriptions of Hampton's grounds (Figure 3.23).

Considerations: Replicas of the historic wooden boxes that date to the 1950s remain in curatorial storage and should be used with historic photographs in designing additional replicas for placement on the Great Terrace. New replica boxes might appropriately be constructed of durable materials, such as synthetic wood or fiberglass, to withstand winter and reduce maintenance demands. However, replica features should conform to the historic design of the original furnishings, including the original vermillion, bronze, and straw color palette, as referenced in the 1882 painting bill.[35] Boxed plantings will require watering once a week throughout the growing season.

Although the Ridgely's citrus trees have been lost, cuttings from the trees survive in the Tilghman family's Wye House Orangery on Maryland's eastern shore (Talbot County). The Wye House Orangery might provide cuttings or seedlings to Hampton National Historic Site for rehabilitation planting. Because citrus trees cannot withstand Maryland winters outdoors and on-site indoor storage is not feasible, the park should explore options for lifting trees from the boxes annually and storing the trees off-site during cold weather until Greenhouse #2 is restored



Figure 3.22. View of the south facade of the Mansion showing the distribution of potted citrus trees along the Serpentine Walk. View looking north, 1878 (HAMP 15475).



Figure 3.23. Potted citrus trees on the Great Terrace to be reestablished in reproduction planter boxes. View looking west, c. 1900 (HAMP 22497).

to an operational level (see Task BS-4). (Replica boxes can remain on the Great Terrace throughout the year.) A partnership with a local organization, such as the Clyburn Arboretum or the Druid Hill Park Conservatory, might permit use of off-site greenhouse facilities for winter storage.

Relationship to Park Planning: Reestablishment of potted citrus trees on the Great Terrace is important in enhancing the interpretive potential of the landscape and the character of the landscape to its Civil War era appearance. Potted trees are also critical to understanding the purpose and location of the original Orangery and should be used in explaining the design of Hampton's grounds.

VG-8. Reestablish seasonal plantings in selected marble urns

Description: Vermont marble urns were installed on the Mansion grounds by Eliza Ridgely in the 1840s. The urns were planted with various annuals at different times throughout the period of significance (Figure 3.24). Today, regular planting of annuals in the marble urns is not feasible due to watering and maintenance requirements; however, each marble urn in the vicinity of the Mansion should be filled with a an approximate fifteen-inch diameter drop-in liner pot to be planted with annuals during periods of peak visitation and special events to illustrate Hampton's horticultural excellence during the period of significance.

Considerations: Reestablishment of potted annuals in the original marble urns within the heart-shaped carriage drive (2 urns), Mansion front (4 urns), Mansion back/Brick Terrace (6 urns), and Great Terrace (12 urns) would entail twenty-four potted annuals. Because potted plants dry out faster than vegetation planted in the ground, annuals will require daily watering during the growing season.

Historic photographs show that the marble urns were planted with a variety of species historically, including many tropical species, trailing vines, aloe (*Aloe* sp.) or century plant (*Agave americana*), and geranium (*Pelargonium* sp.). However, the seasonal presence of bedding plants in selected marble urns is paramount to the historic materials, since the intent of this recommendation is to evoke the historic character of the plantings. Plantings may vary from urn to urn and season to season, but should be planted symmetrically to reflect the organization of urns throughout the grounds, themselves a reflection of the Mansion's symmetrical design.

Relationship to Park Planning: Reestablishment of seasonal plantings in selected marble urns is an important step in rehabilitating the landscape to demonstrate the horticultural opulence that characterized the estate in the Civil War era. Italian marble urns might be used to support interpretation of the designed landscape, in particular in explaining to visitors the impact European gardening traditions and John Carnan and Eliza Ridgely's travels in Europe had on Hampton's landscape design.



Figure 3.24. Nancy Davis planting annuals in the marble urns on the Brick Terrace. Each urn should be fitted with a liner pot and replanted seasonally to evoke its historic appearance. View looking west, c. 1890 (HAMP 19623).

VG-9. Replace missing paired eastern redcedars on the east and west sides of Terraces 1–4

Description: Historic photographs from the period of significance show paired eastern redcedars (*Juniperus virginiana*) flanking both the east and west sides of the each Falling Garden terrace (Figure 3.25). A scattering of these trees remained as late as 2008. Redcedars should be replanted at the southeast corners of Parterres I, III, and V, and at the southwest corner of Parterres II, IV, and VI. In addition, pairs of redcedars should also be replanted at the northeast corner of Parterre I and at the northwest corner of Parterre II.

Considerations: This formal planting is a visual extension of the eastern redcedars (*Juniperus virginiana*) that line the southern edge of the Great Terrace. As an aggregate feature, all paired eastern redcedars should be replanted at the same time, as balance, symmetry, and uniformity essential qualities of the original design. Eastern redcedars appear to be spaced approximately fifteen feet apart on-axis with existing Norway spruce (*Picea abies*) along the central walk, but final placement should be determined in the field.

Relationship to Park Planning: Replacement of missing eastern redcedars (*Juniperus virginiana*) within the Falling Gardens supports the *General Management Plan* preferred alternative three recommendation to manage the

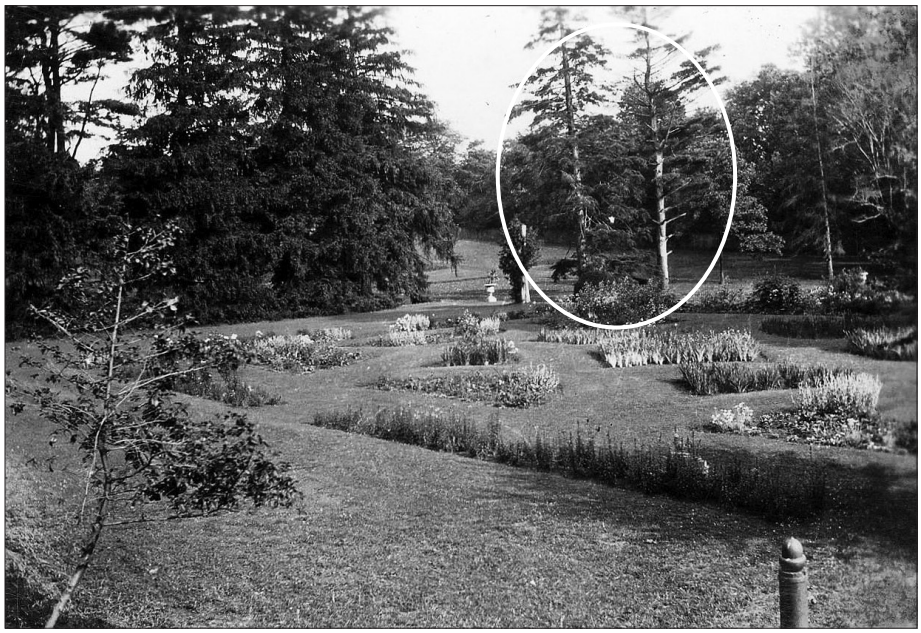


Figure 3.25. Terrace 2 of the Falling Gardens showing paired mature eastern redcedars that bordered the parterres during the period of significance (pair of trees right of center). View looking southeast, c. 1940 (HAMP 20689).

Falling Gardens to evoke their original designs.[36] Replacement of missing trees is one of the most effective techniques to perpetuate the formal character of this landscape area with very low ongoing maintenance requirements. As a focal point of the grounds tour, rehabilitation of the Falling Gardens in also essential to supporting the goals of the *Long-Range Interpretive Plan*.

VG-10. Rehabilitate missing vegetation in Parterre III and IV planting beds

Description: The distinctive terraces of the Falling Gardens were constructed around the same time as the Mansion, circa 1785–90. The planting beds were laid-out to emulate European precedents. Over time, the beds were planted with a variety of different species, but almost always roughly symmetrical. Of all Hampton's occupants, Eliza Ridgely appears to have taken the greatest interest in the gardens. Documentation of her improvements is copious. By the end of the period of significance, the plantings had fallen into neglect. Between 1955 and 1956, Parterre III was "reconstructed" based on design work of Alden Hopkins and English garden precedents. The parterres were restored to their original, Ridgely era configuration in 2009, but remain unplanted (Figure 3.26). Vegetation should be reestablished in Parterres III and IV to evoke the historic appearance of the Falling Gardens during the period of significance.

Considerations: The presence of vegetation in the planting beds is paramount to the historic materials, since the intent of this recommendation is to evoke the historic character of the gardens. Plantings may vary over time, but should maintain symmetry within each of the parterres to reflect the historic planting design. A palette of deer-resistant low flowering shrubs and perennials is provided below for consideration in rehabilitation planting (Table 3.6).

The northern end of both beds flanking the central walk should be planted with a single Japanese snowball bush (*Viburnum plicatum*), with a single English boxwood (*Buxus sempervirens*) at the southern end of both beds. Beds flanking the eastern and western sides of the parterres should be planted with a row of pink peonies (*Paeonia* sp.). Historic peonies from the perimeter of Terrace 3 (75g, 76g, 77g, 78g, 79g, 83g, and 87g) might appropriately be divided and transplanted for use in reestablishing vegetation in the Terrace 2 parterres. Within other planting beds, rehabilitation planting may include deer-restraint vegetation that matures at a low height. A larger focal point specimen might appropriately be planted at the center of each parterre if the historic roses that grew at the center of the parterres are determined to be unsuitable.

During rehabilitation, an automatic irrigation system might appropriately be installed on Terrace 2 to reduce watering by maintenance staff during summer months. Should full-scale restoration of planting in Parterres III and IV become feasible in the future, additional detailed research is needed to determine the most historically appropriate composition of perennial bedding out species. 2008 garden rehabilitation planting plans are included in Appendix B. Additional detailed design work is needed to implement this recommendation.

Relationship to Park Planning: Rehabilitation of vegetation in the Parterre III and IV planting beds is essential to managing the Falling Gardens to evoke their historic use and design, as directed by the *General Management Plan* preferred alternative three.[37] The substitution of low maintenance plant materials ensure that the care of replacement vegetation is feasible from operational and maintenance perspectives. Rehabilitation of the Parterre III and IV planting beds presents opportunities to enhance existing volunteer partnerships and develop new relationships to support implementation and maintenance, as outlined in



Figure 3.26. Parterre IV of the Falling Gardens, which is to be rehabilitated along with Parterre III to evoke its historic appearance. View looking northeast, 2012 (OCLP).

the *General Management Plan* preferred alternative three. The Falling Gardens are a focal point of the grounds tour and their historic character is essential to supporting the goals of the *Long-Range Interpretive Plan*.

VG-11. Reestablish Parterre V and VI planning beds

Description: Parterres V and VI were planted throughout the period of significance with a variety of bedding out plants. By circa 1920, the parterres on Terrace 3 were missing, with the exception of limited perimeter planting. By the end of the period of significance in 1948, the terrace had fallen into a state of total disrepair, with overgrown and missing vegetation. Since this time, Parterres V and VI have remained below the grass surface that characterizes Terrace 3 (Figure 3.27). Limited historic plantings remain on the perimeter of the parterres and a single, aged weeping pagoda tree (*Sophora japonica* 'Pendula', 80g) stands in the center of Parterre V. Parterre V and VI planting beds should be reestablished to reflect their historic configuration and to evoke the historic appearance of the Falling Gardens during the height of their physical development in the 1860s and 1870s.

Considerations: Given limited maintenance resource, complete rehabilitation of the Terrace 3 planting beds is not feasible, and Terrace 3 beds are the least critical in comparison with planting beds to the north. Nonetheless, the edges of Parterre V and VI planting beds should be identified based on historic measured drawings and delineated on site with steel edging. Turf within planting beds should be removed and soil amended to accommodate limited rehabilitation planting. The bottlebrush buckeye (*Aesculus parviflora*, 25a) at the southeast corner of Parterre VI requires pruning to open the historic grass pathway adjoining the parterre beds.



Figure 3.27. Parterres V and VI of the Falling Gardens, where the historic configuration of planting beds are to be reestablished, with limited rehabilitation planting along perimeter beds. View looking southeast, 2012 (OCLP).

The weeping pagoda tree (*Sophora japonica* 'Pendula', 80g) in the center of Parterre V should be propagated and replaced upon its decline. A weeping pagoda tree propagule should also be replanted in the center of Parterre VI. Existing English boxwood (*Buxus sempervirens*, 85g and 86g) should be retained at the northern end of both beds flanking the central walk. A single flowering quince (*Chaenomeles speciosa*) should be planted at the southern end of both beds flanking the central walk. The existing flowering quince (81g) should be assessed for rejuvenation and relocation or for propagation in this planting.

Between the corner shrub plantings, existing white lilacs (*Syringa vulgaris*, 84g) should be pruned, retained, and supplemented with additional white flowering specimens to fill out the row. If the quantity of existing historic pink peonies (*Paeonia* sp., 75g, 76g, 77g, 78g, 79g, 83g, and 87g) in perimeter beds allow, divide and redistribute in a single row in perimeter beds on north, south, and outer (east/west) sides of each parterre.

Interior beds should be lined with geotextile filter fabric and covered with light colored crushed stone. Landscape fabric will ensure that weeds do not germinate in the unplanted beds and will allow for easy removal of crushed stone, should planting rehabilitation or restoration be feasible in the future. Rehabilitation might appropriately utilize the palette of deer-resistant low flowering shrubs and perennials, as identified in Task VG-10. Should full-scale restoration of interior planting beds in Parterres V and VI become feasible in the future, additional detailed research is needed to determine the most historically appropriate composition of perennial bedding out species. 2008 garden rehabilitation planting plans are included in Appendix B.

During planting bed reestablishment, an automatic irrigation system might appropriately be installed on Terrace 3 to reduce watering by maintenance staff during summer months. Additional detailed design work is needed to implement this recommendation.

Relationship to Park Planning: Reestablishment of the Parterre V and VI planting beds is essential to managing the Falling Gardens to evoke their historic use and design, as directed by the *General Management Plan* preferred alternative three.[38] Limited replacement of low maintenance plant material from existing plants on site will help to ensure that care of replacement vegetation is feasible from operational and maintenance perspectives. Rehabilitation of the Parterre V and VI planting beds presents opportunities to enhance existing volunteer partnerships and develop new relationships to support implementation and maintenance, as outlined in the *General Management Plan* preferred alternative three. The Falling Gardens are a focal point of the grounds tour and their historic character is essential to supporting the goals of the *Long-Range Interpretive Plan*.

Table 3.6. Deer Resistant Low Flowering Shrubs and Perennials

Scientific Name	Common Name	Mature Height	Mature Spread	Flower Color
Low Flowering Shrubs Suitable for the Center of Parterres III and IV				
Caryopteris x *clandonensis* 'Minibleu'	Petit Bleu bluebeard	2–2.5′	2–2.5′	purple (July to September)
Daphne x *burkwoodii* 'Silveredge'	Silveredge daphne	3–5′	3–5′	pinkish white (April to May)
Deutzia gracilis 'Nikko'	slender deutzia	1–2′	2–5′	white (April to May)
Potentilla fruticosa	shrubby cinquefoil	2–4′	3–5′	yellow (June to September)
Spirea japonica 'Little Princess'	Little Princess Japanese spirea	1.5–2.5′	2– 3′	pink (June to July)
Perennials				
Achillea millefolium	yarrow	2–3′	2–3′	white (June to September)
Aconitum napellus	monkshood	2–4′	1–1.5′	deep purple (July to August)
Aquilegia canadensis	columbine	2–3′	1–1.5′	pink/yellow (April to May)
Baptisia sphaerocarpa	yellow wild indigo	2–3′	2–3′	yellow (May to June)
Coreopsis verticillata 'Moonbeam'	threadleaf coreopsis	1.5–2′	1.5–2′	light yellow (June to August)
Dianthus barbatus	sweet William	1–2′	0.5–1′	red, pink, white, and bicolors (May to frost)
Digitalis purpurea	common foxglove	2–5′	1–2.5′	pink, white, or purple (May to June)
Gaillardia x *grandiflora*	blanket flower	2–3′	1–2′	yellow, orange, and red (June to September)
Geum triflorum	prairie smoke	0.5–1.5′	0.5–1′	pink to purple (May to June)
Heuchera var.	coral bells	1–2′	1–1.5′	many var. (June to August)
Iris germanica	iris	2–3′	1–2′	purple (May)
Lamprocapnos [Dicentra] spectabilis	bleeding heart	2–3′	1.5–2.5′	white/pink (April to May)
Lavandula angustifolia	English lavender	1–1.5′	1–1.5′	deep purple (June to August)
Monarda didyma	bee balm	2–4′	2–3′	red (July to August)
Nepeta racemosa [mussinii]	nepeta	0.75–1′	1–1.5′	deep purple (May to September)
Nicotiana sylvestris	tobacco plant	3–5′	1–2′	white (June to frost)
Stachys byzantina	Lamb's ears	0.75–1.5′	1–1.5′	purplish-pink (May to July)
Tiarella cordifolia	foam flower	0.75–1′	1–2′	white or pink (May)
Tropaeolum majus	nasturtium	1′+ (climbing)	2′+ (spreading)	red, orange, yellow, or cream (May to September)

VG-12. Replace missing roses along the bluestone walk to Greenhouse #2

Description: Beginning in 1908, roses flanked the bluestone walk to Greenhouse #2. This original planting encompasses at least six specimens on either side of the walk. By the end of the period of significance, these roses had been lost. By the 1960s, some of roses were replanted, but not in their historic quantity or configuration (Figure 3.28). Six roses should be replanted along each side of the eastern end of the walk to Greenhouse #2 at approximately six feet on center, as illustrated in the 1920s aerial photograph of Hampton.

Considerations: The historic species and variety of the original planting is not documented. Roses often require intensive management, so selecting the most appropriate substitute species and varieties is critical. Selection of appropriate species and varieties for replanting should take into account environmental conditions (shade cast by adjacent mature trees), pest (deer, aphids, mites,



Figure 3.28. Roses replanted along the bluestone walk to Greenhouse #2. Note the absence of bottlebrush buckeye that now grows to the north (right) of the greenhouse (to be removed). View looking west, c. 1960 (HAMP 20541).



Figure 3.29. Bluestone walk to Greenhouse #2, where six roses are to be replanted along each side of the walk. View looking west, 2013 (OCLP).

and beetles) and disease tolerance (mildews, molds, and black spot), as well as maintenance requirements (pruning, fertilizing, and spraying). Rose varieties grown at Hampton historically are documented in the table below. Those that date to 1906 were used by Helen Ridgely and are most appropriate for replanting (Table 3.7).

However, should historic species or varieties fail to thrive, tea roses (*Rosa* sp.), hybrid tea roses (*Rosa* x), grandiflora roses (*Rosa grandiflora*), and shrub roses (*Rosa* sp.) might also be considered for replacement planting. Alternating species or varieties along each side of the walk will help to buffer impacts, if one species or variety is struck by diseases or pests, or fails to thrive. The use of more vigorous roses will help to ensure resilience, but will require pruning to maintain appropriate scale and form. Nearly all roses are attractive to deer and will require feature level fencing to protect from browse (Figure 3.29).

Relationship to Park Planning: Replacement of missing roses along the bluestone walk to Greenhouse #2 is an important step in managing the Falling Gardens to evoke their historic use and design, as directed by the *General Management Plan* preferred alternative three.[39] Use of low maintenance substitute species will help to reduce maintenance requirements and support the sustainability of the Hampton National Historic Site landscape.

Table 3.7. Roses Grown at Hampton Historically

Scientific Name	Common Name	Documented at Hampton	Flower Color	Notes
Rosa x *centifolia*	cabbage rose	1838	pink	shrubby
Rosa 'Bengal Triumphant'	Bengal Triumphant rose	1838	red	shrubby, vigorous
Rosa 'Harrison's Yellow'	Harrison's yellow rose	1838	yellow	suckering, spreading
Rosa 'Perpetual White Moss'	Perpetual White Moss rose	1838	white	
Rosa 'Jaune Desprez'	Jaune Desprez rose	1840 [Jean Dupré]	yellow	climbing
Rosa setigera	prairie perpetual rose	1844	pink	shrubby, spreading
Rosa 'Glorie de Dijon'	Gloire de Dijon rose	1858	orange-pink	climbing
Rosa 'Kaiserin Auguste Viktoria'	Kaiserin Auguste Viktoria rose	1874	white	
Rosa 'Petite Mignonette'	Petite Mignonette rose	1874	pink	low form
Rosa 'Général Jacqueminot'	Général Jacqueminot rose	1906	deep red	
Rosa 'Giant of Battles'	Giant of Battles [Géant des Batailles] rose	1906	red	
Rosa 'Paul Neyron'	Paul Neyron rose	1906	pink	climbing
Rosa 'Prince Camille de Rohan'	Prince Camille de Rohan rose	1906	deep red	shrubby
Rosa foetida 'Persiana'	Persian yellow rose	1906	yellow	
Rosa rubignosa	sweet briar rose	1906	yellow	

Note: Roses from 1858 and before date to Eliza Ridgely's tenure, while roses from 1906 date to Helen Ridgely's tenure. Helen also had two moss roses and "a white rose bearing profusely in clusters," e.g. 'Lamarque' or 'Madame Hardy' (1832).

Table 3.8. Vintage Rose Sources

Nursery	Location	Website
Heirloom Roses	St. Paul, Oregon	www.heirloomroses.com/roses/heirloom-roses.html
High Country Roses	Arvada, Colorado	www.highcountryroses.com
Rogue Valley Roses	Medford, Oregon	www.roguevalleyroses.com/allroses
Roses of Yesterday and Today	Watsonville, Califironia	www.rosesofyesterday.com
Vintage Gardens	Sebastapol, California	www.vintagegardens.com

VG-13. Replace evergreen hedges along the west and east sides of the Falling Gardens

Description: The evergreen hedges along the east and west sides of the Falling Gardens are first depicted on the 1843 Map of Hampton. The hedges were likely installed to separate ornamental portions of the Mansion grounds from more utilitarian fields and orchards beyond. By the 1920s, the hedge was missing, with the exception of a few freestanding overgrown American arborvitaes (*Thuja occidentalis*). Based on the recommendation of the 1952 General Development Plan, the hedge was replanted in-kind in the mid-1950s to screen the upper

parking lot from the historic core of the Mansion landscape (Figure 3.30). Today, two hedge sections bordering the Great Terrace and Terrace I of the Falling Gardens have been replaced with a deer-resistant substitute species. Hedges along both sides of the lower terraces should be replanted with a deer-resistant substitute species to reflect the historic division of space between the Falling Gardens, and the East Orchard (to the east) and Garden Maintenance Area (to the west).

Considerations: Without fencing, American arborvitae (*Thuja occidentalis*) is not a viable replacement species due to deer browse concerns. Upright Japanese plum yew (*Cephalotaxus harringtonia* 'Fastigiata') is recommended as a substitute species. Japanese plum yews are deer-resistant and mature at approximately ten feet in height and is already in use at Hampton along the east side of the Great Terrace. Replacement upright Japanese plum yews should be planted at approximately five feet on center and maintained at approximately eight feet in height. In total, this planting will entail approximately 122 new shrubs (85 on the east side of the garden and 37 on the west side of the garden).

Alternatively, steeplechase arborvitae (*Thuja* x 'Steeplechase') might appropriately be evaluated for use. Steeplechase arborvitaes are also deer-resistant; however, this species matures at approximately twenty feet in height and will require maintenance to maintain at an appropriate height.

Relationship to Park Planning: Vegetative screens are identified in the General Management Plan as essential elements of the landscape setting of the Mansion and ancillary buildings. Replacement of the missing hedges along the east and west sides of the gardens are essential to perpetuating the historic character of Hampton's core.



Figure 3.30. Replacement upright Japanese plum yew hedge along the eastern side of the gardens to be extended south and matched on the western side of the gardens. View looking north, 2013 (OCLP).

VG-14. Rehabilitate plantings to the northwest of the Orangery

Description: Most plantings to the northwest of the Orangery were installed well after the end of the period of significance, in conjunction with landscape improvements designed by Alden Hopkins and reconstruction of the Orangery in 1975–76. Plantings were designed to screen views of the upper parking lot from the historic entrance drive and heart-shaped carriage drive, but also have the opposite effect of screening the historic core from visitors arriving at the upper parking lot (Figure 3.31). Non-contributing vegetation should be removed from this area, and missing historic trees documented in the 1948 vegetation inventory should be reestablished over mown lawn.

Considerations: The historic character of the Orangery entrance area was a combination of deciduous and evergreen trees over lawn. To achieve this character, the following trees and shrubs require complete removal:

- flowering dogwood (*Cornus florida*, 13m)
- American hornbeam (*Carpinus caroliniana*, 15m)
- leatherleaf mahonia (*Manonia bealei*, 19m)
- boxwood (*Buxus sempervirens*, 20m, 26m–28m, and flanking the concrete walk to the Orangery)
- winterberry euonymus (*Euonymus bungeanus*, 21–24m)
- English ivy (*Hedera helix*, 25m)
- periwinkle (*Vinca* sp.) near the upper parking lot
- daylilies (*Hemerocallis* sp.) near the upper parking lot



Figure 3.31. Vegetation to the north and east of the upper parking lot, planted after completion of the lot in the mid-1950s and after the concrete walkway was installed in 1995. View looking south, 2012 (OCLP).

The following trees should be maintained or relocated, but should not be replaced upon loss:

- Japanese maple memorial planting (*Acer palmatum* 'Tamukeyama', 9m)
- white fringetree (*Chionanthus virginicus*, 17m–18m)
- dove-tree memorial planting (*Davidia involucrata*, 29m)

The area should be replanted with mown lawn and missing historic trees replanted (from south to north):

- American elm (*Ulmus americana* disease tolerant cultivar)
- Norway spruce (*Picea abies*)
- Kentucky coffeetree (*Gymnocladus dioicus*)
- red oak (*Quercus rubra*)
- eastern sycamore (*Platanus occidentalis*)

This recommendation is best implemented in conjunction with reconfiguring the upper parking lot (Task CR-8) and realigning the concrete walk to the Orangery (Task CR-7), but may also be implemented independently with slight modifications of replanting recommendations.

Relationship to Park Planning: The walk from the upper parking lot to the Orangery provides visitors with their first impression of the historic core of the Mansion landscape. A historically accurate landscape is essential to providing visitors with an authentic experience of Hampton. With contemporary parking facilities shifted away from the historic core, implementation of this recommendation provides the opportunity to enhance the visitor arrival and entrance experience, a cornerstone of the *Long-Range Interpretive Plan*.[40] Removal of non-contributing vegetation will also enhance visitor wayfinding, a recommendation of the *General Management Plan* preferred alternative three.[41]

VG-15. Replace three missing rose beds on the North Lawn

Description: Three rose beds were first depicted in the lawn defined by the heart-shaped carriage drive on the 1843 *Map of Hampton* (Figure 3.32). In 1848, Elizabeth Writ Goldsborough also referenced the planting in an account of her visit to Hampton. By the end of the period of significance, the rose beds had been removed. However, marble urns originally installed in the 1840s remain near the locations of the two circular beds opposite the Mansion pavilions. Three circular rose beds should be reestablished on the lawn and planted with roses to evoke their historic appearance.

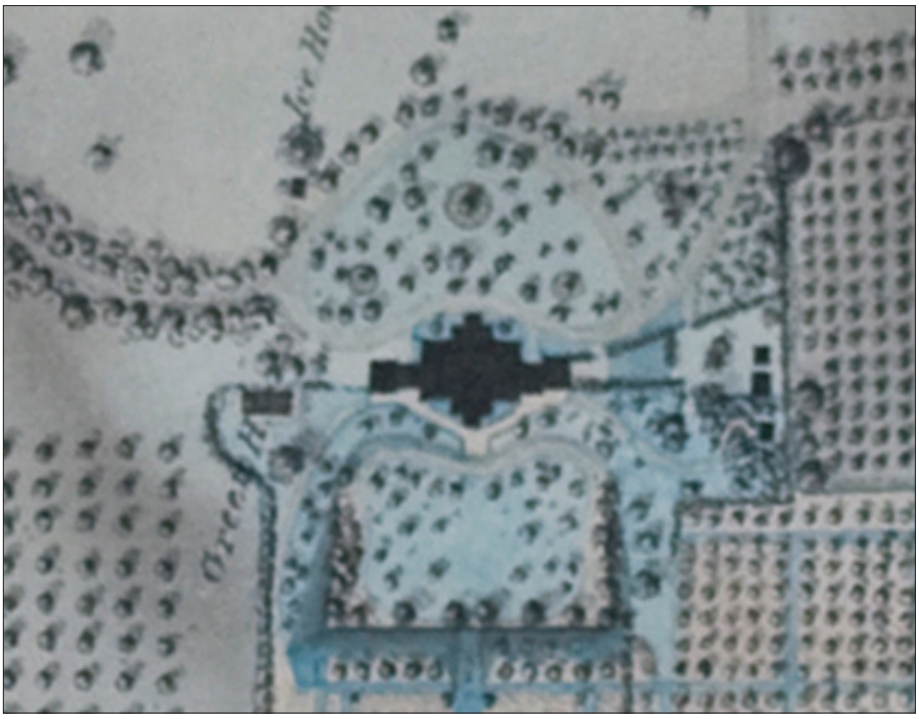


Figure 3.32. Enlargement of the Mansion and Domestic Service Cluster, including rose beds on the heart-shaped carriage drive lawn, as documented by Joshua Barney on his "Map of Hampton." Plan view, 1843 (HAMP 1127, neg. HAMP 21905).

Considerations: Based on the 1843 *Map of Hampton*, the two beds opposite the Mansion pavilions were approximately thirty feet in diameter. The central bed was slightly larger at approximately forty feet in diameter. The planting bed location and configuration should be confirmed in the field based on any remaining evidence at or below grade. The symmetrical layout of the planting beds, a reflection of the Mansion façade, heart-shaped carriage drive, as well as other landscape features to the south, suggests that the beds were planted symmetrically, with matching plant composition in the two smaller beds.

The exact composition of historic species and varieties used in the original planting is not documented; however, Eliza Ridgley documented many of the roses that grew at Hampton beginning in 1838 (see Table 3.7). Roses often require intensive management, so selecting the most appropriate substitute species and varieties is critical. Selection of appropriate species and varieties for replanting should take into account environmental conditions (shade cast by adjacent mature trees), pest (deer, aphids, mites, and beetles) and disease tolerance (mildews, molds, and black spot), as well as maintenance requirements (pruning, fertilizing, and spraying).

Roses that are documented at Hampton prior to 1867 are the most appropriate for use in replanting (see Table 3.7). However, should historic species or varieties fail to thrive, tea (*Rosa* sp.), hybrid tea roses (*Rosa* x), grandiflora roses (*Rosa grandiflora*), polyantha (*Rosa* sp.), and shrub roses (*Rosa* sp.) are all suitable for replacement planting. Alternating species or varieties will help to buffer impacts, if one species or variety is struck by diseases or pests, or fails to thrive. The use of more vigorous roses will help to ensure resilience, but will require pruning

to maintain appropriate scale and form. All roses are attractive to deer and will require feature level fencing to protect from browse. Refer to Table 3.7 for roses documented at Hampton historically. Other suitable varieties include those recommended by Robert Buist in his *American Flower-Garden Directory* (1852).

Relationship to Park Planning: Rehabilitation of the landscape to the north of the Mansion, including replacement of missing historic features, is specifically addressed by the *General Management Plan*.[42] The Mansion front and its associated view of the farm below is a key visitor node identified in the *Long-Range Interpretive Plan*.[43] Improvements to the historic character of this landscape area will have a high impact on the visitor experience as it relates to understanding Hampton at the high of its physical development and horticultural excellence.

VG-16. Establish screen planting along the east side of the Stable Drive

Description: The area to the east of Stable Drive was historically occupied by fields and orchards, along with an ice pond and associated ice house. Residential development along the eastern side of the Mansion grounds in the mid-1950s dramatically changed the character of this area. The adjacent residential development remains largely unscreened from view (Figure 3.33). This setting is incompatible with the historic character of the Mansion landscape and should be screened with the introduction of new low deciduous and low-branched evergreen trees.

Considerations: Non-contributing forsythia (*Forsythia* x *intermedia*) should be removed from the property line, along with any other encroachments by abutters. Appropriate species for screening should correspond to the historic plant palette and include low deciduous trees, such as flowering crabapples (*Malus* spp.), and low-branched evergreen trees, such as Norway spruce (*Picea abies*). As an added



Figure 3.33. View of residential development to the east of Stable Drive to be screened with low deciduous trees and low branched evergreen trees. View looking southeast, 2012 (OCLP).

benefit, flowering crabapples evoke the historic character of the orchard that once grew to the east. Norway spruces also compliment the historic planting on the west side of Stable Drive. Final screening tree placement and quantities should be identified and marked in the field to optimize screening and minimize planting. Implementation of this recommendation will likely entail planting approximately twenty to twenty-five new trees. This task is best completed in conjunction with burying utility lines along Stable Drive (Task SSF-6).

Relationship to Park Planning: Screening incompatible views along this well-traveled pedestrian route from the Mansion to the farm will greatly enhance the visitor experience and the setting of the Stable Drive landscape. Improvement of this pedestrian circulation route is identified in the *General Management Plan* preferred alternative three as it relates to connecting the Mansion and the farm.[44] The improvement of contemporary perimeter screen plantings is specifically directed by *General Management Plan* preferred alternative three, with long-term minor beneficial impacts.[45]

VG-17. Replace white pine screen planting removed between the lower parking lot and Park Maintenance Buildings

Description: Construction of the Visitor Contact Station and lower parking lot necessitated removal of a portion of the white pine (*Pinus strobus*) screen that was planted in 1979 to block incompatible views of the Park Maintenance Buildings and adjacent post-1948 residential development. This screen planting is important to maintaining the historic setting of the cultural landscape, along with privacy for the adjacent residences. The screen should be reestablished with a mixture of native trees and shrubs with a high percentage of evergreen species to create an effective screen. Some non-native evergreens may be needed to ensure a visual barrier between the Mansion landscape and non-contributing buildings and adjacent properties (Figure 3.34).

Considerations: Replacement of missing white pine (*Pinus strobus*) trees along the south and west sides of the new lower parking lot will require planting replacement trees after the final topographic changes associated with construction of the bioretention basin to the west of the parking lot. This replacement screen planting is estimated to require approximately thirty-six native trees and thirty-six native shrubs; however, quantities may vary.

Relationship to Park Planning: Screening incompatible views adjacent to the lower parking lot and Park Maintenance Buildings will enhance the visitor experience by improving the setting of the historic West Field landscape. The improvement of contemporary perimeter screen plantings is specifically directed by *General Management Plan* preferred alternative three, with long-term minor beneficial



Figure 3.34. View between the Collections Storage Building (right) and Park Maintenance Buildings (left) showing the only remaining specimen of the white pine screen planting, to be supplemented with others to obscure views to the Visitor Contact Station, which is visible under construction beyond. View looking north, 2013 (OCLP).

impacts.[46] Immediate implementation of this recommendation following completion of the Visitor Contact Station is important in maintaining the historic landscape setting, as well as privacy for adjacent property owners.

VG-18. Rehabilitate the West Orchard

Description: Orchards existed on the Northampton tract prior to Colonel Charles Ridgely's purchase in 1745. By 1773, there was a substantial orchard of more than 700 apple trees in an unidentified location at Northampton. The 1843 *Map of Hampton* shows a substantial planting of 468 trees in the West Orchard on an approximate thirty-foot square spacing (Figure 3.35). Portions of the West Orchard persisted until the early twentieth century. Although replanting of the entire West Orchard is not feasible due to the loss of the historic extent of Hampton's lands to residential development, a rehabilitation of a portion of the West Orchard is particularly important in allowing for interpretation of the historic landscape.

Considerations: Although a complete replanting is not feasible, thirty-six of the historic fruit trees should be replanted in the West Field to provide visitors with a sense of how this landscape area was historically used by early generations of the Ridgely family. Trees should be replanted as they grew historically, in a square pattern, thirty feet on center, and parallel with the Mansion's façades. Prior to planting, soil should be tested and amended if necessary to accommodate the trees. Replanted trees will require individual fencing to discourage deer browse.

A historic photograph of apple trees at Hampton from circa 1897 shows that fruit trees were standard, or grown on rootstock that allowed each tree to reach its natural height, and pruned into an open bowl form. This form might appropriately be perpetuated in the West Orchard through active management and pruning.

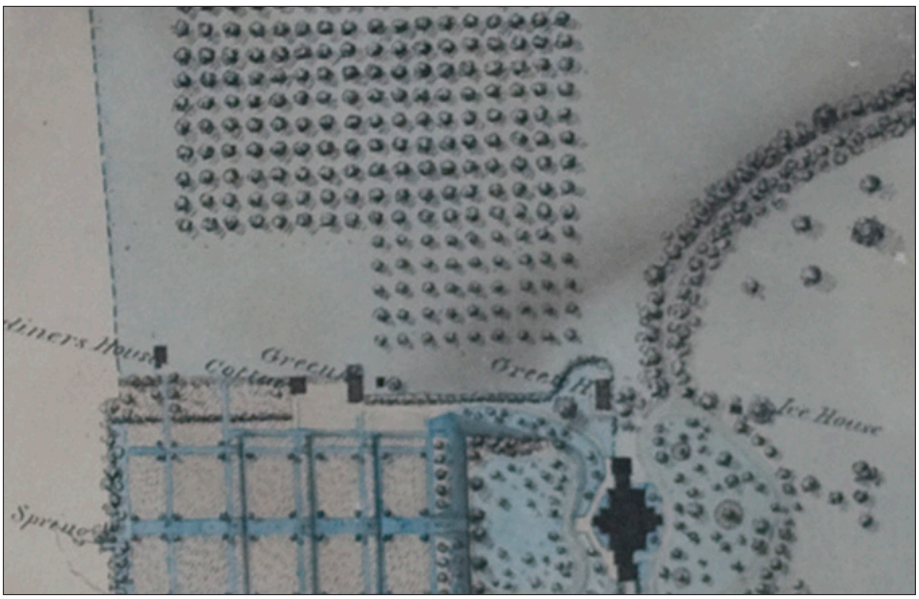


Figure 3.35. Enlargement of the West Orchard area, as documented by Joshua Barney on his "Map of Hampton." Plan view, 1843 (HAMP 1127, neg. HAMP 21905).

Because the varieties historically grown in the West Orchard are not documented, rehabilitation plantings might appropriately employ varieties known to have been grown by the Ridgelys in the "Vault Orchard" (see Table 3.3), historically appropriate varieties such as those in use at Mount Clare Museum or Homewood at Williamsport, or contemporary disease-resistant varieties that will reduce ongoing maintenance requirements. Final determination of fruit tree varieties should also take into account vigor, cropping, pollination characteristic (flowering group, fertility), and disease-resistance. Following the selection of appropriate varieties, rootstocks should be selected that will enable trees to be grown as standards. Refer to Task VG-4 for a similar recommendation for the East Orchard, sample fruit tree planting schemes, and a list of specialized fruit tree sources.

Relationship to Park Planning: The *General Management Plan* preferred alternative three calls for rehabilitation of the historic West Orchard in conjunction with relocation of the entrance road: "The entrance drive, on the mansion side of the park, would be relocated close to the western boundary of the park, and would allow for the rehabilitation of the historic orchard and field, evoking the character of the historic estate."[47] Rehabilitation of the West Orchard also supports the *Long-Range Interpretive Plan* objective to illustrate and "assist visitors in understanding the components of [Hampton's] layered landscape."[48] The rehabilitated West Orchard will also offer educational opportunities related to plant science, horticulture, aboriculture, and fruit processing.

VG-19. Replace existing arborvitaes at the Mansion gate

Description: The Mansion gates were constructed between 1875 and 1880. The earliest photograph of planting adjacent to the gates dates to circa 1900, at which time columnar evergreen trees flanked the gate. Replacement American arborvitaes (*Thuja occidentalis*) remain at the Mansion gate, but have been badly damaged by deer browse and do not present the welcoming impression that they did during the period of significance (Figure 3.36). The nine existing American arborvitae (1–5w and 1–4n) should be removed and replaced with ten substitute species specimens (five on each side of the gate).

Consideration: Without fencing, American arborvitae (*Thuja occidentalis*) is not a viable replacement species due to deer browse. Steeplechase arborviate (*Thuja* x 'Steeplechase') is recommended as a substitute species. Steeplechase arborvitaes are deer-resistant and mature at approximately twenty feet in height. Replacement trees should be evenly spaced along the south side of the fences flanking the Mansion gates at approximately ten feet on center.

The black locust (*Robinia pseudoacacia*, 6w) on the south side of the gates suckers and requires regular maintenance to keep the wider area clear of locust. Flowering dogwoods (*Cornus florida*) that border the arborvitae planting also require regular maintenance and replacement upon decline.

Relationship to Park Planning: Replacement of arborvitae at the Mansion gates is essential to perpetuating the historic arrival experience at Hampton. This area is highly visible to park visitors arriving at the park along Hampton Lane and to park visitors who use the mulched path along the road. In addition, the area is visible by visitors who use the historic entrance drive to access the crosswalk to the farm parcel.



Figure 3.36. Overgrown and deer browsed American arborvitae on the west side of the Mansion gate to be replaced with deer tolerant species, along with American arborvitae on the east side of the gate. View looking north, 2012 (OCLP).

BUILDINGS AND STRUCTURES

BS-1. Reconstruct the Octagon Building

Description: The Octagon Building was constructed by 1843 and destroyed by fire in 1946. The two-story frame building served as slave and servants' quarters throughout the period of significance (Figure 3.37). The building should be reconstructed to reflect its appearance during the period of significance to enhance the historic character of the Domestic Service Cluster to the east of the Mansion and "to facilitate expansion and diversification of interpretation to include more emphasis on African-American history."[49] A historic structure report and archeological investigation are needed to support the reconstruction project. In the interim period, a wayside should be added to the East Terrace area highlighting the history of this building.

Considerations: The Octagon Building was located at the eastern end of the East Terrace. The garden was installed by a local garden club in the 1960s. The two-story frame building was clad with vertical wooden board and batten and topped by an octagonal hip roof, with eaves supported by brackets (four on each façade). Six over six windows on both levels of each of the eight façades, with the exception of a door on the westernmost façade, provided ample light. A central brick chimney was supplemented by a second brick chimney in the core of the northernmost eighth of the building. The foundation of the building remains and is currently used as an herb garden.

A historic structure report and archeological investigation are needed to determine the feasibility of, and guide, reconstruction. If research findings do not demonstrate the interior configuration of the Octagon Building, the reconstructed



Figure 3.37. Octagon Building before it was destroyed by fire in 1946. The building should be reconstructed on its historic foundation provided sufficient documentary evidence can be located. View looking south, 1930 (HAMP 3216).

building might appropriately be modified to accommodate park facility needs, including storage. If the reconstructed building will be open to the public, the entrance should be modified for universal access.

Relationship to Park Planning: Reconstruction of the Octagon Building is well supported by the *General Management Plan* preferred alternative three, which calls for reconstruction of the building if deemed feasible by additional documentary and archeological research. The plan notes that the building should be reconstructed "to ensure the stories of the enslaved who lived and worked in the Mansion were fully told on that side of the property."[50] Similarly, the *Long-Range Interpretive Plan* calls for reconstruction of the Octagon Building to enhance the interpretive program, with visits to the building during regular grounds tours.[51]

BS-2. Reconstruct the Summer Kitchen

Description: The Summer Kitchen, constructed circa 1800, was removed from the East Terrace by the National Park Service in 1950 due to its deteriorated condition. The Summer Kitchen was used for outdoor cooking during warm months to reduce heat in the Mansion (Figures 3.38 and 3.39). The structure should be reconstructed to reflect its appearance during the period of significance, both to enhance the historic character of the Domestic Service Cluster to the east of the Mansion and to enhance the park visitor interpretive experience. Replacement or reconstruction of missing associated historic furnishings, if supported by a historic furnishings report, might appropriately enhance the interpretive potential of this reconstructed feature.



Figure 3.38. View of Hampton showing the Summer Kitchen attached to the east pavilion. View looking northwest, 1906 (HAMP 2155).

Considerations: The Summer Kitchen was located along the eastern façade of the east pavilion of the Mansion and consisted of a shed roof extending over an L-shaped footprint. The central rectangle of the structure was enclosed on the north and south sides by vertical wooden board walls and included a standing seam roof. The south wall of the structure was flush with the south façade of the Mansion, while the north wall of the structure was set back from the northern Mansion façade by approximately two feet.

The short leg of the L-shaped structure (portion extending to the east) was added in the twentieth century. This leg of the Summer Kitchen was enclosed on three sides with horizontal wooden board and batten construction. The southerly side of the extension opened to the East Terrace and may have been used for wood storage associated with fuel for stoves and ovens.

Relationship to Park Planning: Reconstruction of the Summer Kitchen is well supported by the *General Management Plan* preferred alternative three, which calls for reconstruction of the missing structure for use in interpretation.[52] Similarly, the *Long-Range Interpretive Plan* calls for reconstruction of the missing structure, to be guided by a historic structure report. In the *Long-Range Interpretive Plan*, the Summer Kitchen is cited as integral to understanding Hampton's 200-year history.[53]

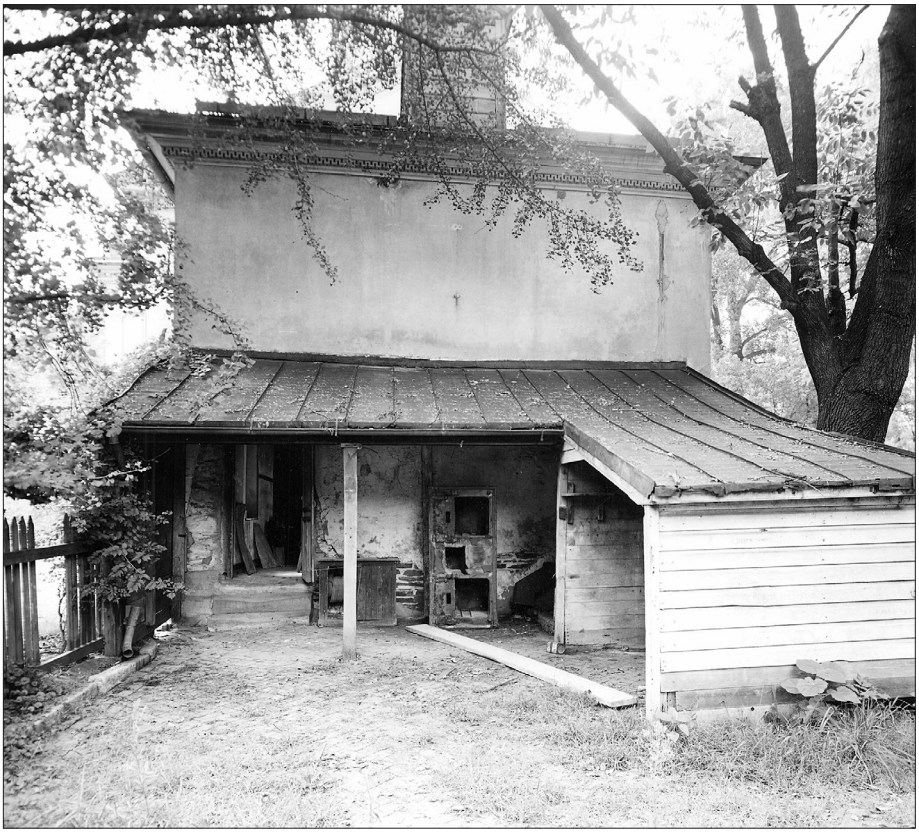


Figure 3.39. Summer Kitchen from the East Terrace showing the twentieth century addition at right. View looking west, 1949 (HAMP 20455).

BS-3. Reconstruct the grapery

Description: The Hampton grapery was extant from at least 1881 to 1906. The structure was first referenced in an article published in the *American Farmer* in July 1881. Helen Ridgely also referenced the grapery in her diary in May 1906. The only known visual documentation of the grapery is a gelatin print from circa 1897 (Figure 3.40). The grapery should be reconstructed based on available documentation to enhance the historic character of the Garden Maintenance Area and setting of the Falling Gardens. The historic grape species grown on the grapery is not documented; however, replacement grape vines should be replanted at the base of the structure and trained to evoke the historic appearance.

Considerations: The grapery was located off the northeast corner of the Garden Maintenance Building in the vicinity of the "cottage" footprint indicated on the 1843 *Map of Hampton*. However, the roughly square footprint of the grapery was much smaller than this early building. The grapery was constructed of four unhewn posts connected by horizontal lath spaced at approximately one foot. The top of the structure consisted of an open pyramid hip roof comprised of comparable lath. A door-sized opening on the northeast side of the structure accommodated access to the interior for picking grapes. Muscadine grapes (*Vitis rotundifolia*) are among the earliest American grapes and widely cultivated throughout the south. Similarly, Muscat grapes (*Vitis vinifera*) have been widely grown throughout American history for wine, table, and raisins. Many Muscadine and Muscat grape cultivars are suitable for replanting on the grapery.

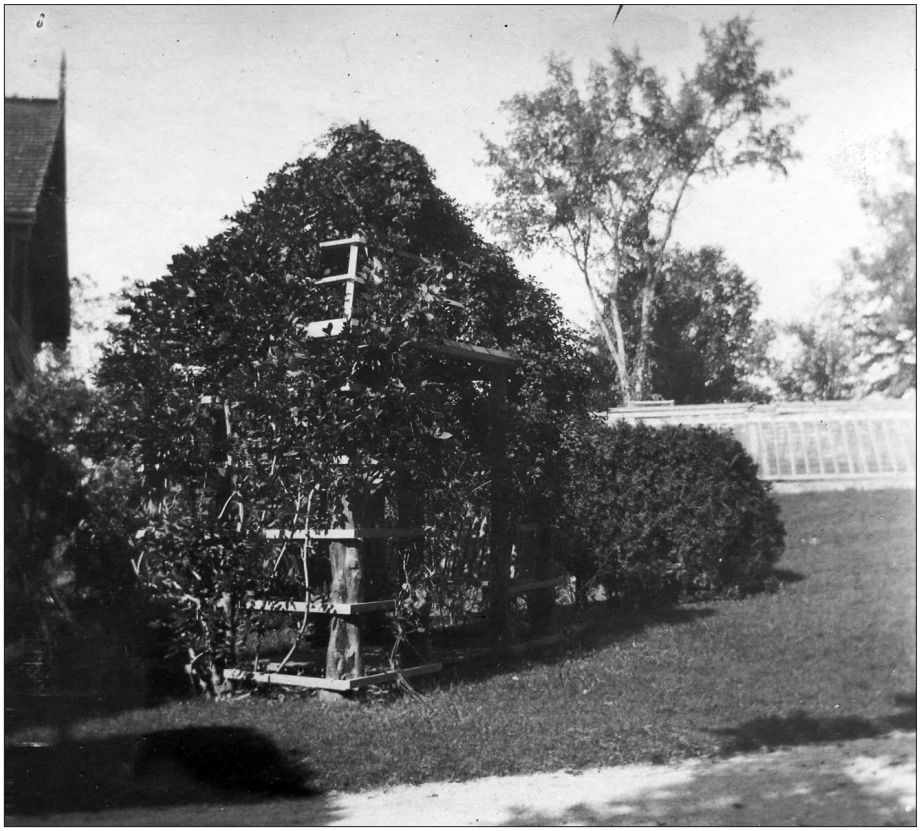


Figure 3.40. Hampton grapery from the cobblestone path extension. The Garden Maintenance Building is visible to the left and Greenhouse #1 beyond. View looking west, c. 1897 (HAMP 44225).

Geophysical investigation and archeological ground truthing may prove useful in determining the exact location and footprint of the grapery and adjacent paths. Additional research and design are needed to implement this treatment task. While this rehabilitation project will entail an initial investment to reestablish the missing structure, long-term management costs should be low, since the original structure was unpainted and rustic in appearance.

Relationship to Park Planning: Reconstruction of the grapery is essential to illustrating the high horticultural energy at Hampton in the mid to late nineteenth century. The grapery is also important to support *General Management Plan* and *Long-Range Interpretive Plan* goals related to expanding the visitor experience to include the entire story of the park, including the lives of gardeners. According to the *General Management Plan* preferred alternative three, rehabilitation and limited reconstruction are both appropriate treatment for park historic resources.[54]

BS-4. Restore Greenhouse #2

Description: Greenhouse #2 was constructed between 1824 and 1826. The structure is a testament to the scale of the horticultural activity at Hampton during the nineteenth century. Despite a 2000 restoration, which included foundation, frame, glazing, and ventilation system work, the greenhouse remains in disrepair, with many glazing panes broken and louvers inoperable (Figure 3.41). The structure should be restored to a functional state for use in interpretation and park grounds care operations.

Considerations: Restoration of the greenhouse will require additional documentary research, planning, and design prior to implementation. A



Figure 3.41. North side of Greenhouse #2 showing broken glazing and weeds that fill the interior of the greenhouse. The greenhouse should be restored to operable condition for use in interpretation and grounds care. View looking southeast, 2013 (OCLP).

greenhouse restoration specialist will likely be required for the specific tasks of the project. Collaboration with Historic Hampton Inc. or a local garden club may offer opportunities to fund and expedite structural restoration work.

Relationship to Park Planning: Restoration of Greenhouse #2 is essential to illustrating the high horticultural energy at Hampton in the mid to late nineteenth century. The greenhouse is also important to support *General Management Plan* and *Long-Range Interpretive Plan* goals related to expanding the visitor experience to include the entire story of the park, including the lives of gardeners. However, restoration of the greenhouse is not specifically referenced in the *General Management Plan* Preferred Alternative 3.

SMALL-SCALE FEATURES

SSF-1. Install high-tensile steel wire mesh deer fencing surrounding the Cemetery Woods, Great Terrace, and Falling Gardens

Description: Vegetation damage due to deer rub and browse is a major landscape management issue at Hampton National Historic Site. Impacts have been most significant in the Cemetery Woods, Great Terrace, and Falling Gardens, where deer have targeted herbaceous vegetation (Figure 3.42). If other management strategies, such as scare devices, repellents, and substitute species are ineffective in controlling deer, twelve-foot high feature level fencing may be needed to protect the Cemetery Woods, Great Terrace, and Falling Gardens from deer browse. Several fencing strategies are feasible, depending upon the desired extent of deer fencing.

Considerations: Deer fencing will have a significant negative visual impact on the Hampton landscape and visitor experience and should only be installed in cases of absolute necessity. The proposed section of fence between the west hyphen of the Mansion and the Orangery will have the greatest negative visual impact. For this reason, alternatives to fencing this location, such as scare devices, should be considered prior to installation of fencing.

To be effective, deer fencing should be a minimum of twelve feet high, with 12.5 gauge high-tensile steel wire mesh fencing (woven wire, chain liven, welded wire, 'v' mesh, or rigid mesh panels). Fencing should be flush with the ground and with adjoining panels, with no gaps larger than 7.5 inches.

Along the east side of the Falling Gardens and Great Terrace, fencing might appropriately extend from the sound barrier on the southern end of the property to the east side of the Pump House, along the alignment of the replacement Japanese plum yew (*Cephalotaxus harringtonia* 'Fastigiata', 63–64g) hedge. Alternatively, fencing might appropriately extend along the eastern side of the East



Figure 3.42. View from cemetery road showing deer and Norway maples in Cemetery Woods at midday. View looking west, 2013 (OCLP).

Orchard and turn west to meet the evergreen replacement hedge. From the Pump House, fencing should continue along the south side of the East Terrace to meet the southeast corner of the Mansion.

Along the western side of the Great Terrace and Falling Gardens, fencing should extend from the southwest corner of the Mansion to meet the northeast corner of the Orangery. From the northwest corner of the Orangery, fencing should extend along the western side of the American arborvitae (*Thuja occidentalis*, 52m) hedge to meet the northeast corner of Greenhouse #2. A small fence segment is needed between Greenhouse #2 and the Greenhouse #1 ruin. From the Greenhouse #1 ruin, fencing should extend across the service drive to meet the eastern façade of the new Collections Storage Building. From the southwest corner of the Collections Storage Building, fencing should extend south to the sound barrier.

Within Cemetery Woods, fencing should extend around the forest stand to the west of the Ridgely Family Cemetery and Cemetery Road to protect vegetation within the area delineated as the 1.11-acre forest protection area in the *Hampton Forest Stand Delineation and Forest Conservation Plan*. Protection afforded by fencing in this area would make feasible reestablishment of understory plantings in Cemetery Woods (see Task VG-3).

Gates will be required in several key locations, including along the East Orchard Terraces, East Pathway, East Terrace, on the west side of the Mansion, on the north side of Greenhouse #2, along the Service Drive between Greenhouse #1 ruin and the Collection Storage Building, along the West Road trace in the vicinity of the Park Maintenance Buildings, and opposite the South Spring ruin. Because wildlife travels along the highway sound barrier wall, a thirty to forty-foot wide unfenced

wildlife corridor should be maintained along the full length of the wall. In total, feature level deer fencing will require between 2,075 and 3,005 linear feet of fence depending upon the preferred strategy.

Relationship to Park Planning: Damage to cultural resources due to deer is acknowledged in the *General Management Plan* as a potential future threat exacerbated by adjacent residential development.[55] Feature level fencing around the Great Terrace and Falling Gardens will significantly impact the visitor experience by limiting points of entry and exit to the Great Terrace and Falling Gardens. However, fencing is likely the most effective strategy for excluding deer from the most sensitive and vulnerable portions of the historic landscape core.

SSF-2. Replace missing wooden lattice and picket fences associated with the Domestic Service Cluster

Description: Historic photographs of the East Terrace taken in 1908 and circa 1913 shows a wooden lattice fence along the north and south sides of the terrace (Figure 3.43). No visual documentation of the east side of the terrace has been located. Prior to installation or between replacements of evergreen hedges along the terrace, this decorative fence may have divided the service area from more ornamental portions of the Mansion grounds to the north and south. Historic photographs taken in the 1930s and in 1949 show low picket fences on the north and south sides of the terrace. A wooden gate also remains on the east side of the terrace, suggesting that the terrace was once surrounded by picket fences on three sides. Throughout the period of significance, fences or hedges (or some combination thereof) separated this service area from the ornamental grounds to the north and south at different times.



Figure 3.43. East Terrace showing the wooden lattice fence that surrounded the area during the period of significance. View looking east, c. 1913 (HAMP 6365).

Wooden lattice fences should be replaced along the north and south sides of the terrace to provide visual and physical separation of landscape spaces and reinforce the different uses of landscape areas. Fencing might appropriately also be reestablished along the east side of the terrace, should additional documentary research reveal that a fence once stood in this location. Fences are also needed in the vicinity of the geothermal well field to reestablish separation of spaces within the field, including a picket fence segment to the north of the 1910 Garage and a wooden lattice fence segment in an east/west alignment across the geothermal well field (Figure 3.44).

Considerations: With no original material remaining, construction of replacement of missing lattice fences will rely heavily on photographic documentation. Historic fences surrounding the East Terrace appear to have stood approximately four to five feet high. The historic fence was comprised of diamond-shaped lattice between vertical posts with cap and bottom rails. A large and distinctive post with a decorative finial stood near the northwest corner of the Octagon Building, where the building necessitated a shift in the alignment of the fence. Implementation of this recommendation will require installation of approximately 155 linear feet of wooden lattice fence surrounding the East Terrace. This recommendation is best implemented in conjunction with reestablishment of missing Domestic Service Cluster hedges (Task VG-5) and following reconstruction of the Octagon Building (Task BS-1) and Summer Kitchen (Task BS-2).

A thirty-five liner foot segment of picket fence should also be replaced to the north of the 1910 Garage. Historic photographs of this picket fence section date to the early twentieth century. During the mid-nineteenth century, this separation was defined by a low hedge. However, the geothermal well field prevents



Figure 3.44. View of the 1910 Garage showing the picket fence to the north to be reconstructed to provide visual and physical separation between Stable Drive and the geothermal well field area. View looking east, c. 1920 (HAMP 18624).

Table 3.9. Summary of Domestic Service Cluster Fence Segments

Location	Type	Approximate Length
Bordering the north, south, and east sides of East Terrace	4–5′ high wooden lattice fence (bordered by evergreen hedges, see task VG-5)	155 linear feet
Extending parallel to the north side of the 1910 Garage toward the Mansion	3–4′ high wooden picket fence	35 linear feet
Extending from between Privy #1 and the Paint House across the geothermal well field	6′ high wooden lattice fence (planted with climbing vines)	55 linear feet

replanting of the hedge and the fence segment should be reestablished to reinforce the visual and physical separation between the Domestic Service Cluster and North Lawn.

Similarly, a fifty-five-foot long, six-foot high wooden lattice fence segment should be installed along the east/west alignment of the historic hedge between Privy #1 and the Paint House. Due to the location of the geothermal well field, the historic hedge cannot be replanted in this area. However, a six-foot high wooden lattice fence planted with climbing vines will provide comparable separation between the two sections of the Domestic Service Cluster without significant impacts to the below-grade system. A variety of non-invasive vines might appropriately be used, including clematis (*Clematis* sp.), climbing hydrangea (*Hydrangea petiolaris*), morning glory (*Ipomoea* sp.), or trumpet honeysuckle (*Lonicera sempervirens*).

Relationship to Park Planning: Replacement of missing lattice fences bordering the East Terrace and in the geothermal well field area is an important step in reestablishing the historic spatial configuration of this landscape area. The *General Management Plan* and Long-Range Interpretive Plan both focus on expanding the visitor experience to include a more comprehensive history of the park and the stories of all who lived and worked at the Mansion. As such, the character of the Domestic Service Cluster is important in achieving this objective. Replacement of missing fences and reestablishment of lost spatial organization are critical steps in rehabilitating the area to enhance interpretation and visitor understanding.

SSF-3. Restore cold frames to the east of the historic Garden Maintenance Building

Description: Cold frames to the east of the Garden Maintenance Building date to the mid-nineteenth century, when the Hampton gardens were at the height of their horticultural excellence. The cold frames were used to toughen plants germinated in the greenhouses before planting in the gardens. Following the transition of stewardship from the Ridgely family, the cold frames fell into disuse and disrepair (Figure 3.45). These small-scale features should be restored to an operational state for use in park grounds care.

Considerations: Each cold frame is approximately 35 feet long and 8 feet wide, covering an approximate 280 square foot area. The brick foundations require



Figure 3.45. Cold frame foundations to the east of the Garden Maintenance Building require brick repair and addition of new sashes to be restored to an operational state. View looking northeast, 2012 (OCLP).

repair and repointing prior to the installation of replacement sashes. Slanting the cold frame sashes to the south, as they did historically, will ensure that plants benefit from a southern exposure. Replacement sashes might appropriately be designed with one-inch thick mahogany frames, fitted with double-walled hollow channeled polycarbonate sheets and held to the frames with iron brackets. The width of sashes should be limited to approximately four-feet to allow for easy access to the interior space.

Relationship to Park Planning: Restoring cold frames to an operational level is important in enhancing the interpretive potential of the landscape and the character of the landscape to its Civil War era appearance. Cold frames are critical to understanding the purpose and location of the garden support buildings, including nearby greenhouses and the Garden Maintenance Building, and should be used in explaining the design of Hampton's grounds to visitors. In conjunction with rehabilitation of Greenhouse #2, operational cold frames are also useful in supporting park horticultural operations.

SSF-4. Remove existing concrete masonry unit tree wells

Description: Concrete masonry unit (CMU) tree wells were installed surrounding three historic trees to the southwest of the upper visitor parking lot (*Aesculus glabra*, 63w; *Fraxinus americana*, 68w; and *Juglans nigra*, 70w). These tree wells were necessary to accommodate regrading associated with construction of the non-contributing entrance road in 1988 (Figure 3.46). CMUs detract from the historic setting and should be removed as trees require replacement.



Figure 3.46. Concrete masonry unit retaining tree wells along the entrance drive to the upper parking area to be removed as trees require replacement. View looking north, 2012 (OCLP).

Considerations: As historic trees require removal, tree wells should be removed and the adjoining ground regraded for a smooth transition to adjacent grades. The installation of new tree wells and retaining walls elsewhere at Hampton should be avoided.

Relationship to Park Planning: While small, the CMU tree wells are readily visible to visitors along the entrance road. Their phased removal will enhance the visitor experience.

SSF-5. Replace missing post and board fences associated with Stable #2

Description: Historic photographs from the 1870s through the late 1950s show fences on the North Lawn associated with the stables (Figure 3.47). Historic fence lines extended from the northern end of Stable #2, encompassing an area of approximately 65,400 square feet. However, a portion of this area now lies on Hampton Lane, following road realignment. Stable fences should be reestablished to the north and west of Stable #2 to evoke the historic character of the paddock.

Considerations: Early photographs from the 1870s show simple anchor and brace fence design, with posts connected by cap rails and a single cross brace. This design is consistent with minimal use of materials needed to corral horses. Photographs from the late 1890s show a simple post and two board fence. Later photographs from 1912 show a split rail design with four rails. All fence designs are appropriate for replacement of missing fencing associated with Stable #2. However, because the simple wood board fence existed closest to the treatment reference date of the 1860s to early 1870s, this fence design should be installed.

Although full replacement is not possible due to the realignment of Hampton Lane, the replacement fence should follow the historic fence alignment on the

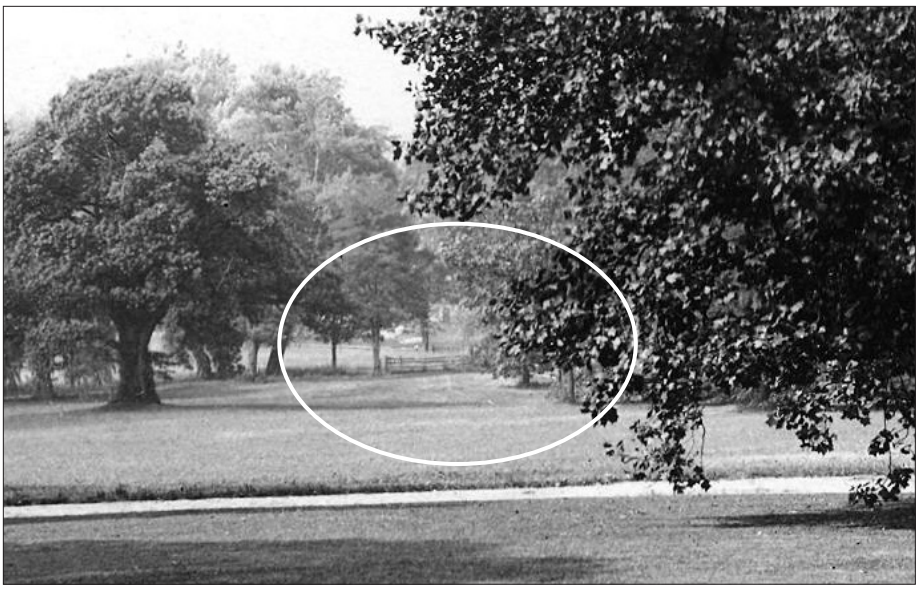


Figure 3.47. Enlargement of a view across the North Lawn showing fencing associated with the stables at center. View looking north, c. 1920 (HAMP 19237).

east, west, and south sides, with the north side shifted to the south to encompass approximately 41,450 square feet. Implementation of this recommendation will require installation of approximately 785 linear feet of post and board fence. The location of gates is not known.

Around the treatment reference date, the area surrounding the stable paddocks was sparsely vegetated with trees. The decline in use of the stables toward the end of the period of significance allowed more trees to mature in the stables area. Implementation of this recommendation will require selective pruning and/or removal of trees in the mixed stand of hardwood trees (57n).

Relationship to Park Planning: With interpretive exhibits housed in the stables and visitors walking between the Mansion and farm grounds, the stables area is highly visible. Replacement of missing paddock fences associated with the stables will enhance the interpretive potential of the stables area, while rehabilitating the landscape to reflect its historic character in a pre-automotive era.

SSF-6. Bury utility lines along Hampton Lane and Stable Drive

Description: Contemporary overhead utility lines along Hampton Lane and Stable Drive significantly detract from Hampton's historic setting. Utility lines along both Hampton Lane and Stable Drive should be buried to eliminate this modern intrusion on the landscape and reestablish unobstructed views between the Mansion and farm. Accordingly, utility poles no longer in use should also be removed.

Considerations: The axial view from the Manson to the farm is the most critical area for utility burial (Figure 3.48). Relocation of utility lines in this area will require borings along an approximate 900-linear-foot corridor.[56] If feasible, utility lines along the entire northern boundary of the Mansion parcel should be



Figure 3.48. View to the farm from the edge of the North Lawn showing utility lines along Hampton Lane to be buried to eliminate visual obstruction between the Mansion and farm. View looking north, 2013 (OCLP).



Figure 3.49. View along Stable Drive showing utility lines to be buried to eliminate this visual intrusion on the historic landscape. View looking south, 2013 (OCLP).

relocated, as all detract from historic views to and from the Mansion. In total, utility lines along Hampton Lane encompass approximately 2,300 linear feet, including the road crossing on-axis with the view from the Mansion to the farm.

Overhead utility lines along Stable Drive also detract from the historic North Lawn (Figure 3.49). The relocation of utility lines along Stable drive will require directional borings for approximately 930 linear feet of utility lines. This task is best accomplished in conjunction establishing screen plantings along the east side of the Stable Drive (Task VG-16).

Overhead utility lines also stand along the east side of cemetery road and along the north, west, and a portion of the east side of the farm parcel. However, these utility lines are obscured by trees, and utility lines in these locations do not detract from the historic setting as significantly.

Relationship to Park Planning: The view between the Mansion and farm is a contributing feature of the cultural landscape. Relocation of utility lines along Hampton Lane and Stable Drive will help to improve the historic setting, while enhancing historic views between the Mansion and the farm. Cultural resources will be protected and improved, while visitor experience, understanding, and satisfaction will be improved.

FARM LANDSCAPE

OVERVIEW

The farm landscape is comprised of the fourteen acres to the north Hampton Lane. It is bordered by residential development to the north, east, and west. Development of the farm preceded the Mansion grounds by many years, likely beginning as early as Colonel Charles Ridgely's initial 1,500 acre land purchase in 1745. Like the Mansion grounds, the farm reached the height of its physical development in the mid-1800s, as John Carnan and Eliza Ridgely undertook improvements that built upon Charles Carnan Ridgely's changes in the English tradition of the *freme ornée*, or improved farm. These changes enabled the farm to function as both a viable agricultural enterprise and as an aesthetic statement.

Perpetuating the functional and aesthetic qualities that characterized the farm during the period of significance is central to sound stewardship the Hampton farm landscape. The treatment tasks that follow seek to retain, enhance, and reestablish the historic character of the farm landscape, while recognizing that residential development of the surrounding landscape makes complete restoration of the farming operation infeasible. The tasks that follow are ordered by landscape characteristic and keyed to the treatment Drawing 5 at the end of the chapter with task codes (CR: circulation, VG: vegetation, BS: buildings and structures, and SSF: small-scale features).

TASKS

CIRCULATION

CR-11. Reestablish missing circulation patterns in the vicinity of the Long House Granary and Dairy

Description: Historic photographs of the Dairy dating to c. 1897 suggest that circulation routes in the vicinity of the building consisted of packed earth paths. However, due to the contents of the images, the extent and alignment of these paths is not very evident. The earliest aerial photograph of the Hampton farm, taken in the 1950s, shows distinctive vehicular and pedestrian circulation patterns around the Dairy and Long House Granary (Figures 3.50 and 3.51). Realignment

of Hampton Lane in the mid-1950s resulted in the former alignment becoming a spur to the Long House Granary. A vehicular loop also once existed between the Dairy and Long House Granary and short-cut to the south of the Dairy formed a triangular lawn area at the farm entrance. Stable Drive also once extended across the realigned Hampton Lane to meet the former Hampton Lane spur. The historic photograph also suggests that pedestrians crossed the Dairy stream and traversed the hill along the east side of the Farm House yard to access Slave Quarters #3 and buildings beyond. These missing circulation routes should be reestablished as dense graded loose aggregate pedestrian walks consistent with the surface of Farm Road to enhance the historic setting of the Dairy and Long House Granary.

Considerations: All replacement circulation routes should be six feet wide, with sinuous curves and generous radii. Replacement paths should be surfaced with light colored loose aggregate to match Farm Road. Landforms associated with historic circulation routes remain largely intact. Road and pathway beds are readily visible in the existing topography. Regrading is only needed along the alignment of the Stable Drive extension. Topography in this area was substantially changed with the realignment of Hampton Lane in the mid-1950s, when the new road was constructed nearly four feet higher than the old road. Due to historic



Figure 3.50. Aerial photograph of the Hampton farm showing circulation routes in the vicinity of the Dairy, Long House Granary, and Cow Barn. Plan view,1952 (Baltimore County Soil Conservation District, Sheet K8, orig. 1:20,000).



Figure 3.51. Aerial photograph of the Hampton farm showing more defined circulation routes in the vicinity of the Dairy, Long House Granary, and Cow Barn. Plan view, 1957 (Baltimore County Soil Conservation District, Sheet AJO-5T-112).

grades, paths will not be universally accessible, with the exception of the short-cut to the south of the Dairy. Should regrading be required in construction of replacement circulation routes, archeological monitoring should coincide with physical work.

A small footbridge is needed to cross the Dairy stream. This footbridge might appropriately be four feet wide and be sited across the stream bed so as not to require handrails; however edge protection should be provided. Once beyond the Dairy stream, the path should transition to open lawn until reaching the top of the embankment, where the path should resume meeting the accessible walks adjacent to Slave Quarters #3. Sensitive grading will be required to ensure that path material does not wash into the Dairy stream. At the top of the hill, the path might appropriately be surfaced with gray stonedust to match the accessible walks.

Implementation of this recommendation may require archeological oversight, as historic buildings and structures may remain below grade. Missing historic buildings between the Dairy and Long House Granary include a blacksmith's shop (ashlar masonry building extant as late as 1959, Figures 3.52 and 3.53), carpenter's shop, and a third unidentified structure in the vicinity of the Long House Granary. Missing historic buildings along the Farm House yard fence include a meat house, what are believe to be two ash houses, and an early quarters building that pre-dated Slave Quarters #3.

Relationship to Park Planning: Reestablishment of missing circulation patterns within the farm landscape is essential providing physical connections between farm buildings in support of broadening the context for understanding Hampton's complex history, as directed by the *General Management Plan*.[57] Reestablished circulation routes offer alternatives to travel along Farm Road, a single lane road that is shared by pedestrians and vehicles. Rehabilitation



Figure 3.52. View from the Dairy toward the Long House Granary and cow barn (since demolished), showing the blacksmith's shop to the right. View looking southeast, 1959 (HABS MD-226-F, Lanny Miyamoto).



Figure 3.53. View from the Dairy toward the Long House Granary showing the former location of circulation routes between the buildings. View looking southeast, 2012 (OCLP).

of missing circulation routes rather than complete reconstruction meets the objectives of the *General Management Plan* preferred alternative three, which calls for rehabilitation of cultural resources.[58]

CR-12. Establish new pedestrian route parallel to Farm Road

Description: Currently, Farm Road accommodates both pedestrian and vehicular traffic. While most vehicles travel at a low speed along the road, pedestrians must step off the road to allow vehicles to pass. With no shoulder, this can be difficult and dangerous. A new pedestrian route should be constructed to the west of Farm Road to provide a separate and safe pedestrian connection between the Hampton Lane crosswalk and buildings in the vicinity of the Mule Barn (Figure 3.54).

Considerations: The path should be constructed at a minimum width of five feet and surfaced with dense graded loose aggregate pedestrian walks consistent with the surface of Farm Road. During design and construction, regrading work should endeavor to create a pedestrian route with a running slope of less than 1:20 (5%). Archeological oversight should coincide with construction. Locating the path to the west side of the West Farm Field fence will help to screen this new addition to the historic landscape from view, while further improving user safety.

Relationship to Park Planning: Construction of a new pedestrian route along Farm Road is essential to improving visitor safety and enhancing the physical connection between the Mansion and Farm landscapes. New paths along Farm Road are specifically called for under the *General Management Plan* preferred alternative three should the use of Farm Road prove to be "unsafe for visitors to walk along."[59]



Figure 3.54. View along the edge of the West Farm Field showing the proposed location of a universally accessible pedestrian route parallel to Farm Road. The new path, to be constructed between the unmown lawn and fence, will provide a safe alternative to the road for pedestrians. View looking north, 2012 (OCLP).

CR-13. Construct a new universally accessible route to the eastern entrance to the Log Farm Structure

Description: The western entrance to the Log Farm Structure is universally accessible by way of a stonedust walk that ramps to the building entrance. However, the eastern entrance to the building remains in accessible due to an approximate one foot grade change between the threshold and adjacent lawn grade (Figure 3.55). This entrance should be made accessible by extending the stonedust walk and low retaining wall that lead to the western building entrance or constructing a new wooden walk that reflects that design of the porch that once existed on the south façade of the Log Farm Structure.

Considerations: The four-foot wide walk extension should be surfaced with stonedust, consistent with the surface treatment of adjacent accessible walks. Because of grade change along the north façade of the building, a low retaining wall, approximately twelve to eighteen inches in height, will be required to ensure a level walk surface.

In addition, a handrail is required along the length of the walk to keep visitors from falling over the low retaining wall. The railing might appropriately be modeled after the wooden handrail that existed along the building's porch in 1906 (see Figure 3.71). Alternatively, this porch might be adapted to form an extension to the existing walk to the western building entrance to allow for a universal access to the eastern entrance. Additional survey work and design plans are required to implement this recommendation. Archeological oversight should accompany construction to ensure that below grade resources are not disturbed.



Figure 3.55. Log Farm Structure showing the existing accessible east entrance and inaccessible west building entrance to be made accessible with the extension of the walk to the western entrance or construction of a new boardwalk-like surface modelled after the building's historic porch. View looking northwest, 2012 (OCLP).

Relationship to Park Planning: As referenced in the *General Management Plan*, universal physical access is a high priority, and "all main paths connecting visitor services. . .would meet ADA regulations."[60] According to the *Long-Range Interpretive Plan*, "trails and pathways will be universally accessible (where possible, without significant grade changes or changes to the historic scene); signage will indicate level of accessibility."[61]

VEGETATION

VG-20. Replace missing historic trees throughout the farm landscape

Note: This recommendation relates to individual specimen trees located throughout the farm landscape. Treatment of individual trees is directed by preservation maintenance needs and replacement strategy outlined in Appendix A: Vegetation Inventory. Individual tree locations are indicated on Drawings 2–5.

Description: Specimen trees on the farm landscape are largely associated with plantings in the Farm House yard, volunteer trees along fence lines that persisted from the period of significance, and trees in the vicinity of the Dairy that were planted to provide shade during summer months. The National Park Service has perpetuated the composition of trees throughout the farm landscape, with the exception of species substitutions due to contemporary disease concerns or to screen incompatible views to contemporary residential development. Over time, however, historic specimen trees have matured and declined, and, in some cases, been removed. Missing historic trees throughout the farm should be replaced to perpetuate the historic character of the landscape.



Figure 3.56. View between Slave Quarters #3 (at right) and the Farm House (at left) showing Slave Quarters #2 (at center) and historic trees that once grew in the vicinity of the buildings to be replaced. View looking north, 1900 (HAMP 20103).

Considerations: Trees throughout the farm landscape are documented in historic photographs, as well as aerial photographs from the 1950s (Figure 3.56). These resources serve as objective benchmarks for assessing change since the end of the period of significance in 1948. A modicum of subjectivity is needed in assessing which trees should be replaced, since placement and composition of trees changed throughout time.

With approximately seventeen specimen trees identified for replanting throughout the farm landscape, implementation of this recommendation is expected to be ongoing. Replacement plantings should be prioritized by impact to visitor experience and on maintaining the cultural landscape in good condition. For example, replanting missing eastern cottonwood (*Populus deltoides*) trees flanking the Dairy might be a high priority, while replanting missing eastern cottonwood and white ash (*Fraxinus americana*) trees along the West Farm Field might rank significant lower.

Replacement of missing specimen trees should take in to account contemporary management considerations including impacts due pests and diseases. In cases where treatment of diseases and pests is not feasible, substitute species may be considered.

Relationship to Park Planning: Specimen trees are referenced in both the *General Management Plan* and *Long-Range Interpretive Plan*. The cultural landscape is identified as a fundamental resource by the *General Management Plan*. Perpetuation of Hampton's diverse collection of trees is central to maintaining the cultural landscape in good condition. In addition, the park interpretive program highlights historic vegetation and landscape history during the grounds tour offered during the summer months. With increased interest in interpreting the farm landscape, replacement of missing historic trees is ever more critical.

VG-21. Reestablish field crops in the West Farm Field

Description: During the period of significance the West Farm Field was planted with a diversity of crops, likely beginning with tobacco and transitioning to grains later in Hampton's history. By about 1897, the earliest photograph of the field show it planted with corn (Figure 3.57). The field remained planted in corn until about 1930. Today, the field is planted in annual rye grass to evoke its historic agricultural use. The field should continue to be planted in annual rye grass or be replanted in corn or grass for hay to illustrate its historic agricultural use.

Considerations: The West Farm Field encompasses just over one acre (approximately 47,000 square feet). At the season's end, corn should be shocked (gathered into corn stacks) throughout the field to dry, as it was historically. Shocking was a method for drying corn that was used before mechanical harvesters were invented. Replanting the West Farm Field offers opportunities to enhance agricultural partnerships with organizations such as Maryland's 4-H Youth Development Program.

Relationship to Park Planning: Reestablishment of field crops in the West Farm Field is important to demonstrating the agricultural activity that took place on the estate during the period of significance.[62] Replanting the West Farm Field is also important in supporting interpretation of the reconstructed Corn Crib (Task BS-5), as well as expanded interpretive programs and exhibits at the farm to better integrate the farm into the visitor experience, as directed by the *General Management Plan*. According to the plan, "the lower terraces and the gardens and fields around the farm would be managed to evoke the original uses and designs with a limited gardening staff."[63]



Figure 3.57. View out the Mansion gates showing corn growing in the West Farm Field beyond. View looking north, c. 1900 (HAMP 18575).

VG-22. Establish new mowing patterns to reinforce historic circulation routes

Description: With the exception of Farm Road, vehicular and pedestrian circulation routes on the farm were informal and often changing to meet needs throughout the period of significance. Historic photographs show major circulation routes to the north of the North Farm Garage, to the north of the Log Farm Structure and Slave Quarters #3, and between the Dairy and Long House Granary (Figure 3.58). Although complete reestablishment of these circulation routes is not feasible, mowing patterns should be used to reinforce historic circulation routes.

Considerations: To the north of the North Farm Garage, the field access drive trace was an extension of Farm Road that once lead from the T intersection, between Norway spruce (*Picea abies*, 37f) and red maple (*Acer rubrum*, 40f), to the northern property boundary. To the north of the Log Farm Structure and Slave Quarters #3, the historic road extended from the North Farm Garage in a gentle arc toward the Dairy stream. Between the Dairy and Long House Granary, a series of road loops trace historic turnarounds. Most of these routes remain visible in the existing site topography. In the vicinity of the Dairy, where paths are recommended for reestablishment at a narrower width, regular mowing should be used to illustrate the approximate historic dimensions of circulation routes, with adjacent tall grass areas mown only semiannually.

Relationship to Park Planning: Establishment of new mowing patterns to reflect historic circulation routes is an important step in enhancing the historic, lived-in qualities of the farm landscape, in support of the *Long-Range Interpretive Plan* goal, "to revitalize Hampton's Home Farm's landscape to reflect a vibrant and vigorous "village" where many people lived their lives."[64] Historic circulation routes will be visible to visitors on daily guided tours of the farm. Mown paths



Figure 3.58. View of the Farm House complex showing the field access drive trace to be revealed with modified mowing patterns and fields to be reestablished through removal of volunteer trees. View looking south, 1906 (HAMP 19664).

encourage exploration of the farm on foot and better visitor understanding of the physical relationships between buildings and sites within the park. Mown paths are an excellent method of maintaining these historic circulation routes with minimal capital expense and limited gardening staff, as directed by the *General Management Plan* preferred alternative three.[65]

VG-23. Repair holes in screen planting along the perimeter of the farm parcel

Description: Recent removal of invasive understory vegetation from the northern portion of the property has opened views to adjacent residential development. An evergreen tree fence row should be planted to screen adjacent homes and define the perimeter of the farm landscape. Evergreen screen planting should be added to the southeast corner of the farm parcel adjacent to the Long House Granary (approximately three trees, Figure 3.59), in the vicinity of the Dairy stream property boundary crossing opposite the view between Slave Quarters #2 and Slave Quarters #3 (approximately four trees, Figure 3.60), and along the northern property boundary between Farm Road and the field access drive trace (approximately four trees). Deciduous trees should be planted to the northwest of the Mule Barn to screen views of the farm parking area from Farm Road (approximately two trees in association with the remnants of historic fencerow vegetation, 34f).

Considerations: Final locations of fence row screen plantings should be evaluated in the field based on sight lines. Appropriate plantings include perpetuating the mixed species completion already in use along the western farm boundary, including white pines (*Pinus strobus*) and serviceberries (*Amelanchier arborea* and *canadensis*). For narrower areas, Norway spruces (*Picea abies*) are also strong screening plants because they are branched low to the ground.



Figure 3.59. Area to the south of the Long House Granary, where views to adjacent residential development beyond the non-historic park boundary fence require screening. View looking east, 2012 (OCLP).



Figure 3.60. View beyond Slave Quarters 3 showing views to the adjacent residential development that requires screening. View looking east, 2012 (OCLP).

Relationship to Park Planning: Screening incompatible views will enhance the visitor experience by improving the setting of the farm landscape. The improvement of contemporary perimeter screen plantings is specifically directed by *General Management Plan* preferred alternative three, with long-term minor beneficial impacts.[66] Implementation of this recommendation also supports the *Long-Range Interpretive Plan* goal of "providing landscape screening between the historic site and the neighborhood."[67]

VG-24. Remove volunteer trees from farm fields to the north of the Farm House Cluster

Description: The earliest visual documentation of the fields to the north of the Farm House Cluster is provided by the 1843 *Map of Hampton*. Another photograph from 1906 shows the open fields with an access drive (see Figure 3.57). After the establishment of Hampton National Historic Site volunteer trees were allowed to mature in the north fields. Some trees were removed in the 2000s, although many remain (Figure 3.61). Volunteer trees should be removed from the north field and lawn or crops reestablished.

Considerations: Removal of volunteer trees will open views to adjacent residential development, so screen planting will be required along the perimeter of the farm parcel to supplement existing screen plantings (see Task VG-23).

Relationship to Park Planning: Removing non-historic vegetation from the northern portion of the farm parcel will enhance the visitor experience and the park's ability to illustrate the historic agricultural use of the north fields. Concurrent with this work, the improvement of contemporary perimeter screen plantings is specifically directed by *General Management Plan* preferred



Figure 3.61. Former fields to the north of the Farm House cluster that are now overgrown with volunteer trees. Trees should be removed to reestablish the open character of this former agricultural area. View looking north, 2013 (OCLP).

alternative three, with long-term minor beneficial impacts.[68] Implementation of this recommendation also supports the *Long-Range Interpretive Plan* goal of "providing landscape screening between the historic site and the neighborhood."[69]

BUILDINGS AND STRUCTURES

BS-5. Reconstruct the Corn Crib on the existing historic foundation

Description: The Corn Crib was constructed between circa 1845 and 1860 to replace an earlier corn house in the same vicinity. The Corn Crib was destroyed by arson in 1988. Today, only the original foundation remains along Farm Road (Figure 3.62). The Corn Crib should be reconstructed on its original foundation based on historic documentation to enhance the historic character of the farm. A historic structure report may be needed to support the reconstruction project.

Considerations: The Corn Crib is well documented by the 1959 Historic American Buildings Survey (MD. 226-N), which includes photographs, a measured drawing, and data sheets (Figures 3.63 and 3.64). In photographs, the wood frame structure is shown sided with horizontal wood slats, with a simple gable roof with wood shingles and projecting eaves with decorative bargeboard. A central doorway provided access on the eastern façade, and grain fill holes existed on the western and southern façades. Following reconstruction, the interior of the structure might appropriately be adapted for use in visitor services and orientation, as directed by the *General Management Plan*.[70] The entrance to the reconstructed structure should be modified for universal access.

Relationship to Park Planning: Reconstruction of the Corn Crib is a key goal of the *General Management Plan* and *Long-Range Interpretive Plan*, which outline a



Figure 3.62. Corn Crib foundation remains from 1988 fire that destroyed the structure. View looking northwest, 2013 (OCLP).

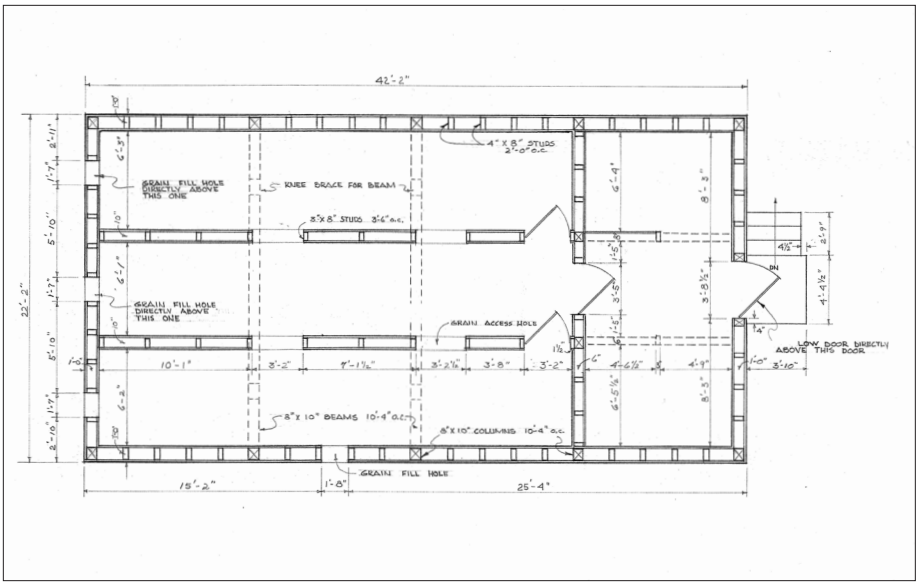


Figure 3.63. Drawing of the Corn Crib prior to it's destruction by fire. Plan view, 1959 (HABS MD-226-N).



Figure 3.64. Corn Crib from Farm Road, including the West Farm Field to the left. By 1959, board fences had been replaced with barbed wire. View looking northwest, 1959 (HABS MD-226-N, Lanny Miyamoto).

new visitor contact station for the interior of the building. This seasonally staffed orientation facility is planned to house interpretive resources related to the history of the farm.[71]

Access to the Corn Crib is accommodated along Farm Lane, which is at its widest adjacent to the Corn Crib and Mule Barn. An accessible route to the Corn Crib from the farm parking area might appropriately be considered to the northwest of the Corn Crib and Mule Barn, consistent with the recommendations of the *Long Range Interpretive Plan*.[72]

SMALL-SCALE FEATURES

SSF-7. Replace missing post and three board fences associated with the Diary

Description: Historic photographs of the Dairy from circa 1897 show post and three board fences bordering the east, west, and south sides of the structure (Figure 3.65). By the early 1900s, these fences had been removed (Figure 3.66). Fences bordering the Dairy should be replaced to enhance the historic character and setting of the Dairy.

Considerations: Historic fences met the stone wall that extends along the northern side of the structure, forming two rectangular yards offset from the building by approximately fifteen feet. Un-gated thresholds marked by wooden posts opposite the two staircases provided access to the yards. Replacement of missing



Figure 3.65. Dairy from the circulation route adjacent to the Long House Granary showing board fences and trees that once surrounded the structure. View looking southwest, c. 1897 (HAMP 44221).



Figure 3.66. Dairy from the vicinity of the Long House Granary showing the historic location of fences and trees around the structure. View looking southwest, 2012 (OCLP).

post and three board fencing will require approximately 150 linear feet of fence. Implementation of this recommendation will require archeological oversight due to ground disturbance.

Relationship to Park Planning: The loss of small-scale features has diminished the agricultural and domestic setting that once characterized the farm. Replacing missing historic fencing supports the *General Management Plan* goal to "expand the visitor experience to include the entire story of the park," including stories of the farm workers.[73] Replacement of similar small-scale features that contribute to the character of the historic scene are also recommended by the *Long-Range Interpretive Plan*.[74]

SSF-8. Replace missing picket, split rail, and post and wire fences in the vicinity of the Dairy stream

Description: During the period of significance, livestock fields and pastures occupied the area to the east of Slave Quarters #3. Historic fencing allowed animals to access the stream for water, as well as the rich grass that grew in this gentle valley (Figure 3.67). Fencing also kept animals at bay from the residential core of the Farm House complex (Figure 3.68). Although most of these fields lay beyond the current Hampton National Historic Site boundary, historic fence lines that remain within the park boundary should be reestablished.

Considerations: Fencing is shown in several historic photographs of the area, although few historic remnants remain on site (see Figures 3.67 and 3.68). Fence styles likely changed over time, as board and rail fences were replaced by barbed wire in the late nineteenth and early twentieth century.

Picket fencing should be replaced from the northwest corner of the Long House Granary, crossing the Dairy stream, and extending parallel with the Farm House yard fence up the embankment toward Slave Quarters #3. Before reaching Slave Quarters #3, the picket fence should terminate, transitioning into a post and wire fence to meet the southeast corner of Slave Quarters #3. A short split rail fence (two rails) segment is also needed to connect the Farm House yard fence to the replacement picket fence. This fence might appropriately incorporate a replacement of the distinctive turnstile shown in the 1936 photograph of this area.

From the southeast corner of Slave Quarters #3, the post and wire fence should extend downhill to the Dairy stream, to meet a split rail fence (four rails) that runs parallel to the Dairy stream to the property boundary. To the north, a rustic rail fence should be replaced to run parallel to the Dairy stream fence. Historic photographs show that this fence segment consisted of rails stacked between two posts, much like a snake rail fence without the distinctive zigzag. The unique design of this fence segment made possible the distinctive arc of the fence line. Replacement of the rustic rail fence segment may require pruning or removal of portions of the north woodland stand (73f). Implementation of this recommendation will require archeological oversight due to ground disturbance.

Relationship to Park Planning: The loss of small-scale features has diminished the agricultural and domestic setting that once characterized the farm. Replacing missing historic fencing supports the *General Management Plan* goal to "expand the visitor experience to include the entire story of the park," including stories of the farm workers.[75] Replacement of similar small-scale features that contribute to the character of the historic scene are also recommended by the *Long-Range Interpretive Plan*.[76] In addition, the diversity of fence types in this area allows park visitors to understand evolution of fence design and configuration on the farm.



Figure 3.67. Margaret Ridgely (1876–1936) and Leonice Ridgely (1874–1934) in the Dairy stream. A picket fence, to be replaced, is visible across the stream just beyond. Slave Quarters #3 is visible in the distance at left. View looking north, c. 1895–1902 (HAMP 20270).

Table 3.10. Summary of Fence Segments in the Vicinity of the Diary Stream

Location	Type	Approximate Length
From the northwest corner of the Long House Granary, across the Dairy stream, and up the embankment toward Slave Quarters #3	Wooden picket	590 linear feet (in 2 legs)
From the southeast corner of Slave Quarters #3 toward the Dairy stream	Post and wire	100 linear feet
From the northern terminus of the picket fence to meet the Farm House yard fence perpendicular (with turnstyle)	Split rail (two rails)	60 linear feet
From the eastern terminus of the post and wire fence parallel to the Dairy stream to the park boundary	Split rail (four rails)	215 linear feet
From the eastern terminus of the post and wire fence, curving uphill before running parallel to the Dairy stream to the park boundary	Rustic rail fence (snake rail without snaking)	400 linear feet



Figure 3.68. Farm House cluster showing the picket fence bordering the Dairy stream and other field fences in the distance beyond to be replaced. View looking north, 1936 (HABS MD-226-J, E.H. Pickering).

SSF-9. Replace the split rail fence along Farm Road with a four board fence and gate opposite the Corn Crib

Description: A historic photograph from around 1897 shows a board fence with four rails bordering Farm Road (Figure 3.69). At the time, a gate opposite the Corn Crib restricted access to the Farm House area beyond. The West Farm Field fence was replaced with a split rail fence in 2010 (Figure 3.70). While this fence was replaced in the appropriate location, it does not match the historic design extant around the 1860s to early 1870s. The split rail fence should be replaced with a four board fence and the gate opposite the Corn Crib reconstructed.

Considerations: Implementation of this recommendation will require replacement of approximately 675 linear feet of fence along Farm Road to reflect the design of the original fencing shown in historic photographs. Implementation of this recommendation will require archeological oversight due to ground disturbance.

Relationship to Park Planning: While minor, implementation of this recommendation will ensure that the historic character of the farm landscape from the 1860s to early 1870s is perpetuated accurately.



Figure 3.69. View along Farm Road showing the board fence that bordered the West Farm Field during the period of significance. A gate is also visible opposite the Corn Crib. Both the fence and gate should be replaced consistent with their historic appearance. View looking northwest, c. 1897 (HAMP 44216).



Figure 3.70. View along Farm Road showing the historic location of the Corn Crib. Note that the style of the fence along the West Farm Field (at left) has changed from board to split rail since the turn of the century. View looking northwest, 2013 (OCLP).

SSF-10. Replace missing split rail fences to the north of the Mule Barn

Description: Historic photographs from around 1930 and 1936 show split rail fencing (four rails) in the vicinity of the Mule Barn, including a fence that extended from the northeast corner of the barn to Farm Road, running parallel along the to the north (Figure 3.71). This fence segment should be replaced in-kind to evoke the historic appearance of this working area of the farm landscape.

Considerations: Implementation of this recommendation will require construction of 143 linear feet on west side of Farm Road, extending from the Mule Barn to the property boundary fence. Implementation of this recommendation will require archeological oversight due to ground disturbance.

Relationship to Park Planning: The loss of small-scale features has diminished the agricultural and domestic setting that once characterized the farm. Replacing missing historic fencing supports the *General Management Plan* goal to "expand the visitor experience to include the entire story of the park," including stories of the farm workers.[77] Replacement of similar small-scale features that contribute to the character of the historic scene are also recommended by the *Long-Range Interpretive Plan*.[78]

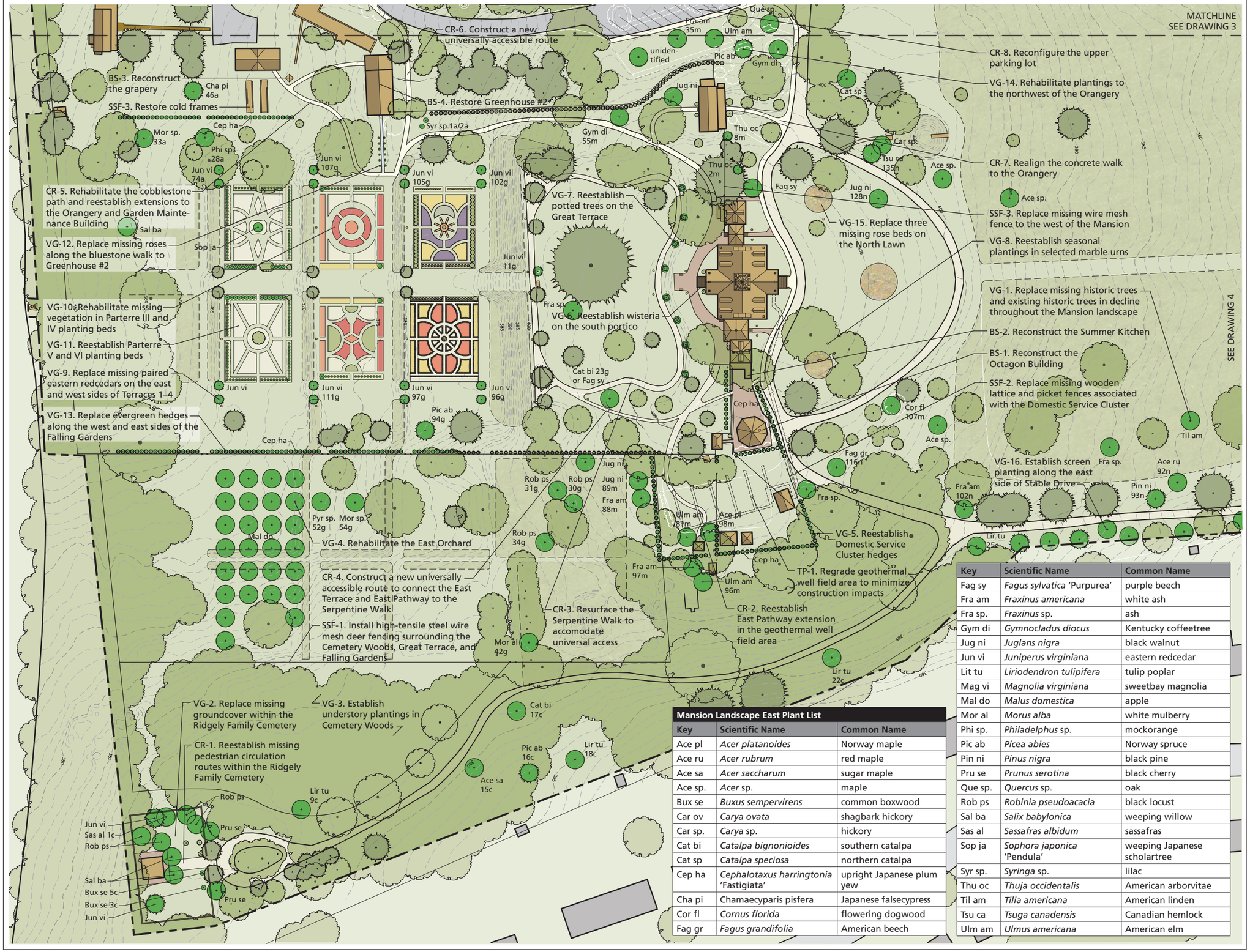


Figure 3.71. Enlargement of a view of the Log Farm Structure showing split rail fencing to the north of the Mule Barn to be replaced (at center). View looking west, c. 1930 (HAMP 4337).

Table 3.11. Landscape Treatment Tasks Summary

Task ID	Task	Page	Related Tasks
Topography			
TP-1	Regrade the geothermal well field area to minimize construction impacts	62	CR-2, VG-5, SSF-2
Circulation			
CR-1	Reestablish missing pedestrian routes within the Ridgely Family Cemetery	63	VG-2
CR-2	Reestablish East Pathway extension in the geothermal well field area	65	TP-1, VG-5, SSF-2
CR-3	Resurface the Serpentine Walk to accommodate universal access	65	CR-4
CR-4	Construct a new universally accessible route to connect the East Terrace and East Pathway to the Serpentine Walk	67	CR-3
CR-5	Rehabilitate the cobblestone path and reestablish extensions to the Orangery and Garden Maintenance Building	68	CR-6, BS-3, SSF-3
CR-6	Construct a new universally accessible route from the new lower parking lot to Terrace 2 of the Falling Gardens	70	CR-5
CR-7	Realign the concrete walk to the Orangery	71	CR-9, VG-14
CR-8	Reconfigure the upper parking lot	72	CR-9, VG-14, SSF-4
CR-9	Construct a new pedestrian route from the Visitor Contact Station to the upper parking lot	74	CR-7, CR-8, VG-14, VG-18
CR-10	Construct a new pedestrian connection to the Hampton Lane crosswalk	75	SSF-5
CR-11	Reestablish missing circulation patterns in the vicinity of the Long House Granary and Dairy	122	CR-10, SSF-7
CR-12	Establish new pedestrian route parallel to Farm Road	125	CR-10, CR-11, VG-21
CR-13	Construct a new universally accessible route to the eastern entrance to the Log Farm Structure	126	
Vegetation			
VG-1	Replace missing historic trees and existing historic trees in decline throughout the Mansion landscape	76	
VG-2	Replace missing groundcover within the Ridgely family cemetery	78	CR-1
VG-3	Reestablish understory plantings in Cemetery Woods	79	SSF-1
VG-4	Rehabilitate the East Orchard	82	VG-18, SSF-1
VG-5	Reestablish missing Domestic Service Cluster hedges	85	TP-1, CR-2, BS-1, BS-2, SSF-2
VG-6	Reestablish wisteria on the south portico	87	
VG-7	Reestablish potted trees on the Great Terrace	88	
VG-8	Reestablish seasonal plantings in selected marble urns	90	
VG-9	Replace missing paired eastern redcedars on the east and west sides of Terraces 1–4	91	VG-10, VG-11
VG-10	Rehabilitate missing vegetation in Parterre III and IV planting beds	92	VG-9, VG-11, SSF-1
VG-11	Reestablish Parterre V and VI planting beds	94	VH-9, VG-10, SSF-1
VG-12	Replace missing roses along the bluestone walk to Greenhouse #2	96	VG-15, BS-4
VG-13	Replace evergreen hedges along the west and east sides of the Falling Gardens	98	SSF-1
VG-14	Rehabilitate plantings to the northwest of the Orangery	100	CR-7, CR-8, CR-9
VG-15	Replace three missing rose beds on the North Lawn	101	VG-12
VG-16	Establish screen plantings along the east side of Stable Drive	103	SSF-6
VG-17	Replace white pine screen planting removed between the lower parking lot and Park Maintenance Buildings	104	
VG-18	Rehabilitate the West Orchard	105	CR-9, VG-4
VG-19	Replace existing arborvitaes at the Mansion gate	107	
VG-20	Replace missing historic trees throughout the farm landscape	127	
VG-21	Reestablish field crops in the West Farm Field	129	CR-12
VG-22	Establish new mowing patterns to reinforce historic circulation routes	130	CR-11, VG-24
VG-23	Repair holes in screen planting along the perimeter of the farm parcel	131	VG-24
VG-24	Remove volunteer trees from farm fields to the north of the Farm House Cluster	132	VG-22, SSF-8

Task ID	Task	Page	Related Tasks
Buildings and Structures			
BS-1	Reconstruct the Octagon Building	108	VG-5, BS-2, SSF-2
BS-2	Reconstruct the Summer Kitchen	109	VG-5, BS-1, SSF-2
BS-3	Reconstruct the grapery	111	CR-5
BS-4	Restore Greenhouse #2	112	VG-12
BS-5	Reconstruct the Corn Crib on the existing historic foundation	133	SSF-9
Small-scale Features			
SSF-1	Install high-tensile steel wire deer fencing surrounding the Cemetery Woods, Great Terrace, and Falling Gardens	113	VG-3, VG-4, VG-10, VG-11, SSF-2
SSF-2	Replace missing wooden lattice and picket fences associated with the Domestic Service Cluster	115	TP-1, CR-2, VG-5, BS-1, BS-2, SSF-2
SSF-3	Restore cold frames to the east of the historic Garden Maintenance Building	117	CR-5
SSF-4	Remove existing concrete masonry unit tree wells	118	CR-8
SSF-5	Replace missing post and board fences associated with Stable #2	119	
SSF-6	Bury utility lines along Hampton Lane and Stable Drive	120	CR-10, VG-16
SSF-7	Replace missing post and three board fences associated with the Dairy	135	CR-11, SSF-8, SSF-9, SSF-10
SSF-8	Replace missing picket, split rail, and post and wire fences in the vicinity of the Dairy stream	136	VG-24, SSF-7, SSF-9, SSF-10
SSF-9	Replace the split rail fence along Farm Road with a four board fence and gate opposite the Corn Crib	138	BS-5, SSF-7, SSF-8, SSF-10
SSF-10	Replace missing split rail fence to the north of the Mule Barn	140	SSF-7, SSF-8, SSF-9



Mansion Landscape East Plant List		
Key	Scientific Name	Common Name
Ace pl	*Acer platanoides*	Norway maple
Ace ru	*Acer rubrum*	red maple
Ace sa	*Acer saccharum*	sugar maple
Ace sp.	*Acer* sp.	maple
Bux se	*Buxus sempervirens*	common boxwood
Car ov	*Carya ovata*	shagbark hickory
Car sp.	*Carya* sp.	hickory
Cat bi	*Catalpa bignonioides*	southern catalpa
Cat sp	*Catalpa speciosa*	northern catalpa
Cep ha	*Cephalotaxus harringtonia* 'Fastigiata'	upright Japanese plum yew
Cha pi	Chamaecyparis pisfera	Japanese falsecypress
Cor fl	*Cornus florida*	flowering dogwood
Fag gr	*Fagus grandifolia*	American beech

Key	Scientific Name	Common Name
Fag sy	*Fagus sylvatica* 'Purpurea'	purple beech
Fra am	*Fraxinus americana*	white ash
Fra sp.	*Fraxinus* sp.	ash
Gym di	*Gymnocladus diocus*	Kentucky coffeetree
Jug ni	*Juglans nigra*	black walnut
Jun vi	*Juniperus virginiana*	eastern redcedar
Lit tu	*Liriodendron tulipifera*	tulip poplar
Mag vi	*Magnolia virginiana*	sweetbay magnolia
Mal do	*Malus domestica*	apple
Mor al	*Morus alba*	white mulberry
Phi sp.	*Philadelphus* sp.	mockorange
Pic ab	*Picea abies*	Norway spruce
Pin ni	*Pinus nigra*	black pine
Pru se	*Prunus serotina*	black cherry
Que sp.	*Quercus* sp.	oak
Rob ps	*Robinia pseudoacacia*	black locust
Sal ba	*Salix babylonica*	weeping willow
Sas al	*Sassafras albidum*	sassafras
Sop ja	*Sophora japonica* 'Pendula'	weeping Japanese scholartree
Syr sp.	*Syringa* sp.	lilac
Thu oc	*Thuja occidentalis*	American arborvitae
Til am	*Tilia americana*	American linden
Tsu ca	*Tsuga canadensis*	Canadian hemlock
Ulm am	*Ulmus americana*	American elm

Cultural Landscape Report

Hampton National Historic Site

Towson, Maryland

Treatment Enlargement Mansion Landscape East

National Park Service

Olmsted Center for Landscape Preservation

www.nps.gov/oclp

SOURCES

1. Site survey, Johnson Mirmiran & Thompson, Jan. 2002
2. Existing conditions maps, NPS - Philadelphia Support Office, May 2004
3. Orthophtograph, MD Dept. of Natural Resources, 2009
4. Field notes, NPS - OCLP, Jan. & May 2012

DRAWN BY

Christopher Beagan, OCLP, 2014
AutoCAD Map 3D, Adobe Photoshop and Illustrator CS3

LEGEND

- Hampton National Historic Site boundary
- Approximate location of geothermal well field
- Feature to be removed
- Existing deciduous tree
- Existing evergreen tree
- Proposed deciduous tree (see plant list at left for species name, see Appendix A for numeric veg. inventory key) — Ace ru 92n
- Proposed evergreen tree (see plant list at left for species name, see Appendix A for numeric veg. inventory key) — Pin ni 93n
- Mown lawn
- Unmown lawn/meadow
- Bituminous concrete
- Crushed stone
- Concrete
- Brick
- Bluestone

NOTE

1. All features shown in approximate scale and location.
2. Only features that require treatment action are labeled.

0’ 25’ 50’ 100’ 200’

Drawing 2

Mansion Landscape West Plant List		
Key	**Scientific Name**	**Common Name**
Ace pl	*Acer platanoides*	Norway maple
Ace sp.	*Acer* sp.	maple
Aes sp.	*Aesculus* sp.	chestnut
Ail al	*Ailanthus altissima*	tree of heaven
Car ov	*Carya ovata*	shagbark hickory
Cor fl	*Cornus florida*	flowering dogwood
Fag sy	*Fagus sylvatica* 'Purpurea'	purple beech
Fra am	*Fraxinus americana*	white ash
Fra sp.	*Fraxinus* sp.	ash
Gin bi	*Ginkgo biloba*	ginkgo
Gle tr	*Gleditsia triacanthos*	honeylocust
Gym di	*Gymnocladus diocus*	Kentucky coffeetree
Jug ni	*Juglans nigra*	black walnut
Lir tu	*Liriodendron tulipifera*	tulip poplar
Mal do	*Malus domestica*	apple
Pic ab	*Picea abies*	Norway spruce
Pin st	*Pinus strobus*	white pine
Pla oc	*Platanus occidentalis*	eastern sycamore
Pop de	*Populus deltoides*	eastern cottonwood
Pse am	*Pseudolarix amabilis*	golden larch
Que ru	*Quercus rubra*	red oak
Que sp.	*Quercus* sp.	oak
Rob ps	*Robinia pseudoacacia*	black locust
Thu x	*Thuja* x 'Steeplechase'	Steeplechase arborvitae
Til am	*Tilia americana*	American linden
Til eu	*Tilia* x *europaea*	European linden
Tsu ca	*Tsuga canadensis*	Canadian hemlock
Ulm am	*Ulmus americana*	American elm

Jug ni
Jug ni
Que sp.
Ace sp.
Gin bi
Tsu ca
Pin st
Fra sp.
Que ru 86w
Ulm am
Fag sy 12w
Hampton Lane
VG-1. Replace missing historic trees and existing historic trees in decline throughout the Mansion landscape
Jug ni
Fra sp.
Ace sp.
Mal do
VG-18. Rehabilitate the West Orchard
Fra sp.
Tsu ca 15w
Ace sp.
Thu x
Pse am 8w
VG-19. Replace existing arborvitaes at the Mansion gates
Jug ni
Cor fl 9w
CR-9. Construct a new pedestrian route from the Visitor Contact Station to the upper parking lot
Ulm am 22w
Car ov 31w
Ulm am 9n
Jug ni 10n
Mal do
Fra am 50w
Rob ps 54n
Pop de
Gle tr
VG-17. Replace white pine screen planting removed between the lower parking lot and Park Maintenance Buildings
Pin st
CR-6. Construct a new universally accessible route from the new lower parking lot to Terrace 2 of the Falling Gardens
SSF-1. Install high-tensile steel wire mesh deer fencing surrounding Cemetery Woods, Great Terrace, and Falling Gardens
Til eu 57a
Ace pl 58a
Pin st
Gym di 60a
Pla oc 56a
SSF-4. Remove existing concrete masonry unit tree wells
Fra am 63a
Jug ni 62a
Ace sp. 61a
Tsu ca 58w
Lir tu
Ace sa 47w
Til am
Til am
Que sp.
Pic ab
Ace pa 54a
Ail al 53w
Ace sa 45w
Pla oc
Pic ab 50a
CR-8. Reconfigure the upper parking lot
VG-14. Rehabilitate plantings to the northwest of the Orangery
Que sp.
Fra am 35m
uniden-tified
Ulm am
Pic ab
Gym di
SEE DRAWING 4
MATCHLINE SEE DRAWING 2

Cultural Landscape Report

Hampton National Historic Site
Towson, Maryland

Treatment Enlargement Mansion Landscape West

National Park Service
Olmsted Center for Landscape Preservation
www.nps.gov/oclp

SOURCES
1. Site survey, Johnson Mirmiran & Thompson, Jan. 2002
2. Existing conditions maps, NPS - Philadelphia Support Office, May 2004
3. Orthophtograph, MD Dept. of Natural Resources, 2009
4. Field notes, NPS - OCLP, Jan. & May 2012

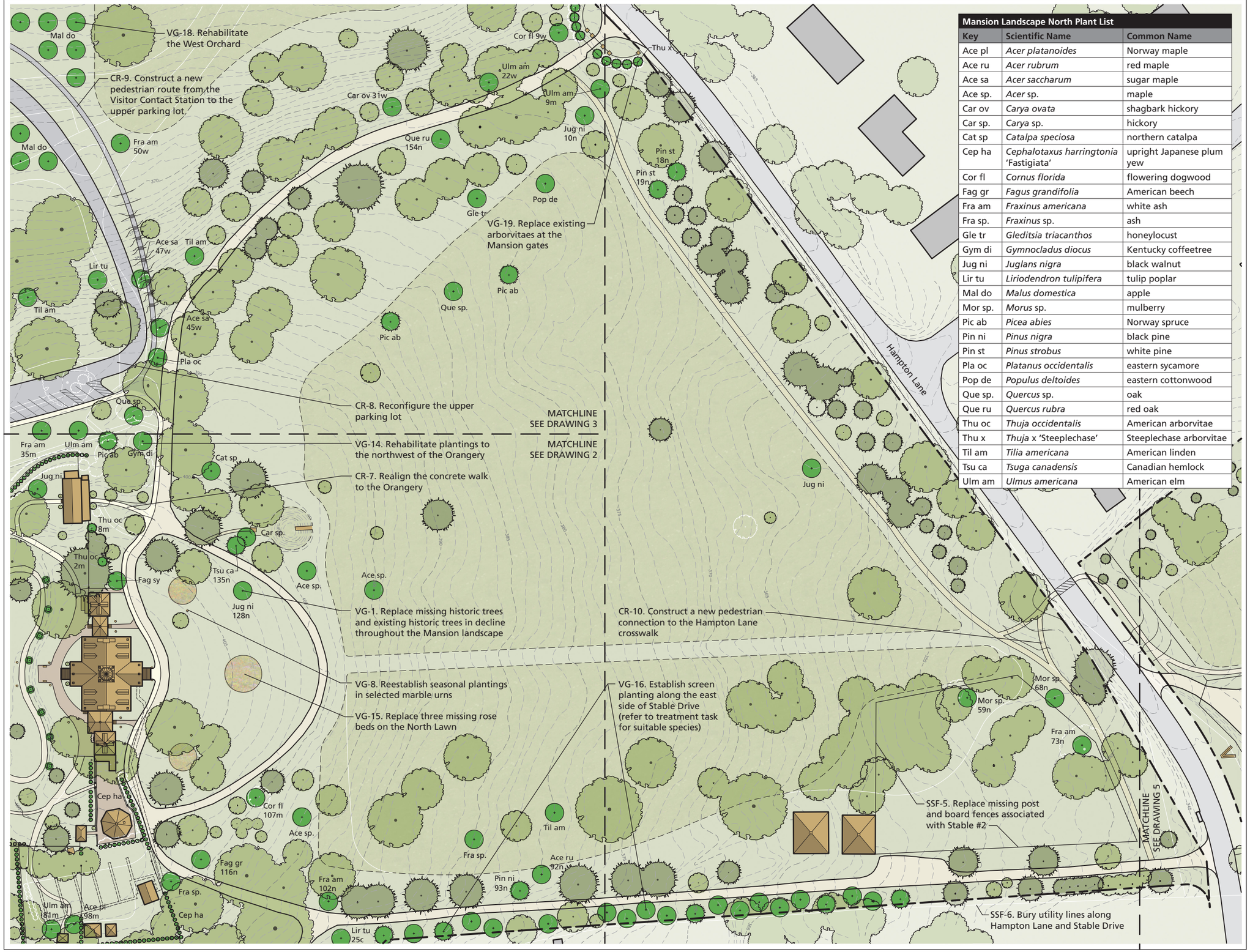
DRAWN BY
Christopher Beagan, OCLP, 2014
AutoCAD Map 3D, Adobe Photoshop and Illustrator CS3

LEGEND
- Hampton National Historic Site boundary
- Feature to be removed
- Existing deciduous tree
- Existing evergreen tree
- Proposed deciduous tree (see plant list at left for species name, see Appendix A for numeric veg. inventory key)
- Proposed evergreen tree (see plant list at left for species name, see Appendix A for numeric veg. inventory key)
- Mown lawn
- Unmown lawn/meadow
- Bituminous concrete
- Crushed stone
- Concrete

NOTE
1. All features shown in approximate scale and location.
2. Only features that require treatment action are labeled.

0′ 25′ 50′ 100′ 200′

Drawing 3



Mansion Landscape North Plant List		
Key	**Scientific Name**	**Common Name**
Ace pl	*Acer platanoides*	Norway maple
Ace ru	*Acer rubrum*	red maple
Ace sa	*Acer saccharum*	sugar maple
Ace sp.	*Acer* sp.	maple
Car ov	*Carya ovata*	shagbark hickory
Car sp.	*Carya* sp.	hickory
Cat sp	*Catalpa speciosa*	northern catalpa
Cep ha	*Cephalotaxus harringtonia* 'Fastigiata'	upright Japanese plum yew
Cor fl	*Cornus florida*	flowering dogwood
Fag gr	*Fagus grandifolia*	American beech
Fra am	*Fraxinus americana*	white ash
Fra sp.	*Fraxinus* sp.	ash
Gle tr	*Gleditsia triacanthos*	honeylocust
Gym di	*Gymnocladus diocus*	Kentucky coffeetree
Jug ni	*Juglans nigra*	black walnut
Lir tu	*Liriodendron tulipifera*	tulip poplar
Mal do	*Malus domestica*	apple
Mor sp.	*Morus* sp.	mulberry
Pic ab	*Picea abies*	Norway spruce
Pin ni	*Pinus nigra*	black pine
Pin st	*Pinus strobus*	white pine
Pla oc	*Platanus occidentalis*	eastern sycamore
Pop de	*Populus deltoides*	eastern cottonwood
Que sp.	*Quercus* sp.	oak
Que ru	*Quercus rubra*	red oak
Thu oc	*Thuja occidentalis*	American arborvitae
Thu x	*Thuja* x 'Steeplechase'	Steeplechase arborvitae
Til am	*Tilia americana*	American linden
Tsu ca	*Tsuga canadensis*	Canadian hemlock
Ulm am	*Ulmus americana*	American elm

Cultural Landscape Report

Hampton National Historic Site

Towson, Maryland

Treatment Enlargement Mansion Landscape North

National Park Service

Olmsted Center for Landscape Preservation

www.nps.gov/oclp

SOURCES

1. Site survey, Johnson Mirmiran & Thompson, Jan. 2002
2. Existing conditions maps, NPS - Philadelphia Support Office, May 2004
3. Orthophtograph, MD Dept. of Natural Resources, 2009
4. Field notes, NPS - OCLP, Jan. & May 2012

DRAWN BY

Christopher Beagan, OCLP, 2014
AutoCAD Map 3D, Adobe Photoshop and Illustrator CS3

LEGEND

- Hampton National Historic Site boundary
- Approximate location of geothermal well field
- Feature to be removed
- Existing deciduous tree
- Existing evergreen tree
- Proposed deciduous tree (Fra am 8n) (see plant list at left for species name, see Appendix A for numeric veg. inventory key)
- Proposed evergreen tree (Pin st 18n) (see plant list at left for species name, see Appendix A for numeric veg. inventory key)
- Mown lawn
- Unmown lawn/meadow
- Bituminous concrete
- Crushed stone
- Concrete
- Brick

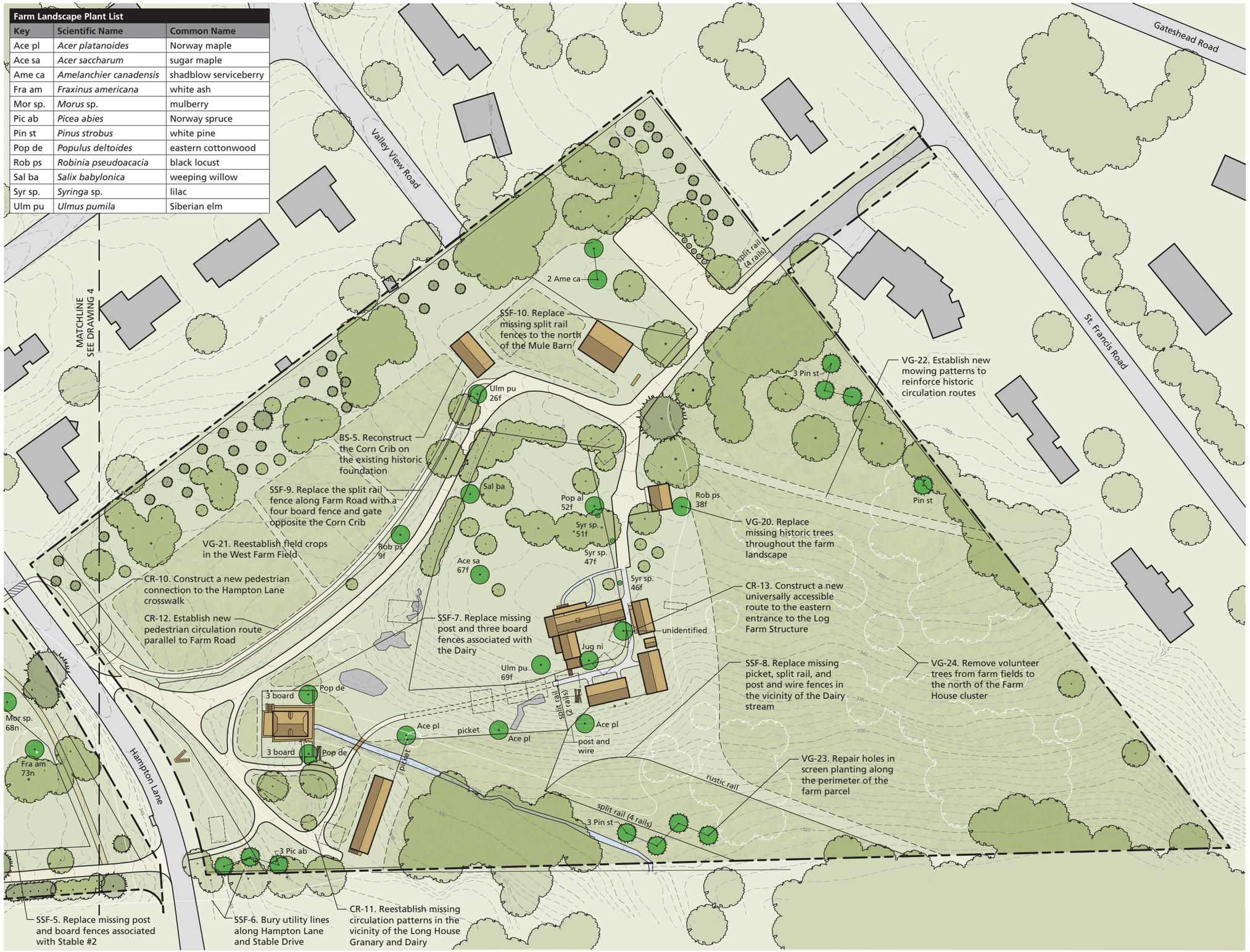
NOTES

1. All features shown in approximate scale and location.
2. Only features that require treatment action are labeled.

0′ 25′ 50′ 100′ 200′

Drawing 4

Farm Landscape Plant List		
Key	**Scientific Name**	**Common Name**
Ace pl	*Acer platanoides*	Norway maple
Ace sa	*Acer saccharum*	sugar maple
Ame ca	*Amelanchier canadensis*	shadblow serviceberry
Fra am	*Fraxinus americana*	white ash
Mor sp.	*Morus* sp.	mulberry
Pic ab	*Picea abies*	Norway spruce
Pin st	*Pinus strobus*	white pine
Pop de	*Populus deltoides*	eastern cottonwood
Rob ps	*Robinia pseudoacacia*	black locust
Sal ba	*Salix babylonica*	weeping willow
Syr sp.	*Syringa* sp.	lilac
Ulm pu	*Ulmus pumila*	Siberian elm



Cultural Landscape Report

Hampton National Historic Site

Towson, Maryland

Treatment Enlargement Farm Landscape

National Park Service

Olmsted Center for Landscape Preservation

www.nps.gov/oclp

SOURCES

1. Site survey, Johnson Mirmiran & Thompson, Jan. 2002
2. Existing conditions maps, NPS - Philadelphia Support Office, May 2004
3. Orthophtograph, MD Dept. of Natural Resources, 2009
4. Field notes, NPS - OCLP, Jan. & May 2012

DRAWN BY

Christopher Beagan, OCLP, 2014
AutoCAD Map 3D, Adobe Photoshop and Illustrator CS3

LEGEND

- Hampton National Historic Site boundary
- Approximate location of building from 1843 Map of Hampton
- Feature to be removed
- Existing deciduous tree
- Existing evergreen tree
- Proposed deciduous tree (see plant list at left for species name, see Appendix A for numeric veg. inventory key) — Rob ps 38f
- Proposed evergreen tree (see plant list at left for species name) — Pin st
- Mown lawn
- Unmown lawn/meadow
- Bituminous concrete
- Crushed stone
- Stonedust
- Mulch

NOTE

1. All features shown in approximate scale and location.
2. Only features that require treatment action are labeled.

0′ 25′ 50′ 100′ 200′

Drawing 5

Endnotes

1 Charles A. Birnbaum and Christine Capella Peters, eds., *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* (Washington, D.C.: U.S. Department of the Interior, 1996), 18-19.

2 The Horticulturist, June 1857, as referenced in "Descriptions of Hampton's Gardens as They Appeared during Eliza Ridgely's Era."

3 LRIP, 63.

4 LRIP, 29.

5 GMP, 62, 36.

6 Management Policies, Chapter 9

7 GMP, 45.

8 Drawing No. NHS-HAM-2027.

9 GMP, 45.

10 GMP, 45.

11 LRIP, 15.

12 Circulation Plan (18 March 2011) fig. 5, 13.

13 GMP, 45.

14 LRIP, 15.

15 At least one parking space must be van-accessible. For parking lots that accommodate one to twenty-five vehicles, one universally accessible space must be provided. For parking lots that accommodate twenty-six to fifty vehicles, at least two universally accessible spaces must be provided. And for parking lots for fifty-one to seventy-five vehicles, at least three universally accessible spaces must be provided.

16 GMP, 53.

17 The upper parking lot accommodates universal visitor access to the Orangery, Mansion, and core of the historic landscape.

18 GMP, 37.

19 GMP, 45.

20 Circulation Plan (18 March 2011) fig. 14, 15.

21 Circulation Plan (18 March 2011) p. 15.

22 GMP, 45.

23 LRIP, 69.

24 Aggregate features are groupings of identical or similar features that serve a single function in the cultural landscape. With vegetation, in instances where balance, symmetry, or uniformity is the intent of the planting, all plants that comprise an aggregate feature should be replaced at the same time.

25 Memorandum, 2 June 1948, with accompanying "Tree Location Sketch and Tree Maintenance Plan," Hampton NHS office files.

26 Drawing No. NHS-HAM-2027.

27 GMP, 64.

28 As of writing, no concrete references to Cemetery Woods vegetation could be found in these references.

29 U.S. Department of the Interior, National Park Service, Hampton National Historic Site, prepared by Vanasse Hangen Brustlin, Inc. (VHB), *Hampton Forest Stand Delineation and Forest Conservation Plan* (U.S. Department of the Interior, 1 May 2012).

30 GMP, 44.

31 LRIP, 11.

32 GMP, 43.

33 LRIP, 63.

34 Karen E. Day. *Preservation Tech Note, Site, Number 1: Restoring Vine Coverage to Historic Buildings* (NPS, Preservation Assistance Division, October 1991), p. 3.

35 Invoice, "Emmart & Quartley, Practical Sign, Decorative & Fresco Painters, Baltimore," 4 January 1882, Ridgely Papers, MS 1127, Box V, MdHi, as referenced in Brown, 38.

36 GMP, 44.

37 GMP, 44.

38 GMP, 44.

39 GMP, 44.

40 LRIP, 46.

41 GMP, 45.

42 GMP, 39.

43 LRIP, 64.

44 GMP, 45.

45 GMP, 84.

46 GMP, 84.

47 GMP, 44–5.

48 LRIP, 11.

49 GMP, 12.

50 GMP, 97.

51 LRIP, 62-3.

52 GMP, 43.

53 LRIP, 9.

54 GMP, 43.

55 GMP, 11.

56 Directional boring is a minimally invasive method that will help to preserve archeological resources present in the areas.

57 GMP, 20.

58 GMP, 43.

59 GMP,45.

60 GMP, 45.

61 LRIP, 15.

62 GMP, v.

63 GMP, 12, 43.

64 LRIP, 9.

65 GMP, 44.

66 GMP, 84.

67 LRIP, 9.

68 GMP, 84.

69 LRIP, 9.

70 GMP, 45.

71 GMP, 44–5. LRIP, 71.

72 LRIP, 71.

73 GMP, 43.

74 LRIP, 70.

75 GMP, 43.

76 LRIP, 70.

77 GMP, 43.

78 LRIP, 70.



Figure 4.1. Marble urn and Garden Maintenance Building from the Falling Gardens. View looking west, 2013 (OCLP).

4. Treatment Implementation

This chapter summarizes treatment tasks included in the preceding chapter, with the objective of translating recommendations into project funding requests through the National Park Service Facility Management Software System (FMSS). For descriptions of work, refer to treatment task narratives in the preceding chapter.

IMPLEMENTATION PRIORITIES

Treatment tasks from the preceding chapter are summarized the tables below and have been categorized into essential and desirable tasks. This prioritization recognizes that opportunities for collaboration, funding availability, interpretive and programmatic goals, project review and compliance, and other factors may impact implementation sequence. Beyond lumping into essential and desirable tasks, the order of tasks does not reflect priority.

Essential tasks are defined as those that:

- Address life-safety issues
- Address fundamental, character-defining features of the historic landscape
- Substantially improve universal access

Desirable tasks are defined as those that:

- Address features that, while contributing to the historic character of the landscape, are not character-defining
- Considerably enhance the visitor experience with new interpretive potential
- Improve the overall landscape condition with only minimal enhancements to the visitor experience

Table 4.1. Essential Landscape Treatment Tasks

Task ID	Task	Page	Related Tasks
Mansion Landscape			
Topography			
TP-1	Regrade the geothermal well field area to minimize construction impacts	62	CR-2, VG-5, SSF-2
Circulation			
CR-3	Resurface the Serpentine Walk to accommodate universal access	65	CR-4
CR-4	Construct a new universally accessible route to connect the East Terrace and East Pathway to the Serpentine Walk	67	CR-3
CR-5	Rehabilitate the cobblestone path and reestablish extensions to the Orangery and Garden Maintenance Building	68	CR-6, BS-3, SSF-3
CR-6	Construct a new universally accessible route from the new lower parking lot to Terrace 2 of the Falling Gardens	70	CR-5
CR-9	Construct a new pedestrian route from the Visitor Contact Station to the upper parking lot	74	CR-7, CR-8, VG-14, VG-18
CR-10	Construct a new pedestrian connection to the Hampton Lane crosswalk	75	SSF-5
Vegetation			
VG-1	Replace missing historic trees and existing historic trees in decline throughout the Mansion landscape	76	
VG-5	Reestablish missing Domestic Service Cluster hedges	85	TP-1, CR-2, BS-1, BS-2, SSF-2
VG-7	Reestablish potted trees on the Great Terrace	88	
VG-9	Replace missing paired eastern redcedars on the east and west sides of Terraces 1–4	91	VG-10, VG-11
VG-10	Rehabilitate missing vegetation in Parterre III and IV planting beds	92	VG-9, VG-11, SSF-1
VG-11	Reestablish Parterre V and VI planting beds	94	VH-9, VG-10, SSF-1
VG-12	Replace missing roses along the bluestone walk to Greenhouse #2	96	VG-15, BS-4
VG-13	Replace evergreen hedges along the west and east sides of the Falling Gardens	98	SSF-1
VG-14	Rehabilitate plantings to the northwest of the Orangery	100	CR-7, CR-8, CR-9
VG-15	Replace three missing rose beds on the North Lawn	101	VG-12
VG-16	Establish screen plantings along the east side of Stable Drive	103	SSF-6
VG-17	Replace white pine screen planting removed between the lower parking lot and Park Maintenance Buildings	104	
VG-18	Rehabilitate the West Orchard	105	CR-9, VG-4
VG-19	Replace existing arborvitaes at the Mansion gate	107	
Buildings and Structures			
BS-1	Reconstruct the Octagon Building	108	VG-5, BS-2, SSF-2
BS-2	Reconstruct the Summer Kitchen	109	VG-5, BS-1, SSF-2
BS-4	Restore Greenhouse #2	112	VG-12
Small-scale Features			
SSF-2	Replace missing wooden lattice and picket fences associated with the Domestic Service Cluster	115	TP-1, CR-2, VG-5, BS-1, BS-2, SSF-2
SSF-3	Restore cold frames to the east of the historic Garden Maintenance Building	117	CR-5
SSF-5	Replace missing post and board fences associated with Stable #2	119	
SSF-6	Bury utility lines along Hampton Lane and Stable Drive	120	CR-10, VG-16

Task ID	Task	Page	Related Tasks
Farm Landscape			
Circulation			
CR-11	Reestablish missing circulation patterns in the vicinity of the Long House Granary and Dairy	122	CR-10, SSF-7
CR-12	Establish new pedestrian route parallel to Farm Road	125	CR-10, CR-11, VG-21
CR-13	Construct a new universally accessible route to the eastern entrance to the Log Farm Structure	126	
Vegetation			
VG-20	Replace missing historic trees throughout the farm landscape	127	
VG-21	Reestablish field crops in the West Farm Field	129	CR-12
VG-23	Repair holes in screen planting along the perimeter of the farm parcel	131	VG-24
Buildings and Structures			
BS-5	Reconstruct the Corn Crib on the existing historic foundation	133	SSF-9
Small-scale Features			
SSF-7	Replace missing post and three board fences associated with the Dairy	135	CR-11, SSF-8, SSF-9, SSF-10
SSF-8	Replace missing picket, split rail, and post and wire fences in the vicinity of the Dairy stream	136	VG-24, SSF-7, SSF-9, SSF-10

Table 4.2. Desirable Landscape Treatment Tasks

Task ID	Task	Page	Related Tasks
Mansion Landscape			
Circulation			
CR-1	Reestablish missing pedestrian routes within the Ridgely Family Cemetery	63	VG-2
CR-2	Reestablish East Pathway extension in the geothermal well field area	65	TP-1, VG-5, SSF-2
CR-7	Realign the concrete walk to the Orangery	71	CR-9, VG-14
CR-8	Reconfigure the upper parking lot	72	CR-9, VG-14, SSF-4
Vegetation			
VG-2	Replace missing groundcover within the Ridgely family cemetery	78	CR-1
VG-3	Reestablish understory plantings in Cemetery Woods	79	SSF-1
VG-4	Rehabilitate the East Orchard	82	VG-18, SSF-1
VG-6	Reestablish wisteria on the south portico	87	
VG-8	Reestablish seasonal plantings in selected marble urns	90	
Buildings and Structures			
BS-3	Reconstruct the grapery	111	CR-5
Small-scale Features			
SSF-1	Install high-tensile steel wire deer fencing surrounding the Cemetery Woods, Great Terrace, and Falling Gardens	113	VG-3, VG-4, VG-10, VG-11, SSF-2
SSF-4	Remove existing concrete masonry unit tree wells	118	CR-8
Farm Landscape			
Vegetation			
VG-22	Establish new mowing patterns to reinforce historic circulation routes	130	CR-11, VG-24
VG-24	Remove volunteer trees from farm fields to the north of the Farm House Cluster	132	VG-22, SSF-8
Small-scale Features			
SSF-9	Replace the split rail fence along Farm Road with a four board fence and gate opposite the Corn Crib	138	BS-5, SSF-7, SSF-8, SSF-10
SSF-10	Replace missing split rail fence to the north of the Mule Barn	140	SSF-7, SSF-8, SSF-9

INTEGRATING TREATMENT RECOMMENDATIONS WITH FMSS

Hampton National Historic Site's cultural landscape is managed through the National Park Service Faculty Management Software System (FMSS). This system is structured to track costs associated with asset management, as well as asset condition. FMSS is also fundamental in generating funding requests for all rehabilitation, restoration, repair, and capital improvements projects through Project Management Information System (PMIS). Integration with FMSS is essential to implementation of the treatment recommendations in this report.

Physical features or "assets" of the cultural landscape are tracked in FMSS through a variety of "Asset Types," including roads, parking areas, maintained landscapes, buildings, outdoor sculptures, and maintained archeological sites. However, the majority of Hampton National Historic Site's landscape-related assets are tracked under the maintained landscape Asset Type.

Table 4.4 below summarizes the landscape treatment tasks included in this report according to FMSS Asset Type, Location, and asset as a first step in translating cultural landscape treatment recommendations into project funding requests. Quantities are provided to facilitate cost estimating. Additional professional services, such as design or construction oversight, may be required to implement treatment recommendations. Relevant FMSS work types and sub-types are summarized and defined in Table 4.3.

Table 4.3. Glossary of Relevant FMSS Work Types and Sub-types

Work Type/ Sub-type	Definition	Key
Facility Maintenance Work Type		
Facility Maintenance	Day-to-day activities, as well as the planned work required to preserve an asset in such a condition that it may be used for its designated purpose over its expected life cycle. Examples include routine replacement of HVAC filters, repairing a roof that was damaged in a storm, and building a ramp to meet accessibility laws.	FM
Relevant Facility Maintenance Sub-types		
Component Renewal	The planned replacement of a component or system that will reach the end of its useful life based on condition and life cycle analysis within the facility's lifetime.	CR
Demolition	Removal of an asset that has been determined to be unsafe or no longer meets mission goals. Removal of an NPS is determined by management in conjunction with NPS planning procedures.	DEM
Deferred Maintenance	Maintenance that was not performed when it should have been, or was scheduled and was put off or delayed. Continued deferment of maintenance will result in deficiencies.	DM
Legis. Mandate Accessibility	Deficiencies that must be corrected in response to regulatory requirements. These activities include retrofitting for accessibility.	LM
Preventative Maintenance	Regular scheduled periodic maintenance activities (within 1 year) on selected equipment.	PM

Work Type/ Sub-type	Definition	Key
Facility Operations Work Type		
Facility Operations	Work activities performed on a recurring basis related to the normal performance or function of an asset throughout the year which intends to meet daily operational needs and activities for which a facility or item of Installed Building equipment (IBE) is intended to be used. Typical work performed under operations includes janitorial and custodial services, snow removal, purchase of utilities (water, sewer, electricity), grounds keeping, waste management, etc.	FO
Relevant Facility Operations Sub-types		
Grounds Care	Official definition forthcoming from the FMSS Maintained Landscape Work Group, but likely to capture short-timed tasks performed in the landscape that are required to meet daily operational needs, such as sweeping, raking, and dead-heading.	GC
Capital Improvements Work Type		
Capital Improvements	Alterations or new construction that helps an asset better meet its intended purpose. Examples include paving an unpaved parking area and replacing portable restrooms with a permanent facility in a frequently visited area.	CI
Relevant Capital Improvements Sub-types		
New Construction	Construction that adds to the existing footprint of an asset, or creates a new asset.	NC

Table 4.4. Landscape Treatment Tasks and the Hampton National Historic Site FMSS Hierarchy

CLR Treatment Task/ FMSS Work Order	CLR Treatment Task Component/ FMSS Tasks	Units of Material	FMSS Asset Type/ Location/ Asset	FMSS Work Type/ Sub-type	Existing PMIS Project	Recurring Maintenance Needed
Mansion Landscape						
Topography						
TP-1. Regrade the geothermal well field area to minimize construction impacts	1. Remove existing loose aggregate surface by hand	7,150 SF	3100/ 27424	FM / DM	None	Overseed lawn
	2. Fine grade adjacent lawn by hand, and loam and seed	7,150 SF				
Circulation						
CR-1. Reestablish missing pedestrian circulation routes within the Ridgely Family Cemetery	1. Unearth or construct 6' wide brick pad around vault	1,215 SF	7100/ 27406	FM / DM	None	Resurface decomposed granite path
	2. Construct 12' wide decomposed granite path with filter fabric underlay from the cemetery gate to the vault	490 SF	3100/ 27424			
CR-2. Reestablish East Pathway extension in the geothermal well field area	Construct 5.5' wide peastone path extension with filter fabric underlay	550 SF	3100/ 27424/ 1063605	FM / DM	None	Resurface peastone path
CR-3. Resurface the Serpentine Walk to accommodate universal access	Apply aggregate binder resin on 4.5' wide path	5,200 SF	3100/ 27424/ 1063609	FM / LMAC	None	Reapply binder resin
CR-4. Construct a new universally accessible route to connect the East Terrace and East Pathway to the Serpentine Walk	1. Construct 3' wide stabilized aggregate path with filter fabric underlay	550 SF	3100/ 27424	FM / LMAC	None	Reapply binder resin
	2. Fine grade adjacent lawn by hand, and loam and seed	2,650 SF				
CR-5. Rehabilitate the cobblestone path and reestablish extensions to the Orangery and Garden Maintenance Building	1. Expose below grade path sections by gentle hand excavation	1,800 SF	3100/ 27424/ 1063595	FM / DM	None	Resweep joints with polymeric sand
	2. Clean entire 5.5' wide path surface to eliminate moss	3,800 SF				
	3. Sweep paver joints with polymeric sand	3,800 SF				

CLR Treatment Task/ FMSS Work Order	CLR Treatment Task Component/ FMSS Tasks	Units of Material	FMSS Asset Type/ Location/ Asset	FMSS Work Type/ Sub-type	Existing PMIS Project	Recurring Maintenance Needed
CR-6. Construct a new universally accessible route from the new lower parking lot to Terrace 2 of the Falling Gardens	1. Regrade an resurface a portion of the bituminous concrete entrance drive	1,700 SF	3100/ 27587	FM / LMAC	None	Overseed lawn, prune replacement lilacs
	2. Remove or relocate existing white lilacs (*Syringa* sp., 15a) to a temporary holding bed to accommodate construction	6 EA				
	3. Construct 5′ wide bituminous concrete walk along the southern edge of the entrance drive	1,700 SF				
	4. Install a 6″ curb along a portion of the new walk	45 LF				
	5. Fine grade adjacent lawn by hand, and loam and seed	4,000 SF				
	6. Replace white lilacs (*Syringa* sp.) in original locations, mulch below	6 EA				
CR-7. Realign the concrete walk to the Orangery	1. Remove existing concrete walk	320 SF	3100/ 27424	FM / LMAC	None	Overseed lawn
	2. Relocate fire hydrant	1 EA				
	3. Regrade area and construct replacement concrete walk	310 SF				
	4. Fine grade adjacent lawn by hand, and loam and seed	1,700 SF				
CR-8. Reconfigure the upper parking lot	1. Remove existing upper parking lot, medians, and concrete walks compete	17,300 SF	1300/ TBD	CI / NC or FM / CR	None	Overseed lawn
	2. Remove white ash (*Fraxinus americana*, 35m), flowering crabapple (*Malus* sp., 35m-1), and rhododendrons (*Rhododendron maximum*, 33m and 34m)	4 EA				
	3. Regrade and construct new bituminous concrete parking area with concrete curbing	9,040 SF				
	4. Construct new concrete walks to connect to existing	1,200 SF				
	5. Fine grade adjacent lawn, and loam and seed	17,500 SF				
	6. Replace white ash (*Fraxinus americana*), mulch below	1 EA				
CR-9. Construct a new pedestrian route from the Visitor Contact Station to the upper parking lot	1. Remove sugar maples (*Acer saccharum*, 45w and 47w)	2 EA	3100/ 27587	FM / LMAC	None	Overseed lawn, prune replacement trees
	2. Regrade and construct 5′ wide bituminous concrete walk	2,900 SF				
	3. Install stone risers to accommodate grade change	40 EA				
	4. Install 5′ length handrails on both sides each flight of stairs	20 EA				
	5. Replace sugar maples (*Acer saccharum*), mulch below	2 EA				
	6. Fine grade adjacent lawn, and loam and seed	8,750 SF				
CR-10. Construct a new pedestrian connection to the Hampton Lane crosswalk	1. Regrade and construct a 5′ wide mulched path with filter fabric underlay to connect to both sides of the crosswalk	1,500 SF	3100/ 27587/ 1159200	FM / LMAC	None	Overseed lawn, remulch path
	2. Fine grade adjacent lawn, and loam and seed	6,600 SF				

CLR Treatment Task/ FMSS Work Order	CLR Treatment Task Component/ FMSS Tasks	Units of Material	FMSS Asset Type/ Location/ Asset	FMSS Work Type/ Sub-type	Existing PMIS Project	Recurring Maintenance Needed
Vegetation						
VG-1. Replace missing historic trees and existing historic trees in decline throughout the Mansion landscape	1. Plant deciduous trees (refer to Appendix A: Vegetation Inventory), mulch below	97 EA	Various	FM / DM	177808	Prune replacement trees
	2. Plant evergreen trees (refer to Appendix A: Vegetation Inventory), mulch below	42 EA				
VG-2. Replace missing groundcover within the Ridgely Family Cemetery	Plant lesser periwinkle (Vinca minor) groundcover throughout the cemetery, mulch below	7,100 SF	3100/ 27424	FM / DM	None	Hand weed regularly
VG-3. Establish understory plantings in Cemetery Woods	1. Remove invasive species, including Norway maple (*Acer platanoides)*	130,000 SF project area	3100/ 27587	FM / DM	None	Maintain deer fence and prune replacement woody vegetation
	2. Install 12′ high, high-tensile steel wire mesh fencing with gates					
	3. Plant understory trees, shrubs and herbaceous vegetation throughout Cemetery Woods (refer to treatment task for suitable species)					
VG-4. Rehabilitate the East Orchard	Plant apple trees (*Malus* sp.) in a square pattern 20′ on center (refer to treatment task for suitable species), mulch below	27 EA	3100/ 27587	FM / DM	None	Prune replacement trees
VG-5. Reestablish Domestic Service Cluster hedges	1. Remove existing Canadian hemlock (*Tsuga canadensis*) tree hedge around the East Terrace	17 EA	3100/ 27424 and 27587	FM / DM	None	Shear hedges as needed to maintain at 6–8′ height
	2. Regrade geothermal well field area consistent with Task TP-1.	7,150 SF				
	3. Plant upright Japanese plum yew (*Cephalotaxus harringtonia* 'Fastigiata') hedges at 5′ on center, mulch below	123 EA				
VG-6. Reestablish wisteria on the south portico	Construct removable trellis system on south portico	1 LS	3100/ 27424	FM / DM	None	Train wisteria on new trellis structure, prune as needed
VG-7. Reestablish potted trees on the Great Terrace	1. Reconstruct wooden boxes based on historic design	8 EA	3100/ 27424	FM / DM	None	Prune replacement trees and over-winter trees indoors
	2. Plant each box with one citrus tree	8 EA				
VG-8. Reestablish seasonal plantings in selected marble urns	Purchase appropriately sized liner pots for marble urns and plant with annuals seasonally	24 EA	3100/ 27424/ 1063626	FM / DM	None	Replace annuals seasonally
VG-9. Replace missing paired eastern redcedars on the east and west sides of Terraces 1–4	Plant eastern redcedars (*Juniperus virginiana*) on Terraces 1–4, mulch below	16 EA	3100/ 27424	FM / DM	None	Prune replacement trees
VG-10. Rehabilitate missing vegetation in Parterre III and IV planting beds	1. Install irrigation system	1 EA	3100/ 27424/ 1063668	FM / DM	151332 and 20599	Prune woody vegetation, hand weed regularly, mulch
	2. Plant beds with low flowering shrubs and perennials (refer to treatment task for suitable species)	7,115 SF				
	3. Mulch planting beds	7,115 SF				

CLR Treatment Task/ FMSS Work Order	CLR Treatment Task Component/ FMSS Tasks	Units of Material	FMSS Asset Type/ Location/ Asset	FMSS Work Type/ Sub-type	Existing PMIS Project	Recurring Maintenance Needed
VG-11. Reestablish Parterre V and VI planting beds	1. Plant perimeter beds with transplanted peonies (*Paeonia* sp.), flowering quinces (*Chaenomeles speciosa*), and lilacs (*Syringa vulgaris*)	±128 EA peonies 2 EA flowering quinces 25 EA lilacs	3100/ 27424/ 1063670	FM / DM	None	Prune woody vegetation, hand weed regularly, mulch
	2. Propagate and replace weeping pagoda (*Sophora japonica* 'Pendula', 80g) trees at the center of Parterres V and VI	2 EA				
	3. Mulch perimeter planting beds	3,425 SF				
	4. Apply loose aggregate with filter fabric underlay on inner beds	5,065 SF				
VG-12. Replace missing roses along the bluestone walk to Greenhouse #2	Plant roses along the eastern end of the walk 6' on center (refer to treatment task for suitable varieties), mulch below	12 EA	3100/ 27424	FM / DM	None	Prune woody vegetation, hand weed regularly, mulch
VG-13. Replace evergreen hedges along the west and east sides of the Falling Gardens	Plan upright Japanese plum yew (*Cephalotaxus harringtonia* 'Fastigiata') hedges at 5' on center, mulch below	122 EA	3100/ 27424	FM / DM	None	Shear hedges as needed to maintain at 8' height
VG-14. Rehabilitate plantings to the northwest of the Orangery	1. Remove existing non-historic trees, shrubs, and herbaceous vegetation (refer to treatment task for specific removals)	17 EA	3100/ 27424	FM / DM	None	Prune woody vegetation, hand weed regularly, mulch
	2. Plant replacement trees (refer to treatment task for recommended species), mulch below	5 EA				
	3. Fine grade adjacent lawn, and loam and seed	5,900 SF				
VG-15. Replace three missing rose beds on the North Lawn	1. Define circular planting beds and plant with roses (*Rosa* sp., refer to treatment task for suitable species)	2,670 SF	3100/ 27424	FM / DM	None	Prune woody vegetation, hand weed regularly, mulch
	2. Mulch planting beds	2,670 SF				
VG-16. Establish screen planting along the east side of Stable Drive	1. Remove non-contributing vegetation from the property boundary	1 LS	3100/ 27587	FM / DM	None	Prune trees
	2. Plant low flowering trees and low branched evergreen trees, mulch below (refer to treatment task for suitable species)	±25 EA				
VG-17. Replace white pine screen planting removed between the lower parking lot and Park Maintenance Buildings	1. Plant native trees species, including white pines (*Pinus strobus*)	±36 EA	3100/ 27587	FM / DM	189262	Prune woody vegetation, mulch
	2. Plant native shrubs species	±36 EA				
VG-18. Rehabilitate the West Orchard	Plant apple trees (*Malus* sp.) in a square pattern 20' on center (refer to treatment task for suitable species), mulch below	36 EA	3100/ 27587	FM / DM	189262	Prune replacement trees
VG-19. Replace existing arborvitaes at the Mansion gates	1. Remove existing overgrown American arborvitaes (*Thuja occidentalis*)	9 EA	3100/ 27403/ 1063588	FM / CR	None	Prune replacement trees
	2. Plant Steeplechase arborvitae (*Thuja* x 'Steeplechase'), mulch below	10 EA				

CLR Treatment Task/ FMSS Work Order	CLR Treatment Task Component/ FMSS Tasks	Units of Material	FMSS Asset Type/ Location/ Asset	FMSS Work Type/ Sub-type	Existing PMIS Project	Recurring Maintenance Needed
Buildings and Structures						
BS-1. Reconstruct the Octagon Building	1. Complete historic structure report and/or archeological investigation	1 LS	7200/ 87719 or 4100/ TBD	CI / NC	None	TBD
	2. Develop design and construction documents, complete compliance and construction	1 LS				
BS-2. Reconstruct the Summer Kitchen	1. Complete historic structure report	1 LS	3100/ 27424 or TBD	FM / CR or FM / DM	None	TBD
	2. Develop design and construction documents, complete compliance and construction	1 LS				
BS-3. Reconstruct the grapery	1. Complete additional documentary research to inform reconstruction	1 LS	3100/ 27424 or TBD	FM / CR or FM / DM	None	Prune grape vines
	2. Develop design and construction documents, complete compliance and construction	1 LS				
	3. Plant structure with grape vines (refer to treatment tasks for suitable species)	4 EA				
BS.4 Restore Greenhouse #2	1. Complete additional documentary research to inform restoration	1 LS	4100/ 27395	FM / DM	152609	TBD
	2. Develop design and construction documents, complete compliance and construction	1 LS				
Small-scale Features						
SSF-1. Install high-tensile steel wire mesh deer fencing surrounding the Cemetery Woods, Great Terrace, and Falling Gardens	Install 12′ high, high-tensile steel wire mesh fencing with gates	2,075–3,005 LF	3100/ 27424	FM / PM	None	Monitor for holes, repair
SSF-2. Replace missing wooden lattice and picket fences associated with the Domestic Service Cluster	Install 4–5′ high wooden lattice fence along the north, south, and east sides of the East Terrace	155 LF	3100/ 27424	FM / DM	None	Paint fences, prune vines
	Install 3–4′ high wooden picket fence parallel to the north side of the 1910 Garage	35 LF				
	Install 6′ high wooden lattice fence extending from between Privy #1 and the Paint House into the geothermal well field	55 LF				
	Plant the 6′ high wooden lattice fence with climbing vines (refer to treatment task for suitable species)	5 EA				
SSF-3. Restore cold frames to the east of the historic Garden Maintenance Building	1. Excavate and repoint existing cold frame foundations	2 EA	3100/ 27587	FM / DM	None	Repair as needed
	2. Design, construct, and install replacement cold frame sashes to cover foundations	170 SF				
SSF-4. Remove existing concrete masonry unit tree wells	1. Remove trees as needed	3 EA	3100/ 27587	FM / DM	None	Prune replacement trees
	2. Remove CMU tree wells	3 EA				
SSF-5. Replace missing post and board fences associated with Stable #2	Construct wooden post and board fences	785 LF	3100/ 27587	FM / DM	171885	Repair as needed

CLR Treatment Task/ FMSS Work Order	CLR Treatment Task Component/ FMSS Tasks	Units of Material	FMSS Asset Type/ Location/ Asset	FMSS Work Type/ Sub-type	Existing PMIS Project	Recurring Maintenance Needed
SSF-6. Bury utility lines along Hampton Lane and Stable Drive	1. Bury utility lines along Hampton Lane	900–2,300 LF	5400/ TBD	CI / NC	152653	Overseed lawn
	2. Bury utility lines along Stable Drive	930 LF				
	3. Fine grade lawn, and loam and seed	TBD				
Farm Landscape						
Circulation						
CR-11. Reestablish missing circulation patterns in the vicinity of the Long House Granary and Dairy	1. Construct 6' wide loose aggregate paths with filter fabric underlay	3,700 SF	1100/ 107558	FM / DM	None	Overseed lawn, resurface loose aggregate paths
	2. Construct 6' wide bridge over the Diary stream	15 LF				
	3. Fine grade adjacent lawn by hand, and loam and seed	±3,700 SF				
CR-12. Establish new pedestrian route parallel to Farm Road	1. Regrade and construct a 5' wide compacted aggregate path with filter fabric underlay	2,880 SF	3100/ TBD	CI / NC	None	Resurface paths
	2. Fine grade adjacent lawn, and loam and seed	±4,000 SF				
CR-13. Construct a new universally accessible route to the eastern entrance to the Log Farm Structure	1. Construct low wood retaining wall and wooden handrail.	30 LF	4100/ 27416	FM / LMAC	None	Resurface path
	2. Construct a new dense graded loose aggregate walk surfaced with well compacted stonedust	100 SF				
Vegetation						
VG-20. Replace missing historic trees throughout the farm landscape	Plant deciduous trees (refer to Appendix A: Vegetation Inventory), mulch below	17 EA	3100/ 27587	FM / DM	177808	Prune replacement trees
VG-21. Reestablish field crops in the West Farm Field	Plant corn	±47,000 SF	3100/ 27587	FM / DM	None	Harvest and shock corn annually
VG-22. Establish new mowing patterns to reinforce historic circulation routes	n/a	n/a	3100/ 27587	FO / GC	None	Mow regularly, refer to general treatment recs. for suggested schedule
VG-23. Repair holes in screen planting along the perimeter of the farm parcel	Plant evergreen and deciduous trees (refer to treatment task for suitable species)	±13 EA	3100/ 27587	FM / DM	None	Prune replacement trees
VG-24. Remove volunteer trees from farm fields to the north of the Farm House Cluster	Remove volunteer trees and saplings	±70, SF	3100/ 27587	FM / DM	None	Mow regularly and continue invasive species management
Buildings and Structures						
BS-5. Reconstruct the Corn Crib on the existing historic foundation	1. Complete additional documentary research to inform reconstruction	1 LS	7200/ 27414 or 4100/ TBD	CI / NC	152654	TBD
	2. Develop design and construction documents, complete compliance and construction	1 LS				
Small-scale Features						
SSF-7. Replace missing post and three board fences associated with the Dairy	Construct post and three board fences	150 LF	3100/ 27587	FM / DM	171885	Repair as needed

CLR Treatment Task/ FMSS Work Order	CLR Treatment Task Component/ FMSS Tasks	Units of Material	FMSS Asset Type/ Location/ Asset	FMSS Work Type/ Sub-type	Existing PMIS Project	Recurring Maintenance Needed
SSF-8. Replace missing picket, split rail, and post and wire fences in the vicinity of the Dairy stream	1. Construct wooden picket fence	590 LF	3100/ 27587	FM / DM	171885	Repair as needed
	2. Construct post and wire fence	100 LF				
	3. Construct split rail fence (two rails)	60 LF				
	4. Construct split rail fence (four rails)	215 LF				
	5. Construct rustic rail fence	400 LF				
	6. Construct turn style in split rail fence (two rails)	1 EA				
SSF-9. Replace the split rail fence along Farm Road with a four board fence and gate opposite the Corn Crib	1. Remove existing split rail fence	675 LF	3100/ 27587/ 1063574	FM / DM	None	Repair as needed
	2. Construct four board fence	675 LF				
	3. Construct wooden gate opposite Corn Crib	1 EA				
SSF-10. Replace missing split rail fences to the north of the Mule Barn	Construct split rail fences	143 LF	3100/ 27587	FM / DM	171885	Repair as needed

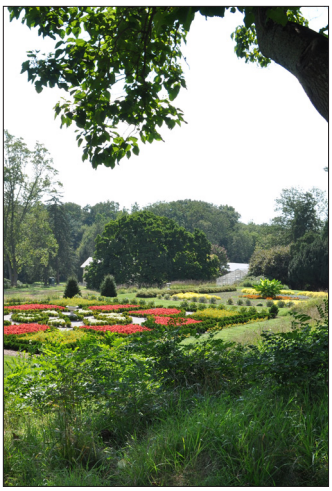


Figure 5.1. Falling Gardens from the edge of the Great Terrace. View looking southwest, 2013 (OCLP).

5. RECORD OF TREATMENT

Since completion of the draft *Cultural Landscape Report for Hampton National Historic Site, Volume II: Treatment Plan, Overall Landscape and Parterre Gardens* in 2006, the park has undertaken a number of landscape improvement projects. This chapter documents treatment work for the historic record and future reference.

Each narrative outlines the issues that warranted treatment and describes as-built physical work. This description is supported by plans, sections, elevations, and details that were developed as part of the treatment. This chapter is organized into two headings, which document treatment in the Falling Gardens and treatment of woody vegetation park wide, respectively.

Implementing treatment recommendations required that the park comply with Section 106 of the National Historic Preservation Act. This act requires federal agencies to review undertakings that affect properties listed or eligible for listing on the National Register of Historic Places. Compliance with Section 106 is documented by the National Park Service Planning, Environment, and Public Comment System (PEPC). The documentation included in this system provided the foundation for this chapter.

FALLING GARDENS

The two upper terraces of the Falling Gardens were rehabilitated to reflect their historic, Ridgely era configuration in 2009–10, with replacement planting beds defined in the turf panels that characterize the Falling Gardens (Figure 5.2). The two parterres on Terrace 1 were also replanted to reflect their circa 1867 planting schemes. The two parterres on Terrace 2 await replanting.

PARTERRES I & II

In 2009, Parterres I and II of the Falling Gardens were cleared of overgrown and non-historic vegetation. Boxwoods (*Buxus sempervirens*) were removed by a local nursery and eight eastern redcedars at the corners of the parterres were removed, with stumps ground to eight inches below grade. Marble urns were left in place and protected with plywood enclosures during demolition.

The Olmsted Center for Landscape Preservation worked with the park to develop a scope of work, class C cost estimates, and specifications. The Olmsted Center



Figure 5.2. Parterre I in its first year after replanting. The recently defined beds of Parterre II are visible to the right, with the Terrace 2 beds being prepared for delineation beyond. View looking southwest, 2009 (OCLP).

also documented existing conditions, and prepared layout plans and woody vegetation planting plans for Parterres I and II based on measured drawings of the original parterres and documentation included in the 95% draft *Cultural Landscape Report for Hampton National Historic Site, Vol. II: Treatment Plan* (May 2006) and *Vol. III: Formal Garden Planting Plans* (October 2008). These plans, which reflect as-built conditions, are included at the end of this chapter. Original Falling Gardens rehabilitation phase one project scoping included a design/build contract for an automatic irrigation system. However, this component of the project was not implemented and irrigation or spigots remain a need.

Parterre I planting beds and paths were defined in 2009 with Ryerson steel edging and loose aggregate paths. Parterre II beds were defined with Ryerson steel edging. Parterres I and II were replanted in spring 2009 based on woody vegetation planting plans and the recommendations of *Cultural Landscape Report for Hampton National Historic Site, Vol. III: Formal Garden Planting Plans* (October 2008). Within Parterre I, beds were defined with low boxwood (*Buxus sempervirens* 'Justin Brouwers') edging and interior beds were planted alternatively with solid red and white geraniums (*Pelargonium* x *hortorum*), while perimeter beds were planted with white canna (*Canna* x *generalis*, east bed), white lantana (*Lantana camara*, north and south beds), pink peony (*Paeonia lactiflora*, west bed), and white tree peony (*Paeonia suffruticosa*, center of two east beds). A potted agave (*Agave* sp.) was added to the center of the parterre until a replica urn was purchased (Figures 5.3 and 5.4).

Within Parterre II, interior beds were planted with red, green, and yellow coleus (*Coelus* x *hybridus*), while perimeter beds were planted with white canna (*Canna* x *generalis*, west bed), pink Japanese spirea (*Spiraea japonica*, north and south



Figure 5.3. Parterre I from the Great Terrace prior to rehabilitation. Boxwood edging was significantly overgrown and a non-historic apple (*Malus halliana*) tree grew at the center of the parterre. The 1949, non-historic Alden Hopkins design for Parterre III is visible beyond. View looking south, 2008 (OCLP).



Figure 5.4. Parterre I four years after rehabilitation showing replacement boxwood (*Buxus* x 'Justin Brouwers') edging and annual herbaceous planting. The redefined beds of Parterre III are visible beyond, but remain unplanted. View looking south, 2013 (OCLP).

beds), pink peony (*Paeonia lactiflora*, east bed), and white tree peony (*Paeonia suffruticosa*, center of two west beds. An Abyssinian banana (*Ensete ventricosum*) was planted at the center of the parterre and replaced with a Japanese hardy banana (*Musa basjoo*) after 2009. Annuals in all beds have been replaced each spring since the initial replanting in 2009 with slight modifications in planting composition to deter deer browse and minimize maintenance requirements (Figures 5.5 and 5.6). For documentation of annual planting by year since rehabilitation in 2009, refer to Table 5.1.



Figure 5.5. Parterre II from the Great Terrace prior to rehabilitation. Non-historic boxwood edging lined the beds and a non-historic tree grew at the center of the parterre, which was laid out to reflect a non-historic, 1949 design by Alden Hopkins. View looking south, 2008 (OCLP).



Figure 5.6. Parterre II three years after rehabilitation showing replacement spirea and peonies, as well as annual herbaceous plantings. The redefined beds of Parterre IV are visible beyond, but remain unplanted, View looking southwest, 2012 (OCLP).

Table 5.1. Record of Rehabilitation Plantings of Annuals in Parterres I and II

Quantity	Scientific Name	Common Name	Flower Color
2009			
Parterre I			
396	*Pelargonium* x *hortum*	geranium	red
696	*Pelargonium* x *hortum*	geranium	white
376	*Lantana camara*	lantana	white
93	*Canna* x 'Ermine'	canna	white
Parterre II			
292	*Coleus* x *hybridus*	coleus	yellow
530	*Coleus* x *hybridus*	coleus	red
297	*Coleus* x *hybridus*	coleus	green
80	*Canna* x *'Ermine'*	canna	white
1	*Ensete ventricosum*	Abyssinian banana	n/a

Quantity	Scientific Name	Common Name	Flower Color
2010			
Parterre I			
396	*Pelargonium* x *hortum*	geranium	white
696	*Pelargonium* x *hortum*	geranium	red
376	*Lantana camara*	lantana	yellow
93	*Canna* x 'Ermine'	canna	white
Parterre II			
292	*Coleus* x *hybridus*	coleus	yellow
530	*Coleus* x *hybridus*	coleus	red
297	*Coleus* x *hybridus*	coleus	green
80	*Canna* x 'Ermine'	canna	white
1	*Musa basjoo*	Japanese hardy banana	n/a
2011			
Parterre I			
396	*Pelargonium* x *hortum*	geranium	red
696	*Pelargonium* x *hortum*	geranium	white
376	*Lantana camara*	lantana	yellow
93	*Canna* x 'Ermine'	canna	white
Parterre II			
292	*Coleus* x *hybridus*	coleus	yellow
530	*Coleus* x *hybridus*	coleus	red
297	*Coleus* x *hybridus*	coleus	green
30	*Canna* x 'Ermine'	canna	white
2012			
Parterre I			
212	*Lantana camara* 'Dallas Red'	lantana	red
387	*Lantana camara* 'New Snow White'	lantana	white
88	*Lantana camara* 'New Gold'	lantana	yellow
30	*Canna* x 'Ermine'	canna	white
Parterre II			
90	*Lantana camara* 'New Snow White'	lantana	white
1314	*Ageratum houstonianum* 'Blue Puffs'	floss flower	blue/purple
216	*Artemisia schmidtiana* 'Silver Mound'	dusty miller	n/a, silver foliage
18	*Lantana camara* 'Miss Huff'	lantana	orange and pink
18	*Lantana camara* 'Radiation'	lantana	red, yellow, and orange
30	*Canna* x 'Ermine'	canna	white
2013			
Parterre I			
264	*Lantana camara* 'New Gold'	lantana	yellow
1,240	*Begonia semperflorens* 'Cocktail Vodka'	begonia	red with bronze leaf
56	*Begonia semperflorens* 'Super Olympia'	begonia	white with green leaf
30	*Canna* x 'Ermine'	canna	white

Quantity	Scientific Name	Common Name	Flower Color
Parterre II			
226	*Coleus* 'Life Lime'	coleus	chartreuse foliage
251	*Petunia* x 'Blue Wave'	petunia	purple
40	*Helichrysum thianschanicum* 'Icicles'	licorice plant	silver foliage
158	*Tagetes patula* 'Janie Deep Orange'	marigold	orange
30	*Canna* x 'Ermine'	canna	white
2014			
Parterre I			
672	*Begonia semperflorens* 'Super Olympia'	begonia	white
700	*Begonia* 'Whopper Series'	begonia	red with bronze leaf
176	*Lantana camara* 'New Snow White'	lantana	white
30	*Canna* x 'Ermine'	canna	white
Parterre II			
1,000	*Ageratum houstonianum* 'Blue Hawaii 5.0'	floss flower	blue/purple
576	*Angelonia angustifolia* 'Blue Serena'	summer snapdragon	purple
256	*Alyssum* spp.	alyssum	white
30	*Canna* x 'Ermine'	canna	white

PARTERRES III & IV

In 2009, Parterre III and IV of the Falling Gardens were cleared of overgrown and non-historic vegetation. The ground plane was leveled, fine graded, and hydroseeded using the Delmarva seed mix. In 2010, Parterre III and IV beds were defined with metal edging based on their historic configurations and mulched. These planting beds have not been planted due to limits of maintenance. However, planting plans have been developed (refer to Appendix B) and beds are prepared for planting as resources permit. This planting composition might appropriately be modified to deter deer browse if replanting is completed prior to installation of deer fencing (refer to Task VG-10).

NORWAY SPRUCE ALLÉE

Norway spruces (*Picea abies*) that historically lined the central axis of the Falling Gardens were overgrown by the end of the period of significance in 1948 and removed between the 1950s and 1970s consistent with the Alden Hopkins designed conjectural "restoration" of the Falling Gardens. Along with rehabilitation of the two upper terraces of the Falling Gardens, Norway spruces were replanted along the central axis in 2010 (Figures 5.7 and 5.8).



Figure 5.7. View along the central axis of the Falling Gardens prior to rehabilitation of the gardens in 2009–10. The original Norway spruces that lined the walk were missing. View looking south, 2008 (OCLP).



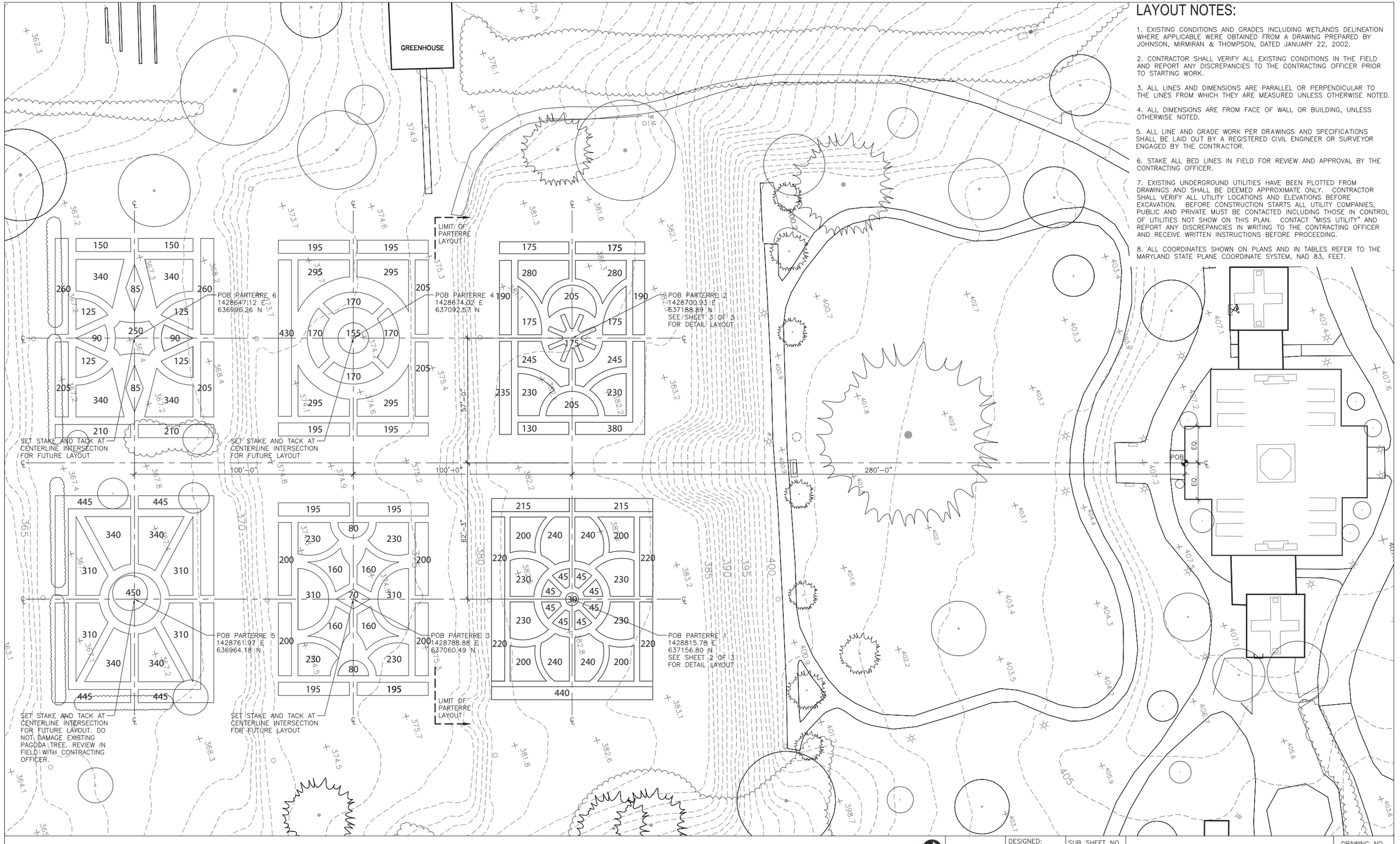
Figure 5.8. View along the central axis of the Falling Gardens three years after rehabilitation. Six replacement Norway spruces line the central walk, Terrace 1 beds are fully rehabilitated and Terrace 2 beds are defined based on their historic configuration, but not planted. View looking south, 2012 (OCLP).

Because Norway spruces will mature at a large size and will shade out the Falling Gardens as they mature, a schedule of removal and replacement is needed to effectively manage the character of this landscape feature. Trees are recommended for wholesale removal and replacement in-kind when existing replacement trees reach twenty feet diameter in canopy width.

Paired eastern redcedars that were removed from the east and west sides of the parterres during garden rehabilitation in 2009–10 were not replaced. However, replacement is recommended to reinforce the balance and symmetry of the Falling Gardens (refer to Task VG-9).

PARK-WIDE WOODY VEGETATION

Management of Hampton National Historic Site's woody vegetation has been ongoing since the park was established in 1948. This work has been accomplished by both in-house horticulture and gardening staff, with the Olmsted Center for Landscape Preservation's arborist training team, and contracted to independent arborists. Documentation of this management work is included in the *Cultural Landscape Report for Hampton National Historic Site Volume I A*ppendix E: Vegetation Inventory under the "preservation maintenance completed" heading. Park cultural resources staff also maintains detailed documentation of contracted maintenance work, including contracts, scopes of work, and notes on improvements, as-implemented.



LAYOUT NOTES:

1. EXISTING CONDITIONS AND GRADES INCLUDING WETLANDS DELINEATION WHERE APPLICABLE WERE OBTAINED FROM A DRAWING PREPARED BY JOHNSON, MIRMIRAN & THOMPSON, DATED JANUARY 22, 2002.

2. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE CONTRACTING OFFICER PRIOR TO STARTING WORK.

3. ALL LINES AND DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED UNLESS OTHERWISE NOTED.

4. ALL DIMENSIONS ARE FROM FACE OF WALL OR BUILDING, UNLESS OTHERWISE NOTED.

5. ALL LINE AND GRADE WORK PER DRAWINGS AND SPECIFICATIONS SHALL BE LAID OUT BY A REGISTERED CIVIL ENGINEER OR SURVEYOR ENGAGED BY THE CONTRACTOR.

6. STAKE ALL BED LINES IN FIELD FOR REVIEW AND APPROVAL BY THE CONTRACTING OFFICER.

7. EXISTING UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM DRAWINGS AND SHALL BE DEEMED APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS AND ELEVATIONS BEFORE EXCAVATION. BEFORE CONSTRUCTION STARTS ALL UTILITY COMPANIES, PUBLIC AND PRIVATE MUST BE CONTACTED INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOW ON THIS PLAN. CONTACT "MISS UTILITY" AND REPORT ANY DISCREPANCIES IN WRITING TO THE CONTRACTING OFFICER AND RECEIVE WRITTEN INSTRUCTIONS BEFORE PROCEEDING.

8. ALL COORDINATES SHOWN ON PLANS AND IN TABLES REFER TO THE MARYLAND STATE PLANE COORDINATE SYSTEM, NAD 83, FEET.

SCALE: 1"=20'-0"

OLMSTED CENTER for Landscape Preservation

DESIGNED:	CS
CAD:	TL
TECH. REVIEW:	
DATE:	MARCH 2009

SUB SHEET NO.

LAYOUT PLAN

PARTERRE GARDEN REHABILITATION

HAMPTON NATIONAL HISTORIC SITE

DRAWING NO.

PKG. NO. HAMP

SHEET 1 OF 3

LAYOUT NOTES:

1. EXISTING CONDITIONS AND GRADES INCLUDING WETLANDS DELINEATION WHERE APPLICABLE WERE OBTAINED FROM A DRAWING PREPARED BY JOHNSON, MIRMIRAN & THOMPSON, DATED JANUARY 22, 2002.

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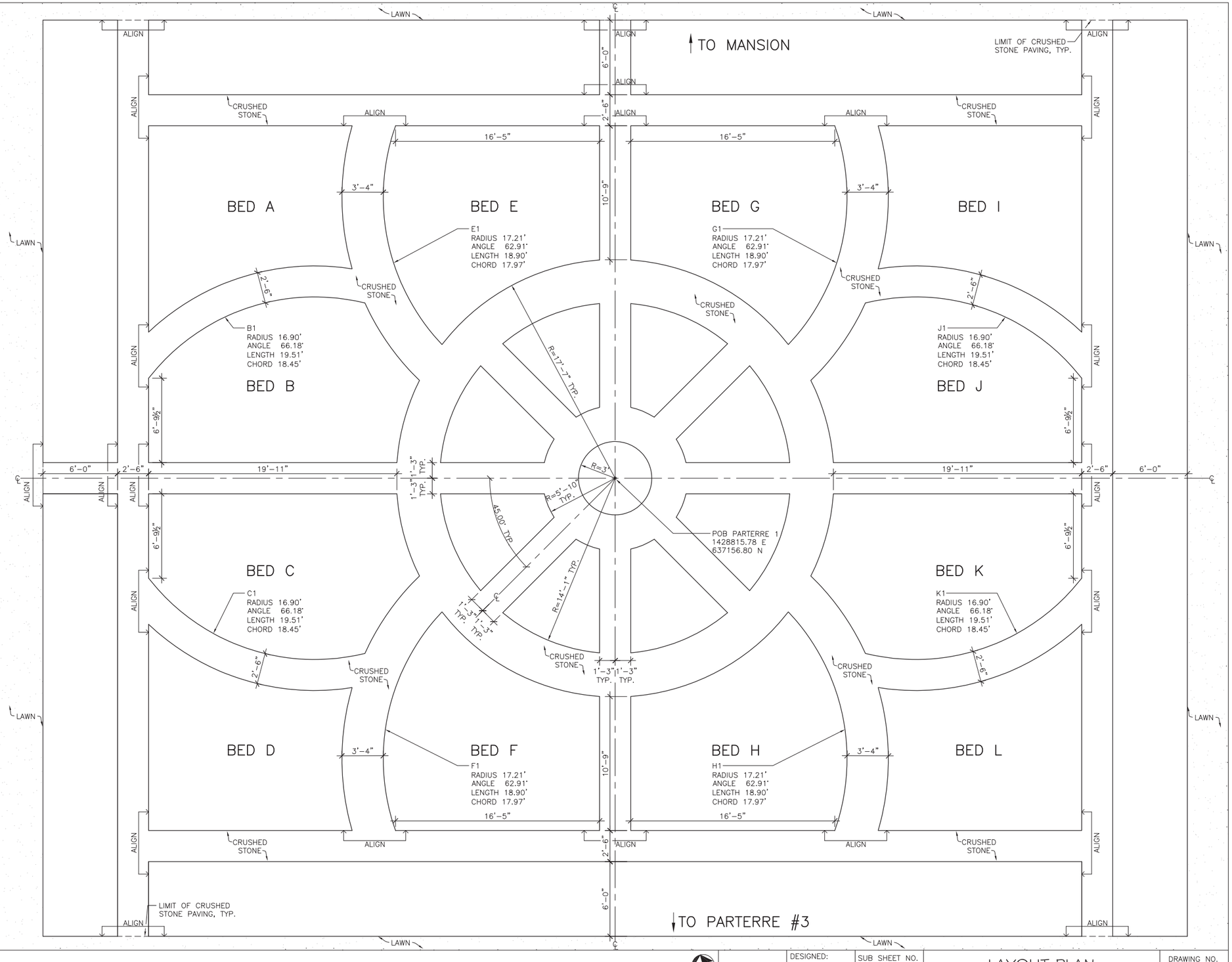
6. STAKE ALL BED LINES IN FIELD FOR REVIEW AND APPROVAL BY THE CONTRACTING OFFICER.

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8. ALL COORDINATES SHOWN ON PLANS AND IN TABLES REFER TO THE MARYLAND STATE PLANE COORDINATE SYSTEM, NAD 83, FEET.

CURVE DATA

NAME	RADIUS	ANGLE	LENGTH	CHORD
B1	16.90'	66.18°	19.51'	18.45'
C1	16.90'	66.18°	19.51'	18.45'
E1	17.21'	62.91°	18.90'	17.97'
F1	17.21'	62.91°	18.90'	17.97'
G1	17.21'	62.91°	18.90'	17.97'
H1	17.21'	62.91°	18.90'	17.97'
J1	16.90'	66.18°	19.51'	18.45'
K1	16.90'	66.18°	19.51'	18.45'



SCALE: ¼"=1'-0"

OLMSTED CENTER for Landscape Preservation

DESIGNED:	CS
CAD:	TL
TECH. REVIEW:	
DATE:	MARCH 2009

SUB SHEET NO.

LAYOUT PLAN
PARTERRE #1

PARTERRE GARDEN REHABILITATION

HAMPTON NATIONAL HISTORIC SITE

DRAWING NO.

PKG. NO. HAMP

SHEET 2 OF 3

LAYOUT NOTES:

1. EXISTING CONDITIONS AND GRADES INCLUDING WETLANDS DELINEATION WHERE APPLICABLE WERE OBTAINED FROM A DRAWING PREPARED BY JOHNSON, MIRMIRAN & THOMPSON, DATED JANUARY 22, 2002.

2. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE CONTRACTING OFFICER PRIOR TO STARTING WORK.

3. ALL LINES AND DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED UNLESS OTHERWISE NOTED.

4. ALL DIMENSIONS ARE FROM FACE OF WALL OR BUILDING, UNLESS OTHERWISE NOTED.

5. ALL LINE AND GRADE WORK PER DRAWINGS AND SPECIFICATIONS SHALL BE LAID OUT BY A REGISTERED CIVIL ENGINEER OR SURVEYOR ENGAGED BY THE CONTRACTOR.

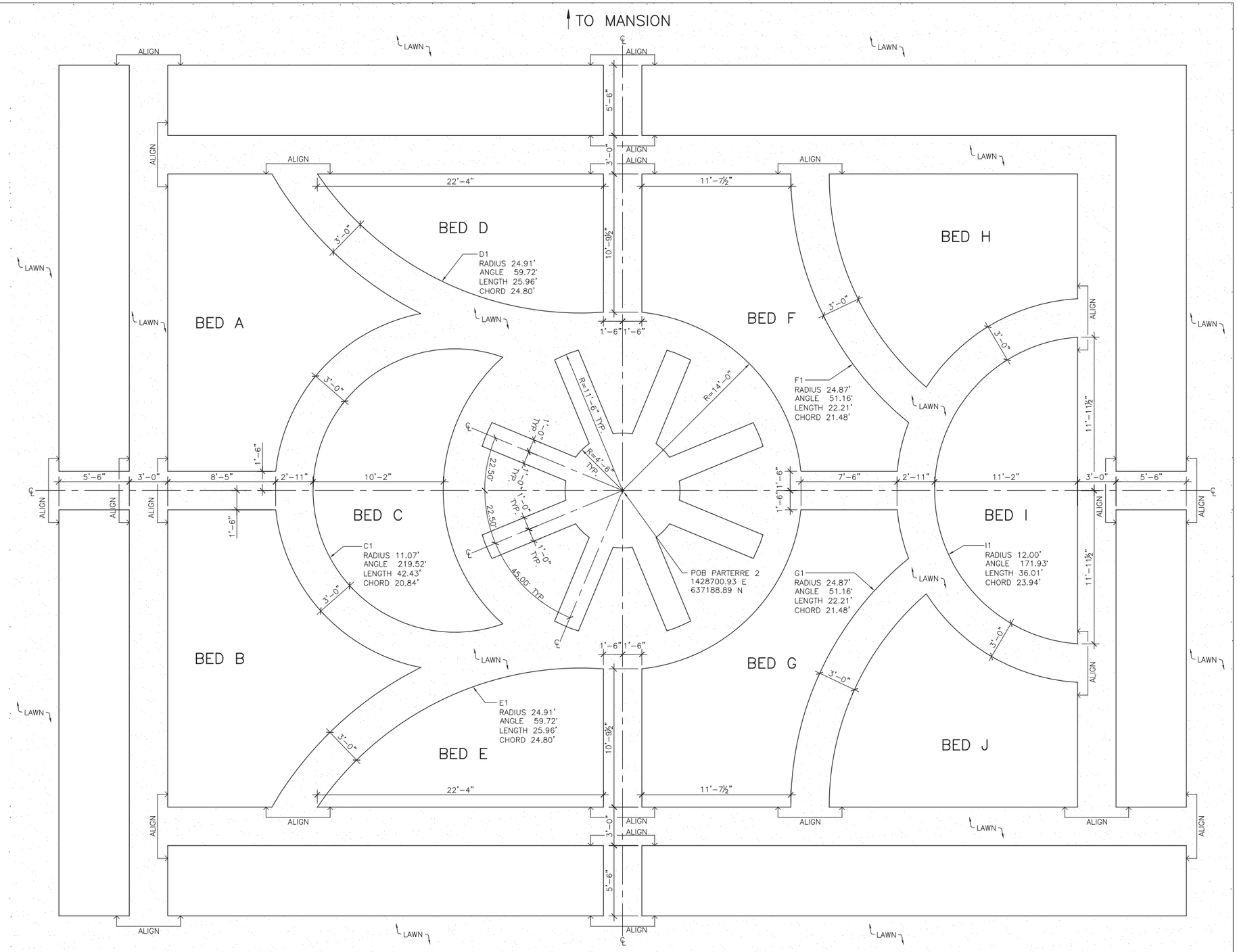
6. STAKE ALL BED LINES IN FIELD FOR REVIEW AND APPROVAL BY THE CONTRACTING OFFICER.

7. EXISTING UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM DRAWINGS AND SHALL BE DEEMED APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS AND ELEVATIONS BEFORE EXCAVATION. BEFORE CONSTRUCTION STARTS ALL UTILITY COMPANIES, PUBLIC AND PRIVATE MUST BE CONTACTED INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOW ON THIS PLAN. CONTACT "MISS UTILITY" AND REPORT ANY DISCREPANCIES IN WRITING TO THE CONTRACTING OFFICER AND RECEIVE WRITTEN INSTRUCTIONS BEFORE PROCEEDING.

8. ALL COORDINATES SHOWN ON PLANS AND IN TABLES REFER TO THE MARYLAND STATE PLANE COORDINATE SYSTEM, NAD 83, FEET.

CURVE DATA

NAME	RADIUS	ANGLE	LENGTH	CHORD
C1	11.07'	219.52'	42.43'	20.84'
D1	24.91'	59.72'	25.96'	24.80'
E1	24.91'	59.72'	25.96'	24.80'
F1	24.87'	51.16'	22.21'	21.48'
G1	24.87'	51.16'	22.21'	21.48'
I1	12.00'	171.93'	36.01'	23.94'



SCALE: ¼"=1'-0"

OLMSTED CENTER for Landscape Preservation

DESIGNED:	CS
CAD:	TL
TECH. REVIEW:	
DATE:	MARCH 2009

SUB SHEET NO.

LAYOUT PLAN
PARTERRE #2

PARTERRE GARDEN REHABILITATION

HAMPTON NATIONAL HISTORIC SITE

DRAWING NO.

PKG. NO. HAMP

SHEET 3 OF 3

GREENHOUSE

102'-0"

10'-0"

6'-0"

2 PA

2 PS

1 BS

SEE SHEET 2 OF 2 FOR DETAIL
PLANTING AT PARTERRE #1

POB

EQ.

PLANTING NOTES:

1. EXISTING CONDITIONS AND GRADES INCLUDING WETLANDS DELINEATION WHERE APPLICABLE WERE OBTAINED FROM A DRAWING PREPARED BY JOHNSON, MIRMIRAN & THOMPSON, DATED JANUARY 22, 2002.

2. ALL NEW PLANT MATERIAL SHALL CONFORM TO THE MINIMUM GUIDELINES ESTABLISHED FOR NURSERY STOCK PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.

3. THE CONTRACTOR SHALL SUPPLY ALL NEW PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE DRAWINGS.

4. THE CONTRACTOR SHALL STAKE THE LOCATIONS OF ALL PROPOSED PLANTING FOR APPROVAL BY THE CONTRACTING OFFICER PRIOR TO THE COMMENCEMENT OF PLANTING.

5. ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES SHALL BE MADE WITH PLANTS OF EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER, LEAF, COLOR, FRUIT, AND CULTURE ONLY AS APPROVED BY THE CONTRACTING OFFICER.

6. IN THE EVENT THAT QUANTITY DISCREPANCIES OR MATERIAL OMISSIONS OCCUR BETWEEN THE PLANT MATERIALS LIST AND THE DRAWINGS, THE HIGHER NUMBER OF PLANTS SHALL GOVERN. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE CONTRACTING OFFICER.

7. CONTRACTOR SHALL SEED ALL EXISTING LAWN AREAS DISTURBED BY CONSTRUCTION NOT OTHERWISE DESIGNATED FOR TREATMENT.

PLANT SCHEDULE

EVERGREEN TREES

SYMBOL	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENTS
PA	6	*Picea abies*	Norway Spruce	12'–14' HT.	AS SHOWN	B&B

EVERGREEN SHRUBS

SYMBOL	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENTS
BS	2	*Buxus sempervirens*	Boxwood	3'–4' HT.	AS SHOWN	B&B
BSS	1253LF	*Buxus sempervirens 'Suffruticosa'*	Dwarf Boxwood	1 QT.	8" O.C. MAX.	CONTAINER; DENSE HEDGE FULL TO BASE

DECIDUOUS SHRUBS

SYMBOL	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENTS
PS	4	*Paeonia suffruticosa*	Tree Peony	#3	AS SHOWN	CONTAINER; WHITE SINGLE FLOWER

SCALE: 1"=20'–0"

OLMSTED CENTER for Landscape Preservation

DESIGNED: CS
CAD: TL
TECH. REVIEW:
DATE: MARCH 2009

SUB SHEET NO.

PLANTING PLAN

PARTERRE GARDEN REHABILITATION

HAMPTON NATIONAL HISTORIC SITE

DRAWING NO.

PKG. NO. HAMP

SHEET 1 OF 2

PLANTING NOTES:

1. EXISTING CONDITIONS AND GRADES INCLUDING WETLANDS DELINEATION WHERE APPLICABLE WERE OBTAINED FROM A DRAWING PREPARED BY JOHNSON, MIRMIRAN & THOMPSON, DATED JANUARY 22, 2002.

2. ALL NEW PLANT MATERIAL SHALL CONFORM TO THE MINIMUM GUIDELINES ESTABLISHED FOR NURSERY STOCK PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.

3. THE CONTRACTOR SHALL SUPPLY ALL NEW PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE DRAWINGS.

4. THE CONTRACTOR SHALL STAKE THE LOCATIONS OF ALL PROPOSED PLANTING FOR APPROVAL BY THE CONTRACTING OFFICER PRIOR TO THE COMMENCEMENT OF PLANTING.

5. ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES SHALL BE MADE WITH PLANTS OF EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER, LEAF, COLOR, FRUIT, AND CULTURE ONLY AS APPROVED BY THE CONTRACTING OFFICER.

6. IN THE EVENT THAT QUANTITY DISCREPANCIES OR MATERIAL OMISSIONS OCCUR BETWEEN THE PLANT MATERIALS LIST AND THE DRAWINGS, THE HIGHER NUMBER OF PLANTS SHALL GOVERN. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE CONTRACTING OFFICER.

7. CONTRACTOR SHALL SEED ALL EXISTING LAWN AREAS DISTURBED BY CONSTRUCTION NOT OTHERWISE DESIGNATED FOR TREATMENT.

PLANT SCHEDULE

EVERGREEN TREES

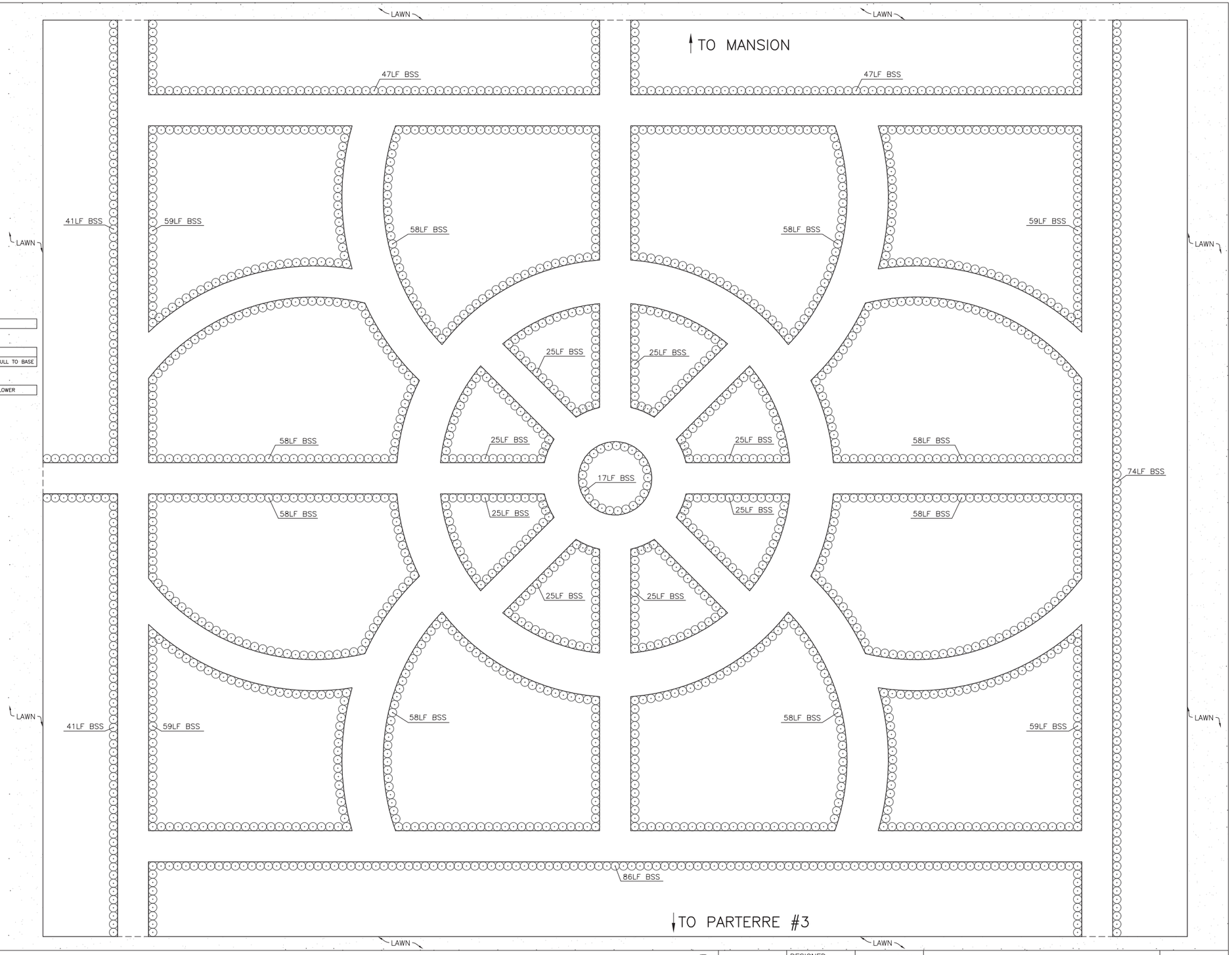
SYMBOL	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENTS
PA	6	*Picea abies*	Norway Spruce	12'–14' HT.	AS SHOWN	B&B

EVERGREEN SHRUBS

SYMBOL	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENTS
BS	2	*Buxus sempervirens*	Boxwood	3'–4' HT.	AS SHOWN	B&B
BSS	1253LF	*Buxus sempervirens 'Suffruticosa'*	Dwarf Boxwood	1 QT.	8" O.C. MAX.	CONTAINER; DENSE HEDGE FULL TO BASE

DECIDUOUS SHRUBS

SYMBOL	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENTS
PS	4	*Paeonia suffruticosa*	Tree Peony	#3	AS SHOWN	CONTAINER; WHITE SINGLE FLOWER



SCALE: ¼"=1'–0"

OLMSTED CENTER for Landscape Preservation

DESIGNED: CS
CAD: TL
TECH. REVIEW:
DATE: MARCH 2009

SUB SHEET NO.

PLANTING PLAN
PARTERRE #1

PARTERRE GARDEN REHABILITATION

HAMPTON NATIONAL HISTORIC SITE

DRAWING NO.

PKG. NO. HAMP

SHEET 2 OF 2

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APPENDIX A. VEGETATION INVENTORY

The following table documents woody vegetation throughout Hampton National Historic Site. This vegetation inventory is revised and updated from an earlier inventory developed by the National Park Service, Philadelphia Support Office between 1993 and 1998. Like its predecessor, this updated inventory provides only a snapshot of existing conditions at Hampton National Historic Site in 2013. An editable version of this table, provided in Microsoft Excel format, will allow for revisions as conditions change. This inventory serves as a companion to the existing conditions drawings included in *Cultural Landscape Report for Hampton National Historic Site, Volume I: Site History, Existing Conditions, Analysis & Evaluation*, as well as to the general treatment recommendations and specific treatment tasks in this report.

The vegetation inventory is organized by landscape character area, beginning at the southeast corner of the park. Each specimen is identified by a number ID, name ID (first three letters of the genus and the first two letters of the species), a scientific (botanical) name, and common name. "Origin" refers to the source of the plant material, including whether it is an original planting, propagule, same-species replacement, substitute species, or missing. "Evaluation" refers to the historic landscape evaluation of each specimen (contributing, non-contributing, or unevaluated; for definitions of these terms, refer to *Cultural Landscape Report for Hampton National Historic Site, Volume I,* Analysis and Evaluation chapter).

"Preservation maintenance needed" documents current needs to preserve the plant specimens and historic character of the landscape. Finally, "replacement strategy" outlines a long-term approach for perpetuating Hampton National Historic Site's woody vegetation based on the origin and evaluation of each specimen, as well as location-specific considerations. As general treatment recommendations relate to perpetuating historic vegetation, long-term replacement strategies identified in the following table include:

- **Propagate** for original historic plantings (see note below) and for previously propagated historic plantings
- **Replace in-kind** for historic replacement plantings that were not propagated previously (see note below) and for compatible contemporary plantings, as necessary

- **Do not replace** for incompatible contemporary plantings and for missing historic specimens for which replanting is not feasible due to contemporary use considerations
- **Remove** for incompatible contemporary plantings

Note: Some historic replacement plantings may require species substitution due to contemporary pest and disease concerns. These instances should be assessed on a case-by-case basis and limited to extreme cases, such as Dutch elm disease. According to the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* for preservation, "new material[s] will match the old in composition, design, color, and texture."[1] As it relates to vegetation, this means matching the size, form, texture, and seasonal character of original historic plantings, including bloom time and color, fruit, and fall foliage.[2]

Endnotes

1 Charles A. Birnbaum and Christine Capella Peters, eds., *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* (Washington, D.C.: U.S. Department of the Interior, 1996), 19.

2 Lauren Meier and Nora Mitchell, "Principles for Preserving Historic Plant Material" *Preservation Technology Update* 6 (1990), 20.

Numeric ID	Name ID	Scientific Name	Common Name	Origin	Evaluation	Preservation Maintenance Needed	Replacement Strategy
Cemetery							
01c	Sas al	*Sassafras albidum*	common sassafras	Missing	Contributing	Replace	Replace in-kind
02c	Bux se	*Buxus sempervirens* 'Suffruticosa'	dwarf English boxwood	Substitute species	Contributing		Replace in-kind
02c-1	Bux se	*Buxus sempervirens* 'Suffruticosa'	dwarf English boxwood	Substitute species	Contributing		Replace in-kind
03c	Bux se	*Buxus sempervirens* 'Suffruticosa'	dwarf English boxwood	Substitute species	Contributing		Replace in-kind
03c-1	Bux se	*Buxus sempervirens* 'Suffruticosa'	dwarf English boxwood	Missing	Contributing	Replace	Replace in-kind
04c	Bux se	*Buxus sempervirens* 'Suffruticosa'	dwarf English boxwood	Missing	Contributing	Replace	Replace in-kind
05c	Bux se	*Buxus sempervirens* 'Suffruticosa'	dwarf English boxwood	Missing	Contributing	Replace	Replace in-kind
06c	Tax cu	*Taxus cuspidata*	Japanese yew	Original	Contributing	Light prune and remove deadwood	Propagate
07c	Tax cu	*Taxus cuspidata*	Japanese yew	Original	Contributing	Light prune and remove deadwood	Propagate
07c-1	Lir tu	*Liriodendron tulipifera*	tulip poplar	Original	Unevaluated		Propagate
07c-2	Pru sp.	*Prunus* sp.	cherry	Original	Unevaluated		Propagate
07c-3	Lir tu	*Liriodendron tulipifera*	tulip poplar	Original	Unevaluated		Propagate
07c-4	Llr tu	*Liriodendron tulipifera*	tulip poplar	Original	Unevaluated		Propagate
07c-5	Lin be	*Lindera benzoin*	spicebush	Original	Unevaluated		Propagate
07c-6	Ile op	*Ilex opaca*	American holly	Original	Unevaluated		Propagate
07c-7	Ile op	*Ilex opaca*	American holly	Original	Unevaluated		Propagate
07c-8	Ile op	*Ilex opaca*	American holly	Original	Unevaluated		Propagate
07c-9	Ile op	*Ilex opaca*	American holly	Original	Unevaluated		Propagate
07c-10	Ile op	*Ilex opaca*	American holly	Original	Unevaluated		Propagate
07c-11	Ile op	*Ilex opaca*	American holly	Original	Unevaluated		Propagate
07c-12	Ile op	*Ilex opaca*	American holly	Original	Unevaluated		Propagate
08c	Gin bi	*Ginkgo biloba*	maidenhair tree	Original	Contributing	Light prune	Propagate
08c-1	un-known	unidentified	unidentified	Missing	Unevaluated		TBD
08c-2	Sas al	*Sassafras albidum*	common sassafras	Original	Unevaluated		Propagate
08c-3	Fra sp.	*Fraxinus* sp.	ash	Original	Unevaluated		Propagate
08c-4	Pru se	*Prunus serotina*	black cherry	Missing	Unevaluated		Propagate
08c-5	Cor fl	*Cornus florida*	flowering dogwood	Original	Unevaluated		Propagate
09c	Lir tu	*Liriodendron tulipifera*	tulip poplar	Missing	Contributing	Replace	Replace in-kind
10c	Ace sa	*Acer saccharum*	sugar maple	Original	Contributing	Medium prune	Propagate
11c	Pic ab	*Picea abies*	Norway spruce	Original	Contributing		Propagate
12c	Ace sa	*Acer saccharum*	sugar maple	Original	Contributing	Medium prune; consider cable for low limb	Propagate
13c	Ace sa	*Acer saccharum*	sugar maple	Original	Contributing		Propagate
14c	Lir tu	*Liriodendron tulipifera*	tulip poplar	Same species replacement	Contributing		Replace in-kind

Numeric ID	Name ID	Scientific Name	Common Name	Origin	Evaluation	Preservation Maintenance Needed	Replacement Strategy
15c	Ace sa	*Acer saccharum*	sugar maple	Missing	Contributing		Replace in-kind
16c	Pic ab	*Picea abies*	Norway spruce	Missing	Contributing	Replace	Replace in-kind
17c	Cat bi	*Catalpa bignonioides*	southern catalpa	Missing	Contributing	Replace	Replace in-kind
18c	Lir tu	*Liriodendron tulipifera*	tulip poplar	Missing	Contributing	Replace	Replace in-kind
19c	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Medium prune and remove deadwood; consider cables	Propagate
20c	Pic ab	*Picea abies*	Norway spruce	Original	Contributing	Remove vines in crown	Propagate
21c	Pic ab	*Picea abies*	Norway spruce	Original	Contributing	Medium prune	Propagate
22c	Lir tu	*Liriodendron tulipifera*	tulip poplar	Missing	Contributing	Replace	Replace in-kind
22c-1	Pic ab	*Picea abies*	Norway spruce	Original	Contributing		Propagate
23c	Lir tu	*Liriodendron tulipifera*	tulip poplar	Same species replacement	Contributing		Replace in-kind
24c	Lir tu	*Liriodendron tulipifera*	tulip poplar	Original	Contributing	Remove poison ivy	Propagate
25c	Lir tu	*Liriodendron tulipifera*	tulip poplar	Missing	Contributing	Replace	Replace in-kind
Garden & East Orchard							
000g			missing orchards	Missing	Contributing		Supplement as necessary
001g	Ced li	*Cedrus libani*	cedar of Lebanon	Original	Contributing	Light prune	Propagate
002g	Ile op	*Ilex opaca*	American holly	Original	Contributing	Light prune; removed decaying trunk	Propagate
003g	Cat bi	*Catalpa bignonioides*	southern catalpa	Original	Contributing		Propagate
004g	Cat bi	*Catalpa bignonioides*	southern catalpa	Original	Contributing	Light prune	Propagate
005g	Mag gr	*Magnolia grandiflora*	southern magnolia	Missing	Non-contributing		Do not replace
006g	Ced de	*Cedrus deodara*	Himalayan cedar	Original	Contributing	Light prune	Propagate
007g	Jug ni	*Juglans nigra*	black walnut	Original	Contributing		Propagate
008g	Jun vi	*Juniperus virginiana*	eastern redcedar	Same species replacement	Contributing		Replace in-kind
009g	Jun vi	*Juniperus virginiana*	eastern redcedar	Same species replacement	Contributing	Remove deadwood	Replace in-kind
010g	Jun vi	*Juniperus virginiana*	eastern redcedar	Same species replacement	Contributing	Remove deadwood	Replace in-kind
011g	Jun vi	*Juniperus virginiana*	eastern redcedar	Missing	Contributing	Replace	Replace in-kind
012g	Jun vi	*Juniperus virginiana*	eastern redcedar	Same species replacement	Contributing		Replace in-kind
013g	Jun vi	*Juniperus virginiana*	eastern redcedar	Same species replacement	Contributing		Replace in-kind
014g	Jun vi	*Juniperus virginiana*	eastern redcedar	Same species replacement	Contributing	Remove Englih ivy and deadwood	Replace in-kind

Numeric ID	Name ID	Scientific Name	Common Name	Origin	Evaluation	Preservation Maintenance Needed	Replacement Strategy
015g	Jun vi	*Juniperus virginiana*	eastern redcedar	Same species replacement	Contributing	Light prune	Replace in-kind
016g	Mag vi	*Magnolia virginiana*	sweetbay magnolia	Missing	Non-contributing		Do not replace
017g	Cry ja	*Cryptomeria japonica*	Japanese cedar	Original	Contributing	Medium prune; remove deadwood	Propagate
018g	Pau to	*Paulownia tomentosa*	princess tree	Original	Contributing	Medium prune; plan to replace	Propagate
019g	Tsu ca	*Tsuga canadensis*	Canadian hemlock	Same species replacement	Contributing	Consider replacement	Replace in-kind
020g	Ile op	*Ilex opaca*	American holly	Original	Non-contributing	Monitor condition	Do not replace
021g	Syr sp.	*Syringa* sp.	lilac	Original	Contributing	Confirm species; thin; continue treating bores	Propagate
022g	Cat bi	*Catalpa bignonioides*	southern catalpa	Same species replacement	Contributing		Replace in-kind
023g	Cat bi	*Catalpa bignonioides*	southern catalpa	Missing	Contributing	Replace	Replace in-kind
024g	Jug ni	*Juglans nigra*	black walnut	Original	Contributing	Light prune; remove limb over magnolia	Propagate
025g	Mag gr	*Magnolia grandiflora*	southern magnolia	Original	Non-contributing	Light prune	Do not replace
026g	Pau to	*Paulownia tomentosa*	princess tree	Original	Contributing	Medium prune	Propagate
027g	Ace pl	*Acer platanoides*	Norway maple 'Schwedleri'	Substitute species	Contributing		Replace in-kind
028g	Ace pl	*Acer platanoides*	Norway maple	Missing	Contributing		Do not replace
029g			cutting garden	Missing	Unevaluated	Evaluate this garden, along with the kitchen garden	Do not replace
030g	Rob ps	*Robinia pseudoacacia*	black locust	Missing	Contributing	Replace	Replace in-kind
031g	Rob ps	*Robinia pseudoacacia*	black locust	Missing	Contributing	Replace	Replace in-kind
032g	Jug ni	*Juglans nigra*	black walnut	Original	Contributing	Light prune	Propagate
033g	Rob ps	*Robinia pseudoacacia*	black locust	Missing	Contributing	Replace	Replace in-kind
034g	Rob ps	*Robinia pseudoacacia*	black locust	Original	Contributing		Propagate
035g	Mor al	*Morus alba*	white mulberry	Original	Contributing	Confirm ID; stabilize with medium pruning	Propagate
036g	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Remove deadwood in crown	Propagate
037g	Fra am	*Fraxinus americana*	white ash	Original	Contributing		Propagate
038g	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Remove poison ivy	Propagate
039g	Fra am	*Fraxinus americana*	white ash	Original	Contributing		Propagate
040g	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Medium prune	Propagate
041g	Fra sp.	*Fraxinus* sp.	ash	Missing	Non-contributing		Do not replace
042g	Mor al	*Morus alba*	white mulberry	Missing	Contributing	Replace	Replace in-kind
043g	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Medium prune	Propagate
044g	Pru se	*Prunus serotina*	black cherry	Original	Contributing	Medium prune; remove ivy	Propagate

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045g	Pru se	*Prunus serotina*	black cherry	Original	Non-contributing		Do not replace
046g	Pru se	*Prunus serotina*	black cherry	Original	Non-contributing	Medium prune	Do not replace
047g	Pru se	*Prunus serotina*	black cherry	Original	Non-contributing	Medium prune; remove grape	Do not replace
048g	Ail al	*Ailanthus altissima*	tree-of-heaven	Missing	Non-contributing		Do not replace
049g	Ail al	*Ailanthus altissima*	tree-of-heaven	Missing	Non-contributing		Do not replace
050g	Ail al	*Ailanthus altissima*	tree-of-heaven	Original	Non-contributing		Do not replace
051g			meadow grass	Original	Contributing		Supplement as necessary
052g	Pyr sp.	*Pyrus* sp.	pear	Missing	Contributing	Replace	Replace in-kind
053g	Mor sp.	*Morus* sp.	mulberry	Original	Contributing	Confirm species; remove deadwood; remove ivy	Propagate
054g	Mor sp.	*Morus* sp.	mulberry	Missing	Contributing	Replace	Replace in-kind
055g	Que al	*Quercus alba*	white oak	Original	Contributing	Medium prune	Propagate
056g	Jug ni	*Juglans nigra*	black walnut	Original	Contributing	Medium prune; remove ivy	Propagate
057g	Jug ni	*Juglans nigra*	black walnut	Original	Contributing	Medium prune	Propagate
058g	Pic ab	*Picea abies*	Norway spruce	Original	Contributing		Propagate
059g	Mor sp.	*Morus* sp.	mulberry	Original	Contributing	Confirm species; medium prune; cable to stabilize trunk	Propagate
060g	Fra sp.	*Fraxinus* sp.	ash	Original	Contributing	Medium prune to improve light; insert thru rod	Propagate
061g	Fra am	*Fraxinus americana*	white ash	Missing	Non-contributing		Do not replace
062g	Mor al	*Morus alba*	white mulberry	Missing	Non-contributing		Do not replace
063g	Cep ha	*Cephalotaxus harringtonia* 'Fastigiata'	upright Japanese plum yew	Substitute species	Contributing		Supplement as necessary
064g	Cep ha	*Cephalotaxus harringtonia* 'Fastigiata'	upright Japanese plum yew	Substitute species	Contributing		Replace with substitute species
065g	Cep ha	*Cephalotaxus harringtonia* 'Fastigiata'	upright Japanese plum yew	Substitute species	Contributing		Replace with substitute species
066g	Thu oc	*Thuja occidentalis*	American arborvitae	Missing	Contributing		Replace with substitute species
067g	Thu oc	*Thuja occidentalis*	American arborvitae	Missing	Contributing		Replace with substitute species
068g	Thu oc	*Thuja occidentalis*	American arborvitae	Missing	Contributing		Replace with substitute species
069g	Thu oc	*Thuja occidentalis*	American arborvitae	Missing	Contributing		Replace with substitute species
070g	Ile op	*Ilex opaca* 'Miss Helen'	Miss Helen American holly (female)	Original	Contributing	Monitor and treat chlorotic leaf condition; remove wild grape and poison ivy	Propagate

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071g	Pla oc	*Platanus occidentalis*	American planetree	Original	Contributing	Remove vines; light prune	Propagate
072g			south woodland	Original	Contributing		Supplement as necessary
073g	Cas mo	*Castanea mollissima*	Chinese chestnut	Original	Contributing	Medium prune	Propagate
074g	Jun vi	*Juniperus virginiana*	eastern redcedar	Missing	Contributing	Replace	Replace in-kind
075g	Pae sp.	*Paeonia* sp.	peonies	Original	Contributing		Propagate
076g	Pae sp.	*Paeonia* sp.	peonies	Original	Contributing		Propagate
077g	Pae sp.	*Paeonia* sp.	peonies	Original	Contributing		Propagate
078g	Pae sp.	*Paeonia* sp.	peonies	Original	Contributing		Propagate
079g	Pae sp.	*Paeonia* sp.	peonies	Original	Contributing		Propagate
080g	Sop ja	*Sophora japonica* 'Pendula'	weeping scholar-tree	Original	Contributing	Propagate from cutting	Propagate
080g-1	Sop ja	*Sophora japonica* 'Pendula'	weeping scholar-tree	MIssing	Contributing	Replace	Replace in-kind
081g	Cha sp	*Chaenomeles* sp.	flowering quince	Original	Contributing	Remove wild grape and porcelain berry; confirm species; transplant to southwest corner of parterre	Propagate
081g-1	Pic ab	*Picea abies*	Norway spruce	Same species replacement	Contributing		Replace in-kind
082g	Bux se	*Buxus sempervirens*	English boxwood	Original	Contributing	Continue to treat for cankor, mites, and leaf psyllid	Propogate
082g-1	Pic ab	*Picea abies*	Norway spruce	Same species replacement	Contributing		Replace in-kind
083g	Pae sp.	*Paeonia* sp.	peonies	Original	Contributing		Propagate
084g	Syr vu	*Syringa vulgaris*	lilac (white)	Original	Contributing	Clear weeds; monitor for borers	Propagate
085g	Bux se	*Buxus sempervirens*	English boxwood	Original	Contributing	Continue to treat for cankor, mites, and leaf psyllid	Propagate
086g	Bux se	*Buxus sempervirens*	English boxwood	Original	Contributing	Continue to treat for cankor, mites, and leaf psyllid	Propagate
087g	Pae sp.	*Paeonia* sp.	peonies	Original	Contributing		Propagate
088g	Jun vi	*Juniperus virginiana*	eastern redcedar	Missing	Contributing	Replace	Replace in-kind
089g	Pic ab	*Picea abies*	Norway spruce	Original	Contributing	Remove English ivy; medium prune; remove deadwood	Propagate
090g	Pic ab	*Picea abies*	Norway spruce	Same species replacement	Contributing		Replace in-kind
091g	Mal sp.	*Malus* sp.	flowering crabapple	Original	Non-contributing	Medium prune	Do not replace
092g	Mal sp.	*Malus* sp.	flowering crabapple	Original	Non-contributing	Medium prune	Do not replace
093g	Pic ab	*Picea abies*	Norway spruce	Same species replacement	Contributing	Remove guy wires; monitor condition	Replace in-kind
094g	Pic ab	*Picea abies*	Norway spruce	Missing	Contributing	Replace	Replace in-kind
095g	Pin st	*Pinus strobus*	eastern white pine	Original	Contributing	Possibly treat ivy on trunk; medium prune	Replace in-kind
096g	Jun vi	*Juniperus virginiana*	eastern redcedar	Missing	Contributing	Replace	Replace in-kind
097g	Jun vi	*Juniperus virginiana*	eastern redcedar	Missing	Contributing	Replace	Replace in-kind

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097g-1	Pic ab	*Picea abies*	Norway spruce	Same species replacement	Contributing		Replace in-kind
098g	Mal ha	*Malus halliana* 'Parkmanii'	Parkman's flowering crabapple	Missing	Non-contributing		Do not replace
099g	Bux se	*Buxus sempervirens*	English boxwood	Same species replacement	Contributing		Replace in-kind
100g	Bux se	*Buxus sempervirens*	English boxwood	Same species replacement	Contributing		Replace in-kind
101g	Mal ha	*Malus halliana* 'Parkmanii'	Parkman's flowering crabapple	Missing	Non-contributing		Do not replace
102g	Jun vi	*Juniperus virginiana*	eastern redcedar	Missing	Contributing	Replace	Replace in-kind
103g	Mag gr	*Magnolia grandiflora*	southern magnolia	Original	Contributing	Medium prune	Propagate
104g	Tax ba	*Taxus baccata* 'Fastigiata'	Irish yew	Original	Contributing	Light prune	Propagate
105g	Jun vi	*Juniperus virginiana*	eastern redcedar	Missing	Contributing	Replace	Replace in-kind
105g-1	Pic ab	*Picea abies*	Norway spruce	Same species replacement	Contributing		Replace in-kind
106g	Jun vi	*Juniperus virginiana*	eastern redcedar	Missing	Contributing		Do not replace
107g	Jun vi	*Juniperus virginiana*	eastern redcedar	Missing	Contributing	Replace	Replace in-kind
108g	Bux se	*Buxus sempervirens*	English boxwood	Missing	Non-contributing		Do not replace
109g	Pic ab	*Picea abies*	Norway spruce	Same species replacement	Contributing		Replace in-kind
109g-1	Pic ab	*Picea abies*	Norway spruce	Same species replacement	Contributing		Replace in-kind
110g	Bux se	*Buxus sempervirens*	English boxwood	Missing	Contributing		Do not replace
111g	Jun vi	*Juniperus virginiana*	eastern redcedar	Missing	Contributing	Replace	Replace in-kind
112g	Jun vi	*Juniperus virginiana*	eastern redcedar	Missing	Contributing		Do not replace
113g			herbaceous annuals	Same species replacement	Contributing		Supplement as necessary
114g			grass walk and slopes	Original	Contributing		Supplement as necessary
Mansion & Domestic Service Cluster							
001m	Bux se	*Buxus sempervirens*	boxwood	Missing	Non-contributing		Do not replace
002m	Thu oc	*Thuja occidentalis*	American arborvitae (stump)	Missing	Non-contributing	Replace	Replace in-kind
003m	Mag vi	*Magnolia virginiana*	sweetbay magnolia	Original	Contributing	Light prune	Propagate
004m	Thu oc	*Thuja occidentalis*	American arborvitae	Original	Contributing		Propagate
005m	Thu oc	*Thuja occidentalis*	American arborvitae	Original	Contributing		Propagate
006m	Thu oc	*Thuja occidentalis*	American arborvitae	Same species replacement	Contributing		Replace in-kind

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007m	Thu oc	*Thuja occidentalis*	American arborvitae	Original	Contributing	1 stem needs removal; light prune	Propagate
008m	Thu oc	*Thuja occidentalis*	American arborvitae	Missing	Contributing	Replace	Replace in-kind
009m	Ace pa	*Acer palmatum* 'Tamukeyama'	Japanese maple 'Tamukeyama'	Original	Non-contributing		Do not replace
010m	Bux se	*Buxus sempervirens* 'Suffruticosa'	boxwood	Original	Non-contributing	Consider removal	Do not replace
011m	Bux se	*Buxus sempervirens* 'Suffruticosa'	boxwood	Original	Non-contributing	Treat spider mites and leaf psyllid; consider removal	Do not replace
012m	Fra bi	*Fraxinus biltmoriana*	Biltmore ash	Propagule	Contributing		Propagate
013m	Cor fl	*Cornus florida*	flowering dogwood	Missing	Non-contributing		Do not replace
014m	Thu oc	*Thuja occidentalis*	American arborvitae	MIssing	Non-contributing		Do not replace
015m	Car ca	*Carpinus caroliniana*	American hornbeam	Original	Contributing		Remove
016m	Gin bi	*Ginkgo biloba*	maidenhair tree (male)	Original	Contributing	Consider installing thru-rod	Propagate
017m	Chi vi	*Chionanthus virginicus*	white fringetree (male)	Original	Non-contributing	Light prune; remove deadwood	Do not replace
018m	Chi vi	*Davidia involucrata*	dove tree	Same species replacement	Non-contributing	Thin crown	Do note replace
019m	Mah be	*Mahonia bealei*	leatherleaf mahonia	Original	Unevaluated		Remove
020m	Bux se	*Buxus sempervirens*	boxwoods (multiple specimens)	Original	Unevaluated		Remove
021m	Euo bu	*Euonymus bungeanus*	winterberry euonymus	Original	Unevaluated		Remove
022m	Euo bu	*Euonymus bungeanus*	winterberry euonymus	Original	Unevaluated		Remove
023m	Euo bu	*Euonymus bungeanus*	winterberry euonymus	Original	Unevaluated		Remove
024m	Euo bu	*Euonymus bungeanus*	winterberry euonymus	Original	Unevaluated		Remove
025m	Vin sp.	*Vinca* sp.	periwinkle	Original	Unevaluated		Remove
026m	Bux se	*Buxus sempervirens*	boxwood	Original	Unevaluated		Remove
027m	Bux se	*Buxus sempervirens*	boxwood	Original	Unevaluated		Remove
028m	Bux se	*Buxus sempervirens*	boxwood	Original	Unevaluated		Remove
029m	Mag x	*Magnolia* x 'Vulcan'	Vulcan magnolia	Original	Non-contributing		Do not replace
030m	Mor al	*Morus alba* 'Pendula'	weeping mulberry	Missing	Non-contributing		Do not replace
031m	Til eu	*Tilia* x *euchlora*	Crimean linden	Same species replacement	Contributing		Replace in-kind
032m	Til eu	*Tilia* x *europaea*	European linden	Original	Contributing		Propagate
033m	Rho sp.	*Rhododendron* sp.	azalea	Original	Non-contributing	Deadhead; fertilize; provide regular irrigation	Do not replace
034m	Rho sp.	*Rhododendron* sp.	azalea	Original	Non-contributing	Deadhead; fertilize; provide regular irrigation	Do not replace
035m	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Light prune	Propagate

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035m-1	Mag x	*Magnolia* x 'Vulcan'	Vulcan magnolia	Substitute species	Non-contributing		Do not replace
036m	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Medium prune and remove lowest limb	Propagate
036m-1	Cot co	*Cotinus coggygria*	smokebush	Original	Non-contributing		Do not replace
037m	Pic ab	*Picea abies*	Norway spruce	Same species replacement	Contributing		Replace in-kind
038m	Pic ab	*Picea abies*	Nowray spruce	Original	Contributing		Propagate
039m	Pic ab	*Picea abies*	Norway spruce	Original	Contributing	Remove English ivy on trunk; medium prune	Propagate
040m	Pic ab	*Picea abies*	Norway spruce	Original	Contributing	Medium prune	Propagate
041m	Pic ab	*Picea abies*	Norway spruce	Original	Contributing		Propagate
042m	Pic ab	*Picea abies*	Norway spruce	Missing	Contributing		Do not replace
043m	Pic ab	*Picea abies*	Norway spruce	Original	Contributing		Propagate
044m	Pic ab	*Picea abies*	Norway spruce	Same species replacement	Contributing		Replace in-kind
045m	Pic ab	*Picea abies*	Norway spruce	Original	Contributing		Propagate
046m	Pic ab	*Picea abies*	Norway spruce	Same species replacement	Contributing	Medium prune	Propagate
047m	Thu oc	*Thuja occidentalis*	American arborvitae	Original	Contributing		Propagate
047m-1	Thu oc	*Thjua occidentalis*	American arborvitae	Missing	Contributing		Replace in-kind
048m	Gym di	*Gymnocladus dioicus*	Kentucky coffeetree	Original	Contributing		Propagate
049m	Gym di	*Gymnocladus dioicus*	Kentucky coffeetree	Original	Contributing		Propagate
050m	Cer ca	*Cercis canadensis*	redbud	Original	Contributing		Propagate
051m	Cor fl	*Cornus florida*	flowering dogwood	Original	Non-contributing		Do not replace
052m	Thu oc	*Thuja* 'Green Giant'	Green Giant arborvitae	Substitute species	Contributing		Replace in-kind
053m	Bux se	*Buxus sempervirens* 'Suffruticosa'	boxwood	Same species replacement	Non-contributing		Do not replace
054m	Bux se	*Buxus sempervirens* 'Suffruticosa'	boxwood	Missing	Non-contributing		Do not replace
055m	Gym di	*Gymnocladus dioicus*	Kentucky coffeetree	Missing	Contributing	Replace	Replace in-kind
056m	Jug ni	*Juglas nigra*	black walnut	Original	Contributing		Propagate
057m	Sop ja	*Sophora japonia* 'Pendula'	weeping scholar-tree	Original	Contributing		Propagate
058m	Ced li	*Cedrus libani*	cedar of Lebanon	Original	Contributing		Propagate
059m	Til eu	*Tilia* x *europaea*	European linden	Original	Contributing	Light prune; investigate treatment options	Propagate
060m	Bux se	*Buxus sempervirens*	boxwood	Missing	Non-contributing		Do not replace
061m	Bux se	*Buxus sempervirens*	boxwood	Missing	Non-contributing		Do not replace

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062m	Bux se	*Buxus sempervirens*	boxwood	Missing	Non-contributing		Do not replace
063m	Wis si	*Wisteria sinensis*	Chinese wisteria	Original	Contributing		Propagate
064m	Wis si	*Wisteria sinensis*	Chinese wisteria	Original	Contributing		Propagate
065m	Bux se	*Buxus sempervirens*	boxwood	Missing	Non-contributing		Do not replace
066m	Bux se	*Buxus sempervirens*	boxwood	Missing	Non-contributing		Do not replace
067m	Til sp.	*Tilia* sp.	linden	Original	Contributing	Thin crown; elevate over walk and light prune	Propagate
068m	Gin bi	*Ginkgo biloba*	maidenhair tree	Original	Contributing		Propagate
069m			herb garden	Original	Non-contributing		Do not replace
070m	Ste ps	*Stewartia pseudocamellia*	Japanese stewartia	Missing	Unevaluated		Do not replace
071m	Bux se	*Buxus sempervirens* 'Suffruticosa'	boxwood	Original	Non-contributing		Do not replace
072m	Pon tr	*Poncirus trifoliata*	bitter-orange	Missing	Non-contributing		Do not replace
073m	Ile op	*Ilex opaca*	American holly	Original	Contributing		Propagate
074m	Mag vi	*Magnolia virginiana*	sweetbay magnolia	Original	Unevaluated		Propagate
075m	Tax di	*Taxodium distichum*	common baldcypress	Original	Unevaluated		Propagate
076m	Fra sp.	*Fraxinus* sp.	ash	Original	Contributing		Propagate
077m	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Medium prune	Propagate
078m	Hib sy	*Hibiscus syriacus*	Rose-of-Sharon	Same species replacement	Unevaluated		Replace in-kind
079m	Ace pl	*Acer platanoides*	Norway maple	Missing	Contributing	Do not replace due to geothermal well field	Do not replace
080m	Fra am	*Fraxinus americana*	white ash	Missing	Unevaluated	Do not replace due to geothermal well field	Do not replace
081m	Ulm sp.	*Ulmus sp.*	elm	Missing	Contributing	Replace adjacent to Privy #1 due to geothermal well field	Replace in-kind
082m	Fra am	*Fraxinus americana*	white ash	Missing	Contributing	Do not replace due to geothermal well field	Do not replace
083m	Ulm sp.	*Ulmus* sp.	elm	Original	Contributing	Medium prune; monitor	Propagate
084m	Cor fl	*Cornus florida*	flowering dogwood	Original	Contributing		Propagate
085m	Fra am	*Fraxinus americana*	white ash	Original	Contributing		Propagate
086m	various	*Paeonia* sp., *Narcissus* sp., and *Amaryllis* sp.	peonies, daffodils, and naked ladies	Original	Non-contributing		Do not replace
087m	Cor fl	*Cornus florida*	flowering dogwood	Missing	Unevaluated		Do not replace
088m	Fra am	*Fraxinus americana*	white ash	Missing	Contributing	Replace	Replace in-kind
089m	Jug ni	*Juglas nigra*	black walnut	Missing	Contributing	Grind stump and replace	Replace in-kind
090m	Fra am	*Fraxinus americana*	white ash	Same species replacement	Contributing		Replace in-kind
091m	Ulm am	*Ulmus americana* 'Liberty'	American elm 'Liberty'	Substitute species	Contributing		Replace in-kind

Numeric ID	Name ID	Scientific Name	Common Name	Origin	Evaluation	Preservation Maintenance Needed	Replacement Strategy
092m	Fra am	*Fraxinus ameriana*	white ash	Original	Contributing	Remove minor deadwood and clear #96	Propagate
093m	Fra am	*Fraxinus americana*	white ash	Original	Contributing		Propagate
094m	Fra am	*Fraxinus americana*	white ash	Missing	Non-contributing		Do not replace
095m	Ulm am	*Ulmus americana*	American elm	Original	Contributing	Medium prune and elevate	Propagate
096m	Ulm am	*Ulmus americana* 'Liberty'	American elm 'Liberty'	Missing	Contributing	Replace	Replace in-kind
097m	Fra am	*Fraxinus americana*	white ash	Missing	Contributing	Replace	Replace in-kind
098m	Ace pl	*Acer platanoides*	Norway maple	Missing	Contributing	Replace	Replace in-kind
099m	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Remove limb over structure	Propagate
100m	Fra am	*Fraxinus americana*	white ash	Original	Contributing		Propagate
101m	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Medium prune	Propagate
102m	Ulm am	*Ulmus americana*	American elm	Original	Contributing	Monitor basal decay	Propagate
103m	Ulm am	*Ulmus americana*	American elm	Original	Contributing	Remove v-crotch on leader	Propagate
104m	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Medium prune	Propagate
105m	Ace pl	*Acer platanoides*	Norway maple	Original	Contributing		Propagate
106m	Lir tu	*Liriodendron tulipifera*	tulip poplar	Original	Contributing	Monitor small area of basal decay; light prune	Propagate
107m	Mor sp.	*Morus* sp.	mulberry	Missing	Unevaluated		Do not replace
108m	Tsu ca	*Tsuga canadensis*	Canadian hemlock	Same species replacement	Contributing		Replace in-kind
109m	Fra am	*Fraxinus americana*	white ash	Original	Contributing		Propagate
110m	Bux se	*Buxus sempervirens*	boxwood	Missing	Non-contributing		Do not replace
111m	Bux se	*Buxus sempervirens*	boxwood	Missing	Non-contributing		Do not replace
Garden Maintenance Area							
01a	Syr sp.	*Syringa* sp.	lilac	Missing	Contributing	Replace	Replace in-kind
02a	Syr sp.	*Syringa* sp.	lilac	Missing	Contributing	Replace	Replace in-kind
03a	Aes pa	*Aesculus parviflora*	bottlebrush buckeye	Original	Non-contributing		Remove
04a	Cor ma	*Corylus maxima* 'Purpurea'	purpleaf filbert	Original	Contributing	Light prune	Propagate
05a	Cor ma	*Corylus maxima* 'Purpurea'	purpleaf filbert	Original	Contributing	Light prune	Propagate
06a	Ace pa	*Acer palmatum*	Japanese maple	Missing	Non-contributing		Do not replace
07a	Fra am	*Fraxinus americana*	white ash	Missing	Contributing		Do not replace
08a	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Light prune or remove	Propagate
09a	Gin bi	*Ginkgo biloba*	maidenhair tree	Original	Contributing	Medium prune	Propagate
10a	Cor fl	*Cornus florida*	flowering dogwood	Original	Contributing	Medium prune	Propagate
11a	Pic ab	*Picea abies*	Norway spruce	Original	Contributing	Light prune	Propagate
12a	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Remove to eliminate hazard to adjacent historic structure	Propagate
13a	Fra am	*Fraxinus americana*	white ash	Missing	Unevaluated		Do not replace

Numeric ID	Name ID	Scientific Name	Common Name	Origin	Evaluation	Preservation Maintenance Needed	Replacement Strategy
14a	Phi co	*Philadelphus coronarius*	mockorange	Missing	Unevaluated		Do not replace
15a	Syr sp.	*Syringa* sp.	lilac (white)	Original	Contributing		Propagate
16a			unidentified species	Missing	Unevaluated	Identify and replace if historic	Replace in-kind
17a	Lag in	*Lagerstroemin indica*	common crapemyrtle (pink)	Original	Contributing	Light prune; remove light deadwood	Propagate
18a	Lag in	*Lagerstroemin indica*	common crapemyrtle (pink)	Original	Contributing	Remove light deadwood	Propagate
19a	Ace pa	*Acer palmatum* 'Atropurpureum'	Japanese maple 'Atropurpureum'	Original	Contributing	Light prune	Propagate
20a	Mag so	*Magnolia* x *soulangiana*	saucer magnolia	Propagule	Non-contributing		Do not replace
21a	Mag so	*Magnolia* x *soulangiana*	saucer magnolia	Original	Non-contributing	Corrective prune	Do not replace
22a	Mag so	*Magnolia* x *soulangiana*	saucer magnolia	Propagule	Non-contributing	Light prune; thin crown	Propagate
23a	Car il	*Carya illinoinensis*	pecan	Propagule	Contributing		Propagate
24a	Lir tu	*Liriodendron tulipifera*	tulip poplar	Original	Contributing	Medium prune	Propagate
25a	Aes pa	*Aesculus parviflora*	bottlebrush buckeye	Original	Unevaluated	Remove weeds	Propagate
26a	Thu oc	*Thuja occidentalis*	American arborvitae	Missing	Non-contributing		Do not replace
27a	Cha sp.	*Chaenomeles* sp.	flowering quince	Original	Unevaluated		Propagate
28a	Phi sp.	*Philadelphus* sp.	mockorange	Missing	Unevaluated	Replace	Replace in-kind
29a	Cha sp.	*Chaenomeles* sp.	flowering quince	Original	Unevaluated		Propagate
30a	Lir tu	*Liriodendron tulipifera*	tulip poplar	Missing	Contributing	Do not replace due to existing tree	Do not replace
31a	Lir tu	*Liriodendron tulipifera*	tulip poplar	Original	Contributing	Medium prune	Propagate
32a	Pic ab	*Picea abies*	Norway spruce	Original	Contributing	Light prune	Propagate
33a	Mor sp.	*Morus* sp.	mulberry	Missing	Contributing	Replace	Replace in-kind
34a	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Medium prune to clear Norway spruce	Propagate
35a	Mor sp.	*Morus* sp.	mulberry	Original	Contributing	Medium prune and deadwood	Propagate
36a	Pin st	*Pinus strobus*	eastern white pine	Original	Non-contributing		Supplement as necessary
37a	Pin st	*Pinus strobus*	eastern white pine	Original	Non-contributing		Supplement as necessary
38a	Pin st	*Pinus strobus*	eastern white pine	Original	Non-contributing		Supplement as necessary
39a	Pin st	*Pinus strobus*	eastern white pine	Original	Non-contributing		Supplement as necessary
40a	Pin st	*Pinus strobus*	eastern white pine	Original	Non-contributing		Supplement as necessary
41a	Pin st	*Pinus strobus*	eastern white pine	Original	Non-contributing		Supplement as necessary
41a-1	Syr sp.	*Syringa* sp.	lilac	Original	Unevaluated		Propagate
42a	Pin st	*Pinus strobus*	eastern white pine	Original	Non-contributing		Supplement as necessary
42a-1	Syr sp.	*Syringa* sp.	lilac	Original	Unevaluated		Propagate

Numeric ID	Name ID	Scientific Name	Common Name	Origin	Evaluation	Preservation Maintenance Needed	Replacement Strategy
43a	Mac po	*Maclura pomifera*	osage-orange	Original	Contributing	Document and remove; use sucker as replacement	Propagate
44a	Mag gr	*Magnolia grandiflora*	southern magnolia	Original	Contributing	Identify cultivar	Propagate
45a	Pic ab	*Picea abies*	Norway spruce	Original	Contributing	Medium prune	Propagate
46a	Cha pi	*Chamaecyparis pisifera*	Japanese falsecypress	Missing	Contributing	Replace	Replace in-kind
47a	Pic ab	*Picea abies*	Norway spruce	Original	Contributing		Propagate
48a	Pic ab	*Picea abies*	Norway spruce	Original	Contributing		Propagate
49a	Pic ab	*Picea abies*	Norway spruce	Same species replacement	Contributing		Replace in-kind
50a	Pic ab	*Picea abies*	Norway spruce	Missing	Contributing	Replace	Replace in-kind
51a	Pic ab	*Picea abies*	Norway spruce	Original	Contributing		Propagate
52a	Jug ni	*Juglas nigra*	black walnut	Original	Contributing	Limbs overhang historic structure; medium prune	Propagate
53a	Ail al	*Ailanthus altissima*	tree-of-heaven	Missing	Contributing	Replace	Replace in-kind
54a	Ace pa	*Acer palmatum*	Japanese maple	Missing	Contributing	Replace	Replace in-kind
55a	Pla oc	*Platanus occidentalis*	American planetree	Original	Contributing	Medium prune; consider treating for anthracnose	Propagate
56a	Pla oc	*Platanus occidentalis*	American planetree	Missing	Contributing	Replace	Replace in-kind
57a	Til eu	*Tilia* x *europaea*	European linden	Missing	Contributing	Replace	Replace in-kind
58a	Ace pl	*Acer platanoides*	Norway maple	Missing	Contributing	Replace	Replace in-kind
59a	Jug ni	*Juglas nigra*	black walnut	Original	Contributing	Cable and medium prune	Propagate
60a	Gym di	*Gymnocladus dioicus*	Kentucky coffeetree	Missing	Contributing	Replace	Replace in-kind
61a	Aes sp.	*Aesculus* sp.	buckeye	Missing	Contributing	Replace	Propagate
62a	Jug ni	*Juglas nigra*	black walnut	Missing	Contributing	Replace	Replace in-kind
63a	Fra am	*Fraxinus americana*	white ash	Missing	Contributing	Replace	Replace in-kind
64a			mown lawn	Original	Contributing		Supplement as necessary
West Field							
001w	Thu oc	*Thuja occidentalis*	American arborvitae	Missing	Contributing	Replace	Replace in-kind
002w	Thu oc	*Thuja occidentalis*	American arborvitae	Original	Contributing		Propagate
003w	Thu oc	*Thuja occidentalis*	American arborvitae	Original	Contributing		Propagate
004w	Thu oc	*Thuja occidentalis*	American arborvitae	Same species replacement	Contributing		Replace in-kind
005w	Thu oc	*Thuja occidentalis*	American arborvitae	Same species replacement	Contributing		Replace in-kind
006w	Rob ps	*Robinia pseudoacacia*	black locust	Propagule	Contributing		Replace in-kind
007w	Pic ab	*Picea abies*	Norway spruce	Same species replacement	Contributing		Replace in-kind
008w	Pse am	*Pseudolarix amabilis*	golden larch	Missing	Contributing	Replace	Replace in-kind

Numeric ID	Name ID	Scientific Name	Common Name	Origin	Evaluation	Preservation Maintenance Needed	Replacement Strategy
009w	Cor fl	*Cornus florida*	flowering dogwood	Same species replacement	Contributing		Replace in-kind
010w	Cor fl	*Cornus florida*	flowering dogwood	Same species replacement	Contributing	Remove and replace	Replace in-kind
011w	Cor fl	*Cornus florida*	flowering dogwood	Same species replacement	Contributing	Prune; treat for pests	Propagate
012w	Fag sy	*Fagus sylvatica* 'Atropunicea'	purple European beech	Original	Contributing	Remove and replace	Propagate
013w	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Treat for anthracnose; prune from utility lines	Propagate
014w	Pic ab	*Picea abies*	Norway spruce	Original	Non-contributing		Do not replace
015w	Tsu ca	*Tsuga canadensis*	Canadian hemlock	Missing	Contributing	Replace	Replace in-kind
016w	Til eu	*Tilia* x *europaea*	European linden	Original	Contributing	Consider lightning protection	Propagate
017w	Que pr	*Quercus prinus*	chestnut oak	Original	Contributing	Prune; consider lightning protection	Propagate
018w	Ace ru	*Acer rubrum*	red maple	Original	Non-contributing		Do not replace
019w	Ulm am	*Ulmus americana*	American elm	Same species replacement	Contributing		Replace in-kind
020w	Jug ni	*Juglans nigra*	black walnut	Original	Contributing		Propagate
021w	Que pa	*Quercus palustris*	pin oak	Same species replacement	Contributing	Treat for scale	Replace in-kind
022w	Ulm am	*Ulmus americana*	American elm	Missing	Contributing	Consider replacement with disease tolerant variety; canopy space may be a challenge	Replace in-kind
023w	Til eu	*Tilia* x *europaea*	European linden	Original	Contributing	Prune	Propagate
024w	Ace sa	*Acer saccharum*	sugar maple	Original	Contributing		Propagate
025w	Pin ni	*Pinus nigra*	Austrian pine	Original	Contributing	Monitor tip blight and treat	Propagate
026w	Fra am	*Fraxinus americana*	white ash	Original	Non-contributing	Do not replace unless identified as a replacement of a historic tree	Do not replace
027w	Ace sa	*Acer saccharum*	sugar maple	Same species replacement	Contributing		Replace in-kind
028w	Mor al	*Morus alba*	white mulberry	Original	Contributing		Propagate
029w	Que pa	*Quercus palustris*	pin oak	Original	Non-contributing		Do not replace
030w	Ace sa	*Acer saccharum*	sugar maple	Original	Contributing	Prune	Propagate
031w	Car ov	*Carya ovalis*	red hickory	Missing	Contributing	Replace	Replace in-kind
032w	Ace sa	*Acer saccharum*	sugar maple	Same species replacement	Contributing		Replace in-kind
033w	Til eu	*Tilia* x *europaea*	European linden	Original	Unevaluated		Do not replace
034w	Fra am	*Fraxinus americana*	white ash	Original	Contributing		Propagate
035w	Que ru	*Quercus rubra*	red oak	Same species replacement	Contributing		Replace in-kind

Numeric ID	Name ID	Scientific Name	Common Name	Origin	Evaluation	Preservation Maintenance Needed	Replacement Strategy
036w	Til sp.	*Tilia* sp.	linden	Original	Contributing	Install lightning protection	Propagate
037w	Fra am	*Fraxinus americana*	white ash	Original	Contributing		Propagate
038w	Pic ab	*Picea abies*	Norway spruce	Same species replacement	Contributing		Replace in-kind
039w	Ace sa	*Acer saccharum*	sugar maple	Original	Contributing		Propagate
039w-1	Ace sa	*Acer saccharum*	sugar maple	Same species replacement	Contributing		Replace in-kind
040w	Gym di	*Gymnocladus dioicus*	Kentucky coffeetree	Original	Contributing		Propagate
041w	Ile op	*Ilex opaca*	American holly	Original	Unevaluated		Propagate
042w	Ace sa	*Acer saccharum*	sugar maple	Substitute species	Contributing		Replace in-kind
043w	Fra am	*Fraxinus americana*	white ash	Original	Contributing		Propagate
044w	Til eu	*Tilia* x *europaea*	European linden	Original	Contributing		Propagate
045w	Ace sa	*Acer saccharum*	sugar maple	Same species replacement	Contributing		Replace in-kind
046w	Ace sa	*Acer saccharum*	sugar maple	Same species replacement	Contributing		Do not replace
047w	Ace sa	*Acer saccharum*	sugar maple	Same species replacement	Contributing		Replace in-kind
048w	Rob ps	*Robinia pseudoacacia*	black locust	Missing	Unevaluated	Do not replace unless identified as historic	Do not replace
049w	Rob ps	*Robinia pseudoacacia*	black locust	Missing	Unevaluated	Do not replace unless identified as historic	Do not replace
050w	Fra am	*Fraxinus americana*	white ash	Missing	Contributing	Replace	Replace in-kind
051w	Lir tu	*Liriodendron tulipifera*	tulip poplar	Original	Contributing		Propagate
052w	Jug ni	*Juglans nigra*	black walnut	Original	Contributing	Install cables	Propagate
053w	Pin st	*Pinus strobus*	eastern white pine	Original	Contributing	Remove trunk snags	Propagate
054w	Aes oc	*Aesculus octandra*	yellow buckeye	Original	Contributing		Propagate
055w	Jug ni	*Juglans nigra*	black walnut	Original	Contributing	Install cable	Propagate
056w	Til eu	*Tilia* x *europaea*	European linden	Original	Contributing		Propagate
057w	Jug ni	*Juglans nigra*	black walnut	Original	Contributing	Install cable	Propagate
058w	Tsu ca	*Tsuga canadensis*	Canadian hemlock	Missing	Contributing	Replace	Replace in-kind
059w	Gin bi	*Gingko biloba*	maidenhair tree (male)	Original	Contributing		Propagate
060w	Pic ab	*Picea abies*	Norway spruce	Missing	Contributing	Replace	Replace in-kind
061w	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Install cable	Propagate
062w	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Install through rod and cable	Propagate
063w	Aes gl	*Aesculus glabra*	Ohio buckeye	Original	Contributing		Propagate
064w	Fra am	*Fraxinus americana*	white ash	Original	Contributing		Propagate
065w	Jug ni	*Juglans nigra*	black walnut	Original	Contributing	Install cable	Propagate
066w	Fag gr	*Fagus grandiflora*	American beech	Original	Contributing		Propagate
067w	Ulm am	*Ulmus americana* 'Liberty'	American elm 'Liberty'	Same species replacement	Contributing		Replace in-kind
068w	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Cable limb over road	Propagate

Numeric ID	Name ID	Scientific Name	Common Name	Origin	Evaluation	Preservation Maintenance Needed	Replacement Strategy
069w	Jug ni	*Juglans nigra*	black walnut	Original	Contributing	Prune to lighten branches	Propagate
070w	Jug ni	*Juglans nigra*	black walnut	Original	Contributing		Propagate
071w	Fra am	*Fraxinus americana*	white ash	Original	Contributing		Propagate
072w	Ace sa	*Acer saccharum*	sugar maple	Same species replacement	Contributing		Replace in-kind
073w	Jug ni	*Juglans nigra*	black walnut	Original	Contributing		Propagate
074w	Que ru	*Quercus rubra*	red oak	Original	Contributing	Prune to lighten branches	Propagate
075w	Jug ni	*Juglans nigra*	black walnut	Original	Contributing	Install cable in branch over road	Propagate
076w	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Install cable	Propagate
077w	Que ru	*Quercus rubra* or *texana*	red oak or texas red oak	Original	Contributing		Replace in-kind
078w	Que ru	*Quercus rubra*	red oak	Missing	Contributing		Do not replace
079w	Jun vi	*Juniperus virginiana*	eastern redcedar	Missing	Non-contributing		Do not replace
080w	Pic ab	*Picea abies*	Norway spruce	Missing	Contributing	Do not replace due to Visitor Contact Station and West Orchard	Do not replace
081w	Lir tu	*Liriodendron tulipifera*	tulip poplar	Original	Contributing	Prune	Propagate
082w			rough grass	Original	Contributing		Supplement as necessary
083w	Mac po	*Maclura pomifera*	osage-orange	Original	Contributing	Prune	Propagate
084w	Yuc fi	*Yucca filamentosa*	yucca	Original	Unevaluated		Propagate
085w	Ulm am	*Ulmus americana*	American elm	Missing	Unevaluated		Do not replace
086w	Que ru	*Quercus rubra*	red oak	Missing	Contributing	Replace	Replace in-kind
087w	Jug ni	*Juglans nigra*	black walnut	Original	Contributing	Prune deadwood	Propagate
088w	Que ru	*Quercus rubra*	red oak	Same species replacement	Contributing		Replace in-kind
089w	Que ru	*Quercus rubra*	red oak	Original	Contributing		Propagate
090w	Pic ab	*Picea abies*	Norway spruce	Same species replacement	Non-contributing	Remove vines	Do not replace
091w	Tsu ca	*Tsuga canadensis*	Canadian hemlock	Original	Contributing		Propagate
092w	Aes sp.	*Aesculus* sp.	buckeye	Original	Unevaluated		Propagate
093w	Thu oc	*Thuja occidentalis*	American arborvitae	Original	Unevaluated	Prune	Propagate
094w		stump		Missing		Do not replace due to new entrance road alignment	Do not replace
095w	Que ru	*Quercus rubra*	red oak	Missing	Contributing	Do not replace due to new entrance road alignment	Do not replace
096w	Fra am	*Fraxinus americana*	white ash	Missing	Contributing	Do not replace due to new entrance road alignment	DO not replace
097w	Tsu ca	*Tsuga canadensis*	Canadian hemlock	Original	Contributing		Propagate
098w	Pru ye	*Prunus* x *yedoensis*	Yoshino cherry	Propagule	Contributing	Verify species	Propagate
099w	Que sp.	*Quercus* sp.	oak	Original	Contributing	Identify species	Propagate
100w	Fra am	*Fraxinus americana*	white ash	Original	Contributing		Propagate
101w	Jug ni	*Juglans nigra*	black walnut	Original	Contributing		Propagate

Numeric ID	Name ID	Scientific Name	Common Name	Origin	Evaluation	Preservation Maintenance Needed	Replacement Strategy
102w	Pla oc	*Platanus occidentalis*	eastern sycamore	Original	Contributing		Propagate
103w	Pin st	*Pinus strobus*	white pine screen planting	Original	Non-contributing	Screen includes red cedar and other volunteers	Supplement as necessary
North Lawn							
001n	Thu oc	*Thuja occidentalis*	American arborvitae	Original	Contributing		Propagate
002n	Thu oc	*Thuja occidentalis*	American arborvitae	Original	Contributing		Propagate
003n	Thu oc	*Thuja occidentalis*	American arborvitae	Same species replacement	Contributing	Remove deadwood	Propagate
004n	Thu oc	*Thuja occidentalis*	American arborvitae	Original	Contributing	Remove dead leader	Propagate
005n	Cor fl	*Cornus florida*	flowering dogwood	Original	Contributing		Replace in-kind
006n	Cor fl	*Cornus florida*	flowering dogwood	Original	Contributing	Remove deadwood; monitor for anthracnose and borers	Propagate
007n	Til eu	*Tilia* x *europaea*	European linden	Original	Contributing	Remove suckers at root flare; prune	Propagate
008n	Ace sa	*Acer saccharum*	sugar maple	Original	Contributing		Propoagate
009n	Ulm am	*Ulmus americana*	American elm	Missing	Non-contributing	Replace	Replace in-kind
010n	Jug ni	*Juglans nigra*	black walnut	Missing	Contributing	Replace	Replace in-kind
011n	Ace sa	*Acer saccharum*	sugar maple	Original	Contributing	Prune	Propagate
012n	Pic ab	*Picea abies*	Norway spruce	Original	Contributing		Propagate
013n	Pic ab	*Picea abies*	Norway spruce	Original	Contributing	Medium prune and remove vines	Propagate
014n	Thu oc	*Thuga occidentalis*	American arborvitae	Original	Contributing	Medium prune and cable	Propagate
015n	Lir tu	*Liriodendron tulipifera*	tulip poplar	Original	Contributing	Medium prune to clear utility lines	Propagate
016n	Fag gr	*Fagus grandifolia*	American beech	Original	Contributing	Identify species and cut girdling root	Propagate
017n	Pic ab	*Picea abies*	Norway spruce	Same species replacement	Contributing		Replace in-kind
018n	Pin st	*Pinus strobus*	eastern white pine	Missing		Replace	Replace in-kind
019n	Pin st	*Pinus strobus*	eastern white pine	Missing	Contributing	Replace	Replace in-kind
020n	Pin st	*Pinus strobus*	eastern white pine	Same species replacement	Contributing		Replace in-kind
021n	Pin st	*Pinus strobus*	eastern white pine	Same species replacement	Contributing		Replace in-kind
022n	Pin st	*Pinus strobus*	eastern white pine	Same species replacement	Contributing		Replace in-kind
023n	Pin st	*Pinus strobus*	eastern white pine	Same species replacement	Contributing		Replace in-kind
024n	Pin st	*Pinus strobus*	eastern white pine	Original	Contributing	Lime and medium prune	Propagate
025n	Pin st	*Pinus strobus*	eastern white pine	Original	Contributing	Lime and medium prune	Propagate
025n-1	Pin st	*Pinus strobus*	eastern white pine	Original	Contributing		Replace in-kind

Numeric ID	Name ID	Scientific Name	Common Name	Origin	Evaluation	Preservation Maintenance Needed	Replacement Strategy
026n	Pin st	*Pinus strobus*	eastern white pine	Same species replacement	Contributing	Lime and medium prune	Replace in-kind
027n	Lir tu	*Liriodendron tulipifera*	tulip poplar	Original	Contributing	Medium prune	Propagate
028n	Thu oc	*Thuja occidentalis* 'Emerald'	eastern arborvitae	Same species replacement	Contributing	Light prune	Replace in-kind
029n	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Medium prune	Propagate
030n	Ace ru	*Acer rubrum*	red maple	Same species replacement	Contributing		Replace in-kind
031n	Lir tu	*Liriodendron tulipifera*	tulip poplar	Same species replacement	Contributing		Replace in-kind
032n	Pin st	*Pinus strobus*	eastern white pine	Original	Contributing	Medium prune	Propagate
032n-1	Pin st	*Pinus strobus*	eastern white pine	Same species replacement	Unevaluated		Replace in-kind
033n	Pin st	*Pinus strobus*	eastern white pine	Original	Contributing	Medium prune	Propagate
034n	Pin st	*Pinus strobus*	eastern white pine	Same species replacement	Contributing		Replace in-kind
034n-1	Pin st	*Pinus strobus*	eastern white pine	Same species replacement	Unevaluated		Replace in-kind
034n-2	Pin st	*Pinus strobus*	eastern white pine	Same species replacement	Unevaluated		Replace in-kind
034n-3	Pin st	*Pinus strobus*	eastern white pine	Same species replacement	Unevaluated		Replace in-kind
034n-4	Pin st	*Pinus strobus*	eastern white pine	Same species replacement	Unevaluated		Replace in-kind
035n	Jun vi	*Juniperus virginiana*	eastern redcedar (staminate)	Original	Contributing		Propagate
036n	Ace ru	*Acer rubrum*	red maple	Same species replacement	Contributing	Remove	Replace in-kind
036n-1	Ace ru	*Acer rubrum*	red maple	Same species replacement	Contributing		Replace in-kind
037n	Que ru	*Quercus rubra*	red oak	Same species replacement	Contributing		Replace in-kind
038n	Que ru	*Quercus rubra*	red oak	Original	Contributing	Monitor	Propagate
039n	Lir tu	*Liriodendron tulipifera*	tulip poplar	Original	Contributing	Medium prune and cable leaders	Propagate
040n	Lir tu	*Liriodendron tulipifera*	tulip poplar	Original	Contributing	Medium prune and install through-rod	Propagate
041n	Lir tu	*Liriodendron tulipifera*	tulip poplar	Original	Contributing		Propagate
042n	Pin st	*Pinus strobus*	eastern white pine	Missing	Contributing	Replacement would obstruct view to farm	Do not replace
043n	Pin st	*Pinus strobus*	eastern white pine	Same species replacement	Contributing		Replace in-kind

Numeric ID	Name ID	Scientific Name	Common Name	Origin	Evaluation	Preservation Maintenance Needed	Replacement Strategy
044n	Pin st	*Pinus strobus*	eastern white pine	Same species replacement	Contributing		Replace in-kind
045n	Pin st	*Pinus strobus*	eastern white pine	Same species replacement	Contributing		Replace in-kind
046n	Pin st	*Pinus strobus*	eastern white pine	Same species replacement	Contributing		Replace in-kind
047n	Pin st	*Pinus strobus*	eastern white pine	Same species replacement	Contributing		Replace in-kind
048n	Pin st	*Pinus strobus*	eastern white pine	Same species replacement	Contributing		Replace in-kind
049n	Pin st	*Pinus strobus*	eastern white pine	Original	Contributing	Medium prune	Propagate
050n	Pin st	*Pinus strobus*	eastern white pine	Original	Contributing	Medium prune	Propagate
051n	Pin st	*Pinus strobus*	eastern white pine	Original	Contributing	Medium prune	Propagate
052 n	Lir tu	*Liriodendron tulipifera*	tulip poplar	Original	Contributing	Medium prune	Propagate
053n	Fag gr	*Fagus grandifolia*	American beech	Original	Contributing		Propagate
054n	Rob ps	*Robinia pseudoacacia*	black locust	Original	Contributing	Consider removal	Propagate
055n	Rob ps	*Robinia pseudoacacia*	black locust	Original	Contributing	Consider removal	Propagate
056n	Rob ps	*Robinia pseudoacacia*	black locust	Original	Contributing	Consider removal	Propagate
057n		*Juglans nigra, Robinia pseudoacacia, Fraxinus americana, Aesculus* spp.	mixed hardwood fence line/hedge	Original	Unevaluated	Determine, maintain to minimize bramble vines; selectively remove trees as needed to accommodate reconstructed stable fence	Supplement as necessary
058n	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Monitor	Propagate
059n	Mor sp.	*Morus* sp.	mulberry	Original	Contributing	Identify species; remove; and consider replacement	Propagate
060n	Jug ni	*Juglans nigra*	black walnut	Original	Contributing	Remove vines	Propagate
061n	Aes gl	*Aesculus glabra*	Ohio buckeye	Original	Contributing	Medium prune; cable; and remove vines	Propagate
062n	Lon ta	*Lonicera tatarica*	tatarian honeysuckle	Missing	Non-contributing		Do not replace
063n	Rob ps	*Robinia pseudoacacia*	black locust	Missing	Contributing	Replacement would obstruct view to farm	Do not replace
064n	Jun vi	*Juniperus virginiana*	eastern redcedar (staminate)	Missing	Contributing	Replacement would obstruct view to farm	Do not replace
065n	Jun vi	*Juniperus virginiana*	eastern redcedar (staminate)	Original	Contributing		Propagate
066n	Jun vi	*Juniperus virginiana*	eastern redcedar (staminate)	Original	Contributing		Propagate
067n	Jun vi	*Juniperus virginiana*	eastern redcedar (staminate)	Original	Contributing		Propagate
068n	Mor sp.	*Morus* sp.	mulberry	Missing	Unevaluated	Replace	Replace in-kind
069n	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Medium prune; cable; remove vines	Propagate
070n	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Medium prune	Propagate

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071n	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Medium prune; cable; remove vines	Propagate
072n	Gle tr	*Gleditsia triacanthos*	honey locust	Same species replacement	Contributing		Replace in-kind
073n	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Consider removal and replace	Propagate
074n	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Identify species; remove *Rhus radicans*; cable	Propagate
075n	Pic ab	*Picea abies*	Norway spruce	Same species replacement	Contributing		Replace in-kind
075n-1	Jun vi	*Juniperus virginiana*	eastern redcedar	Original	Unevaluated		Propagate
075n-2	Cor fl	*Cornus florida*	flowering dogwood	Original	Unevaluated		Propagate
075n-3	Ace ru	*Acer rubrum*	red maple	Original	Unevaluated		Propagate
075n-4	Ace pl	*Acer platanoides*	Norway maple	Original	Unevaluated		Propagate
075n-5	Ace pl	*Acer platanoides*	Norway maple	Original	Unevaluated		Propagate
075n-6	Tsu ca	*Tsuga canadensis*	Canadian hemlock	Original	Unevaluated		Propagate
075n-7	Tsu ca	*Tsuga canadensis*	Canadian hemlock	Original	Unevaluated		Propagate
075n-8	Tsu ca	*Tsuga canadensis*	Canadian hemlock	Original	Unevaluated		Propagate
075n-9	Tsu ca	*Tsuga canadensis*	Canadian hemlock	Original	Unevaluated		Propagate
075n-10	Tsu ca	*Tsuga canadensis*	Canadian hemlock	Original	Unevaluated		Propagate
075n-11	Pic ab	*Acer platanoides*	Norway spruce	Original	Unevaluated		Propagate
075n-12	Mor sp.	*Morus* sp.	mulberry	Original	Unevaluated		Propagate
075n-13	Mor sp.	*Morus* sp.	mulberry	Original	Unevaluated		Propagate
075n-14	Tsu ca	*Tsuga canadensis*	Canadian hemlock	Original	Unevaluated		Propagate
076n	Fra am	*Fraxinus americana* 'Autumn Purple'	white ash 'Autumn Purple'	Substitute species	Contributing		Replace in-kind
077n	Pic ab	*Picea abies*	Norway spruce	Original	Contributing	Remove wild trees and vines	Propagate
078n	Pic ab	*Picea abies*	Norway spruce	Original	Contributing		Propagate
079n	Jug ni	*Juglans nigra*	black walnut	Original	Contributing		Propagate
080n	Jug ni	*Juglans nigra*	black walnut	Original	Contributing		Propagate
081n	Jug ni	*Juglans nigra*	black walnut	Original	Contributing	Install cable between leaders	Propagate
082n	Ace sa	*Acer saccharum*	sugar maple	Original	Unevaluated		Replace in-kind
083n	Pic ab	*Picea abies*	Norway spruce	Same species replacement	Contributing		Replace in-kind
084n	Fra am	*Fraxinus americana*	white ash	Same species replacement	Contributing		Replace in-kind
085n	Fra am	*Fraxinus americana*	white ash	Original	Contributing		Propagate
086n	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Medium prune	Propagate
087n	Pic ab	*Picea abies*	Norway spruce	Original	Contributing	Monitor pest	Propagate
088n	Pic ab	*Picea abies*	Norway spruce	Original	Contributing	Medium prune	Propagate
089n	Pic ab	*Picea abies*	Norway spruce	Original	Contributing		Propagate
090n	Til eu	*Tilia* x *euchlora*	Crimean linden	Missing	Non-contributing		Do not replace
091n	Fra am	*Fraxinus americana*	white ash	Original	Unevaluated	Medium prune	Replace in-kind
092n	Ace ru	*Acer rubrum*	red maple	Missing	Contributing	Replace	Replace in-kind

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093n	Pin ni	*Pinus nigra*	Austrian pine	Missing	Contributing	Replace	Replace in-kind
094n	Pic ab	*Picea abies*	Norway spruce	Original	Contributing	Medium prune and monitor pest	Propagate
095n	Til eu	*Tilia* x *euchlora*	European linden	Original	Contributing	Medium prune	Propagate
096n	Fra am	*Fraxinus americana*	white ash	Original	Contributing		Propagate
097n	Pla ac	*Platanus* x *acerifolia*	London planetree	Original	Contributing	Light prune	Propagate
098n	Pic ab	*Picea abies*	Norway spruce	Original	Contributing		Propagate
099n	Cha pi	*Chamaecyparis pisifera*	Japanese false cypress	Original	Contributing	Identify cultivar	Propagate
100n	Cha pi	*Chamaecyparis pisifera*	Japanese false cypress	Original	Contributing	Identify cultivar	Propagate
101n	Fra pe	*Fraxinus pennsylvanica*	green ash	Original	Contributing	Identify species	Propagate
102n	Fra am	*Fraxinus americana*	white ash	Missing	Contributing	Replace	Replace in-kind
103n	Que al	*Quercus alba*	white oak	Original	Non-contributing	Cable	Do not replace
104n	Ace sa	*Acer saccharum*	sugar maple	Original	Contributing		Propagate
105n	Oxy ar	*Oxydendrum arboreum*	sourwood	Original	Unevaluated		Propagate
106n	Thu oc	*Thuja occidentalis*	American arborvitae	Original	Contributing	Side branch may need cable	Propagate
107n	Cor fl	*Cornus florida*	flowering dogwood	Same species replacement	Unevaluated		Replace in-kind
108n	Cor fl	*Cornus florida*	flowering dogwood	Original	Unevaluated		Do not replace
109n	Bux se	*Buxus sempervirens*	dwarf English boxwood	Original	Unevaluated		Propagate
110n	Bux se	*Buxus sempervirens* 'Suffruticosa'	boxwood 'Suffruticosa'	Original	Unevaluated	Light prune	Propagate
111n	Bux se	*Buxus sempervirens* 'Suffruticosa'	boxwood 'Suffruticosa'	Original	Unevaluated		Propagate
112n	Bux se	*Buxus sempervirens* 'Suffruticosa'	boxwood 'Suffruticosa'	Original	Unevaluated		Propagate
113n	Nys sy	*Nyssa sylvatica*	sour gum	Same species replacement	Unevaluated		Replace in-kind
114n	Fag gr	*Fagus grandifolia*	American beech	Original	Contributing		Propagate
115n	Lir tu	*Liriodendron tulipifera*	tulip poplar	Original	Contributing		Propagate
116n	Fag gr	*Fagus grandiflora*	American beech	Missing	Contributing	Replace	Replace in-kind
117n	Lir tu	*Liriodendron tulipifera*	tulip poplar	Same species replacement	Contributing		Replace in-kind
118n	Ulm am	*Ulmus americana*	American elm	Same species replacement	Contributing	Cable and prune	Replace in-kind
119n	Bux se	*Buxus sempervirens* 'Suffruticosa'	dwarf English boxwood	Missing	Unevaluated		Do not replace
120n	Pic ab	*Picea abies*	Norway spruce	Original	Contributing	Medium prune	Propagate
121n	Pic ab	*Picea abies*	Norway spruce	Original	Contributing	Light prune; watch for insects	Propagate
122n	Jug ni	*Juglans nigra*	black walnut	Original	Contributing		Propagate

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123n	Lir tu	*Liriodendron tulipifera*	tulip poplar	Original	Contributing	Light prune	Propagate
124n	Jug ni	*Juglans nigra*	black walnut	Original	Contributing	Light prune	Propagate
125n	Lir tu	*Liriodendron tulipifera*	tulip poplar	Same species replacement	Contributing		Replace in-kind
126n	Pic ab	*Picea abies*	Norway spruce	Original	Contributing	Prune	Propagate
127n	Lir tu	*Liriodendron tulipifera*	tulip poplar	Original	Contributing	Remove deadwood	Propagate
128n	Jug ni	*Juglans nigra*	black walnut	Missing	Contributing	Replace	Replace in-kind
129n	Gin bi	*Gingko biloba*	maidenhair tree (male)	Original	Contributing		Propagate
130n	Fag sy	*Fagus sylvatica* 'Atropunicea'	purple European beech	Same species replacement	Contributing		Replace in-kind
131n	Jun vi	*Juniperus virginiana*	eastern redcedar	Original	Contributing		Propagate
132n	Que al	*Quercus alba*	white oak	Same species replacement	Contributing		Replace in-kind
133n	Fag sy	*Fagus sylvatica* 'Atropunicea'	purple European beech	Same species replacement	Contributing		Replace in-kind
134n	Ace sa	*Acer saccharum*	sugar maple	Original	Contributing		Propagate
135n	Tsu ca	*Tsuga canadensis*	Canadian hemlock	Missing	Contributing	Replace	Replace in-kind
136n	Lar de	*Larix decidua*	European larch	Original	Contributing		Propagate
137n	Aes fl	*Aesculus falva*	yellow buckeye	Original	Contributing	Prune	Propagate
138n	Pic ab	*Picea abies*	Norway spruce	Original	Contributing		Propagate
139n	Pla oc	*Platanus occidentalis*	eastern sycamore	Original	Contributing	Treat for anthracnose	Propagate
140n	Fag sy	*Fagus sylvatica*	European beech	Original	Contributing		Propagate
141n	Pla ac	*Platanus* x *acerifolia*	London planetree	Original	Contributing		Propagate
142n	Lir tu	*Liriodendron tulipifera*	tulip poplar	Original	Non-contributing		Do not replace
143n	Til eu	*Tilia* x *europaea*	European linden	Original	Contributing	Remove suckers at root flare	Propagate
144n	Ace sa	*Acer saccharum*	sugar maple	Original	Contributing		Propagate
145n	Ile op	*Ilex opaca*	American holly (female)	Original	Unevaluated	Treat leaf minor	Propagate
146n	Liq st	*Liquidambar styraciflua*	sweet gum	Original	Non-contributing		Do not replace
146n-1	Que ru	*Quercus rubra*	red oak	Same species replacement	Contributing		Replace in-kind
147n	Ile op	*Ilex opaca*	American holly	Original	Unevaluated		Propagate
148n	Que ru	*Quercus rubra*	red oak	Original	Contributing		Propagate
149n	Ace ru	*Acer rubrum*	red maple	Original	Contributing		Propagate
150n	Ile op	*Ilex opaca*	American holly	Original	Contributing	Prune	Propagate
151n	Til eu	*Tilia* x *europaea*	European linden	Original	Contributing		Propagate
152n	Gin bi	*Gingko biloba*	maidenhair tree (male)	Original	Contributing		Propagate
153n	Pic ab	*Picea abies*	Norway spruce	Original	Contributing		Propagate
154n	Que ru	*Quercus rubra*	red oak	Missing	Contributing	Replace	Replace in-kind
155n	Fra am	*Fraxinus americana*	white ash	Original	Contributing		Propagate

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156n	Que pa	*Quercus palustris*	pin oak	Original	Contributing		Propagate
157n	Que ru	*Quercus rubra*	red oak	Original	Contributing		Propagate
158n	Que al	*Quercus alba*	white oak	Original	Contributing	Prune	Propagate
159n	Aes sp.	*Aesculus* sp.	buckeye	Original	Contributing		Propagate
160n	Que al	*Quercus alba*	white oak	Original	Contributing		Propagate
161n	Gym di	*Gymnocladus dioicus*	Kentucky coffeetree	Original	Contributing		Propagate
162n		rough grass	fescue, rye grass, bur grass, red clover, asters, chickorie, wood sorrel, creeping charlie, violets, indian strawberry, raspberry, wild rose, poison ivy, mint, beebalm	Original	Contributing		Supplement as necessary
Farm							
01f	Fra am	*Fraxinus americana*	white ash	Missing	Contributing	Replacement would obstruct view to farm	Do not replace
02f			west screen planting; evergreen & deciduous; natives & exotics	Original	Non-contributing		Supplement as necessary
03f	Fra am	*Fraxinus americana*	white ash	Missing	Contributing	Replacement would obstruct view to farm	Do not replace
03f-1	Sal ba	*Salix babylonica*	weeping willow	Original	Non-contributing	Remove and replace with weeping willow (*Salix babylonica*) further northwest along Farm Road.	Remove
04f	Ace sa	*Acer saccharum* 'Legacy'	sugar maple 'Legacy'	Substitute species	Contributing		Replace in-kind
05f	Ace sa	*Acer saccharum*	sugar maple	Substitute species	Contributing	Remove deadwood	Replace in-kind
06f	Ace pl	*Acer platanoides*	Norway maple	Original	Contributing	Plan to replace	Propagate
06f-1	Bet ni	*Betula nigra*	river birch	Original	Non-contributing	Remove and replace with historic Norway maple (*Acer platanoides*)	Remove
07f	Pru se	*Prunus serotina*	black cherry	Same species replacement	Contributing	Remove deadwood; elevate; replace in-kind if needed	Replace in-kind
08f			rough grass	Original	Contributing		Supplement as necessary
09f	Rob ps	*Robinia pseudoacacia*	black locust	Missing	Contributing	Replace	Replace in-kind
10f	Sed ac	*Sedum acre*	sedum	Original	Contributing		Supplement as necessary
11f	Cor fl	*Cornus florida*	flowering dogwood	Original	Contributing	Light prune; remove deadwood	Propagate
12f	Cor fl	*Cornus florida*	flowering dogwood	Same species replacement	Contributing		Replace in-kind
13f	Cor ru	*Cornus* x *rutgersensis*	dogwood 'Rutcan' Constellation®	Substitute species	Contributing	Remove and replace	Replace in-kind
14f	Cor ru	*Cornus* x *rutgersensis*	dogwood 'Rutcan' Constellation®	Substitute species	Contributing		Replace in-kind

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15f	Cor ru	*Cornus* x *rutgersensis*	dogwood 'Rutcan' Constellation®	Substitute species	Contributing		Replace in-kind
16f	Cor ru	*Cornus* x *rutgersensis*	dogwood 'Rutcan' Constellation®	Substitute species	Contributing		Replace in-kind
17f	Cor ru	*Cornus* x *rutgersensis*	dogwood 'Rutcan' Constellation®	Substitute species	Contributing		Replace in-kind
18f	Cor ru	*Cornus* x *rutgersensis*	dogwood 'Rutcan' Constellation®	Substitute species	Contributing		Replace in-kind
19f	Cor ru	*Cornus* x *rutgersensis*	dogwood 'Rutcan' Constellation®	Substitute species	Contributing		Propagate
20f	Fra am	*Fraxinus americana*	white ash	Original	Contributing	Medium prune; elevate	Propagate
21f	Cor ru	*Cornus* x *rutgersensis*	dogwood 'Rutcan' Constellation®	Substitute species	Contributing		Replace in-kind
22f	Cor ru	*Cornus* x *rutgersensis*	dogwood 'Rutcan' Constellation®	Substitute species	Contributing		Replace in-kind
23f	Cor ru	*Cornus* x *rutgersensis*	dogwood 'Rutcan' Constellation®	Same species replacement	Contributing		Replace in-kind
24f	Cor ru	*Cornus* x *rutgersensis*	dogwood 'Rutcan' Constellation®	Substitute species	Contributing		Replace in-kind
25f	Ace ne	*Acer negundo*	boxelder	Original	Contributing	Medium prune	Propagate
26f	Ulm pu	*Ulmus pumila*	Siberian elm	Missing	Contributing	Replace	Replace in-kind
27f	Cor fl	*Cornus florida*	flowering dogwood	Same species replacement	Contributing	Remove and replace	Replace in-kind
27f-1	Cor fl	*Cornus florida*	flowering dogwood	Same species replacement	Contributing		Replace in-kind
28f	Cor fl	*Cornus florida*	flowering dogwood	Same species replacement	Contributing	Light prune; monitor	Replace in-kind
29f	Cor fl	*Cornus florida*	flowering dogwood	Same species replacement	Contributing		Replace in-kind
30f	Cor fl	*Cornus florida*	flowering dogwood	Same species replacement	Contributing	Plan to replace	Replace in-kind
31f	Mal sp.	*Malus* 'Donald Wyman'	flowering crabapple 'Donald Wyman'	Substitute species	Contributing		Replace in-kind
32f	Mal sp.	*Malus* sp. or cv.	flowering crabapple	Original	Contributing	Light prune	Propagate
33f	Rob ps	*Robinia pseudoacacia*	black locust	Same species replacement	Contributing		Replace in-kind
34f	Ace ne	*Acer negundo*	boxelder	Original	Non-contributing		Do not replace
35f	Ace ru	*Acer rubrum*	red maple	Original	Contributing	Medium prune	Propagate
36f	Que al	*Quercus alba*	white oak	Original	Contributing	Medium prune	Propagate
37f	Pic ab	*Picea abies*	Norway spruce	Original	Contributing	Remove vines	Propagate
38f	Rob ps	*Robinia pseudoacacia*	black locust	Missing	Contributing	Replace	Replace in-kind
39f	Ace ru	*Acer rubrum*	red maple	Original	Contributing	Remove vines; medium prune	Propagate
40f	Ace ru	*Acer rubrum*	red maple	Original	Contributing	Medium prune, install thru-rod	Propagate

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41f	Mag so	*Magnolia* x *soulangiana* cv.	saucer magnolia	Original	Contributing	Medium prune	Propagate
42f	Bux se	*Buxus sempervirens*	boxwood	Original	Contributing		Propagate
42f-1	Cor fl	*Cornus florida*	flowering dogwood	Same species replacement	Unevaluated		Replace in-kind
43f	Cor fl	*Cornus florida*	flowering dogwood	Same species replacement	Unevaluated		Replace in-kind
44f	Cor fl	*Cornus florida*	flowering dogwood	Same species replacement	Unevaluated	Monitor for insects and disease	Replace in-kind
45f	Rob ps	*Robinia pseudoacacia*	black locust	Same species replacement	Contributing		Replace in-kind
46f	Syr sp.	*Syringa* sp. or cv.	lilac	Missing	Contributing	Replace	Replace in-kind
47f	Syr sp.	*Syringa* sp. or cv.	lilac	Missing	Contributing	Replace	Replace in-kind
48f	Syr sp.	*Syringa* sp. or cv.	lilac	Original	Contributing		Propagate
49f	Syr sp.	*Syringa* sp. or cv.	lilac	Original	Contributing		Propagate
50f	Cel oc	*Celtic occidentalis*	common hackberry	Original	Contributing	Light prune	Propagate
51f	Syr sp.	*Syringa* sp.	lilac	Missing	Contributing	Replace	Replace in-kind
52f	Pop al	*Populus alba*	white poplar	Missing	Contributing	Replace	Replace in-kind
53f	Rob ps	*Robinia pseudoacacia*	black locust	Original	Contributing	Elevate crown	Propagate
54f	Que pa	*Quercus palustris*	pin oak	Original	Contributing	Medium prune; plan to replace	Propagate
55f	Que pa	*Quercus palustris*	pin oak	Original	Contributing	Medium prune	Propagate
56f	Cor fl	*Cornus florida*	flowering dogwood	Same species replacement	Contributing		Replace in-kind
57f	Cor ru	*Cornus* x *rutgersensis*	dogwood 'Rutcan' Constellation®	Substitute species	Contributing		Replace in-kind
58f	Cor ru	*Cornus* x *rutgersensis*	dogwood 'Rutcan' Constellation®	Substitute species	Contributing		Replace in-kind
59f	Cor fl	*Cornus florida*	flowering dogwood	Same species replacement	Contributing		Replace in-kind
60f	Cor fl	*Cornus florida*	flowering dogwood	Same species replacement	Contributing		Replace in-kind
61f	Cor fl	*Cornus florida*	flowering dogwood	Same species replacement	Contributing		Replace in-kind
62f	Mag vi	*Magnolia virginiana*	sweetbay magnolia	Original	Contributing	Medium prune	Propagate
63f	Que ru	*Quercus rubra*	red oak	Original	Contributing	Medium prune	Propagate
64f	Mal sa	*Malus sargentii* 'Tina'	Tina flowering crabapple	Same species replacement	Contributing		Replace in-kind
65f	Pru se	*Prunus serrulata*	Japanese flowering cherry	Same species replacement	Contributing		Replace in-kind
66f	Que pa	*Quercus palustris*	pin oak	Same species replacement	Contributing		Replace in-kind

Numeric ID	Name ID	Scientific Name	Common Name	Origin	Evaluation	Preservation Maintenance Needed	Replacement Strategy
67f	Ace sa	*Acer saccharum*	sugar maple	Same species replacement	Contributing		Replace in-kind
68f			mown lawn	Original	Contributing		Supplement as necessary
69f	Ulm pu	*Ulmus pumila*	Siberian elm	Missing	Contributing	Replace	Replace in-kind
70f	Lon ta	*Lonicera tatarica*	tatarian honeysuckle	Missing	Non-contributing		Do not replace
71f	Lon ta	*Lonicera tatarica*	tatarian honeysuckle	Missing	Non-contributing		Do not replace
72f	Ros sp.	*Rosa* sp.	rose	Missing	Non-contributing		Do not replace
72f-1			bulbs	Original	Unevaluated		Replace in-kind
73f			woodland fragments	Original	Non-contributing		Supplement as necessary
74f	Ace ne	*Acer negundo*	boxelder	Original	Non-contributing		Do not replace
74f-1	Ulm sp.	*Ulmus* sp.	elm	MIssing	Unevaluated	Replace	Replace in-kind
75f	Ile sp.	*Ilex* sp.	holly	Original	Non-contributing		Replace in-kind
75f-1	Vib sp.	*Viburnum* sp.	viburnum	Original	Non-contributing		Supplement as necessary
76f	Cor fl	*Cornus florida*	flowering dogwood	Original	Unevaluated		Do not replace
76f-1	Cer ca	*Cercis canadensis*	redbud	Original	Unevaluated		Replace in-kind
77f	un-known	unknown	unknown	Missing	Unevaluated	Identify and determine replacement treatment strategy	TBD
78f	Fra am	*Fraxinus americana*	white ash	Original	Non-contributing		Do not replace
79f	Vib sp.	*Viburnum* sp.	viburnum	Original	Non-contributing		Supplement as necessary
80f	Mal sp.	*Malus* sp.	crabapple	Original	Contributing		Propagate
81f	Nys sy	*Nyssa sylvatica*	tupelo	Original	Unevaluated		Propagate
82f	Pin st	*Plnus strobus*	eastern white pine	Original	Non-contributing		Supplement as necessary

Appendix B. Falling Garden Planting Plans

The following drawings document 2008 recommendations for complete rehabilitation planting of the Falling Gardens to reflect their pre-1949 layout based on an analysis of historic photographs. The following drawings are taken from the *Cultural Landscape Report for Hampton National Historic Site, Vol. III: Formal Garden Planting Plans* (October 2008) by National Park Service Northeast Regional Office, Philadelphia Project Manager Shaun Eyring; Historical Landscape Architect Cheryl Sams O'Neill, and Historical Landscape Architecture Interns Joshua Shields, Jeanie Hau, and Michael Tull.

Parterre Garden Rehabilitation Plan - Plant Totals

Hampton National Historic Site



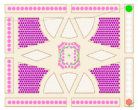
Plant	*Botanical Name*	Number
Canna	*Canna x generalis*	80
Coleus, Green	*Coleus x hybridus*	297
Coleus, Red	*Coleus x hybridus*	530
Coleus, Yellow	*Coleus x hybridus*	292
English Box	*Buxus sempervirens*	1
Herbaceous Peony	*Paeonia lactiflora*	13
Japanese Spirea	*Spiraea japonica*	83
Tree Peony	*Paeonia suffruticosa*	2



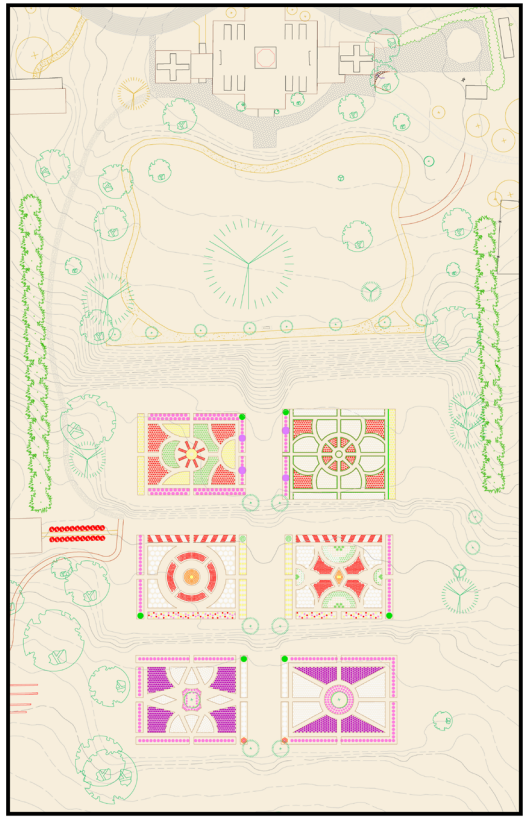


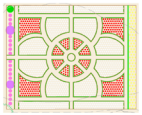
Plant	*Botanical Name*	Number
Bearded Iris, White	*Iris germanica*	28
Bearded Iris, Yellow	*Iris germanica*	45
Begonia, Red	*Begonia semperflorens-cultorum*	204
Begonia, White	*Begonia semperflorens-cultorum*	192
Dahlia	*Dahlia*	120
English Box	*Buxus sempervirens*	1
Herbaceous Peony	*Paeonia lactiflora*	20
Hollyhock	*Alcea rosea*	90
Japanese Snowball Bush	*Viburnum plicatum*	1
Rose, Harrison Yellow	*Rosa x Harrisonni*	1
Rose, White	*Rosa*	64
Scarlet Sage	*Salvia splendens*	424
Sweet Alyssum	*Lobularia maritima*	406





Plant	*Botanical Name*	Number
English Box	*Buxus sempervirens*	1
Flowering Quince	*Chaenomeles speciosa*	1
Herbaceous Peony	*Paeonia lactiflora*	66
Lilac, White	*Syringa vulagris*	14
Meadowsweet	*Filipendula 'Rubra'*	48
Petunia, Magenta	*Petunia sp.*	580
Petunia, White	*Petunia sp.*	370
Weeping Pagoda Tree	*Saphora japonica 'pendula'*	1





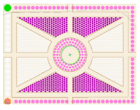
Plant	*Botanical Name*	Number
Canna	*Canna x generalis*	93
Century Plant	*Agave Americana*	1
English Box	*Buxus sempervirens*	1
Geranium, Red	*Pelagonium x hortorum*	460
Geranium, White	*Pelagonium x hortorum*	696
Herbaceous Peony	*Paeonia lactiflora*	17
Lantana	*Lantana camara*	376
Tree Peony	*Paeonia suffruticosa*	2





Plant	*Botanical Name*	Number
Bearded Iris, White	*Iris germanica*	28
Bearded Iris, Yellow	*Iris germanica*	45
Begonia, Red	*Begonia semperflorens-cultorum*	204
Begonia, White	*Begonia semperflorens-cultorum*	192
Dahlia	*Dahlia*	48
English Box	*Buxus sempervirens*	1
Flowering Tobacco	*Nicotiana alata*	66
Herbaceous Peony	*Paeonia lactiflora*	20
Hollyhock	*Alcea rosea*	80
Japanese Snowball Bush	*Viburnum plicatum*	1
Rose, Harrison Yellow	*Rosa x Harrisonni*	1
Rose, White	*Rosa*	92
Scarlet Sage	*Salvia splendens*	480
Snow-on-the-Mountain	*Euphorbia marginata*	174
Sweet Alyssum	*Lobularia maritima*	380
Zebra Grass	*Miscanthus sinensis 'Zebrinus'*	16

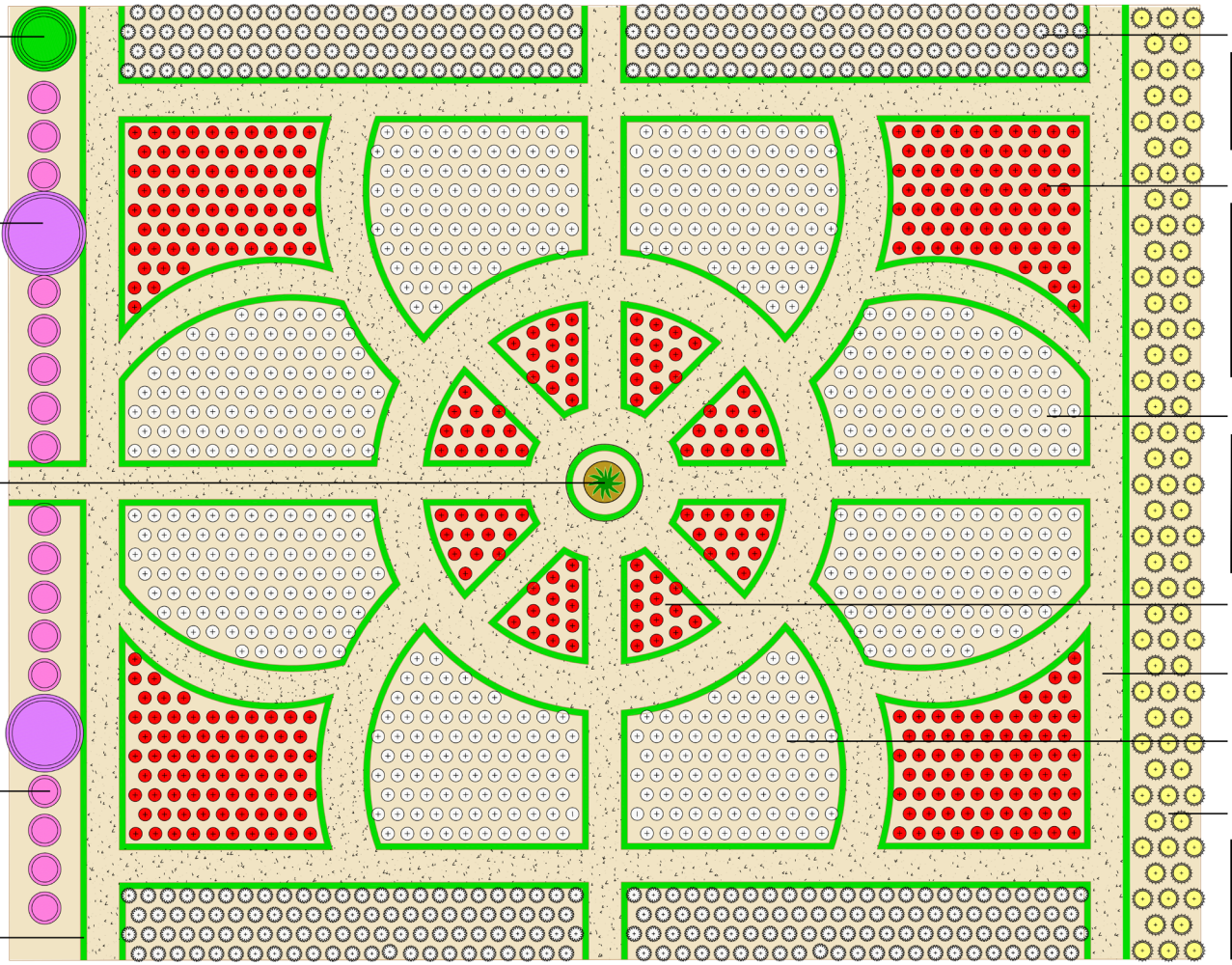




Plant	*Botanical Name*	Number
English Box	*Buxus sempervirens*	1
Flowering Quince	*Chaenomeles speciosa*	1
Herbaceous Peony	*Paeonia lactiflora*	76
Lilac, White	*Syringa vulagris*	14
Meadowsweet	*Filipendula 'Rubra'*	84
Petunia, Magenta	*Petunia sp.*	516
Petunia, White	*Petunia sp.*	588
Weeping Pagoda Tree	*Saphora japonica 'pendula'*	1

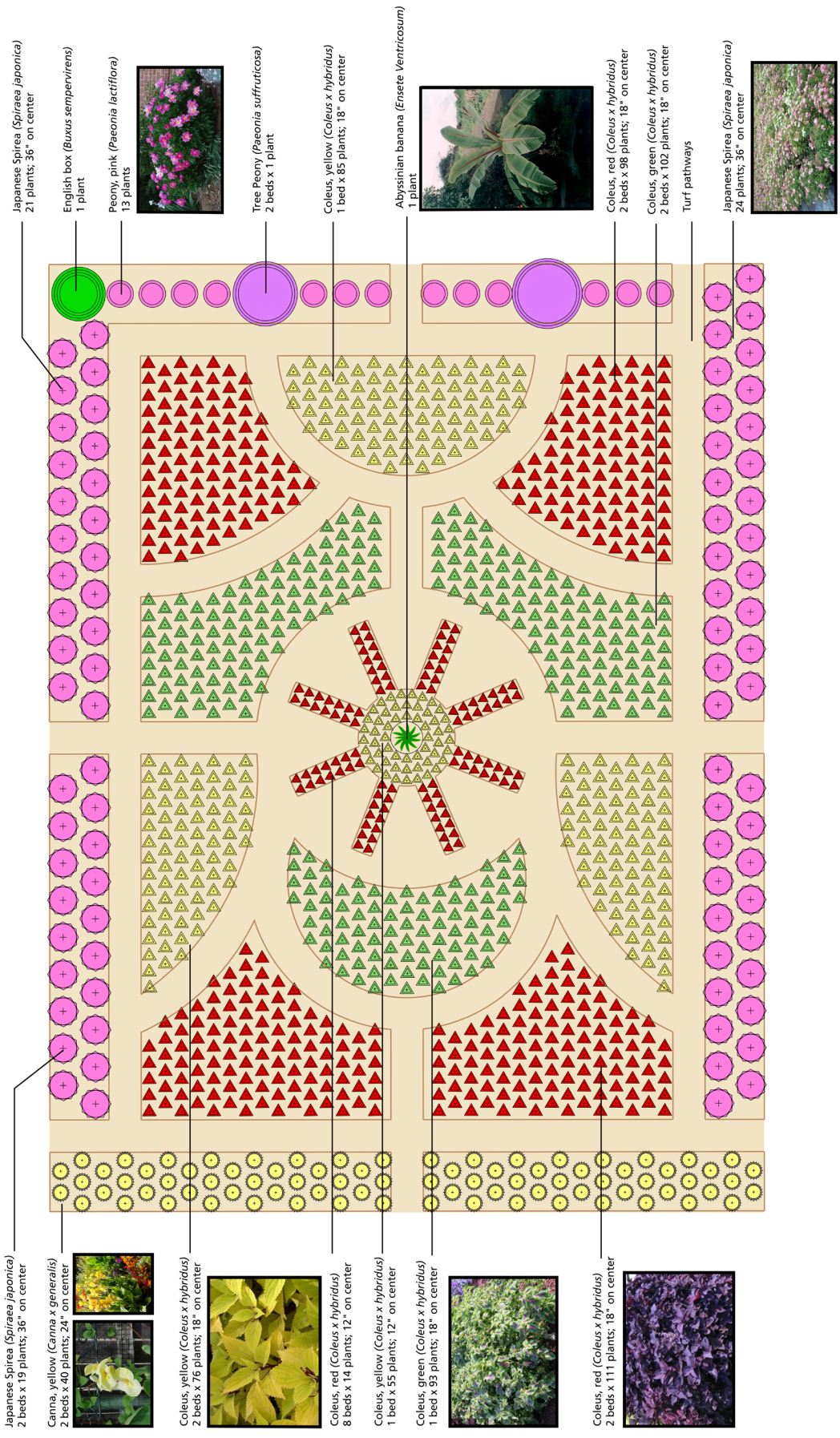
Parterre Garden Rehabilitation Plan - Parterre I Planting Detail

Hampton National Historic Site



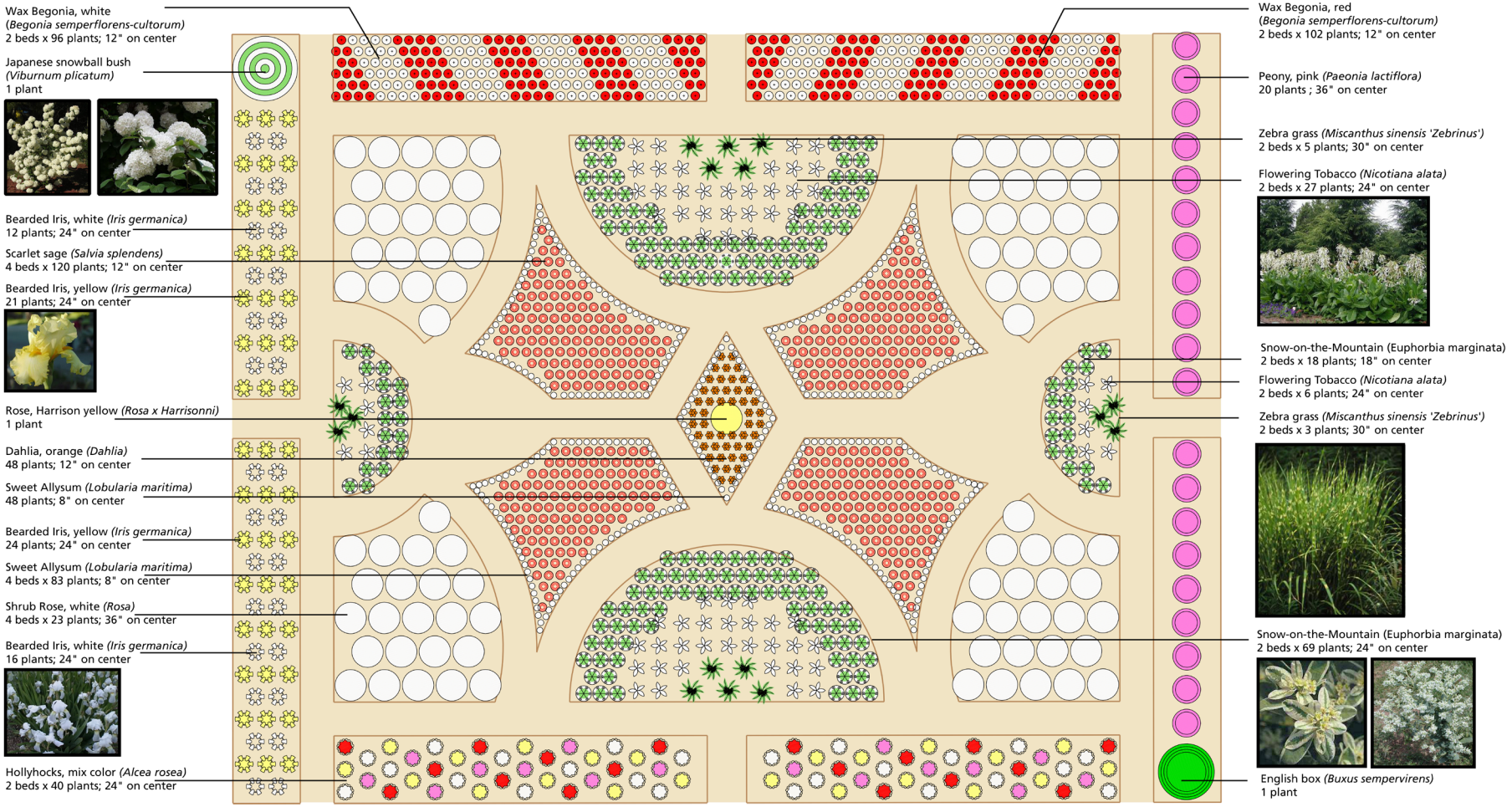
Parterre Garden Rehabilitation Plan - Parterre II Planting Detail

Hampton National Historic Site



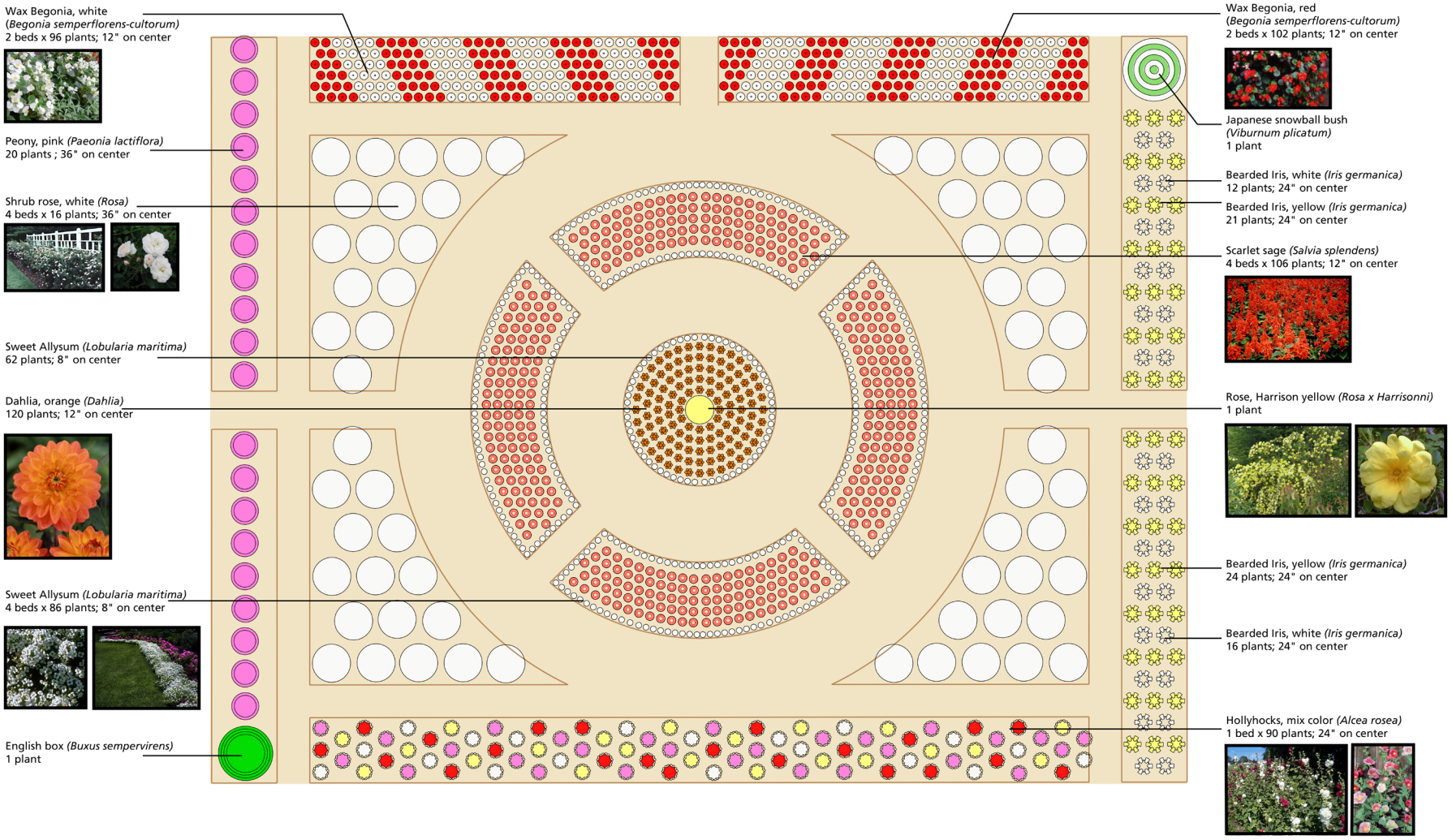
Parterre Garden Rehabilitation Plan - Parterre III Planting Detail

Hampton National Historic Site



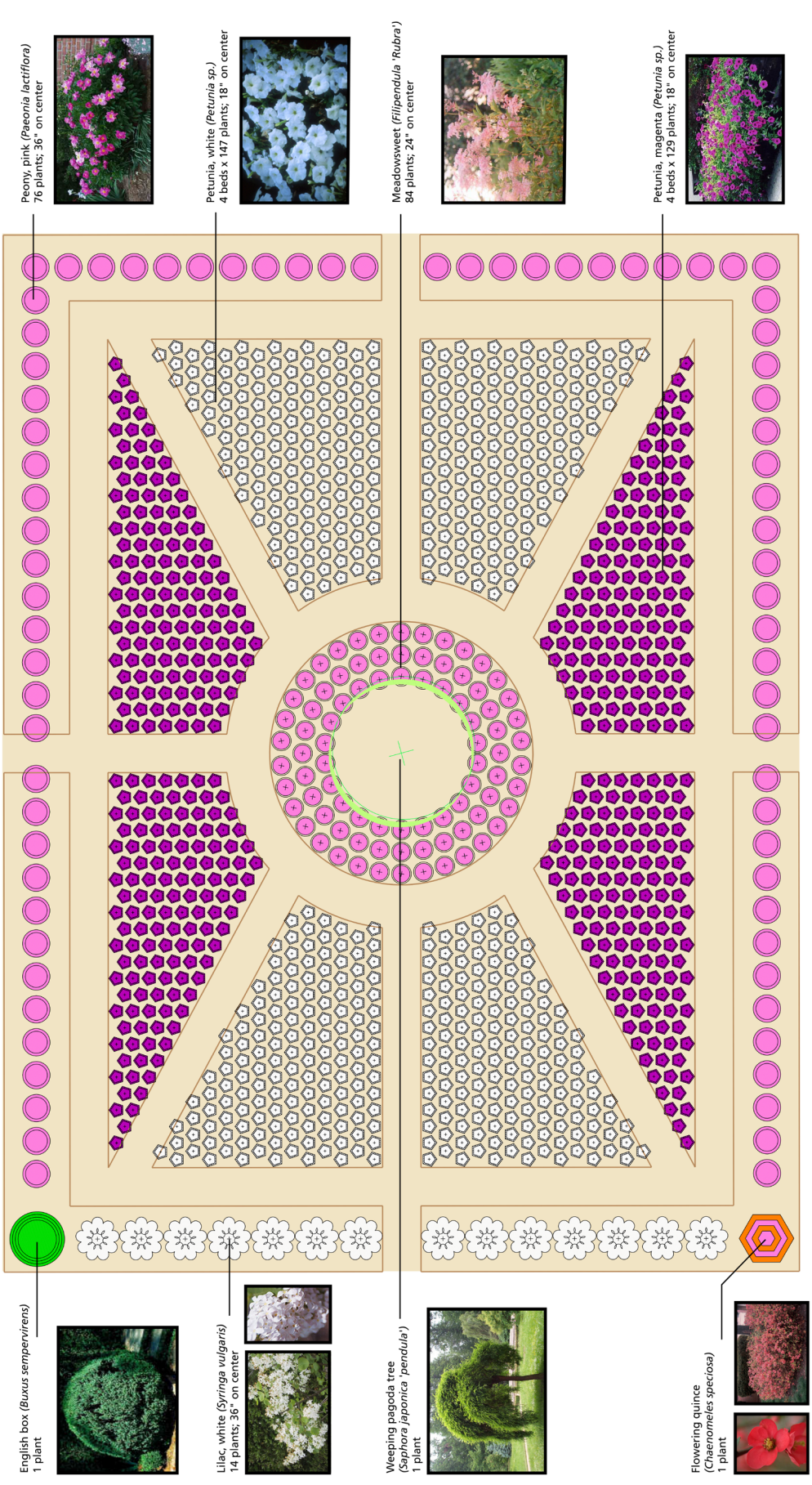
Parterre Garden Rehabilitation Plan - Parterre IV Planting Detail

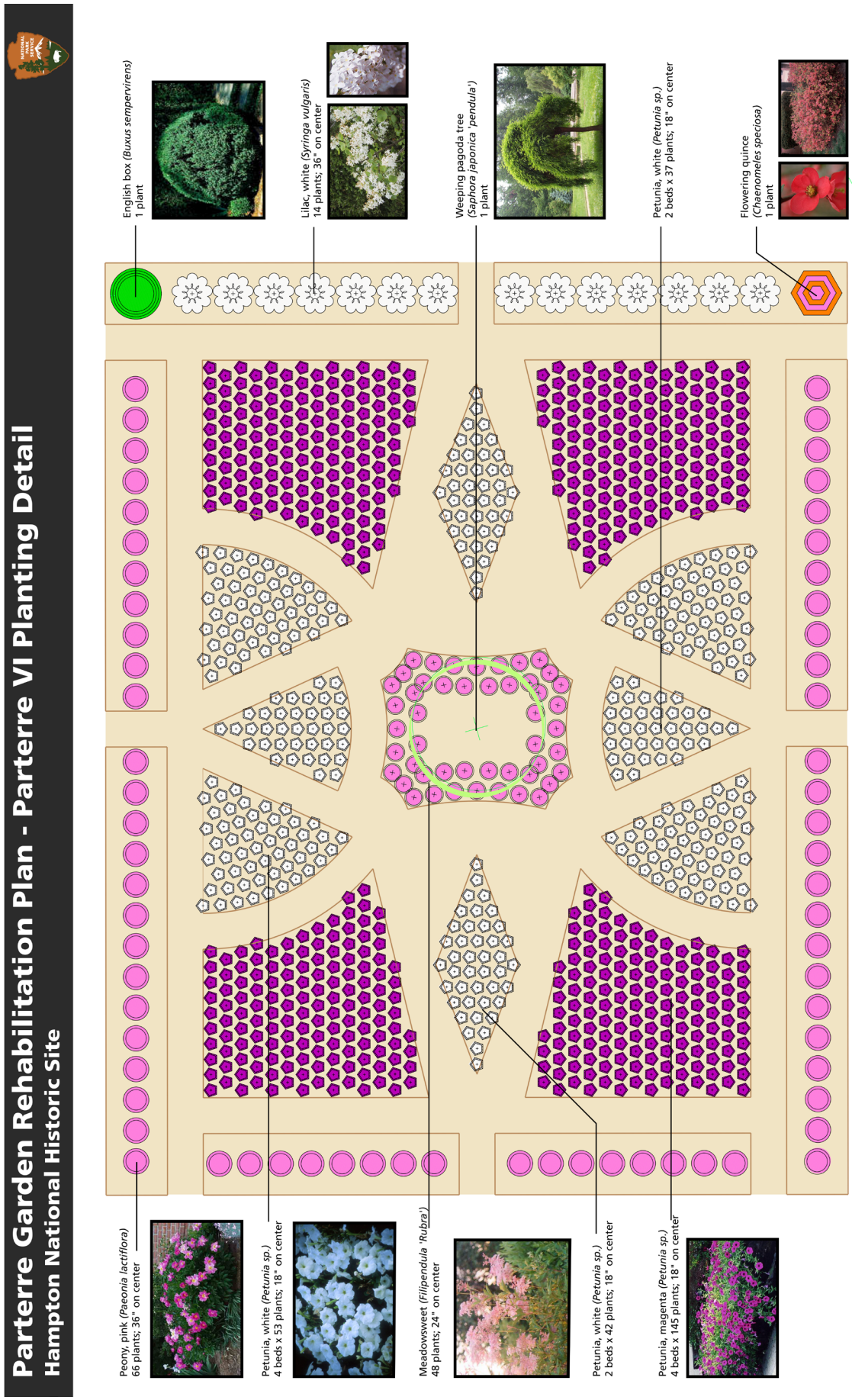
Hampton National Historic Site



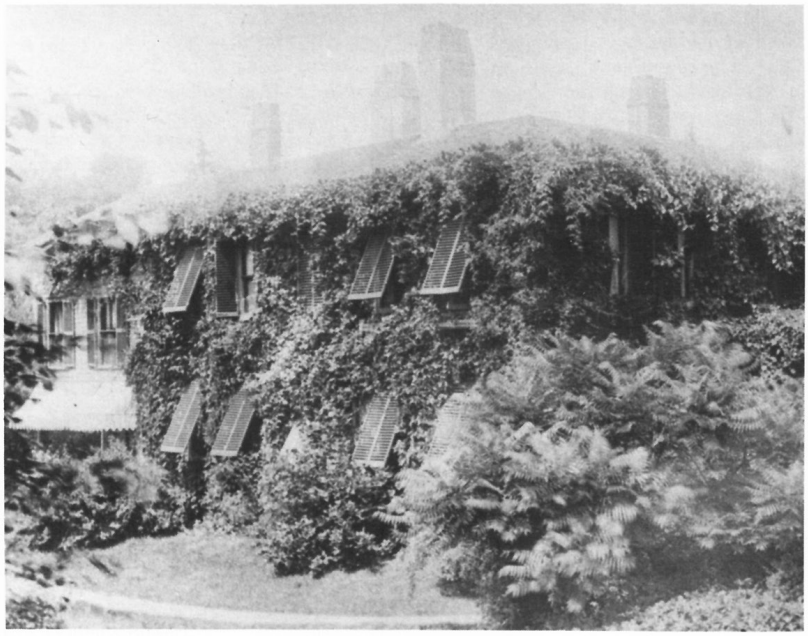
Parterre Garden Rehabilitation Plan - Parterre V Planting Detail

Hampton National Historic Site




Parterre Garden Rehabilitation Plan - Parterre VI Planting Detail
Hampton National Historic Site
English box (Buxus sempervirens)
1 plant
Lilac, white (Syringa vulgaris)
14 plants; 36" on center
Weeping pagoda tree
(Saphora japonica 'pendula')
1 plant
Petunia, white (Petunia sp.)
2 beds x 37 plants; 18" on center
Flowering quince
(Chaenomeles speciosa)
1 plant
Peony, pink (Paeonia lactiflora)
66 plants; 36" on center
Petunia, white (Petunia sp.)
4 beds x 53 plants; 18" on center
Meadowsweet (Filipendula 'Rubra')
48 plants; 24" on center
Petunia, white (Petunia sp.)
2 beds x 42 plants; 18" on center
Petunia, magenta (Petunia sp.)
4 beds x 145 plants; 18" on center

APPENDIX C. RESTORING VINE COVERAGE TO HISTORIC BUILDINGS



FAIRSTED
Frederick Law Olmsted
National Historic Site
Brookline, Massachusetts

PRESERVATION
Tech Notes

U.S. Department of the Interior
National Park Service
Cultural Resources

Preservation Assistance Division

SITE

NUMBER 1

Restoring Vine Coverage to Historic Buildings

Karen E. Day
Preservation Assistance Division
National Park Service

In 1883, Frederick Law Olmsted Sr., noted landscape architect and planner, established his home and office in Brookline, Massachusetts. Olmsted's improvements to the two-acre site transformed the farm into a picturesque suburban estate, which he called Fairsted. Olmsted employed elements from the picturesque and pastoral styles, including an abundance of climbing vegetation on stone walls, trees, and buildings.

To help unify the architecture and the landscape Olmsted planted two twining vines, *Wisteria sinensis* (Chinese Wisteria) and *Actinidia arguta* (Bower Actinidia), which would cover the house. The vines masked the angularities of the building, and thus accomplished Olmsted's intent of obscuring the distinction between the natural and the manmade. The vines climbed profusely on the south side of the house, twining around waterspouts, window boxes, and shutters. Olmsted installed strapping to provide vine support, that ran vertically and horizontally along the facade.

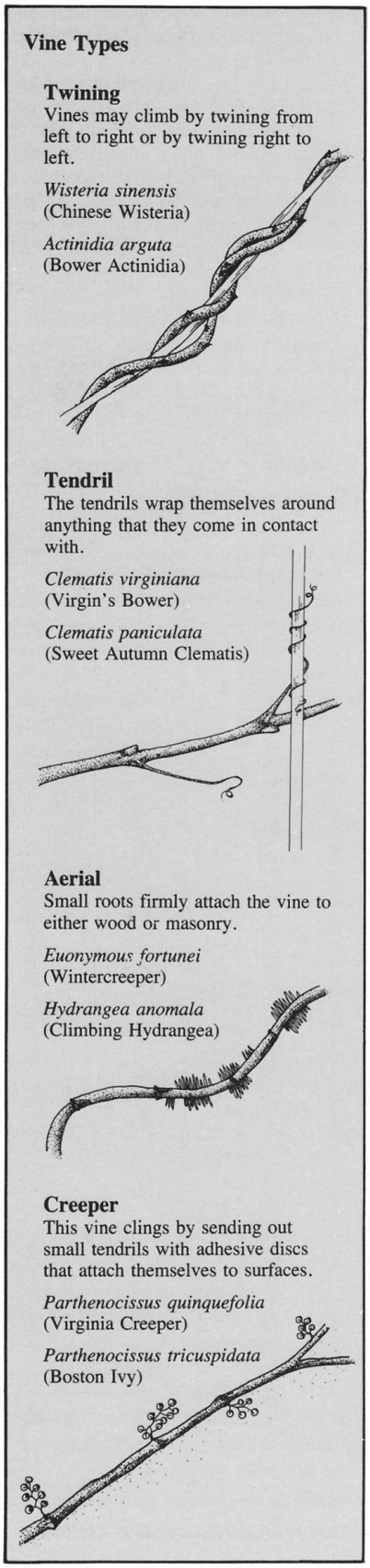
The vines that covered Fairsted are an important visual and historic feature, reflecting Olmsted's interpretation of the ideal garden suburb and his landscape design principles. Unfortunately, the vines eventually contributed to the deterioration of the clapboard house, necessitating that some alternative method be found to protect the building facade from future damage and while still supporting the historic plant material.

Problem

Vines can damage historic clapboard or masonry buildings in a number of ways. Roots growing near buildings retain moisture and can put pressure on foundations, displacing materials and providing entry points for water, insects, and rodents. The primary damage caused by all vines is due to moisture. The shade created by extensive vegetation cover prevents the sun from drying the covered wall, and also reduces the drying effect from air circulation. Moisture from condensation, rain water, and plant transpiration is thus slow to evaporate and creates an environment conducive to paint failure, wood rot, and deterioration of soft masonry. The continuous presence of moisture on masonry buildings can weaken mortar and cause structural deterioration. When water trapped in cracks and openings freezes, the ice expands— pressure that can further damage the masonry.

In addition, vines cause other forms of damage depending on their individual

Where vegetation is essential to the integrity of a historic property, historically significant plant materials and other landscape features should be preserved and maintained while taking steps to protect and maintain historic buildings.



growth habits. *Twining* vines climb by sending out shoots that wrap around objects and grow in both length and width. As the vine grows thicker, it can constrict these objects, causing features such as louver shutters to snap under the increasing pressure. Furthermore, the spreading shoots penetrate openings and crevices. In time, the growing vine can loosen and separate building materials.

Like twining vines, *tendril* vines wrap around objects for support. Because they are actually extended leaves, tendrils do not grow in width, only in length. Both twining and tendril vines, however, can break weather seals on wooden facades, separating wood shingles and siding, as well as fascia and soffit boards on porches. Other vine types include *Aerial* vines which grow small roots along the length of the stem. These rootlets cling to the wall and can force their way into crevices. The fineness and density of the rootlets makes removal difficult. *Creeping* vines have tiny adhesive pads that cling to the building surface. Commonly found on masonry brick buildings, creeping vines do not generally cause extensive damage to structures while growing, although they may abrade softer mortar. However, they attach themselves so thoroughly to the building surface that paint, mortar, and brick are likely to be damaged when the vines are removed.

In 1980, The National Park Service began structural restoration of the house at Fairsted. To facilitate this work, the historic vines were removed from the facade and cut back to the ground. Since the vines were both historic plant material and an important feature of the property, complete removal was avoided. The vines were kept at ground level, but pruned frequently to prevent reattachment to the house. This situation resulted in weakened plant growth and an appearance quite different from



Figure 1. Historic plant materials can be retained while restoration of the historic structure is underway. The *Wisteria* and *Actinidia* vines that were historically used by Olmsted, were cut back during the restoration of Fairsted in 1988. Photo by Charles Pepper, courtesy of the Olmsted National Historic Site.

Olmsted's intention *(see figure 1)*. Furthermore, long-term frequent pruning risked a higher incidence of pest-related problems to the plants and restricted their natural climbing habit. It was therefore important to the public site that a new trellis system be devised that would protect both the historic vegetation and the historic structure, while re-establishing the appearance of a "vine clad mansion."

Historic Fairsted Trellises

Development of a new trellis system began with research into the materials, techniques and hardware used in New England between 1880 and 1930, as well as specific investigation into the various techniques used at Fairsted during those years. Historically, the east elevation of the house had two trellis structures supporting *Wisteria sinensis* (Chinese Wisteria). Photographs from as early as 1884 show a wooden trellis system at the entry porch and a spiraled steel strapping system along the house facade *(see figure 2)*. Remnants of these systems, such as eyebolts and hooks, were found intact at several locations on the structure. The kitchen wall had an interesting trellis consisting of posts with protruding pegs located between windows. Holes in the post indicated that pegs could be added or removed depending on the growth of the plant.

Solution

After investigating the various types of historic trellis systems at Fairsted, four criteria for the new trellis systems were established to address particular preservation issues. An ideal system would:

1. provide an appropriate historic appearance;
2. suit the specific vine growth characteristics;
3. minimize the impact of the anchorage and support structure of the trellis to the historic building facade; and,
4. provide direct access to the building for preservation and maintenance purposes.

In order to meet both the above criteria and also to test alternative solutions, four different trellis systems were designed and installed for use in a two-year test phase *(see figure 3)*. The first system used spiraled steel strapping; the second, aircraft cable; and the third modular pipe. The fourth system combined strapping and piping.

Installation and Monitoring

The experimental trellis systems were constructed and installed on the south and west elevations (where the historic plant material is located) in 1989, and have been monitored for the past two years *(see figure 6)*. Plant growth and development, ease of removal, appearance, and effect on the historic structure are being observed and documented regularly. Some recommendations for modification have already been made.

The steel strapping system (system 1), although painted, has shown a great amount of rust. The use of galvanized steel, painted with a zinc oxide primer and a finish coat would have discour-

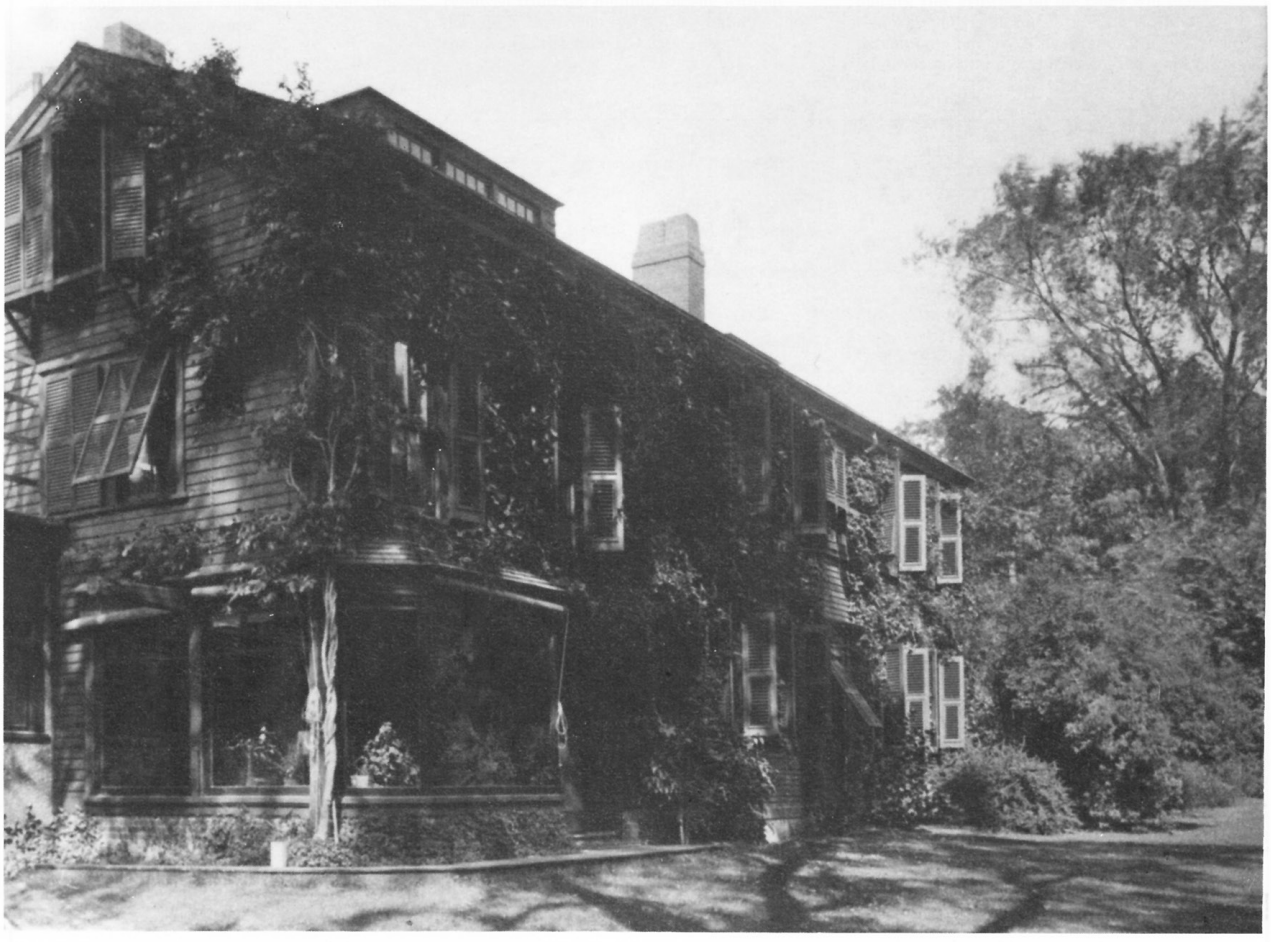


Figure 2. View of the west elevation at Fairsted which shows a steel strapping trellis system built as early as 1884. Photo courtesy of Olmsted National Historic Site.

Figure 3. The four experimental systems developed at the Olmsted National Historic Site, and some advantages and drawbacks to each.

System 1 — Spiraled Steel Strapping

Fabrication
Materials: ⅛″ x ½″ spiraled steel strapping, hooks, snap hooks, eyebolts, and F & M rings. The steel strapping trellis is modeled after the historic design (c. 1885) developed by Olmsted. Spiraled metal strapping were attached to the house by a series of hooks and metal eyebolts. The eyebolts for this system, as well as the attachment devices for the other trellis systems, are held at least 6″ away from the house to allow for air circulation between the plant material, trellis system and building facade. The strapping was fed through intermediate F & M rings located at regular intervals vertically and horizontally along the side of the house.

Maintenance
The ends of the spiraled strapping are fitted with snap hooks so that the trellis system can be removed for maintenance purposes, thus creating a flexible trellis system.

Evaluation
The spiraled steel strapping is an appropriate support for the growth habit of twining vines. The metal strapping is also effective in recreating the historic appearance of the trellis, and is also the least visible of the systems. The steel, although treated with paint, has already shown a great amount of rust, so an alternative material should be considered.

System 2 — Aircraft Cable

Fabrication
Materials: ⅜″ aircraft cable, eyebolts, and hooks.
⅜″ aircraft cable was substituted for the spiraled strapping in the first system. A system of eyebolts and hooks was used to secure the aircraft cable to the house.

Maintenance
The cable system is similar to the spiral strapping system in that it is flexible. The aircraft cable is attached to the eyebolts with snap hooks that allow the wire and vine to be removed from the building facade without damaging the trellis system, the building, or the historic vegetation.

Evaluation
The texture and twist of the cable support and guide to the twining vines. Like the spiral strapping, the vines grow around the cable, so the structure is not visible. The weight of a mature vine growing on the cable will make removal and replacement difficult for one person on a ladder. A temporary pulley system might be used to aid in hoisting the vines back into place.

System 3 — Modular Pipe

Fabrication
Materials: galvanized metal pipe, fittings, eyebolts, and swivel sockets.
This modular pipe system is composed of galvanized metal pipe and a series of pipe fittings. This system was hinged at the base to allow the rigid trellis structure to be tilted away from the house. The support pipes were anchored in the ground by inserting them in galvanized metal sleeves that were placed 4′ below the ground surface and 6″ away from the house. The top portion of the trellis structure was secured to the house by a bolt and clamp combination.

Maintenance
More than one person is required to remove this system. The rigid system folds out away from the house on the swivel sockets near the base of the house (see figure 4).

Evaluation
Although the rigid system allows the vegetation to remain stable, the pipe structure may also have problems with the weight of fully mature vines. The tilting frame may prove to be difficult to lift back into position. The twining vines do not provide enough coverage to conceal the structure completely.

System 4 — Combination

Fabrication
Materials: spiraled steel strapping, galvanized metal pipe, fittings, eyebolts, and swivel sockets.
This solution is a combination of spiraled strapping, galvanized metal pipe and fittings. Eyebolts will separate the strapping from the supporting pipe structure. Swivel sockets near the base of the pipe structure allow the trellis to be tilted away from the house. This combination system provides a historic trellis appearance with the addition of rigid support. The vines are physically separated from the house, thus reducing potential damage to the facade.

Maintenance
The spiraled strapping can be unhooked from the pipe system for limited maintenance or the entire structure can be removed for more extensive repair.

Evaluation
The weight of a mature vine must also be considered in this solution. This pipe and strapping combination is not historically accurate in appearance. The twining vines cover the strapping, but the pipe structure behind is exposed.



Figure 4. The pipe and strapping system, constructed with swivel sockets, allows the rigid support system to fold down away from the house. The strapping can also be removed from the pipe support for limited maintenance. Photo by Karen Day.

aged rapid rusting. The flexible aircraft cable (system 2), with the added weight of a mature vine will make removal and replacement difficult for one person. A temporary pulley system is recommended to aid in hoisting the vines back into place. The third design is a rigid modular pipe system (system 3). Although the rigidity of the system is advantageous to the stability of the vegetation, the weight of the vines may also be prohibitive for easy removal and replacement. The combination strapping and pipe system (system 4) does not recreate a historically accurate appearance. The system was designed in order to remove the vines on the strapping without removing the pipe supporting system. The vines growing on the strapping do not provide sufficient coverage to hide the pipe system behind. Furthermore, additional maintenance is required to keep the vines from growing on the pipe. After the multi-year test period is complete, one of the four systems will be selected, modified as needed, and installed to the east, south and west facades of the house *(see figure 7)*.

Conclusion

The trellis system solution will restore a feature that contributes to the unique character and appearance of the historic suburban estate, and thus reinforces the interpretation of the Olmsted National Historic Site. The systems discussed here were developed individually to meet the unique requirements of the property. This trellis development process, which considered the building appearance and historic character of the site in addition to the growth habits of the plant, historical trellis materials, and maintenance needs, can be applied to other sites with different needs and considerations. However, climbing vegetation should not be added to historic buildings if it did not occur historically since careful management and maintenance is required. The vines that covered Fairsted were an integral part of the historic character of the site. When vegetation is essential to the integrity of a historic property, historically significant plant materials and other landscape features should be preserved and maintained while taking steps to protect and maintain historic buildings.

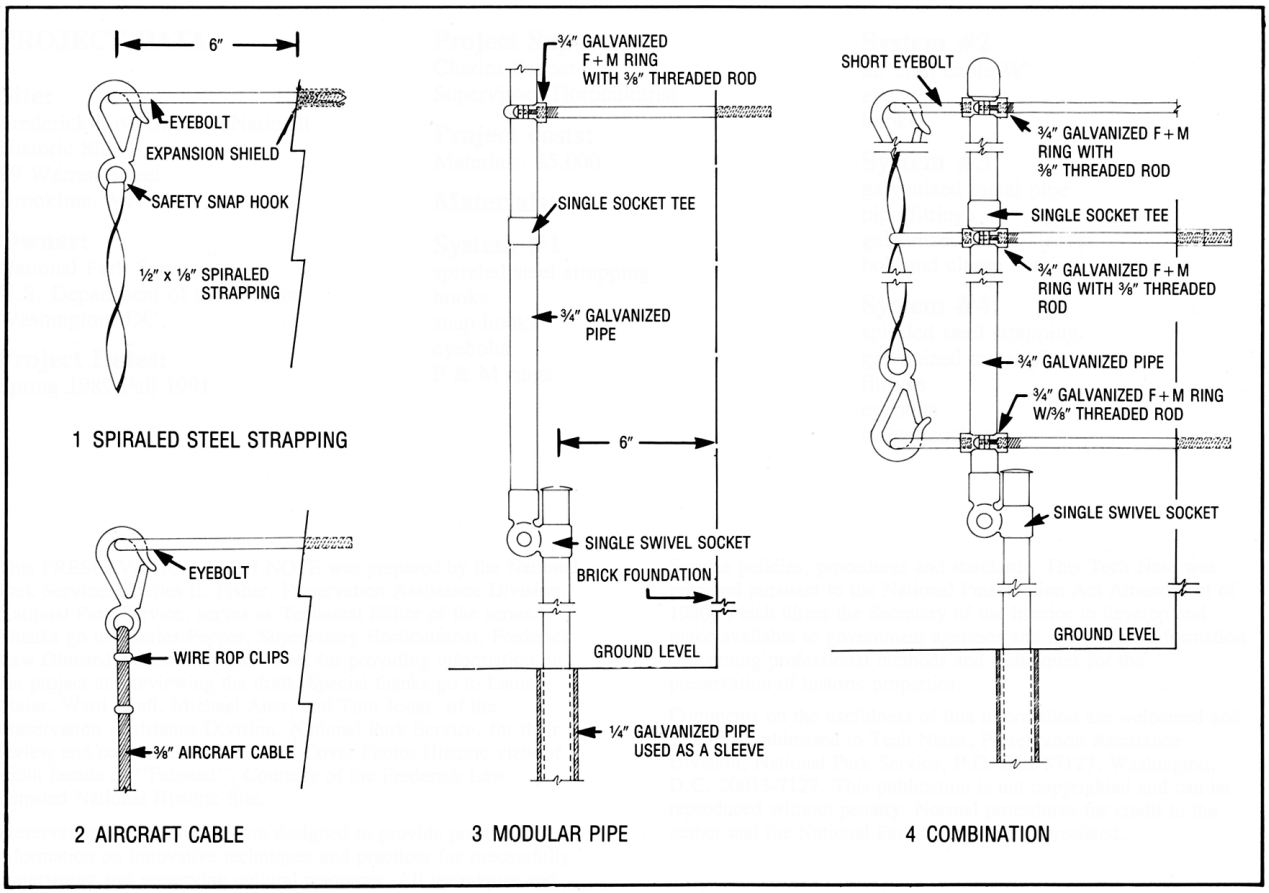


Figure 5. Details of the four experimental trellis systems. Drawings by Sharon Runner, National Park Service.

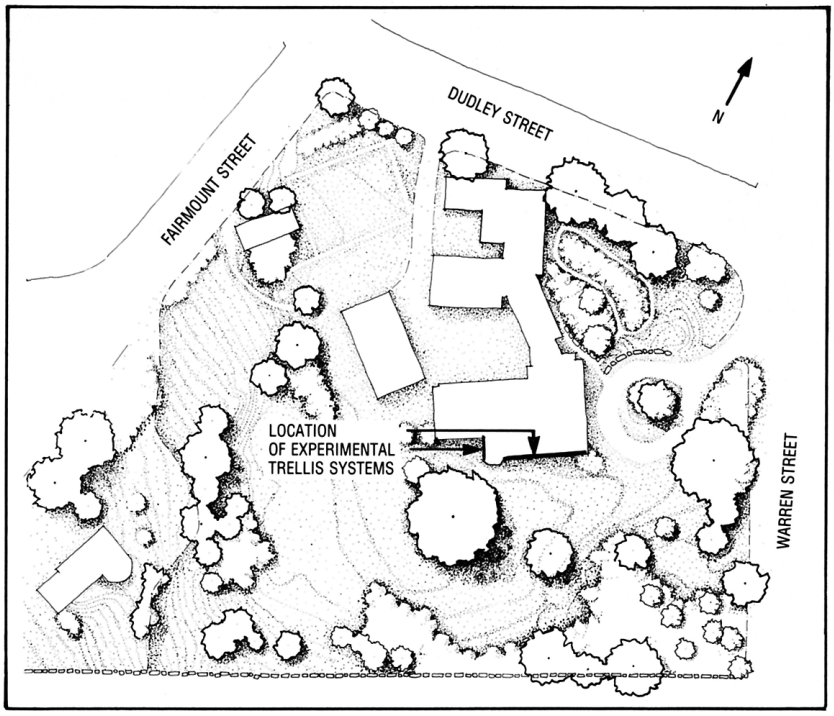


Figure 6. Site plan of Fairsted; the experimental trellis systems were installed on the south and west elevations. Drawing by Karen Day.



Figure 7. View of south facade, the experimental trellis systems have been in place for two growing seasons. Photo by Karen Day.

PROJECT DATA

Site:
Frederick Law Olmsted National Historic Site
99 Warren Street
Brookline, MA

Owner:
National Park Service
U.S. Department of the Interior
Washington, DC

Project Dates:
Spring 1989-Fall 1991

Project Supervisor:
Charles Pepper
Supervisory Horticulturist

Project costs:
Materials: $5,000

Materials:

System #1
spiraled steel strapping
hooks
snap hooks
eyebolts
F & M rings

System #2
air craft cable 3/8″
eyebolts
hooks

System #3
galvanized metal pipe
pipe fittings
galvanized metal sleeves
bolt and clamp combo

System #4:
spiraled steel strapping
galvanized metal pipe
fittings
eyebolts
swivel sockets

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Preservation TECH NOTES are designed to provide practical information on innovative techniques and practices for successfully maintaining and preserving cultural resources. All techniques and practices described herein conform to established National Park Service policies, procedures and standards. This Tech Note was prepared pursuant to the National Preservation Act Amendment of 1980, which direct the Secretary of the Interior to develop and make available to government agencies and individuals information concerning professional methods and techniques for the preservation of historic properties.

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