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Olmsted Center
for Landscape Preservation

Cultural Landscape Report for Eisenhower National Historic Site

Volume 2: Treatment



Cultural Landscape Report

for

Eisenhower National Historic Site

Volume 2:

Treatment

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Overall Treatment Plan, 2006

Farm #1 Treatment Plan, 2006

Farm #2 Treatment Plan, 2006

Farm #3 Treatment Plan, 2006

Clement Redding Farm Treatment Plan, 2006

Acknowledgments

This report was a collaborative effort of the staff at the Olmsted Center for Landscape Preservation and the Eisenhower National Historic Site. At the Olmsted Center, Tracy Stakely was involved in the early phases of the project prior to his move to the Regional Office in Atlanta. Margie Coffin Brown took over as project lead and was assisted by Jeffrey Killion in the development of treatment recommendations and plans. Bob Page, Director of the Olmsted Center, provided overall guidance and reviewed this report.

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Introduction

> *"This was chance, I thought, to prove that careful husbandry could restore land to its original fertility…Although we haven't achieved the greatest success…there are enough lush fields to assure me that I shall leave the place better than I found it."*
>
> Dwight D. Eisenhower, from *At Ease, Stories I Tell To Friends*

Eisenhower National Historic Site (NHS) offers a bucolic glimpse back to the lives and ideals of General Dwight D. and Mrs. Eisenhower. (figs. 0.1-0.3) Established in 1967, the site preserves the structures, landscape, and agricultural uses that reflect the Eisenhower's acquisition of the property beginning in 1950. The mission of the National Park Service (NPS) has been to ensure that the historical characteristics of Farms #1, #2, #3, and the Clement Redding Farm are retained, while allowing for visitor access and educational opportunities. The 1967 designation states,

> *The farm of General Dwight D. Eisenhower, thirty-fourth President of the United States, at Gettysburg, Pennsylvania, is of outstanding historical significance to the people of the United States because of its close association with the life and work of General Eisenhower and because of its relation to the historic battle of Gettysburg during the Civil War….The establishment as a national historic site will constitute a fitting and enduring memorial to General Dwight D. Eisenhower and to the events of far-reaching importance which occurred on the property.*

Today, the Farm #1 property retains a high level of historical integrity for its association with Dwight D. Eisenhower in the 1950s and 1960s. Compared with other historic presidential home sites, the park is relatively young and many trees installed during the Eisenhower period are still maturing. Most shrubs, ornamental plants, and site furnishings are original, and many that have died since the end of the historic period have been replaced. Written material, photographs, and maps provide excellent documentation of the property. Similarly, Farms #2, #3, and the Clement Redding Farm retain a high level of integrity as twentieth-century working farms, with structures and landscape features that date to the eighteenth and nineteenth centuries and perpetuate the longstanding tradition of agricultural use.

In 2005, the Olmsted Center for Landscape Preservation completed a Cultural Landscape Report to document the development of all four farms from their earliest recorded history in the late eighteenth century to the existing conditions. The first volume contains a comprehensive site history, record of existing conditions, analysis of the significance with respect to the National Register of Historic Places, and evaluation of integrity and extant historic landscape characteristics and features. Existing conditions maps of the four farms appear in Volume 1. This second volume articulates a preservation strategy for the long-term landscape management of Farms #1, #2, #3, and the Clement Redding Farm.

According to NPS policy, the Cultural Landscape Report (CLR) serves as the primary supporting document guiding the treatment of a cultural landscape, and is required before any major intervention. For Eisenhower NHS, the treatment plan is needed to address the many issues associated with a maturing landscape, loss of historic vegetation, viewshed management, visitor circulation and accessibility, educational and interpretive objectives, and maintenance requirements. This volume describes related planning documents, discusses treatment alternatives and implications, and provides guidelines and recommendations for the preferred treatment alternative. The overall goal of the treatment recommendations is to reinforce the National Park Service's tradition and philosophical basis for the sound stewardship of cultural landscapes as outlined in the National Park Service *Cultural Resource Management Guideline* (1997) and the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1996).

Relationship to Existing Planning Documents

Shortly after General Eisenhower's death in March 1969, the NPS began a period of research and planning to inform the future management of the historic site, including a Historic Resource Study with period plans for the 1967 landscapes of Farms #1, #2, and #3.[1] The NPS granted lifetime tenancy to Mrs. Eisenhower on Farm #1. During this period, she had use of the fourteen acres surrounding the main house while an NPS grounds crew maintained the landscape.[2] In the spring of 1969, NPS prepared detailed maps of the existing conditions of the property (see CLR Volume 1, Appendix A). NPS management decisions concentrated on maintaining agricultural activity on the farm and on basic maintenance to prevent deterioration of site features, rather than an

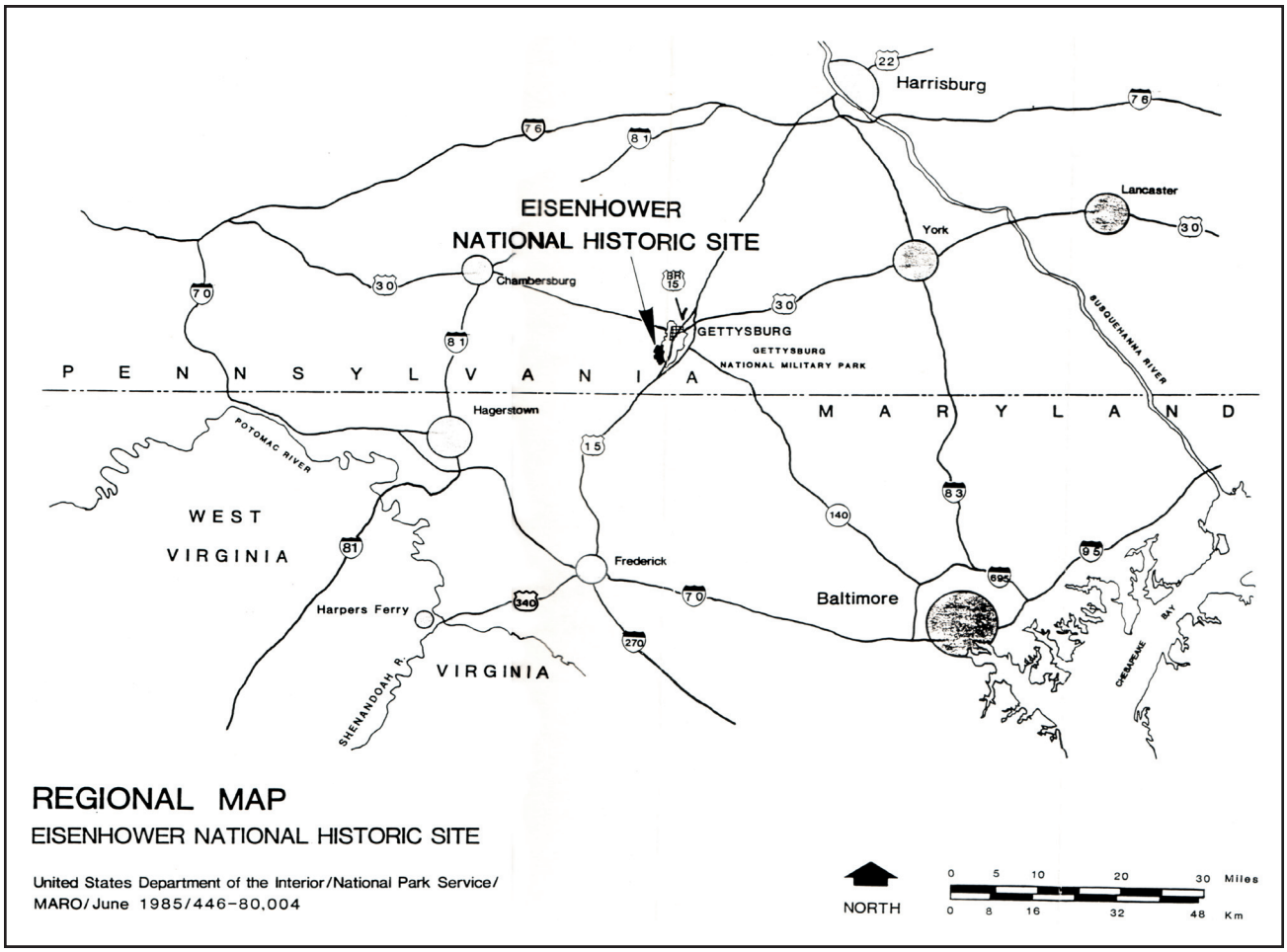


Figure 0.1. Regional map.

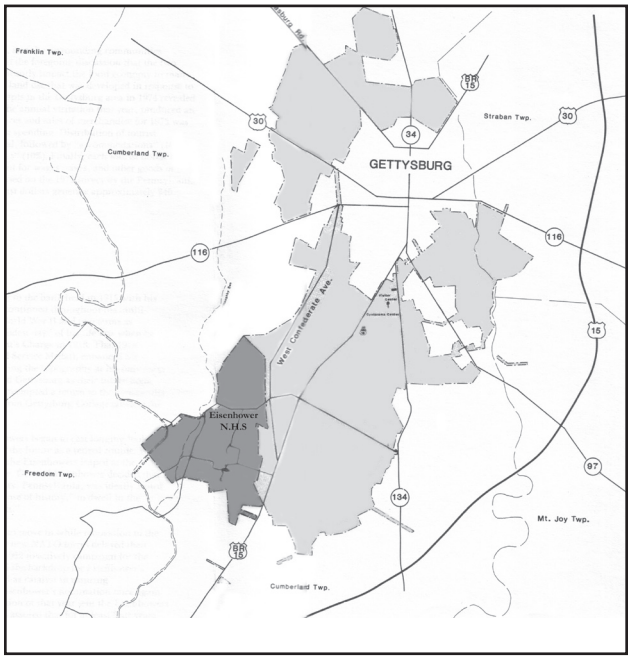


Figure 0.2. Vicinity map (Park shaded in dark gray).

extensive program of development. Farms #2 and #3, which the W. Alton Jones Foundation donated to Gettysburg National Military Park in 1962, were transferred to the newly established Eisenhower NHS in 1969.

Mrs. Eisenhower died on November 1, 1979, and the NPS assumed full responsibility for the Eisenhower home on Farm #1 and its surrounding landscape. Changes were necessary to transform the private residence into a public site. The NPS converted Eisenhower's storage building east of the bank barn to a visitor reception center. A portion of the drive was widened and a fence section was removed in order to accommodate the shuttle bus for visitors. The addition of macadam walkways – painted green to distinguish them from original walkways – improved accessibility for interpretive purposes. These changes did not dramatically alter the Eisenhower homestead and upon opening in June 1980, the site attracted thousands of visitors to experience the place the Eisenhowers called home.

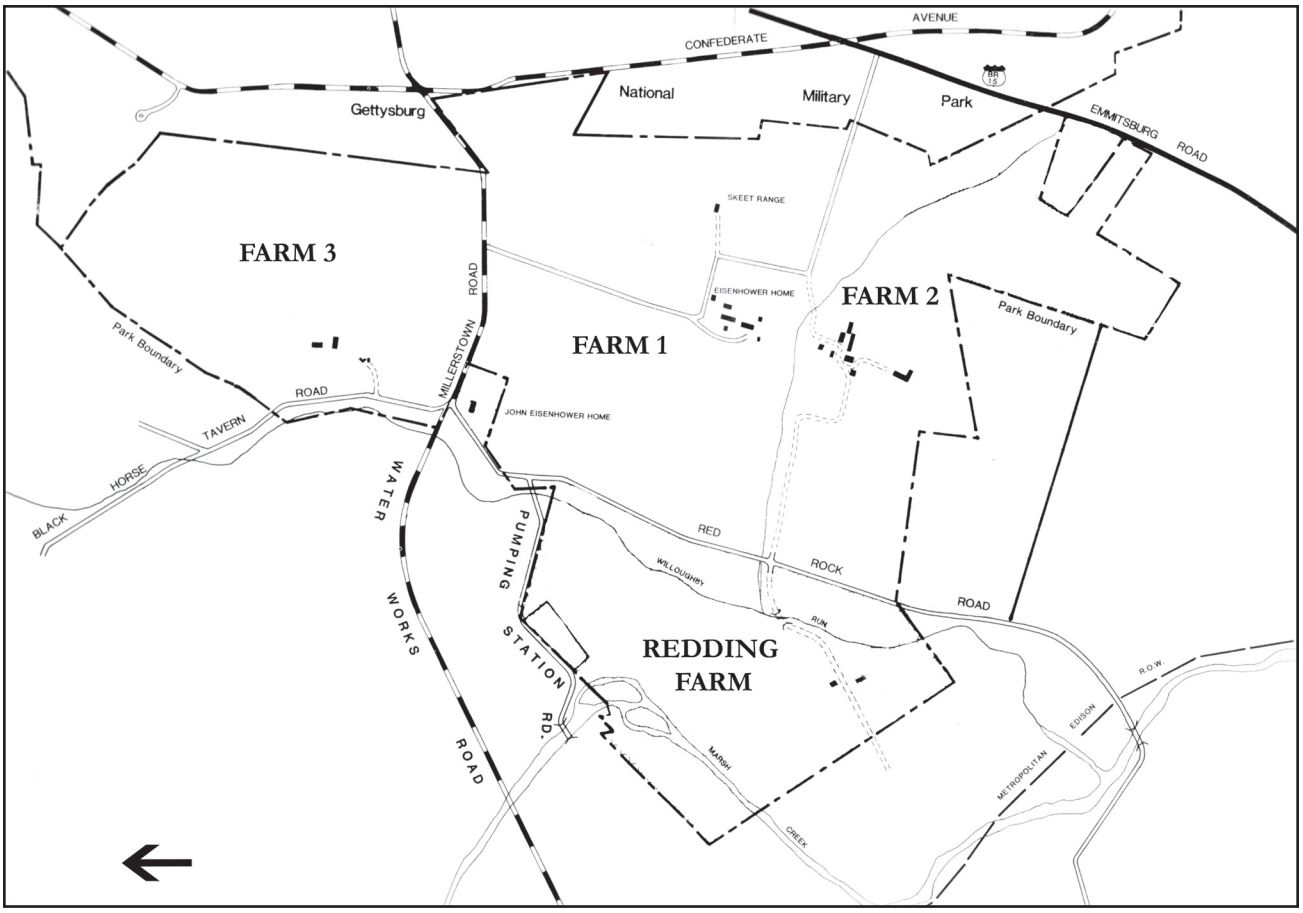


Figure 0.3. Site map.

Visitor programs began in 1980, focusing on the house, with little emphasis on the surrounding agricultural landscape. Prior to this time, however, the park carefully negotiated several special use permits in 1969 and 1970 to continue active agricultural use of the property, preserve the historic land use and setting, and facilitate maintenance. Agricultural operations expanded further in 1978 when five additional parcels were added to the park, including the Clement Redding Farm, which was acquired to preserve the historic setting of the Eisenhower property and the significant views to the west. The Reddings continued farming the property until the death of Irene Redding in 1993, at which time the NPS issued an Agricultural Use Permit to a local farmer to continue agricultural operations. Consignment of the agricultural activities allowed the NPS to focus on the preservation of the many historic structures and the ornamental plantings, particularly those at Farm #1.

Beginning in the late 1980s, several NPS planning documents guided site management including the *General Management Plan* (1987), *Interpretive Prospectus* (1989), *Statement for Management* (1992), *White Tail Deer Management Plan* (1995), *Strategic Park Management Plan for Government Performance and Results Act* (1997), *Long Range Interpretive Plan* (2000), and most recently, the *Wayside Exhibit Plan* (2004). The 1987 *General Management Plan* (GMP) recommended less interpretive emphasis on the house and greater emphasis on Eisenhower's interests in cattle and land husbandry, and the buildings and activities outside of the house itself.[3] The GMP divided the park into three management zones: historic, park development, and special use. (Table 0.1, figs. 0.4, 0.5) The GMP designated the predominant management approach as "preservation, with selective restoration" of missing features. Recommendations included the restoration of the pond and the "light appearance" of the roads, removal of the 1970 security station, and more.[4] Most recommendations, however, were not carried out such as those for grounds modifications. Revisiting the GMP recommendations nineteen years later, the document is considered outdated and is no longer followed. This volume of the CLR reexamines and reevaluates the GMP recommendations with direction set by subsequent management documents and more recent applicable guidelines and policies. The

Table 0.1 Management Zoning Defined in the GMP, February 1987[8]	
Historic Zone	
Preservation Subzone	644.5 acres
Preservation/Adaptive Use Subzone (adaptive use of structures for park operations)	2 acres
Protection Subzone	135 acres
Park Development Zone	
Administrative Development Subzone (Staff parking area, Farm #2)	.5 acres
Special Use Zone	
Agricultural Use Subzone	40 acres
Private Residential Clement Redding Tract (scenic easement permitting the construction of three dwellings)	3 acres

park's current management direction and philosophy are reflected in the *Statement for Management* (1992), *Long Range Interpretive Plan* (2000), *Wayside Plan* (2004), and *Strategic Park Management Plan for Government Performance and Results Act* (2005-2010).

The *Interpretive Prospectus* prepared in 1989 focused on the production of interpretive media with no guidance for landscape modifications. In 1992 the park prepared a *Statement for Management* (SFM) which detailed the park's significance, purpose, management objectives, park conditions, and major issues to resolve. The stated objective for resource management is to "preserve significant features of the cultural landscape to reflect the general character of the Eisenhower farm at the time of its donation to the National Park Service in 1967."[5] For the setting, the objective is to "promote conservation of the setting of Eisenhower NHS so that visitors can experience the historic, scenic, rural, and agricultural character of the farms during the period of the Eisenhowers' occupancy, 1950 to 1969." A major issue raised following these statements is the challenge of maintaining the historic setting and the need to allow for some changes in vegetation.[6]

More recently, documentation for the National Register has been completed. The July 2005 documentation lists a period of significance as 1863 and 1951 to 1969, with the significant dates of 1863, the Battle of Gettysburg; 1955, when renovations to the home were complete and the Eisenhower's began actively using the property and hosting dignitaries; 1966, when the Eisenhower Farm was designated a Registered National Historic Landmark under the provisions of the Historic Sites Act of 21 August 1935; and 1967, when the Eisenhower's gifted the property to the people of the United States. The property is recognized under Criterion A for its association with the Battle of Gettysburg and its association with one of the country's foremost military leaders and 34th President. The property is also recognized under Criterion B specifically for its association with President Dwight D. Eisenhower. Criteria consideration G, achieving significance within the past fifty years, also applies to the Eisenhower NHS.[7]

As stated in the CLR Volume 1, Chapter 5, the period of 1951, when General Eisenhower acquires the farm and is elected president, to "circa 1967" will be used when discussing the period of significance. Recommended treatment actions seek to preserve the integrity – the location, setting, association, design, materials, workmanship, and feeling – of this period.

Endnotes to Introduction

[1] *Historic Resource Study and Historical Base Map*, Edwin C. Bearss (National Park Service: Washington, DC, 1970) and Thomas C. Dall, Landscape Architect to Chief, PSC, Memorandum, Trip Report – Gettysburg NMP, May 26-29, 1969.

[2] Mrs. Eisenhower paid her own utility bills and the like, but on occasion the NPS made improvements in the house, such as painting some of the rooms per her request. Park review comment from Memorandum from John P. McKenna to Margie Coffin Brown, April 7, 2003.

[3] United States Department of the Interior, National Park Service, *General Management Plan, Eisenhower National Historic Site, Pennsylvania*, February 1987, p. 2. Hereafter: *General Management Plan*.

[4] *General Management Plan,* p. 40-42.

[5] United States Department of the Interior, National Park Service, *Statement for Mangement, Eisenhower National Historic Site, Gettysburg, Pennsylvania*, March 1992, p. 29. Hereafter: *Statement for Management*.

[6] *Statement for Management*, p. 30.

[7] Kathy Harrison, Winona Peterson, and Carol Hegeman, "National Register of Historic Places Nomination Form - Eisenhower National Historic Site." July 2005.

[8] *General Management Plan*, p. 30-31 and *Statement for Management*, p. 27.

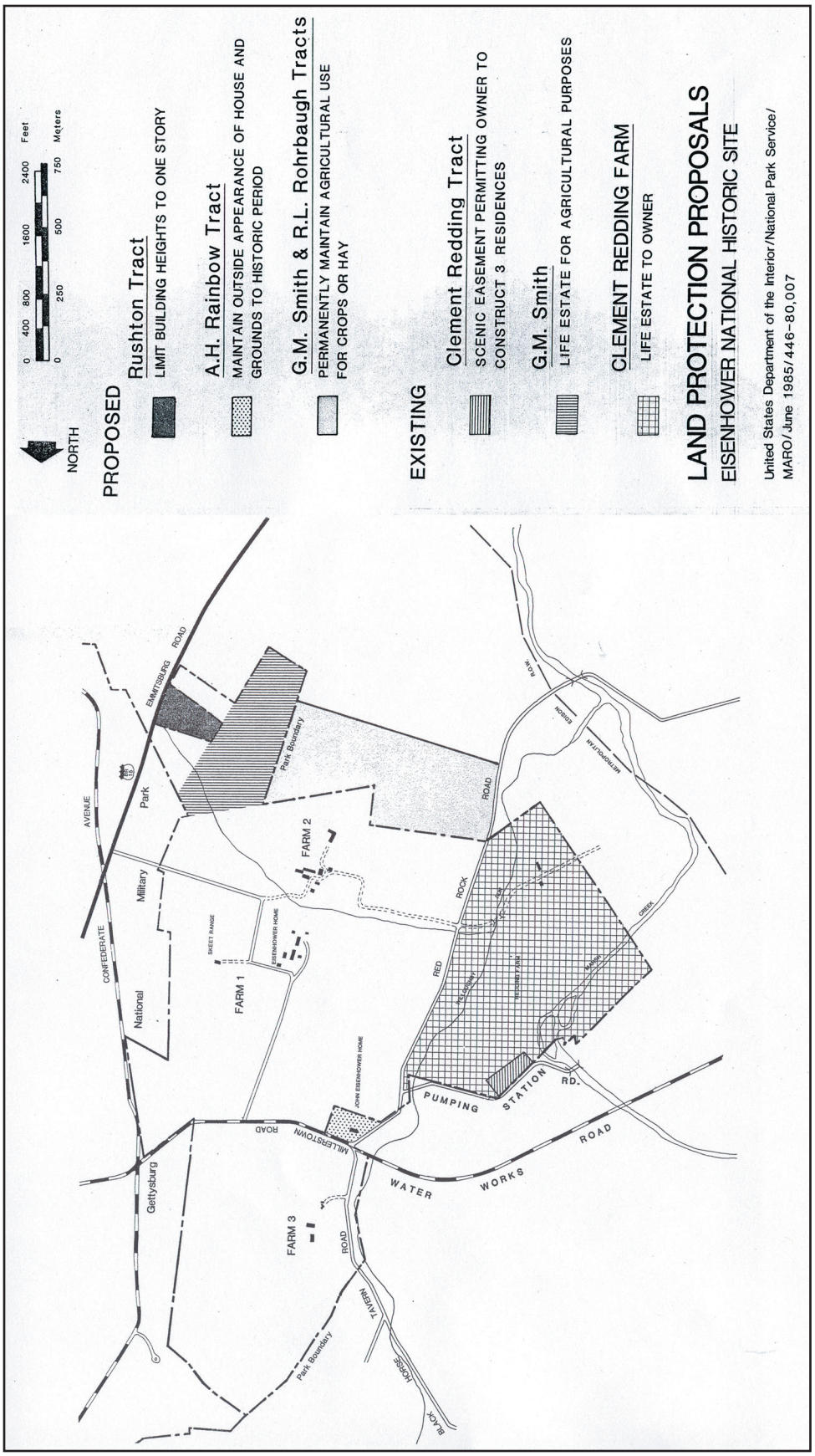


Figure 0.4. Land Protection Proposals map (from General Management Plan, 1987)

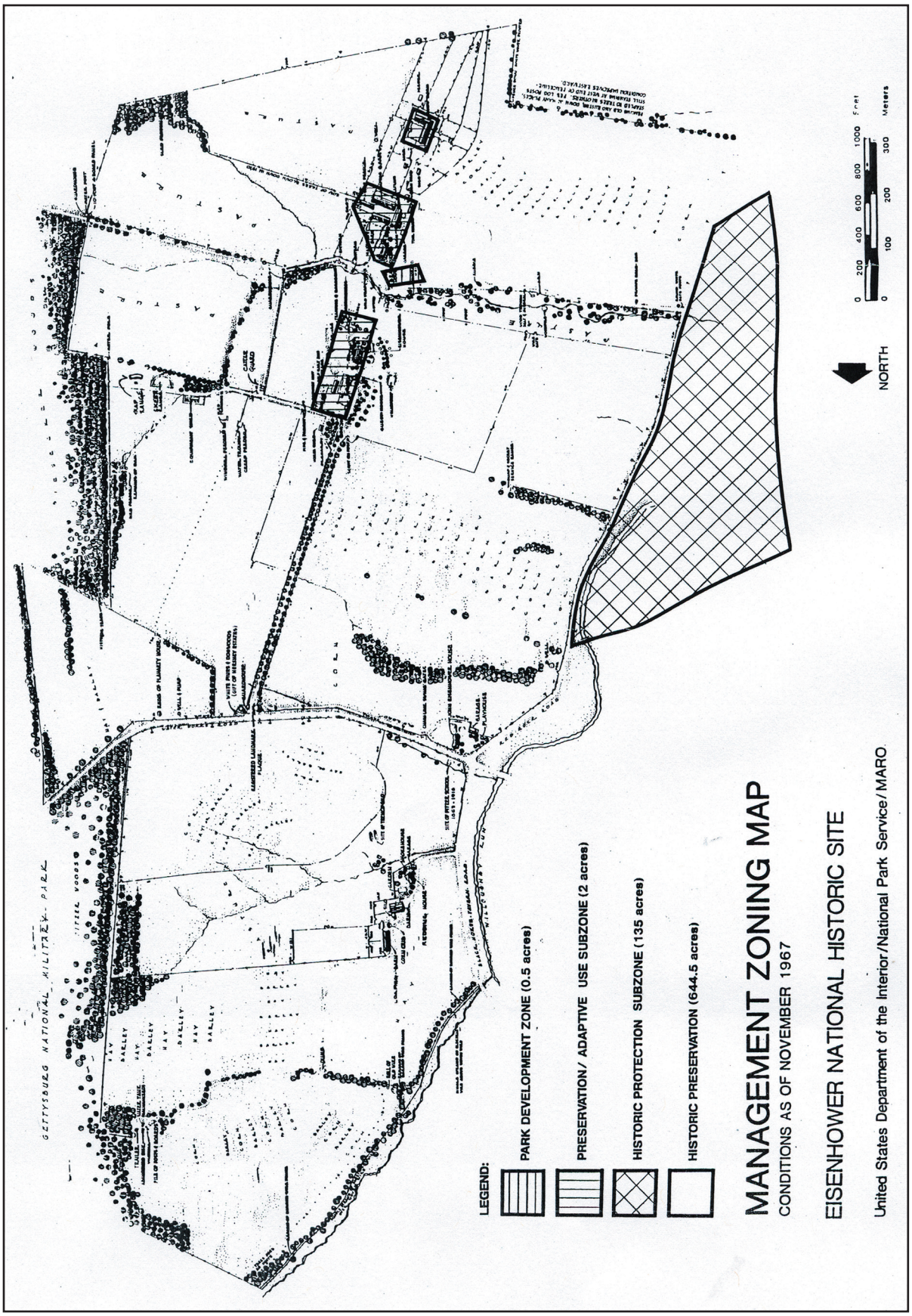


Figure 0.5. Management Zoning Map (from Statement for Management, 1992)

Chapter 1:
Treatment Alternatives and Implications



Chapter 1: Treatment Alternatives and Implications

As a federally owned property listed on the National Register of Historic Places and a designated National Historic Landmark, decisions regarding the treatment of Eisenhower NHS must be consistent with the 1996 *Secretary of the Interior's Standards for the Treatment of Historic Properties*. These standards specify four distinct, but interrelated, approaches to the treatment of historic properties. Application of these treatments to historic landscapes is further defined in the Secretary's 1996 *Guidelines for the Treatment of Cultural Landscapes*. The treatment option prescribed in the 1987 GMP, "preservation with selective restoration" needs to be reconsidered with these more recent definitions. Implications for alternative treatments are described below and in Table 1.1. Considerations include maintenance requirements, interpretation, public access and safety, environmental sustainability, cost, and park operations.

Treatment Alternatives

Preservation

Preservation focuses on the maintenance and repair of existing historic materials and retention of a property's form as it has evolved over time. This approach prescribes the maintenance and repair of the site as it currently exists, and allows existing features to be replaced in-kind, yet does not permit the addition of new features. Since acquisition in 1967, the park service has adopted a preservation approach for the property. However, after more than thirty-nine years have passed, some features, particularly trees and shrubs have declined, been removed, and now need to be replaced. The shade and root systems of healthy mature trees installed by the Eisenhowers often hinders the growth of young replacement plants. The appearance of the property has evolved from an assortment of ornamental trees and shrubs and shade trees, to a landscape dominated by large shade trees, particularly white pines. Increased emphasis on watershed protection has resulted in the growth of vegetation along the stream between Farms #1 and #2, obscuring views between the two farms.

Since preservation focuses on the maintenance and repair of existing historic materials, this treatment involves the least intervention and perpetuates the current management practices. Preservation is likely to be the least expensive treatment alternative, with one possible exception. A preservation approach requires replacement of plants in-kind and in location. For example, the declining 'Hopi' crabapples planted along the drive during the Eisenhower period would be propagated if not commercially available. The propagated trees would then serve as replacements. Replacing plants with a different cultivar is considered rehabilitation.

Rehabilitation

Rehabilitation acknowledges the need to meet continuing or changing uses through alterations or new additions while retaining the historic character of the property. It allows for repairs and alterations of the cultural landscape, and for improving the utility and function of landscape features. It is used to make an efficient, compatible use while preserving those portions or features of the property that contribute to its historical significance. For some historic properties, changes are necessary to accommodate visitor use, such as the addition of parking, concessions, and visitor facilities or the modification of circulation surfaces to withstand high use and meet ADA accessibility standards. In other cases, modifications are necessary for sustainable management, such as the reduction of formal gardens or the elimination of agricultural practices.

A rehabilitation strategy allows for the replacement of missing features as they existed historically based on documentary evidence, or replacement with compatible features. The costs would be similar to those for a preservation approach. At Eisenhower NHS, accommodation of visitor services has resulted in some rehabilitation, such as the conversion of the storage building to the reception center and the removal of a gate for bus circulation. With a rehabilitation approach, plantings that have died or have not thrived since the Eisenhower's departure, either due to reduced maintenance or unsuitable climate, could be replaced with substitute species. For example, the 'Hopi' crabapples along the drive could be replaced with a substitute cultivar. To retain the uniformity of the planting, one substitute cultivar would be selected. Under the rehabilitation approach, however, one must constantly assess the impacts of minor changes to the property's overall historic integrity. The cumulative effect of many

Table 1.1 Implications for Treatment Alternatives		
Preservation	Rehabilitation	Restoration
Spatial organization & natural features		
• Preserve landscape composed predominantly of mature shade trees. • Replace in-kind features that decay or decline. • Allow existing vegetation to grow in wetland and stream areas but prevent further growth by selective cutting and thinning.	• Rehabilitate plantings that have lost all understory plants by planting young trees with ornamental plants. • Manage wetland and stream areas for ecological benefits of watershed protection. • Thin vegetation as much as possible to preserve historic views.	• Restore ornamental plantings and gardens, many more features in the landscape. • Reduce plantings in wetland and stream areas to their circa 1967 appearance.
Land use and cultural traditions		
• Preserve existing agricultural use for grazing and crop production. • Replace deteriorated fences in kind and in location.	• Maintain agricultural use for grazing and crop production. • Replace deteriorated fences in kind and in location as feasible.	• Restore agricultural use to circa 1967 levels. • Restore missing fence lines or replace non-historic fence materials or styles.
Vegetation		
• Preserve existing vegetation. • Replace in kind those plants that decline. • Propagate species and cultivars that are no longer commercially available.	• Replace plants in-kind where feasible. • Replant missing trees, shrubs and ornamental plantings that are missing based on 1969 documentation. • Substitute plantings that are no longer commercially available. • Maintain vegetable garden and ornamental plantings to a size that is sustainable with maintenance operations. • Do not restore crown vetch in wooded corridors (invasive).	• Restore plantings to their circa 1967 appearance. • Remove large trees that shade areas that were previously planted with ornamental plants, shrubs, and small trees. • Replant short lived fruit trees such as peach, nectarine, and cherry. • Restore vegetable garden to its former size and crops. • Restore crown vetch in wooded corridors.
Views		
• Preserve existing views by removing or thinning vegetation.	• Preserve historic views where possible by removing or thinning vegetation.	• Restore historic views by removing or thinning vegetation.
Circulation		
• Preserve existing circulation system of roads and paths.	• Replace existing hardened paths with surface material that is more compatible with historic scene.	• Restore historic surface treatments and maintain hardened ADA accessible network of parking areas, ramps and paths.
Buildings, Structures, and cluster arrangements		
• Preserve existing buildings and uses.	• Reuse buildings to accommodate visitor services and preservation functions. • Retain as much historic fabric and use as possible.	• Restore buildings to historic uses, rebuild bank barn at Farm #2.
Small-scale Features		
• Preserve existing small-scale features.	• Restore some small scale features that are missing, such as the state plaques on trees along the drive.	• Restore small scale features that are missing such as the state plaques on trees along the drive.
Archeology		
• Protect archeological sites.	• Protect archeological sites.	• Protect archeological sites.

substitutions of plant species and other modifications to facilitate park operations could compromise the historical setting, materials, and feeling of the site.

Restoration

Restoration is undertaken to depict a property at a particular time in its history, while removing evidence of other periods. This approach would require depiction of the site at a certain date or period of time. The "period of significance" of 1951 to circa 1967 implies restoration of the site to its circa 1967 appearance. A restoration approach would require reversing the many minor modifications to the property since it was acquired by the park service, with one major exception. Under the Secretary of the Interior's Standards for restoration, provisions are made to allow accessible parking, circulation, and facilities to meet the Americans with Disabilities Act (ADA) guidelines. Existing accessibility features such as parking spaces, ramps, and hard surfaced walkways would be retained.

Restoration would be the most costly alternative and require the highest level of maintenance. A restoration strategy would result in reverting a portion of the Farm #1 barn yard to shale, rebuilding the bank barn at Farm #2, and replacing overgrown plantings in-kind, such as mature tree specimens at the teahouse area, the screen between the house and barn, and the spruce, pine and crabapple planting along the drive. The 'Hopi' crabapples planted along the drive during the Eisenhower period would be propagated if not commercially available. The vegetable garden would be restored to its circa 1967 size.

Reconstruction

Reconstruction recreates vanished or non-surviving portions of a property for historic purposes. This approach would only be appropriate if historic characteristics of the site were destroyed or if the Civil War battlefield within the park boundaries was determined so significant that its re-creation, by the removal of the Eisenhower elements, was critical to the park's interpretive mission. This treatment option is rarely selected and is not considered an appropriate or necessary option for the Eisenhower property.

Preferred Treatment Alternative

Based on the changes in vegetation and the changes made to the landscape to accommodate visitors, the recommended treatment for the Eisenhower NHS is rehabilitation. This approach will focus on the continued maintenance and repair of landscape features remaining from the period of significance, which ends in 1969. When feasible, vegetation, fences, circulation surfaces, and small-scale features will be replaced in kind. However, as has been the case since the NPS converted the private estate into a public historic site, rehabilitation will take place to ensure visitor safety and comfort, such as hardened circulation surfaces. Rehabilitation will also allow for sustainable maintenance practices. The 'Hopi' crabapples, for example, would be replaced with a disease-resistant variety. Treatment of the stream corridors will be carried out in concert with the Chesapeake Bay Act to protect water quality and natural resource wetland habitat. Below is a list of treatment principles that apply to Eisenhower NHS. Subsequent sections contain descriptions of the defining historic landscape characteristics and associated recommendations.

Treatment principles

In 1966, Farm #1, the central farmstead of the Eisenhower Farms, was designated a National Historic Landmark because of its nationally significant association with General Eisenhower. In the park's enabling legislation in 1967, the Eisenhower NHS was designated primarily for the association with General Eisenhower and secondarily for its relationship to the Battle of Gettysburg during the Civil War. This holds true for Farms #2 and #3, which were transferred out of Gettysburg NMP and into Eisenhower NHS in 1969. Similarly, the purpose of the Clement Redding farm is to preserve the historic setting of the Eisenhower properties. Therefore, the rehabilitation treatment approach at Eisenhower NHS aims to reflect the lives and interests of the Eisenhowers and associated working farms.

Before any modifications are made to the farm properties or properties in the surrounding viewshed, changes should be carefully evaluated for their impact on historical integrity and defining landscape characteristics and features. In carrying out individual actions or routine maintenance, it is advisable to evaluate the overall or

cumulative effect of each change to ensure that the historical integrity is not diminished. The following is a list of general principles that, when adhered to, will enhance the character and integrity of the farm properties.

-- Preserve the open areas, woodlands, building clusters, and natural systems that contribute to the overall spatial organization of the farm properties. Control vegetation as needed.
-- Preserve the natural features of the properties.
-- Preserve agricultural use.
-- Preserve historic fence lines, fence materials, fence post and gate styles.
-- Preserve the diversity of vegetation within the cultural landscape, recognizing that many plants were gifts or relate to a particular interest of the Eisenhowers.
-- Preserve historic views.
-- Provide barrier-free access in such a way that character-defining features, materials, and finishes are preserved.
-- Preserve historic buildings and structures, including small outbuildings and features associated with agricultural operations and the lives of the Eisenhowers.
-- Preserve the diversity of features in the landscape, both large and small features, to best provide the overall appearance of an occupied homestead and operating farm.
-- Protect archeological sites.
-- Protect intermittent streams.
-- Protect the ecosystem.

Endnote to Chapter 1

[1] United States Department of the Interior, National Park Service, *The Secretary of Interior's Guidelines for the Treatment of Historic Properties with Guidelines for the Treatment of Historic Landscapes*, Washington DC: Cultural Resource Stewardship and Partnerships, Heritage Preservation Services, Historic Landscape Initiative, 1996: p. 33.

Chapter 2:
Treatment Issues and Recommendations



Chapter 2: Treatment Issues and Recommendations

The remainder of this volume addresses specific issues, recommendations, and alternatives for site features on all of the farms and is organized under the following headings:

A. Spatial Organization, Topography, Response to Natural Features and Systems
B. Land Use and Cultural Traditions: Crops, Grazing, Former Pond, and Wildlife Management
C. Vegetation and Views: Stream Corridors, Vegetated Screens, and Ornamental Plantings
D. Circulation: Accessibility, Paved and Gravel Surfaces
E. Buildings and Structures
F. Small-Scale Features: Fences and Gates, Benches and Waysides, Septic System at Farm #2, Selected Historic Features
G. Archeology
H. Summary of Recommendations

An overall treatment plan for the site and specific plans for Farms #1, #2, #3, and the Clement Redding Farm appear in Appendix B at the end of this report. The section letters and numbers correspond to the recommendations shown on the treatment plans.

A. Spatial Organization, Topography, Response to Natural Features and Systems

Since the eighteenth century and the Manor of Maske, topography and natural boundaries influenced the spatial organization of the farms that comprise Eisenhower NHS. Roads typically followed low areas and wooded stream corridors while farm buildings occupied the higher ground, leaving the gently sloped land in between open for pastures and crops. Within this mosaic was a smaller but typical pattern: a domestic complex with a farmhouse, cisterns, shade trees, and gardens adjacent to a barn complex with paddocks, watering and feeding troughs, and fencing. During the Eisenhower period, these patterns held true and guided a variety of farm improvements.[1] (fig. 2.1)

A-1. Diversity of Landscape Features

From a broad perspective, farm building clusters, road alignments, overall field patterns, and property boundaries remain intact from the Eisenhower era. Upon closer observation, as experienced by walking through the landscape, the properties are working farms with an array of utilitarian features such as outbuildings, fences, gates, and watering troughs. Farm #1, however, is unique because in addition to the agricultural features, there are many ornamental plantings, patios and walkways, and furnishings in the domestic core. This contrast reflects its role as the Eisenhower's home and retreat.

Recommendations

The existing spatial patterns of fields, building clusters, and boundaries shown in figure 2.1 should be preserved. Doing so will perpetuate the diversity of utilitarian and ornamental landscape features throughout the park, particularly Farm #1. While preserving the diversity of features will require a high level of maintenance, it is essential to the design and feeling of the Eisenhower NHS. There are numerous examples that illustrate the utilitarian and ornamental landscape: the paved driveway surfaces and extensive and carefully designed plantings along the driveway for Farm #1 contrasts with the gravel surfaces and relative absence of driveway plantings on the other three farms; or the outdoor entertaining spaces at Farm #1 versus none at the other farms. Each of these features will be discussed in detail in subsequent sections of the treatment plan. Another contrast is visible in the fences: at Farms #1, #2, and #3, the fence styles distinguish the properties owned by Eisenhower Farms with the simpler utilitarian fences of the Clement Redding Farm, which was not owned by Eisenhower Farms. Fences are discussed in more detail in the section on small-scale features and in the park's National Register documentation.

A-2. Management of Natural Succession

Where not in conflict with wetlands or endangered species protection, natural areas require careful management and cutting to preserve the open landscape, and important characteristic during the historic period. This issue is discussed in greater detail in the Land Use and Cultural Traditions section and the Vegetation and Views section.



Figure 2.1. Spatial organization and field patterns depicted on the 1967 plan (from Historic Resources Study, 1970).

B. Land Use and Cultural Traditions: Crops, Grazing, Former Pond, and Wildlife Management

The tradition of land use at Eisenhower NHS is one of the most significant landscape characteristics, portraying not only the primary historical function of farming since the eighteenth century, but also the values, personal tastes, and activities of the Eisenhowers during their ownership.[2] Fortunately, this tradition continues today because without active production, the property would indeed be bleak and cumbersome to maintain. These agricultural uses are complemented by the many historic domestic and utilitarian features still extant on the farms as well as more recent additions that accommodate park visitors and staff. These features are discussed in more detail in subsequent sections of this chapter. The historical base map from the Historic Resource Study shows the agricultural areas as they existed in 1967 (see fig. 2.1). Some of the changes that have occurred since that time are discussed below.

The Eisenhowers were thoughtful stewards of the land and adopted contour planting and crop rotation practices to better conserve the soil. Such techniques are still relevant, but several more recent environmental protection policies need to be considered in the development of historic preservation guidelines. The Clean Water Act and associated guidelines for the protection of floodplains and wetlands, enacted in the late 1960s and early 1970s, dictate the management of stream corridors that dissect the site. These efforts are manifested in the protection initiative called the Chesapeake Bay Program. The Endangered Species Act, enacted in 1973, provides guidelines for the protection of endangered, threatened, and candidate species, which influences management practices on the Clement Redding Farm. Like many land conservationists, Eisenhower was also an avid hunter of gamebirds, which guided his management of woodland and stream edges. While recreational hunting is not conducive to the NPS mission, controlled hunting of an over abundant deer population is needed to protect crops and ornamental vegetation. These issues are described in more detail below.

B-1. Changes in use of fields

Through special use permits, farmers continue to plant crops in contours much as they existed historically. However, a comparison of aerial photographs from the mid-1960s and an aerial from 1998 shows that there have been some changes in land use at Farm #1. The contour pattern of crops in the field directly west of the Eisenhower Drive is different today than it was historically. According to the historical base map, the field directly west of the Eisenhower house was pasture but some historic aerials show corn there.[3a] It is now contour cropland. (figs. 2.2, 2.3)

Recommendations

Contour farming and soil conservation practices should be preserved, as it is a lasting imprint of Eisenhower's influence on the landscape.[3b] The field west of the Eisenhower home should remain as crops as there is no record of cattle grazing in this field.[3c] The field west of Eisenhower Drive should be returned to its historic contour pattern if feasible.

B-2. Farm practices and machinery

Both the GMP and SFM raise questions about the type of farm practices and machinery that are appropriate to perpetuate agricultural use of the property, including the equipment used, the cattle operation, and the types of crops grown.[4] Such features are an important part of the story at Eisenhower NHS, and most of the machinery has been preserved with some of it on display.

Recommendations

The GMP states, "present management policies will be continued in order to reduce the impact of modern vehicles in the visitor concentration areas and within the visitor's immediate view. This may include restrictions on the moving of non-historic permittee equipment through these areas during peak visitation hours; reduction of the visibility of modern maintenance equipment and staff vehicles; and whenever possible, scheduling of farm related tasks requiring modern equipment to times when visitation is low."[5] To date, the park has not found it necessary to formalize or implement such restrictions.

B-3. Crop rotations

As stated in the 1987 GMP, many of the traditional crops grown in southern Pennsylvania in the 1800s are still grown on the Eisenhower farm land, including corn, wheat, barley, hay, and oats. Eisenhower grew some of these crops – namely corn, barley, and hay – as shown on the 1967 historical base map in the Historic Resource Study (see fig. 2.1). Tillage patterns and crop rotations



Figure 2.2. Aerial view of Farms #1, #2, and #3 looking north with contour stripping evident in the fields, 22 June 1964. (Lane Studio, EISE NHS files, #2973)

Figure 2.3. Contemporary aerial view looking south at portions of Farms #1, #2, and #3. (EISE NHS files, #3815J)



followed recommendations provided after consultation with the Pennsylvania State University Agricultural Extension Service and the U.S. Soil Conservation Service.

Today, there are approximately 293 acres of crop fields on the three Eisenhower farms. Since acquiring the farmland, the NPS has issued agricultural Special Use Permits (SUPs) to local farmers. These permits have minimized the maintenance requirements by the NPS, kept the land in production, and contributed to the economic base of Adams County. Farmers holding SUPs are required to meet over thirty special conditions necessary to preserve the historic scene and to protect the soil. Farms #1 and #2 are leased through a SUP with 187 acres in crops. A portion of Farm #3 is cultivated under a SUP with 106 acres in crops and a portion of the Clement Redding Farm is leased through a SUP with 78 acres in crops.[6] The SUPs span a period of five years and are renewed every year thereafter.

Recommendations

In CLR Volume 1, Chapter 3, historic photographs and Tables 3.1 and 3.2 detail the crops planted by the Eisenhowers on Farms #1 and #2 between 1959 and 1966, and the historic base map from 1967 shows the layouts of crops on Farms #1, #2, and #3 (see fig. 2.2). However, the park and farmers should continue to select crop rotations in accordance with the recommendations of the Adams County Natural Resource Conservation Service. To preserve the character of the Eisenhower period, crop fields should be planted in grains or grasses, such as corn, wheat, barley, hay, alfalfa, and clover. While soybeans were not grown in the fields during the Eisenhower period, this crop is currently recognized as a sustainable and marketable choice. In consultation with the park, farmers may also use new techniques, such as "no till" farming, which are in the spirit of Eisenhower's soil conservation philosophy and in accordance with the Natural Resource Conservation Service.

B-4. Grazing fields

Eisenhower and his partners established pastures to support livestock operations, following recommendations of the Pennsylvania State University Agricultural Extension Service and the U.S. Soil Conservation Service.[7] Land used for grazing included low, wet bottomlands not suitable for crops. Although Eisenhower sold the show cattle in 1966 prior to gifting the property to NPS, the herd was a significant component of his farm operations. Between 1966 and 1969, Eisenhower switched to a feeder cattle operation with a maximum of 250 head on the farm at one time, including purebred Angus (on Farms #1 and #2), and Angus Hereford and purebred Hereford (on Farm #3). The SFM cites the benefit of preserving cattle grazing to give the site an environment of pastoral serenity.[8] To re-create the historic scene and to perpetuate these historic pastures, the park issues SUPs for the pasturing of Black Angus cattle. At present 149 acres are under a SUP: portions of Farms #1 and #2 are leased through a SUP, with 112 acres in pasture for 40 cows while on Farm #3 there are 37 acres in pasture for 18 cattle.[9] At Clement Redding, there are no active pasture areas. There is currently less area in pasture than at the end of the historic period in 1969.

Recommendations

The park should preserve pasture areas and livestock grazing in the core of the farm areas to preserve the character of the Eisenhower farms.

B-5. Grazing along the stream between Farms #1 and #2

For years, cattle were allowed to graze along the banks of the stream between Farms #1 and #2, an area now referred to as the "nine-acre pasture." (fig. 2.4) Although the cattle helped prevent the area from becoming wooded and blocking the view between Farms #1 and #2, their presence damaged and eroded the stream banks. For these reasons, and for ecological reasons related to the Chesapeake Bay Program, the park has removed cattle from this field and now mows it. The mowing has also helped prevent this area from becoming overgrown, and



Figure 2.4. Grazing on the "nine-acre pasture" on Farm #1, view toward east, ca. 1955. (EISE NHS files, #2140)

has controlled the preponderance of non-native invasive plants. However, access to this area is at times difficult. This issue is also addressed in the Vegetation and Views section under native versus non-native vegetation.

Recommendations

To help protect the stream banks and minimize erosion, the park should continue to keep the cows out of the nine-acre pasture and stream corridors. The effectiveness of controlling multiflora rose, Japanese honeysuckle and other non-native invasives with mowing should be monitored. It may be necessary to annually cut the area or apply a herbicide spray to these individual plants until invasives are eliminated from the area.

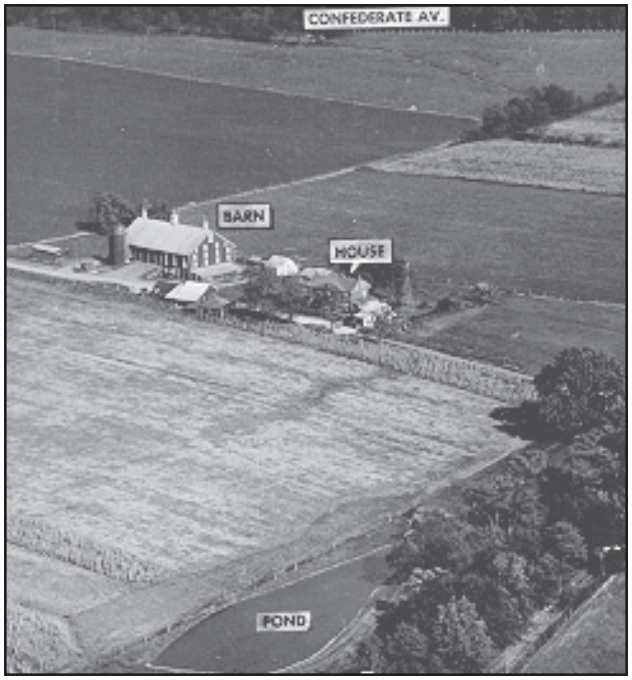


Figure 2.5. Aerial view of Farm #1 with house, barn, and pond labeled, 27 October 1952. (Gettysburg Times, EISE NHS files, #1177)



Figure 2.6. John Moaney and David Eisenhower fishing at the Farm #1 pond, view toward northeast, August 1954. (US Navy, EISE NHS files, #2199)

B-6. Former pond, between Farms #1 and #2

In 1951 the Eisenhowers installed a pond southwest of the house, near the boundary of Farms #1 and #2 for fire protection and as fish and waterfowl habitat. (figs. 2.5, 2.6) A weeping willow was planted to act as a duck blind. Cattails, swamp iris, and several hundred daffodils were planted, as was wild rice at the eastern end. In 1954 a water line was extended from the local municipal facility to the farm and a hydrant installed. The pond was stocked with fish and was a favorite fishing hole for family and friends until a drought in 1962 and 1963 reduced the size of the pond or possibly a pesticide runoff killed many of the fish. In 1964, the pond was drained because of silt and maintenance problems, but traces were still evident in the late 1960s, including the annual reappearance of daffodils along the previous shoreline.[10] This area is now grass and scrub vegetation and is barely visible. Just to the east of the former pond is an immense sycamore tree that has been the subject of many paintings and may be the same tree visible in Figure 2.147 in the CLR, Volume 1.

Recommendation

Although the GMP recommended restoration of the pond, this treatment plan does not recommend its restoration.[11] The Eisenhowers removed the pond in 1964 because it presented safety and maintenance issues. Furthermore, the stream corridor is now protected as part of the Chesapeake Bay Program and substantial alteration would impact water quality and habitat. The story of the former pond is nonetheless important and should be interpreted with a wayside that includes historic photographs and text describing the pond and the current watershed protection program. (fig. 2.7)

B-7. Deer management

In the past, as described in the 1992 SFM, deer caused extensive damage to domestic plantings, orchard trees, and crops. Subsequent damage was reduced by a White Tail Deer Management Plan begun in the mid-1990s.[12] Once at a population of 325 deer per forested square mile in the vicinity, there are now 26 deer per forested square mile.[13] The deer travel across the property on the drives and by crawling under or through small gaps in the fences and jumping over the fences. (fig. 2.8)

Recommendation

The deer reduction program helps to preserve the vegetation in the historic landscape, with less browsing



Figure 2.7. Former location of pond (beyond the sycamore) as viewed from the path between Farms #1 and #2. (Photo by OCLP, 2005)

and damage of plants. In the winter, when browsing is more likely, vulnerable plants in the domestic core that are commonly damaged by deer, such as young replacement trees, should be wrapped with deer netting if necessary. The netting is removed in the spring when the deer are less likely to browse tree bark.

B-8. Rodent management

Like deer, rodents often damage young trees, especially fruit trees, by gnawing on the bark at the base of the tree, particularly during the winter. Certain plant species are particularly vulnerable to damage including young crabapple and fruit trees and yew bushes.

Recommendation

Tree guards should be installed around fruit and crabapple trees that are susceptible to rodent damage, particularly new trees. See Appendix C at the end of this report for specifications. In garden areas, a variety of repellents has also been used. The areas around the Secret Service Range and the show barns have experienced the biggest problems in the past and should be closely monitored for future damage.



Figure 2.8. Gap under fence used by deer along entry drive to Farm #1. (Photo by OCLP, 2001)

B-9. Bird coveys near creeks and woodlands

General Eisenhower incubated, raised, and released pheasant and quail on his property to improve bird hunting. Quail were released into five different coveys around the farm, each with a feeding and watering area. Brush piles and plantings of crown vetch (*Coronilla varia*) were added to each area. The largest covey was located between Farms #1 and #2.[14]

Recommendation

Reestablishment of the coveys is problematic because hunting is not allowed in the park. In addition, the large number of fox would likely prevent them from becoming established (neither quail nor pheasants are native to the area). An additional issue is that crown vetch is considered an invasive plant, so nesting and cover areas would have to make use of a more appropriate plant.

B-10. Protected species

On the Clement Redding property, the least shrew and loggerhead shrike occupy the wetland meadow along Willoughby Run. (fig. 2.9) To preserve these state-listed endangered species, the meadow area is not mowed during nesting season, which is late July into August. This area is also believed to be archeologically sensitive. The GMP states that pastures will be managed to encourage nesting of state threatened species, including the upland sandpiper, by not mowing until after the first of July.

Recommendation

Eisenhower NHS provides an important habitat for birds. The annual mowing of hayfields and pastures should continue to be adapted to nesting locations and seasons, whenever possible. Particular care should be



Figure 2.9. View northeast at the wetland meadow along Willoughby Run at the Clement Redding Farm, an important habitat for protected species. (Photo by OCLP, 2001)

taken when mowing in and around known sensitive areas, such as the area between Willoughby Run and Red Rock Road.

C. Vegetation and Views: Stream Corridors, Vegetated Screens, and Ornamental Plantings

Contrasting with the site's open agricultural fields and pastures are the trees and shrubs directly associated with spatial, structural, and circulation elements. This includes native plants in stream corridors, vegetation along old fence lines, stands of native trees and shrubs, and ornamental trees and shrubs around the farmhouses. Existing plantings were supplemented with new and transplanted vegetation, especially at Farm #1, along driveways and paths and around buildings and other outdoor features, both for functional and ornamental purposes.

Of all the features that contribute to the historical integrity of the Eisenhower property, vegetation is one of the most susceptible to change. Some forty to fifty years have passed since many of the plants were installed. High winds across the exposed fields have damaged and destroyed mature trees that either predated or were installed during the Eisenhower era. Many missing plants, or those in poor condition, are species that are susceptible to pests and diseases or are not suitable for the climate of the site. The recent prolonged drought has placed additional stress on many plants.

Meanwhile in the some of the woodland edges and along stream corridors, natural vegetation has grown unchecked, resulting in wider and denser fencerows that in some places obscure historic viewsheds. Removal of vegetation may conflict with natural resource management objectives, including wetlands protection efforts, and protection of rare and endangered species. In contrast, preservation of invasive species introduced by General Eisenhower in woodland areas may conflict with the site's management objectives regarding native and non-native species.

Given these challenges, the park has of late made great strides in replacing historic plantings; for example, a comparison of the 1969 vegetation maps for Farm #1 and 2005 existing conditions maps reveals that there are only 87 missing historic plants out of an inventory of 341. Some of the general issues regarding vegetation and views are discussed below.

C-1. Wind damage to white pine trees

The openness of the site is vulnerable to high winds, heavy snow, and ice storms. White pines, a favorite of the Eisenhowers, are particularly susceptible to wind damage. Of the eighty-eight pines present on Farm #1 in 1969, only fifty-nine remain or are recent replacements. Most of the pines are missing along the windy, exposed entry drive.

Recommendations

Pines are an important feature in the Eisenhower landscape. Missing and declining pines should be replanted according to the original configuration of the Eisenhower plantings, recognizing that the trees will require a replacement cycle of about fifty years. In this respect, it is acceptable to plant small pine trees, particularly since the Eisenhower landscape consisted of many young trees during their tenure. However, some along the entry drive should not be replaced (see subsequent sections).

C-2. Overgrown plantings, competition with large trees, and loss of understory plantings

Densely planted areas, such as the entry drive planting, orchard, and vegetated screens southwest of the Eisenhower house and between the house and barn on Farm #1 are overgrown. Understory shrubs and small ornamental trees are crowded or lost. In many cases, replacing individual plants is not feasible due to shade and competition from mature specimens.

Recommendations
In general, when more than fifty percent of the plantings are gone, the entire planting should be replanted at the same time. Specific areas that will require this approach are discussed later in this section.

C-3. Plants requiring a high level of maintenance and pruning

Many of the plants in the Eisenhower landscape require a high level of maintenance to remain healthy, attractive, and orderly. Examples include the roses, which have been tended and replaced as necessary by NPS. Only the roses by the gas pumps and on the west side of the orchard on Farm #1 are missing. Another example is the apple trees in the orchard. These had become overgrown but have been rejuvenated through recent NPS maintenance crew projects. Orchard trees benefit from annual pruning.

Additional species that require regular pruning or rejuvenative pruning include yews, boxwood, lilacs, and privet. The recently planted wisteria vines on the guesthouse require pruning two or three times a year to prevent overgrowth and potential damage to structure and protective netting to ward off rodents.

Recommendations
It is important to maintain the forms similar to those present during the Eisenhower period as well as preserve the health and vigor of the plants. Historic photographs should be studied when making decisions regarding the pruning of roses, apples, yews, boxwood, lilacs, privet, and wisteria. While some recommendations are included in this treatment plan, ideally the park will develop a preservation maintenance plan that can incorporate historic photographs with pruning guidelines.

C-4. Unchecked growth of fencerows

Fencerows, or trees and shrubs paralleling a fence, historically marked field edges, acted as windbreaks, and served as wildlife habitat. If left unchecked, however, growth of vegetation can alter these historic features and make them wider, taller, and denser, which can then block historic views. Such growth can also encourage the introduction of non-native invasive species (see below).

Recommendations
Fencerows should be monitored so that they remain within their historic boundaries. Non-native invasives should be removed whenever possible. Fencerows should be kept relatively thin and lower branches should be selectively pruned or removed, especially on native weed trees such as black walnut or mulberry. Managing growth of woody vegetation in these areas can be difficult due to the possibility of mowing equipment getting snagged in fences and may require acquisition of a specialized piece of equipment.

C-5. Effect of unchecked stream vegetation on views

Vegetation along stream corridors prevents soil erosion and widening of water channels, and serves as windbreaks and wildlife habitat. However, much like fencerows, vegetation in stream corridors can also spread and become too dense if not periodically managed. Such has been the case along portions of the stream corridor that passes between Farms #1 and #2. General Eisenhower wanted to improve the condition of the stream, and in 1954, requested information on how to develop it "in accordance with the best practices for such small brooks."[15] In the mid-1960s, portions of this streambed were characterized by wide and dense masses of vegetation, while others areas were less so (see fig. 2.2). Two of the less vegetated areas along the stream allowed views from the Eisenhower House to adjacent fields and farmhouses. Today, these two stretches of the stream corridor are much wider and denser than they were historically and are now obscuring the historic views. (figs. 2.10-2.12) This can be attributed in part to the preponderance of non-native invasive plants, to be discussed in more detail below, as well as native species such as black walnut and mulberry.

Views of the landscape have long had a place in the history of the site; the old name "Mount Airy" for Farm #1 gestured to its elevated position in the landscape, and Farm #2 was once named "Fairview," which suggested the beautiful views. These physical qualities also attracted General Eisenhower to the area, particularly the spectacular western views to the Blue Ridge Mountains.[16] (fig. 2.13) The NPS has purchased or included in the boundary of the site additional contiguous lands to preserve the historic views that contributed to Eisenhower's decision to settle and retire at Gettysburg. The most significant of these acquisitions



Figure 2.10. View from the Eisenhower home at the corridor of vegetation along the stream east of Nevins Lane. The plants are much taller than they were historically. (Photo by OCLP, 2005)



Figure 2.11. The view from Farm #1 to Farm #2 is obscured by vegetation in the stream corridor. (Photo by OCLP, 2005)



Figure 2.12. View from the lawn at Farm #2 looking north to Farm #1. (Photo by OCLP, 2005)

was the Clement Redding Farm; the historic view into this farm complex from the Eisenhower Farm was one of the deciding factors that contributed to General Eisenhower's purchase of Farm #1.[17]

Recommendations

Today, the expansive views to and from each farm survive and are relatively intact, as are most of the important internal views from various points within the farms. Much of this can be attributed to the dedicated use of the land for agriculture, which keeps the land open and free of encroaching vegetation that may block the view. The exceptions are views that include the meandering stream corridor between Farms #1 and #2, which has become overgrown and has begun to block three important views from: Farm # 1 east to distant pastures and the edge of the Gettysburg Battlefield; Farm #1 south to Farm #2; and Farm #2 north to Farms #1 and #3. To a lesser extent, such stream vegetation has also begun to obscure the view from Farm #1 west to the western ridge, particularly the farmhouse at the Clement Redding Farm.



Figure 2.13. View looking west at Farm #1 from West Confederate Avenue. In the middleground are the mature spruce trees along Eisenhower Drive, and in the distance are the Blue Ridge Mountains, a view that was very important to the Eisenhowers. (Panorama photo by OCLP, 2005)

To improve the key viewsheds described above, lower branches should be selectively pruned or removed rather than removing trees entirely because the tree and shrub roots aid in stabilizing soils. Best management practices should be researched that are consistent with the watershed protection goals of the Chesapeake Bay Program. Development on the northwest corner of Red Rock Road should be monitored, as should post-Eisenhower development along Emmitsburg Road, which is currently screened by successional growth in portions of the fields at the George Smith Farm Site that was purchased in the 1970s.[18]

C-6. Native versus non-native species

Many of the plantings at the park, particularly ornamentals at Farm #1, were gifted to the Eisenhowers during their residence in Gettysburg. While some of these plants are not native to the area, most are easily monitored and managed and do not pose a serious threat of becoming non-native invasives. Rather, it is in the larger natural areas such as stream corridors and along fencerows where there are occurrences of non-native invasive plants taking over.

Recommendations

Controlling multiflora rose, Japanese honeysuckle, barberry, crown vetch, and other non-native invasive plants in stream corridors and fencerows will support the larger watershed protection goals of the Chesapeake Bay Program. Proactive management at the site will also help prevent these areas from becoming overgrown and wider than they were historically and thus maintain important visual relationships to adjacent fields and especially between Farms #1 and #2. Mowing, pruning, cutting, or spraying are options for managing the invasives, but ultimately the chosen methods should be consistent with preferred best management practices favored by the Chesapeake Bay Program.

C-7. Shortage of water for moisture-loving plants and young replacement plants

Recent years have been very dry and with less than the region's average rainfall of 40 to 44 inches a year. Within the ornamental landscape surrounding the home at Farm #1, additional watering is required. Many of the plants donated to or acquired by the Eisenhowers are woodland species that prefer moist, well-drained soils, partial shade, and protection from the wind. These are not the site conditions in the domestic landscape areas at Farm #1 and as a result several species are suffering or are gone due to insufficient moisture, namely flowering dogwood trees, hemlocks, beeches, maples, and hollies.[19]

Watering is a labor-intensive activity, and the park employs less grounds maintenance staff than did the Eisenhowers. At present, NPS waters with sprinklers and hoses, concentrating on areas such as the putting green, rose beds, annual flowers, and young replacement trees and shrubs. In the years ahead, extensive replanting of missing or declining trees and shrubs will be necessary. These trees and shrubs will initially require one inch of water a week by natural rainfall or, more likely, by irrigation to thrive after planting. Similarly, plants that are currently suffering from a shortage of moisture would benefit from one inch of water a week by natural rainfall or irrigation during the hot, dry months of June, July, and August.

The NPS has adopted the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program designed to promote sustainability in terms of environmental impact, energy efficiency, and

water conservation. This program advocates for the reduction of irrigation systems that apply excessive or unnecessary water for aesthetics. At Eisenhower NHS, a property-wide irrigation system is not needed; however, irrigation of a few high-maintenance, historically significant features is justified.

Recommendations

In areas where plants are dispersed, a water tank would be extremely useful for new plants, stressed plants, and other ornamentals such as dogwoods that require more moisture. A tank placed on a truck, with multiple lines, can be used to water several trees or shrubs that are distant from water lines. "Gator bags," slow-drip irrigation bags, could be used in combination with a water tank to protect young tree trunks and supply water.

In areas that require once a week watering, such as the rose beds, tea garden plantings, vegetable garden, and annual flower beds, install micro irrigation, drip irrigation, seasonal tube feeder, or soaker hose systems. These systems typically function with low water volume and pressure, and efficiently focus the delivery of water to the roots of the plants. Irrigation head systems should not be used because of their inefficient use of water and the potential for leaf burn. See Appendix C for additional information.

In frequently watered areas, such as the putting green, an underground irrigation system should be installed. The system can be set to a particular schedule, reducing personnel time spent watering. The lines need to be drained at the end of the season to prevent freezing. Because underground irrigation systems require disruption of soil, tree roots, and can potentially disturb archeological sites, archeological compliance is needed. Chief Walter West, Eisenhower's grounds crew supervisor at the farm, recounts in his oral history that a sprinkler system was installed in the lawn east of the Eisenhower house. Other options include gray water systems and cisterns that collect rainwater, possibly a good alternative given the amount of roofing on some of the farm buildings, such as the bank barn on Farm #1.

In addition, contracts for future planting projects should include a minimum one year guarantee on the plants and, if wherever possible, a provision that the plants will be regularly watered by the contractor.

C1: Vegetation – Farm #1

The remaining portion of this section discusses specific planting areas at all four farms. Numbers listed next to each of the areas discussed below correspond to the number of each plant shown on the treatment plan maps for each farm in Appendix B. Corresponding condition assessments and recommendations for individual plants can be found in Appendix A.

For Farm #1, the vegetation recommendations are organized by subareas as defined in the CLR, Volume 1. (fig. 2.14) The recommendations for the other three farms are organized as two areas: "House plantings" and "Pastures and fields."

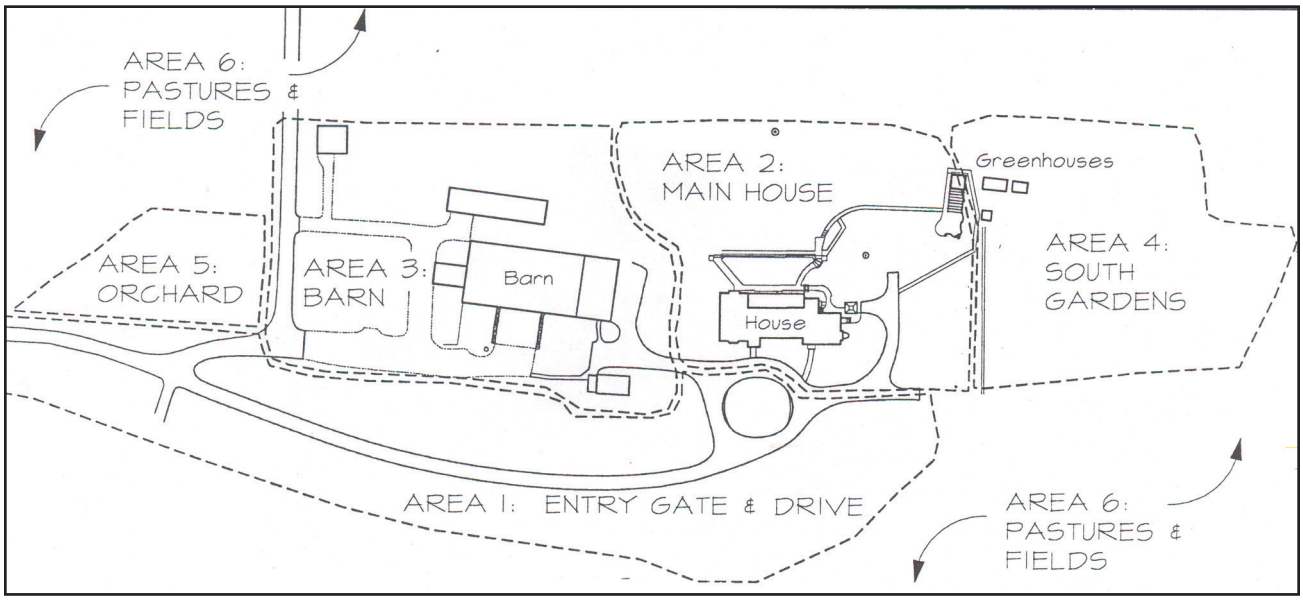


Figure 2.14. Divisions of the Farm #1 landscape used to describe the subareas of the cultural landscape.

Area 1: Entry gate and drive (Gate area, #s 1-32)

Until recently, the original 1950s and 1960s plantings at the entry gate in front of the fence and gate were overgrown, which blocked views of the white cross-board fence and the National Historic Landmark boulder and created a safety hazard.[20] The park has since rejuvenated or replaced these plants and has restored the historic character of this area. Several plants behind the fence have also been replaced but are competing with the larger mature vegetation, especially the white pines. (figs. 2.15-2.18)

Recommendation

When fifty percent of the original plants behind the fence die, the entire area should be replaced in-kind so that a uniformity of age will be achieved.



Figure 2.15. Entry gate to Farm #1, wooden fencing along Waterworks Road, now Millerstown Road, aerial view toward southwest, 18 November 1966. (Wayne O'Neil, US Army, EISE NHS files, #3037)



Figure 2.16. Entry gate to Farm #1, view south, 8 September 1967. (Lane Studio, EISE NHS files, #2827)



Figure 2.17. View of new yews and rejuvenated barberry at the entry gate. Note the size of original trees behind the fences. (Photo by OCLP, 2005)



Figure 2.18. Mature planting behind the fence at the entry gate have crowded out replacement plants such as the sassafras at far left. (Photo by OCLP, 2005)



Figure 2.19. Norway spruce and crabapple allee along the entry drive, crabapples in bloom, view to the north, 28 April 1960. (US Navy, EISE NHS files, #2144)



Figure 2.20. Mature crabapples and spruce trees along the entry drive, looking north. (Photo by OCLP, 2005)



Figure 2.21. Several crabapples along the entry drive are dying or are missing as shown in this view looking north. (Photo by OCLP, 2005)

Area 1: Entry gate and drive (Gate to orchard, #s 33-150)

Between 1954 and the mid-1960s, the Eisenhowers planted a spruce, crabapple, and pine allee along the entry drive.[21] Today, many of these plants are nearly mature and some are beginning to decline. (figs. 2.19-2.21) Of the fifty-eight crabapple trees inventoried in 1969, eight are gone and five have been removed and replaced with substitute species. There are now four cultivars of crabapples instead of one. Of the mature original crabapples, nine are in poor or fair condition. According to a crabapple specialist from Pennsylvania State University, the variety of pink-flowering crabapple given to the Eisenhowers, "Hopa," is susceptible to apple scab and intolerant of the dry and windy conditions that characterize the driveway's elevated and exposed location. Their health is further compromised by the increasing competition with the mature Norway spruce. Most of the Norway spruce trees are in good condition; however, the large trees have numerous exposed roots that are difficult to mow around.

The historic allee pattern of Norway spruces planted on each side of the drive roughly 100 feet apart and separated by two pink-flowering crabapples generally remains. White pines were also proposed between each crabapple with the intent of creating a spruce-crabapple-

pine-crabapple-spruce sequence, but according to the 1969 plan this planting was not fully implemented or some of the trees died. Some of the pines remain today but tend to detract from the spruce-crabapple pattern.

Recommendations

There are several alternatives for replacing plantings along the drive. The current method is to replace individual trees as they decline. Crabapples have been replaced with several different varieties that are more hardy to the local conditions. One alternative is to replace the planting in blocks; however this method would never achieve the uniformity of age that currently exists and is not true to the original Eisenhower planting. A second option is to replace the entire planting of spruce, crabapple, and pine in the same sequence as it was planted – spruces (1954), crabapples (1955), and pines (mid-1960s) – so that disturbances to the historic scene are minimized.[22]

It is recommended that the park pursue the second alternative and remove and replant all of the trees in the same sequence they were planted.[23a] However, as the intended role of the pines was not achieved, and given their documented poor performance at this site, their replacement along the drive is not recommended.[23b] Until the Norway spruce are replaced, a new piece of mowing equipment is needed that can support a raised deck to ensure safety of the operator when mowing around the raised roots of the spruce. Alternatively, the spruce trees could be mulched. This however would be a very labor-intensive practice to maintain and not in keeping with the historic appearance of the entry allee.



Figure 2.22. Aerial of Farm #1 from south showing the plantings along the entry drive, 9 August 1967. (A. J. Parsonese, US Marine Corps, EISE NHS files, #2988)

The original crabapples were a birthday gift from General Eisenhower's cabinet. At the time, the 'Hopa' was considered a hardy variety, featuring an upright and spreading form, red-yellowish fruit, and pink flowers, Mrs. Eisenhower's favorite color. Regarding a replacement crabapple, the 'Indian Magic' variety best matches the characteristics of the 'Hopa' especially in terms of flower color, but the park should contact the county extension office for current lists of cultivars and their resistances to disease.[24] In general, the cost of removing the existing trees and planting new trees can be estimated by multiplying the cost of each tree by three.

The Eisenhowers and their guests enjoyed the entry planting when arriving by automobile, or when out walking. Today, most visitors arrive by tour bus, which has a higher profile and scrapes along the overarching branches of the maturing trees and provides visitors with an elevated and restricted peripheral view of the drive. If possible, a smaller bus, or van would enhance the visitor arrival experience, allowing visitors to view out both sides of the vehicle as well as the front window. A smaller vehicle would also pass under rather than scrape against the overhanging branches.

Area 1: Entry gate and drive (Orchard to windbreak, #s 151-208)

Toward the end of the historic period, a mass of trees dominated by Norway spruces and white pines shaded the portion of the entry drive next to the orchard.[25] Continuing south, white pines along with scattered



Figure 2.23. View looking north at the entry drive from west of the guest house. Note the size of the white pines and the lean caused by the prevailing west winds. (Photo by OCLP, 2005)



Figure 2.24. Winter view of the entry drive with windbreak southwest of the house, aerial view toward the south, ca. 1960s. (Robert Hartley Collection, EISE NHS files, #3102)

Norway spruce and deciduous shade and ornamental trees bordered the drive and filled some of the adjacent lawn areas. Many of the plants were donations and were installed for screening purposes and for their ornamental value. Most of these plants survive today, and the white pines in particular are quite large. (figs. 2.22, 2.23) During winter storms several original pines have been broken apart. A young copper beech in front of barn is half dead; it is likely that the tree did not establish well due to two dry summers. Other replacement trees have been installed, although a few are not in the correct location based on the 1969 maps.

Recommendation

It is likely that many of the other mature white pines will succumb to winter storms as they reach maturity. Figure 2.22 illustrates the planting configuration to follow to replace individual trees as they decline. Where the trees are tightly clustered, a tree may be removed and not replaced until the adjacent trees also decline. As discussed in the previous section, a watering program is needed during the first year after planting to ensure that the new trees receive adequate moisture.

Area 1: Entry gate and drive (Windbreak and turnaround, #s 209-265)

In the mid-1950s a windbreak of white pines and privet was installed southwest of the house to block drifting



Figure 2.25. View looking south at the windbreak southwest of the house. The privet hedge is taller than it was historically. Like the pines along the entry drive, many of the plants display a conspicuous leeward habit. (Photo by OCLP, 2005)

snow on the driveway and provide relief from the dusty summer winds. Many of the pines were replaced in the early 1960s and in the years thereafter additional plants were installed including a row of American elms, hollies, and dogwoods.[26] Just south of the windbreak were plantings of forsythia and honeysuckle but most are no longer present. Two original black locusts retained from the Redding period were enclosed by a patch of lawn defined by the driveway turnaround and have since been replaced several times. (figs. 2.24, 2.25)

Recommendations

The windbreak is thinner due to the maturity of the plants, which have grown taller and thinned at the base. To reestablish a dense screen the entire windscreen planting should be replanted at the same time. The privet does not need to be replanted as it can be cut back and rejuvenated and should be maintained at its historic height of 4.5 feet.[27] On the east of the windscreen are several flowering dogwood trees that are in very poor condition. These trees prefer a rich, moist soil and partial shade and are suffering in the open, dry, windy conditions. The trees would benefit from additional moisture during dry periods.

Area 2: Main house (Front entry, north and south sideyards, #s 1-28)

Several large trees were installed soon after construction of the house: a sugar maple and a pin oak slightly south and west of the home, just east of the driveway; a large white pine south of the Dutch oven; and an American elm



Figure 2.26. Plantings along front facade, 28 September 1963. (Lane Studio, EISE NHS files, #2820)



Figure 2.27. Plantings along front facade, 13 September 2005. (Photo by OCLP, 2005)

in the lawn north of the house. The four trees were a gift from the Eisenhowers' friend Nelson A. Rockefeller and were quite large when transplanted, which provided an immediate sense of age to the newly installed landscape.[28] In 1969, the white pine, sugar maple, and pin oak shaded the south and western portions of this area, but General Eisenhower's favorite tree, the elm, had succumbed to Dutch elm disease and had been replaced by this time.[29] The replacement elm was in turn replaced by a zelkova tree by NPS. (figs. 2.26, 2.27) Excluding these trees and two hollies, the front entry area and south sideyard were mostly open lawn although several yews and boxwoods were planted along the paths to the house and along portions of the foundation. A planting of cherries, forsythias, a dogwood, and a white pine was present in an east-west line at the far south end of the lawn area on a low slope just above the south rose garden.

Recommendations

Previously missing historic plants have been replaced and are in good condition. The zelkova tree should be replaced with a disease-resistant elm tree when the zelkova declines. If possible, the new tree should be of good size as the elm was when installed historically. The



Figure 2.28. Guests on barbecue/teahouse patio at White House staff picnic, 1 July 1959. (Mary Jane McCaffree, EISE NHS files, #2335)



Figure 2.29. Reconstruction of the patio, prior to replanting project, August 2001. (Photo by OCLP, 2001)



Figure 2.30. View of recently installed plantings, 13 September 2005. (Photo by OCLP, 2005)



Figure 2.31. North elevation of barbecue/teahouse with most original plantings no longer extant, 8 September 1967. (Lane Studio, EISE NHS files, #2825)



Figure 2.32. North elevation of barbecue/teahouse, 13 September 2005. Note the open view beyond the barbecue compared to 1967. (Photo by OCLP, 2005)

yew along the foundation to the right side of the front door appears in historic photographs from 1966 but it is not on the 1969 plan. It should be retained to provide a visual balance with the yew along the foundation on the left side, which is a replacement in its original location.

Area 2: Main house (Teahouse and barbecue, #s 29-50)

The teahouse and barbecue area was completed in 1956 and landscaped soon after. The teahouse and barbecue were well-used by the Eisenhower family and their guests. By 1969, only a small number of the original trees remained and included three Norway spruce, an American beech, and a red maple. These trees remain today and provide a shady canopy over the area. Surviving shrubs in 1969 included Japanese pieris,

dwarf yew, rose-of-sharon, Japanese holly, and Japaanese flowering cherry, with English ivy climbing the teahouse walls and clematis growing on the brick serpentine wall. These plants remain or have been replaced, except for a rose-of-sharon and the flowering cherry. (figs. 2.28-2.30)

Recommendations

Many missing historic plants have recently been replaced and their health should continue to be closely monitored, especially those around the patio due to the excessive shade cast by the mature spruces and the beech tree. It is because of the age of these historic trees that the character of this area has changed. In particular, the three spruces and two yews on the south side have grown taller and have thinned at the base, meaning they no longer have low branches that can provide the sense of enclosure that is illustrated in historic photographs. (figs. 2.31, 2.32) When the spruce trees decline, the park should replace them, and at the same time the yews and the missing cherry tree so that the plants mature evenly.

Area 2: Main house (East lawn, #s 51-58)

By the end of the historic period, several white pines and tuliptrees, a weeping crabapple, and a magnolia were scattered in the east lawn area between the teahouse and the flagpole.[30] The lawn area between the flagpole and the putting green was mainly open save for a sugar maple, probably because Mrs. Eisenhower preferred pristine lawns and enjoyed the views of the fields to the east.[31] Most of these trees remain today either as the originals or as replacements. (figs. 2.33, 2.34)

Recommendations

There is a missing tuliptree between the teahouse and flagpole that should be replaced. There is also a red maple that was historically a tuliptree; when it declines it should be replaced with a tuliptree.

Area 2: Main house (South lawn and drying yard, #s 59-66)

This area just southeast of the house was anchored by the windmill and the hand pump and well. A small area of lawn next to the windmill was used as a laundry drying yard, and soon after the house was built an L-shaped lilac hedge was installed to screen it from the rear terrace. Additional lilacs and white pine were planted nearby at the end of the driveway turnaround, but by 1969 only a few lilacs remained along with some replacement plants – an almond and a magnolia. By this time, a semicircular-shaped privet hedge centered about the hand pump enclosed much of the south lawn and the drying yard. The hedge was maintained at a height of about two and a half to three feet. Within this enclosure, more extensive gardens of roses and dogwoods had been planned and some installed, but Mrs. Eisenhower had them removed and replaced with grass after human bones were found, likely from when the farm was used as a hospital during the Civil War.[32] (figs. 2.35-2.38)



Figure 2.33. White pines, crabapples, and tulip poplars in the eastern lawn, view to northeast, 6 June 1961. (Lane Studio, EISE NHS files, #2689)



Figure 2.34. View looking southeast at the shade trees in the east lawn. (Photo by OCLP, 2005)

Recommendations

The lilacs in the drying yard and south lawn need rejuvenative pruning: one-quarter to one-third of the oldest trunks of each lilac cluster should be cut and several of the young shoots coming from the ground should be encouraged. The privet growing within the lilac hedge should be removed and replaced with a common lilac, possibly one of the two just to the south that are supposed to be Chinese lilacs.



Figure 2.35. Semicircular privet hedge defining the south lawn and drying yard, 9 August 1967. (A.J. Parsonese, US Marine Corps, EISE NHS files, #3014)



Figure 2.36. View looking east at the hand pump in the south lawn area and the privet hedge, lilacs, and almond. (Photo by OCLP, 2005)

Area 2: Main house (Rear terrace, #s 67-111)

When the Eisenhowers purchased the farm from the Reddings, the east side of the house featured three green ashes Mrs. Eisenhower wished to preserve. To accomplish this, and to connect the house to the surrounding farm landscape, the existing grade was raised to the level of the back porch with several stone retaining walls and by constructing tree wells around the three ash trees.[33] By 1969, these trees, as well as original plantings of boxwoods along the paths and English ivy on top of the wall from the 1950s were extant and still are today. Later plantings of lilac, periwinkle, and pink geraniums (in pots) also remain. (figs. 2.39, 2.40)

The east rose garden was installed soon after construction of the rear terrace. The four foot-wide bed was situated three feet from the retaining wall and spanned the length of the wall from step to step. It was surrounded on all



Figure 2.37. View southeast of lilacs and privet hedge in the drying yard/ south lawn area, May 1969. (W. E. Dutton, EISE NHS files)



Figure 2.38. Contemporary view of the lilac and privet hedges. Note the privet interspersed within the lilac hedge at far right. (Photo by OCLP, 2005)

sides by grass and featured roses in two alternating rows maintained at a height of two feet.[34] (figs. 2.41, 2.42) Over the years, a wide variety of roses were planted and by the end of the historic period a new generation of hybrid tea roses were in place.

Recommendations

The three green ash trees are in good-fair condition with moderate die-back and should be carefully monitored as they are the primary character-defining features in this area. Several historic boxwoods are missing and should be replaced, as should the bed of English ivy in the foundation bed between the two porch steps. Conversely, two boxwoods in this same bed, one in the grouping at the northeast corner of the house, and two next to the north set of steps leading to the east rose garden should be removed as indicated by the 1969 plan. In the mid-1950s, azaleas were grouped around the south porch steps but were not extant by 1969; their replacements should therefore be removed.[35] At the retaining wall, the planting of English ivy should be allowed to grow



Figure 2.39. View of the rear terrace and the boxwoods and vinca along the porch foundation, 27 June 1966. (AP photo, Lane Studio, EISE NHS files, #2405)



Figure 2.40. Detail of ivy on rear terrace retaining wall and lilacs and boxwoods bordering the north steps and the ivy growing over the rear terrace wall, 27 June 1966. (AP/Lane Studio, EISE NHS files, #2415)

over the wall (but not onto the brick path that fronts it). To maintain a neat appearance, it should be clipped at four or five inches.[36] Wooden planters with annuals were placed throughout the rear terrace, often on steps, wing walls, or on tables. They should be painted white or green as indicated on the 1969 plan and in historic photographs.[37]

Area 2: Main house (Putting green, # 112)

The putting green was installed in 1955 and sodded with a Penncross bentgrass.[38] The primary approach tee was approximately ninety yards from the green, located east of the greenhouse across the swale and electric fence and slightly out into the eastern field. There were also temporary tees made out of coconut fiber mats but their locations changed and were placed in the lawn wherever Eisenhower wanted to tee off.[39] The green is maintained at a height slightly higher than golf green standards to



Figure 2.41. In the mid-1950s, shrubs in the east rose garden were maintained at a height of two feet. (US Navy, EISE NHS files, #2931)



Figure 2.42. View looking south at the north terrace steps showing the potted pink geraniums, boxwoods, and English ivy in the bed above the retaining wall, and the east rose garden and brick path. (Photo by OCLP, 2005)



Figure 2.43. View northeast of the putting green and sand trap. (Photo by OCLP, 2005)

maintain plant vigor and reduce weeds. (fig. 2.43) The green requires a high level of maintenance, crabgrass weed control, and irrigation to preserve its character.

Recommendations

The putting green is a very popular and admired site feature, and most visitors do not walk on it. The GMP recommended to "restore the golf tee and mark site in field." This feature should be restored.

Area 3: Barn (Visitor reception center area, #s 1-60)

At the end of the historic period, a row of seven tall catalpa trees likely planted in the 1930s was located along the fenceline between the Quonset hut and the storage building (now visitor reception center).[40] Only five of the trees remain today and they constitute the only landscaping in this area, as was the case historically. The Eisenhowers likely retained this old fencerow to screen the Quonset hut from view and to provide shade for the dog kennels.[41] (fig. 2.44)



Figure 2.44. View looking south at the remaining old catalpas. (Photo by OCLP, 2005)



Figure 2.45. Storage building, south and east facades, various shrubs along foundation and weeping cherry adjacent to east facade, 8 September 1967. (Lane Studio, EISE NHS files, #2832)

The storage building was constructed in 1960, and although it too was utilitarian in purpose, the south entrance, east foundation, and the northwest corner were landscaped to soften the edges and blend it with



Figure 2.46. Storage building north and west facades, original garage door on northwest corner, 8 September 1967. (Lane Studio, EISE NHS files, #2828)



Figure 2.47. View looking south at plantings around the visitor reception center and missing Canadian yews next to the fence. (Photo by OCLP, 2005)



Figure 2.48. Adenauer rose garden and plantings south and west of the reception center, view north. (Photo by OCLP, 2005)



Figure 2.49. Mature trees in barn screen underplanted with shrubs, view across lawn to west, May 1969. (W. E. Dutton, two images combined into panorama, EISE NHS files)

the surroundings.[42] By the late 1960s original plantings of common boxwood, Japanese holly, Canadian yew, and English yew were still present as were later additions such as a star magnolia near the south entrance (not on 1969 plan but visible in 1967 photograph), a weeping cherry on the east side, and two pin cherries in the lawn east of the building. (figs. 2.45, 2.46) Most of these plants are gone today except for a few of the common boxwood and the magnolia at the south entrance and a recently replanted weeping cherry on the east side that is in poor health. (figs. 2.47, 2.48)

In the lawn south of the building, lilac, Norway spruce, and redwoods were planted in the 1950s.[43] The redwoods died but the lilac and spruce were present in 1969. The lilac remains today but the spruce was replaced in 1997-98 when the original tree fell down because it had grown so large.

The Adenauer rose garden between the storage building and barn was a gift to the Eisenhowers in 1955 from Konrad Adenauer, Chancellor of the Federal Republic of Germany, and was installed soon after construction of the storage building.[44] In 1994 only thirteen of the original red flowering General Eisenhower hybrid tea roses remained.[45] In about 1994, cuttings from the original roses were grafted to new root stock by Jackson & Perkins. The new plants were then installed by the Friends of the National Parks at Gettysburg. Recently, the bed consisted of about fifty red General Eisenhower hybrid tea roses in good condition, but in June 2006 many were lost in a heavy rain storm.[46] Between the roses and the walkway is a row of boxwoods that historically was not individually pruned as balls as they are now but as a continuous hedge as diagrammed on the 1969 plan.

Recommendations

The missing catalpa trees should be replaced but only when a majority of the remaining trees begin to decline. Around the storage building, many of the plantings are missing and should be replaced including the pin cherries in the east lawn; English yew, common boxwood, and Canadian yew along the east foundation; a Japanese holly at the southwest corner; and Canadian yews at the fence at the northwest corner. The dying weeping cherry on the east side will need to be replaced soon. The boxwoods between the Adenauer rose garden and walkway should be encouraged to grow into a continuous hedge rather than pruned as individual plants. New General Eisenhower hybrid tea roses should be developed to replace those lost in June 2006.

Area 3: Barn (Screen between barn and house, #s 61-86)

Mrs. Eisenhower directed the installation of "a row of good-sized evergreen trees…to screen the barn from the new house."[47] The screen was installed in 1954 and was comprised of Norway spruce and Canadian hemlock. Soon after, the area was underplanted with shrubs and flowers and included rhododendrons from the mountains near Camp David and periwinkle that ultimately became so prolific that much of it was removed. Low-growing varieties of azaleas were introduced at an unknown date along with many King Alfred daffodils. The bed soon became a catch-all for various flower and shrub donations. By the late 1960s the spruces and hemlocks were mature and had effectively grown into a dense screen. Historic photographs show the bed beneath the trees' canopy was fully planted with shrubs and had a slightly overgrown appearance, perhaps due to lack of adequate maintenance.[48a] (fig. 2.49) The 1969 plan did not identify individual shrubs or flowers in the bed save

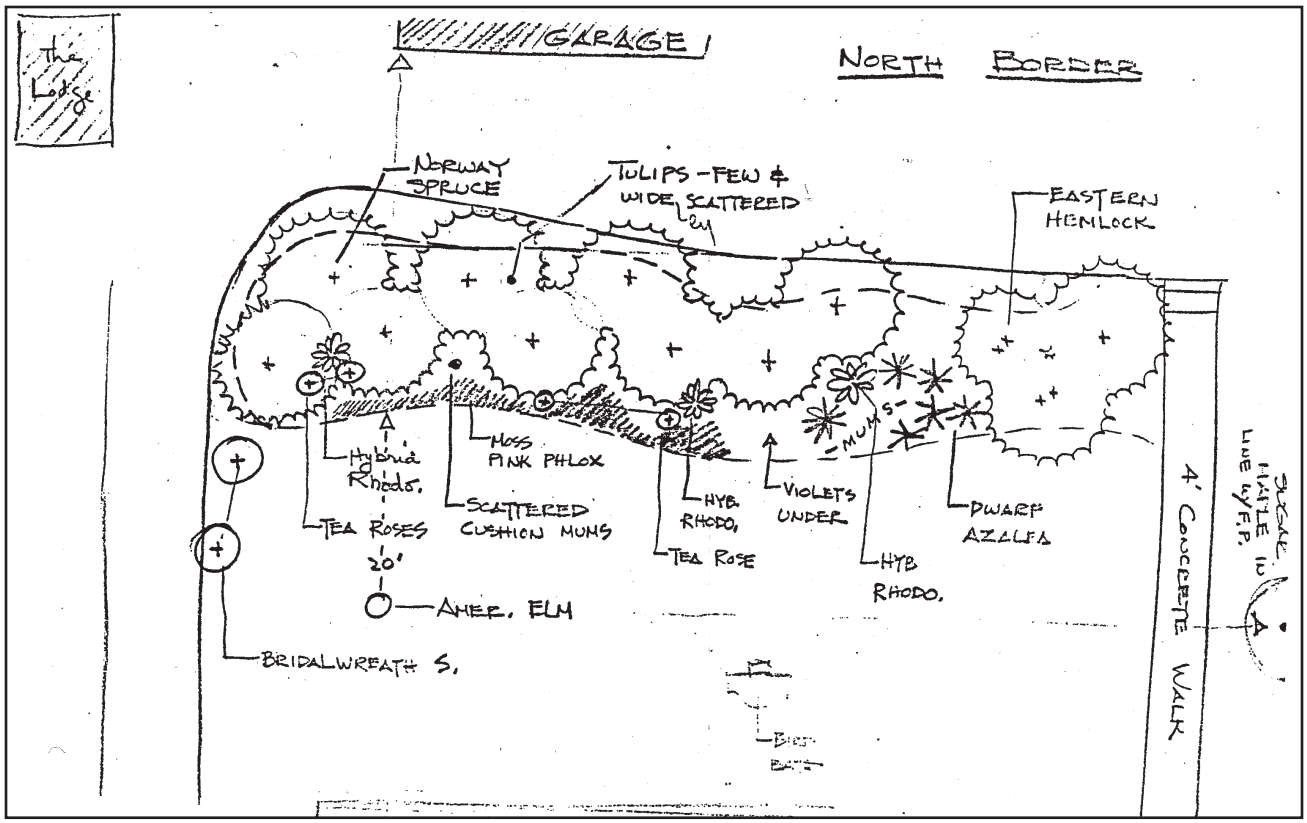


Figure 2.50. Existing conditions of plants in barn screen as documented by Thomas C. Dall, May 1969. (Memorandum to Chief, PSC, from Thomas C. Dall. Trip Report, Gettysburg NMP, Gettysburg, PA, May 26-29, 1969. EISE NHS files)

for two bridalwreath spiraea at western edge. However, a NPS survey initiated by landscape architect Thomas Dall in 1969 did identify some additional plantings. (fig. 2.50)

Today, the spruce trees are now mature and thin at their bases and no longer visually screen the barn from the house. The hemlocks are in very poor condition, mostly likely due to recent drought conditions. (figs. 2.51, 2.52) One of the trees was struck by lightning and removed as a safety precaution.[48b] Despite the shade, the understory appears to be performing relatively well. Some of these plants have been heavily pruned and collectively no longer convey the somewhat overgrown appearance that was present near the end of the historic period. (fig. 2.53) Additionally, according to the Dall drawing, some of the plants are not historic.

Recommendations

Three alternatives for replacing the trees include: replacing individual trees, particularly hemlocks, as they decline; waiting for the spruce trees to pass maturity and decline and removing dead trees until more than fifty percent are gone; or replacing all spruce and hemlock trees at the same time. It is recommended that the third option be pursued so that new trees can mature evenly. Until then, for trees that are stressed, or when trees are replaced, a weekly watering program of one inch a week by rainfall or watering with a water truck or gator bags during summer months will improve the vigor of the trees.

Much of the current palette of shrubs and flowers is not historic and should be removed in favor of those shown on the Dall drawing, which currently provides the only known detailed documentation of this area (see fig. 2.50). However, this work should be implemented only after the eventual replacement of the spruce and hemlock trees. As with the trees, a weekly watering program will be essential for the shrubs to survive in what will initially be a very sunny and exposed area. Once the correct plants are installed, pruning should be less rigid so that the area looks more natural. As suggested in both the 1969 plan and the Dall drawing, the two historic bridalwreath spirea at the west end should not be part of the mulched bed and should be pruned less to achieve their "bridal" or cascading branch habit.



Figure 2.51. View looking north at the barn screen approximately one year after installation, no shrubs have been installed, fall 1955. (EISE NHS files, #1176)



Figure 2.52. The mature evergreens in the barn screen no longer block the view between the house and barn, view southeast. (Photo by OCLP, 2005)

Area 3: Barn (Guesthouse, #s 87-106)

Chief West and his crew designed and installed plantings around the guesthouse in the summer of 1956.[49] Major plants included a lilac at the northwest corner and a group of five white pines on the south side. According to the 1969 plan, only two of the original five white pines were extant and the lilac was not shown, although it does appear on another Dall drawing and in photographs from 1967 and 1969. (figs. 2.54-2.57) Planting beds were situated along the south and east sides and were filled with a variety of flowers and shrubs including peonies, azaleas, roses, daffodils, and other bulbs that were often transplanted to other areas of the farm. Given the repeated planting of bulbs and flowers, and removal of roses over the years, these beds saw continual change in their mix of plant materials and it is unlikely that few of the original plants lasted very long. By 1969, in addition to the original mix of peonies, azaleas, and bulbs used in the beds, several new species had been introduced since the mid-1950s including wisteria, bridalwreath spirea, and violets, General Eisenhower's favorite flower. Today, the character of the guesthouse plantings has changed due



Figure 2.53. View looking northeast at the barn screen plantings. Many of the understory shrubs are not historic and are too pruned. (Photo by OCLP, 2005)



Figure 2.54. Guesthouse east facade, after porch addition and with mature wisteria along foundation, 8 September 1967. (Lane Studio, EISE NHS files, #2155)



Figure 2.55. View looking southwest at the guesthouse plantings and young wisteria along the east foundation. (Photo by OCLP, 2005)



Figure 2.56. Mature white pines dominate the south side of the guesthouse, May 1966. (Eisenhower Family Collection, EISE NHS files, #3436)



Figure 2.57. The planting bed on the south side of the guest house, view north. (Photo by OCLP, 2005)

to the absence of the large white pines and the small size of their replacements.

Recommendations

In time the new plantings around the guesthouse will mature and the character will gesture to that at the end of the historic period. In the meantime, several plantings, such as the boxwoods, should be removed as they were not present historically. Several historic plants are missing, such as the wisteria southwest of the guesthouse as indicated on the 1969 plan. Annuals should be limited to daffodils and violets that were known to exist in these



Figure 2.58. View looking north at the fence and gas pumps north of the barn. In 1969, six red rambling roses grew along this section of fence. (Photo by OCLP, 2005)

beds during the historic period. The two historic spirea plants need to be pruned less to achieve their naturally cascading habit.

Area 3: Barn (West side, #s 107-115)

During the initial landscaping work at the farm, two large specimen trees were placed near the barn: a sugar maple at the southwest corner and a red maple just north of the guesthouse entry. The sugar maple was a gift from Rockefeller and was included with the donation of the other large trees around the new home. It is unknown whether he also funded the installation of the red maple.[50] The original sugar maple died and was replaced in 1965, but sometime after 1969 the replacement died and was replaced by a red maple. A white birch was located on the west side of the barn near the barn bridge and by 1969 it too was replaced. The area north of the barn was considered a working barnyard even after the Eisenhower renovations and consequently there was little ornamental vegetation except for a row of climbing roses along the western fence, on either side of the gas pumps.

Recommendations

When the red maple at the southwest corner of the barn declines, it should be replaced with a sugar maple. North



Figure 2.59. Greenhouses and playhouse, view to the east across the vegetable garden, with trees along the boundary with the eastern field in the background, May 1969. (W. E. Dutton, EISE NHS files)

of the barn, red rambling roses should be planted along the fence on either side of the gas pumps. (fig. 2.58)

Area 4: South gardens (#s 1-8)

The south gardens featured two greenhouses, the playhouse, a vegetable garden, and a rose garden. Soon after construction of the greenhouses in 1956, two pin cherries were placed directly south of the structures. A Norway spruce was located on the northwest corner of the larger greenhouse, and a row of white pines was placed along the fence line of the eastern field. A sporadic fencerow with occasional gaps grew between the eastern field and the field south of the house and included catalpas. By the late 1960s, all of the trees were still extant except for the Norway spruce, but a white pine and both pin cherries have died since that time.[51] (figs. 2.59, 2.60)

In the 1950s the vegetable garden extended from the incinerator south to the creek, but by the mid-1960s, it was scaled-back to include the area only adjacent to the greenhouses. In 1969, the garden plot covered an area of approximately thirty feet by one hundred and twenty feet, primarily west and south of the greenhouses.[52] (fig. 2.61) The size of the garden has been reduced since that time to approximately thirty feet by sixty feet. It is maintained by the Volunteer Senior Ranger Corps.

In the mid-1960s, the south rose garden was established and measured approximately four feet by one hundred feet.[53] The garden included a variety of floribunda roses and was still extant in 1969. The park reestablished the rose bed in about 1994 with pink and red floribunda roses donated by Jackson & Perkins and planted by the Friends of the National Parks at Gettysburg.[54] The roses are presently in good condition.



Figure 2.60. View looking east at the south rose garden, vegetable garden, and white pines and catalpa along the eastern field edge. The path is a recent rehabilitation. (Photo by OCLP, 2005)



Figure 2.61. Vegetable gardens and greenhouses, view toward northeast, May 1969. (W. E. Dutton, EISE NHS files)

South of the garden, a donation in 1956 of several walnuts and a few pecans were planted on the property line between Farm #1 and Farm #2, approximately fifty yards northeast of the stream crossing between the two farms.[55a] A few of the originals were still extant in 1969 and two pecans remain today. In addition to the walnuts and pecans, raspberries were donated to the Eisenhowers as gifts and planted between Farms #1 and #2.[55b]

Recommendations

When one of the two extant white pines declines, the other should be removed so that all three trees, along with the two missing pin cherries, can be replaced and mature as a group. Historically, the Eisenhower's vegetable garden was larger than the current vegetable garden and was well tended. With a rehabilitation treatment approach, it is acceptable to alter the size of the garden in order to reduce the amount of maintenance necessary



Figure 2.62. Aerial view in the winter from north of the orchard fenced off from surrounding pasture, ca. 1960s. Note the hemlock in the eastern half of the orchard. (Robert Hartley collection, EISE NHS files #3102)



Figure 2.63. Mature apple trees dominate the western half of the orchard today, view north. (Photo by OCLP, 2005)

to tend the garden during the months of peak visitation. Additional volunteers could be recruited to maintain a larger and more historically accurate garden.[55c] The south rose garden, depending on the level of care, may need to be replanted every ten to fifteen years. The raspberries can be reintroduced based on historical documentation.

Area 5: Orchard (#s 1-41)

According to Ethel Wetzel, Eisenhower's administrative assistant during the early 1960s, "the General was very interested in having some fruit around. He liked the trees, he liked the blossoms, and he liked the fruit."[56] The orchard featured mostly apples, peaches, and cherries, and although the chosen varieties were well adapted to the local conditions, the orchard was never particularly productive because of poor soil conditions, birds constantly eating the fruits, and Japanese beetle infestations. By 1969 the orchard contained twenty-four fruit trees, including sixteen apples, six peaches, and two nectarines (there were no remaining cherries). Certain species such as peach and nectarine are relatively short-lived trees while apple trees can survive for over 100 years. This proves true in the Eisenhower orchard as most of the original apple trees still remain and now dominate the space while the eight peach and nectarine trees that were extant in 1969 have since been replaced. (figs. 2.62, 2.63)

There were also several other non-fruiting trees in the orchard; seven tuliptrees, three flowering dogwoods, and one Canadian hemlock were growing in a small grove on the eastern side of the orchard, close to the horse pasture fence. Given their size, these trees had probably been in this location since the early 1960s. Red rambling rose was also shown on the 1969 plan as growing on the west fence of the orchard.

Recommendations

Three new apple trees, a peach tree, and a dogwood tree have been planted in locations where there were historically no such trees and should therefore be removed. There are also several tuliptrees and flowering dogwoods that are missing and should be replaced. As the young peaches and nectarines are in exposed locations, and their health should be closely monitored. Replanting missing red rambling roses along the west fence will likely not survive because of the excessive shade in this area and should therefore not be installed. A replacement cycle for fruit trees can be projected for certain species: peaches and nectarines require replacement every five to ten years while apples can live to be over 75 years old.

Area 6: Pastures and fields

C1-1. Fencerows on Farm #1

A variety of fencerows defined the edges of fields and pastures on Farm #1 during the Eisenhower period. Most shown on a 1964 aerial photograph and on the 1967 historical base map exist today except for the fencerow defining the Flaharty property (see figs. 2.1, 2.2).

Recommendation

The fencerow along the Flaharty property line should be replaced with native plant species that are consistent with

the watershed protection goals of the Chesapeake Bay Program and recommendations of the Adams County Natural Resource Conservation Service.

C1-2. Vegetated screens on Farm #1

Intentionally planted screens of trees, like fencerows, also served to ensure the Eisenhower's privacy and block possible views from curiosity seekers. One such screen was comprised of four white pines planted along the north side of the Farm #2 Lane near the Guard Hut to block views to the house from the nearby Carlana Motel and Restaurant.[57] (fig. 2.64) Other vegetated screens were also planted to block undesirable views from the house, such as the mass of deciduous trees planted on the west side of the equipment shed to address Mrs. Eisenhower's concern that the structure's white-painted walls and gleaming metal roof were too conspicuous.[58] (fig. 2.65) These screens were extant in 1969 and are present today.

Recommendations

The pine tree screen along Farm #2 Lane is mature and should be replanted when fifty percent of the trees decline. Additional deciduous trees should be planted west of the equipment shed as some of the existing trees are in decline. Management of this screening feature should extend to include the trees just to the south of the building on the other side of the skeet range lane.

C2. Vegetation – Farm #2

House plantings (#s 1-36)

Farm #2 was acquired in 1954 and became the center of cattle operations at Eisenhower Farms. A complex of corrals and holding pens anchored by the show barn and other outbuildings dominated the scene and was itself surrounded by fields and pastures. This utilitarian landscape was a stark contrast to the extensive ornamental landscape on Farm #1.

As was typical for a rural farmstead of the period, ornamental plantings were restricted to a few trees and shrubs around the farmhouse and along the adjacent drive. Several evergreen trees in front of the home in the late 1950s were supplemented during the Eisenhower period with Norway spruce, Norway maple, and white pine. By the late 1960s, the vegetation had matured considerably, creating a screen of trees and nearly obscuring the view of the farmhouse from all sides. A few shrubs were also extant around the farmhouse front porch. (figs. 2.66-2.72)



Figure 2.64. Four pine trees were planted on the north side of the Farm #2 Lane to block the view between the Eisenhower home and the former Carlana Motel and Restaurant. (Photo by OCLP, 2005)



Figure 2.65. Deciduous trees were planted on the west side of the Equipment Shed to visually block the building from the house. (Photo by OCLP, 2005)



Figure 2.66. Aerial view of Farm #2 from the south showing trees around the farmhouse and catalpa rows in the eastern field and along Farm #2 lane, 22 June 1964. (Lane Studio, EISE NHS files, #2973)

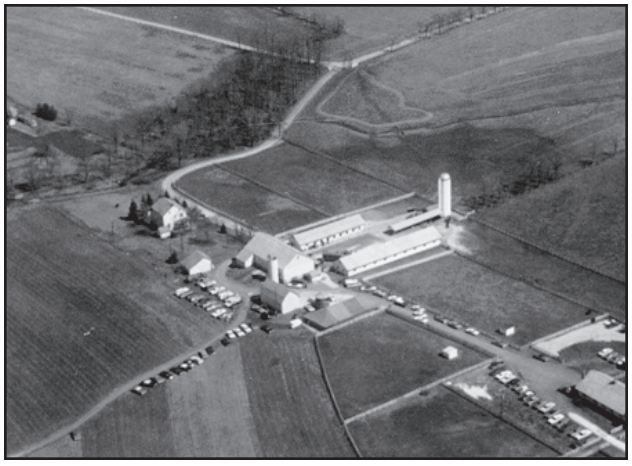


Figure 2.67. Another aerial view of vegetation at Farm #2, looking northeast, March 1966. (John Donmoyer, Robert Hartley collection, EISE NHS files #3103)



Figure 2.68. Winter view of Farm #2 farmhouse, May 1962. (Robert Hartley collection, EISE NHS files, #3113)



Figure 2.69. Mature pines and spruces screen the farmhouse on Farm #2, north facade, May 1969. Compare the density of the trees with Figure 2.69. (W. E. Dutton, EISE NHS files)



Figure 2.70. Farm #2 farmhouse, south facade, where Norway maples dominate the scene. A rose-of-sharon is next to the shed. May 1969. (W. E. Dutton, EISE NHS files)



Figure 2.71. Detail of vegetation around porch at Farm #2 farmhouse, 19 May 1967. (Emless Nett, EISE NHS files, #3393).



Figure 2.72. View of south and east sides of Farm #2 farmhouse. Note missing shrubs along the porch that were present in 1967. (Photo by OCLP, 2005)

Few changes occurred to this landscape after the historic period, as the NPS management focus was on buildings, visitor services, and site infrastructure, especially at Farm #1. Mature shade trees, both deciduous and evergreen, remain around the farmhouse today, although some of the trees present in the late 1960s have died and have been removed. As a result, the eastern side of the farmhouse is not as heavily screened from view as it once had been. Along the front porch, there is no longer a planting of lilacs, and plantings of lilacs next to the farm lane along the stream corridor have been crowded out by black walnuts and mulberries.

Recommendations

Vegetation other than major trees at Farm #2 is difficult to identify in historic photographs. However, as discussed above, shade trees historically dominated the house area with a few shrubs proximate to the house. To preserve this character, existing trees should be preserved, maintained, and replaced when they decline, and missing trees should be replaced. The use of shrubs should be focused to areas where they are known to have existed and are the most visible, such as the lilacs along the front porch. The lilacs near the stream corridor were likely part of the domestic landscape; however, the weedy mulberry and black walnut trees here should be removed. The vegetable garden southwest of the house could be re-established as a Volunteer Senior Ranger Corps if historical documentation is located in the future.

Pastures and fields

C2-1. Fencerows on Farm #2

Three notable fencerows existed on Farm #2 during the historic period. The oldest featured catalpa trees in the eastern pasture. When Eisenhower purchased Farm #2, they were already mature and provided considerable shade for the pasture, suggesting they were planted sometime in the 1930s. There were thirty to forty trees planted along the southern side of the fence in a solid row. Many of the trees died in the 1960s after the cattle began chewing their bark, and only about half of the original trees were remaining in the late 1960s. Around 1970, the remaining trees blew down in a severe storm, and none have since been replaced.[59] (fig. 2.73)



Figure 2.73. Detail of catalpa row, Show Barn in background, view to southwest, May 1969. (W. E. Dutton, EISE NHS files)

The same storm in 1970 also damaged portions of a fencerow of catalpas on the south side of the Farm #2 Lane stretching from the Guard House at Nevins Lane to the Guard Hut at the east end of Farm #2 Lane. The trees were likely planted in the early 1950s amongst an older fencerow. By the late 1960s, the trees provided limited shade because they were not a continuous row along the road. It is not clear if the gaps were intentional or if some of the original trees had died and were not replaced.[60] This fencerow still features large catalpas along with a few red maples and sycamore trees. (figs. 2.74, 2.75) A third fencerow stretched from the Farm



Figure 2.74. Farm #2 entry road, catalpa row on the left, Farm #1 in the background, October 1955. (Abbie Rowe, EISE NHS files, #2124)



Figure 2.75. Scattered catalpas and maples define the fencerow along Farm #2 entry lane, looking west. (Photo by OCLP, 2005)



Figure 2.76. Aerial view of Farm #2 from east, and the fencerow along the Carlana Motel property line (lower middle), spring 1955. (EISE NHS files, #3135)

#2 Lane southward and defined the Carlana Motel and Restaurant property line. It was mainly scrub vegetation and was removed by the NPS in 1980.[61] (fig. 2.76)

Recommendations

Fencerows are a defining feature of the Eisenhower NHS landscape. As was the case historically, they marked edges of fields, acted as windbreaks, provided shade, and prevented soil erosion, functions still relevant today in what continues to be a productive agricultural landscape.[62] Fencerows also addressed the Eisenhower's concerns of privacy. The park should replant the catalpa fencerow in the east pasture and consult with the Adams County Natural Resource Conservation Service in replanting the fencerow along the former Carlana Motel boundary. The fencerow along the Farm #2 Lane should also be rehabilitated with new plantings of catalpas amongst the existing trees.

C3. Vegetation – Farm #3

House plantings (#s 1-22)

When Farm #3 was purchased in 1955, the property contained the original farmhouse, bank barn, silo, and a few outbuildings. The farm historically served as support for the other two farms, primarily for crop production and to a lesser degree pasturage.[63a] Like Farm #2, Farm #3 featured a utilitarian landscape with trees and shrubs planted around the farmhouse. By the late 1960s, mature trees, most likely maples, shaded the south, west, and north sides of the house. (figs. 2.77-2.80) Today, there are far fewer trees, especially on the south side of the house. Several shrubs and flower beds are located in the front and along the walkway, and also around the smokehouse and garage. (fig. 2.81) A lilac at the smokehouse likely dates to the Eisenhower period.

Recommendations

Farm #3 is not open to visitors and is managed primarily to be part of the historic scene at Eisenhower NHS. The appearance of the farmhouse area from a distance, and especially from Millerstown Road to the south, is more important than up close. The cluster arrangement of buildings and structures surrounded by corrals and fields is still intact, but the shady canopy that surrounded the farmhouse – one of the most important historic landscape features – has been greatly diminished. To restore this scene, new maple trees should be planted at former stumps and in historic locations in the lawn.[63b] Existing shrubs and flowers can be retained.



Figure 2.77. View of Farm #3 from the west, entry drive lower right, mature trees screening house, two trees along drainage swale at right, May 1969. (W. E. Dutton, EISE NHS files)



Figure 2.78. Farm #3 trees shown in this late 1960s photo are no longer extant, including trees adjacent to the farmhouse and trees in the field, view toward the west, May 1969. (W. E. Dutton, EISE NHS files)



Figure 2.79. View of Farm #3 farmhouse, east facade, and mass of trees on north and south sides, May 1969. (W. E. Dutton, EISE NHS files)



Figure 2.80. Farm #3 garage, west facade, May 1969. (W. E. Dutton, EISE NHS files)



Figure 2.81. View of flowers along the front facade of Farm #3 farmhouse. In the late 1960s, the view to the south from here would have been mostly blocked by large shade trees. (Photo by OCLP, 2005)

Pastures and fields

C3-1. Vegetated screen on Farm #3

At the end of the historic period, two large deciduous trees were located in the pastures southeast of the farmhouse along a drainage swale (see figs. 2.77, 2.78).[64] Interestingly, it is possible that the trees were planted or possibly retained from an earlier time to screen the view of the bank barn from the entrance to Farm #1. However, there is no known documentation regarding this theory, nor are the species of trees known.

Recommendations

Four or five new trees should be planted along the drainage swale. The trees should be native species and should be consistent with the watershed protection goals of the Chesapeake Bay Program.

CR. Vegetation – Clement Redding Farm

House plantings (#s 1-17)

The Clement Redding Farm came under full NPS management upon the death of Irene Redding in 1993. The farm, which officially became a part of the Eisenhower NHS earlier, in 1978, was acquired to provide a buffer for the Eisenhower site, prevent adjacent development that might intrude on the historic farm scene, and preserve the western view from the main farm. As with Farms #2 and #3, the Clement Redding Farm featured a residential cluster and agricultural cluster surrounded by fields and pastures. Vegetation consisted primarily of a few shade trees and ornamental plantings around the farmhouse, and the large trees and shrubs probably date to the Clement Redding period. Some shrubs, such as a formal yew hedge at the front of the farmhouse, were removed by NPS. Other existing vegetation includes flowerbeds along the home's south and east foundations and south edge of the lawn, and various shrubs along the fences on the northern and western edges of the lawn.[65] (figs. 2.82-2.84)



Figure 2.82. Aerial view of Farm #1, #2, and a portion of Clement Redding Farm at lower right, from west, 1955. (EISE NHS files, #1180)



Figure 2.83. Foundation plantings are maintained along front facade of the farmhouse at the Clement Redding Farm. (Photo by OCLP, 2005)

Recommendations

Like Farm #3, the Clement Redding Farm is not open to visitors and is managed primarily to be part of the historic scene. The presence of ornamental vegetation around the farmhouse is the most important vegetation characteristic to maintain, especially the shade trees, as they are the most noticeable when viewed from Red Rock Road and from the farmhouse at Farm #2, and more importantly, from the Eisenhower House at Farm #1. The existence of other vegetation along the fencelines and the foundation of the house also contribute to this character. Therefore, all existing vegetation in the house area should be maintained and preserved except for the following which should be removed: a cherry next to the smokehouse that it is too close to that structure, and mulberries and other weedy plants that have grown up from seeds near the lilac and mock orange west of the house.

Pastures and fields

CR-1. Weeds and invasives at barn

The barn paddock is overgrown with weeds, and in particular, the southwest corner of the bank barn is engulfed with multiflora roses.



Figure 2.84. The large shade trees around the house at the Clement Redding Farm are an important landscape feature, view west. (Photo by OCLP, 2005)

Recommendation
Weeds in the barn paddock and multiflora roses growing on the barn should be removed.

CR-2. Remnant vegetation

Along with scattered trees, a remnant hawthorn hedge is situated along Willoughby's Run at the eastern boundary of the farm, but it is not known when it was planted. In the pasture east of the barn is a large hickory that likely dates to the middle of the twentieth century, if not earlier. A few random fruit trees are located in the fields west of the house, suggesting the earlier presence of an orchard. Other vegetation along Willoughby's Run and Red Rock Road includes wetland species and a grove of mature hickory trees.[66]

Recommendations
The remnant hawthorn hedge and stream vegetation, pasture hickory tree, and fruit trees west of the house should be maintained and preserved, as they are part of the historic scene. As noted in the Land Use and Cultural Traditions section, mowing around the wetland meadow should be limited to non-nesting periods.

D. Circulation: Accessibility, Paved & Gravel Surfaces

Circulation systems at the Eisenhower NHS consist of historic farm drives and lanes, pedestrian walkways to buildings and structures, and associated features such as cattle guards, culverts, and drainage swales. These corridors – their width, surface treatment, and drainage characteristics – contribute to the historic character of the site. Most visitors arrive via Eisenhower Drive on the shuttle bus from the Gettysburg Visitor Center and spend about an hour or two walking around the site. The visit typically includes a guided tour of the Eisenhower home and a self-guided tour of the surrounding domestic landscape. A new brochure guides visitors on a walking route that includes the bank barn, guest house, guardhouse site, barbecue, drying yard, rear terrace, east rose garden, Frisco bell, putting green, garage, and reception center. A smaller number of visitors venture to the skeet range and to the cattle barns at Farm #2.

The NPS has become a leader in demonstrating effective ways of making historic sites accessible to all visitors. In compliance with the Architectural Barriers Act of 1968, Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990, the park seeks to provide the highest level of access with the lowest level of impact on the site's historic integrity. The shuttle bus is equipped with a wheelchair lift. However, those



Figure 2.85. Designated accessible parking space at Farm #1 is located northwest of the barn. (Photo by OCLP, 2005)



Figure 2.86. The large grass/gravel area next to the Show Barn on Farm #2 offers space for accessible parking. (Photo by OCLP, 2005)

Table 2.1
ADA Accessible Specifications

Accessible Route Specifications that Apply to Walkways around Buildings	
Accessible Route Minimum Specifications	• Width = 36 inches. • Gradient = 5 percent (1:20). • A gradient greater than 5 percent shall be called a ramp. • Cross pitches (cross slopes) = 2 percent (1:50) or less. • Abrupt level changes are no greater than 0.5 inch in height.
Accessible Ramps	• Gradient greater than 5 percent (1:20) and a maximum of 8 percent (1:12). • Maximum rise on any run = 30 inches in height. • In space limitations, a ramp gradient no greater than 16.6 percent (1:6) may be used for a horizontal run of 2 feet. • In space limitations, a ramp gradient between 8 percent (1:12) and 10 percent (1:10) may be used for a maximum vertical rise of 6 inches. • An 8 percent (1:12) gradient and a rise greater than 6 inches, or a horizontal run greater than 72 inches, must have handrails on both sides of the ramp. • Surface must be stable, firm, and nonslip.
Handrails	• Required on either side of 8 percent (1:12) gradient ramps with a 6-inch rise or greater, or a 72-inch horizontal run, and on either side of stairs. • Must continue at least 12 inches beyond the top and bottom of a ramp and be parallel to the ground plane. • Top of gripping surface = 34 –38 inches in height above the ramp or stair tread surface.
Landings	• Must be located at every 30-inch vertical rise in a ramp. • Dimensions of a landing = 36 inches wide x 60 inches deep at the top and bottom of a ramp run.
Accessible Parking	• Space = 96 inches wide. • Access aisle is considered part of an accessible route. • Spaces and aisles have a 2 percent (1:50) maximum gradient in any direction. • Passenger loading zone (access aisle) = 60 inches wide x 20 feet long, adjacent and parallel to the vehicle pull up space.
Accessible Guidelines for Trails (to be considered for path between Farms #1 and #2)	
Accessible Trail Proposed Minimum Specifications	• Width = 36 inches • Gradient = 5 percent (1:20) for any distance, 8.33 percent with resting intervals provided every 200 feet, 10 percent with resting intervals provided every 30 feet, 14 percent with resting intervals every 5 feet. • Cross pitches (cross slopes) = 5 percent (1:20) or less. • Tread obstacles up to 2 inches. • Surface = firm and stable.
Landings	• Dimensions of a rest interval = 36 inches wide x 60 inches deep at the top and bottom sloped sections as specified for the running slope grades above.

users cannot access the cattle barns because there is no accessible path between Farms #1 and #2. Visitors in wheelchairs requiring additional assistance can drive directly to Farm #1 and park in a designated ADA parking space northwest of the bank barn or in the asphalt-surfaced area next to the visitor reception center, and then drive to the cattle barns on Farm #2 and park on the level gravel/grass area at the show barn entrance. (figs. 2.85, 2.86) To date, there have been no requests to add a formal designated space at Farm #2 that is similar to the space at Farm #1.[67]

A key component to accessibility is providing information to the public on trail characteristics. People tend to select trails based on their personal interests and abilities. Trail signs and maps can be improved to provide specific information about the trail conditions and difficulty levels with information about the cross slope, duration of steep grades, average and minimum trail width, surface hardness, and the presence of obstacles, hazards, and facilities. Such media can also include drawing of the trail profile to show changes in grade and length.[68]

To move around the site, visitors use a combination of historic paths plus green macadam paths that were added by the park in the 1970s and 1980s. However, some path sections are too steep to meet ADA guidelines for accessible routes with a maximum five percent slope. (Table 2.1) Many sections have slopes of eight percent, which are considered ramps, and thus require landings and handrails. Areas where ADA compliant accessibility should be addressed are discussed below.

D1-1. Access around the domestic core

From the designated accessible parking space northwest of the barn to the front of the Eisenhower home, the historic paths on either side of the barn and the green macadam path along the south side of the bank barn screen are accessible routes with grades of two to five percent. (fig. 2.87) Other paths at Farm #1 pose problems, however. The pathway from the south side of the Eisenhower home to the greenhouses becomes quite steep with a maximum grade of thirteen percent. Looping back to the house from the teahouse, the historic brick path – which was originally set in sand but was reset in mortar by the NPS – gradually slopes up until it meets the east rose garden at a series of irregular steps and a landing, also constructed by the NPS. To bypass the steps, the park built a green macadam bypass ramp inside the privet hedge, which required the removal of some of the privets. The slope of this macadam ramp ranges from eleven to twelve percent. (figs. 2.88-2.90a) The NPS also installed brick walkways around the perimeter of the east rose garden, but in the 1990s the segment on the east side of the rose bed was removed but the area was not properly regraded.[69] The segment on the west side remains and connects to a historic walk and steps heading west to the garage and barn and to the green macadam path alongside the barn screen.

Recommendations

The non-historic path connecting the south side of the Eisenhower home to the playhouse and greenhouses is quite steep. Except for a level segment between the teahouse and the playhouse, this path should be eliminated. An alternate route should be developed from this level section to the beginning of the path between Farms #1 and #2, paralleling the south rose bed and using the path reconstructed in the 1990s as recommended in the GMP.[70a] This new route will feature slopes around five percent, and will require minor regrading near the playhouse (see fig. 2.60).

The curving historic mortared brick path between the teahouse and the east rose garden poses accessibility challenges because of the nine-foot change in elevation. One solution in achieving accessibility requirements would be to regrade the path at a constant 5% slope, but this would require numerous switchbacks and adding fill to the historic landscape. A second option would have numerous twelve-foot long, eight percent ramps separated by landings. This solution would have fewer switchbacks and less fill but would require the presence of handrails, which would negatively affect the character of this feature and the surrounding historic scene. The best option appears to be to remove the brick stairs and return the walkway to brick at the historic grade. Railroad or landscape ties can be used for a step at the end of the walkway as shown in a historic photograph.[70b] (fig. 2.90b) Although the non-historic bypass ramp is certainly not a desireable feature in the landscape, it appears to be the best solution at this time (treatment of this ramp is addressed in section D1-6). Due to the steep slope on the bypass ramp, the park could install wooden handrails on either side that are inconspicuous in the landscape.

The non-historic brick path along the west side of the rose garden provides an accessible connection to the green macadam path next to the barn screen. It should remain; however, the path surface should be changed and will be discussed later in this section. The GMP

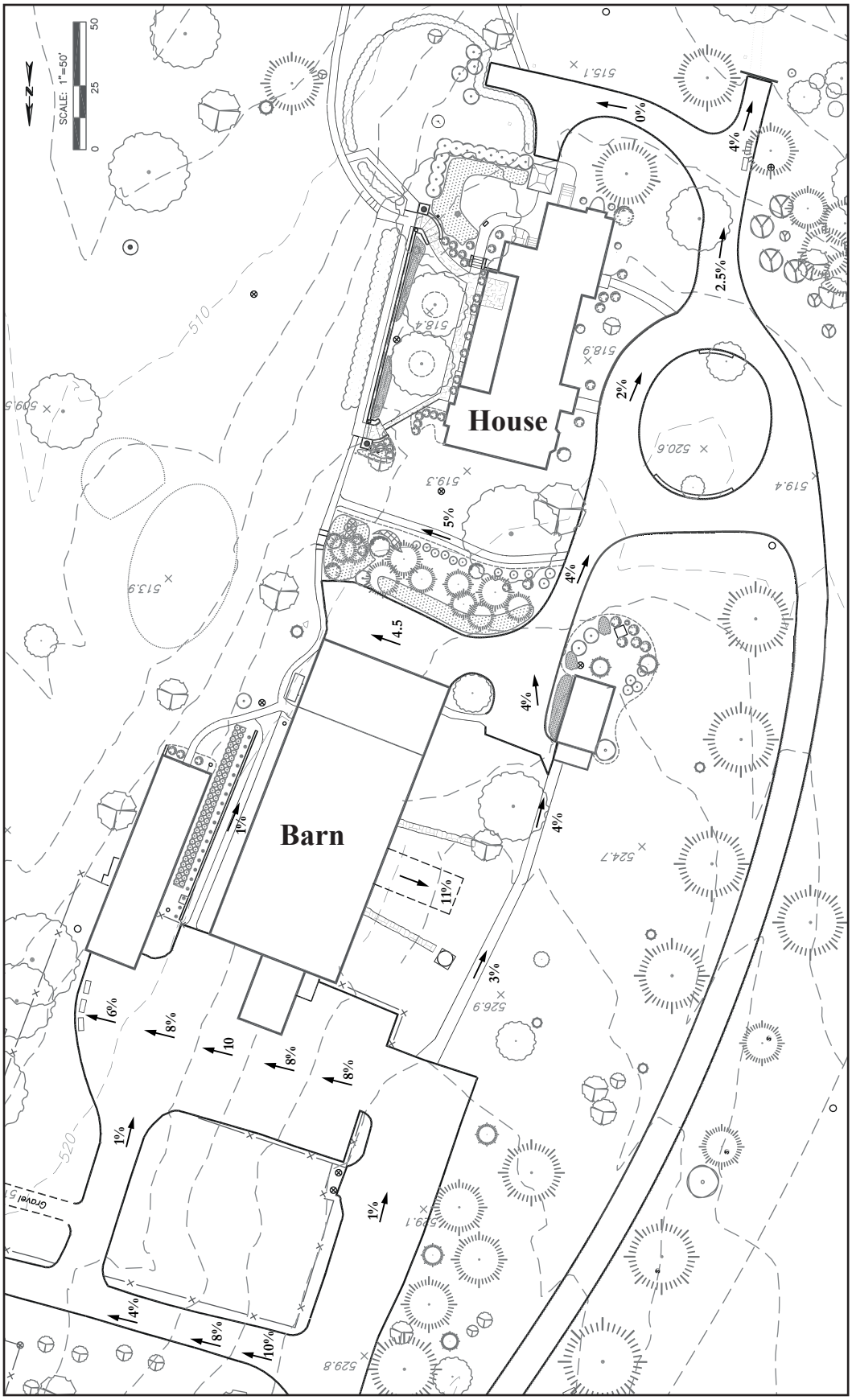


Figure 2.87. Map showing grades and slopes of major pedestrian areas around the domestic core of Farm #1. (Map by OCLP, 2005)

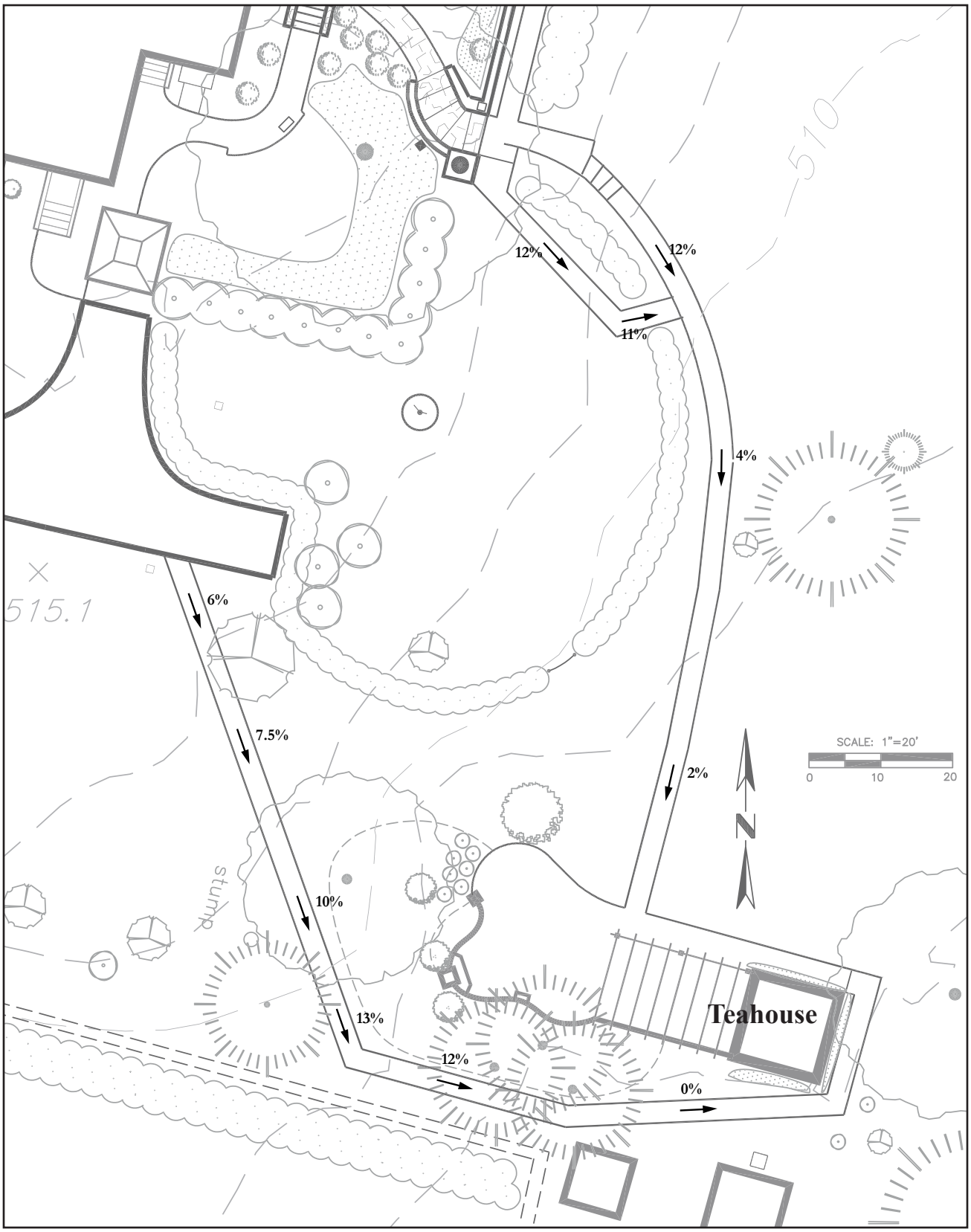


Figure 2.88. Map showing grades and slopes of major pedestrian areas around the domestic core of Farm #1. (Map by OCLP, 2005)



Figure 2.89. Detail of asphalt path south of house leading to greenhouses and playhouse. (Photo by OCLP, 2002)



Figure 2.90a. The green macadam path, and the steps and landing on the historic brick path were added by NPS. The brick walk was originally set in a bed of sand. (Photo by OCLP, 2005)



Figure 2.90b. Historic view looking south at the wood-bound grass landing between the terrace steps and the brick path to the teahouse, no date. (EISE NHS files, ENHS3601#10J)



Figure 2.91. Grass/gravel ramp on the west side of the bank barn. (Photo by OCLP, 2005)

recommended removing the green barn screen path and replacing the concrete walk and steps to the garage and barn with a concrete ramp, but this report recommends retaining the macadam path as well as the steps, which were replaced in kind in 2000, because wheelchair users can use the macadam path to access the back yard.[71] The area immediately east of the rose garden should be regraded to reflect historic conditions.

D1-2. Access to upper level of the bank barn

The ramp to the upper level of the bank barn was historically surfaced in gravel and/or grass. A conspicuous rectangular area of crushed blue gravel was installed in 1990s. There is now a pea gravel surface that is less noticeable because grass has begun to overtake the area. The ramp has a grade of about eleven percent and is susceptible to erosion, but due to limited use of the barn, is not heavily traveled. (fig. 2.91, see also fig. 2.87) Access to this area is important, as it is used by interpreters for orientation talks when weather is inclement and is also an exhibit space for farm machinery.

Recommendations

Ideally, an accessible entrance to the barn will be created to the lower level closer to the reception center. Modifying the ramp into a durable, non-slip surface at an acceptable grade, and most likely with handrails, would dramatically alter the historic character of the bank barn. The GMP recommended replacing the grassy ramp with a "gravel appearance" surface.[72] However, this also would alter the character and would give the area a more pristine appearance than was historically present. It would also increase the likelihood of tracking gravel into the barn and future exhibit area. Therefore, this ramp should be allowed to continue to revert to grass.

D1-3. Access at the skeet range

Access from the visitor reception center to the skeet range is via paved Nevins Road and the Skeet Range Lane, a relatively flat earthen and gravel road that passes alongside the Equipment Shed and then becomes mostly grass. (fig. 2.92) A grass embankment with a maximum slope of about five percent rises up to the skeet range outbuildings that are connected by narrow concrete sidewalks. The walks are in good to fair condition.

Recommendations

The skeet range features a wayside sign, and disabled visitors can park in the grass-covered area right next to it if needed. The condition of the sidewalks should be monitored for further deterioration.

D1-4. Access from Farm #1 to Farm #2 and show barn

A portion of the path between Farms #1 and #2 was originally a farm lane when the Eisenhowers purchased the property. During renovations to the house it was used as construction access, and then the lane was removed in favor of an unpaved and informal path between the two farms.[73a] (fig. 2.93) Farm #2 continues to be an important component of the Eisenhower NHS and provides visitors with a greater understanding of General Eisenhower's cattle and farming operations. Unfortunately, the path may be difficult for some visitors to walk on. The route and distance are identified with a wayside.

The path serves as the primary pedestrian route between the two farms for visitors and park staff, and in an effort to provide a comfortable walking surface, the park has applied woodchips that unfortunately tend to wash away in heavy rains. A French drain was recently installed at the north end of the path to catch stormwater runoff from the drive and seems to be helping the problem, but is nonetheless a modern intrusion. Drainage continues to be a problem, however, at the lower end of the trail from water flowing diagonally from northeast to southwest.[73b] The slope of the path is uneven with slopes ranging from two to eight percent; the steepest section is near the former guardhouse foundation. (figs. 2.94, 2.95)

The slope of the lane in front of house at Farm #2 averages around five percent, although there is a short run of seven percent near the bank barn foundation (see fig. 2.95). The lane approaching the show barn has similar slopes to that of the lane, with a run of six to seven percent prior to the building. There are no paved sidewalks that lead to the show barn, but visitors needing assistance can park at the building's main entrance.



Figure 2.92. View looking southeast at the high house, control tower, and the wayside (at right) at the skeet range. (Photo by OCLP, 2005)

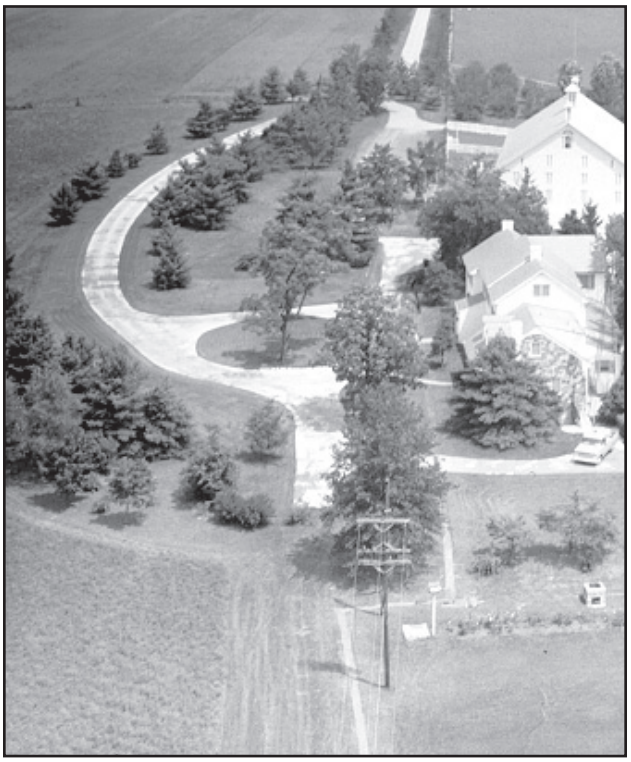


Figure 2.93. Aerial of Farm #1 from south showing the path between Farms #1 and #2 at lower center, 9 August 1967. (A. J. Parsonese, US Marine Corps, EISE NHS files, #2988)

Recommendations

In accordance with the *Guidelines for the Treatment of Cultural Landscapes*, the access between Farm #1 and #2 should meet accessibility requirements but minimize the impact on the cultural landscape. Rather than meet the ADA guidelines for "Accessible Routes," the park could consider the proposed guidelines for "Outdoor

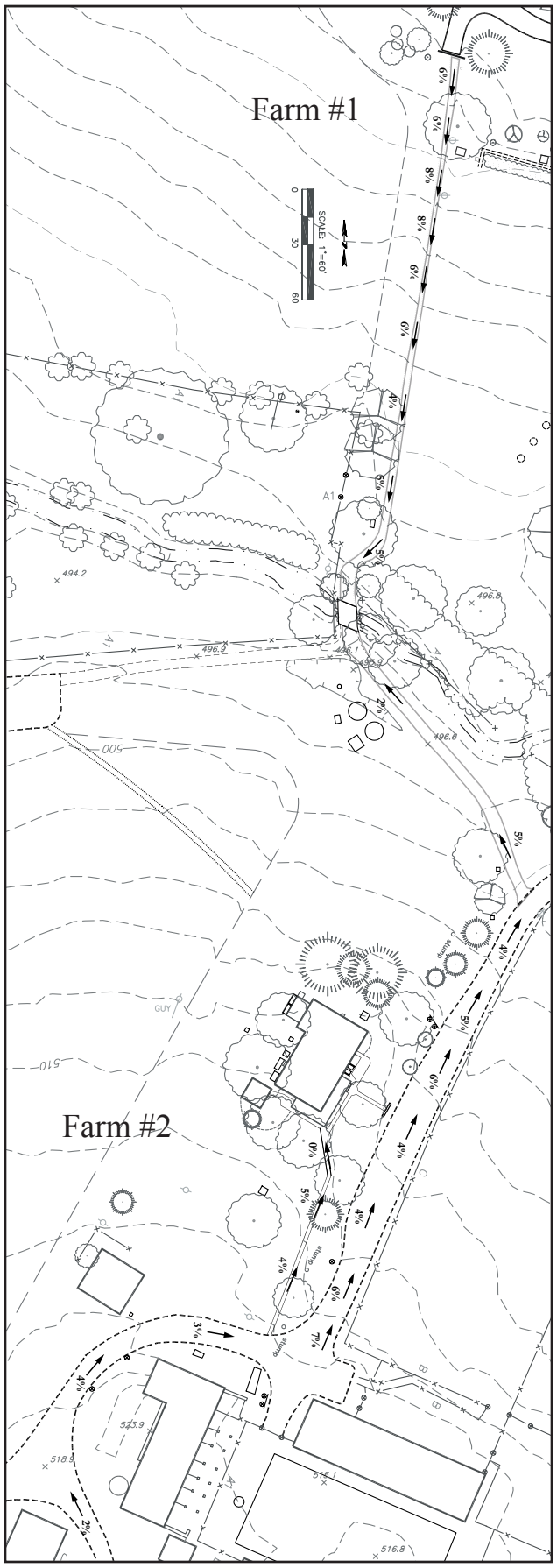




Figure 2.94. View south of the wood chip path that leads to Farm #2. (Photo by OCLP, 2005)

Developed Areas" as outlined in Table 2.1. These criteria are used for trails that extend a quarter mile or more. The route to the show barn is almost a quarter mile, about 1200 feet, and could be defined as a "trail." In this case, a landing would need to be created between the guardhouse foundation and the creek at the point where the slope increases to between six to eight percent. Using the existing alignment, the surface could remain unpaved but be made firm and even, with a crown at the upper end and a cross-slope at the lower end, and waterbars and/or dips would possibly be needed. An alternative to the French drain would be to install swales parallel to the trail, but this would require excavation and a hardened crown to prevent scouring.

The woodchip surface should be removed and replaced with a gravel aggregate/clay/sand mix. The clay serves as a binder to stabilize the aggregate, and the sand helps interlock the aggregates creating a tight water-resistant surface. The addition of a clay stabilizer can aid in forming a compacted tread with a crown, much like a road. Commercially available soil stabilizers may also be added, such as EMC2™ or Road Oyl™ (a pine resin binder), both by Soil Stabilization Products.[74] See Appendix C for other examples of trail specifications. The color of the stone should be gray to match other historically earthen/gravel paths at the site.

Figure 2.95. Map showing grades and slopes of major pedestrian routes from the south end of Farm #1 through Farm #2. (Map by OCLP, 2005)

Disabled visitors that have come to the site by vehicle should be given the option to take the "trail to Farm #2" or drive to designated spaces at Farm #2. Another option may be to convey disabled visitors via a golf cart, much like Eisenhower did. Creating a new path is not recommended, as it will alter the historic scene.

D1-5. Road and parking surfaces, Farm #1

As described in the *Statement for Management,* Eisenhower Drive and Nevins Lane were widened and have been resurfaced several times. The barnyard on Farm #1 was changed from rough gravel to pavement by the Secret Service in the 1970s, after the historic period, and now serves as a pedestrian area for visitors arriving and departing by shuttle bus. The other roads and lanes have not changed since federal acquisition of the property. A road from Farm #1 to the John Eisenhower Farm (Pitzer Schoolhouse), not maintained since 1964, is no longer in use and has returned to crops.

Recommendations

The historic roads that have been widened should not be restored to their original widths as they now function to serve the requirements of the shuttle bus. However, the color of the paving can be addressed. Mrs. Eisenhower was known to prefer light colored pavement and paved roads were surfaced with white chip and seal.[75] When the barnyard was converted to a parking area, the surface was tarred and chip coated to create a lighter appearance, but recently has been repaved with a dark surface. The site now consists of three macadam surface types: dark black, chip coated, and green-painted. A hierarchy of surface types that is clear to visitors and at the same time serves the park's functions is needed.

Ideally all surfaces should have a lighter appearance. The use of light-colored/high albedo surfaces supports LEED program criteria to reduce the heat island effect by using heat reflectant surfaces.[76a] Depending on color and composition, different paving surfaces have different albedo reflectance ratings and thus, different thermal temperatures. Areas paved in dark asphalt can be much hotter on a summer day than areas paved in lighter colored materials, meaning a large area such as the paved barnyard is likely to be uncomfortable on a typical summer day for visitors waiting for the shuttle bus.

A series of test sections is recommended in order to develop a surface mix that can withstand local environmental conditions and use, and provide a compatible color and texture with native materials, since ultimately some of the material will wash from the surface. When choosing the gravel, the color will change over time; it always becomes lighter once applied. As different stone sizes give different surface textures and are use for different traffic situations, the park should consult with the state Department of Transportation regarding chip seal applications.[76b]

The GMP, recognizing the need for stable vehicular surfaces, distinguished surface treatment recommendations by whether the features were historically paved or not.[77] The following recommendations rely on these distinctions as well as the LEED criteria discussed above:

-- All original paved roads (Eisenhower Drive from front gate to the south driveway, and Nevins Lane from Eisenhower Drive to Farm #2 Lane) should be of a light appearance and use a chip seal that employs a white-colored stone, which will gesture to the historic appearance and help reduce heat reflectance.
-- All original non-paved roads and parking areas (barnyard) should have a gravel appearance and use a chip seal with a dark gray-colored stone, which will distinguish them from historically paved features and still reduce heat reflectance.

These recommendations should be implemented when the current surface treatments need to be replaced.

D1-6. Pedestrian path surfaces, Farm #1

Types of pedestrian path surfaces also vary at the park. Around the domestic core, most paths are asphalt, with some concrete and some brick. In the winter of 1979-1980, green-painted macadam walkways were added here for accessibility and interpretive purposes. They still exist today because they are very functional and require minimal maintenance. The paths intersect with historic brick and concrete paths, and a brick walk along the east rose garden that is not historic.

Recommendations

Unlike roads and parking areas, the GMP did not separate out historic versus non-historic in its path recommendations other than suggesting that all macadam pedestrian surfaces should be changed to "a gravel appearance."[78] However, some paths from the historic period also featured gravel surfaces. The following recommendations aim to clarify this difference:



Figure 2.96. Granite step in front of farmhouse at Farm #2. (Photo by OCLP, 2005)



Figure 2.97. This historic concrete path at Farm #2 connects the farmhouse to the bank barn. It is not wide enough for a wheelchair user. (Photo by OCLP, 2005)

-- Historically graveled paths (path from bottom of bank barn ramp to guesthouse, path along south rose garden) should use a chip seal with a gray stone.
-- Non-historic green macadam walkways should be replaced with walks treated with a chip seal surface with light brown colored stones. The non-historic brick walk should be replaced with this type of walk, and the proposed new construction of an accessible route along the south rose garden (except the portion along the south rose garden) should use this type of walk.

These recommendations should be implemented when current surface treatments are in need of replacement.

D2-1. Access around headquarters area, Farm #2

The Farm #2 Lane in front of the farmhouse is wide enough to provide adequate space for parking. Although a 6"-high granite step at the head of the main walk leading to the house would likely prevent unaccompanied disabled visitors from parking here, they could instead park farther up the lane and use the long sidewalk that leads from near the bank barn to the house. (figs. 2.96, 2.97) However, this walkway is only about sixteen inches wide and is beginning to lift near a spruce tree. There is currently no accessible entrance into the house.

Recommendations

The sidewalk that connects the house to the bank barn area is uneven and is a tripping hazard. This walkway is also too narrow for wheelchair use. Efforts to modify this walkway should be in conjunction with work to provide universal access to the farmhouse.

D2-2. Road surfaces and parking surfaces, Farm #2

Like Eisenhower Drive and Nevins Lane, the eastern portion of the Farm #2 Lane was also widened and has been resurfaced several times. The other roads at Farm #2 have never been paved and are surfaced in dark grey gravel. The informal parking areas are also gravel.

Recommendations

The same hierarchy for original paved roads and non-paved roads at Farm #1 applies at Farm #2:

-- All original paved roads (Farm #2 Lane from Nevins Lane east to the Guard Hut) should be of a light appearance and use a chip seal that employs a white-colored stone, which will gesture to the conditions as they existed historically and reduce heat reflectance.
-- All other roads at Farm #2 were historically loose gravel and should remain as such. The dark grey stone color should be used.
-- Parking areas should also remain as gravel.

These recommendations should be implemented when the current surface treatments need to be replaced.

D2-3. Culvert bridge along path from Farm #1 to Farm #2 and show barn

The culvert bridge over the stream between Farm #1 and #2 is in poor condition and needs to be replaced. (fig. 2.98) The culvert bridge is historic as it was extant during the Eisenhower period and provided an important linkage between Farms #1 and #2.[79] This is still the case today, but the three circular pipes channel the water, which has resulted in greater erosion.

Recommendation
A box culvert, similar to the one installed upstream on Nevins Lane or along the Skeet Range Lane would be more effective as it will manage water flow more effectively and improve visitor safety. (fig. 2.99) An engineer should prepare specifications and oversee replacement, and consider a structure that is either wider or has higher sidewalls that can safely and effectively accommodate peak stormwater flows. If the walking area on the top of the culvert is greater than thirty-six inches from the ground, a railing should be incorporated into the design. If the culvert can be designed to keep the walking surface less than thirty-six inches from the ground below, this would be preferable so as to not introduce a highly visible and non-historic feature (railing) to the historic landscape.

D3-1. Road surfaces, Farm #3

The farm roads at Farm #3 have always been loose gravel and currently feature a dark grey colored stone.

Recommendation
Whenever necessary, gravel roads should be replaced-in-kind with loose, dark grey colored stones.

DR-1. Road surfaces, Clement Redding Farm

Farm roads at Clement Redding Farm have always been loose gravel and are presently dark grey in color.

Recommendation
Whenever necessary, gravel roads should be replaced-in-kind with loose, dark grey colored stones.



Figure 2.98. The pipe culvert bridge between Farms #1 and #2 is historic but has exacerbated erosion by channeling water. (Photo by OCLP, 2005)



Figure 2.99. The box culvert along Nevins Lane would be an appropriate solution along the path between Farms #1 and #2. (Photo by OCLP, 2005)

E. Buildings & Structures

Buildings and structures are a defining characteristic of the Eisenhower NHS but their treatment is generally addressed separately from the landscape for the purposes of this CLR. The park's List of Classified Structures contains 38 buildings, 3 sites, 89 other structures, and 6.37 miles of livestock fencing (with one building, the bank barn at Farm #2 lost to fire). One livestock support building – the small brooder house – at the Clement Redding Farm deteriorated through benign neglect. In general, and where practical, all non-historic and non-contributing structures in the park should not be replaced.

E2-1. Reconstruct bank barn, Farm #2

A fire in 1993 destroyed the upper level of the bank barn, but spared the foundation. After the fire a temporary roof was constructed over the structure to protect the ground floor.

Recommendation
Reconstruction of the bank barn at Farm #2 is currently in the NPS Project Management Information System (PMIS) database. The structure will be rebuilt using Historic American Buildings Survey drawings. The exterior of the barn will be returned to its historic appearance as a typical Pennsylvania bank barn while the interior will be used for museum storage and interpretation.

ER-1. Boundary stone wall, Clement Redding Farm

The boundary stone wall is along the west side of Red Rock Road and dates from the eighteenth century. It is constructed with random sized loose-laid stacked stone and is mostly covered by unmanaged vegetation. It originally ran the length of the property boundary between the Redding farm and Farm #1, but only a small portion has survived. The wall is in poor condition.[80]

Recommendation
The entire boundary stone wall should be stabilized and preserved not only because it is a historic feature but to help prevent deterioration of the shoulder along Red Rock Road.

F. Small-Scale Features

F-1. Fences and Gates

Fencing and gates helped mark boundaries, divide fields, and contain livestock at Eisenhower Farms. Perhaps more than any other element, the vast variety and number of fences punctuated and characterized the agricultural landscape. Types of fences were determined by the requirements of use and on the aesthetic tastes of the General and Mrs. Eisenhower.[81]

There are approximately seven miles of historic fencing within the Eisenhower property, and most contribute to the significance of the park.[82] There are four major types – post and wire, four board, cross board, and picket – within which are variations in wire types, footings, board types, and treatment of posts including unpainted, creosote-painted, and white-painted.

All fences were documented in 1970, and the 1967 historical base map in the Historic Resource Study shows the different fence styles (see fig. 2.1). In addition, fence details and specifications were prepared in 1983 by John S. Heiser (see CLR Volume 1, Appendix F). A detailed summary of fence types and locations is included in the National Register documentation (July 2005) and the linear distances of each fence type are specified in the park's FMSS maintenance management system. The 1992 SFM stated that most historic livestock fencing was extant except for a few sections, which were removed or relocated to facilitate the shuttle bus operation.[83]

Routine and ongoing maintenance of pasture fencing is accomplished by the agricultural permittee with fence materials provided by the park.[84] Fence and gate sections that are not associated with livestock pastures are maintained by the park.[85a] Most fencing from the Eisenhower period has been replaced in-kind. Some sections no longer retain their historic integrity: a run of Australian wire fence at the edge of the property east of the Eisenhower home and fences installed to support the changed cattle guard location at the north end of Nevins Lane. In the past, fences along Eisenhower Drive have been damaged by mowing equipment that catches in the fencing. (fig. 2.100)

Recommendations
Currently, fences are replaced on a cyclic basis every ten to fifteen years, and fence types are replaced in kind with similar materials using the documentation listed above.



Figure 2.100. Fence section along Eisenhower Drive damaged by a mower. (Photo by OCLP, 2001)

National Environmental Policy Act (NEPA) compliance for fence repairs and replacements is detailed in a blanket Categorical Exclusion for fences contained in the park's compliance files. However, each contract for replacement fencing still requires Section 106 assessment.

Whenever possible, historic materials should be used and obtained from local sources. The park should also consider replacing the Australian wire fence along the east boundary with the War Department concrete and post fence that was present from 1950 to 1967. To minimize safety hazards for persons operating the mowers around the fences as well as preventing damage to both the mowing equipment and fence, options include hand mowing the area proximate to the fence and posts, using weed whackers in a manner that does not damage the posts, or allowing grazing in these areas.

F1-1/F2-1. Benches and waysides, Farms #1 and #2

There are two visitor facilities associated with the Eisenhower NHS. The first is within the Gettysburg NMP Visitor Center where the visitor can purchase tickets for the three-mile, seven-minute shuttle bus ride to the farm. The second is the Eisenhower Reception Center, located in the Eisenhower's storage building, formerly used for several vehicles and personal items. The reception center contains interpretive information, exhibits, a bookstore, restrooms, a sitting area, and a video on the Eisenhowers.

No food service or telephone service is provided at the farm, but drinking water is available at the visitor reception center year around and at the show barn from April to October. Wrought iron seating benches with wood slats are located in several areas: next to the reception center for visitors waiting for the shuttle bus; north of the helipad in the lawn on the west side of Eisenhower Drive; southwest of the house at the head of the path to Farm #2; and on the front porch of the farmhouse at Farm #2. In the past, visitors, particularly older visitors, often requested the interpretive staff to supply more benches. There are also six box frame benches between posts one and seven associated with the skeet range. Picnic tables are available for use at



Figure 2.101. Park benches at the Reception Center. (Photo by OCLP, 2005)



Figure 2.102. Park benches at the head of the path to Farm #2. (Photo by OCLP, 2005)



Figure 2.103. Picnic tables and park bench at Farm #2. (Photo by OCLP, 2005)



Figure 2.104. View looking south at the septic system structure on Farm #2 in clear view from the main path that leads to the farmhouse. (Photo by OCLP, 2002)

Farm #2, south of the house, although the half-dozen or so of them are viewed by some park staff as visually intrusive in this location.[88b] (figs. 2.101-2.103) Waysides are located at the skeet range, the trailhead to Farm#2, and in several areas throughout Farm #2. Additional waysides for Farm #1 are in development.

Recommendations

The current Victorian-style bench used at the site is out of place and should be replaced with a style that is compatible with the 1960s domestic setting and distinguishable as a non-historic feature. As discussed in the CLR Volume 1, Chapter 2, the landscape around the Eisenhower home contained elements more commonly used in suburban neighborhoods and new home construction than in a rural setting.[86] Like many suburban backyards at the time, the back of the Eisenhower home featured "outdoor rooms" that were an extension of the home's living space and provided areas for entertaining and relaxation. Versatile and durable outdoor furniture such as redwood picnic tables, wood Adirondack chairs, and Art deco metal chairs became commonplace.[87] In this spirit, simple redwood benches with seat backs would be an appropriate replacement for the wrought iron benches and likely could be locally obtained. Trash receptacles with a redwood covering could also be used but should only be placed in unobtrusive locations. See Appendix C at the end of this report for examples.

In addition to the existing waysides, several additional waysides could be added at the entry drive and orchard area, the helipad, and the former pond. A second self-guiding brochure could be offered to visitors interested in a longer, more in-depth tour of the landscapes. The picnic tables could be relocated to the west side of the house, but only if there is adequate shade.

F1-2. Tree plaques, laundry pole, and rocking chairs, Farm #1

Brass plaques with state names historically marked the spruce trees along Eisenhower Drive. By 1969, after some had been stolen, the remaining plaques were inventoried and then removed, although no record was kept of which plaque went with which tree.[88] Thirty-five of the forty-eight original tree plaques are in the museum collection. The original laundry pole from the drying yard and original maple rocking chairs from the guesthouse porch are also in the museum collection.[89]

Recommendations

As the original set of tree plaques is not complete and some of the existing plaques are in poor condition, all forty-eight plaques should be reproduced and installed along the drive. Several other plant plaques from Farm #1 are in the museum collection and could be reinstalled if their historical locations can be determined.[90] The laundry pole and the rocking chairs should also be reproduced and installed. In the winter months, however, the chairs should be stored indoors.



Figure 2.105. View looking west at the toppled Ritchie fountain in the south paddock on Farm #2. (Photo by OCLP, 2005)



Figure 2.106. View looking north at a missing Nelson water bowl in the southwest paddock on Farm #2. (Photo by OCLP, 2005)

F2-2. Septic system caps, Farm #2

In 1999, a new septic system was installed to accommodate the needs of both Farm #1 and Farm #2. The concrete tanks for this system were placed on Farm #2, just east of the employee parking lot, directly across from the stream crossing between the farms.[91] The tanks are below ground with three concrete pads exposed above grade. Ventilation pipes and mechanical access panels are located on these pads. The pads, panel doors, and pipes are very visible and unattractive, especially when seen from the culvert bridge looking south up to the farmhouse at Farm #2. (fig. 2.104)

Recommendations

The tops and sides of the concrete pads, panel doors, and pipes should be painted a flat dark brown color so that they are less noticeable from the culvert bridge, which is where visitors catch their first glimpse of the farmhouse on Farm #2. To further obscure the structures, approximately ten yards of loam should be added around the concrete pads and seeded with grass. The new fill should be feathered into the existing grade. However, the park should consult experts on the septic system first so that the fill does not block some of the small vents on the sides of the tanks and inhibit its operation. No shrubs or other vegetation should be planted in this area as that will tend to draw more attention to the structures.



Figure 2.107. View looking east at the well and pump on Farm #2, in the pasture east of the show barn. (Photo by OCLP, 2005)

F2-3. Ritchie fountains, Nelson water bowls, well and pump, and concrete trough, Farm #2

Water dispensers located in the pastures and paddocks were an important feature in the agricultural landscape at Farm #2 during the Eisenhower period. Four of the original dispensers, Nelson water bowls, remained at the end of the historic period. Many of these were eventually replaced by Ritchie water fountains, of which seven were extant in the late 1960s. Most of the fountains are in good condition but a few are in poor condition or are missing. (figs. 2.105, 2.106) The well and pump dates from the late 1950s and provided water to the Ritchie and Nelson fountains, the farmhouse, the show barn, and the semen shed. The structure was originally identified by a four-board post fence and covered by a galvanized metal roof. The NPS replaced the original pump with a submersible pump as well as the roof. The structure is currently in poor condition. (fig. 2.107) The concrete trough dates to c.1959 and was used to water cattle when they were not in the paddocks at the show barn. This feature is located in the "alley" fencing west of the show barn but is obscured by vegetation.[92]

Recommendations
The fountain in the south paddock is tipped over and should be stabilized. Two of the Nelson water bowls are missing and should be replaced: one in the southwest paddock and the west fountain in the corral north of the nurse barn wing of the show barn. The fencing around the well and pump is missing and the roof has collapsed. This feature should be stabilized and restored. Tall grasses should be removed from around the concrete trough feature so that it is visible.

F2-4. Utility poles, Farm #2

A extant utility polle south of the house at Farm #2 is missing a its "arms" and insulators, while a rotting utility pole in the paddock east of the house fell within the past two years.[93]

Recommendations
The arms and insulators on the pole south of the house and the missing pole in the paddock should be replaced in kind.

FR-1. Gas pump, Clement Redding Farm

A gas pump was historically located next to the garage at the Clement Redding Farm and is currently stored in the barn.[94]

Recommendation
The gas pump should be reinstalled at the garage.

G. Archeological Resources

G-1. Archeological monitoring

To date, six archaeological component sites have been identified at Eisenhower NHS, all of which contribute to the park's significance under Criteria A and B. These identified component sites are: Eisenhower Farm (Farm #1), Farm #2, Farm #3, Flaharty Farm (Pitzer Tenant Farm), Pitzer Schoolhouse Site, and James Ewing Farm Site.[95] Specific features are listed in the National Register of Historic Places Nomination Form.

The Eisenhower property reflects several periods of historic significance, most notably the Eisenhower period and the Civil War period. Farms #1, #2, and #3 were behind the Confederate lines during the July 1863 Battle of Gettysburg. The properties were subject to trampling of field crops, killing of livestock, removal or burning of fencing, loss of household articles, and damages sustained due to artillery fire from the Union lines. The buildings were probably used as aid stations and to care for casualties. The closest engagement likely occurred on the third day of the battle in the fields adjoining the southern border of Farm #2, with Confederate Blakely guns fired from the knoll of the present Smith Farm adjoining the nurse cow pasture, and breastworks from Emmitsburg Road to Willoughby Run across much of Farm #2.[96] During the Eisenhower period of ownership, the area around the base of the Eisenhower home and roads leading to it were extensively disturbed by construction.[97]

As discussed in Chapter 1, the Farm #1 was designated a National Historic Landmark in 1966 for its association with General Eisenhower. Eisenhower NHS was established in 1967 primarily for its association with Eisenhower and secondarily for its relationship to the Battle of Gettysburg. Farms #2 and #3 were originally part of Gettysburg NMP but were transferred into Eisenhower NHS in 1969. Later, the Clement Redding farm was acquired to preserve the historic setting of the Eisenhower properties.

Recommendations
While the Civil War period is significant, field patterns, fencerows, structures, and other characteristics from later periods until the end of the Eisenhower period should be preserved. There is a high probability of significant archeological resources through the site.

No overview or assessment within the Service wide Archeological Inventory Program has been initiated under Section 110 of the National Historic Preservation Act for any of the six identified or potential archeological sites that are associated with the Eisenhower NHS.[98] Therefore, archeological monitoring during any site disturbance is very important. Any regrading needed to improve accessibility on Farms #1 or #2 should include archeological monitoring.

H. Summary Of Recommendations

The mission of the NPS has been to ensure that historic, scenic, rural, and agricultural characteristics of Farms #1, #2, #3, and the Clement Redding Farm are retained, while allowing for visitor access and educational opportunities. Recommended treatment guidelines and actions seek

to preserve the integrity – that is the location, setting, association, design, materials, workmanship, and feeling – during the period of the Eisenhowers' occupancy, 1951 to 1969 (the park visually interprets the year 1967, when Eisenhower gave the property to the NPS).

The preferred treatment at Eisenhower NHS, rehabilitation, focuses on the continued maintenance and repair of landscape features remaining from the period of significance, which ends in 1969. Wherever feasible, vegetation, fences, circulation surfaces, and small-scale features are replaced in kind. Much of this work has already been completed by the park. The rehabilitation treatment approach also acknowledges the need to meet continuing or changing uses through alterations or new additions while retaining the historic character of the property. Specifically, this refers to ensuring visitor safety and comfort through features such as accessible circulation routes and walkways; allowing for sustainable maintenance practices, like replacement of certain historic plant material with more disease-resistant varieties; and managing natural features such as stream corridors in concert with the goals of the Chesapeake Bay Program.

A. Spatial Organization, Topography, and Response to Natural Systems and Features

The organization of fields, farm building clusters, road alignments, property boundaries, and fence lines should be preserved and maintained, as they are essential to the design and feeling of the Eisenhower NHS. The diversity of features in the park is great, and the contrast between the more developed and ornamental landscape at Farm #1 versus the utilitarian setting of the other three farms should also be preserved.

B. Land Use and Cultural Traditions: Crops, Grazing, Former Pond, and Wildlife Management

Some of the park's land uses have necessarily changed to accommodate the transformation of the site from a private farm to a public park, from the addition of accessible paths and benches, to the rehabilitation of the storage building into a visitor reception center, to the prohibition of hunting. However, the site's primary land use type – agricultural fields of contoured croplands and grazing pastures – continues to illustrate the legacy of the Eisenhower's stewardship of this land. Although there have been changes in how some of the individual fields are farmed, and in what types of crops are planted, the basic use of the land has endured. Local farmers with Special Use Permits work with the park to maintain this setting, and like Eisenhower and his staff, continue to rely on recommendations from county extension and state conservation services. They must also adhere to a variety of other directives such as the Chesapeake Bay Program that regulates the health of stream corridors in the park, and the Endangered Species Act that influences management of wetland areas on the Clement Redding Farm. While such policies prevent the restoration of the old pond between Farms #1 and #2, they encourage the park to manage increasingly overgrown and invasive vegetation along the stream corridors.

C. Vegetation and Views: Stream Corridors, Vegetated Screens, and Ornamental Plantings

Vegetation is the most changeable landscape characteristic and one the most challenging to manage. The openness of the site and its exposure to sustained winds has stressed many of the plants since the end of the historic period. To further complicate matters, many of the plants were donations and were not particularly suited to the site conditions. Despite these constraints, the park's vegetation has faired reasonably well. Future challenges include maintaining the historic conditions of hedgerows, fencerows, and vegetated stream corridors, which serve to both frame desirable views and screen unwanted views, planning for the replacement of entire features that have become overgrown or are in decline, and caring for replacement plantings in sustainable and cost-effective ways.

As was typical for rural farmsteads of the period, landscaping around farmhouses consisted of shade trees, shrubs, and gardens. However, the complexity and design of the ornamental landscape at Farm #1 set it apart from the other farms and clearly illustrated its role as the Eisenhower's primary place of residence. The landscape was typical of many suburban landscapes of the 1950s, with terraces, gardens, patios, and the like designed for entertaining and relaxation. The Eisenhowers did just that, hosting countless foreign dignitaries, Republican Party events, and White House staff picnics, as well as family gatherings. These spaces were defined and adorned with a large variety of trees, shrubs, and flowers, many of which were donated by admirers. Many of these plants are extant today, although a fair number have died due to age, disease, or storm damage. Fortunately, the park has replaced-in-kind many of these plants. The treatment recommendations offer

detailed assessments and recommendations for all of the ornamental plantings at Farm #1.

The more challenging vegetation issues concern some of the more prominent planting areas: the evergreen and flowering trees along Eisenhower Drive; the vegetated screens between the house and barn and southwest of the house; the plantings around the teahouse and barbecue; and the orchard trees. In each of these areas, the existing trees have become either quite large and are crowding out other plants, or are beginning to decline because of age or poor soil conditions. In most cases, the best course of action will be to remove the existing vegetation and plant replacements in the sequence they were originally planted.

Many of the treatment actions focus on historic character. At Farm #1, for example, the Hopa crabapples along the entry drive are in decline because of disease and age, so a substitute variety that has the same form, habit, and most importantly, same pink flower as the original trees, is recommended. At the other farms, because there is less historic documentation, recommendations aim to preserve or reestablish the presence of shade trees and shrubs around the houses, as was the case historically.

D. Circulation: Accessibility, Paved and Gravel Surfaces

The circulation system at Eisenhower NHS historically consisted of a vehicular network of driveways and farm lanes associated with the farm complex and a pedestrian system of paths and walks associated with each farmhouse. These systems also included such features as cattleguards, culverts, and drainage swales. As with vegetation features, the circulation features at Farm #1 are more complex than the other farms and feature paved driveways, brick walkways, and flagstone terraces.

The historic circulation system is essentially intact. In the 1970s, to achieve universal accessibility for visitors, the NPS modified some areas by constructing new walkways and ramps, hardening previously unpaved features, and altering pavement widths. However, accessibility rules have changed since that time and some additional modifications or new construction will be needed, especially between the Eisenhower home and the teahouse/barbecue area. The route between Farms #1 and #2 also needs to be upgraded, as does the culvert at the stream crossing.

The changes and additions, and potential new projects, described above make the distinctions between historic and non-historic features even more important to convey. The treatment recommendations aim to clarify this distinction so that the historic character of the site's circulation features can be preserved and interpreted – especially those of Farm #1.

E. Buildings and Structures

Buildings and structures at Eisenhower NHS, including those dating from the eighteenth century to those introduced during the Eisenhower period, make up the clusters that are typical of Pennsylvania farmsteads. They also illustrate how such farmsteads evolved over time in response to new farm technologies, economic realities, and the preferences and needs of the landowners.

The Eisenhower influence is most evident on Farm #1, where a new house was constructed and other existing buildings were modified to meet contemporary needs, and at Farm #2 where the farm cluster was completely modified to accommodate the cattle operation. Other features reflect Eisenhower's presidential status and personal interests and needs, including a helicopter landing area, several guardhouses, a barbecue and teahouse, and a skeet and trap range.

Overall, buildings and structures from Farms #1, #2, #3, and the Clement Redding Farm still represent the Eisenhower period, the only major exception being the loss of the nineteenth-century bank barn on Farm #2. The park hopes to reconstruct this structure in the near future. Another important feature, recommended for preservation and stabilization, is the eighteenth-century stone boundary wall along Red Rock Road at the Clement Redding Farm.

F. Small-Scale Features

Small-scale features at Eisenhower NHS illustrate the operations at Eisenhower Farms and the public and private faces of the Eisenhower family. Most of those features associated with the business side of the farms are still present such as water faucets, troughs, utility lines, poles, and windmills, or have been replaced in kind such as fences and gates. However, some features are missing or are in poor condition - such as several water fountains, the well and pump, and utility poles on Farm #2, or need to be replaced with historic materials - such as a section of non-historic Australian wire fence on Farm #1.

Features associated with the domestic aspects of the farm are also mostly intact and are primarily situated in the lawns and gardens around the Eisenhower home. Other historic features such as electric eye sensors and security lights were also present and most are still extant. Some historic features are in the musuem collection and should be reproduced and reintroduced in the landscape: tree plaques along Eisenhower Drive, rocking chairs at the guesthouse, and the laundry pole.

Visitor-related small-scale features like benches, picnic tables, trash receptacles, and waysides dot the site. The Victorian-style park benches should be replaced with redwood benches that were commonly used in the 1950s and 1960s, and trash receptacles should match the benches. Additional waysides are being developed to help visitors interpret the landscape. Contemporary features required to operate the site are mostly unobtrusive save for the septic system structures on Farm #2, which should be concealed.

G. Archeology

There is a high probability of significant archeological resources through Eisenhower NHS, especially from the Civil War period. The Battle of Gettysburg is identified in the park's enabling legislation; however, the park was designated primarily for its association with General Eisenhower. Therefore, characteristics and features from the Eisenhower period of significance should be preserved. Some of the recommendations discussed in this report – mainly those associated with accessible paths – will require site disturbances and will require archeological monitoring, especially in known sensitive areas.

Endnotes to Chapter 2

[1] Tracy Stakely, Margie Coffin Brown, and Jeffrey Killion. *Cultural Landscape Report for Eisenhower National Historic Site, Volume 1: Site History, Existing Conditions, and Analysis*, National Park Service, Olmsted Center for Landscape Preservation, Boston, Massachusetts, 2005: p. 224. Hereafter: Stakely, CLR Volume 1.

[2] Stakely, CLR Volume 1, p. 224.

[3a] John McKenna, Site Manager, Memorandum to Margie Coffin Brown, September 8, 2006.

[3b] Kathy Harrison, Winona Peterson, and Carol Hegeman. "National Register of Historic Places Nomination Form - Eisenhower National Historic Site." July 2005. Hereafter: "National Register of Historic Places Nomination Form," July 2005.

[3c] John McKenna, Site Manager, Memorandum to Margie Coffin Brown, September 8, 2006.

[4] *General Management Plan*, p. 31-32; *Statement for Management*, p. 30.

[5] *General Management Plan*, p. 31.

[6] *Statement for Management*, p. 10.

[7] "National Register of Historic Places Nomination Form," July 2005.

[8] *Statement for Management*, p. 12, 30.

[9] Regarding agricultural leasing, the *Statement for Management* states "The NHPS provides for leasing of lands within the historic site for agricultural purposes, with lease fees retained for maintenance. Portions of Farms #1 and #2 are leased under this authority, with 187 acres in crops and 112 acres in pasture for 40 animals." Regarding special use permits, the *Statement for Management* states "The park manages 143 acres of Farm #3 through agricultural special use permits issued to area farmers for periods up to five years. Thirty-seven acres are in pasture for 18 cattle, and 106 acres are in crops. The program's benefits are maintenance of a historically compatible rural landscape, reduction of maintenance costs, preservation of natural and cultural resources, and perpetuation of the lands in an active agricultural production as an economic benefit to the local community. *Statement for Management*, 10.

[10] Stakely, CLR Volume 1, p. 121-125.

[11] *General Management Plan*, p. 16, 40.

[12] *Statement for Management*, p. 30.

[13] Zachary Bolitho, Natural Resource Specialist, email to Jeffrey Killion, February 28, 2006.

[14] Stakely, CLR Volume 1, p. 127-128.

[15] *Ibid*, p. 168-169.

[16] *Ibid*, p. 230.

[17] "National Register of Historic Places Nomination Form," July 2005.

[18] *Ibid.*

[19] Eisenhower often considered irrigation for his crops. Although discouraged by his farm manager, Eisenhower proceeded with drilling an artesian well in about 1967. The irrigation system was never installed. The well is listed on the List of Classified Structures and is unused, capped, and barely visible from Red Rock Road. Stakely, CLR Volume 1, p. 162; *General Management Plan*, p. 17; and *Statement for Management*, p. 15. The *Statement for Management* describes potential use of the well by the Gettysburg Municipal Authority, but park staff has determined that the municipality will not be allowed to use the well.

[20] Stakely, CLR Volume 1, p. 60-64.

[21] *Ibid*, p. 65-67.

[22] *Ibid*, p. 65-66.

[23a] Once the trees are cut, the stumps should be chipped and ground.

[23b] Stakely, CLR Volume 1, p. 66.

[24] Cultivar information from material by Alan H. Michael, International Society of Arborists, 28th Annual Shade Tree Symposium, February 9, 1993. For updated information, the park should contact the Ornamental Horticulture & Urban Forestry Agent for Adams County. http://hortweb.cas.psu.edu/extension/ohortex/contact_list.html

[25] Stakely, CLR Volume 1, p. 69-71.

[26] *Ibid*, p. 71-72.

[27] *Ibid*, p. 71.

[28] *Ibid*, p. 77-80.

[29] *Ibid*, p. 77-80.

[30] *Ibid*, p. 97.

[31] *Ibid*, p. 81.

[32] *Ibid*, p. 83-85.

[33] *Ibid*, p. 80-83.

[34] *Ibid*, p. 80-87.
[35] *Ibid*, p. 83.
[36] *Ibid*, p. 83.
[37] *Ibid*, p. 102.
[38] *Ibid*, p. 94-95.
[39] *Ibid*, p. 95.
[40] *Ibid*, p. 110.
[41] "National Register of Historic Places Nomination Form," July 2005.
[42] Stakely, CLR Volume 1, 108-109.
[43] *Ibid*, p. 106.
[44] *Ibid*, p. 109-110.
[45] Adenauer's gift of 200 roses included 100 Eisenhower red roses and 100 peace rose bushes. The peace roses were given away. Eisenhower NHS archives, memo for record, 12/20/1955.
[46] Eisenhower National Historic Site, NHPA Section 106 documentation, 1994.
[47] Stakely, CLR Volume 1, p. 105 and Arthur S. Nevins, *Gettysburg's Five-Star Farmer,* New York: Carlton Press, Inc., 1977, p. 111.
[48a] Stakely, CLR Volume 1, p. 105-106.
[48b] John McKenna, Site Manager, Memorandum to Margie Coffin Brown, September 8, 2006.
[49] Stakely, CLR Volume 1, p. 106-108.
[50] *Ibid*, p. 104-106.
[51] *Ibid*, p. 97, 114-115.
[52] *Ibid*, p. 115-116.
[53] *Ibid*, p. 116.
[54] Eisenhower National Historic Site, NHPA Section 106 documentation, 1994.
[55a] Stakely, CLR Volume 1, p. 117.
[55b] John McKenna, Site Manager, Memorandum to Margie Coffin Brown, September 8, 2006.
[55c] *Ibid.*
[56] Stakely, CLR Volume 1, p. 118-120.
[57] *Ibid*, p. 227.
[58] *Ibid*, p. 121, 174-175.
[59] *Ibid*, p. 173, 198.
[60] *Ibid*, p. 173-174.
[61] *Ibid*, p. 230.
[62] *Ibid*, p. 226.
[63a] *Ibid*, p. 175-176.
[63b] The three stumps on the south side of the house were maples removed in the mid-1990s, according to Park Ranger John Joyce who lived in the house. John McKenna, Site Manager, Memorandum to Margie Coffin Brown, September 8, 2006.
[64] Stakely, CLR Volume 1, p. 199.
[65] *Ibid*, p. 200-202.
[66] *Ibid*, p. 202.
[67] Treatment Charette meeting notes, Eisenhower National Historic Site, September 14, 2005
[68] Christopher Stevens and Linda White, *Cultural Landscape Report and Archeological Assessment for Victory Woods, Saratoga National Historical Park, Saratoga, New York.* Department of the Interior, National Park Service, Olmsted Center for Landscape Preservation and Northeast Region Archeology Program, 2006, p. 199.
[69] Stakely, CLR Volume 1, p. 194.
[70a] *General Management Plan*, p. 41.
[70b] Carol Hegeman, Supervisory Historian, email to Jeffrey Killion, October 24, 2006.
[71] *General Management Plan*, p. 41.
[72] *Ibid.*
[73a] Stakely, CLR Volume 1, p. 118.
[73b] John McKenna, Site Manager, Memorandum to Margie Coffin Brown, September 8, 2006.
[74] A soil stabilizer product has been used successfully at Minute Man NHP and Longfellow NHS (www.stabilizersolutions.com). Petersburg National Battlefield uses a locally mined river gravel mix with clay and sand added. It holds up well to pedestrian and horse traffic, remains stable on slopes, and is applied to the ground surface with a depth of four to six inches (without excavation to preserve battlefield archeological resources). The clay is needed to bind the mix. Park staff rolls the surface immediately after applying the mix in order to stabilize it. To prevent footprints, the park only applies small portions of the trail, then rolls it, then applies more, and then rolls that, and so on. The staff pulls the roller manually unless going up a hill in which case they attach it to a gator and not only rolls the surface but also rolls the four to six inch sides. The park is satisfied with the final product. From Christopher Stevens and Linda White, *Cultural Landscape Report and Archeological Assessment for Victory Woods, Saratoga National Historical Park, Saratoga, New York.* Department of the Interior, National Park Service, Olmsted Center for Landscape Preservation and Northeast Region Archeology Program, 2006, p. 200.
[75] Stakely, CLR Volume 1, p. 231.
[76a] LEED refers to the U.S. Green Building Council's Leadership in Energy and Environmental Design rating system and is first discussed in the Vegetation section as it pertains to irrigation. See www.usgbc.org.
[76b] The web address for the Pennsylvania State Department of Transportation is http://www.dot.state.pa.us/.
[77] *General Management Plan*, p. 40.
[78] *Ibid*, p. 41.
[79] National Park Service, *List of Classified Structures*, #81387 (053A).
[80] "National Register of Historic Places Nomination Form," July 2005.
[81] *Ibid.*
[82] *General Management Plan*, p. 20.
[83] *Statement for Management*, p. 13.
[84] Fence posts are purchased from Doug Kirkland, Dillsburg, Pennsylvania.
[85a] *Statement for Management*, p. 13.
[85b] John McKenna, Site Manager, Memorandum to Margie Coffin Brown, September 8, 2006.
[86] Stakely, CLR Volume 1, p. 77.
[87] From http://www.furniturestyles.net/american/modern/retro.html
[88] Stakely, CLR Volume 1, p. 66, 131.
[89] John McKenna, Site Manager, Memorandum to Margie Coffin Brown, September 8, 2006.
[90] *Ibid.*
[91] Stakely, CLR Volume 1, p. 198.
[92] "National Register of Historic Places Nomination Form," July 2005.
[93] John McKenna, Site Manager, Memorandum to Margie Coffin Brown, September 8, 2006.
[94] *Ibid.*
[95] "National Register of Historic Places Nomination Form," July 2005.
[96] *General Management Plan*, p. 22.
[97] *Ibid*, p. 22, 28.
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Appendix A:
Plant Species, Assessments, and Recommendations



Table A.1
Plant Species

Botanical Name	Common Name
Acer platanoides 'Crimson King'	Crimson King maple
Acer rubrum	red maple
Acer saccharum	sugar maple
Berberis thunbergii var. atropurpurea	Purple-leaf Japanese barberry
Betula pendula	European white birch
Buxus microphylla var koreana	Korean boxwood
Buxus sempervirens	common boxwood
Campsis radicans	trumpet vine
Catalpa spp.	catalpa
Clematis spp.	clematis
Cornus florida	flowering dogwood
Crataegus phaenopyrum	Washington hawthorn
Fagus grandifolia	American beech
Fagus sylvatica 'Atropunicea'	purple-leaf beech
Forsythia ovata	early forsythia
Fraxinus pennsylvanica	green ash
Geranium	pink geranium
Hedera helix	English ivy
Hibiscus syriacus	shrub althea (also called rose-of-sharon)
Ilex crenata	Japanese holly
Ilex opaca	American holly
Juglans nigra	black walnut
Ligustrum spp.	privet
Liquidambar styraciflua	American sweetgum
Liriodendron tulipifera	tuliptree
Lonicera spp.	honeysuckle
Magnolia stellata	star magnolia
Magnolia x soulangiana	saucer magnolia
Malus spp.	flowering crabapple
Malus spp.	weeping crabapple
Malus spp.	Golden Delicious or Stayman Winesap apple
Paeonia	peony
Picea abies	Norway spruce
Pieris japonica	Japanese pieris
Pinus strobus	white pine
Platanus occidentalis	American sycamore
Prunus cerasifera 'Atropurpurea'	purple cherry plum
Prunus pensylvanica	pin cherry
Prunus persica	common peach
Prunus persica (nectarina)	nectarine
Prunus serrulata	Japanese flowering cherry

Prunus spp.	cherry
Prunus spp.	weeping cherry
Prunus triloba	flowering almond
Rhododendron spp.	dwarf azalea
Rhododendron spp.	rhododendron
Robinia psuedoacacia	black locust
Rosa spp.	floribunda rose
Rosa spp.	rambling rose
Rosa spp.	tea rose
Quercus palustris	pin oak
Quercus velutina	black oak
Sassafras albidum	common sassafras
Spiraea prunifolia	bridalwreath spirea
Syringa x chinensis	Chinese lilac
Syringa x persica	Persian lilac
Syringa vulgaris	common lilac
Taxus baccata	English yew
Taxus baccata 'Repandens'	English spreading yew
Taxus canadensis	Canadian yew
Taxus x media 'Hicksii'	Hicks yew
Tsuga canadensis	Canadian hemlock
Tulip	tulip
Ulmus americana	American elm
Ulmus parvifolia	Chinese elm
Violet	violet
Zelkova serrata	Japanese zelkova

Table A.2
Plant Assessments and Recommendations

Map code # and species	Common Name	Extant in c.1969	Size	Condition	Recommendation
FARM #1					
Area 1: Entry gate and drive (Gate area, #s 1-32)					
1. *Taxus x media 'Hicksii'*	Hicks yew	✓	Young	Good; replaced overgrown plant in 2005	--
2. *Taxus x media 'Hicksii'*	Hicks yew	✓	Young	Good; replaced overgrown plant in 2005	--
3. *Taxus x media 'Hicksii'*	Hicks yew	✓	Young	Good; replaced overgrown plant in 2005	--
4. *Taxus x media 'Hicksii'*	Hicks yew	✓	Young	Good; replaced overgrown plant in 2005	--
5. *Taxus x media 'Hicksii'*	Hicks yew	✓	Young	Good; replaced overgrown plant in 2005	--
6. *Taxus x media 'Hicksii'*	Hicks yew	✓	Young	Good; replaced overgrown plant in 2005	--
7. *Taxus x media 'Hicksii'*	Hicks yew	✓	Young	Good; replaced overgrown plant in 2005	--
8. *Taxus x media 'Hicksii'*	Hicks yew	✓	Young	Good; replaced overgrown plant in 2005	--
9. *Taxus x media 'Hicksii'*	Hicks yew	✓	Young	Good; replaced overgrown plant in 2005	--
10. *Taxus x media 'Hicksii'*	Hicks yew	✓	Young	Good; replaced overgrown plant in 2005	--
11. *Berberis thunbergii var. atropurpurea*	purple-leaf Japanese barberry	✓	Mature	Good; recently rejuvenated	--
12. *Berberis thunbergii var. atropurpurea*	purple-leaf Japanese barberry	✓	Mature	Good; recently rejuvenated	--
13. *Berberis thunbergii var. atropurpurea*	purple-leaf Japanese barberry	✓	Mature	Good; recently rejuvenated	--
14. *Berberis thunbergii var. atropurpurea*	purple-leaf Japanese barberry	✓	Mature	Good; recently rejuvenated	--
15. *Berberis thunbergii var. atropurpurea*	purple-leaf Japanese barberry	✓	Mature	Good; recently rejuvenated	--
16. *Cornus florida*	flowering dogwood	✓	Mature	Good; but crowded and stunted	--
17. *Crataegus phaenopyrum*	Washington hawthorn	✓	Gone	--	Do not plant hawthorn; currently too shady for replacement; replace when entire area is replanted
18. *Crataegus phaenopyrum*	Washington hawthorn	✓	Mature	Poor; crowded and stunted; hollow trunk	Leave for now; too shady for replacement; replace when entire area is replanted
19. *Pinus strobus*	white pine	✓	Mature	Good	--
20. *Pinus strobus*	white pine	✓	Mature	Good	--
21. *Pinus strobus*	white pine	✓	Gone	--	Do not plant pine; currently too shady; replace when entire area is replanted
22. *Pinus strobus*	white pine	✓	Mature	Fair; broken leader	--
23. *Picea abies*	Norway spruce	✓	Mature	Good	--

24. *Sassafras albidum*	common sassafras	✓	Young	Poor; replaced in 2005; dying	May soon need replacement
25. *Liquidambar styraciflua*	American sweetgum	✓	Mature	Fair; stunted by competition	--
26. *Liquidambar styraciflua*	American sweetgum	✓	Young	Good; replaced in 2005	--
27. *Pinus strobus*	white pine	✓	Mature	Fair; broken branches	--
28. *Pinus strobus*	white pine	✓	Young	Poor; replacement is dying	May soon need replacement
29. *Acer rubrum*	red maple	✓	Mature	Good; but stunted	--
30. *Crataegus phaenopyrum*	Washington hawthorn	✓	Young	Good, replaced in 2005	--
31. *Cornus florida*	flowering dogwood	No	Young	Good; crowded and shaded by other plants; historically a white pine and should be replaced	Replace dogwood with white pine when entire area is replanted
32. *Pinus strobus*	white pine	✓	Young	Good	--
Area 1: Entry gate and drive (Gate to orchard, #s 33-150)					
33. *Picea abies*	Norway spruce	✓	Mature	Good	--
34. *Pinus strobus*	white pine	✓	Young	Good; replacement planted in 2005	--
35. *Tsuga canadensis*	Canadian hemlock	✓	Mature	Fair	--
36. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
37. *Picea abies*	Norway spruce	✓	Mature	Good	--
38. *Malus spp.* 'Hopa'	flowering crabapple	✓	Gone	--	Do not replace crabapple; too close to culvert
39. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
40. *Picea abies*	Norway spruce	✓	Mature	Good	--
41. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
42. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
43. *Pinus strobus*	white pine	✓	Gone	--	Do not replace white pine
44. *Picea abies*	Norway spruce	✓	Mature	Good	--
45. *Pinus strobus*	white pine	✓	Gone	--	Do not replace white pine; instead plant pink-flowering crabapple to mirror crabapple on west side (#140)
46. *Pinus strobus*	white pine	✓	Gone	--	Do not replace white pine; instead plant pink-flowering crabapple to mirror crabapple on west side (#138)
47. *Picea abies*	Norway spruce	✓	Mature	Good	--
48. *Malus spp.* 'Liset'	flowering crabapple	No	Mature	Good; small red persistent fruit; identified as white pine in 1969 plan but was not mirrored on west side	Replace Liset crabapple with pink-flowering crabapple to mirror crabapple on west side (#136)
49. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
50. *Picea abies*	Norway spruce	✓	Mature	Good	--

51. *Malus spp.* 'Katherine'	flowering crabapple	No	Mature	Fair; different variety with small yellow fruit, tagged "E9 Type 3"	Plant pink-flowering crabapple
52. *Malus spp.*	flowering crabapple	✓	Mature	Good	--
53. *Picea abies*	Norway spruce	✓	Mature	Fair	--
54. *Malus spp.* 'Hopa'	flowering crabapple	✓	Gone	--	Plant pink-flowering crabapple
55. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Poor	--
56. *Picea abies*	Norway spruce	✓	Mature	Good	--
57. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
58. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
59. *Picea abies*	Norway spruce	✓	Mature	Good	--
60. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
61. *Malus spp.* 'Liset'	flowering crabapple	No	Mature	Good; different variety with red fruit; tagged "E16 Type 2"	Replace Liset crabapple with pink-flowering crabapple
62. *Picea abies*	Norway spruce	✓	Mature	Good	--
63. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Poor	--
64. *Pinus strobus*	white pine	✓	Gone	--	Do not plant white pine; was not mirrored on west side of drive historically
65. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
66. *Picea abies*	Norway spruce	✓	Mature	Good	--
67. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
68. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
69. *Picea abies*	Norway spruce	✓	Mature	Good	--
70. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Fair	--
71. *Pinus strobus*	white pine	✓	Gone	--	Do not plant white pine
72. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Fair	--
73. *Picea abies*	Norway spruce	✓	Mature	Good	--
74. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
75. *Pinus strobus*	white pine	✓	Gone	--	Do not plant white pine
76. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
77. *Picea abies*	Norway spruce	✓	Mature	Good	--
78. *Malus spp.* 'Hopa'	flowering crabapple	✓	Gone	--	Plant pink-flowering crabapple
79. *Pinus strobus*	white pine	✓	Gone	--	Do not plant white pine
80. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
81. *Picea abies*	Norway spruce	✓	Mature	Good	--
82. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
83. *Pinus strobus*	white pine	✓	Gone	--	Do not plant white pine; was not mirrored on west side of drive historically
84. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
85. *Picea abies*	Norway spruce	✓	Mature	Good	--
86. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Fair	--
87. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Fair	--

88. *Picea abies*	Norway spruce	✓	Mature	Good	--
89. *Pinus strobus*	white pine	✓	Gone	--	Do not plant white pine
90. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Fair	--
91. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Fair	--
92. *Picea abies*	Norway spruce	✓	Mature	Good	--
93. *Picea abies*	Norway spruce	✓	Gone	--	Plant spruce
94. *Pinus strobus*	white pine	✓	Gone	--	Do not plant white pine; plant pink-flowering crabapple to mirror crabapple on east side
95. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Fair	--
96. *Pinus strobus*	white pine	✓	Gone	--	Do not plant white pine
97. *Picea abies*	Norway spruce	✓	Mature	Good	--
98. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
99. *Pinus strobus*	white pine	✓	Gone	--	Do not plant white pine; it was not mirrored on east side historically
100. *Malus spp.* 'Hopa'	flowering crabapple	✓	Gone	--	Plant pink-flowering crabapple
101. *Picea abies*	Norway spruce	✓	Mature	Good	--
102. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
103. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
104. *Picea abies*	Norway spruce	✓	Mature	Good	--
105. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
106. *Pinus strobus*	white pine	✓	Gone	--	Do not plant white pine
107. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
108. *Picea abies*	Norway spruce	✓	Mature	Good	--
109. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
110. *Pinus strobus*	white pine	✓	Gone	--	Do not plant white pine
111. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
112 . *Picea abies*	Norway spruce	✓	Mature	Good	--
113. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
114. *Pinus strobus*	white pine	✓	Gone	--	Do not plant white pine
115. *Malus spp.* 'Hopa'	flowering crabapple	✓	Gone	--	Plant pink-flowering crabapple
116. *Picea abies*	Norway spruce	✓	Mature	Good	--
117. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
118. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
119. *Picea abies*	Norway spruce	✓	Mature	Good	--
120. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
121. *Malus spp.* 'Hopa'	flowering crabapple	✓	Gone	--	Plant pink-flowering crabapple
122. *Picea abies*	Norway spruce	✓	Mature	Good	--
123. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
124. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
125. *Picea abies*	Norway spruce	✓	Mature	Good	--

126. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
127. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
128. *Picea abies*	Norway spruce	✓	Mature	Poor; almost dead	--
129. *Malus spp.* wild crabapple	flowering crabapple	No	Mature	Good; replacement plant, large green apples with round spreading form; possibly historic variety (Hopa) where graft took over; tagged "W12type4"	Replace wild crabapple with pink-flowering crabapple
130. *Malus spp.* 'Liset'	flowering crabapple	No	Young	Good; small red persistent fruit; tagged "W11type2"	Replace Liset crabapple with pink-flowering crabapple
131. *Picea abies*	Norway spruce	✓	Mature	Good	--
132. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
133. *Pinus strobus*	white pine	✓	Gone	--	Do not plant white pine; instead plant a pink-flowering crabapple; it was a white pine historically
134. *Picea abies*	Norway spruce	✓	Mature	Good	--
135. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
136. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
137. *Picea abies*	Norway spruce	✓	Mature	Good	--
138. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
139. *Pinus strobus*	white pine	✓	Gone	--	Do not plant white pine; was not mirrored on east side of drive historically
140. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
141. *Picea abies*	Norway spruce	✓	Mature	Good	--
142. *Malus spp.* 'Hopa'	flowering crabapple	✓	Mature	Good	--
143. *Malus spp.* 'Hopa'	flowering crabapple	✓	Gone	--	Plant pink-flowering crabapple
144. *Picea abies*	Norway spruce	✓	Mature	Good	--
145. *Malus spp.* 'Hopa'	flowering crabapple	✓	Gone	--	Plant pink-flowering crabapple
146. *Tsuga canadensis*	Canadian hemlock	✓	Mature	Good	--
147. *Picea abies*	Norway spruce	✓	Mature	Good	--
148. *Pinus strobus*	white pine	✓	Mature	Good	--
149. *Pinus strobus*	white pine	✓	Mature	Good	--
150. *Picea abies*	Norway spruce	✓	Mature	Good	--
Area 1: Entry gate and drive (Orchard to windbreak, #s 151-208)					
151. *Pinus strobus*	white pine	✓	Mature	Good	--
152. *Pinus strobus*	white pine	✓	Mature	Good	--
153. *Pinus strobus*	white pine	✓	Gone	--	Do not plant pine; currently too shady
154. *Picea abies*	Norway spruce	✓	Mature	Good	--
155. *Picea abies*	Norway spruce	✓	Mature	Good	--
156. *Picea abies*	Norway spruce	No	Young	Good; originally a white pine, replaced with a spruce in 2005	Replace spruce with white pine

157. *Pinus strobus*	white pine	✓	Young	Good; replacement of wind-damaged pine	--
158. *Pinus strobus*	white pine	✓	Gone	--	Plant white pine
159. *Ulmus americana*	American elm	✓	Mature	Good	--
160. *Picea abies*	Norway spruce	✓	Mature	Good	--
161. *Picea abies*	Norway spruce	✓	Young	Good; replaced in 2005	--
162. *Picea abies*	Norway spruce	✓	Mature	Good	--
163. *Pinus strobus*	white pine	✓	Mature	Good	--
164. *Malus spp.*	flowering crabapple	No	Young	Good; in wrong historic location	Relocate crabapple to historic location
165. *Pinus strobus*	white pine	✓	Mature	Good	--
166. *Acer platanoides* 'Crimson King'	Crimson King maple	✓	Mature	Good	--
167. *Prunus serrulata*	Japanese flowering cherry	✓	Gone	--	Do not plant cherry; currently too shady
168. *Pinus strobus*	white pine	No	Young	Good; originally was a Norway spruce; replaced in 2005	Replace white pine with spruce
169. *Picea abies*	Norway spruce	✓	Mature	Good	--
170. *Prunus cerasifera* 'Atropurpurea'	purple cherry plum	✓	Mature	Poor, almost dead	May soon need replacement
171. *Prunus cerasifera* 'Atropurpurea'	purple cherry plum	✓	Mature	Good	--
172. *Prunus cerasifera* 'Atropurpurea'	purple cherry plum	✓	Gone	--	Do not plant cherry plum; currently too shady
173. *Pinus strobus*	white pine	✓	Mature	Good	--
174. *Pinus strobus*	white pine	✓	Mature	Good	--
175. *Pinus strobus*	white pine	✓	Young	Good; replacement of damaged pine	--
176. *Pinus strobus*	white pine	✓	Mature	Good	--
177. *Pinus strobus*	white pine	✓	Young	Good; replacement of damaged pine	--
178. *Pinus strobus*	white pine	✓	Young	Good; replaced in 2005	--
179. *Fagus sylvatica* 'Atropunicea'	purple leaf beech	✓	Mature	Fair; slightly stressed	--
180. *Malus spp.*	flowering crabapple	✓	Mature	Good	--
181. *Malus spp.*	flowering crabapple	✓	Mature	Good	--
182. *Malus spp.*	flowering crabapple	✓	Young	Good; replacement of original	--
183. *Fagus sylvatica* 'Atropunicea'	purple leaf beech	✓	Young	Poor; replacement stressed and not thriving	May soon need replacement
184. *Pinus strobus*	white pine	✓	Young	Good; replaced in 2005	--
185. *Pinus strobus*	white pine	✓	Gone	--	Plant white pine
186. *Pinus strobus*	white pine	✓	Mature	Good	--
187. *Pinus strobus*	white pine	✓	Young	Good; replaced in 2005	--
188. *Pinus strobus*	white pine	✓	Mature	Good	--
189. *Pinus strobus*	white pine	No	Young	Good; replaced in 2005; in wrong historic location	Relocate white pine to historic location
190. *Pinus strobus*	white pine	✓	Mature	Good	--

191. *Pinus strobus*	white pine	✓	Mature	Good	--
192. *Pinus strobus*	white pine	✓	Young	Good; replaced in 2005	--
193. *Pinus strobus*	white pine	✓	Mature	Good	--
194. *Pinus strobus*	white pine	✓	Young	Good; replacement of wind damaged tree	--
195. *Pinus strobus*	white pine	✓	Young	Good; replacement	--
196. *Campsis radicans*	trumpet vine	No	Mature	Good; documented as wisteria on 1969 map	Replace trumpet vine with wisteria
197. *Pinus strobus*	white pine	✓	Mature	Good	--
198. *Pinus strobus*	white pine	✓	Mature	Good; severe lean	--
199. *Prunus persica*	common peach	✓	Gone	--	Plant peach; move benches to the west
200. *Pinus strobus*	white pine	✓	Mature	Good	--
201. *Pinus strobus*	white pine	✓	Mature	Good	--
202. *Prunus serrulata*	Japanese flowering cherry	✓	Mature	Good; park staff notes bloom is half white and half pink	--
203. *Pinus strobus*	white pine	✓	Young	Fair; replacement is competing with sugar maple	--
204. *Acer saccharum*	sugar maple	✓	Mature	Good	--
205. *Pinus strobus*	white pine	✓	Mature	Good	--
206. *Pinus strobus*	white pine	✓	Mature	Fair; dying	May soon need replacement
207. *Pinus strobus*	white pine	✓	Mature	Good	--
208. *Ulmus americana*	American elm	✓	Gone	--	Plant disease-resistant elm
Area 1: Entry gate and drive (Windbreak and turnaround, #s 209-265)					
209. *Juglans spp.*	walnut	No	Mature	Good; historically a Chinese elm	Replace walnut with Chinese elm
210. *Ulmus parvifolia*	Chinese elm	✓	Mature	Poor; leaning with exposed roots	May soon need replacement
211. *Ulmus parvifolia*	Chinese elm	✓	Mature	Fair	--
212. *Zelkova serrata*	Japanese zelkova	No	Young	Good; historically an Chinese elm	Replace zelkova with Chinese elm
213. *Ulmus parvifolia*	Chinese elm	✓	Mature	Good	--
214. *Ulmus parvifolia*	Chinese elm	✓	Gone	--	Plant Chinese elm
215. *Ulmus parvifolia*	Chinese elm	✓	Mature	Fair	--
216. *Zelkova serrata*	Japanese zelkova	No	Young	Good; historically an Ulmus parviflora	Replace zelkova with Chinese elm
217. *Ulmus parvifolia*	Chinese elm	✓	Mature	Good	--
218. *Ligustrum spp.* hedge	privet hedge	✓	Mature	Good; ash seedling has grown up in hedge; now mature	Remove ash seedling; rejuvenate and reduce height to 4.5’
219. *Pinus strobus*	white pine	✓	Gone	--	Plant white pine
220. *Pinus strobus*	white pine	✓	Gone	--	Plant white pine
221. *Pinus strobus*	white pine	✓	Mature	Good	--
222. *Pinus strobus*	white pine	✓	Gone	--	Plant white pine
223. *Pinus strobus*	white pine	✓	Mature	Good	--
224. *Pinus strobus*	white pine	✓	Mature	Good	--

225. *Pinus strobus*	white pine	✓	Mature	Good	--
226. *Pinus strobus*	white pine	✓	Mature	Good	--
227. *Pinus strobus*	white pine	✓	Mature	Good	--
228. *Pinus strobus*	white pine	✓	Gone	stump	Plant white pine
229. *Pinus strobus*	white pine	✓	Gone	--	Plant white pine
230. *Pinus strobus*	white pine	✓	Gone	--	Plant white pine
231. *Pinus strobus*	white pine	✓	Mature	Good	--
232. *Pinus strobus*	white pine	✓	Mature	Good	--
233. *Pinus strobus*	white pine	✓	Mature	Good	--
234. *Pinus strobus*	white pine	✓	Mature	Good	--
235. *Pinus strobus*	white pine	✓	Mature	Good	--
236. *Ilex opaca*	American holly	✓	Mature	Good	--
237. *Ilex opaca*	American holly	✓	Mature	Good	--
238. *Ilex opaca*	American holly	✓	Mature	Good	--
239. *Cornus florida*	flowering dogwood	✓	Gone	OCLP propagated three years ago	Plant flowering dogwood
240. *Cornus florida*	flowering dogwood	✓	Young	Poor; dying, replaced in 2005	May soon need replacement
241. *Cornus florida*	flowering dogwood	✓	Young	Good; replaced in 2005	--
242. *Cornus florida*	flowering dogwood	✓	Mature	Fair; stunted	--
243. *Cornus florida*	flowering dogwood	✓	Mature	Fair; stunted	--
244. *Cornus florida*	flowering dogwood	✓	Young	Good; replaced in 2005	--
245. *Cornus florida*	flowering dogwood	✓	Mature	Fair; stunted	--
246. *Cornus florida*	flowering dogwood	✓	Mature	Fair; stunted	--
247. *Ilex opaca*	American holly	✓	Matue	Good	--
248. *Ilex opaca*	American holly	✓	Mature	Good	--
249. *Pinus strobus*	white pine	✓	Mature	Good	--
250. *Lonicera spp.*	honeysuckle	✓	Gone	--	Plant honeysuckle
251. *Lonicera spp.*	honeysuckle	✓	Mature	Fair	--
252. *Lonicera spp.*	honeysuckle	✓	Gone	--	Plant honeysuckle
253. *Forsythia ovata*	early forsythia	✓	Gone	--	Plant forsythia
254. *Forsythia ovata*	early forsythia	✓	Gone	--	Plant forsythia
255. *Forsythia ovata*	early forsythia	✓	Gone	--	Plant forsythia
256. *Forsythia ovata*	early forsythia	✓	Young	Good; replaced in 2005	--
257. *Forsythia ovata*	early forsythia	✓	Gone	--	Plant forsythia
258. *Forsythia ovata*	early forsythia	✓	Young	Good; replaced in 2005	--
259. *Forsythia ovata*	early forsythia	✓	Mature	Good	--
260. *Acer saccharum*	sugar maple	✓	Gone	--	Plant sugar maple
261. *Acer platanoides*	Norway maple	No	Mature	Good; historically a sugar maple	Replace Norway maple with sugar maple
262. *Acer platanoides*	Norway maple	No	Mature	Good; historically a sugar maple; disk tag on trunk is #747	Replace Norway maple with sugar maple
263. *Quercus velutina*	black oak	✓	Mature	Good	--

264. *Robinia psuedoacacia*	black locust	✓	Mid-age	Good-fair; replacement of original	--
265. *Robinia psuedoacacia*	black locust	✓	Mid-age	Poor; replacement of original	May soon need replacement
Area 2: Main house (Front entry, north and south sideyards, #s 1-28)					
1. *Zelkova serrata*	Japanese zelkova	No	Mid-age	Good; replacement for American elm	Replace with disease-resistant elm
2. *Ilex opaca*	American holly	✓	Mature	Good	--
3. *Taxus baccata* 'Repandens'	English spreading yew	✓	Mature	Good	--
4. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
5. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
6. *Ilex opaca*	American holly	✓	Young	Good	--
7. *Taxus baccata* 'Repandens'	English spreading yew	Undetermined	Young	Good	Retain; visible in 1966 photograph but not on 1969 plan; visually pairs with #3
8. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
9. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
10. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
11. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
12. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
13. *Taxus × media* 'Hicksii'	Hicks yew	✓	Young	Good; replacement of original	--
14. *Taxus × media* 'Hicksii'	Hicks yew	✓	Young	Good; replacement of original	--
15. *Taxus × media* 'Hicksii'	Hicks yew	✓	Young	Good; replacement of original	--
16. *Pinus strobus*	white pine	✓	Mature	Good	--
17. *Pinus strobus*	white pine	✓	Mature	Good	--
18. *Acer saccharum*	sugar maple	✓	Mature	Good	--
19. *Quercus palustris*	pin oak	✓	Mature	Good	--
20. *Cornus florida*	white flowering dogwood	✓	Mature	Fair; stunted	--
21. *Forsythia ovata*	early forsythia	✓	Mature	Good	--
22. *Forsythia ovata*	early forsythia	✓	Mature	Good	--
23. *Forsythia ovata*	early forsythia	✓	Mature	Good	--
24. *Forsythia ovata*	early forsythia	✓	Mature	Good	--
25. *Prunus spp.*	cherry	✓	Mid-age	Good; possibly a replacement plant	--
26. *Prunus spp.*	cherry	✓	Mid-age	Good; possibly a replacement plant	--
27. *Prunus spp.*	cherry	✓	Mid-age	Good; possibly a replacement plant	--
28. *Pinus strobus*	white pine	✓	Mature	Fair	--
Area 2: Main house (Teahouse and barbecue, #s 29-50)					
29. *Picea abies*	Norway spruce	✓	Mature	Good	--
30. *Picea abies*	Norway spruce	✓	Mature	Good	--
31. *Picea abies*	Norway spruce	✓	Mature	Good	--

32. *Prunus serrulata*	Japanese flowering cherry	✓	Gone	--	Do not plant cherry; currently too shady for replacement
33. *Fagus grandifolia*	American beech	✓	Mature	Good	--
34. *Taxus baccata* 'Repandens'	English spreading yew	✓	Mature	Fair; large (2 plants)	--
35. *Taxus baccata* 'Repandens'	English spreading yew	✓	Mature	Fair; large (2 plants)	--
36. *Pieris japonica*	Japanese pieris	✓	Young	Good; replacement of original	--
37. *Ilex crenata*	Japanese holly	✓	Young	Good; planted recently	--
38. *Ilex crenata*	Japanese holly	✓	Young	Good; planted recently	--
39. *Ilex crenata*	Japanese holly	✓	Young	Good; planted recently	--
40. *Ilex crenata*	Japanese holly	✓	Young	Good; planted recently	--
41. *Ilex crenata*	Japanese holly	✓	Young	Good; planted recently	--
42. *Ilex crenata*	Japanese holly	✓	Young	Good; planted recently	--
43. *Ilex crenata*	Japanese holly	✓	Young	Good; planted recently	--
44. *Taxus baccata* 'Repandens'	English spreading yew	✓	Mature	Good	--
45. *Clematis spp.*	Clematis vine	✓	Mature	Good	--
46. *Hedera helix*	English ivy	✓	Mature	Good	--
47. *Hibiscus syriacus*	shrub althea (also called rose-of-sharon)	✓	Young	Fair; recent replacement	--
48. *Hibiscus syriacus*	shrub althea (also called rose-of-sharon)	✓	Gone	--	Plant rose-of-sharon
49. *Hibiscus syriacus*	shrub althea (also called rose-of-sharon)	✓	Young	Fair; recent replacement	--
50. *Acer rubrum*	red maple	✓	Mature	Fair	--
Area 2: Main house (East lawn, #s 51-58)					
51. *Acer rubrum*	red maple	No	Young	Fair; historically a tuliptree	Replace red maple with tuliptree
52. *Magnolia x soulangiana*	saucer magnolia	✓	Young	Good; replaced in 2005	--
53. *Pinus strobus*	white pine	✓	Mature	Fair	--
54. *Pinus strobus*	white pine	✓	Young	Good; replaced in 2005	--
55. *Prunus subhirtilla*	weeping cherry/crab	✓	Mature	Good	--
56. *Liriodendron tulipifera*	tuliptree	✓	Gone	--	Plant tuliptree
57. *Liriodendron tulipifera*	tuliptree	✓	Mature	Good	--
58. *Acer saccharum*	sugar maple	✓	Mature	Fair	--
Area 2: Main house (South lawn and drying yard, #s 59-66)					
59. *Magnolia x soulangiana*	saucer magnolia	✓	Mature	Good	--
60. *Prunus triloba*	flowering almond	✓	Young	Replaced in 2005	--
61. *Ligustrum hedge*	privet	✓	Mature	Good; section missing at green path	--
62. *Syringa vulgaris*	common lilac	No	Mature	Good; historically a Chinese lilac	Replace common lilac with Chinese lilac

63. *Syringa vulgaris*	common lilac	No	Mature	Good; historically a Chinese lilac	Replace common lilac with Chinese lilac
64. *Syringa x chinensis*	Chinese lilac	No	Mature	Good; historically common lilac	Replace Chinese lilac with common lilac
65. *Syringa x persica*	Persian lilac	Unknown	Mature	Good; not identified on 1969 plan; likely a Persian lilac	--
66. *Syringa vulgaris hedge*	common lilac	✓	Mature	Fair; young shoot growth all cleared out; includes a privet	Needs to be rejuvenated; allow new shoots to grow; remove one privet and replace with common lilac
Area 2: Main house (Rear terrace, #s 67-111)					
67. *Hedera helix*	English ivy	✓	Mature	Good	--
68. *Fraxinus pennsylvanica*	green ash	✓	Mature	Fair; dieback throughout	--
69. *Fraxinus pennsylvanica*	green ash	✓	Mid-age	Good-fair; replacement; dieback throughout	--
70. *Fraxinus pennsylvanica*	green ash	✓	Mid-age	Good-fair; replacement; dieback throughout	--
71. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
72. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
73. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
74. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
75. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
76. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
77. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
78. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
79. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
80. *Buxus sempervirens*	common boxwood	✓	Gone	--	Plant boxwood
81. *Buxus sempervirens*	common boxwood	✓	Gone	--	Plant boxwood
82. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
83. *Hedera helix* south of porch	English ivy	✓	Gone	--	Plant English ivy
84. *Hedera helix* on retaining wall face	English ivy	✓	Gone	--	Allow English ivy in bed above wall to grow over wall
85. *Hedera helix* in bed above retaining wall	English ivy	✓	Mature	Good	--
86. *Vinca minor*	common periwinkle	✓	Gone	--	Plant vinca in bed amongst tulips
87. *Tulipa spp.*	tulips	✓	Present in spring	Good; colors vary	--
88. *Pelargonium x hortorum* in white wood pots on porch steps, tables, and wing walls	pink geraniums	✓	Present in summer	--	Pots at stone wall should be white
89. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
90. *Buxus microphylla var. koreana*	Korean boxwood	✓	Mature	Good	--
91. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--

92. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
93. *Buxus sempervirens*	common boxwood	No	Mature	Good	Remove boxwood
94. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
95. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
96. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
97. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
98. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
99. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
100. *Buxus sempervirens*	common boxwood	No	Mature	Good	Remove boxwood
101. *Buxus sempervirens*	common boxwood	No	Mature	Good	Remove boxwood
102. *Syringa vulgaris*	common lilac	✓	Mature	Good	--
103. *Hedera helix*	English ivy	✓	Mature	Good	--
104. *Buxus sempervirens*	common boxwood	✓	Gone	--	Plant boxwood
105. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
106. *Rosa spp.* (East rose garden)	Hybrid tea roses	✓	Mature	Good	--
107. *Buxus sempervirens*	common boxwood	No	Mature	Good; not shown on 1969 plan	Remove boxwood
108. *Buxus sempervirens*	common boxwood	No	Mature	Good; not shown on 1969 plan	Remove boxwood
109. *Rhododendron spp.*	azalea	No	Mature	Good; not shown on 1969 plan	Remove azalea
110. *Rhododendron spp.*	azalea	No	Mature	Good; not shown on 1969 plan	Remove azalea
111. *Rhododendron spp.*	azalea	No	Mature	Good; historically a box-wood	Replace azalea with box-wood
Area 2: Main House (Putting green, #112)					
112. Putting green	--	✓	Mature	Good	Restore tee feature in landscape
Area 3: Barn (Visitor reception center, #s 1-60)					
1. *Catalpa speciosa*	catalpa	✓	Gone	stump	Plant catalpa when entire row is replanted
2. *Catalpa speciosa*	catalpa	✓	Mature	Good	--
3. *Catalpa speciosa*	catalpa	✓	Mature	Good	--
4. *Catalpa speciosa*	catalpa	✓	Gone	--	Plant catalpa when entire row is replanted
5. *Catalpa speciosa*	catalpa	✓	Mature	Good; leaning	--
6. *Catalpa speciosa*	catalpa	✓	Mature	Good	--
7. *Catalpa speciosa*	catalpa	✓	Mature	Good	--
8. *Prunus pensylvanica*	pin cherry	✓	Gone	--	Plant pin cherry
9. *Prunus pensylvanica*	pin cherry	✓	Gone	--	Plant pin cherry
10. *Prunus spp.*	weeping cherry	✓	Young	Poor; replaced in 2005; dying	Will need replacement soon
11. *Taxus baccata*	English yew	✓	Gone	--	Plant English yew
12. *Taxus baccata*	English yew	✓	Gone	--	Plant English yew
13. *Taxus baccata*	English yew	✓	Gone	--	Plant English yew
14. *Buxus sempervirens*	common boxwood	✓	Gone	--	Plant common boxwood

15. *Buxus sempervirens*	common boxwood	✓	Gone	--	Plant common boxwood
16. *Taxus canadensis*	Canadian yew	✓	Gone	--	Plant Canadian yew
17. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
18. *Buxus sempervirens*	common boxwood	✓	Mature	Good	--
19. *Ilex crenata*	Japanese holly	✓	Mature	Good	--
20. *Ilex crenata*	Japanese holly	✓	Gone	--	Plant Japanese holly
21. *Rosa spp.* (Adenauer rose garden)	Rose bed	✓	Mature	Good; some original roses and some propagated	--
22-50. *Buxus sempervirens* hedge	common boxwood	✓	Young	Good; 20 plants exist, recent replacements, evenly spaced; originally had fifty plants	--
51. *Taxus canadensis*	Canadian yew	✓	Gone	--	Plant Canadian yew
52. *Taxus canadensis*	Canadian yew	✓	Gone	--	Plant Canadian yew
53. *Taxus canadensis*	Canadian yew	✓	Gone	--	Plant Canadian yew
54. *Taxus canadensis*	Canadian yew	✓	Gone	--	Plant Canadian yew
55. *Taxus canadensis*	Canadian yew	✓	Gone	--	Plant Canadian yew
56. *Syringa vulgaris*	common lilac	✓	Mature	Good	--
57. *Picea abies*	Norway spruce	✓	Young	Good; replaced in 2005	--
58. *Malus spp.*	flowering crabapple	✓	Mature	Good	--
59. *Platanus occidentalis*	American sycamore	✓	Young	Good; replaced in April 1986	--
60. *Magnolia stellata*	star magnolia	✓	Mature	Good	--
Area 3: Barn (Screen between barn and house, #s 61-86)					
61. *Pieris japonica*	flowering andromeda	No	Mature	Good; Dall drawing indicates dwarf azaleas in this area	Replace andromeda with dwarf azalea
62. *Iris spp.*	German iris	No	Mature	Good; Dall drawing indicates mums near the larger of the two areas and dwarf azaleas near the smaller area	Replace iris with mums and dwarf azalea
63a. *Sedum spectabile* 'Autumn Joy'	Autumn Joy sedum	No	Mature	Good; Dall drawing indicates two tea roses at either end of this planting	Replace sedum with two tea roses
63b. *Rhododendron spp. hybrid*	rhododendron	✓	Gone	--	Plant hybrid rhododendron as shown in Dall drawing
63c. *Sedum spectabile* 'Autumn Joy'	Autumn Joy sedum	No	Mature	Good; Dall drawing indicates two tea roses at either end of this planting interspersed with cushion mums and pink phlox	Replace sedum with two tea roses interspersed with mums and phlox
63d. *Sedum spectabile* 'Autumn Joy'	Autumn Joy sedum	No	Mature	Good; Dall drawing indicates two tea roses here amongst bed of pink phlox	Replace sedum with two tea roses interspersed with mums and phlox
64. *Vinca minor*	common periwinkle	✓	Mature	Good; but dry; Dall drawing indicates scattered plantings of tulips in this area	Plant tuilips amongst vinca
65. *Buxus sempervirens*	common boxwood	No	Mature	Good; not on Dall drawing	Remove boxwood
66. *Rhododendron spp.* hybrid	rhododendron	✓	Mature	Good	--

67. *Taxus spp.*	yew	No	Mature	Good; not on Dall drawing	Remove yew
68. *Taxus spp.*	yew	No	Mature	Good; Dall drawing indicates hybrid rhododendron here	Replace yew with hybrid rhododendron
69. *Rhododendron spp.* hybrid	rhododendron	✓	Mature	Good	--
70. *Taxus spp.*	yew	No	Mature	Good; not on Dall drawing	Remove yew
71. *Buxus sempervirens*	common boxwood	No	Mature	Good; not on Dall drawing	Remove boxwood
72. *Spiraea prunifolia*	bridalwreath spirea	No	Mature	Good; heavily pruned; not on Dall drawing	Remove spirea
73. *Tsuga canadensis*	Canadian hemlock	✓	Mature	Fair-poor; thinning; too dry; adelgid	May soon need replacement
74. *Tsuga canadensis*	Canadian hemlock	✓	Mature	Fair-poor; thinning; too dry; adelgid	May soon need replacement
75. *Tsuga canadensis*	Canadian hemlock	✓	Gone	stump	Plant hemlock
76. *Picea abies*	Norway spruce	✓	Mature	Good	--
77. *Picea abies*	Norway spruce	✓	Mature	Good	--
78. *Picea abies*	Norway spruce	✓	Mature	Good	--
79. *Picea abies*	Norway spruce	✓	Gone	stump	Plant spruce
80. *Picea abies*	Norway spruce	✓	Mature	Good	--
81. *Picea abies*	Norway spruce	✓	Mature	Fair	--
82. *Picea abies*	Norway spruce	✓	Mature	Good	--
83. *Picea abies*	Norway spruce	✓	Mature	Good	--
84. *Picea abies*	Norway spruce	✓	Mature	Fair; crowded; thin at base; no longer functioning as screen	--
85. *Spiraea prunifolia*	bridalwreath spirea	✓	Mature	Good; heavily pruned	Prune less to regain bridal veil form; remove from mulched bed as shown in Dall drawing and 1969 plan
86. *Spiraea prunifolia*	bridalwreath spirea	✓	Mature	Good; heavily pruned	Prune less to regain bridal veil form; remove from mulched bed as shown in Dall drawing and 1969 plan
Area 3: Barn (Guesthouse, #s 87-106)					
87. *Wisteria spp.*	wisteria	✓	Young	Good; replanted in 2005	--
88. *Pinus strobus*	white pine	✓	Young	Good; replanted in 2005	--
89. *Pinus strobus*	white pine	✓	Young	Good; replanted in 2005	--
90. *Paeonia spp.*	pink peony	✓	Mature	Good; but only three plants historically	--
91. *Paeonia spp.*	pink peony	✓	Mature		--
92. *Paeonia spp.*	pink peony	✓	Mature		--
93. *Paeonia spp.*	pink peony	No	Mature		Remove peony
94. *Spiraea prunifolia*	bridalwreath spirea	✓	Mature	Good; heavily pruned	Prune less to regain bridal veil form
95. *Spiraea prunifolia*	bridalwreath spirea	✓	Mature	Good; heavily pruned	Prune less to regain bridal veil form
96. *Rhododendron spp.*	dwarf azalea	✓	Mature	Good	--
97. *Rhododendron spp.*	dwarf azalea	✓	Mature	Good	--
98. *Rhododendron spp.*	dwarf azalea	✓	Mature	Good	--

99. *Rhododendron spp.*	dwarf azalea	✓	Gone	--	Plant azalea
100. *Buxus sempervirens*	common boxwood	No	Mature	Good	Remove boxwood
101. *Buxus sempervirens*	common boxwood	No	Mature	Good	Remove boxwood
102. *Buxus sempervirens*	common boxwood	No	Mature	Good	Remove boxwood
103. Misc. annuals	mixed violets, daffodils, summer lilies, petunias	✓	Gone	In bed	Plant bulbs
104. Misc. annuals	variagated vinca, ivy, gladiolus, liatrus, iris	No	Mature	In bed	Remove plants
105. *Wisteria spp.*	wisteria	✓	Gone	--	Plant wisteria
106. *Syringa vvulgaris*	common lilac	✓	Mature	Good; recently pruned; identified as Persian lilac on Dall drawing	Plant Persian lilac
Area 3: Barn (West side, #s 107-115)					
107. *Acer rubrum*	red maple	No	Young	Good; historically a sugar maple	Replace red maple with sugar maple
108. *Acer rubrum*	red maple	✓	Mature	Fair	--
109. *Betula pendula*	European white birch	✓	Mature	Good	--
110. *Rosa spp.* on fence	red rambling rose	✓	Gone	--	Plant rose
111. *Rosa spp.* on fence	red rambling rose	✓	Gone	--	Plant rose
112. *Rosa spp.* on fence	red rambling rose	✓	Gone	--	Plant rose
113. *Rosa spp.* on fence	red rambling rose	✓	Gone	--	Plant rose
114. *Rosa spp.* on fence	red rambling rose	✓	Gone	--	Plant rose
115. *Rosa spp.* on fence	red rambling rose	✓	Gone	--	Plant rose
Area 4: South gardens (#s 1-8)					
1. *Rosa spp. (South rose garden)*	floribunda roses	✓	Young	Good	--
2. *Prunus pensylvanica*	pin cherry	✓	Gone	--	Plant pin cherry
3. *Prunus pensylvanica*	pin cherry	✓	Gone	--	Plant pin cherry
4. Vegetable garden	--	✓	Portion present	Good	--
5. *Catalpa speciosa*	catalpa	✓	Mature	Good	--
6. *Pinus strobus*	white pine	✓	Gone	--	Plant white pine
7. *Pinus strobus*	white pine	✓	Mature	Good	--
8. *Pinus strobus*	white pine	✓	Mature	Good	--
Area 5: Orchard (#s 1-41)					
1. *Malus spp.*	Golden Delicious or Stayman Winesap apple	✓	Mature	Good	--
2. *Malus spp.*	Golden Delicious or Stayman Winesap apple	✓	Mature	Good	--
3. *Malus spp.*	Golden Delicious or Stayman Winesap apple	✓	Mature	Good	--
4. *Malus spp.*	Golden Delicious or Stayman Winesap apple	✓	Mature	Good	--
5. *Malus spp.*	Golden Delicious or Stayman Winesap apple	✓	Mature	Good	--
6. *Malus spp.*	Golden Delicious or Stayman Winesap apple	✓	Mature	Good	--
7. *Malus spp.*	Golden Delicious or Stayman Winesap apple	✓	Mature	Good	--

8. *Malus spp.*	Golden Delicious or Stayman Winesap apple	✓	Young	Good	--
9. *Malus spp.*	Golden Delicious or Stayman Winesap apple	No	Mature	Good; not on 1969 plan	Remove apple
10. *Malus spp.*	Golden Delicious or Stayman Winesap apple	No	Mature	Fair; not on 1969 plan	Remove apple
11. *Malus spp.*	Golden Delicious or Stayman Winesap apple	No	Young	Good; not on 1969 plan	Remove apple
12. *Malus spp.*	Golden Delicious or Stayman Winesap apple	✓	Mature	Good	--
13. *Malus spp.*	Golden Delicious or Stayman Winesap apple	✓	Young	Good	--
14. *Malus spp.*	Golden Delicious or Stayman Winesap apple	✓	Mature	Good	--
15. *Malus spp.*	Golden Delicious or Stayman Winesap apple	✓	Mature	Good	--
16. *Prunus persica* 'Nectarina'	nectarine	✓	Young	Good	--
17. *Malus spp.*	Golden Delicious or Stayman Winesap apple	✓	Mature	Good	--
18. *Malus spp.*	Golden Delicious or Stayman Winesap apple	✓	Mature	Good	--
19. *Malus spp.*	Golden Delicious or Stayman Winesap apple	✓	Mature	Fair	--
20. *Prunus persica*	common peach	✓	Young	Fair	--
21. *Malus spp.*	Golden Delicious or Stayman Winesap apple	✓	Mature	Good	--
22. *Prunus persica*	common peach	No	Young	Fair; not on 1969 plan	Remove peach
23. *Prunus persica*	common peach	✓	Young	Fair	--
24. *Liriodendron tulipifera*	tuliptree	✓	Mature	Good	--
25. *Liriodendron tulipifera*	tuliptree	✓	Gone	--	Plant tuliptree
26. *Liriodendron tulipifera*	tuliptree	✓	Mature	Good	--
27. *Liriodendron tulipifera*	tuliptree	✓	Gone	--	Plant tuliptree
28. *Prunus persica* 'Nectarina'	nectarine	✓	Young	Good	--
29. *Prunus persica*	common peach	✓	Young	Good	--
30. *Prunus persica*	common peach	✓	Young	Good	--
31. *Prunus persica*	common peach	✓	Young	Good	--
32. *Prunus persica*	common peach	✓	Young	Good	--
33. *Cornus florida*	flowering dogwood	No	Mature	Fair; not on 1969 plan	Remove dogwood
34. *Liriodendron tulipifera*	tuliptree	✓	Mature	Good	--
35. *Tsuga canadensis*	Canadian hemlock	✓	Mature	Good	--
36. *Cornus florida*	flowering dogwood	✓	Gone	--	Replace dogwood
37. *Liriodendron tulipifera*	tuliptree	✓	Mature	Good	--
38. *Cornus florida*	flowering dogwood	✓	Mature	Good	--

39. *Liriodendron tulipifera*	tuliptree	✓	Gone	--	Plant tuliptree
40. *Cornus florida*	flowering dogwood	✓	Gone	--	Plant dogwood
41. *Rosa spp.* on west fence	red rambling rose	✓	Gone	--	Do not plant red rambling rose; currently too shady for replacement
FARM #2					
House plantings (#s 1-36)					
1. *Syringa vulgaris*	common lilac	Undetermined	Mature	Fair; shaded by maple	--
2. *Syringa vulgaris*	common lilac	Undetermined	Mature	Good	--
3. *Pyrus communis*	common pear	✓	Mature	Fair; in decline; losing limbs	--
4. *Acer platanoides*	Norway maple	✓	Mature	Good	--
5. *Picea pungens forma glauca*	Colorado blue spruce	✓	Mature	Poor; in decline; crowded by maple	--
6. stump	--	Undetermined	Gone	Stump; appears to be deciduous tree in aerial pics	Plant red maple or catalpa
7. *Acer platanoides*	Norway maple	✓	Mature	Good	--
8. stump	--	Undetermined	Gone	Stump; appears to be deciduous tree in aerial pics	Plant red maple or catalpa
9. *Pyrus communis* or possibly *P. ussuriensis or P. calleryana*	common pear, Ussurian pear, or Callery pear	✓	Mature	Good; very large; a remarkable tree	--
10. *Acer platanoides*	Norway maple	✓	Mature	Good	--
11. *Acer platanoides*	Norway maple	✓	Mature	Good	Need to prune for spruce
12. *Picea abies*	Norway spruce	Undetermined	Mature	Poor; crowded by maple; poor form	--
13. *Picea abies* or possibly *P. orientalis*	Norway or Oriental spruce, or cross	✓	Mature	Fair; leaning; may be a cross between a Norway spruce and Oriental spruce; short needles; pendulous branches	--
14. *Catalpa speciosa*	catalpa	Undetermined	Mature	Good; stunted	--
15. *Acer platanoides*	Norway maple	✓	Mature	Good	--
16. *Acer platanoides*	Norway maple	✓	Mature	Good	--
17. *Pinus strobus*	white pine	✓	Young	Good; replaced in 2005	--
18. *Pinus strobus*	white pine	✓	Mature	Fair; weak appearance	--
19. *Pinus strobus*	white pine	✓	Mature	Fair; weak appearance	--
20. *Pinus strobus*	white pine	✓	Mature	Fair; weak appearance	--
21. *Acer platanoides*	Norway maple	✓	Mature	Good	--
22. *Acer platanoides*	Norway maple	✓	Mature	Good; multistem	--
23. *Picea pungens forma glauca*	Colorado blue spruce	✓	Mature	Good; leaning	--
24. *Picea pungens forma glauca*	Colorado blue spruce	✓	Gone	--	Plant blue spruce
25. *Picea pungens forma glauca*	Colorado blue spruce	✓	Mature	Poor; in decline; crowded; leaning	--
26. *Picea pungens forma glauca*	Colorado blue spruce	✓	Mature	Poor; in decline; crowded by maple	--

27. *Acer platanoides*	Norway maple	✓	Mature	Good	Need to prune for spruce
28. *Syringa vulgaris*	common lilac	✓	Gone	--	Plant lilac
29. perennials	--	Undetermined	Mature	--	Remove perennials
30. perennials	--	Undetermined	Mature	Very shady; day lilies in good condition	Remove perennials
31. *Hibiscus syriacus*	rose-of-sharon	✓	Gone	--	Too shady to replace
32. garden	--	✓	Gone	--	Need more information to reconstruct
33-36. *Syringa vulgaris*	common lilac	Undetermined	Mature	Good; crowded	Remove adjacent mulberry, black walnut, and other weedy vegetation
FARM #3					
House plantings (#s 1-22)					
1. *Juglans nigra*	black walnut	✓	Mature	Good	Remove vegetation from trunk
2. *Acer platanoides*	Norway maple	✓	Mature	Good	--
3. *Acer platanoides*	Norway maple	✓	Mature	Good	--
4. stump	--	Undetermined	Gone	Stump; likely part of deciduous mass of trees	Plant red maple
5. *Forsythia spp.*	forsythia	Undetermined	Young	Good	--
6. *Lonicera spp.*	climbing honeysuckle	Undetermined	Young	Good; climbing on light post	--
7. stump	--	Undetermined	Gone	Stump; likely part of deciduous mass of trees	Plant red maple
8. annuals along porch	--	Undetermined	Mature	Good	--
9. *Philadelphus coronaries*	mock orange	Undetermined	Mature	Good	--
10. *Ulmus parvifolia*	Chinese elm	✓	Mature	Good	Remove suckers from base of trunk
11. stump	--	Undetermined	Gone	Stump; part of deciduous mass of trees	Plant red maple
12. *Acer platanoides*	Norway maple	✓	Mature	Good	--
13. stump	--	Undetermined	Gone	Stump; part of deciduous mass of trees	Plant red maple
14. stump	--	Undetermined	Gone	Stump; part of deciduous mass of trees	Plant red maple
15. stump	--	Undetermined	Gone	Stump; part of deciduous mass of trees	Plant red maple
16. *Rosa spp.* and *Potentilla spp.*	rose and potentilla	Undetermined	Young	Good; recent additions	--
17. stump	--	Undetermined	Gone	Stump	Plant red maple
18. perennials by shed and garage	iris and mint	Undetermined	Mature	Good to fair; mostly mowed	--
19. *Syringa vulgaris*	common lilac	✓	Mature	Good	--
20. unknown	--	Undetermined	Gone	Large shrub visible in 1969 photograph	Plant lilac

21. unknown	--	Undetermined	Gone	Large tree with rounded shape visible in 1967 photograph	Plant sugar maple
22. garden	--	✓	Gone	--	Need more information to reconstruct
CLEMENT REDDING FARM					
House plantings (#s 1-17)					
1. *Acer platanoides*	Norway maple	✓	Mature	Good	--
2. *Acer platanoides*	Norway maple	✓	Mature	Good	--
3. perennials along front fence	--	Undetermined	Mature	Good	--
4. annuals along fence at smokehouse	--	Undetermined	Mature	Good	--
5. annuals and perennials by house	--	Undetermined	Mature	Good	--
6. *Prunus spp.*	cherry	No	Young	Fair; grew up as seed	Remove cherry; too close to structure
7. *Syringa vulgaris* and *Philadelphus coronaries*	common lilac and mock orange	Undetermined	Mature	Fair; growing together	Remove other weedy vegetation including mulberry
8. *Philadelphus coronaries*	mock orange	Undetermined	Mature	Good	Remove other weedy vegetation including mulberry
9. *Vitis spp. on fence*	Concord grape	Undetermined	Mature	Good	--
10. *Syringa vulgaris*	common lilac	✓	Mature	Good	--
11. *Cercis canadensis*	redbud	✓	Mature	Good	--
12. *Syringa vulgaris*	common lilac	✓	Mature	Good	--
13. *Helianthus tuberosus*	Jerusalem artichoke	Undetermined	Mature	Good; native	Monitor spread
14. *Ligustrum spp.*	privet	✓	Mature	Good	--
15. *Buddlea spp.*	butterfly-bush	No	Young	Good; yew hedge removed in 1996	--
16. perennials by front porch	--	No	Mature	Good; yew hedge removed in 1996	--
17. annuals along wall	--	Undetermined	Mature	Good	--

Appendix B:
Treatment Plans



Symbol	Botanical Name	Common Name(s)	Symbol	Botanical Name	Common Name(s)
Trees and Shrubs					
Abe gr	Abelia x grandiflora	Glossy abelia	Mal sp W	Malus spp. wild crabapple	Wild crab (from rootstock)
Ace pl	Acer platanoides	Norway maple	Phi co	Philadelphus coronarius	Mock orange
Ace pl C	Acer p. 'Crimson King'	Crimson King maple	Pic ab	Picea abies	Norway spruce
Ace ru	Acer rubrum	Red maple	Pic pu	Picea pungens	Colorado blue spruce
Ace sa	Acer saccharum	Sugar maple	Pie ja	Pieris japonica	Japanese pieris
Ber th	Berberis thunbergii	Japanese barberry	Pin st	Pinus strobus	Eastern white pine
Bet pe	Betula pendula	European white birch	Pla oc	Platanus occidentalis	Sycamore
Bet sp	Betula spp.	White birch	Pru ce	Prunus cerasifera 'Atropurperea'	Purple leaf plum
Bud sp	Buddleia spp.	Butterfly-bush	Pru pen	Prunus pensylvanica	Wild red/Pin cherry
Bux mi	Buxus microphylla var. koreana	Korean boxwood	Pru per	Prunus persica	Common peach
Bux se	Buxus sempervirens	Common boxwood	Pru pr N	Prunus persica "Nectarina'	Nectarine
Car il	Carya illinoinensis	Pecan	Pru se	Prunus serrulata	Oriental cherry
Car sp	Carya spp.	Hickory	Pru sp	Prunus spp.	Cherry
Cat sp	Catalpa spp.	Catalpa	Pru su	Prunus subhirtella 'Pendula'	Weeping Higan cherry
Cer ca	Cercis canadensis	Redbud	Pru tr	Prunus triloba	Flowering almond
Cha la	Chamaecyparis lawsoniana	Port Orford cedar	Pyra coc	Pyrancantha coccinea	Pyracantha (Firethorn)
Cor fl	Cornus florida	Flowering dogwood	Pyru com	Pyrus communis	Common pear
Cra ph	Crataegus phaenopyrum	Washington hawthorn	Que pa	Quercus palustris	Pin oak
Cry ja	Cryptomeria japonica	Japanese cryptomeria	Que ve	Quercus velutina	Black oak
Fag gr	Fagus grandifolia	American beech	Rho ob	Rhod. x obtusum 'Hinodegiri"	Hinodegiri azalea
Fag sy	Fagus sylvatica 'Atropunicea'	Purple leaf beech	Rho sp	Rhododendron spp.	Azalea/Rhododendron
For ov	Forsythia ovata	Early forsythia	Rob ps	Robinia pseudoacacia	Black locust
Fra pe	Fraxinus pennsylvanica	Green ash	Ros sp	Rosa spp.	Rose
Hib ro	Hibiscus rosa sinensis	Chinese hibiscus	Sal ba	Salix babylonia	Weeping willow
Hib sp	Hibiscus spp.	Hibiscus	Sal ni	Salix nigra	Black willow
Hib sy	Hibiscus syriacus	Rose-of-Sharon	Sas al	Sassafras albidium	Sassafras
Ile cr	Ilex crenata	Japanese holly	Seq se	Sequoia sempervirens	Redwood
Ile gl	Ilex glabra	Inkberry	Spi sr	Spriraea prunifolia	Bridalwreath spirea
Ile op	Ilex opaca	American holly	Syr ch	Syringa x chinensis	Chinese lilac
Jug sp	Juglans spp.	Walnut	Syr pe	Syringa x persica	Persian lilac
Lig sp	Ligustrum spp.	Privet	Syr vu	Syringa vulgaris	Common lilac
Liq st	Liquidambar styraciflua	Sweet gum	Tax bac	Taxus bacatta	English yew
Lir tu	Liriodendron tulipifera	Tulip poplar	Tax ba R	Taxus bacatta 'Repandens'	Dwarf English yew
Lon sp	Lonicera spp.	Honeysuckle	Tax ca	Taxus canadensis	Canadian yew
Mag so	Magnolia x soulangiana	Saucer magnolia	Tax cu	Taxus cuspidata 'Capitata'	Japanese yew
Mag sp	Magnolia spp.	Magnolia	Tax me	Taxus x media 'Hicksii'	Hicks yew
Mag st	Magnolia stellata	Star magnolia	Tax sp	Taxus spp.	Yew
Mal sp A	Malus spp. Apple	Apple	Tsu ca	Tsuga canadensis	Canadian hemlock
Mal sp H	Malus spp. 'Hopa'	Hopa crabapple	Ulm am	Ulmus americana	American elm
Mal sp K	Malus spp. 'Katherine'	Katherine crabapple	Ulm pu	Ulmus parvifolia	Chinese elm
Mal sp L	Malus spp. 'Liset'	Liset crabapple	Zel se	Zelkova serrata	Japanese zelkova
Groundcovers, Vines, and Herbaceous					
Agr te	Agrostis tenuis 'Penncross'	Penncross bentgrass	Iri sp	Iris spp.	Iris
Aqu sp	Aquilegia spp.	Columbine	Nym sp	Nymphaea spp.	Water lily
Beg tu	Begonia tuberhybrida	Tuberous begonias	Pae sp	Paeonia spp.	Peony
Cal bi	Caladium bicolor	Caladium	Pel ho	Pelargonium x hortorum	Common geranium
Cam ra	Campsis radicans	Trumpetcreeper	Sal sp	Salvia splendens	Scarlet sage
Cen ce	Centaurea ceneraria	Dusty Miller	Sin sp	Sinningia spp.	Common gloxinia
Car pe	Carum petroselenum	Parsley	Sed sp	Sedum spectabile	Showy sedum
Cle sp	Clematis spp.	Clematis	Tag sp	Tagetes spp.	Marigold
Cor va	Coronilla varia	Crown vetch	Tul sp	Tulipa spp.	Tulip
Cyc sp	Cyclamen spp.	Cyclamen	Typ la	Typha latifolia	Common cattail
Dia de	Dianthus deltoides	Maiden pink	Vin mi	Vinca minor	Vinca (Periwinkle)
Gla sp	Gladiolus spp.	Gladiola	Vio sp	Viola spp.	Violet
Hed he	Hedera helix	English ivy	Vio wi	Viola x wittrockiana	Common pansy
Hel tu	Helianthus tuberosus	Jerusalem artichoke	Vit la	Vitus labrusca 'Concord'	Concord grape
Imp wa	Impatiens wallerana	Impatiens	Vit sp	Vitus spp.	Grape
Iri ge	Iris x germanica	German iris	Wis si	Wisteria sinensis	Chinese wisteria

Notes: Plant sizes in inches indicate trunk diameter at breast height; plant sizes in feet indicate shrub diameter; (ms) multi-stemmed

FARM #1
(items with * are shown on this plan; see Farm #1 plans for other items)

C1-1. *Reestablish Flaharty fencerow.
C1-2. *Preserve and maintain white pine screen.
***Plant additional trees at Equipment Shed screen.**
D1-1. Remove green path to playhouse. Remove brick step; add ramp handrails. Construct accessible route at south rose garden; pave with gray chip seal.
D1-2. Allow bank barn ramp to revert to grass.
D1-3. *Monitor condition of skeet range walkways.
D1-4. Regrade path between Farms #1 and #2; replace mulch with compacted gravel.
D1-5. Replace dark asphalt on Eisenhower Drive with white chip seal.
***Replace dark asphalt on Nevins Lane with white chip seal.**
Replace dark asphalt at barnyard with dark gray chip seal.
D1-6. Replace green path at barn screen and teahouse with light brown chip seal.
Replace brick walk with light brown chip seal.
Surface new accessible path at south rose garden with gray chip seal.
Replace dark asphalt path to guesthouse with gray chip seal.
F1-1. Replace cast iron benches with redwood benches.
F1-2. Reinstall spruce tree plaques, laundry pole, and guesthouse rocking chairs.

FARM #3
(see Farm #3 plan for these items)

C3-1. Plant new trees along drainage swale.
D3-1. Maintain gravel roads with loose, dark gray colored stone.

SITE-WIDE RECOMMENDATIONS (items with * are shown on this map; refer to text for other items)

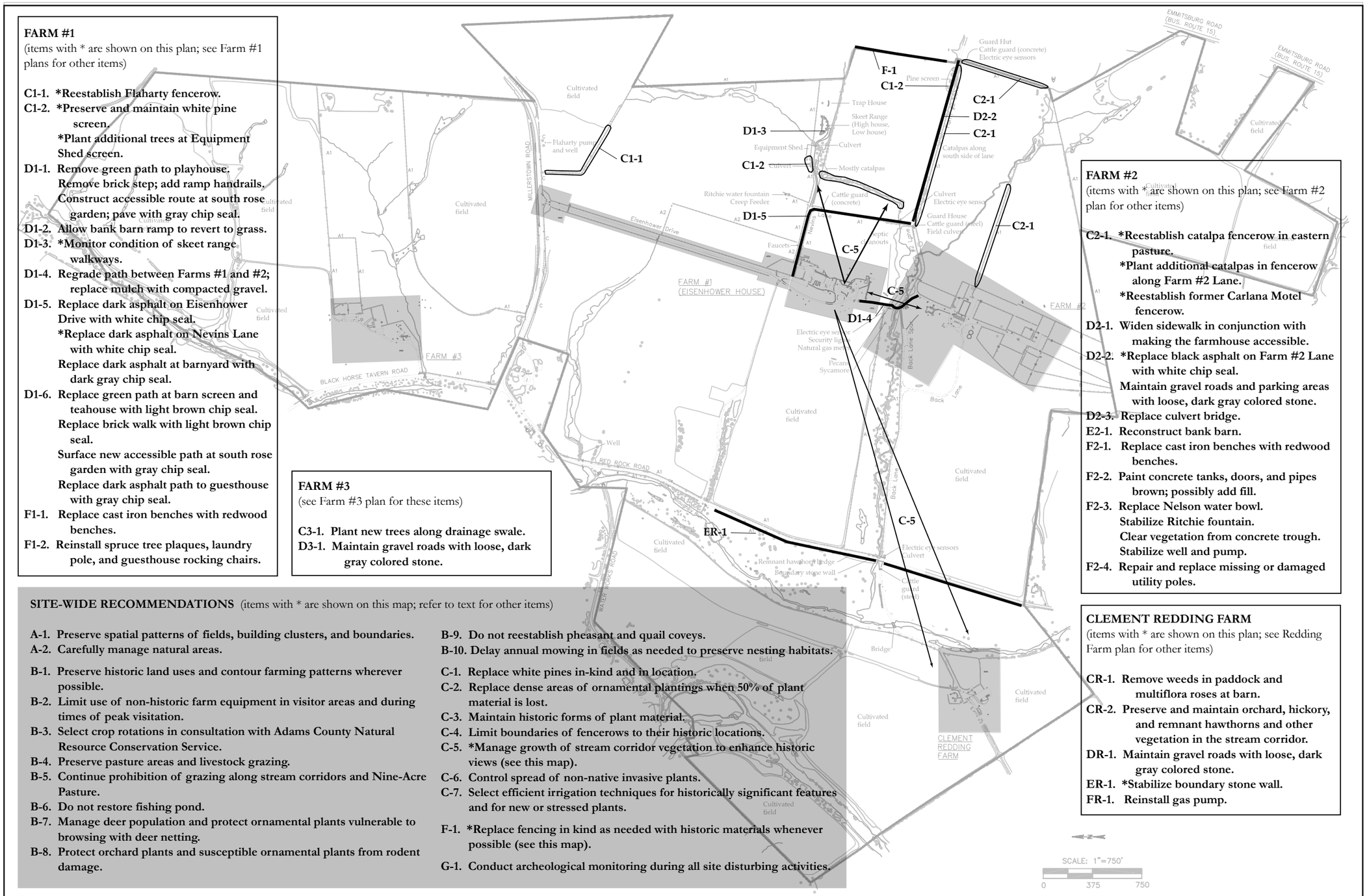
A-1. Preserve spatial patterns of fields, building clusters, and boundaries.
A-2. Carefully manage natural areas.

B-1. Preserve historic land uses and contour farming patterns wherever possible.
B-2. Limit use of non-historic farm equipment in visitor areas and during times of peak visitation.
B-3. Select crop rotations in consultation with Adams County Natural Resource Conservation Service.
B-4. Preserve pasture areas and livestock grazing.
B-5. Continue prohibition of grazing along stream corridors and Nine-Acre Pasture.
B-6. Do not restore fishing pond.
B-7. Manage deer population and protect ornamental plants vulnerable to browsing with deer netting.
B-8. Protect orchard plants and susceptible ornamental plants from rodent damage.
B-9. Do not reestablish pheasant and quail coveys.
B-10. Delay annual mowing in fields as needed to preserve nesting habitats.

C-1. Replace white pines in-kind and in location.
C-2. Replace dense areas of ornamental plantings when 50% of plant material is lost.
C-3. Maintain historic forms of plant material.
C-4. Limit boundaries of fencerows to their historic locations.
C-5. *Manage growth of stream corridor vegetation to enhance historic views (see this map).
C-6. Control spread of non-native invasive plants.
C-7. Select efficient irrigation techniques for historically significant features and for new or stressed plants.

F-1. *Replace fencing in kind as needed with historic materials whenever possible (see this map).

G-1. Conduct archeological monitoring during all site disturbing activities.



FARM #2
(items with * are shown on this plan; see Farm #2 plan for other items)

C2-1. *Reestablish catalpa fencerow in eastern pasture.
***Plant additional catalpas in fencerow along Farm #2 Lane.**
***Reestablish former Carlana Motel fencerow.**
D2-1. Widen sidewalk in conjunction with making the farmhouse accessible.
D2-2. *Replace black asphalt on Farm #2 Lane with white chip seal.
Maintain gravel roads and parking areas with loose, dark gray colored stone.
D2-3. Replace culvert bridge.
E2-1. Reconstruct bank barn.
F2-1. Replace cast iron benches with redwood benches.
F2-2. Paint concrete tanks, doors, and pipes brown; possibly add fill.
F2-3. Replace Nelson water bowl.
Stabilize Ritchie fountain.
Clear vegetation from concrete trough.
Stabilize well and pump.
F2-4. Repair and replace missing or damaged utility poles.

CLEMENT REDDING FARM
(items with * are shown on this plan; see Redding Farm plan for other items)

CR-1. Remove weeds in paddock and multiflora roses at barn.
CR-2. Preserve and maintain orchard, hickory, and remnant hawthorns and other vegetation in the stream corridor.
DR-1. Maintain gravel roads with loose, dark gray colored stone.
ER-1. *Stabilize boundary stone wall.
FR-1. Reinstall gas pump.

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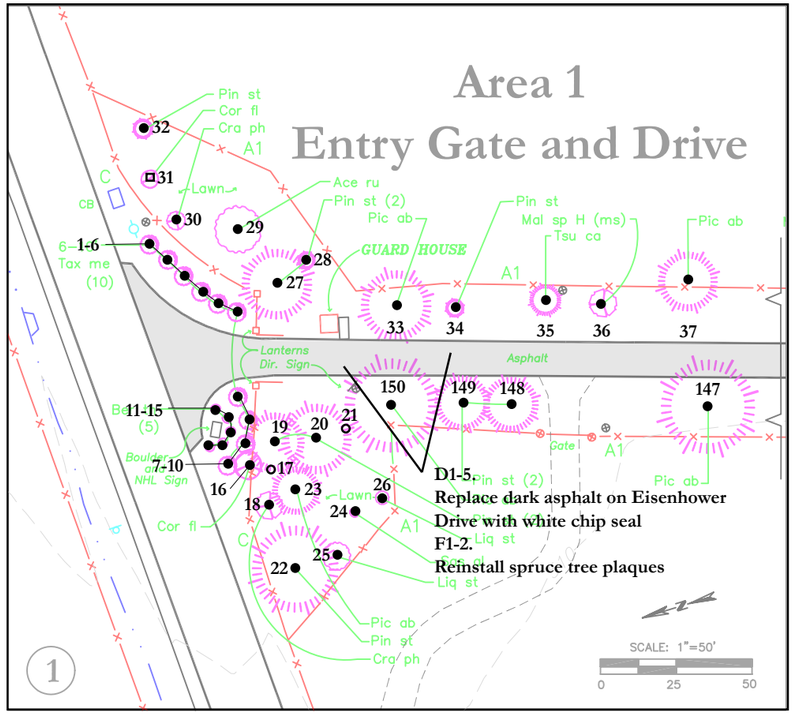
Treatment Plan Overall: 2006

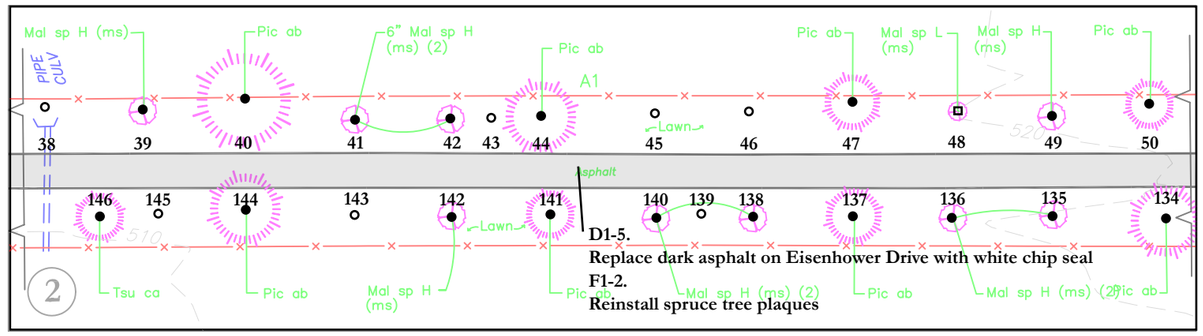
National Park Service
Olmsted Center for Landscape Preservation

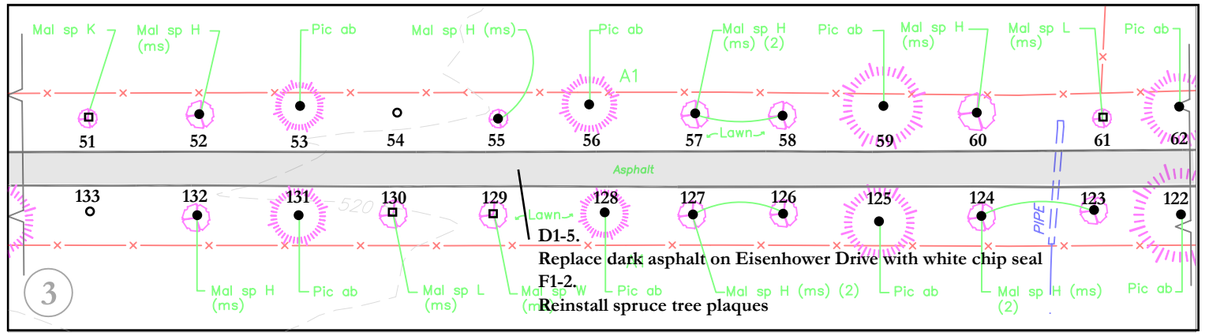
Sources:
Historic plans (1955,1967, 1969); CADD drawing (1999); Site visits (2002, 2005).

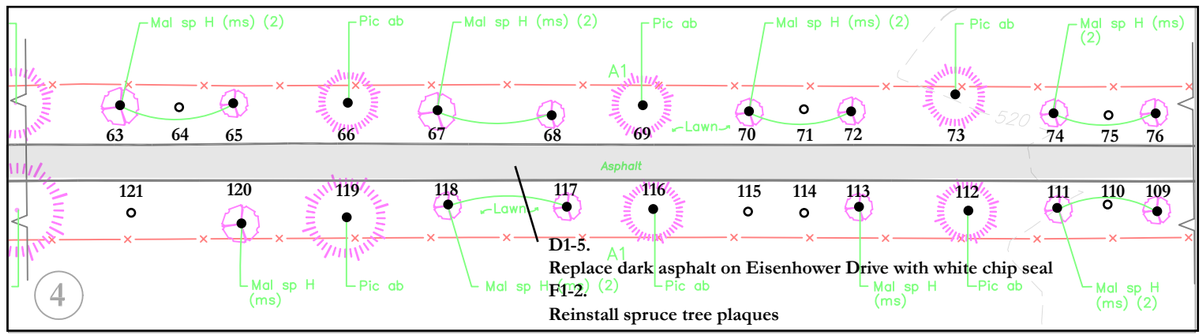
Notes:
Gray boxes represent areas of enlargement for each farm. Task letters refer to sections in Chapter 2. Location and scale of features are approximate. Drawn by J. Killion using Illustrator 10.

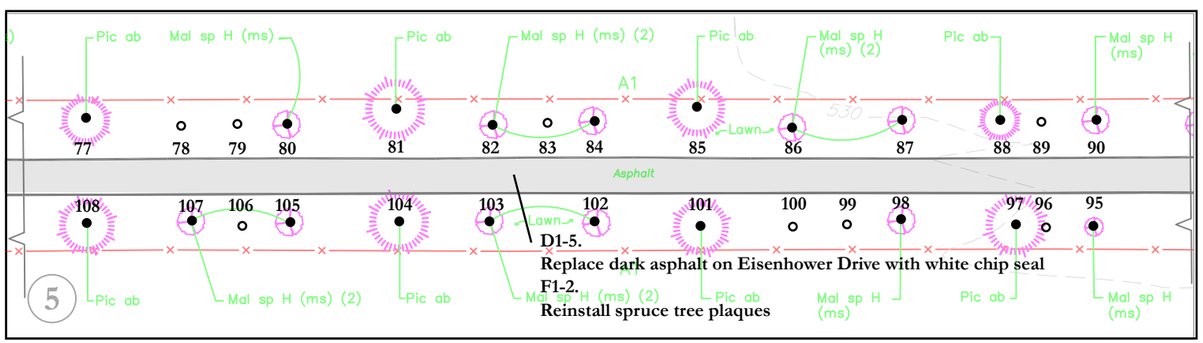
Legend:
- Park boundary
- Paved road
- Gravel road
- Structure
- Trees
- Fences
  - A1 - post and wire
  - A2 - post and wire w board
  - B - 4-board
  - C - cross-board
  - D - picket

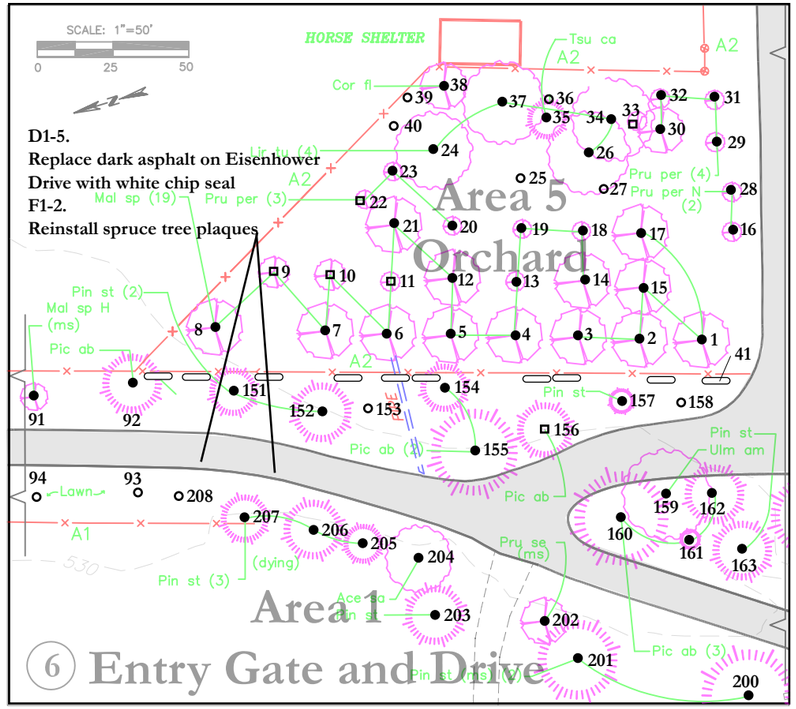












Cultural Landscape Report for Eisenhower National Historic Site

Treatment Plan
Farm #1: 2006 (1/2)

National Park Service
Olmsted Center for Landscape Preservation

Sources:
Historic plans (1955,1967, 1969); CADD drawing (5/2000); Site visits (2002, 2005).

Notes:
Task letters refer to sections in Chapter 2 and numbers refer to App. A Location and scale of features are approximate. Drawn by Killion, OCLP.

Plant Legend:

20	Plant number
●	Historic, existing
○	Historic, missing
□	Non-historic existing
◇	Undetermined existing
x	Undetermined missing

Refer to text for specific treatment recommendations

Cultural Landscape Report for Eisenhower National Historic Site

Treatment Plan
Farm #1: 2006 (2/2)

National Park Service
Olmsted Center for Landscape Preservation

Sources:
Historic photographs and plans (1955,1967,1969); CADD drawing (5/2000); Site visits (2002, 2005).

Notes:
Task letters refer to sections in Chapter 2 and numbers refer to App. A Location and scale of features are approximate. Drawn by Killion, OCLP.

Plant Legend:
- 20 Plant number
- ● Historic, existing
- ○ Historic, missing
- □ Non-historic existing
- ◇ Undetermined existing
- x Undetermined missing

Refer to text for specific treatment recommendations

Area 1
Entry Gate and Drive

Area 3
Barn

Area 2
Main House

Area 4
South Gardens

D1-5.
Replace dark asphalt on Nevins Lane with white chip seal

D1-5.
Replace dark asphalt at barnyard with dark gray chip seal

F1-1.
Replace cast iron benches with redwood benches

D1-2.
Allow bank barn ramp to revert to grass.

C-5.
Manage growth of stream corridor vegetation to enhance historic views

F1-2.
Reinstall laundry pole

D1-6.
Replace green path at teahouse with light brown chip seal

C-5.
Manage growth of stream corridor vegetation to enhance historic views

D1-1.
Remove green path to playhouse

D1-1/D1-6.
Construct new accessible route at south rose garden; pave with gray chip seal

D1-6.
Replace dark asphalt path to guesthouse with gray chip seal

F1-2.
Reinstall rocking chairs

D1-4.
Regrade path between Farms #1 and #2; replace mulch with compacted aggregate/clay/sand tread

F1-1.
Replace cast iron benches with redwood benches

F1-1.
Replace cast iron benches with redwood benches

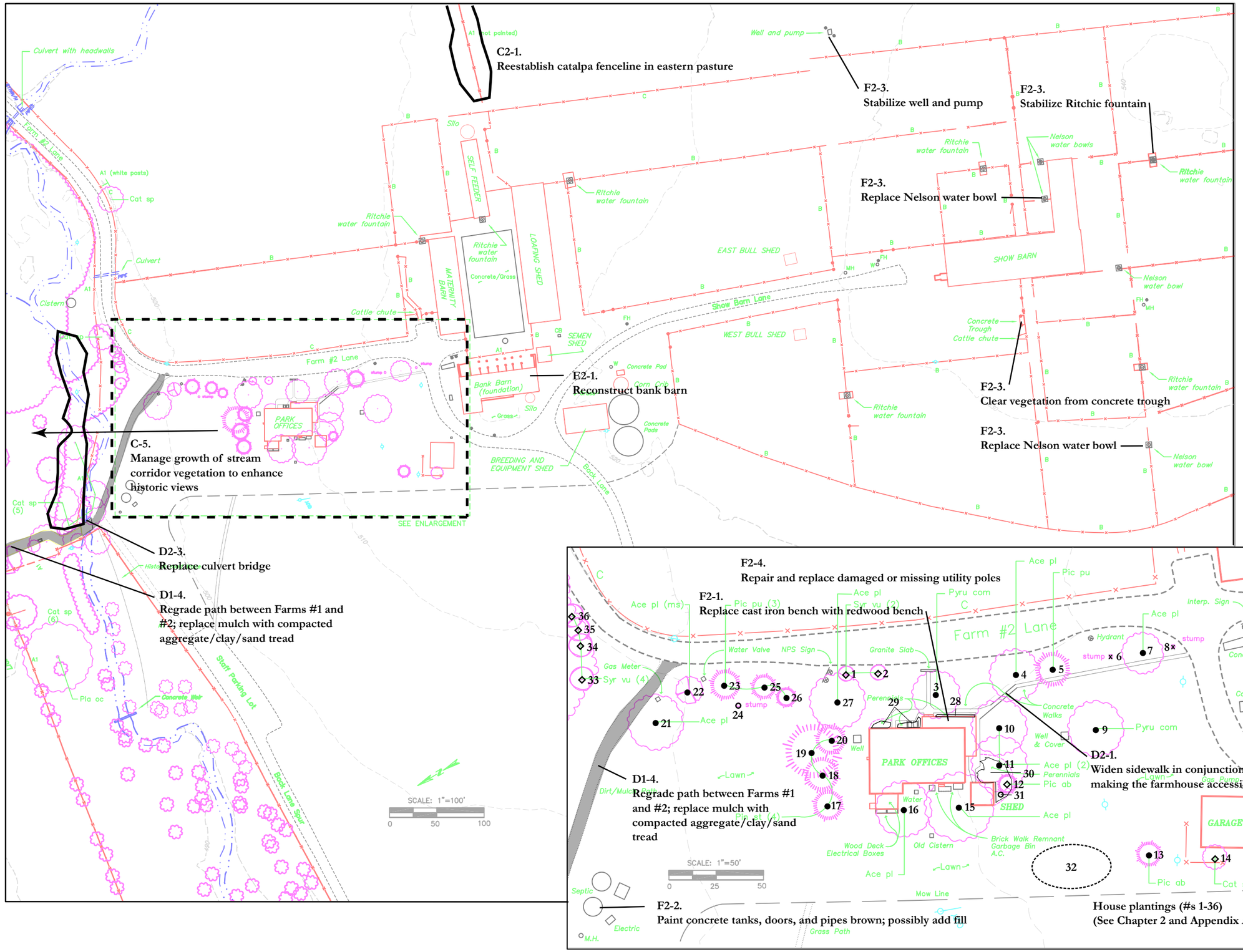
D1-5.
Replace dark asphalt on Eisenhower Drive with white chip seal

C-5.
Manage growth of stream corridor vegetation to enhance historic views

D1-6.
Replace brick walk with light brown chip seal

D1-1.
Remove step; add handrails to ramp

D1-6.
Replace green path at barn screen with light brown chip seal



Cultural Landscape Report for Eisenhower National Historic Site

Treatment Plan
Farm #2: 2006

National Park Service
Olmsted Center for Landscape Preservation

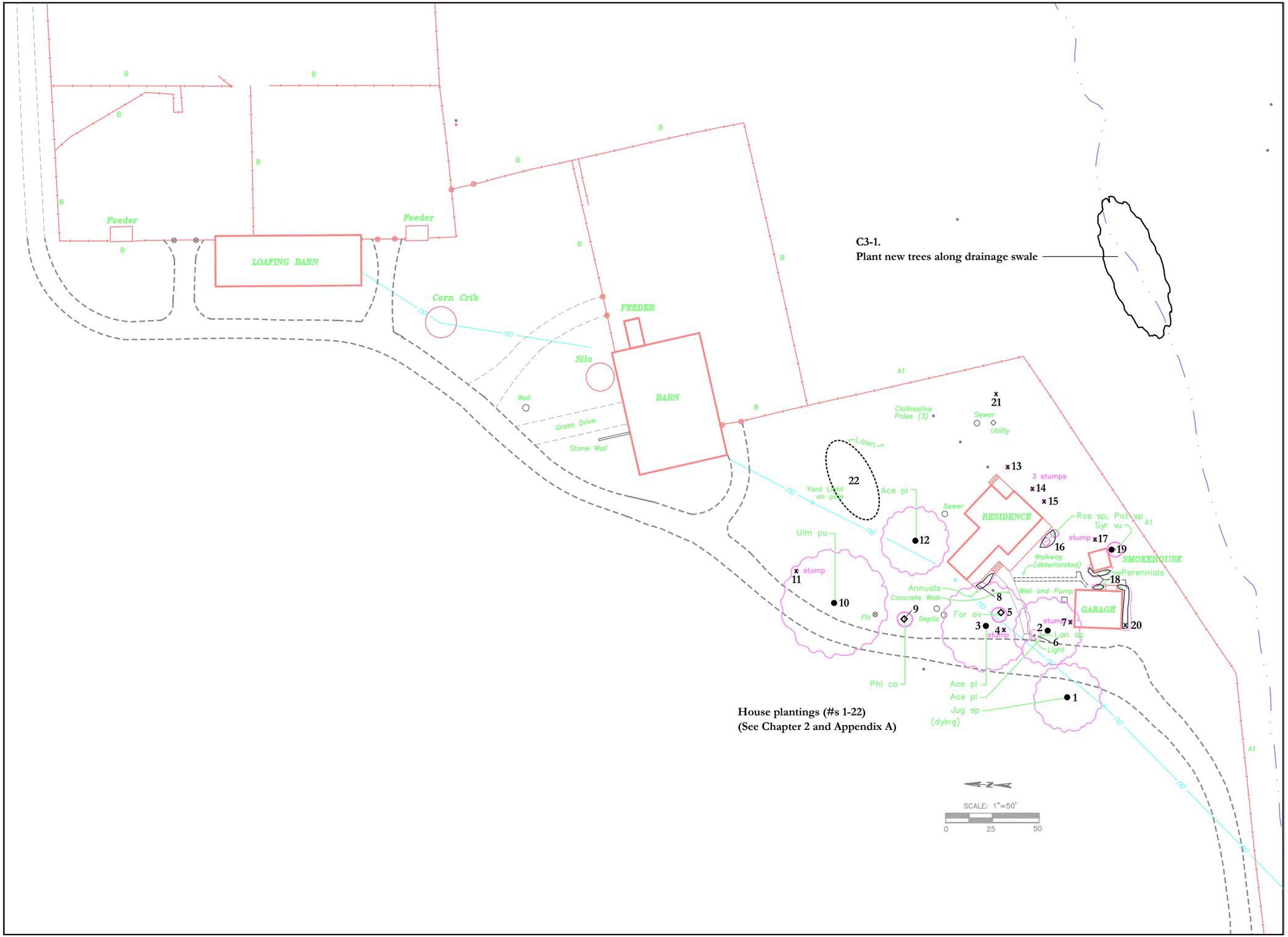
Sources:
Historic plans (1955, 1967, 1969); CADD drawing (5/2000); Site visits (2002, 2005).

Notes:
Task letters refer to sections in Chapter 2 and numbers refer to App. A Location and scale of features are approximate. Drawn by Killion, OCLP.

Plant Legend:

20	Plant number
●	Historic, existing
○	Historic, missing
□	Non-historic existing
◇	Undetermined existing
x	Undetermined missing

Refer to text for specific treatment recommendations



Cultural Landscape Report for Eisenhower National Historic Site

Treatment Plan
Farm #3: 2006

National Park Service
Olmsted Center for Landscape Preservation

Sources:
Historic plans (1955,1967, 1969); CADD drawing (5/2000); Site visits (2002, 2005).

Notes:
Task letters refer to sections in Chapter 2 and numbers refer to App. A
Location and scale of features are approximate.
Drawn by Killion, OCLP.

Plant Legend:

- 20 Plant number
- ● Historic, existing
- ○ Historic, missing
- ▫ Non-historic existing
- ◇ Undetermined existing
- x Undetermined missing

Refer to text for specific treatment recommendations

House plantings (#s 1-17)
(See Chapter 2 and Appendix A)

Flagpole
Cer ca
Syr vu
Syr vu
Mow line
Hel tu
Lig sp
A1 (decorative)
Lawn
Lawn
Septic
MH
MH
Vit la along fence
A1
Cistern
Concrete Walk
Perennials
Windmill
SUMMER KITCHEN
RESIDENCE
Annuals along wall
Phi co
Pru sp
Bud sp
Stone Ret. Wall
Syr vu & Phi co
Perennials & Annuals
Water Pump
Lawn
Concrete Walk
Gate
SMOKEHOUSE
Annuals
Windmill
Ace pl (2)
Perennials
WOODSHED
Scattered orchard trees
Gravel Road
FR-1.
Reinstall gas pump
Gas Pump
Grass
GARAGE
FH
EQUIPMENT SHED
STORAGE SHED
NPS CARPENTRY SHOP
Concrete
Tank
Ret. Wall
BANK BARN
Dirt/Gravel
Grass
Silo Pad
Silo Pad
Ret. Wall
Mass of Ros sp
BROODER HOUSES (ruins)
B (6-board)
B (6-board)
F.L.
A1
OU
CR-2.
Preserve and maintain hickory
Car sp
Birdhouse
CR-2.
Preserve and maintain remnant hawthorn and other vegetation in the stream corridor
Remnants of hawthorne hedge along creek
CR-2.
Preserve and maintain orchard trees
CR-1.
Remove weeds in paddock
CR-1.
Remove multiflora roses at barn
N
SCALE: 1"=50'
0
25
50

Cultural Landscape Report for Eisenhower National Historic Site

Treatment Plan
Redding Farm: 2006

National Park Service
Olmsted Center for Landscape Preservation

Sources:
Historic plans (1955,1967, 1969); CADD drawing (5/2000); Site visits (2002, 2005).

Notes:
Task letters refer to sections in Chapter 2 and numbers refer to App. A Location and scale of features are approximate. Drawn by Killion, OCLP.

Plant Legend:

20	Plant number
●	Historic, existing
○	Historic, missing
□	Non-historic existing
◇	Undetermined existing
x	Undetermined missing

Refer to text for specific treatment recommendations

Appendix C:
Product Specifications



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Aquarius Brands, "It is part of our growth strategy to acquire
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Spec Bulletin Library

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Model CLB/G-4HW park bench, 4 ft., redwood stained hardwood slats.

• **Model CLB Park Bench** incorporates on end frames; die formed from structural cha light weight design. Diagonal braces provid stability.

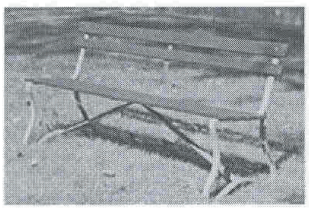
• Portable design. Frame feet include anch fixed positioning. (Anchors not included.)

• Bench frames are hot dip galvanized afte maximum protection from weather.

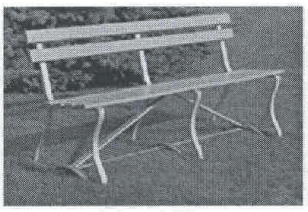
• Lengths: 4 or 6 ft. long.

• Lumber: A combination of 3/4" x 2-1/2" a redwood stained hardwood slats. (6 ft. mo additional formed center channel for sturdi

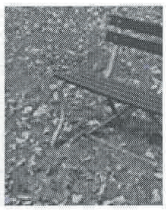
• 100% Recycled Plastic: 1" x 3" (nom.) se 100% recycled plastic available in 9 colors Options). 4 ft. bench uses extra formed cer support. 6 ft. bench uses 3 frames.



Model CLB/G-6HW park bench, 6 ft. long, redwood stained hardwood slats.



Model CLB3/G-6PC13 park bench, 3 frames, 6 ft. long, 100% recycled plastic slats, cedar color.



Model CLB/G bench, 4 ft. l recycled plasti colc

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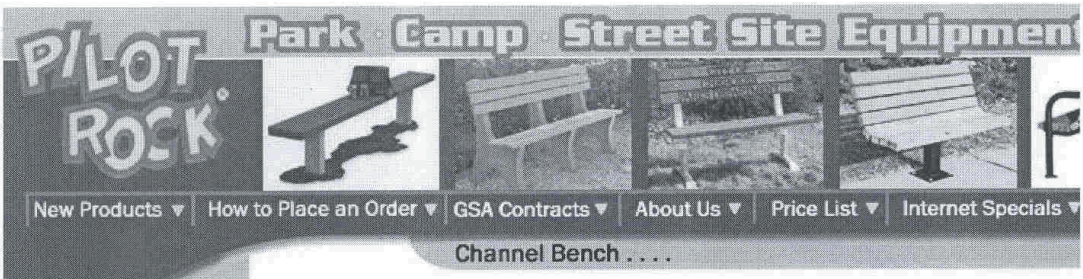
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- **Model CXB Park Bench** is an extra heavy bench designed to be stronger and more stable with a simple, clean design.
- All welded frame construction: seat/back support channel is die-formed from 1/8" thick (11 ga.) steel; frame posts and portable foot are fabricated from 2 3/8" OD steel pipe.
- Hot dip galvanized finish and fasteners maximize protection from the elements.
- Optional black enamel or powder coated frame finish (see Material Options page).
- Portable/surface mount park bench (**PCXB**) includes 9/16" dia. anchor holes in frame foot, or stationary/embedded park bench (**SCXB**) frame post installations.
- Seat/back plank materials include: lumber, aluminum, 100% recycled plastic (available in 9 colors); 10" or 12" wide vinyl coated expanded or perforated steel planks (available in 5 colors, see Material Options page).
- Channel Park Benches can be 4, 6, 8, 15, 21 or 24 feet long (depending on seat/back material selected).
- Optional: Armrests can help make bench more accessible (see Arm Rest options).
- Optional: custom lettering available on lumber, recycled plastic, and perforated steel (see Bench Signage).



Model PCXB/G-6TP24 portable, galvanized frame x 4" (nom.) treated pi

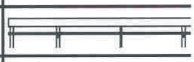


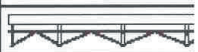
Model SCXB/G-6VW1(stationary/embedded, galv 6 ft. long, 2" x 10" brow expanded steel seat and



Model PCXB/G-4PN24 park bench, portable, galvanized frames, 4 ft. long, 2" x 4" (nom.) green recycled plastic planks. With optional engraved identification.

LOOK PRIC

SCXB	Material	Material Thickness and Width (in.)	Bench Length (ft.)	Configuration
	Wood	2 x 4 2 x 10	4, 6, 8	
			15	
	Aluminum	2 x 10	4, 6, 8	
			15	
			21, 24	
	100% Recycled Plastic	2 x 4 2 x 10	4	
			6	
	Plastisol Coated Expanded Steel	2 x 10 2 x 12	4, 6, 8	
	Plastisol Coated Perforated Steel	2 x 10 2 x 12	4, 6, 8	

PCXB	Material	Material Thickness and Width (in.)	Bench Length (ft.)	Configuration
	Wood	2 x 4 2 x 10	4	
			6, 8	
			15	
	Aluminum	2 x 10	4	
			6, 8	
			15	
			21, 24	
	100% Recycled Plastic	2 x 4 2 x 10	4	
			6	
	Plastisol Coated Expanded Steel	2 x 10 2 x 12	4	
			6, 8	
	Plastisol Coated Perforated Steel	2 x 10 2 x 12	4	
			6, 8	

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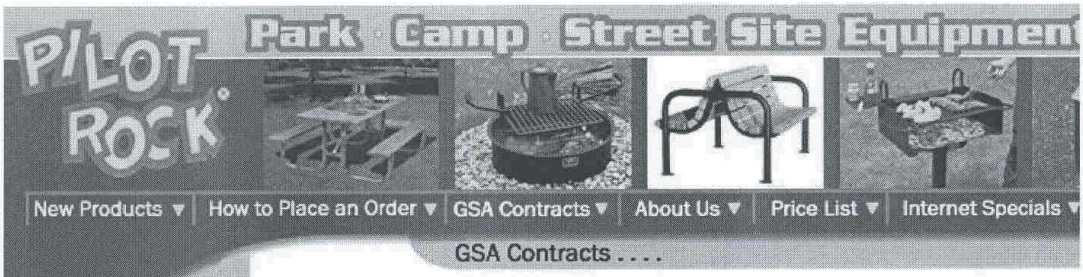
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SIN: 192-37i – Park and Playground, including Grills and Replacement parts.
SIN: 192-37b – Tables/Benches.

Contract Number: GS-07F-0351N
Title: Schedule 073; Food Service, Hospitality, Cleaning Equipment & Supplies, Chemi Services.
SIN: 384-2 – Office Recycling Containers and Waste Receptacles.
SIN: 384-4 – Outdoor Recycling Containers and Waste Receptacles.

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We also accept all federal government charge cards.

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For GSA pricing and freight estimates, please go to Request Price Quotation.

NOTE: Our GSA Contract is available only to Federal Government buyers. State, City a buyers cannot use the federal price schedules. However, quantity discounts are availal request a price quotation and add R.J. Thomas Manufacturing Co. to your bid invitatio

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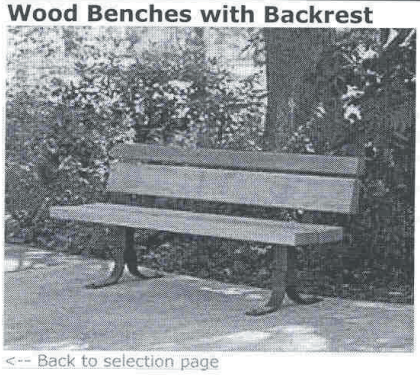
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Bench 38

Wood Benches with Backrest



<-- Back to selection page

Support Options
S-1 Embedment
S-2 Surface Plate
S-3 Gull-Wing
S-4 Sub-Floor

View Specifications
38 SERIES

- **FRONT SEAT MEMBER TILTED UPWARD 3"**

Materials
Slats: 3" x 8" and 3" x 4" nom. in choice of Clear All Heart, Free of Heart Center Redwood Douglas Fir; or Western Red Cedar (all with clea preservative treatment)
Supports: 1/2" x 3" steel bar and 3" square x 1 steel tube
Fasteners: Stainless steel
Finish: See our options page for choice of polye finish (shown in Bronze).

Redwood Bench
38-60R 6' long, 2 supports, 235 lbs.
38-80R 8' long, 2 supports, 284 lbs.

Douglas Fir Bench
38-60D 6' long, 2 supports, 167 lbs.
38-80D 8' long, 2 supports, 245 lbs.

Western Red Cedar Bench
38-60C 6' long, 2 supports, 235 lbs.
38-80C 8' long, 2 supports, 284 lbs.

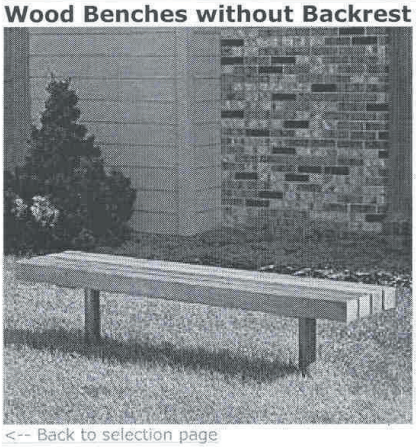
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Bench 105

Wood Benches without Backrest



<-- Back to selection page

Support Options
S-1 Embedment
S-2 Surface Plate
S-4 Sub-Floor

View Specifications
105 SERIES

- **4" X 4" TIMBERS**
- **HEAVY SUPPORTS IN THREE CONFIGURAT**

Materials
Slats: 4" x 4" nom. in choice of Clear All Heart, Free of Heart Center Redwood; Clear D or Western Red Cedar (all with clear preservative treatment)
Supports: 2-7/8" O.D. steel tube and 3/8" x 4-1/2" steel plate
Fasteners: Stainless steel
Finish: See our options page for choice of polye finish (shown in Bronze).

Redwood Bench
105-60R 6' long, 2 supports, 165 lbs.
105-80R 8' long, 2 supports, 195 lbs.

Douglas Fir Bench
105-60D 6' long, 2 supports, 165 lbs.
105-80D 8' long, 2 supports, 195 lbs.

Western Red Cedar Bench
105-60C 6' long, 2 supports, 165 lbs.
105-80C 8' long, 2 supports, 195 lbs.

Site Map

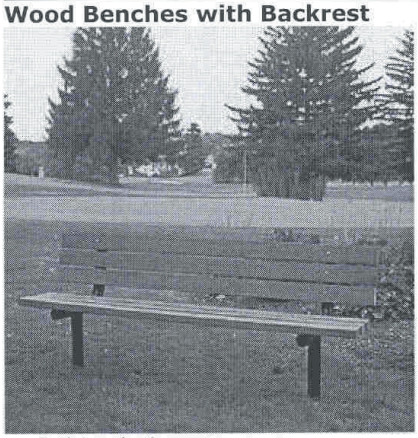
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Bench 79

Wood Benches with Backrest



<-- Back to selection page

Support Options

S-1 Embedment
S-2 Surface Plate
S-4 Sub-Floor

View Specifications
79-60
79-80

- **OUR MOST ECONOMICAL BENCH**

Materials
Slats: 2" x 4" nom. in choice of Clear All Heart, Free of Heart Center Redwood; Clear Douglas Fi Western Red Cedar (all with clear preservative t
Supports: 2-3/8" O.D. steel pipe
Fasteners: Stainless steel
Finish: See our options page for choice of polye finish (shown in Black).

Redwood Bench
79-60R 6' long, 2 supports, 83 lbs.
79-80R 8' long, 3 supports, 120 lbs.

Douglas Fir Bench
79-60D 6' long, 2 supports, 83 lbs.
79-80D 8' long, 3 supports, 120 lbs.

Western Red Cedar Bench
79-60C 6' long, 2 supports, 83 lbs.
79-80C 8' long, 3 supports, 120 lbs.

Site Map

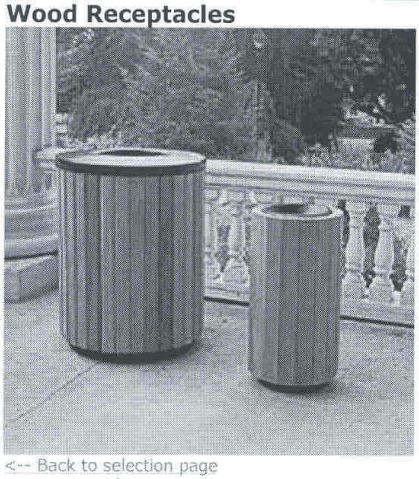
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Receptacle 70

Wood Receptacles



- **MATCHING ASH URN AND LITTER RECEPT**
- **BOTH UNITS FACTORY-ASSEMBLED**
- **AVAILABLE IN RECYCLED PLASTIC**

Materials

Slats: 1-1/2" thick in choice of Clear All Heart, F
Heart Center Redwood; Clear Douglas Fir; or We
Cedar (all with clear preservative treatment) or
thick recycled plastic with color molded in
Frame: 3/16" steel
Top: Polyethylene with vinyl-coated cable and
10"-diameter opening
Liner: 22-gallon plastic
Finish: Black polyester powder coat
Size: 25-1/2"-diameter x 30-1/2" high

70-22R Redwood, 95 lbs.
70-22D Douglas Fir, 95 lbs.
70-22C Western Red Cedar, 95 lbs.

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View Specifications
70-22

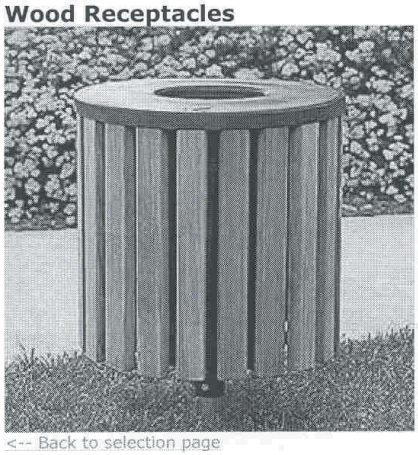
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Receptacle 41

Wood Receptacles



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- **OPTIONAL POLYETHYLENE COVER OR STE**
- **22-GALLON OR 32-GALLON PLASTIC LINE**

Materials

Slats: 2" x 3" nom. in choice of Clear All Heart, Heart Center Redwood; Clear Douglas Fir; or We Cedar (all with clear preservative treatment)
Liner: 22-gallon or 32-gallon plastic
Cover: Plastic, flat
Fasteners: Stainless steel
Finish: Black polyester powder coat

Redwood Receptacle

41-22R 22-gallon, 68 lbs.
41-32R 32-gallon, 73 lbs.

Douglas Fir Receptacle

41-22D 22-gallon, 68 lbs.
41-32D 32-gallon, 73 lbs.

Western Red Cedar Receptacle

41-22C 22-gallon, 68 lbs.
41-32C 32-gallon, 73 lbs.

Accessories

45-22 22-gallon plastic, flat lid, 2 lbs.
45-32 32-gallon plastic, flat lid, 2 lbs.
46-00 Molded polyethylene cover with vinyl-coa and 10"-diameter opening; choice of Black or Br
47-20 Steel domed cover with self-closing door gallon receptacle; choice of Black or Bronze, 7 lb
47-30 Steel domed cover with self-closing door gallon receptacle; choice of Black or Bronze, 12
49-22 22-gallon plastic replacement liner, 5 lbs.
49-32 32-gallon plastic replacement liner, 7 lbs.

View Specifications
41-22
41-32

Site Map

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Receptacle 43

Wood Receptacles



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View Specifications
43-22
43-32

- **OPTIONAL POLYETHYLENE COVER OR STE**
- **22-GALLON OR 32-GALLON PLASTIC LINE**

Materials
Slats: 2" x 3" nom. in choice of Clear All Heart, Heart Center Redwood; Clear Douglas Fir; or We Cedar (all with clear preservative treatment)
Liner: 22-gallon or 32-gallon plastic
Cover: Plastic, flat
Fasteners: Stainless steel
Finish: Black polyester powder coat

Redwood Receptacle
43-22R 22-gallon free-standing, 75 lbs.
43-32R 32-gallon free-standing, 80 lbs.

Douglas Fir Receptacle
43-22D 22-gallon free-standing, 75 lbs.
43-32D 32-gallon free-standing, 80 lbs.

Western Red Cedar Receptacle
43-22C 22-gallon free-standing, 75 lbs.
43-32C 32-gallon free-standing, 80 lbs.

Accessories
45-22 22-gallon plastic, flat lid, 2 lbs.
45-32 32-gallon plastic, flat lid, 2 lbs.
46-00 Molded polyethylene cover with vinyl-coa and 10"-diameter opening; choice of Black or Br
47-20 Steel domed cover with self-closing door gallon receptacle; choice of Black or Bronze, 7 lb
47-30 Steel domed cover with self-closing door gallon receptacle; choice of Black or Bronze, 12
49-22 22-gallon plastic replacement liner, 5 lbs.
49-32 32-gallon plastic replacement liner, 7 lbs.

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TRAIL SURFACE SPECIFICATIONS
(Excerpted from Barter, Christian, Margaret Coffin Brown, Tracy Stakely, Gary Stellpflug, with illustrations by Sarah Baldyga. *Acadia Trail Treatment Plan: Cultural Landscape Report for the Historic Hiking Trail System, Acadia National Park, Maine*. Brookline, MA: Olmsted Center for Landscape Preservation, 2006.)

Acadia National Park has an extensive system of trails and detailed specifications for gravel tread.

The Acadia carriage road system mix contains 8 percent clay, which binds the mix for a durable walking surface. The specifications state that aggregate shall consist of hard, durable particles or fragments of crushed stone or gravel conforming to the following requirements and gradations:

Los Angeles abrasion, ASTM C131 and C535	50 percent max.*
Fractured faces (one face)	95 percent max.*
Fractured faces (two faces)	75 percent max.*
Soundness loss, five cycles, ASTM C 88 (magnesium)	18 percent max.*
Flat/elongated (length to width >5 ASTM D4791	15 percent max.*

* Based on the portion retained on the 3/8-inch sieve.

Materials shall be free from organic material and lumps or balls of clay.

Material passing the No. 4 sieve shall consist of natural or crushed sand and fine mineral particles. The material, including any blended filler, shall have a plasticity index of not more than 6 and a liquid limit of not more than 25 when tested in accordance with ASTM D4318.

Aggregate shall contain a minimum of 5 percent clay particles but no more than 50 percent of that portion of material passing the No. 200 sieve size shall be clay. Inorganic clay to be used as binder shall conform to the following:

Passing No. 200	75 percent
Liquid Limit	30 min.
Plastic Index	8 min.

The fraction of material passing the No. 200 sieve shall be determined by washing as indicated in ASTM D1140, "Amount of Material in Soils Finer Than the No. 200 Sieve." The fractured faces for the coarse aggregate portion (retained on the No. 4 sieve) shall have an area of each face equal to at least 75 percent of the smallest midsectional area of the piece. When two fractured faces are contiguous, the angle between the planes of fractures shall be at least 30 degrees to count as two fractured faces. Fractured faces shall be obtained by mechanical crushing. Gradation shall be obtained by crushing, screening, and blending processes as may be necessary. Material shall meet the following screen analysis requirements by weight.

Sieve Designation	Percent Passing
¾ inch	100 percent
½ inch	90–100 percent
No. 4	55–70 percent
No. 40	20–30 percent
No. 200	12–16 percent

TRAIL REFERENCES
(Excerpted from Landscape Lines 15, "Historic Trails," p. 37-38)

Government Trail Programs

US Bureau of Land Management National Landscape Conservation System
1849 C Street, NW, MIB 3123
Washington, DC 20240

US National Park Service National Trails System Program
I 849 C Street, NW (2235)
Washington, DC 20240
wvvw.ncrc.nps.gov/rtca

US Forest Service
Recreation, Heritage, and Wilderness Resources Division
p.o. Box 96090
Washington, DC 20090-6090

US Fish & Wildlife Service
National Trails Program
440 I North Fairfax Drive, Room 634
Arlington, VA 22203

Non-Profit Trail Organizations

American Hiking Society
1422 Fenwick Lane
Silver Spring, M D 209 I 0

American Trails
p.o. Box 491797
Redding, CA 96049-1797
wvvw.AmericanTrails.org

Appalachian Trail Conference
799 Washington Street
Harpers Ferry, WV 25425
wvvw.atconf.org

Leave No Trace Center for Outdoor Ethics
p.o. Box 997
Boulder, CO 80306
wvvw.lnt.org

Rails-to-Trails Conservancy
11 00 17th Street, NVV,
10th Floor Washington, DC 20036
wvvw.railtrails.org

Tread Lightly!, Inc.
298 24th Street, Suite 325
Ogden, UT 8440 1
wvvw.treadlightly.org

Useful Websites

US Federal Highway Administration, Forest Service Publications List
wvvw.fhwa.dotgov/environmentfiSpubs/index.htm

Herold, Philip, Jean Albreacht, and Laura Morales. Trail Planning, Construction, & Maintenance. University of Minnesota.
http:/tforestry.lib.umn.edulbib/trls.phtml

South Carolina State Trails Program.
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http://www.sctrails. net/trails/LIBRARY /Quotes.pdf

Trail Manuals

Birchard, William Jr. and Robert Proudman. 2000. *Appalachian Trail Design, Construction and Maintenance. Second Edition*. Harpers Ferry, WV: Appalachian Trail Conference.

Birkby, Robert C. 1996. *Lightly on the Land: The SCA Trail-Building and Maintenance Manual.* Seattle: The Mountaineers.

Demrow, Carl and David Salisbury. 1998. *The Complete Guide to Trail Building and Maintenance. Third Edition.* Boston: Appalachian Mountain Club Books.

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Hesselbarth, Woody. 1997. T*rail Construction and Maintenance Notebook.* Missoula, MT: US Department of Agriculture, US Forest Service. wvvw.fhwa.dotgov/environmenttfspubs/lndex.htm

Kenway, Lester. December 1997. "Steel Tripods for Skyline Systems," *The Register: A Stewardship Newsletter for the Appalachian Trail.* Harpers Ferry, WV: Appalachian Trail Conference.

Trail Management Issues

Barter, Christian, Margaret Coffin Brown, Tracy Stakely, Gary Stellpflug, with illustrations by Sarah Baldyga. *Acadia Trail Treatment Plan: Cultural Landscape Report for the Historic Hiking Trail System, Acadia National Park, Maine*. Brookline, MA: Olmsted Center for Landscape Preservation (2006).

Bergmann, Roger. September 2000. "Soil Stabilizers on Universally Accessible Trails." Washington, DC: US Forest Service, 0023¬
1202-SDTDC
www.ihwa.dot.gov/environment;1Spubs/index.htm

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Griswold, Stephen. March 2000. "High Elevation Trailwork in United States National Parks, and Peru and Nepal." Fort Collins, CO: High Altitude Revegetation Workshop Proceedings.

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National Park Service. Draft January 2001. "GIS for the National Trails System: An Action Plan." Washington, DC: US Department of the Interior, National Trails System Program.

National Park Service, October 2000. "Preserving Historic Trails, Conference Proceedings, October 17-19, 2000, Acadia National Park." Brookline, MA: National Park Service, Olmsted Center for Landscape Preservation.

Trail History

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National Park Service
U.S. Department of the Interior

Olmsted Center for Landscape Preservation
email: FRLA_olmsted_center@nps.gov
web: www.nps.gov/oclp/