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## CULTURAL LANDSCAPE REPORT FOR GLENMONT

THOMAS EDISON NATIONAL HISTORICAL PARK  
WEST ORANGE, NEW JERSEY



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# CULTURAL LANDSCAPE REPORT FOR GLENMONT

THOMAS EDISON NATIONAL HISTORICAL PARK

WEST ORANGE, NEW JERSEY

SITE HISTORY

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EXISTING CONDITIONS

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ANALYSIS AND EVALUATION

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TREATMENT

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Cover Photo: Thomas Edison seated within the front lawn of Glenmont, 1917 (Photograph 14.220.47, Thomas Edison National Historical Park Archives)

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## FOREWORD

When you visit Glenmont, the home of Thomas Edison, you experience what appears to be a wonderfully preserved fifteen-acre estate: an exquisite 1880s Queen-Anne style home, a sturdy concrete garage that still houses Mr. Edison's cars, and a concrete potting shed and greenhouse that volunteers have brought back into bloom, all sitting in a bucolic landscape of mature trees and shrubs and rolling lawns. Our interpretive and educational programs reveal Mr. Edison's family life at Glenmont and his professional life at the recently renovated Laboratory Complex.

So one might be tempted to ask why we need a cultural landscape report. Everything looks fine, doesn't it? We paint the home when we can, we mow the lawn regularly, and we cut down the dead trees when they fall. The visitors think it's great, and we really don't need one more plan in the bookcase.

However, this report, the outstanding professional work of the staff of the Olmsted Center for Landscape Preservation, gives us a wealth of information about the cultural landscape at Glenmont, revealing the extent to which some of its historic character has been lost and recommending substantive and reasonable treatment guidelines and specific tasks to preserve and enhance it.

Meticulously researched and attractively presented, the Cultural Landscape Report for Glenmont is not headed for the bookshelf; its treatment guidelines will inform our funding requests, provide direction for our day-to-day grounds keeping, and enhance our partners' appreciation and understanding of what needs to be accomplished. Our staff sincerely appreciates the work of the Olmsted Center for Landscape Preservation. We especially want to acknowledge Bob Page, Eliot Foulds, Michael Commisso, and Rose Marques for their work on this report.

Greg Marshall  
Superintendent  
Thomas Edison National Historical Park



## INTRODUCTION

As part of Thomas Edison National Historical Park, Glenmont is located within the historic residential community of Llewellyn Park, in the township of West Orange, New Jersey, approximately fifteen miles west of New York City. The 15.67-acre estate (historic portion comprises 13.54 acres) reflects the history of the Edison family, as well as early community planning. The Glenmont grounds include the Edison home, gravesite, garage, swimming pool, barn, greenhouse, potting shed and gardener's cottage, and a variety of native and exotic trees and shrubs (Figures 0.1 and 0.2).

Thomas Edison acquired Glenmont in 1886 and resided there until his death in 1931. Mina Edison continued to live at the estate until her own death in 1947. Originally interred in Rosedale Cemetery in Orange, both Thomas and Mina were buried at Glenmont in 1963 at the request of their children.

In 1955, Glenmont was designated the Edison Home National Historic Site and was later acquired by the National Park Service in 1959. Since 1959, the National Park Service has administered the site along with the Edison Laboratory National Monument, which was established in 1956. The home and laboratory were both redesignated as Edison National Historic Site in 1962, and later changed to Thomas Edison National Historical Park in 2009. Glenmont is listed in the National Register of Historic Places as part of Edison National Historic Site and Llewellyn Park Historic District.

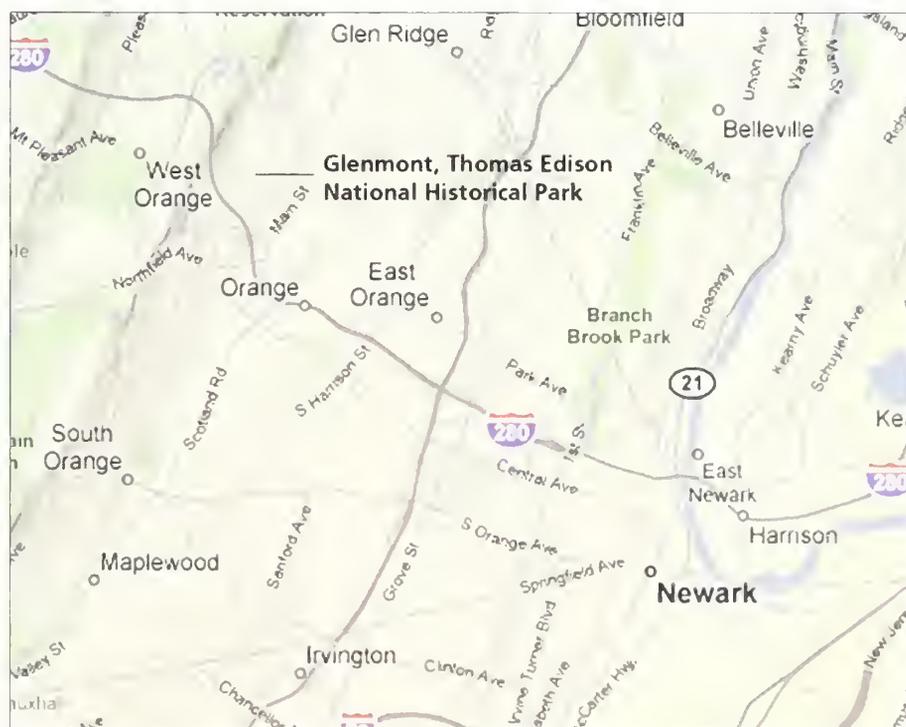


Figure 0.1: Location of the Glenmont property, Thomas Edison National Historical Park and Newark, New Jersey (Google Map, 2009, annotated by the Olmsted Center for Landscape Preservation).



Figure 0.2: Current aerial view of the Glenmont property, Thomas Edison National Historical Park showing its context within Llewellyn Park (NASA aerial c. 2007, reproduced from Google Earth, annotated by the Olmsted Center for Landscape Preservation).

## PROJECT SCOPE AND METHODOLOGY

The park's *Resource Management Plan* (1992), *Statement for Management* (1990) and *Master Plan* (written in 1969, approved in 1971 and revised April 1977) set forth the basic management philosophy for the Glenmont landscape and provided a framework for future decision-making. The *Master Plan* aimed to "preserve and restore as practicable the historic environment of c. 1931," while the *Resource Management Plan* sought to achieve the same goal through the detailed guidance of a cultural landscape report.

Building upon previous documentation, including a draft *Cultural Landscape Report* (1987), Thomas Edison National Historical Park requested assistance from the Olmsted Center in 1992 to complete a three phased project; an interview with Head Gardener George Crothers to provide an oral history of grounds maintenance at Glenmont, a scope of work for a cultural landscape report, and finally, the preparation of a cultural landscape report. In addition to finishing the first two phases of the project, the Olmsted Center completed a *Tree Preservation Maintenance Guide* (1994) and *Historic Plant Inventory* (1995). The preparation of this cultural landscape report completes the tasks outlined in 1992. This report will assist the park in the general management of Glenmont, guide the future treatment of the cultural landscape, and supplement the existing audio tour program with new information related to the landscape. Specifically, the report addresses the following objectives relative to management of the Glenmont landscape:

- Document the historic design and evolution of the landscape, as well as identify and describe the historic contexts and period of significance associated with the landscape;
- Document the changing historical appearance of character-defining features within the Glenmont landscape, as well as the broader setting;
- Provide contextual documentation on the Llewellyn Park residential subdivision, as well as the history of American landscape design;
- Recommend treatment strategies for the long-term management of the landscape
- Provide documentation that supports park consultation responsibilities under Section 106 of the National Historic Preservation Act.

This report has been developed according to the *Guide to Cultural Landscape Reports: Contents, Process, and Techniques* (National Park Service, 1998). The treatment guidelines and tasks are consistent with the guidelines established by the National Park Service *Director's Order 28: Cultural Resource Management* (1999), *NPS-28: Cultural Resource Management Guideline* (1997), and *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* (1996).

Research for this cultural landscape report has been undertaken at a thorough level of investigation, which includes review of all available historical resources including both primary and secondary sources.<sup>1</sup> Primary source materials included construction documents, plans, maps, photographs, and written documentation from the collections of Thomas Edison National Historical Park; the National Archives, Rutgers, State University of New Jersey; Special Collections and University Archives; the Chautauqua Institution Archives; the Catalog of Landscape Records [formerly the Wave Hill Catalog of Landscape Records]; New Jersey Historical Society; Essex County Registry of Deeds; New Jersey Office of Information Technology, Office of GIS; National Union of Catalog Manuscripts; Llewellyn Park Archives; Hagley Museum and Library; Cornell University, Library Division of Rare and Manuscript Collections; Newark Public Library, New Jersey Room; Township of West Orange; West Orange Public Library, Essex County Parks Commission, New York Historical Society; Boston Public Library; College of New Rochelle, Gill Library; Palisades Inter-State Park Commission; New York Public Library, Humanities and Social Sciences Library, Manuscripts and Archives Division, Metropolitan Museum of Art; Winterthur Library; Avery Memorial Architectural Library of Columbia University, Rare Books Collection and Drawings; Harvard University Graduate School of Design, Frances Loeb Library; David Rumsey Collection; New Jersey Library; New Jersey State Museum, and Phillips Library, Peabody Essex Museum.

A wealth of secondary source material has been compiled through the work of many researchers over the years relating to the character and history of Glenmont. Sources specific to Glenmont included, but were not limited to, Barbara Yocum's *The House at Glenmont Historic Structure Report, Edison National Historic Site, Volumes I and II* (1995), Leah Brodbeck Burt's draft *Cultural Landscape Report* (1987), The Louis Berger Group's draft *Archeological Overview and Assessment, Edison National Historic Site* (2009), and Keith Robbin's *A History of the Development of the First Planned American Suburban Community: Llewellyn Park* (1989).

## **REPORT ORGANIZATION**

This report is organized into four chapters beginning with a detailed history of the evolution of the Glenmont landscape, followed by documentation of existing conditions, an analysis and evaluation of the integrity of the landscape with respect to the historic period (1857-1931), and treatment guidance for the ongoing management of the landscape. Additional detailed information is included in appendices. The contents of the four chapters are summarized below:

### **Site History**

The site history chapter is organized into six sections corresponding to distinct periods in the development of the Glenmont landscape. The periods are Pre-History to 1879; Pedder, Arnold Constable and Company Ownership (1879-1886); Thomas Edison Era (1886-1931); Mina Edison (1931-1947); Thomas A. Edison, Inc. Ownership (1946-1959); and Federal Ownership (1959-2009). Each section describes the contextual history of the study area, namely Llewellyn Park, as well as the site specific history of the study area during each period. Sections conclude with a summary description that documents the character of the Glenmont landscape at the end of each era. The site history is accompanied by historic photographs, diagrams, and period plans illustrating the detailed condition of the landscape at the end of each period.

### **Existing Conditions**

The existing conditions chapter documents the existing (2009) landscape through narrative and graphics. It is based upon field inventory, the most current site surveys and plans (including the park's GIS database), and discussions with park staff about current issues pertaining to maintenance, administration, and interpretation. It also addresses the regional context, environmental conditions, Llewellyn Park setting (immediate environs), and park operations pertaining to the landscape.

### **Analysis and Evaluation**

The analysis and evaluation chapter provides an overview of the historical significance of the Glenmont landscape, describes the characteristics and features that contribute to the significance of the landscape, and evaluates the integrity of the historic landscape. This analysis and evaluation is based on the criteria developed by the National Register of Historic Places. By comparing the historic condition with the existing conditions of landscape characteristics and features, the report presents a list of characteristics and features that contribute or that do not contribute to the historic character of the landscape.

### **Treatment**

The treatment chapter describes the preservation strategy for management of the Glenmont landscape. It includes a framework for treatment that establishes a treatment character date and preferred treatment, addresses park issues, and provides an overall philosophy that guides the individual treatment tasks. The treatment tasks are organized according to landscape characteristics, which include spatial organization, circulation, vegetation, buildings and structures, views and vistas, and small-scale features. The narrative guidelines and tasks are supplemented by annotated treatment plans, diagrams, and images.

## **SUMMARY OF FINDINGS**

### **HISTORICAL OVERVIEW**

Prior to European settlement, Native Americans—particularly the Hackensacks—occupied the banks of the Passaic River to the east of the present day Glenmont site. Near Glenmont, the first European settlers arrived in the late 1670s; they built houses, cleared fields, farmed the land, and started industries. The Glenmont lands eventually became part of Llewellyn Park, a planned community begun in 1853 (platted in 1857) by Llewellyn Haskell. With assistance from architect Alexander Jackson Davis, landscape architects Eugene Baumann and Howard Daniels, and others, Haskell created a picturesque residential suburb that included curvilinear roads, native and exotic trees, and rustic architecture.

Glenmont remained undeveloped until Henry Pedder purchased the property in 1879. With the assistance from architect Henry Hudson Holly and landscape gardener Nathan Franklin Barrett, Pedder had a Queen-Anne style home constructed within a stylized rural landscape based on the naturalistic design principles popularized by landscape architect Andrew Jackson Downing. The property included winding drives, expansive lawns, informal groupings of ornamental trees and shrubs, flower gardens, carpet bedding, and numerous service related functions including a chicken house and cow barn, stable,

greenhouse, pump house, well house, orchard, and vegetable garden. In 1884, Henry Pedder was found to be embezzling from his employer, Arnold Constable & Company. Shortly thereafter, the company acquired the property.

In 1886, Arnold Constable & Company sold the property to Thomas A. Edison. After acquiring the property, Mina Edison assumed the lead role in the management and operation of the Glenmont grounds. During the early years, the property was minimally altered and continued to be maintained in the same manner as it had prior to Edison ownership. However, by the early 1900s, Mina commissioned landscape gardener Ernest Bowditch to redesign the grounds. Although it seems that his plans were never executed, the Edisons valued his land planning concepts and later implemented some of those ideas, which included relocating and unifying service buildings and structures away from the house. Significant changes that occurred during the early 1900s included the establishment of additional flower beds; the construction of a hose house, garage, pool, gardeners cottage, potting shed, greenhouse (replaced an earlier building), tool shed, playhouse, and summer house; the relocation of the chicken house and cow barn, and removal of the well house. In later years, the Edisons gradually simplified the landscape. By 1920, the Pedder barn, sections of path, and carpet bedding were removed or abandoned. However, they continued to make improvements to the landscape up until the mid-to late 1920s. The skating pond, constructed in 1926, was among the last additions to the landscape during the historic period. In 1931, Thomas Edison died at the age of 84.

Between 1931 and 1947, the character of the Glenmont landscape was carefully preserved as Mina Edison continued to manage the property. During this period, improvements to the grounds were mostly discrete additions, which included the planting of a rose garden and the redesign of the flower garden adjacent to the greenhouse and gardener's cottage. Following the death of Mina in 1947, Thomas A. Edison, Inc. minimally maintained the house and grounds and occasionally used the unoccupied home for entertaining. During these years, gardening ceased, many buildings and structures deteriorated, and the majority of vegetation became overgrown. In 1955, Glenmont was designated as the Edison Home National Historic Site.

The Glenmont property was eventually deeded to the National Park Service by the McGraw-Edison Company (formerly Thomas A. Edison, Inc.) in 1959. In subsequent years, the National Park Service made several changes to enhance and preserve the historic character of the landscape, as well as address visitor accessibility and safety. These changes included the restoration and/or rehabilitation of many buildings and structures, and the installation of directional signs, lighting, trash receptacles, interpretative signage, and parking areas.

### **SUMMARY OF EXISTING CONDITIONS**

Situated within the Llewellyn Park Historic District, the 15.67-acre Glenmont landscape today is a well preserved idealized rural landscape that reflects the history of the Edison family, as well as the naturalistic and picturesque design principles popularized by Andrew Jackson Downing. The grounds include a Queen-Anne style house set within an open lawn dotted with scattered masses of trees and shrubs, curving drives and walks, flower gardens, and a variety of service related buildings and structures.

The house remains located in the northern portion of the property situated within an expansive manicured lawn, scattered with single specimen and clumps of trees and shrubs. North of the house, encircled by a secondary drive and Honeysuckle Avenue, is the laundry yard containing six clotheslines and hose house. The interior is mostly open, visually enclosed by deciduous and evergreen trees and shrubs. To the west and south, bounded by Park Way on the west and south and Honeysuckle Avenue on the north, is the west (back) lawn containing mature perimeter plantings of oak, beech, maple, and ash trees. The interior is largely open with several specimen trees and features including the Edison gravesite, pump house, and numerous small-scale features. The front lawn, east of the house, is a large oval area delineated by the main drive circle. The oval lawn is open in character and consists of highly manicured turf bordered by deciduous and evergreen trees and shrubs.

Beyond the oval lawn, bounded by Honeysuckle Avenue, Park Way, Glen Avenue, and the main and secondary drives, is the south (lower) lawn containing the garage and remnant fencing. Adjacent to the oval lawn, to the north along Honeysuckle Avenue, is the woodland. With exception to an organically-shaped depression marking the location of the former skating pond, this area is largely wooded and includes many utility structures (cisterns and gas faults), as well as features associated with the pond. The service area, north of the house and across Honeysuckle Avenue, contains the majority of service related functions including the gardener's cottage, potting shed, and greenhouse; hotbed/cold frame foundation, chicken house and cow barn, and concrete basin (former location of the pool), all surrounded by a series of paths and gardens. The Johnson-Tilney property, north of the Glenmont house, is approximately two-acres and is scattered with trees and shrubs and includes a parking area.

### **SUMMARY OF ANALYSIS AND EVALUATION**

Glenmont is listed in the National Register of Historic Places as part of Thomas Edison National Historical Park and as a contributing resource within the Llewellyn Park Historic District. However, the landscape is currently

inadequately documented. Based on the National Register Criteria for Evaluation, this report recommends that the Glenmont landscape be documented for its significance under Criterion B for its association with American inventor, scientist and businessman Thomas Alva Edison and Criterion C in the areas of community planning and development and landscape architecture. In the area of community planning and development, the Glenmont landscape is significant as a contributing resource within the Llewellyn Park Historic District. In the area of landscape architecture, Glenmont is significant as an independent work of landscape design that reflects the naturalistic design principles popularized by Andrew Jackson Downing. The Glenmont landscape also derives significance under Criteria Considerations B and C as the reinterment site of Thomas and Mina Edison. The overall period of significance for the property begins in 1857 with the establishment of Llewellyn Park, and extends to 1931, the year of Thomas Edison's death. Beyond this aggregate span of years, 1963 has been determined significant as the date when Thomas and Mina were reinterred at Glenmont.

Many landscape characteristics and features from the period of significance remain today at Glenmont. The most important landscape characteristics are natural systems and topography (geology and west lawn mound), spatial organization, circulation (local roads—Park Way, Glen Avenue, and Honeysuckle Avenue, main and secondary drives and paths), vegetation (vines, lawn, woodland plantings, deciduous and evergreen trees and shrubs, remnant orchard, foundation plantings, Edison gravesite plantings, flower gardens, and Honeysuckle Avenue hemlock hedge), buildings and structures (Glenmont house, gardener's cottage and potting shed, greenhouse, garage, chicken house and cow barn, pump house, hose house, skating pond site, concrete basin, stone boundary wall, and hotbed/cold frame foundation), views and vistas (East view from house and main entrance drive view), and small-scale features (miscellaneous utility structures, Edison gravesite, landscape fixtures, bluestone stoop, and clothesline posts).

Following Glenmont's acquisition by Thomas A. Edison, Inc., and later by the National Park Service, some landscape characteristics and features that once reflected the domestic use and rural ideal of the Edison family were removed. These features included paths in the west lawn and woodland, pastures and meadows, orchards, flower and vegetable gardens, vines on buildings and structures, and a summer house and playhouse. Other changes to the landscape are primarily associated with National Park Service visitor facilities, which include parking areas, restroom facility, fireproof metal structure, benches and receptacles, and signs.

Despite some changes in vegetation, circulation, buildings and structures, and small-scale features, the Glenmont landscape retains overall integrity of location, design, setting, materials, workmanship, and feeling, and association.

### **SUMMARY OF TREATMENT**

The recommended treatment philosophy for the Glenmont cultural landscape is to enhance its historic character so that it more closely reflects its appearance prior to Thomas Edison's death in 1931. At this time, the property represented an idealized rural landscape developed and embellished according to the wishes of the Edison family and reflected the naturalistic design principles popularized by Andrew Jackson Downing during the mid-nineteenth century. The intent of this treatment philosophy is to reestablish the domestic and human qualities of the landscape that help convey its historic character, as well as provide the public with the opportunity to experience the landscape that was familiar to Thomas Edison and his family. Rehabilitation, as the primary treatment, will preserve and enhance the historic characteristics of the landscape while allowing for cyclical and long-term changes inherent in natural systems and land-use practices. It allows for accommodation of public use (i.e. universal accessibility and interpretative signage) and the repair or replacement of lost or altered features to enhance historic character.

Key treatment tasks for the rehabilitation of the Glenmont landscape include the consolidation of visitor and staff parking; resurfacing of existing roads, drives, walkways, and paths; reestablishment of paths in west lawn and woodland area; accessibility to historic structures and grounds; reconstruction of hotbeds/cold frames; and removal of incompatible non-historic buildings. Treatment also includes replanting deciduous and evergreen trees; and the reestablishment of vegetable and flower gardens, pasture areas, the hemlock hedge along Honeysuckle Avenue, and vines on buildings and structures.

### **RECOMMENDATIONS FOR FURTHER WORK**

This cultural landscape report for Glenmont was scoped at a thorough level of research, which provided sufficient documentation on the overall development of the landscape. However, given the scope of the project and limited access to the extensive archival collection at the park, further research could expand the site history and enhance interpretation of the landscape. Recommendations for further work include conducting additional research on Ellen Biddle Shipman's involvement with the perennial garden near the gardener's cottage, potting shed, and greenhouse, and the skating pond site, specifically its design implementation and construction of skating shack. In addition, research may yield information on the locations of an earlier 1900s skating pond, pig house(s), sand box, gazebo,

summer house, and tennis court. An archeological study is also warranted as it may reveal the outlines of these features, but also provide significant information regarding Native American occupation and the Pedder period.

## ENDNOTES

- 1 As defined in the National Park Service *Cultural Resource Management Guideline* (DO-28, 1998), "thorough" means research in selected published and documentary sources of known or presumed relevance that are readily accessible without extensive travel and the promise expeditious extraction of relevant data; interviewing all knowledgeable persons who are readily available, non-destructive investigation, and presenting findings in no greater detail than required by the task directive. *National Park Service, Cultural Resource Management Guideline*, NPS-28, web edition, 11 June 1998, [http://www.cr.nps.gov/history/online\\_books/nps28/28contents.htm](http://www.cr.nps.gov/history/online_books/nps28/28contents.htm), 17-19.

## SITE HISTORY

### PRE-HISTORY TO 1879

Prior to the European settlement, the area which encompasses Glenmont was inhabited by Native Americans, namely the Hackensacks. Within the vicinity of the Glenmont landscape, the first European settlers arrived in the late 1670s; they built houses, cleared fields, farmed the land, and eventually started industries. In 1857, the Glenmont lands became part of Llewellyn Park, the earliest planned residential subdivision in the United States created by Llewellyn Haskell. With assistance from Alexander Jackson Davis, landscape architects Eugene Baumann and Howard Daniels, and others, Haskell created a picturesque residential park, featuring curvilinear roads, springs and streams, native and exotic trees, stone and rustic bridges, and a common natural park that came to be known as the “Ramble.” By the late 1870s, Glenmont remained undeveloped agricultural land within the park and consisted of a large number of mature trees, including maples, oaks, and beeches.

### ARCHEOLOGICAL HISTORY

The retreat of the Pleistocene glaciers that covered the New Jersey area began around 17,000 BP and left a rugged landscape in their wake. The Newark basin was composed of black diabase lavas interspersed with Triassic red beds of sandstone, shale, and conglomerate that slope westward<sup>1</sup> (Figure 1.0). The vegetation that followed was predominantly herbaceous in the form of mosses, lichens, and sedges. Following that phase came a succession of open parkland vegetation and then one of mixed forest zones that included pine and spruce, which predominated by about 13,000 BP. In central New Jersey, pine began to predominate sometime after 12,000 BP, roughly coinciding with the beginning of

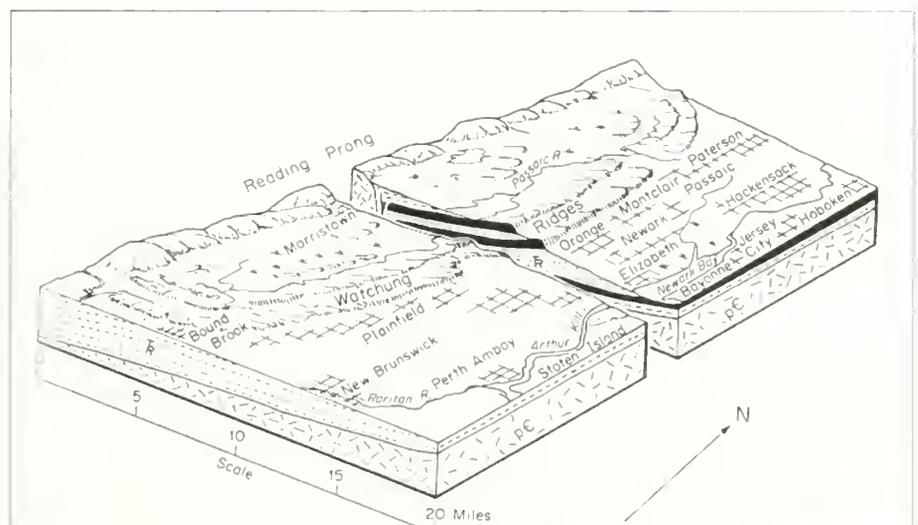


Figure 1.00. This diagram shows part of the Newark Basin and the topographic expression of the Watchung Ridges (Charles E. Hunt, *Natural Regions of the United States and Canada*).

the Paleo-Indian period<sup>2</sup>. This is the period of earliest known occupation of New Jersey, dating to about 11,000 to 10,000 years BP. Three Paleo-Indian sites have been identified within fifty miles of the Glenmont project site, and the nearest is the Port Mobil site on the western shore of Staten Island.<sup>3</sup> The early inhabitants formed a hunter-gather society, primarily focused on hunting game. Gathering of plant foods may have been equally important but it is not as well documented in the archeological record. Accordingly, these people preferred locations that offered good vantage points for observing game.<sup>4</sup>

The Archaic period followed around 10,000 to 3,000 BP as warmer Holocene climates encouraged population migrations and new subsistence strategies for inhabitants in the New Jersey area. They now engaged in small group activities, such as forays, from base camps. By the Terminal Archaic period, 300 to 2700 BP, inhabitants seem to have been more residentially stable.<sup>5</sup>

The Woodland period, 2,700 BP (750 BC) to 1600 AD, was likely characterized by the occupation of a small group at base camp near areas of major resources. In the later part of the period, temporary and seasonal sites were abundant along tributaries and near natural springs<sup>6</sup>. The primitive forest in the area of the present-day Oranges hosted a wide variety of vegetative species. The oak – including the red, black, white, and pin oaks – was widely distributed. Though less wide-spread, the area also supported chestnut, hickory, elms, beech, birch, ash (both black and white), and tulip trees on the First Mountain side of the Oranges. Maples, including sugar maples from which sugars and syrups could be made, were also present at the time. Sycamores were diffused in this location and grew to large sizes. Scattered in the area and among larger trees were dogwoods, wild cherries, apple trees, and persimmon. Pines were not indigenous to the area. Yellow pine, along with red cedars and even some chestnuts, established themselves as secondary growth trees in land that was abandoned by agricultural concerns. Smaller fruits common to the area included currants, raspberries, strawberries, grapes, plums, mulberries, persimmons, peaches, apples, and quinces.<sup>7</sup>

European settlement in the Newark area, which includes today's West Orange, began even as Native Americans – particularly the Hackensacks, a tribe related to the Lenni Lenape – were active along the banks of the Passaic River to the east of the present day Glenmont site. Late nineteenth century accounts indicate minor Native American trails in the immediate vicinity of Glenmont including at the notches of Eagle Rock, Mount Pleasant, and Northfield Avenues, while evidence of Native American settlements has also been found. At the time of early European settlement, “a few wigwams [were present] in Tory Corner,” about one quarter of a mile from Glenmont. Other native settlements were also located less than three miles from Glenmont.<sup>8</sup>

## **COLONIAL SETTLEMENT OF THE ORANGES**

The Newark area was founded by a group of Connecticut Puritans from the settlements of Milford and Branford, and they were soon joined by families from nearby Guilford and New Haven. In the spring of 1666, Robert Treat, the leader of the Milford group, led about thirty families aboard two or more boats to the banks of the Passaic River. On July 11, 1667, the colonists and the Hackensacks signed a treaty giving the colonists a tract of land that included present-day Newark, Montclair, Bloomfield, Nutley, Belleville, Glen Ridge, most of the Oranges and Irvington, along with parts of Maplewood and Short Hills.<sup>9</sup>

The soil of East New Jersey seems to have been peculiarly well suited to the growth of apple trees. Shortly after the first colony located there, apple seeds brought from Connecticut were planted. Young trees also may have come from droppings of cattle that ate the fruit. As early as 1678, reference to the planting of these trees was made in the Town Records, and four years later Governor Carteret, in writing to the proprietors in England, said: "At Newark is made great quantities of cider exceeding any that we have from New England, Rhode Island or Long Island." The careful cultivation of apples improved the quality of the produce, and over time almost every farmer in the county had an apple orchard.<sup>10</sup>

By 1678, Newark's western boundary had extended to the top of the Orange Mountains. That same year, one of the first settlers, Anthony Oliff, established his homestead about 1,000 feet west of the future Glenmont site, near the intersection of Tulip Avenue and Oak Bend. By the 1730s, about 700 to 800 people lived in the village of Newark and its surrounding countryside, which included today's South, East, and West Oranges.<sup>11</sup> This area also saw military action during the American Revolution when the Battle of Watsessing was fought within or near Watsessing Park, between one and two miles to the east of Edison's Laboratory.<sup>12</sup>

After the Revolution, cider mills and distilleries were established throughout the county. These became famous for the rich quality of the cider made from local Canfield and Harrison apples, and thousands of barrels were annually shipped to the South and other parts of the country. Some were even exported to Europe. "Applejack" became a favorite beverage, and distilleries multiplied while intemperance increased. The government tax on local spirits and the increased consumption of "blue grass" whiskey from Kentucky put an end to this industry.<sup>13</sup>

## **Nineteenth Century Development**

In the Newark area, significant political, economic, and demographic changes took place during the years that followed the war and even into the mid- to late-nineteenth century. By 1783, area citizens were already referring to themselves as an entity separate from Newark. But it was not until 1806 that the Township

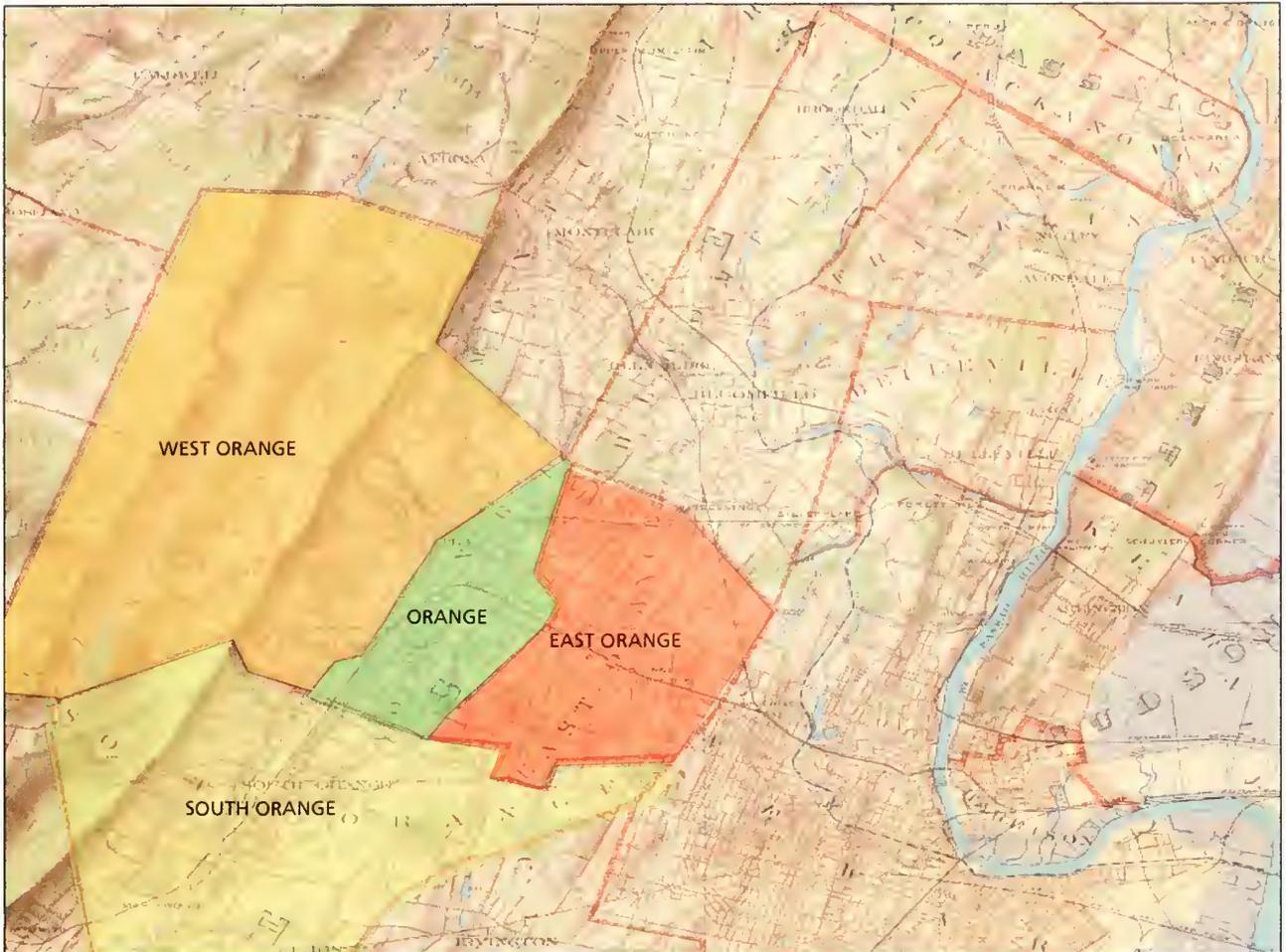
of Orange, including all present-day Oranges, actually separated from Newark's administration. Newark had failed to efficiently administer its outlying area, particularly as the population of Newark was rapidly expanding. Even Orange itself grew rapidly, with an initial population of about 2,200 in 1806 that increased to 4,000 by 1825.<sup>14</sup>

Both the trends established prior to the Revolutionary War and the subsequent capitalist economy that became the foundation for the American Industrial Revolution had an impact on Orange. In the early part of the nineteenth century, entrepreneurs and skilled mechanics were drawn there. As prosperity grew in nearby industrial Newark, repercussions were felt in Orange. By 1832, Orange was home to two sawmills, one barkmill, forty tanvats, two taverns, three churches, and around 200 or 300 dwellings. By 1835 Orange became more closely linked to Newark by the Morris and Essex Railroad that ran from Newark to Morristown.<sup>15</sup> With its transportation connection to other towns, it is hardly surprising that Orange's population in 1850 was 4,385 but had grown to 9,382 by 1860, when it became incorporated as a town. Soon after, it began to fragment because of conflicts over city service levels. South Orange organized in 1861 and East Orange in 1863. West Orange incorporated as a township also in 1863 and then reformed as a town in 1900<sup>16</sup> (Figure 1.1).

### **THE DEVELOPMENT OF LLEWELLYN PARK**

In response to the ill-effects of the rapidly industrialized American cities, the mid-nineteenth century witnessed a growing sentiment toward nature's ability to inspire and uplift the human spirit. This Romantic Movement, as it later was called, was influenced in part by the Hudson River School artists, Transcendentalist writers, and landscape gardeners who promoted the design of pastoral or natural style country residences removed from the congestion and noise of the city, but close enough for daily commuting.<sup>17</sup> In short, the rapidly changing character of American cities was increasing the appeal of the rural countryside.

The practice of landscape gardening in the United States was initially popularized for a middle-class audience by Andrew Jackson Downing. In his influential 1841 publication, *A Treatise on the Theory and Practice of Landscape Gardening*, Downing reinterpreted the principles of English landscape gardeners – such as Humphry Repton, Lancelot “Capability” Brown, Richard Payne Knight, and the writings of John Claudius Loudon – and provided extensive instructions on the location, layout, and plantings for rural homes. He introduced the ideals of naturalistic landscape gardening, characterized as “Picturesque” or “Beautiful,” that sought to blend designed landscapes with the natural environment and featured an informal style of curvilinear shapes, changes in topography, babbling



**Figure 1.01.** This map shows the Oranges ca. 1891 following their split in the 1860s. Annotated by the Olmsted Center (David Rumsey Map Collection).

brooks, forest and glade plantings, and a sense of mystery with light and shade patterns.<sup>18</sup> Downing established the main features of the private pleasure ground as: vistas, drives and walks, meadows, rockwork, rustic bridges, and wooded glades. The style manifested itself in sweeping lawns, curving drives, and groupings of trees. Largely because of Downing, designers became concerned with improving the potential of a site rather than imposing an artificial order on it. Gone was the early focus on strict geometry and enclosed dooryard spaces adjoining the home. Gardens became open, naturalistic, romantic, and focused on views of the surrounding countryside.<sup>19</sup>

In the ensuing years, Downing's naturalistic gardening principles attracted many followers, notably Frederick Law Olmsted, and eventually the style became known solely as the picturesque style of landscape design. In addition, it set forth the framework for the development of Llewellyn Park and later picturesque suburbs.<sup>20</sup>

#### **Purchase and Creation of the Park**

In the early 1850s, Llewellyn S. Haskell (1815-1872), a prosperous New York City drug importer, was living in Kearny, New Jersey, during which time the condition

of water and air in urban areas was notorious for carrying highly contagious and deadly diseases. Following the death of four of his five children, Haskell and his wife sought a cleaner, healthier location in which to live. In 1852, Haskell visited a picturesque tract of semi-wilderness and farmland on the southeastern slope of Orange Mountain (now known as West Orange) at the suggestion of his friend, Alexander Jackson Davis (1803-1892), a prominent New York architect and nature lover.<sup>21</sup> In his day, Davis was arguably the leading American designer of country houses in the Romantic style. With his originality and innovation, Davis set forth ideas and designs that helped establish the picturesque character of the park. In his career, Davis produced a varied series of villa designs, including the popular Gothic Revival, Italianate, bracketed, French, and even Turkish styles. His Gothic Revival designs were of an ornamental style that harmonized well with the natural surroundings.

The beauty of the land and panoramic views of the Orange Mountain area inspired Haskell in 1853 to purchase approximately sixty-five acres atop Eagle Rock from Henry Walker, including an old farmhouse (Figure 1.2). Shortly thereafter, he engaged Davis to transform the farmhouse into a picturesque rustic dwelling, which Haskell later called the Eyrie.<sup>22</sup> By 1857, Haskell had acquired 350 acres on the slope of the mountain below the sixty-five acres on Eagle Rock (Figure 1.3).

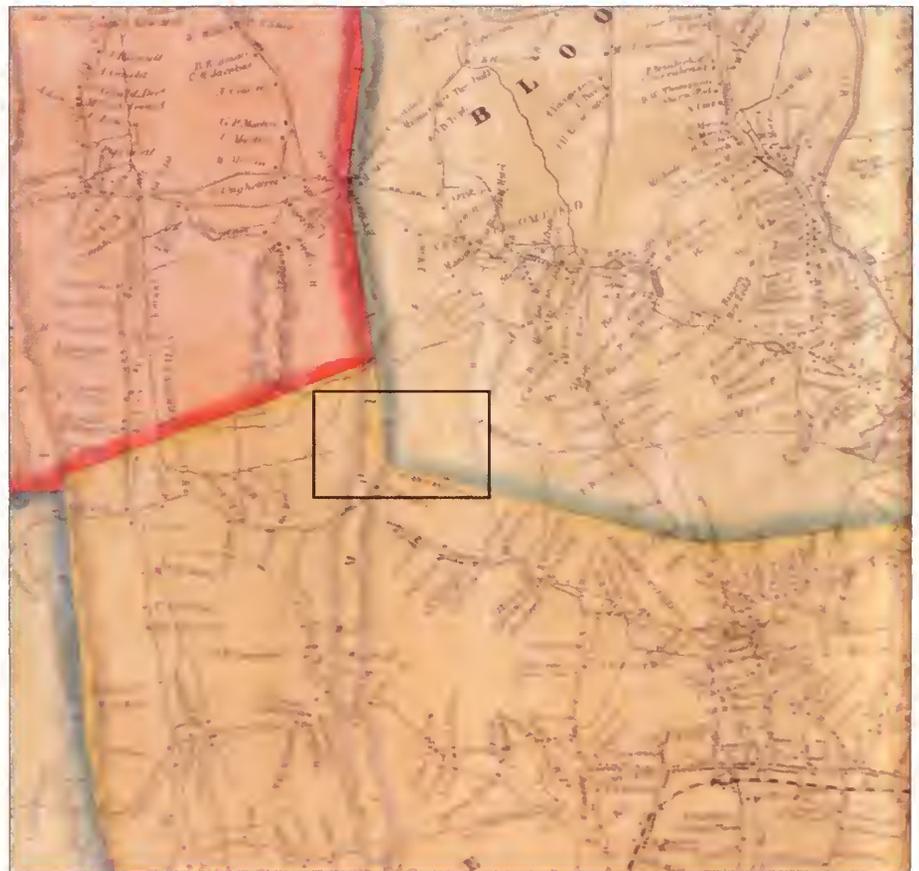


Figure 1.02. In this 1850 “Map of Essex County,” property owners’ names are shown, including that of H. Walker, who is shown as a land owner along Turk Eagle Rock. (Newark Public Library, Special Collections, The Charles F. Cummings New Jersey Information Center; annotated by the Olmsted Center for Landscape Preservation [hereafter OCLP]).



Figure 1.03. This 1857 plan entitled “Llewellyn Park and Villa Sites on Eagle Ridge in Orange & West Bloomfield Essex County, N.J.” shows the layout of the plots of land and offers an architectural sketch of Haskell’s home, the Eyrie, which helps establish the character and feel of the overall park (Llewellyn Park Archives).

Author Theodore Tilton described the land as:

a wild tract of mountainous land...covered with thick woods...threaded by mountain streams, pierced with picturesque ravines, rimmed and ribbed with rocks, monumented with venerable trees as old as the Pilgrim Fathers, and altogether diversified with a beautiful brokenness of scenery...<sup>23</sup>

Haskell envisioned a large residential park to be laid out according to the principles advocated by Andrew Jackson Downing (Figure 1.4). Natural terraces climbing the slope of the mountain were suitable for building sites, and a deep ravine, approximately fifty acres in size, became a centralized park and focal point for the individual lots (Figure 1.5, 1.6). Initially, the fifty acres of common land became known as Llewellyn Park, but by 1860 the “park” moniker was extended to include the residential areas. The park land became known as the “Ramble.”<sup>24</sup> On February 28, 1857, Haskell and his wife deeded the common land to three trustees, Augustus Moore, Thomas Merrick, and Edwin Burt. The deed, which marked the official beginning of Llewellyn Park, specified that fifty acres was to be used as “a private pleasure ground...to be freely...used and enjoyed, as a place of resort and recreation” by the separate owners of the villa sites. It also indicated that the park and roads were to be maintained by annual assessments from villa owners and controlled by an elected committee of managers.<sup>25</sup>



Figure 1.04. View of the Llewellyn Park lodge and entrance. In the 1850s, Llewellyn Park had a rural, picturesque character that was typical of the Romantic Movement. (Avery Memorial Architectural Library of Columbia University, Rare Books Collection and Drawings 1940.001.00157).

By 1860, Llewellyn Park was mostly complete. Haskell's holdings had increased to 500 acres and he had spent over \$100,000 laying out the residential areas, developing a series of curvilinear roads and embellishing the park<sup>26</sup>. An article in *New York World* spoke of Haskell's accomplishments: "Passionately fond of landscape gardening himself, he has spared no expense to make the spot at once attractive and desirable. The only wonder is that he has accomplished so much in the brief space of four years."<sup>27</sup>

In that same year, *The New York Illustrated News* published an article on Llewellyn Park that stated:

If New Yorkers, who lavish their thousands and tens of thousands upon the building of stately mansions in Fifth Avenue and other aristocratic places, where they have nothing but bad air to breathe, and ugly prospects of brick and stone houses to see, could only once get over to Llewellyn Park, and fill themselves with the beauty and glory of its woods and magnificent prospects, inhale its fragrant and exhilarating breezes, and revel in the madness of a gallop over its fine swards and well built roads – now under arching and shady trees, and now in open glades under the bare and sunlighted heavens – they would soon be ashamed of the cold-blooded, artificial life which they live, and beg, borrow, buy, or steal a "location" in this realm of romance and beauty.<sup>28</sup>

Beginning at Valley Road (now Main Street), Llewellyn Park was organized



Figure 1.05. (left) In this H.F. Walling “Map of Essex County, New Jersey,” the topography of the area in 1859 is depicted. Note how the features of the land in the Llewellyn Park area lend themselves to the celebration of nature that was integral to the Romantic Movement (Newark Public Library, Special Collections, The Charles F. Cummings New Jersey Information Center; annotated by the OCLP).

Figure 1.06. (right) The Thomas Hughes’ “Map of the Town of Orange, Essex County, N.J.” shows the topography of the land and some vegetation. Note that the future Glenmont site is undeveloped between Park Way and Glenn [sic] Avenue in 1856 (Llewellyn Park Archives).

around the Ramble, which was composed of three distinct areas: the Entrance, Glen Ellyn, and Upper Ramble (Figures 1.7, 1.8). These areas followed the natural topography, as well as Willow Brook, the stream that flowed through the center of the park land. The entrance area was set back from Main Street approximately 250 feet, and included a reflective pond called Willow Pond and a round, stone gate lodge, designed by Alexander Jackson Davis, and occupied by the gardener with his young daughter ca. 1860.<sup>29</sup> Beyond the entrance, Glen Ellyn (eventually referred to as the Glen) was a narrow strip of section of park land characterized by steep topography, woodlands, and glades. Extending northward, the topography gradually leveled out to a rolling, open meadow, referred to as the Upper Ramble. Organized into larger open areas surrounded by naturalized woodland, the Upper Ramble included a playground and a so-called “social circle.” Within these areas were groupings of oak, chestnut, hickory, and evergreen trees.<sup>30</sup>

Encircling the Ramble were approximately ten miles of sinuous roads, and villa sites. Mature trees overarched the roads that were bordered by flowering shrubs and wild flowers. Park vegetation consisted of an overstory of mature trees and an understory planted with hemlock, beeches, rhododendrons, and dogwoods. Other plantings included various maple types (sugar, silver and Norway), weeping willows, pines (Austrian pine and *pinus excelsa*), deciduous cypress, ginko, double-flowering cherry, purple-leaved beech, mountain laurels, bohemian olives, horse chestnuts, and other varieties.<sup>31</sup> Rustic seats, shelters, summerhouses, and arbors were sporadically located along the winding roads. These structures appeared only slightly removed from nature due to their simple construction and use of natural materials. In addition, these structures were strikingly similar to the concepts and examples illustrated in Downing’s 1841 *Treatise on the Theory and Practice of Landscape Gardening*.

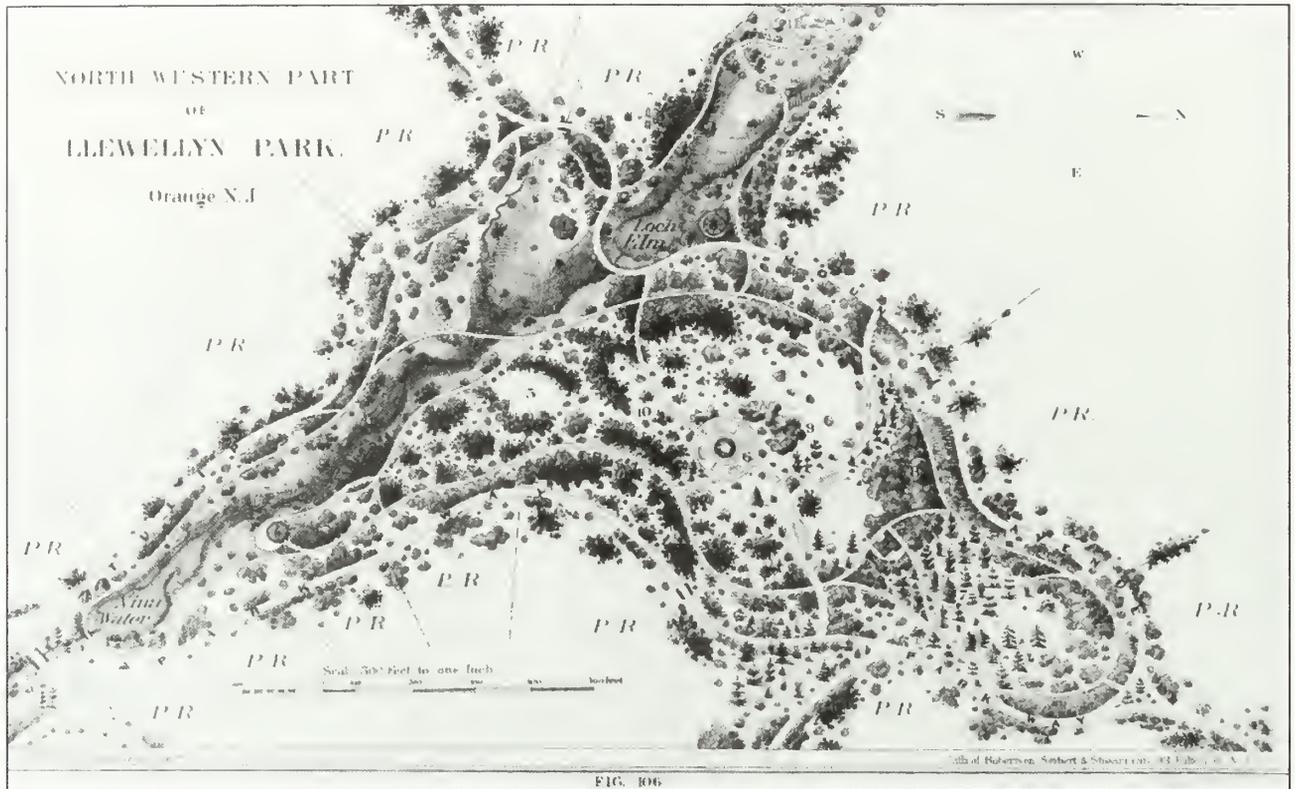


Figure 1.07. (top) This 1859 drawing entitled “North Western Part of Llewellyn Park, Orange, N.J.” shows a portion of Llewellyn Park drawn by Eugene Baumann. Note the circulation, how the land was organized into different use areas, and some of the vegetation that characterized the rural park at the time (Llewellyn Park Archives).

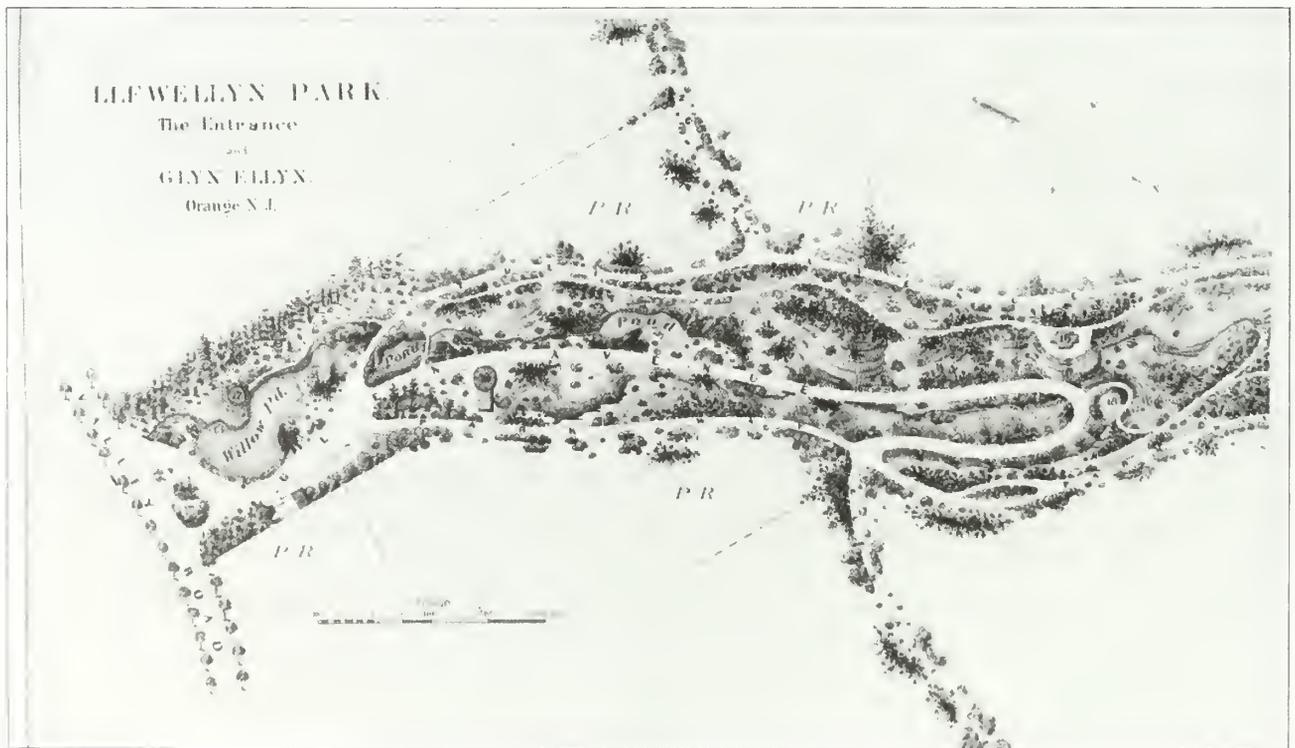


Figure 1.08. (bottom) Another 1859 drawing, “Llewellyn Park, The Entrance” and Glyn Ellyn, Orange, N.J.,” shows a different area of Llewellyn Park. Also drawn by Eugene Baumann, this map shows the main entrance of the park, along with roads and land features (Llewellyn Park Archives).

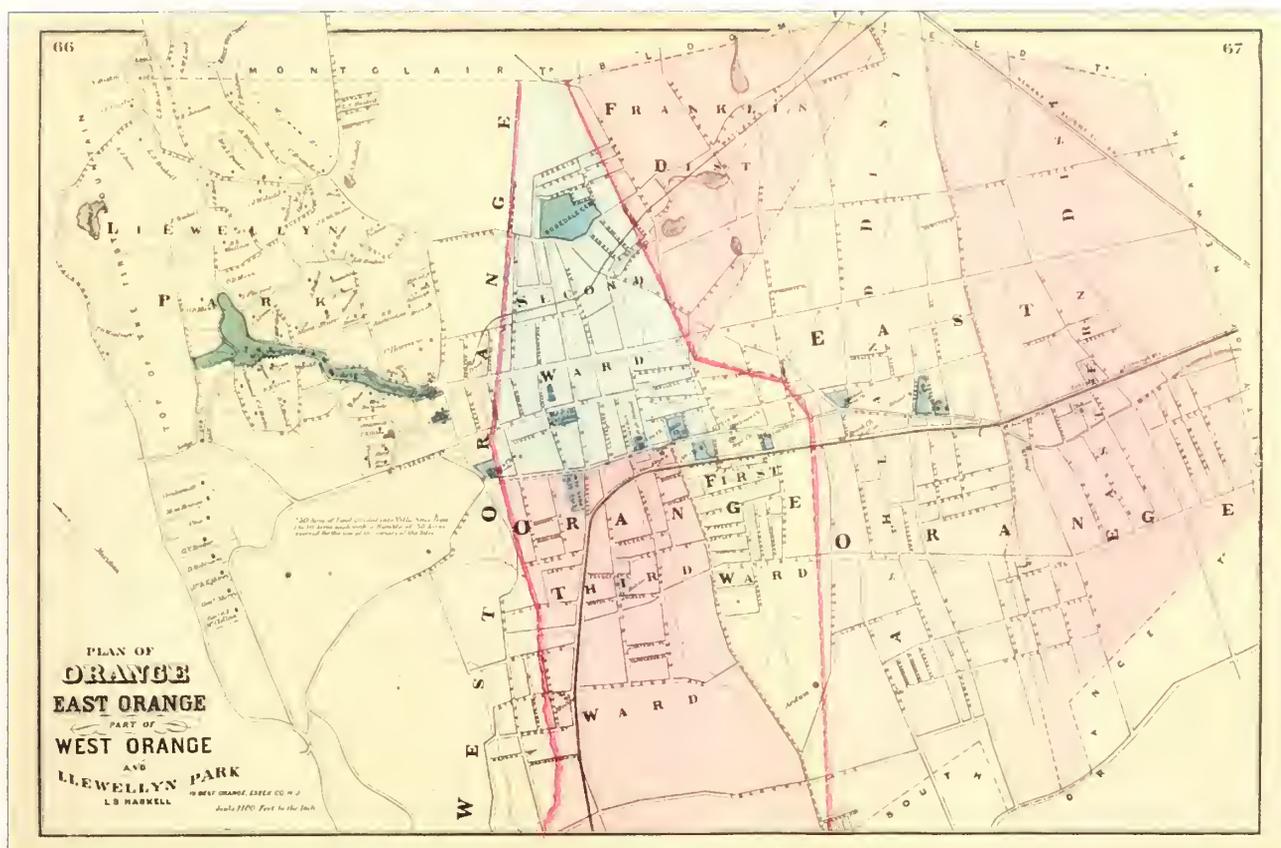


Figure 1.09. This F.W. Beers and L.S. Haskell map, entitled "Plan of Orange, East Orange, Part of West Orange, and Llewellyn Park," shows plots of land sold to proprietors in 1872 within Llewellyn Park. Note that the future site of Glenmont is not yet labeled as having an owner (David Rumsey Map Collection).

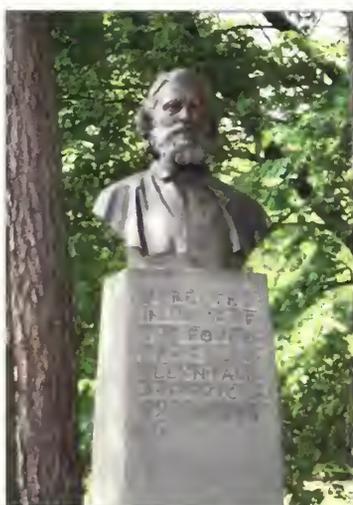


Figure 1.10. A bust of Llewellyn S. Haskell was erected at the main entrance of Llewellyn Park in 1880. It continues to stand today in its original location (OCLP).

By 1870, the Llewellyn Park had reached the height of its development, but noticeably the future site of Glenmont – a seemingly choice parcel – remained undeveloped (Figure 1.9). The entire development, including building lots, roads and the common land, covered approximately 750 acres with more than 100 residential lots, fifty of which were sold and thirty families in residence.<sup>32</sup> The style of homes within the park, some of which were designed by Alexander Jackson Davis, consisted of romantic and Victorian revivals.<sup>33</sup> Haskell died in 1872, effectively ending the prevailing romantic Gothic Revival style of architecture he favored in the park and leaving the park under the guidance of the park managers. Later in 1880, his efforts to create Llewellyn Park were immortalized in a bust that celebrated Haskell as the founder of Llewellyn Park (Figure 1.10).

#### The Design of Llewellyn Park

While it is clear that Llewellyn Haskell and Alexander Jackson Davis initiated the development of Llewellyn Park, the actual design and layout cannot be attributed to any one individual, although several people appear to have influenced it.

Eugene A. Baumann, a European landscape gardener who was new to the United States at the time, is credited with some assistance in the design of the park.

In 1859, Baumann delineated plans of the Ramble, later to be published in Henry Winthrop Sargent's Sixth Edition of Downing's *Treatise on the Theory and Practice of Landscape Gardening*. In addition, he laid out for Haskell approximately five acres of the grounds belonging to Arcade Cottage—one of the few cottages Haskell had constructed for promotional purposes. In his memoirs, Baumann later reflected on his work at Llewellyn Park:

They [James M. Thorburn and Co.] straightway recommended me to several people who might need me, first among these Llewellyn S. Haskell of North Orange who asked me to do a plan for him for some land that he owned there.<sup>34</sup>

Howard Daniels, an architect and landscape gardener who eventually achieved fourth place in the Central Park design competition, is also credited with a role in the development of Llewellyn Park. Others who may have contributed to shaping the park's design include Llewellyn Wheeler and at least one local gardener, James MacGall (or McGall), who came to Orange from Bermuda and claimed that he "laid out Llewellyn Park."<sup>35</sup>

While these men may have made contributions or exerted some design influence, author Jane B. Davies, in her article "Llewellyn Park in West Orange, New Jersey," rules each one out as an unlikely candidate to be credited as the primary designer of Llewellyn Park. In particular, she rationalizes that Davis, as the building architect, did not have the necessary training in landscape gardening, the experience in this field, or the time in his practice to devote to the effort in the critical years of 1856 and 1857. In addition, she notes, Davis' professional records indicate charges to Haskell's account only for architectural work.<sup>36</sup> It seems most likely that it was Haskell – sometimes described as an amateur landscape architect – who played the major active role in designing, directing the work of other designers, and maintaining a consistent influence on the Llewellyn Park's character.<sup>37</sup> He seemingly guided the development according to the picturesque style of landscape design.

### **The Changing Environment Outside the Park**

Surrounding Llewellyn Park, small fifty-foot lots and gridiron streets were being laid out—a great contrast to the park's guiding principles.<sup>38</sup> From ca. 1870 to ca. 1913, the western, southern, and northwestern sections of the town surrounding the park developed from agricultural uses into residential and recreational uses. In addition, industrial and low density residential uses were in close proximity, and expensive homes on expansive acres were built near moderately priced homes on small parcels. Some industrial and commercial land uses encroached upon the park and prevented its adjacent lands from being developed. Conversely, where external land uses were compatible with the residential character of the park, the integrity of Llewellyn Park was not compromised.<sup>39</sup>

Sometime between 1868 and 1874, the Orange Branch of the Greenwood Lake extension of the Erie Railroad (also known as the Watchung Railroad) was built through West Orange and ended two blocks from the park entrance, near the intersection of Park Avenue and Beaver Street.<sup>40</sup> With the Watchung Railroad's freight service, the area became accessible to industries, including Westinghouse, General Motors, Tiffany & Co., and those that Thomas Edison would later establish in the area.<sup>41</sup>

#### **LANDSCAPE SUMMARY, 1879**

By 1879, Llewellyn Park had reached 750 acres. The topography of the land lent itself beautifully as a picturesque backdrop for a residential park. Natural terraces climbing the slope of the mountain formed suitable building sites, while the Willow Brook mountain stream cut a deep ravine across terrain at the center of the development. Extremely steep hillsides flatten out to open meadows, some of which remained undeveloped at this time including the future Glenmont site.

The spatial organization of the residential development followed the natural contours of the land: The Ramble, or the interior park, ran along the center of the development and provided a focal point for the many residential lots that were planned along its borders. Other residential lots were planned along the major roads in the development, including Valley Way, Mountain Avenue, Oak Bend, and Eagle Rock Road. The Ramble itself was composed of three general zones – the Entrance, Glen Ellyn, and the Upper Ramble – all following the course of the central stream. Within the Ramble, about three miles of walking paths helped form the pedestrian circulation system. This vehicular circulation system began at the main Glen Ellyn entrance, off Main Street, where three primary paved roads in the park converged: Tulip Avenue, Glen Avenue, and Park Way. Throughout the development about ten miles of sinuous roads led to and by villa sites.

The park's land use was primarily residential, with more than 100 home sites planned. The Ramble at its center was the second largest use, a wooded fifty-acre stretch to be used in common by park residents as a passive recreational area. To ensure the residential nature of the park, park managers disallowed industrial uses such as shops, factories, or slaughterhouses. Lastly, the quarries in the development resulted as a natural land use because of the rocky terrain beneath the surface. The stone was used throughout the development, especially in building homes.

Buildings, structures, and constructed water features in Llewellyn Park generally displayed elements of the picturesque style. The buildings included the Gothic, romantic, and Victorian revivals styles. The residences were country estates, or gentlemen's farms, which required various outbuildings, such as barns, hen

houses, stables, paddocks, and accommodations for house staff. Recreational structures and small-scale features included rustic seats, fences, kiosks, and bridges; a maypole; animal enclosure pens; summerhouses, shelters, and arbors. One of the most striking structures in the development was the stone gate lodge at the main entrance. Nearby the entrance, a waterfall (the Cascades) was built, and serene artificial ponds in the Ramble included Willow Pond; the pond Nina Water at the intersection of Oak Bend, Tulip Avenue, and Park Way; and Loch Elm to the northern end of the park near Mountain Avenue.

Vegetation – both native and exotic – existed throughout Llewellyn Park in the form of overstory and understory plants. Deciduous and evergreen trees, shrubs, and wild flowers were common. Yet the vegetation did not obscure panoramic views and vistas because of the mountainous terrain. From the top of Orange Mountain, views were open for about 100 miles to New York City and the Highlands of the Hudson River. Throughout the park, limited views from the roadways witnessed a seamless view of various properties, as the developed lands flowed together without the division of property fences.

The undeveloped future site of Glenmont also afforded views and vistas, largely because of its location on a natural terrace and its openness as former agricultural lands. The site had southeasterly views particularly opened across the sloping landscape toward Glen Avenue. The topography of the land gently rose from the southeast to a level area—where the home would eventually be built—then rose again farther to the north. Owned by James M. Ward and Daniel E. Green, the eventual thirteen-acre site was bounded by Glen Avenue on the east and Park Way to the south. Beyond its Glen Avenue boundary also to the east was a large parcel also owned by J.M. Ward. Hugging the site’s southern boundary, Park Way divided the site from the neighboring Ramble. Glen Avenue and Park Way formed the only circulation routes in close proximity to the site. To the north, the site was bordered by an undeveloped lot and another ten-acre residential lot owned by Egbert Starr.

The site’s undeveloped state led to its openness and simplicity. Vegetation grew mainly along the site’s perimeter in the form of a large number of mature trees, such as oaks, beech, and maples. The vegetation was likely thickest along Park Way and perhaps even along the boundaries of adjacent purchased lots. Meanwhile, the site was devoid of buildings or structures, constructed water features, or small-scale features at this time.

## ENDNOTES

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- 13 Henry Whittemore, *The Founders and Builders of the Oranges* (L.J. Hardham, Printer and Bookbinder, 1896), 37.
- 14 Kristofer M. Beadenkopf, Zachary J. Davis, and Roderick S. Brown, *Archeological Overview and Assessment, Edison National Historic Site* (East Orange, NJ: The Louis Berger Group, Inc. 2007) [draft], 13, citing Wickes (1892), Whittemore (1896), Folsom (1925).
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- 16 Wikipedia.org (accessed 25 August 2009), quoting John P. Snyder, "The Story of New Jersey's Civil Boundaries: 1606-1968," (Trenton: Bureau of Geology and Topography, 1969), 133.
- 17 David L. Ames and Linda Flint McClelland, *National Register Bulletin: Historic Residential Suburbs, Guidelines for Evaluation and Documentation for the National Register of Historic Places*, (United States Department of the Interior: National Park Service, 2002), 38.
- 18 David L. Ames and Linda Flint McClelland, *National Register Bulletin: Historic Residential Suburbs, Guidelines for Evaluation and Documentation for the National Register of Historic Places*, (United States Department of the Interior: National Park Service, 2002), 34.
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- 21 Robert P. Guter, with Jane B. Davies and Donald C. Richardson, *National Register of Historic Places Nomination for Llewellyn Park Historic District* (United States Department of the Interior: National Park Service, 1986), 2-3.

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- 24 Jane B. Davies, "Llewellyn Park in West Orange, New Jersey," *Antiques*, January 1975, 143.
- 25 Llewellyn Park Deed between Llewellyn Haskell and Wife to Augustus Moore, Thomas Merrick, and Edwin Burt, February 28, 1857 (Essex County Office of the Registry, Book C10, pgs. 293 to 315.).
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- 32 LANDSCAPES, Landscape Architecture, Planning, Historic Preservation, *Llewellyn Park Ramble Landscape: Preservation & Maintenance Master Plan* (Charlotte, VT: LANDSCAPES, 2001), 3.
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- 36 Jane B. Davies, "Llewellyn Park in West Orange, New Jersey," *Antiques*, January 1975, 145.
- 37 Theodore Tilton., "Llewellyn Park: Theodore Tilton on Llewellyn Park," *The Independent*, 26 May, 1864; Jane B. Davies, "Llewellyn Park in West Orange, New Jersey," *Antiques*, January 1975, 145.
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- 41 Kristofer M. Beadenkopf, Zachary J. Davis, and Roderick S. Brown, *Archeological Overview and Assessment, Edison National Historic Site* (East Orange, NJ: The Louis Berger Group, Inc. 2007) [draft], 23.

# Cultural Landscape Report for Glenmont

## Thomas Edison National Historical Park

West Orange, New Jersey

### Pre-History to 1879



National Park Service

Olmsted Center for Landscape Preservation

[www.nps.gov/oclp](http://www.nps.gov/oclp)

#### SOURCES

- 1 Thos Hughes', *Map of the Town of Orange, Essex County, NJ*, 1856.
- 2 Matthew Hughes, *Map of the Town of Orange, Township of East Orange and part of West Orange*, 1866 and 1872.
- 3 Beers, FW (Frederick W.), Haskell, L S *Plan of Orange, East Orange, part of West Orange and Llewellyn Park in West Orange, Essex Co.*, 1872

#### DRAWN BY

Michael Comisso, AutoCAD 2000 and Illustrator CS 3, 2009

#### LEGEND

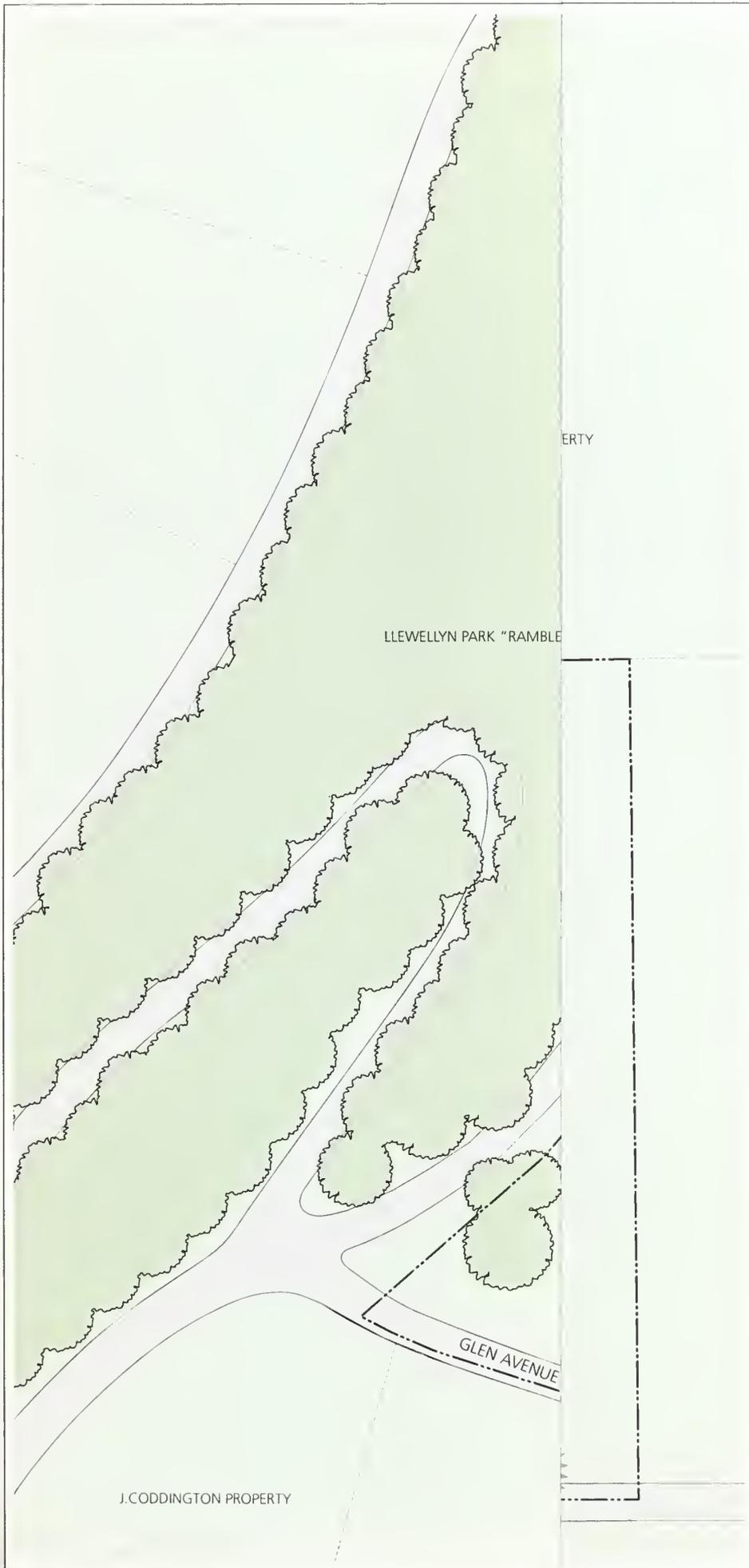
	Date feature added/built, if known
	Removed feature
	Building
	Paved, unpaved vehicular circulation
	Path or walk
	Lawn
	Groundcover or herbaceous bed
	Deciduous specimen tree, wooded area
	Evergreen/coniferous specimen tree or shrub
	Deciduous/broadleaf evergreen shrub
	Stormwater drains
	Flagstone curbing
	Fence
	NPS Property Boundary
	1' Contour

#### NOTES

1. All features shown in approximate scale and location.
2. Contours shown only in project area and not in Egbert Starr Property.



Drawing 1.0



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## Thomas Edison National Historical Park

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3. Beers, F.W. (Frederick W.), Haskell, L.S. *Plan of Orange, East Orange, part of West Orange and Llewellyn Park in West Orange, Essex Co., 1872*.

#### DRAWN BY

Michael Comisso, AutoCAD 2000 and Illustrator CS 3, 2009

#### LEGEND

- (1963) Date feature added/built, if known
- Removed feature
- Building
- Paved, unpaved vehicular circulation
- Path or walk
- Lawn
- Groundcover or herbaceous bed
- Deciduous specimen tree, wooded area
- Evergreen/coniferous specimen tree or shrub
- Deciduous/broadleaf evergreen shrub
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- Flagstone curbing
- Fence
- NPS Property Boundary
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Drawing 1.0



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## **PEDDER, ARNOLD CONSTABLE & COMPANY OWNERSHIP, 1879-1886**

Between 1879 and 1884, Henry Pedder transformed an undeveloped thirteen acres within Llewellyn Park into a fashionable suburban residence. With assistance from architect Henry Hudson Holly and landscape gardener Nathan Franklin Barrett, Pedder had a beautiful Queen-Anne style home constructed within a stylized rural landscape based on the popular naturalistic and picturesque style of landscape gardening. The property included winding drives, expansive lawns, informal groupings of trees and shrubs, as well as a barn, carriage house, greenhouse, informal and formal flower beds, orchard, and vegetable garden. Pedder owned the property until 1884 when he was found to be embezzling from his employer, Arnold Constable & Company. The company eventually acquired the property, before selling it to Thomas A. Edison in 1886.

## **NATURALISTIC AND PICTURESQUE DESIGN PRINCIPLES IN LANDSCAPE DESIGN**

The American economy grew rapidly following the American Civil War, creating a new wealthy class. The expansion of railroads to scenic rural areas and an increase in leisure time of the affluent due to the Industrial Revolution allowed these newly rich Americans to establish country homes (often called “country places”) and suburban residences with extensive gardens.<sup>1</sup> Between 1876 and 1893, American landscape design was largely influenced by the writings of Andrew Jackson Downing and the work of Robert Morris Copeland, Frederick Law Olmsted, Calvert Vaux, H.W.S. Cleveland, Charles Eliot, and many others. It reflected naturalistic and picturesque styles that were characterized by sweeping lawns, curving drives, views, and groupings of trees.<sup>2</sup>

By the late nineteenth century, the naturalistic and picturesque styles were often embellished with overlays of ornate garden features in the gardenesque style. A feature of the gardenesque style was “carpet-bedding” or “bedding-out.” Bedding scheme designs typically consisted of annuals and tropical plants chosen for their vivid colors and compactness or a strong vertical habit for accent. Beds were generally placed near the house to draw attention and provide a level of detail that connected nature and architecture.<sup>3</sup> In addition, plantings were often supplemented by vertical features, including vases, urns, and spiky plants.<sup>4</sup>

## **THE ESTABLISHMENT OF GLENMONT**

The future site of Glenmont was undeveloped until Henry C. Pedder, a confidential clerk at Arnold Constable and Company, a New York City department store, purchased a 10.47-acre parcel (Block 91, Lot 1) in 1879 from

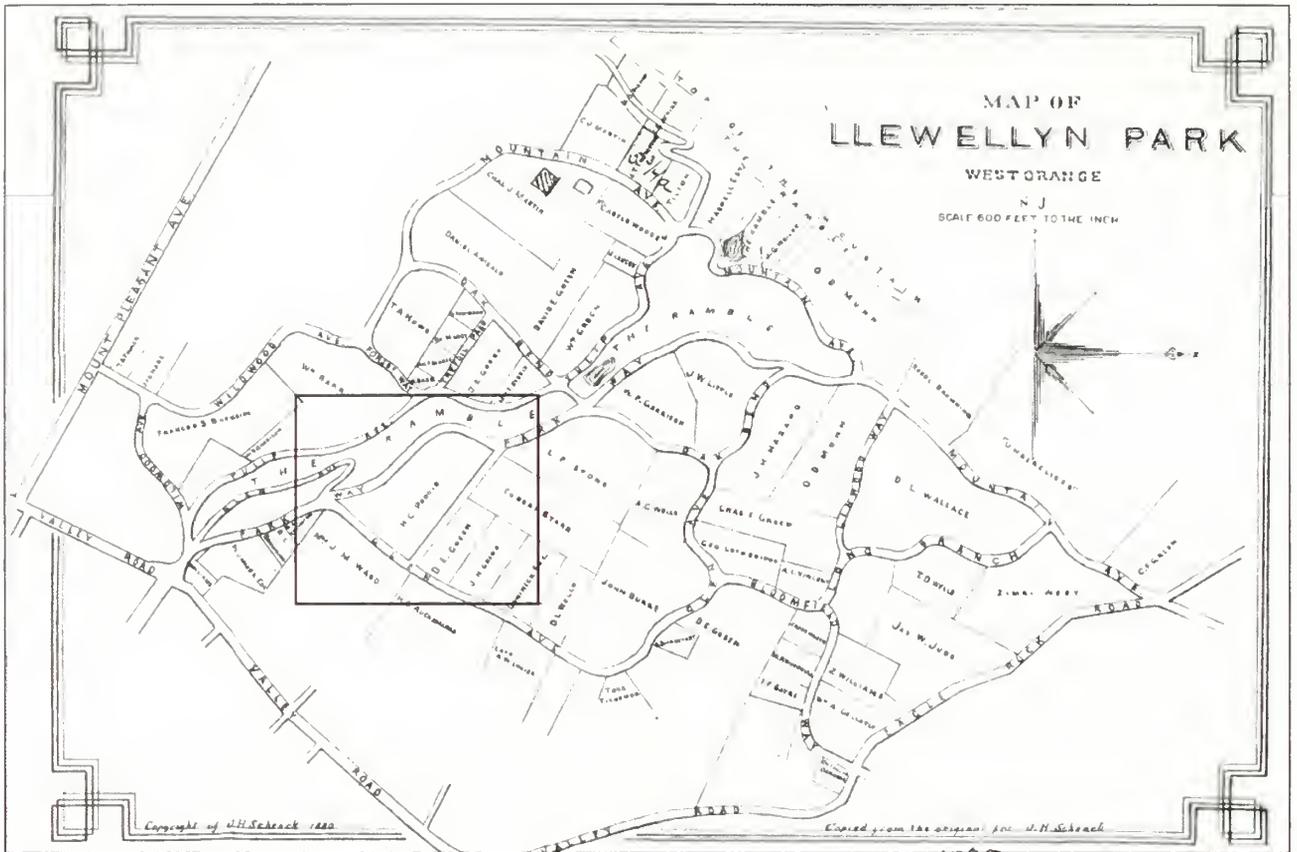


Figure 1.11. This 1880 J.H. Schenck map entitled, "Map of Llewellyn Park, West Orange, N.J." shows the original H.C. Pedder parcel and the adjacent parcel, owned by D. E. Green at this time, which Pedder would later purchase (Llewellyn Park Archives).

Mr. and Mrs. James M. Ward. The property was situated at the intersection of Glen Avenue and Park Way. In 1881, Pedder increased his holdings with the purchase of an adjoining 3.07-acre parcel (Block 101.01, Lot 19) from David E. Green (Figure 1.11).<sup>5</sup>

In 1880, Pedder hired Henry Hudson Holly (1834-1892), a New York City architect, to design a new house at the cost of \$200,000.<sup>6</sup> As indicated in an early architectural rendering, Holly proposed a four-story Queen-Anne styled home that included many gables, expansive verandahs, a roof balustrade, and two tall chimneys (Figures 1.12 and 1.13).<sup>7</sup> With the exception of the addition of the Den (or Billiards Room) and Drawing Room enlargement in 1884, the house was complete by 1882. It resembled the earlier drawing, except the rectangular verandah Holly proposed along the south side of the house was enlarged and rounded. This room was later referred to as the Conservatory. The house was sited on high ground to command long views of the surrounding countryside, and interior rooms were carefully laid out according to their exposure to the natural elements (Figure 1.14).

During construction of the house and continuing for years afterward, Pedder made significant improvements to the surrounding landscape. Between 1880 and 1882, Pedder commissioned Nathan Franklin Barrett to lay out the Glenmont grounds.<sup>8</sup> Barrett later confirmed his involvement with the overall design in a

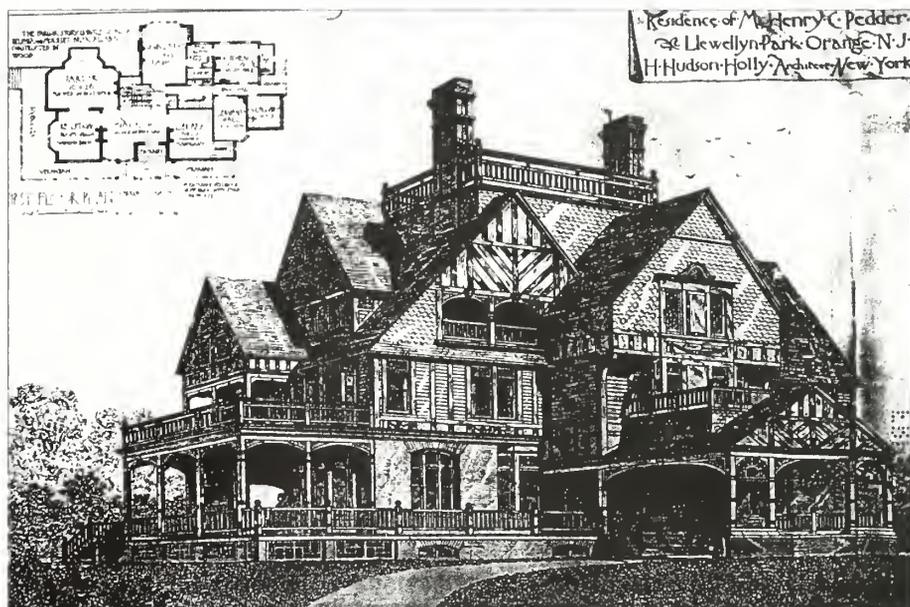


Figure 1.12. The original Henry Hudson Holly design of Pedder's Queen Anne home proposed a rectangular, open-air porch along the entire south elevation. Before it was built, that porch was modified into the semi-circular structure that exists today (American Architectural Magazine).

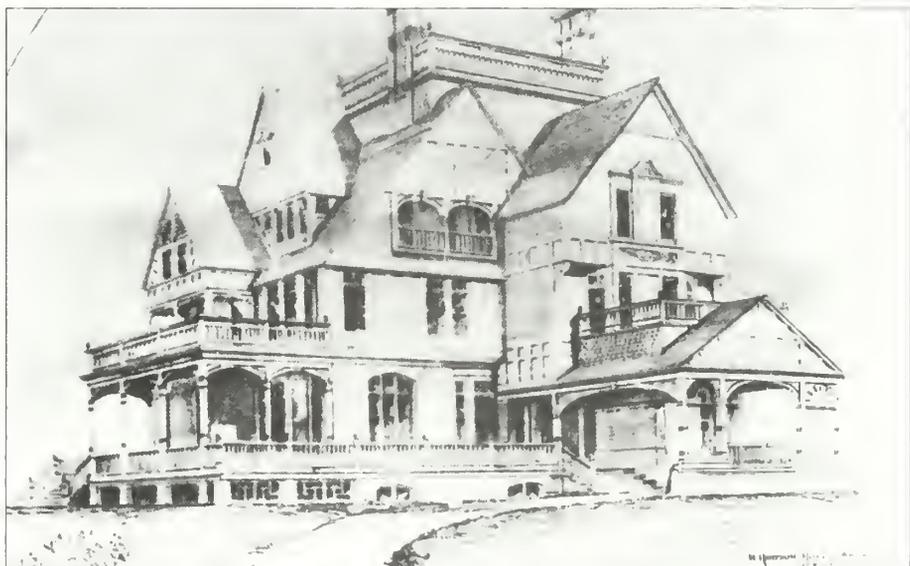


Figure 1.13. This early sketch of the Pedder House, dated January 30, 1880 and drawn by architect Henry Hudson Holly, shows his vision for this Queen Anne home in Llewellyn Park (Edison National Historic Site, Historic Structure Report, Volume I).



Figure 1.14. The earliest known photo of Glenmont taken ca. 1882-1883 shows the semi-circular open-air porch and young plantings along its foundation. Note the openness of the surrounding area behind the home and the lamp post at right. (Edison National Historic Site, Historic Structure Report, Volume I).

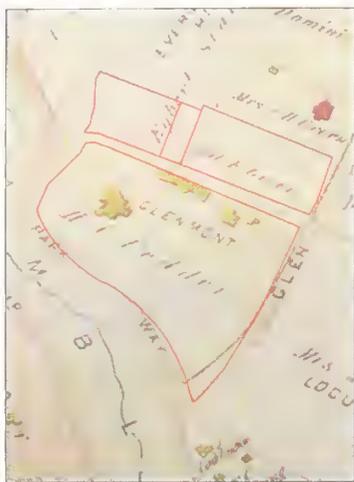


Figure 1.15. This 1881 Elisha Robinson map within the “Robinson’s Atlas of the City of Newark, New Jersey” shows the property as developed by Henry C. Pedder in 1881. Note the rectangular barn/stables along Honeysuckle Avenue and the four-square garden bordered by Glen and Honeysuckle avenues (The Louis Berger Group, Inc., East Orange, N.J.).

letter, dated December 28, 1916, to Thomas Edison stating: “It may interest you to know that I laid out your place for H.C. Pedder in the early 1880s.”<sup>9</sup> Barrett (1845-1919) grew up on Staten Island, New York, and later served in the Union Army, sustaining wounds in the Battle of Cedar Creek. After returning from war, he worked in his father’s nursery, during which time he was introduced to the practical aspects of landscape architecture. One of the most important commissions for Barrett was the development of the Town of Pullman in Chicago, Illinois, during the 1870s. Barrett’s design for Pullman led to his involvement in other towns and suburban residential developments, including Chevy Chase, Maryland; Fort Worth, Texas; and Birmingham, Alabama. In addition to his planning achievements, Barrett designed landscapes for many country places, including gardens for P.A.B. Widener in Ogontz, Pennsylvania; H.O. Havemeyer in Islip, Long Island; and Joseph H. Choate in Stockbridge, Massachusetts. In the majority of his designs, both in residential and community planning, Barrett incorporated formal elements within the naturalistic and picturesque style. In 1895 Barrett was appointed landscape architect of the Essex County Park Commission and served as Commissioner of the Palisades Interstate Park from 1900 to 1915. In 1903 he was elected president of the American Society of Landscape Architects.<sup>10</sup>

Barrett’s design of the Glenmont grounds is reflected in a series of images taken between 1881 and 1884, as well as an *1881 Atlas of the City of Newark, New Jersey*, and an 1882 map, created by engineers Mead and Taylor and entitled “Map of Residence and Grounds Belonging to H.C. Pedder Esq., Llewellyn Park, Orange, New Jersey 1882” (Figures 1.15 and 1.16). The images and maps reveal the idealized rural landscape of the naturalistic and picturesque styles, represented by winding drives and walks, expansive lawns, and groupings of trees, with the house as the focal point. The maps also include features typical of a country place or suburban residence, including service buildings, croquet lawn, and kitchen garden. As depicted on the *1881 Atlas of the City of Newark, New Jersey*, a large rectangular barn or stable is shown to have existed on the property in 1881, but by 1882 it was removed. Although not depicted in the 1881 or 1882 maps, a greenhouse complex was constructed in the 1880s—not part of Barrett’s design for the grounds, located on the 3.07-acre parcel, north Honeysuckle Avenue.<sup>11</sup>

By 1884, initial improvements to the Glenmont landscape were complete and described in a July 19, 1884 *New York Times* as having:

...smooth-shaven lawns dotted with shrubbery and flowers in the highest art of landscape gardening. ...on a commanding knoll facing the east. The ground on which it is built encompasses about ten acres, part of it wooded, but all under the care of gardeners, making a delightful house. It has connected with it extensive greenhouses and stables.<sup>12</sup>



Figure 1.16. An 1882 Mead and Taylor map, entitled "Map of Residence and Grounds Belonging to H.C. Pedder Esq., Llewellyn Park, Orange, New Jersey 1882," shows the configuration of the house, drives and walks, the barn, chicken house, and vegetable garden in 1882 (EDIS Archives, 114424).

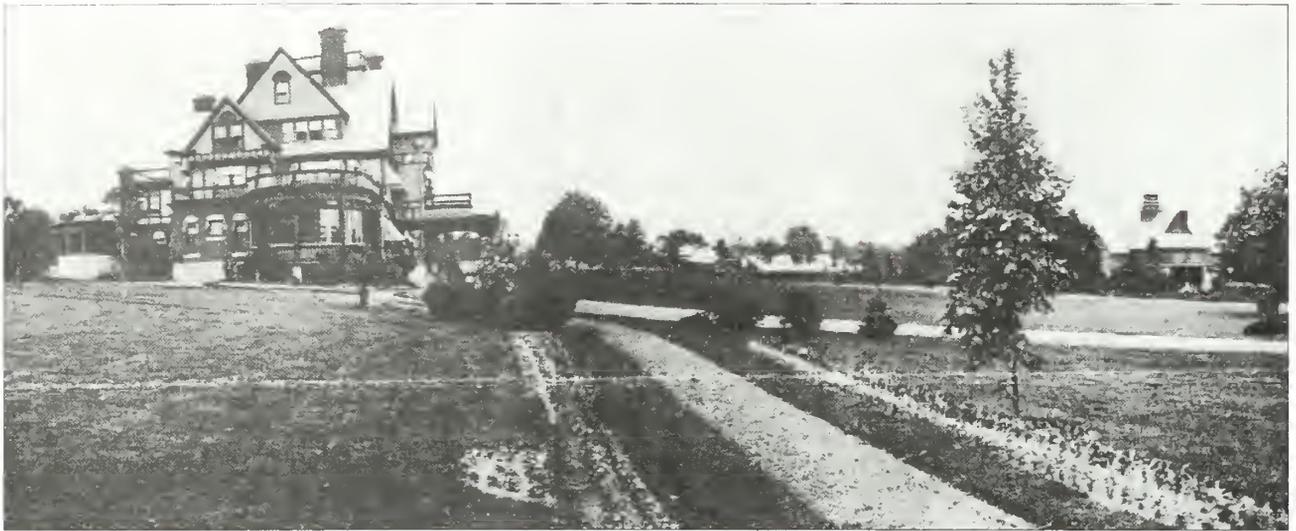


Figure 1.17. In this image, ca. 1884-1886, the original Pedder barn is seen in the background (right) as is the greenhouse complex (left). View looking northeast, the photo shows the main drive bisecting the landscape from left to right and bordered by two plantings of shrubs, one center left, the other right. Most notable is the walking path at center and the parallel annual flower beds to the east and west (EDIS Archives).

The house was located in the northern portion of the property situated within an expansive manicured lawn, scattered with single specimen and clumps of trees and shrubs. On the northeast side of the house was the well house and a laundry yard, containing a pump house. To the west, was a croquet lawn bounded by curvilinear paths and perimeter plantings. Southeast of the house was a large oval lawn dotted with trees and shrubs. Beyond the oval lawn, was the south (lower) lawn pasture and service related functions, which included a barn, chicken house and stable, and vegetable garden. East of the house and across Honeysuckle Avenue, was the greenhouse complex and flower garden.

A series of curvilinear drives rambled through the grounds. Beginning at a “Y” intersection at Park Way—a Llewellyn Park Road, the main drive curved through the landscape and ended in an oval-shaped loop that passed beneath the porte cochere of the house. The width of the gravel drive was approximately ten feet and lined with flagstone curbing. Two secondary entrance drives, located near the laundry yard and carriage house, connected to the main drive by way of Honeysuckle Avenue, the service road that was built shortly after Henry Pedder purchased the property. As with the main drive, the secondary entrance drives were lined with flagstone curbing. The landscape included a network of sinuous walks and paths. Marked by a rectangular bluestone stoop on the west and set of steps to the south, the paths began at Park Way and meandered through the west and southwest portions of the property, eventually leading up to and around the house.

Along with the drives and paths, underground utilities were found throughout the Glenmont landscape. Two cisterns, with underground piping, were located in the west and south lawns. Water was pumped from the well and cisterns into the northwestern portion of the cellar. Wastewater and sewage drained from the house to two cesspools on the west side of barn. Another two cisterns were

located in the northeast corner of the barn with a cesspool draining southwest from the barn. Corresponding with the water system was a network of storm water drains found along the edges of the drives. An underground bell wire connected the house and outbuildings for communications and perhaps to the house doorbell and even the household staff communication system. Gas for lighting was conveyed via underground pipes, during which time two gas cast-iron lamp standards were installed near the entry drive, one along the main drive oval to the southeast, and one at the secondary drive near Honeysuckle Avenue. These were ornamented with a bas relief and helical vine motif.<sup>13</sup>

With the exception of the mature vegetation along the periphery of the property, the Glenmont grounds were largely open in character in the 1880s. Shortly after the completion of the house, trees and shrubs were planted to enhance the beauty of the grounds, frame views, and screen service areas. Based on early images, taken between 1884 and 1887, deciduous and evergreen trees (mostly maples, beeches, ash, oaks, Norway spruce, and white pine) were thoughtfully laid out along the paths and drives, while others were arranged in groups. Various evergreen and deciduous trees were planted around the service areas, intended to screen the less desirable views. Although uncertain, it is assumed that at this time, a hemlock hedge was planted along Honeysuckle Avenue.<sup>14</sup> Single specimen trees, primarily located in the south and west lawns, were placed near the house and admired for their beauty. Specimen trees found on the property included a Nordmann's fir, copper beech, weeping beech, weeping cherry, weeping spruce, paulownia, and Sargent weeping hemlock.<sup>15</sup> In addition to the trees, the grounds were ornamented with evergreen and deciduous shrubs. The most prominent shrubs were rhododendrons, which were planted in naturalistic groupings along the perimeter of the property.

Reflecting the popularity of the gardensque style, a series of oval, teardrop, quadrilateral, and arabesque-shaped ornamental flower beds, was incorporated on the south and west sides of the house. The flowerbeds were planted in the "bedding-out" schemes with patterns of colorful flowering annuals of a consistent height to produce the effect of an oriental carpet. These beds may have included marigolds, alyssum, and impatiens. Additional informal flowerbeds, which included acanthus, daylilies, yucca, peonies, phlox, and begonias, were found along the walks and islands (Figures 1.17 and 1.18).

At the corner of Honeysuckle Avenue and Glen Avenue, east of the chicken house and cow barn, was a large four-square vegetable garden and small orchard, consisting of pear and apple trees. Bordered by a wooden post fence, the vegetable garden included a variety of vegetables. A peach tree was later planted at the center of the garden.



Figure 1.18. An image of the northeast elevation of the Glenmont house, c. 1884-1886, showing the bedding-out design at the entrance from Honeysuckle Avenue. This bed appears to be planted with rows of annuals encircling a perennial bed planted with yucca. Note the well house at right. (Edison National Historic Site, Historic Structure Report, Volume I).

Similar to other country places and suburban residences that were being constructed during this period, the Glenmont grounds were also designed for recreation. As shown in the 1882 Mead and Taylor map, a croquet lawn was sited within the west lawn. Although little is known of the croquet lawn, the area continued to be used for recreation during the Edison era, later serving as the location for a tennis court, a site for the summer house, and a playhouse nearby to the northwest.

#### **The Glenmont Name**

The first known recorded reference to the house and grounds as “Glenmont” appeared in 1888 on the “Map of Llewellyn Park, West Orange, New Jersey.” However, it is presumed that the estate was named during the Pedder years as it was common practice to name the estates within Llewellyn Park. The name also followed Henry Hudson Holly’s advice which suggested that an estate’s location should be incorporated in its name. In particular, the home was situated on a rise of land or “mount” on the north side of the park’s Glyn Ellyn ravine and on the west side of Glen Avenue.<sup>16</sup> The Edisons later used that name to refer to the home throughout their residency.<sup>17</sup>

**ARNOLD CONSTABLE & COMPANY OWNERSHIP, 1884-1886**

Henry Pedder and his wife lived at Glenmont until 1884 when it was found that he embezzled funds from his employer Arnold Constable & Company. The company took possession of Glenmont, which had been constructed with embezzled money, for the sum of \$1 as part of a restitution settlement.<sup>18</sup> In the transaction, the company acquired Glenmont's acreage, furnished home, and outbuildings.

In 1885, Thomas A. Edison was courting Mina Miller of Ohio whom Edison had met through a mutual friend, inventor Ezra Gilliland. In the autumn, Edison became preoccupied with the desire to purchase a home that was magnificent enough for his bride-to-be. Edison is said to have offered Mina a choice of a country home or city dwelling, to which Mina chose a country home. Soon after, Edison showed Mina the Pedder home in suburban West Orange with its numerous outbuildings and greenhouse complex, and the expansive landscape. He later purchased the property in 1886.

**LANDSCAPE SUMMARY, 1886**

By 1886, the Glenmont grounds had evolved from undeveloped agricultural land, into a fashionable suburban residence. Situated within a sweeping manicured lawn, the Queen-Anne style home was the focal point of the landscape. Beyond the house, the grounds had a number of service buildings and structures, including a barn, chicken house and cow stable, greenhouse, and pump house (or well house). The majority of buildings were found to the east of the house, while the greenhouse was located across Honeysuckle Avenue.

In keeping with the naturalistic and picturesque styles of landscape design, the circulation systems within the landscape generally followed a curving, naturalistic alignment. The main and secondary drives were surfaced in gravel and edged with flagstone curbing. From the south side of the house, two long gravel walking paths extended to Park Way, one heading southwest and the other southeast; the southwest path ended in a two-step, blue slate mounting stoop while the other ended in a short set of steps.

Along with the broad lawns and croquet area (located within the west lawn), the landscape included groupings of deciduous trees and shrubs, specimen plantings, informal and formal flowerbeds, a vegetable garden, and a small orchard. Although the majority of vegetation had been recently planted within the previous three to four years, the perimeter plantings were mature and dominated by maples, oaks, and beeches.

With the exception of the fence surrounding the vegetable garden, the majority of small-scale features within the Glenmont grounds were connected to the utility systems. There were approximately five cisterns, two cesspools, and multiple storm water drains. Four gas lamps were found on the property; two Llewellyn Park gas lamps were located along Park Way, while the others were found along the main drive oval to the southeast, and the other along the secondary drive near Honeysuckle Avenue.

## ENDNOTES

- 1 John E. Auwaerter and George W. Curry, *Cultural Landscape Report for the Mansion Grounds, Marsh-Billings-Rockefeller National Historical Park, Volume 1: Site History* (Boston: Olmsted Center for Landscape Preservation, 2005), 49-52
- 2 Henry V. Hubbard and Theodore Kimball, *An Introduction to the Study of Landscape Design*, reprint of 1929 ed. (Boston: Hubbard Educational Trust, 1959), 58-59.
- 3 Denise Wiles Adams, *Restoring American Gardens: An Encyclopedia of Heirloom Ornamental Plants, 1640-1940* (Cambridge: Timber Press, 2004) 162-163.
- 4 John E. Auwaerter and George W. Curry, *Cultural Landscape Report for the Mansion Grounds, Marsh-Billings-Rockefeller National Historical Park, Volume 1: Site History* (Boston: Olmsted Center for Landscape Preservation, 2005), 50-51.
- 5 Kristofer M. Beadenkopf, Zachary J. Davis, and Roderick S. Brown, *Archeological Overview and Assessment, Edison National Historic Site* [draft] (East Orange, NJ: The Louis Berger Group, Inc. 2007), 21; Barbara A. Yocum, *The House at Glenmont, Historic Structure Report, Edison National Historic Site, West Orange, New Jersey, Volume 1*, (Lowell, MA: U.S. Department of the Interior, Building Conservation Branch, Cultural Resources Center, 1998), 10.
- 6 Henry Hudson Holly was born in 1834 to William Welles Holly, a prosperous merchant and a local politician. Raised in New York City, Holly chose to pursue the study of architecture in 1854 when he was 20. He entered the office of practicing architect Gervase Wheeler as an apprentice. He spent the majority of 1856 in Europe where he could closely observe the sources of much American architecture. Glenmont is the home Holly is best known for, and it was featured in the photographic compendium *L'Architecture Americaine* in 1886. Holly died in 1892 as a result of injuries sustained in a serious fall at a construction site three years before. Henry Hudson Holly, *Holly's Picturesque Country Seats*, reprint, Dover Publications, New York, 1993.
- 7 Barbara A. Yocum, *The House at Glenmont, Historic Structure Report, Edison National Historic Site, West Orange, New Jersey, Volume 1*, (Lowell, MA: U.S. Department of the Interior, Building Conservation Branch, Cultural Resources Center, 1998), 10-14.
- 8 According to Henry Whittmore's *Founders and Builders of the Oranges* (1896) Frederick W. Kelsey originally set out [planted] a significant number of rare native and exotic trees at Glenmont. Frederick Wallace Kelsey was a merchant, nurseryman and author. Born April 25, 1850 in Ogden, New York, Kelsey framed the New Jersey Shade Tree Commission Law of 1893 and was the originator and chairman of the commission which framed the first Park Commission of Essex County, New Jersey. Later, Frederick became President of the F.W. Kelsey Nursery Company. He is the author of the *First County Park System*. Recent research efforts have provided limited documentation to support Henry Whittmore's statement.
- 9 Letter from N.F. Barrett to Thomas A. Edison, December 28, 1916, as quoted in Barbara A. Yocum, *The House at Glenmont, Historic Structure Report, Edison National Historic Site, West Orange, New Jersey, Volume 1*, (Lowell, MA: U.S. Department of the Interior, Building Conservation Branch, Cultural Resources Center, 1998), 15.
- 10 Charles A. Birnbaum and Robin Karson, eds. *Pioneers of American Landscape Design* (New York: McGraw-Hill, 2000), 10-11.
- 11 Kristofer M. Beadenkopf, Zachary J. Davis, and Roderick S. Brown, *Archeological Overview and Assessment, Edison National Historic Site* [draft] (East Orange, NJ: The Louis Berger Group, Inc. 2007), 21; Barbara A. Yocum, *The House at Glenmont, Historic Structure Report, Edison National Historic Site, West Orange, New Jersey, Volume 1*, (Lowell, MA: U.S. Department of the Interior, Building Conservation Branch, Cultural Resources Center, 1998), 10.
- 12 Barbara A. Yocum, *The House at Glenmont, Historic Structure Report, Edison National Historic Site, West Orange, New Jersey, Volume 1*, (Lowell, MA: U.S. Department of the Interior, Building Conservation Branch, Cultural Resources Center, 1998), 21.
- 13 Kristofer M. Beadenkopf, Zachary J. Davis, and Roderick S. Brown, *Archeological Overview and Assessment, Edison National Historic Site* (East Orange, NJ: The Louis Berger Group, Inc. 2007) [draft], 22.

- 14 Estimate from Bobbink and Atkins Importers and Nurserymen and Florists, September 15, 1909 (Edison Archives). Bobbink and Atkins Importers Nurserymen and Florists provided cost estimates for renovating the old hemlock hedge along the private drive with new hemlocks. While it is unclear of the approximate date of establishment of the hemlock hedges, based on the 1909 letter, we assume that the hemlock hedge existed prior to Edison occupancy. The hemlocks were likely planted as screening between 1882 and 1886 to obscure views to the greenhouse complex and service area.
- 15 Leah Brodbeck Burt, *Cultural Landscape Report: Glenmont* (Edison National Historic Site, 1987).
- 16 Henry Hudson Holly, *Country Seats*, p.57.
- 17 Barbara A. Yocum, *The House at Glenmont, Historic Structure Report, Edison National Historic Site, West Orange, New Jersey, Volume 1*, (Lowell, MA: U.S. Department of the Interior, Building Conservation Branch, Cultural Resources Center, 1998), 34.
- 18 Kristofer M. Beadenkopf, Zachary J. Davis, and Roderick S. Brown, *Archeological Overview and Assessment, Edison National Historic Site* (East Orange, NJ: The Louis Berger Group, Inc. 2007) [draft], 22.



# Cultural Landscape Report for Glenmont

## Thomas Edison National Historical Park

West Orange, New Jersey

Pedder, Arnold Constable & Co.  
Ownership, 1879-1886



National Park Service

Olmsted Center for Landscape Preservation

[www.nps.gov/oclp](http://www.nps.gov/oclp)

### SOURCES

- 1 J.H. Schenck, *Map of Llewellyn Park, West Orange, New Jersey*, 1880
- 2 Mead and Taylor, *Map of Residence and Grounds Belonging to H.C. Pedder Esq., Llewellyn Park, Orange NJ*, 1882.
- 3 Elisha Robinson, *Robinson's Atlas of the City of Newark, New Jersey* (E. Robinson, Newark, New Jersey, 1881).

### DRAWN BY

Michael Commisso, AutoCAD 2000 and Illustrator CS 3, 2009

### LEGEND

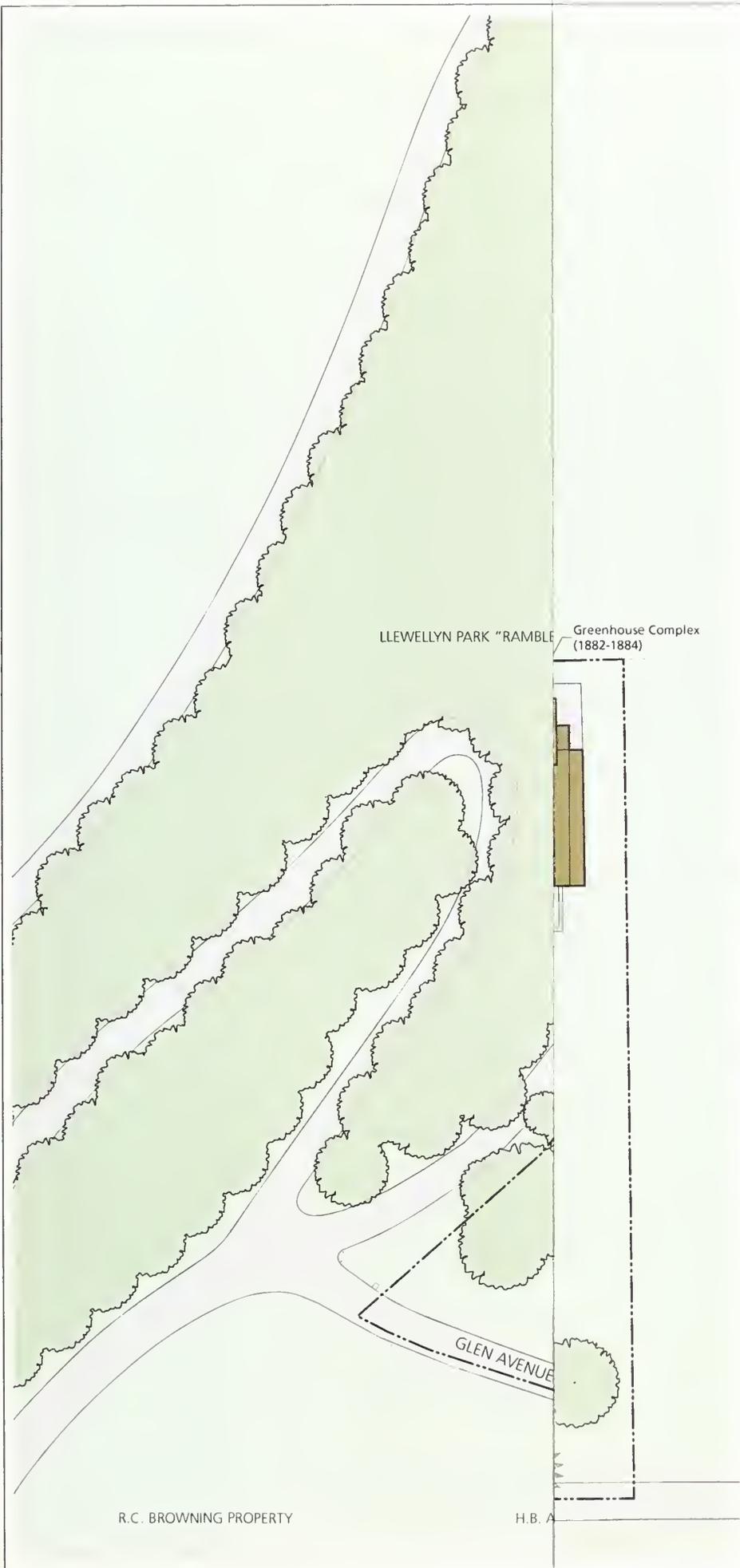
	Date feature added/built, if known
	Removed feature
	Building
	Paved vehicular circulation
	Unpaved vehicular circulation
	Path or walk
	Lawn
	Groundcover or herbaceous bed
	Deciduous specimen tree, wooded area
	Evergreen/coniferous specimen tree or shrub
	Deciduous/broadleaf evergreen shrub
	Stormwater drains
	Flagstone curbing
	Fence
	NPS Property Boundary
	1' Contour

### NOTES

1. Plan shows conditions in 1886 with changes since 1879.
2. All features shown in approximate scale and location.
3. Contours shown only in project area and not in Tilney Property.



Drawing 1.1



Cultural Landscape Report  
for Glenmont

Thomas Edison National  
Historical Park

West Orange, New Jersey

Pedder, Arnold Constable & Co.  
Ownership, 1879-1886



OLMSTED  
CENTER  
FOR LANDSCAPE PRESERVATION



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

SOURCES

1. J.H. Schenck, *Map of Llewellyn Park, West Orange, New Jersey*, 1880
2. Mead and Taylor, *Map of Residence and Grounds Belonging to H.C. Pedder Esq., Llewellyn Park, Orange NJ*, 1882
3. Elisha Robinson, *Robinson's Atlas of the City of Newark, New Jersey* (E. Robinson, Newark, New Jersey, 1881).

DRAWN BY

Michael Comisso, AutoCAD 2000 and Illustrator CS 3, 2009

LEGEND

- (1963) Date feature added/built, if known
- Removed feature
- Building
- Paved vehicular circulation
- Unpaved vehicular circulation
- Path or walk
- Lawn
- Groundcover or herbaceous bed
- Deciduous specimen tree, wooded area
- Evergreen/coniferous specimen tree or shrub
- Deciduous/broadleaf evergreen shrub
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NOTES

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Drawing 1.1



R.C. BROWNING PROPERTY

H.B. AUCHINCLOSS PROPERTY

COLGATE PROPERTY

EGBERT STARR PROPERTY

## **THOMAS EDISON ERA, 1886-1931**

When the Edisons acquired Glenmont, the landscape around the house still retained picturesque and gardenesque elements and continued to do so until the Edisons commissioned landscape gardener Ernest Bowditch to redesign the grounds. His master plan espoused elements of Neoclassicism that were in vogue during the period. However, the Edisons seemed to prefer the naturalistic approach even while they valued his land planning concepts. Some of those ideas were implemented in the ensuing years at Glenmont – the same years that Edison’s laboratories were thriving. Edison’s industrial success in West Orange triggered growth in the local community, while his experimentation with concrete brought about a number of new structures at Glenmont.

The Arts and Crafts Movement seemed a natural extension of the naturalistic and picturesque styles and likely prompted the “wild garden” concept in the wooded area along the south side of Honeysuckle Avenue – the same general area for which landscape architect Ellen Biddle Shipman was providing plans for an improved skating pond. Contrasting the Arts and Crafts style, the bedding-out schemes eventually were removed, as well as the barn from the Pedder era.

## **CONTEMPORARY DESIGN INFLUENCES**

Between 1894 and 1917 was the greatest period of estate building in the United States. These years coincided with a period of unprecedented growth in wealth and prosperity, the so-called Gilded Age that reflected the United States’ rise to a world industrial, commercial, and military power. This same period witnessed the greatest proliferation of country estate building the nation had yet seen, a phenomenon that brought new focus and a more academic approach to architecture and landscape architecture as Americans sought to display their wealth and culture.<sup>1</sup>

Landscape architects became increasingly involved in collaborative work on country residences. Garden design shifted from gardenesque and natural design to Neoclassical and Beaux-Arts design. Largely influenced by the 1893 Chicago World’s Colombian Exposition and Charles Platt’s (1861-1933) popular 1894 book, *Italian Gardens*, Neoclassical design was characterized by formality, symmetry, axes, and ornament. Despite the popularity of Neoclassicism, the naturalistic or picturesque style of design remained in favor for informal landscapes situated away from the house, reflecting the continued desire for an idealized rural setting.<sup>2</sup>

Between 1890 and 1914, the Arts and Crafts Movement sprang from British reaction to industrialization, mass production, and removal of the worker from

the products of labor. The movement sought to return to the pre-industrial condition of arts and crafts, but in the garden it promoted the idea of harmony between culture and nature, favoring an informal naturalism (in contrast to the naturalistic or picturesque style that idealized nature). John Ruskin and William Morris were leaders and supporters of the movement's concepts. The Arts and Crafts Movement in the landscape was characterized by naturalized asymmetrical plantings, respect for natural site conditions, and the use of native plants and vernacular building materials.<sup>3</sup>

Taken together within the country place setting, Neoclassicism provided the formal structure within the landscape, while the Arts and Crafts principles provided the integration with the surrounding natural landscape through the use of landscape elements, such as rustic hand-laid stone walls and mixed perennial borders.

As part of the Arts and Crafts Movement, wild gardening also became popular within country place gardens. The wild garden concept featured naturalizing bulbs and wildflowers. Drifts of these plantings began to occupy otherwise vacant spaces.<sup>4</sup> One of the most well known proponents of the wild garden was British landscape gardener and author William Robinson (1838-1935). His influential book, *The Wild Garden*, was published in 1870. He advocated the concept of creating wild or somewhat wild places in outlying estate grounds. Mina seems to have been aware of Robinson's concepts, as her library had at least one book concerning wild gardens.<sup>5</sup>

The profession of landscape architecture continued to grow and develop over the years, and by the early 1920s the profession was widely considered a viable career for women. Similar to nursing, educating children, or performing social work – occupations that were historically opened to women – a career in gardening or landscape design was beginning to be seen as a logical extension of a woman's traditional domestic role.<sup>6</sup> It was around this same time that Ellen Shipman moved her landscape architecture practice to New York where she hired only women, presumably to give other women a chance to learn and prosper in this once-all-male field. Regardless of such generalities, women still encountered many obstacles to their success in landscape architecture. Women's eventual success in landscape architecture at this time was fostered by the great increase in opportunities for the entire profession in the early twentieth century.<sup>7</sup>

### **WEST ORANGE AND INDUSTRIALIZATION**

The advent of the railroad and the establishment and growth of the Edison Laboratories and companies contributed greatly to the growth of the rural areas surrounding Llewellyn Park. By 1894, the Orange Crosstown Company started

to operate a trolley line that extended to the foot of Eagle Rock Avenue. This new streetcar and trolley provided commuter transportation for Edison’s workers, but interestingly the Edison workforce also came from such locations as East Orange, Orange, South Orange, and Newark.<sup>8</sup>

**THOMAS EDISON'S PURCHASE OF GLENMONT, 1886**

The Arnold Constable & Company held Pedder’s Queen Anne home for a year and five months before Edison purchased it in January of 1886.<sup>9</sup> In a letter dated January 12, real estate broker, Edward P. Hamilton, described the Pedder home to Edison, noting that the property had cost \$400,000 furnished but could be purchased for half that amount, either furnished or not. Unbeknownst to Hamilton, Edison had already signed a purchase-and-sale agreement with Arnold Constable & Company the day before, buying two parcels of land totaling 13.54 acres and including the house, barn, cow stable and chicken house, greenhouse complex, cultivated lawns, and gardens, for \$125,000, in addition to all the home furnishings for a dollar. This was less than half of what the property was actually worth, which based on an 1885 letter from Henry Hudson Holly to J. Asch, was valued at \$271,000 (\$36,000 for the land and \$235,000 on site improvements). According to the letter, Holly determined that the house itself cost approximately \$90,000 and the outbuildings—including the greenhouse and stable—totaled \$55,000. Laying out the grounds, adding fencing, and planting trees and shrubs cost approximately \$30,000 (Figure 1.19).<sup>10</sup> Edison had planned to spend no more than \$20,000 on a home in the country. But after seeing Glenmont, he commented:

But when I entered this I was paralyzed. To think that it was possible to buy a place like this, which a man with taste for art and a talent for decoration had put ten years [sic] of enthusiastic study and effort into—too enthusiastic in fact—the idea fairly turned my head and I snapped it up. It is a great deal too nice for me, but it isn’t half nice enough for my little wife here...so that secures the fitness of things.<sup>11</sup>

Edison and Mina married in Akron, Ohio, on February 24, 1886 and moved into their new home in April. During their years at Glenmont, the couple later had three children, Madeleine (May 31, 1888), Charles (August 3, 1890), and Theodore (July 10, 1898).<sup>12</sup>

While many people were establishing their homes and businesses in the city, the Edisons were likely drawn to Glenmont because of the natural and peaceful setting of Llewellyn Park and the ease of travel between the park and New York, which were only about an hour apart. West Orange also appealed to Thomas Edison since it was still mainly undeveloped and had a two-acre meadow at the corner of Valley Drive (today known as Main Street) and Lakeside Avenue that was well suited for the construction of a laboratory. Edison purchased the

Figure 1.19. Henry Hudson Holly’s letter to J. Asch, dated June 12, 1885, consisted of four parts: a cover sheet, a summary sheet, and two sets of work sheets that tally up the house and its improvements. This work sheet lists the expenses of individual building components, which includes the costs of outbuildings, greenhouse, laying out the grounds, fencing, and planting trees and shrubs (EDIS Archives).

Property	33,000
Acres	32
Windows	17
Shrubbery	1
Veranda	2
Adjoining	-
4 miles	-
Heating	4
Stables	4
Tubing	3
Spring	3
Decorations	4
Washhouse	2
Hallway	1
Carriage	1
Pump	1
Washhouse	4
Stable	1
Drainage	2
Book	2
Labour	2
Materials	13,000
Outfitting	15,000
Ground	12,000
Alterations	20,000
Lighting	10,000
Plumbing	10,000
Painting	7,000



Figure 1.20. (left) This image ca. 1886-1890 shows Glenmont's young landscape, much like Edison would have seen it when he purchased the property in 1886 (EDIS Archives).



Figure 1.21. (right) This image ca. 1886-1890 shows the bedding out schemes for flower beds that are shown bordering either side of the walking paths, south of the conservatory (EDIS Archives, 12.420.11).

meadow property in 1887 and began construction of a laboratory complex.<sup>13</sup> The Edison Laboratories were in operation by 1887, turning West Orange into a bustling center of industrial activity.

**MAINTENANCE OF THE GLENMONT GROUNDS, 1886-1900S**

After acquiring the property, Mina Edison assumed the lead role in the management and operation of the Glenmont grounds. At that time, she had the help of a cook, waitress, maid, laundress, governess, gardener, and grounds keeper. In those early years, property maintenance continued as it had prior to Edison ownership and included various cyclical tasks. In the spring, there was pruning of hedges and shrubs, seeding of vegetable gardens, preparation of flower beds, and repairing lawns following winterkill. The early summer months consisted of planting the flowering and foliage plants that had been started in the greenhouses, moving the potted tropical plants out into the landscape, and mowing the lawns regularly. In the fall, flower beds were cleared and tropical plants were moved back into the greenhouses.



Figure 1.22. The bedding out schemes for flower beds are shown bordering either side of the walking paths, south of the conservatory. The planted oval to the northeast of the house is seen to the upper right, c. 1890 (EDIS Archives).

Figure 1.23. The ornamental beds ca. 1886-1890 were cut into the turf and planted with annuals. Note the planted urn in the lower foreground. Other ornamental beds are seen through the porte cochere to the north and in front of that structure to the west (EDIS Archives, 12.420.10).



While there is little record of what was planted during the 1880s, receipts from a variety of nurseries beginning in the 1890s show purchases of a wide assortment of shrubs, trees, annuals, perennials, vegetable seeds, and tropical plants for the greenhouses (Appendix A: Historic Plant Nurseries Suppliers used at Glenmont).

#### Initial Changes and Additions

Between 1886 and the early 1900s, the landscape surrounding the perimeter of house continued to reflect the picturesque and gardenesque style of landscape design, as evidenced in a series of images taken between 1886 and early 1900s. On the house, vines embowered the porte-cochere and conservatory. Beyond the house, the turf in the west and front lawn areas were kept at a short height, while the south (lower) lawn was maintained as pasture and meadow. Along the



Figure 1.24. A c. 1890s-1900s image of the west lawn showing young specimen trees, foundation plantings and walking path (EDIS Archives).



Figure 1.25. A c.1890-1900s image of the west lawn showing the young trees and foundation plantings. Note the weeping cherry (right) (EDIS Archives, combined 12.420.17 and 12.420.29).

pathways near the house, flowerbeds—laid out in geometric shapes—were planted in the typical “bedding-out” fashion and informal flowerbeds were found along the foundation of the house and within the main drive islands. In addition to the flowerbeds, urns planted with large tropical foliage plants were displayed along the main drive within the front lawn. Along with the flowerbeds and planted urns, the landscape included evergreen and deciduous trees and shrubs. Some of the more notable trees and shrubs—as seen in the earlier images, included the weeping cherry, weeping beech, Norway maple, royal paulownia, and three dwarf Alberta spruces (Figures 1.20-1.25).

Some of the earliest improvements to the property included the installation of telephone service in 1886 and electrical wiring in 1887. The electrical wires were installed by the Noll Brothers of New York City and extended underground from the generating plant at the Edison Laboratories. Direct current electric power was first used in the house on December 23, 1887.<sup>14</sup> In 1891, a new well, fitted with an electrical pump, was drilled to the north of the original well that same year. The original well house was later removed in 1899.<sup>15</sup> Eventually Glenmont connected to the municipal water lines being constructed by West Orange and Llewellyn Park in the late 1890s.<sup>16</sup> Lastly, in 1902, a new cesspool was excavated about 100 feet from the old one, but the exact location is not known.<sup>17</sup> The next year, a fire hydrant serviced by town water was installed between the north side of the house and Honeysuckle Avenue.<sup>18</sup>



Figure 1.26. This plan, entitled “Design for Grounds,” shows the 1907 master plan for Glenmont by Ernest Bowditch shows a number of significant proposed changes to the landscape, designed with the intent to move service related functions away from the house. Many of these land-planning ideas were realized in some form over the ensuing years (EDIS Archives, 114486).

#### REDESIGN OF THE GLENMONT GROUNDS, 1907-1920

In 1907 Mina Edison hired landscape gardener Ernest W. Bowditch (1850-1918) to prepare a series of plans for the redevelopment of the grounds. During his career, Bowditch had worked with prominent architects, landscape architects, and architectural firms, including Robert Morris Copeland; McKim, Mead & Bigelow; Frederick Law Olmsted Sr.; H.H. Richardson, and Peabody and Stearns. While employed with Shedd & Sawyer, Civil Engineers, Bowditch had the opportunity to lay out driveways, paths, and gardens at Mount Auburn Cemetery in Cambridge, Massachusetts. During this time, he was strongly influenced by the picturesque style of landscape design, later employing it in many of his residential subdivision designs, which included Pierre Lorillard and Cornelius Vanderbilt’s Breakers, and estates of Ogden Goelet, and Charles Lanier. While much of Bowditch’s designs were of the picturesque style, he also embraced Neoclassicism and often incorporated formal elements in his designs.<sup>19</sup>

Following his August and October 1907 visits to Glenmont, Ernest Bowditch produced a topographical survey of the property, which included the names of trees.<sup>20</sup> Soon after completion of the survey, Bowditch prepared an illustrated plan of the grounds, entitled “*Estate of Thomas A. Edison, Llewellyn Park, Orange, N.J., Design for Grounds*” (Figure 1.26). The plan, relying heavily on formal beds, symmetry, axes, and geometric shapes, cohesively integrated the undeveloped three-acre parcel—containing the greenhouse complex, into the earlier design by Nathan Franklin Barrett. It proposed simplifying the large oval drive and leaving

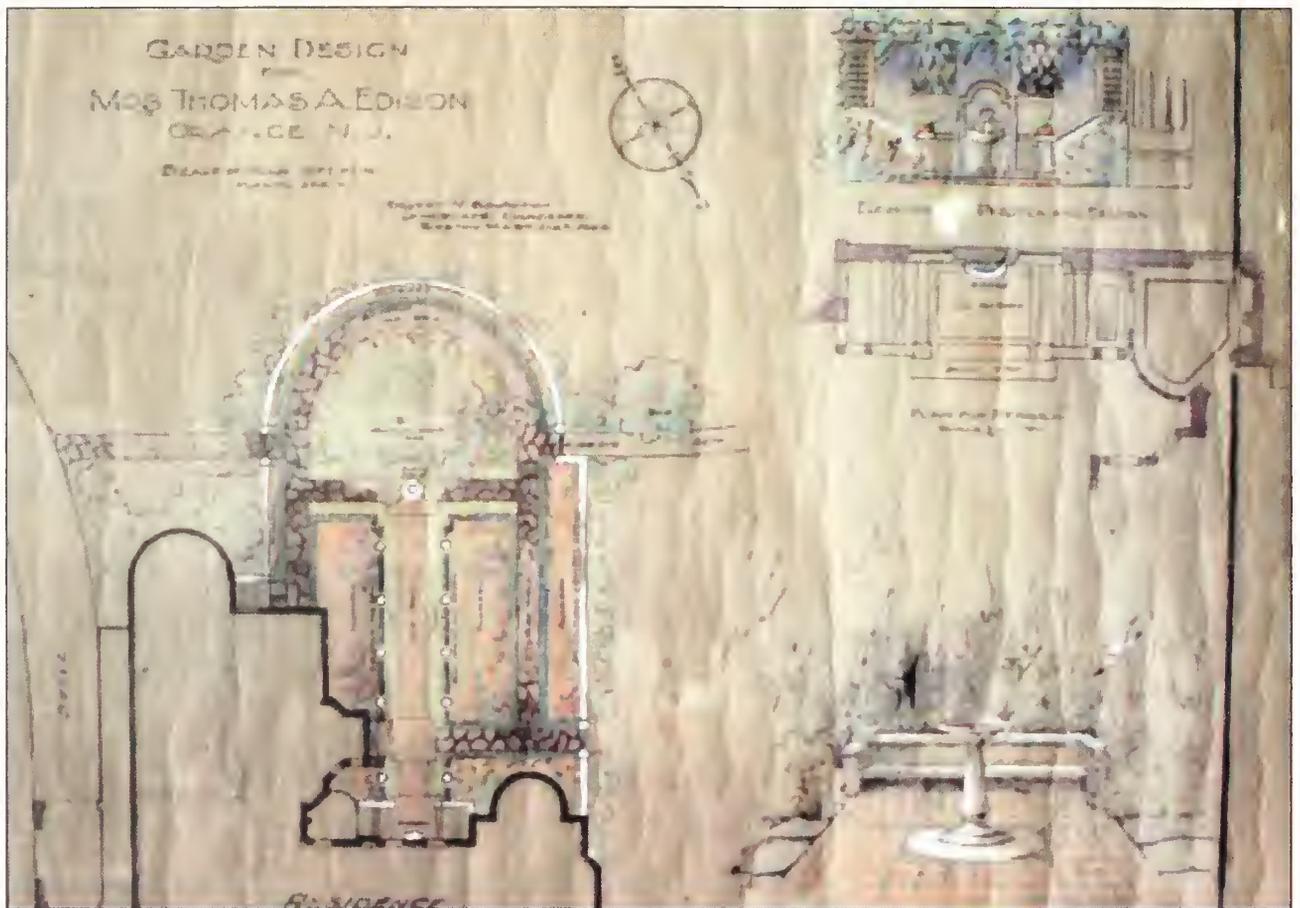


Figure 1.27. This 1909 Bowditch drawing (2418-4) entitled "Garden Design for Mrs. Thomas A. Edison, Orange, N.J.," proposed a formal layout for garden areas to the southwest of the house (EDIS Archives).

only the small oval-shaped loop to the northeast side of the house. This area was complemented by a water feature with a small terrace, surfaced with terra cotta tiles. Bowditch's plan also simplified the walkways along the south and west sides of the house. In an effort to move and unify service related elements away and to the east of the house, Bowditch refashioned Honeysuckle Avenue as a tree-lined alley, serving as the main axis with vegetable gardens, the garage, and the stable situated on either side.

Near the house, Bowditch proposed an enclosed laundry yard surrounded by a service turn along the north elevation and a garden along the western elevation. Across Honeysuckle Avenue, south of the greenhouses, Bowditch laid out two flower gardens: a formal garden with geometric shapes and a focal point at its center, and the other without any predetermined design scheme. A small paddock area was adjacent to the flower gardens and connected to the proposed stable. The stable and a garage, as well as a four-square kitchen garden, were sited on opposite sides of Honeysuckle Avenue. A tool shed and an additional garden for small fruit trees and vegetables were proposed on the farthest northeastern corner of the property. Lastly, Bowditch incorporated a "lodge" (a gatehouse) on the northwestern side of Honeysuckle's juncture with Glen Avenue, making this the official entrance to the estate. In order to make the gatehouse effective and

Figure 1.28. This 1910 Bowditch design (2418-10), entitled "Thomas A. Edison, Sketch for Garden," focused on the southwestern garden area and relies on formal beds within an informal setting of curvilinear paths and beds. (EDIS Archives.)

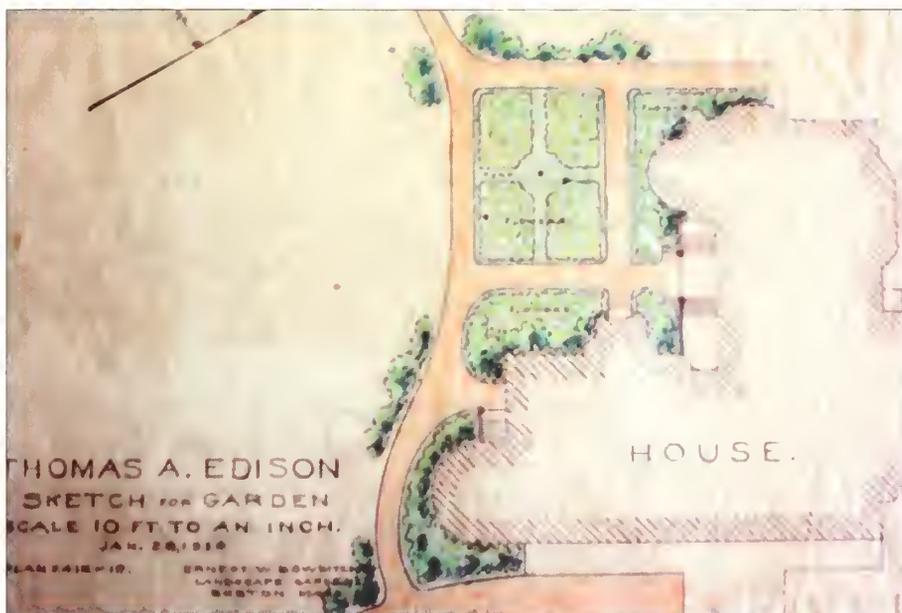


Figure 1.29. A 1910 Bowditch design (2418-11) for the southwestern garden area with heavy use of geometric forms. (EDIS Archives.)



Figure 1.30. A 1910 Bowditch design (2418-12) for the southwestern garden areas. This plan shows the most informal and naturalistic design. (EDIS Archives.)



perhaps the property more secure, gates were suggested for many access points, including the two entrances onto the property. In a November 1907 letter to Mina, Bowditch proposed a timeline for completion of the proposed work:

I have an impression that if, as I understand, you and Mr. Edison are in the habit of going to Florida, or elsewhere, for six weeks, beginning about the middle of March and returning about May first, the entire change of driveways and paths might be accomplished while you are away, and without excessive cost.

I do not mean that all the walls could be built in addition, though probably all foundations might be laid, but the dirty work incidental to the driveways, which is uninteresting, could be finished while you were away; then, at such time thereafter, as you see fit, the plantations could be overhauled, freshened up, and replaced and only the interesting part of the work done while you and your husband are at home. Half the fun of building a country estate is seeing things accomplished, without being aware of any of the disagreeable details.<sup>21</sup>

Following Bowditch's completion of the overall estate plan for the Glenmont grounds in 1907, Mina requested that he prepare a series of design schematics in 1909 and 1910 for a flower garden that would complement the new Ante Room addition (now known as the Fern Room) and terrace and stairways—designed by architect Wilbur Knowles, located along the southwest elevation of the house, between the conservatory and den. The generated drawings (Plan Numbers. 2418-4- 2418-7), were in keeping with Neoclassical design, consisting of axes, focal points, garden ornamentation (vases, fountains, and bird baths), and geometric beds and walks (Figure 1.27). Plantings included dwarf box hedges, yews and cedars, and perennials and annuals in mixed flower beds (including peonies, asters, poppies, petunias, snapdragons, larkspur, roses, and Canterbury bells). For the general treatment of the garden, Bowditch suggested:

...The walks should be tile, brick, or random flag; the wall, brick with a cement cap; the birds' bath either in marble or cement, and the seats of hard wood.

The weeping cherry tree will be in the midst of the garden, and while the trunk of the tree is not exactly centered on the middle of the walk, it is near enough to the centre [sic] so that it will not be noticed except possibly in mid-winter, when the leaves are off.<sup>22</sup>

After four months of correspondence between Bowditch and Mrs. Edison with regards to the proposed flower garden, Mina – displeased with the excessive paths and formality of the designs – had Bowditch prepare three additional plans for the garden (Plan Numbers 2418-10-2418-12) (Figures 1.28-1.30). The drawings were simplified, with two plans featuring Neoclassical elements, while the third was more picturesque in style. Although complying with Mina's wishes, Bowditch

continued to promote his earlier designs stating:

These [sic] are any one of them perfectly practicable, and would look well [in reference to the later plans]; but I confess to a preference for the first project we made up, of which you already have the drawing, and which, though perhaps a trifle more elaborate than you think you want, will not, I am very sure, look excessive at Llewellyn Park, where the general scheme of the grounds and the plantations is by no means simple, but decidedly rich in effect.<sup>23</sup>

Despite the many plans and renderings that were prepared by Bowditch between 1907 and 1910 for the Glenmont grounds, the majority of his designs, such as the flower garden along the southwest elevation of the house, were likely never implemented within the landscape. However, Thomas and Mina Edison did follow the general concept of Bowditch's 1907 design for the grounds, with regards to his land planning principles and the spatial organization of the property, specifically relocating and unifying service buildings and structures away from the house.

#### **Construction of the Concrete Buildings and Structures**

By the early 1900s, Edison was actively involved in the Portland cement business, in particular concrete houses. Edison, fascinated by the ability of concrete to be molded into highly durable products in a wide variety of shapes, began an endeavor to mold and pour an entire house in one operation – a single monolithic concrete structure. At that time, reinforced concrete was cast as individual components and then assembled into a building or structure. Edison proposed eliminating this step by simply pouring concrete into a large mold, with reinforcing rods in place. It was his belief that if the process could be mechanized and houses mass-produced, the final product could be made available at a low price, providing affordable housing for the working class.<sup>24</sup>



Figure 1.31. A 1950s image looking southeast towards the 1908 concrete garage, constructed during Thomas Edison's experimentation with concrete (EDIS Archives).

Between 1907 and 1908, around the same time Mina engaged Bowditch to prepare plans for the Glenmont landscape, Edison, began to experiment with concrete buildings on the grounds. With assistance from Frank D. Lambie, owner of the New York Steel Form Company, Edison constructed a garage and a two-story concrete gardener's cottage (Figures 1.31 and 1.32). As proposed in the 1907 Bowditch plan for the grounds, the garage was built east of the house along Honeysuckle Avenue and across from the Pedder barn, in the former location of Pedder's L-shaped chicken house/cow barn. The chicken house/cow barn was relocated across Honeysuckle Avenue, as Bowditch had recommended. According to a bill from house mover George F. Robinson, the building was relocated across Honeysuckle Avenue in 1907 to accommodate the new garage. Around the same time, within close proximity to the barn, a rectangular pool was constructed, measuring approximately twenty-six feet by forty-five feet. It is unclear whether or not it was an Edison experiment.<sup>25</sup>

Following the principles of the Bowditch plan, the Edisons had a new gardener's cottage and potting shed built east of the house, across Honeysuckle Avenue, and in the same location as the previous greenhouse complex built by Henry Pedder. During construction of the gardener's cottage and potting shed, Mina turned to Pierson U-Bar Company to design and construct new greenhouses to be attached to the new cottage and an existing north wing of an earlier greenhouse built by Pedder. The company's design, similar to the layout Bowditch indicated, called for a U-shaped plan, with the main greenhouses in an east-west orientation that provided southern exposure, necessary to maximize sunlight.



Figure 1.32. A 1970s image looking northeast towards the 1908 concrete gardener's cottage and potting shed, constructed during Thomas Edison's experimentation with concrete (EDIS Archives).

According to the specifications, the greenhouses were:

...all to be U-Bar construction, and to plan #1132, one  $\frac{3}{4}$  span rose house about 50' long by 25' wide; one  $\frac{3}{4}$  span palm house about 16' 6" long by 25' wide; one leanto plant house to be connected to the south-east side of the work room building [Gardener's Cottage and Potting Shed] and to be 33' long by 10' wide.

One fern house [used as orchid house] constructed in the following manner – for 17' in length, the house to be a leanto against the side of the work room building and for about 15' 3" in length to be even span connected to a high wall on one end and to the present greenhouse on the other end and to the leanto with a valley. A new partition will be placed between the present greenhouse and the fern house and this partition will be constructed in such a manner that when the present greenhouse is removed at a later date [earlier greenhouse built by Pedder], the construction of the fern house can be carried through even span.<sup>26</sup>

It is assumed that during this time, cold frames were also placed to the east of the north wing as described by Henry S. Deforest, Pierson U-Bar Company Sales Manager, in a 1907 letter to Mina:

It would be a good idea to construct walls around the cold frames when they are moved to the new location and these walls should be 3" thick and should project above grade about 1'.

By 1908, the gardener's cottage, potting shed, and greenhouse complex was complete. Within the complex, the greenhouses were divided into various houses, which included the palm house, the orchid house, the lean-to adjoining the palm house, the rose house, and the carnation house. In these structures, flowers and plants were cultivated for use on the grounds, gardens, and in the home.<sup>27</sup> Within the palm house, plants were originally grown for the conservatory in the main house. The orchid house sheltered tropical plants that required special conditions of heat and humidity. The lean-to was used to grow poinsettias. The rose house grew the Edisons favorite types of roses, while the carnation house produced different kinds of cut flowers for decorating the home's interior.<sup>28</sup>

The greenhouse complex played an important role in propagating seeds for both ornamental plants, such as annuals, and for vegetables that could later be transplanted into the flower and vegetable gardens. Vouchers and invoices dating between 1900 and 1905 indicate a number of plants purchased either as seeds or seedlings, including: tomatoes, lettuce, radish, onions, peas, beets, carrots, celery, corn, beans, pinto beans, spinach, cabbage, mush melon, cucumber, parsley, turnip, potato, sweet peas, peppers, parsnip, Swiss chard, eggplant, cauliflower,



Figure 1.33. (left) A photograph taken during Madeleine Edison's wedding in 1914. Note the temporary planting arrangements and triangular island planted with annuals and dracaena (EDIS Archives, Album 113).



Figure 1.34. (right) Taken in 1913, this image facing north shows a simplified but maturing landscape. Note the absence of the southwest path and carpet bedding (EDIS Archives, 12.420.32).

tobacco stems, squash, rosemary, sage, salvia, thyme, and poppy. Many of these vegetables and herbs were purchased consistently over time. Among the annuals that were purchased as either seeds, seedlings, or young plants were dahlias, geraniums, heliotrope, begonias, ageratum, pansies, coleus, and verbenas.<sup>29</sup>

With completion of the greenhouse, gardener's cottage and potting shed, and other improvements across Honeysuckle Avenue, Mina, apparently looking to improve screening of the service area, had Bobbink and Atkins, Nurserymen and Florists prepare cost estimates for screening around the barn and making repairs to the existing hemlock and privet hedges. According to the September 15, 1909 estimate, the firm suggested that the two hemlock hedges—leading from the barn to the road (presumably along the north side of the stone boundary wall) and along Honeysuckle Avenue—be replaced with new hemlocks; the barn be screened with Lombardy poplars, hemlocks, and white and Austrian pines; and the privet hedge beneath the large trees along Honeysuckle not be reestablished. The estimate also included general distribution of rhododendrons and white and Austrian pines throughout the Glenmont landscape.<sup>30</sup> Although it is unclear, the work was presumably completed between 1910 and 1925.<sup>31</sup>

#### **Glenmont Grounds Simplified**

By 1910, after years of careful development of the landscape, the Glenmont grounds had matured into a lush landscape that was an integral to the family's life. In 1914, Edison's daughter, Madeleine, married John Sloane at Glenmont, and in celebration of the event, the grounds were embellished with temporary plantings. Plants were used to screen the utilitarian laundry yard, and potted evergreens complemented with annuals were set as a backdrop near the large maple tree that stood nearby the house in the driveway oval. Within the triangular island, located within the main drive and northeast of the house, a bed of annual plants were planted with two spiky plants, such as dracaena, spaced apart at the bed's center (Figure 1.33).

During the following years, the Edisons gradually simplified the landscape. These changes coincided with the increased maintenance requirements for the grounds, as well as the ensuing First World War. By 1914, carpet bedding and container plants were removed, followed by a few damaged trees in 1916 (Figures 1.34 and 1.35). In response to storm related damage to certain trees, Mina sought the assistance of the Olmsted Brothers to assess the condition of all the trees and plantings as stated in an October 16, 1916 letter:

Dear Sirs, I wish to have competent inspection and opinion of our trees and planting immediately, if possible. Will you kindly inform me whether, Mr. John C. Olmsted is visiting the parts about here, soon, and if so, could he come and see me in person, or if that is impossible, may I ask whom you could recommend as the best person for that purpose. I shall like to know what the expense of such inspection and opinion would be.<sup>32</sup>

**Figure 1.35. View of Thomas Edison looking north towards the oval lawn and house, c. 1917. Glenmont's mature landscape was lush but simplified by 1914. No ornamental beds are now seen in front of the porte cochere, for example. Note Edison's rustic seat still in use (EDIS Archives, 14.220.47).**

The firm responded that a visit could be made for the purpose, but there is no information to indicate that the work was actually done. On June 20, 1917, however, Hicks Nurseries of Westbury, Long Island, N.Y., provided an assessment of an oak tree hit by lightning along with an estimate to number, name, and label the principal trees and shrubs on the Glenmont grounds.





Figure 1.36. (top) In 1907, Bowditch proposed a gatehouse for the Glenmont property. However, the concept didn't materialize into a draft plan until 1919, an illustration of which is shown above drawn by Knowles and Bassoe. The gatehouse was never built. (EDIS Archives).

Beginning in 1919 and continuing throughout the 1920s, general improvements were made to the house, under the supervision of architects Wilber S. Knowles, Thorbjorn Bassoe, and Frank Bower. During that time, Knowles and Bassoe prepared designs for a proposed lodge gatehouse. Bowditch's 1907 master plan recommended that the lodge, or gatehouse, be located at Glenmont's entrance on Honeysuckle Avenue. However, no further evidence of a gatehouse is known, and the lodge was apparently never built (Figure 1.36).

By 1920, the old Pedder barn was in disrepair and unoccupied, prompting Mina to sell the building to Van Keuren and Son, Paving Contractors of Newark, New Jersey. Following its acquisition, Van Keuren and Son razed the barn, salvaging construction materials, such as lumber, tin, paper, lath, and slate.<sup>33</sup>

Following the removal of carpet bedding and the Pedder barn, the grounds continued to be maintained but with few improvements. The house remained the focal point surrounded by foundation plantings and groupings of deciduous and evergreen trees and shrubs (Figure 1.37). The southern portion of the property continued to serve as pasture for the Edison cows, as well as the location for the vegetable garden and orchard (Figure 1.38)<sup>34</sup>. East of the house, the service buildings were intact. The chicken house and stable (referred to as the chicken house/cow barn) continued to house chickens and a horse and an additional pasture was located south of the building. Adjoining the gardener's cottage, potting shed, and greenhouse, the extensive formal and informal flower gardens remained, including a few fruit trees. Although the pool remained intact, it no longer was used for recreation.<sup>35</sup>

Figure 1.37. (left) View of the conservatory and foundation plantings, c.1920s. Note the weeping beech in the background (EDIS Archives).

Figure 1.38. (right) View of the south (lower lawn), c. 1930s, used as pasture during Edison residency (Edison Archives).



### GLENMONT LANDSCAPE IMPROVEMENTS, 1920S

Over the course of the next decade until Edison's death in the fall of 1931, there were few changes within the Glenmont landscape. In 1920, Mina, an avid bird watcher, had a bird fountain designed and placed on the lawn near the house. The fountain was electrically wired to keep the water from freezing in winter. It was later moved from the lawn to the roof of the conservatory where it remained until it was removed in the 1940s. By 1925, the condition of the north wing of the greenhouse – an earlier section of greenhouse built by Pedder – had deteriorated and subsequently was removed, leaving only the brick walls sheathed with concrete.

### Shipman Plans for Skating Pond and Grounds

In the early 1920s, Mina contacted Ellen Biddle Shipman (1869-1950) for assistance with plantings and garden changes within the Glenmont grounds. At that time, Shipman had designed many gardens for friends and neighbors of the Edisons, such as the Franks, Colgate, and Ford families. In the ensuing years, Mina and Ellen collaborated on a variety of projects at Glenmont and Edison's winter home in Fort Myers, Florida.<sup>36</sup>

Figure 1.39. The 1925 Pentecost and Martin Plan for the Skating Pond. The skating pond, completed in 1926, was poorly constructed and did not retain water (EDIS Archives, 114496).

Ellen Shipman was one of America's foremost garden designers of the early twentieth century. During her thirty-five-year career, she designed well over



600 gardens throughout the country. At the height of her career in the 1920s, she was hailed as the Dean of American Women Landscape Architects not only for her highly acclaimed gardens but for training dozens of young women in her New York office. Shipman specialized in small residential gardens in upscale communities and included projects such as Lake Shore Boulevard (Grosse Pointe, Michigan); Samuel Salvage estate (Glen Head, N.Y.); Mabel Dodge estate (Mount Kisco); Chatham Manor, Fredericksburg, Virginia; and the English Garden at Stan Hywet Hall, Akron, Ohio. Shipman’s gardens were known for their intimate scale, exquisite flower borders, and attractive ornamental features, such as gates, pergolas, and small garden buildings.<sup>37</sup>

Figure 1.40. In this 1926, entitled “Suggested Treatment for Skating Pond,” landscape architect Ellen Shipman provided her vision for a skating pond west of the garage. Separately, she provided construction drawings. Although estimates were prepared for Shipman’s proposal, it is unclear as to whether or not her design was ever implemented; present-day conditions resemble Pentecost and Martin’s 1925 plan (EDIS Archives, 11495).

In 1925, at the urging of her son Theodore Edison and his wife, Anna Marie Osterhout, who were both skating enthusiasts, Mina contracted with Pentecost & Martin, Inc., Landscape Architects, and William Neill and Son, Landscape Engineers and Contractors, for the construction of a new skating pond and shack – a replacement of a previous pond built in the early 1900s – in the former location of the Pedder barn.<sup>38</sup> While it is unclear whether the skating shack was constructed, the skating pond was completed by 1926. However, it was poorly constructed and did not retain water as evidenced by a series of correspondences among George Pentecost, William Neill, and John V. Miller, Mina’s brother and assistant manager of Glenmont (Figure 1.39). The unsatisfactory condition of the





Figure 1.41. In this 1926, entitled “Construction Details for Skating Pond, the Estate of Mrs. Thomas A. Edison,” Landscape Architect Ellen Shipman provides 1 of 2 construction details for the skating pond.

Although estimates were prepared for Shipman’s proposal, it is unclear as to whether or not her design was ever implemented; present-day conditions resemble Pentecost and Martin’s 1925 plan (EDIS Archives, 11495).

pond is later summarized in a 1927 letter written by Miller to Neill:

In the contract which was made up by Mr. Pentecost, as engineer, and signed by you and Mrs. Edison:

Item “D” calls for “careful testing of bottom and if soft and yielding said material to be removed and refilled with gravel or other hard material. We do not believe sufficient care was exercised in making these tests, nor that the proper excavation and refilling was done.

Item “E”-When bottom of pond has been thus prepared a six inch layer of clean clay shall be applied thereon and thoroughly puddle until water tight. We believe that the principal trouble arises out of the use of so-called clay from the field at Mrs. Edison’s residence. This was not “clean” clay as some contained considerable stone and also sand.

Clearly disappointed with the pond, Mina turned to Shipman to redesign the skating pond in 1926. By October 1926, Shipman had prepared a conceptual plan, accompanied by two construction details for the pond (Figure 1.40). As shown in the plan and details, the organic shape of the pond and plumbing systems remained the same, but construction materials were changed as Shipman proposed the use of brick and concrete for the walls and base. In addition, the documents proposed a new skating shack (Figure 1.41).

Although estimates were prepared for Shipman’s proposal, it is unclear as to whether or not her design was ever implemented; present-day conditions resemble Pentecost and Martin’s 1925 plan.

Soon after the pond was built, wild gardens were established within the same area, lining Honeysuckle Avenue. These gardens consisted of native woodland plants interspersed with irises and daffodils. Mina owned several books covering the topic of wild gardens, and it is likely that she followed some of the ideas (Appendix B: Mina Miller Edison’s Garden Books).

By 1927, the family’s use of the Glenmont grounds went through a period of transition as it became less of a year-round home and more of a seasonal home. During this time, the Edisons spent more time at their winter retreat in Fort Myers, Florida, as Thomas Edison began working with long-time friend Henry Ford in the investigation of domestic sources of rubber. Mina later recalled, “Everything turned to rubber in the family. We talked rubber, thought rubber, dreamed rubber.”<sup>39</sup>

Despite not spending as much time at Glenmont, the house, service buildings, and grounds were still maintained at a high level. In 1929, exterior alterations were made to the cow barn. Changes to the exterior included the installation of an iron fence enclosing the chicken runs and a wooden rail fence for the cow area.<sup>40</sup> Other notable changes within the grounds included improvements to the irrigation systems.

Thomas A. Edison died on October 21, 1931, at age 84. At the time of his death, a schematic plan of the grounds was prepared as part of an appraisal for the property. The plan showed a square laundry yard about forty feet north of the house, and to the west of that yard was the hose house. The pump house was situated west of the hose house, approximately seventy feet north of the house. To the northwest of the house, about fifty feet away, was the summer house, and fifty-five feet to the north of that was the playhouse. The garage, cow barn, gardener’s cottage, potting shed, and greenhouse complex were extant in their 1908 locations – the garage on the south parcel of near Honeysuckle Avenue, and the cow barn, greenhouses and gardener’s cottage on the northern parcel (Figure 1.42).<sup>41</sup>

#### **LANDSCAPE SUMMARY, 1931**

By 1931, significant changes had occurred within the Glenmont landscape, many of which created the character of the landscape seen today. In particular, major alterations came in the areas of spatial organization and construction of structures. A garage was built east of the house along Honeysuckle Avenue and across from the Pedder barn – later removed – in the former location of Pedder’s

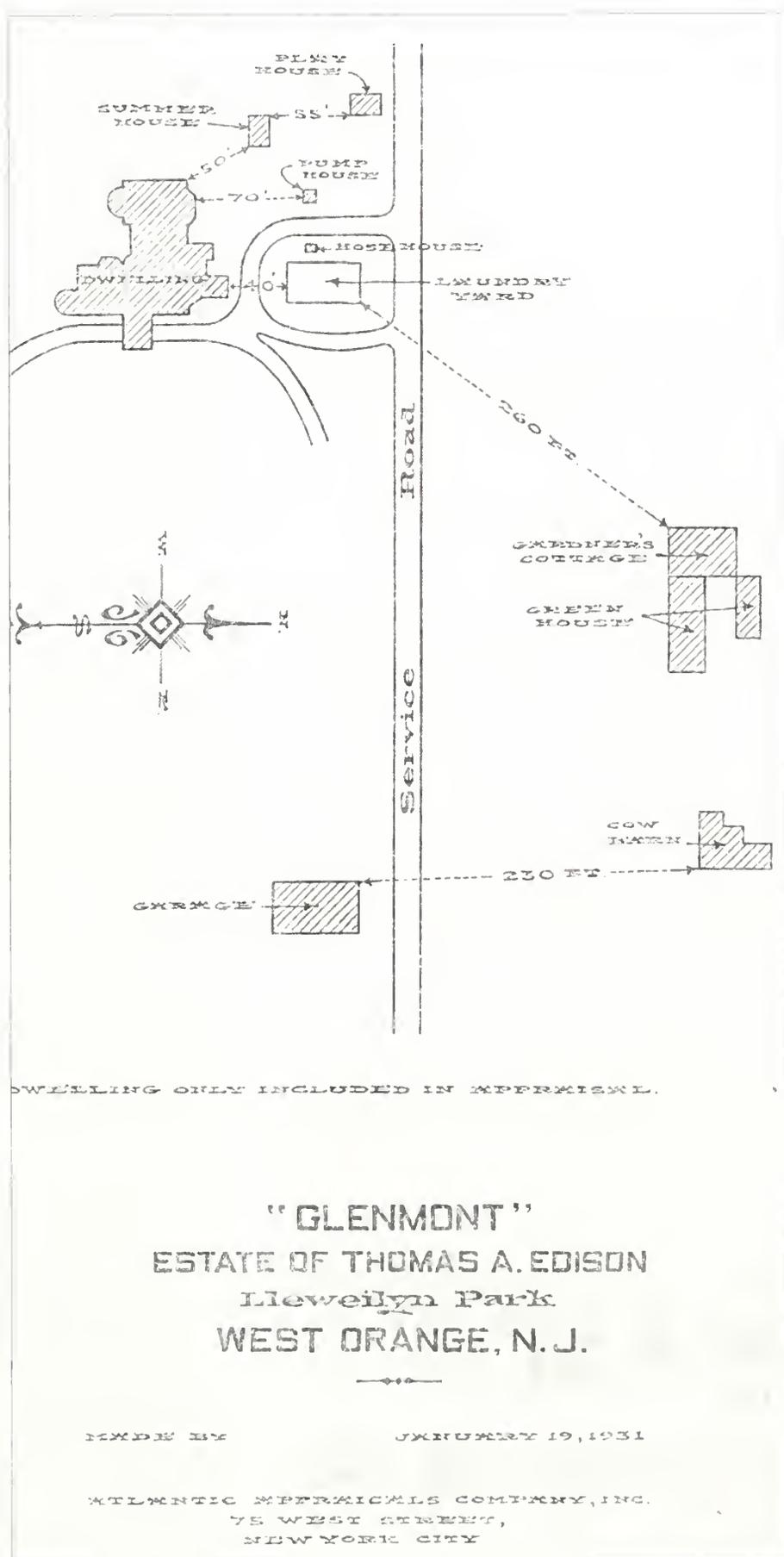


Figure 1.42. This map, entitled "Glenmont, Estate of Thomas A. Edison, Llewellyn Park, West Orange, N.J.," was completed for a 1931 appraisal of the property. It locates the garage, barn, and greenhouses, but more importantly the playhouse and summerhouse about which little is known (EDIS Archives).

L-shaped chicken house/cow barn. The chicken house/cow barn was relocated across Honeysuckle Avenue on the northern parcel. A tool shed was later built to the west of the chicken house/cow barn. A new concrete greenhouse complex, including the gardener's cottage and potting shed, replaced an earlier greenhouse complex, and a concrete swimming pool was built nearby. The playhouse and summer house were built to the northwest of the house, while the well house was removed from its location on the north side.

The land in the northern half of the Glenmont property was much more heavily used for various purposes than the southern portion. To the north and across Honeysuckle Avenue, the greenhouses and flower gardens blended with recreational uses such as the swimming pool. Flower beds – both formal and informal – were created to the south of the greenhouse complex. Closer to the house, the recreational area to the west included the summer house in the west lawn and the playhouse near Honeysuckle Avenue. Curvilinear walking paths added leisurely routes through the west lawn and along the west side of the house. To the east was the new utilitarian garage area.

Circulation throughout the site changed with the addition and removal of some paths and drives. The walking path that proceeded from the conservatory to Park Way, heading southeast, was removed along with the planting island that resulted from the converging paths. The paths and drives around the Pedder barn site were reduced and paths to the south of the greenhouse complex changed from curvilinear to straight walkways to create a rectangular formal flower garden.

Vegetation throughout the site, such as deciduous and evergreen trees, grew to maturity and other trees and shrubs were added, giving the site a more enclosed feeling. Many evergreens were added during this period in some cases as screening, such as those obscuring the view of the utilitarian laundry yard, garage, and chicken house/cow barn. The showy ornamental beds – including those that ran parallel along either side of the walkway to the west of the oval drive, the triangular bed at the convergence of the walkways near the conservatory, the semi-circular bed and planted containers in front of the porte-cochere, and the three carpet beds along the south side of the house – were all removed, thus simplifying the landscape. However, a formal flower garden and two informal flower gardens were added to the south and east of the greenhouse complex.

Because of maturing vegetation and the addition of new trees and shrubs, the views from the house were becoming narrowed or blocked to the north, west, and south. But to the east, toward Glen Avenue, the views through the expansive lawn areas remained fairly open. A few small-scale features were added on the grounds, but mainly for utilitarian purposes. The new pool to the southeast of the

greenhouse complex was the only water feature known to date to be present on the property by the year 1931. At the end of this period, the D.F. Cox property to the north of the main house had been developed. The home had several service buildings and straight walkways connecting the house to the outbuildings and Honeysuckle Avenue.

## ENDNOTES

- 1 John E. Auwaerter, *Cultural Landscape report for the Mansion Grounds, Marsh-Billings-Rockefeller National Historical Park, Volume 1, Site History*, (Boston: National Park Service, 2005), 103; as quoted in Mac Griswold and Eleanor Weller, *The Golden Age of American Gardens: Proud Owners-Private Estates, 1890* (New York: Harry N. Abrams, Inc., 1992), 14..
- 2 John E. Auwaerter, *Cultural Landscape report for the Mansion Grounds, Marsh-Billings-Rockefeller National Historical Park, Volume 1, Site History*, (Boston: National Park Service, 2005), 103-104.
- 3 Barbara A. Yocum, *The House at Glenmont, Historic Structure Report, Edison National Historic Site, West Orange, New Jersey, Volume 1*, (Lowell, MA: U.S. Department of the Interior, Building Conservation Branch, Cultural Resources Center, 1998), 104-105.
- 4 Leah Burt, "Cultural Landscape Report, Glenmont," 19 August 1987, 11.
- 5 Mina's book collection included such titles as: *The Wild Garden* by Margaret McKenney, *The Book of Wild Flowers for Young People* by F. Schuyler Mathews, and *California Wild Flowers* by Elisabeth Hallowell Saunders.
- 6 Tankard, Judith, *The Gardens of Ellen Biddle Shipman*," introduction by Leslie Rose Close (Sagaponack, N.Y.: Sagapress, Inc. 1996), xv.
- 7 Tankard, Judith, *The Gardens of Ellen Biddle Shipman*," introduction by Leslie Rose Close (Sagaponack, N.Y.: Sagapress, Inc. 1996), xvi.
- 8 Mary Ann Hellrigel, "Thomas A. Edison and the Mountain Society: West Orange During the Edison Era," Edison National Historic Site, April 25, 1987, 6-7.
- 9 Barbara A. Yocum, *The House at Glenmont, Historic Structure Report, Edison National Historic Site, West Orange, New Jersey, Volume 1*, (Lowell, MA: U.S. Department of the Interior, Building Conservation Branch, Cultural Resources Center, 1998), 30-31.
- 10 Holly's letter to Asch consists of four parts: a cover sheet, a summary sheet, and two sets of work sheets that tally up the cost of the house and its improvements in two different ways. The first method arrives at a figure of \$210,000; the second method totals \$208,000. Holly used \$210,000 figure on his summary sheet, and added to it \$25,000 for "Value of Land." This gives a figure of \$235,000 for the house and all site improvements. The addition of the Pedder raw land purchases (\$36,000) gives a total of \$271,000. Barbara A. Yocum, *The House at Glenmont, Historic Structure Report, Edison National Historic Site, West Orange, New Jersey, Volume 1*, (Lowell, MA: U.S. Department of the Interior, Building Conservation Branch, Cultural Resources Center, 1998), 21, 32-33.
- 11 Barbara A. Yocum, *The House at Glenmont, Historic Structure Report, Edison National Historic Site, West Orange, New Jersey, Volume 1*, (Lowell, MA: U.S. Department of the Interior, Building Conservation Branch, Cultural Resources Center, 1998), 32, 33.
- 12 Besides having three children with Mina, Thomas Edison had three children from his first marriage to Mary Stilwell – Marion Estell, Thomas Alva Jr., and William Leslie.
- 13 Kristofer M. Beadenkopf, Zachary J. Davis, and Roderick S. Brown, *Archeological Overview and Assessment, Edison National Historic Site* (East Orange, NJ: The Louis Berger Group, Inc. 2007), 22, 23.
- 14 Barbara A. Yocum, *The House at Glenmont, Historic Structure Report, Edison National Historic Site, West Orange, New Jersey, Volume 1*, (Lowell, MA: U.S. Department of the Interior, Building Conservation Branch, Cultural Resources Center, 1998), 830.
- 15 Barbara A. Yocum, *The House at Glenmont, Historic Structure Report, Edison National Historic Site, West Orange, New Jersey, Volume 1*, (Lowell, MA: U.S. Department of the Interior, Building Conservation Branch, Cultural Resources Center, 1998), 40.

- 16 Barbara A. Yocum, *The House at Glenmont, Historic Structure Report, Edison National Historic Site, West Orange, New Jersey, Volume II*, (Lowell, MA: U.S. Department of the Interior, Building Conservation Branch, Cultural Resources Center, 1998), 856; Pierson 1922:593-594.
- 17 Barbara A. Yocum, *The House at Glenmont, Historic Structure Report, Edison National Historic Site, West Orange, New Jersey, Volume II*, (Lowell, MA: U.S. Department of the Interior, Building Conservation Branch, Cultural Resources Center, 1998), 856.
- 18 Kristofer M. Beadenkopf, Zachary J. Davis, and Roderick S. Brown, *Archeological Overview and Assessment, Edison National Historic Site* (East Orange, NJ: The Louis Berger Group, Inc. 2007), 23.
- 19 *Pioneers of American Landscape Design*, Charles A. Birnbaum and Robin Karson, eds. (New York: McGraw-Hill, 2000), 34.
- 20 Correspondence between Ernest Bowditch and Mrs. Thomas Edison, November 29, 1907.
- 21 Correspondence between Ernest Bowditch and Mrs. Thomas Edison, November 29, 1907
- 22 Correspondence between Ernest Bowditch and Mrs. Thomas Edison, October 13, 1909.
- 23 Correspondence between Ernest Bowditch and Mrs. Thomas Edison, February 10, 1910.
- 24 Michael Peterson, "Thomas Edison's Concrete House," *Invention and Technology* 11 (Winter 1996) p 50-56.
- 25 Date of construction is based on List of Classified Structures Database, Glenmont-Concrete Basin, S-4 (040682).
- 26 Specification of Greenhouses for Thomas A. Edison, Pierson U-Bar Company, 1907.
- 27 Barbara A. Yocum, *The House at Glenmont, Historic Structure Report, Edison National Historic Site, West Orange, New Jersey, Volume I*, (Lowell, MA: U.S. Department of the Interior, Building Conservation Branch, Cultural Resources Center, 1998), 42-43.
- 28 Melvin J. Weig, "The Glenmont Grounds," 7 October 1965, 1-2.
- 29 Peter Henderson and Co. Invoice, March 21, 1903 (Edison Archives, Voucher and other Financial Documents, 1875-1941).
- 30 Cost estimate from Bobbink and Atkins Importers and Nurserymen and Florists, September 15, 1909 (Edison Archives).
- 31 Memorandum from Maryanne Gerbauckas, Superintendent, *Park Staff Comments for the Preliminary Scope of Work for a Glenmont Edison National Historic Site* (National Park Service, February 12, 1993). Page 5, paragraph 1, according to George Crothers, hemlocks were probably planted ca. 1910-1925.
- 32 Letter from Mina Edison to the Olmsted Firm, October 18, 1916.
- 33 Correspondence from R.W. Kellow to Van Keuren and Son, Paving Contractors, October 7, 1920. (Edison Archives).
- 34 The Edison had three cows prior to 1934; they had two cows between 1934 and 1947. They were kept in the north pasture, but were frequently moved to the south (lower) lawn after they cut hay.
- 35 Oral history, Arthur Spiegler and C. Thore Hallstrom, at Glenmont, 22 October 1965,6.
- 36 Ellen Biddle Shipman designed a garden entitled, "the Moonlight Garden", for Mina Edison's winter home in Fort Myers, Florida in 1929.
- 37 *Pioneers of American Landscape Design*, Charles A. Birnbaum and Robin Karson, eds. (New York: McGraw-Hill, 2000), 346-351.
- 38 In 1902, the concept of a skating pond was realized on the property in an unknown location and supplied by water from the pump house. The casting of its concrete shell occurred in April, and additional related expenses were incurred in July.
- 39 Matthew Josephson, *Edison* (McGraw-Hill Book Company, Inc. New York: 1959).
- 40 Correspondence between Brooks Iron Works and J.V. Miller, April 15, 1929. (Edison Archives).
- 41 Barbara A. Yocum, *The House at Glenmont, Historic Structure Report, Edison National Historic Site, West Orange, New Jersey, Volume I*, (Lowell, MA: U.S. Department of the Interior, Building Conservation Branch, Cultural Resources Center, 1998), 46; Map of Glenmont, Estate of Thomas A. Edison, Atlantic Appraisals Company, NY, January 19, 1931.

# Cultural Landscape Report for Glenmont

## Thomas Edison National Historical Park

West Orange, New Jersey

### Thomas Edison Era, 1886-1931



National Park Service

Olmsted Center for Landscape Preservation

[www.nps.gov/oclp](http://www.nps.gov/oclp)

#### SOURCES

- 1 Atlantic Appraisals Company Inc., "Glenmont" Estate of Thomas A. Edison, Llewellyn Park, West Orange, NJ, 1931
- 2 1940 Aerial Photography of Glenmont.
- 3 Sanborn Map Company Fire insurance maps for West Orange, Essex County showing "Estate of Thomas Edison." Sanborn Maps 1923-24

#### DRAWN BY

Michael Commisso, AutoCAD 2000 and Illustrator CS 3, 2009

#### LEGEND

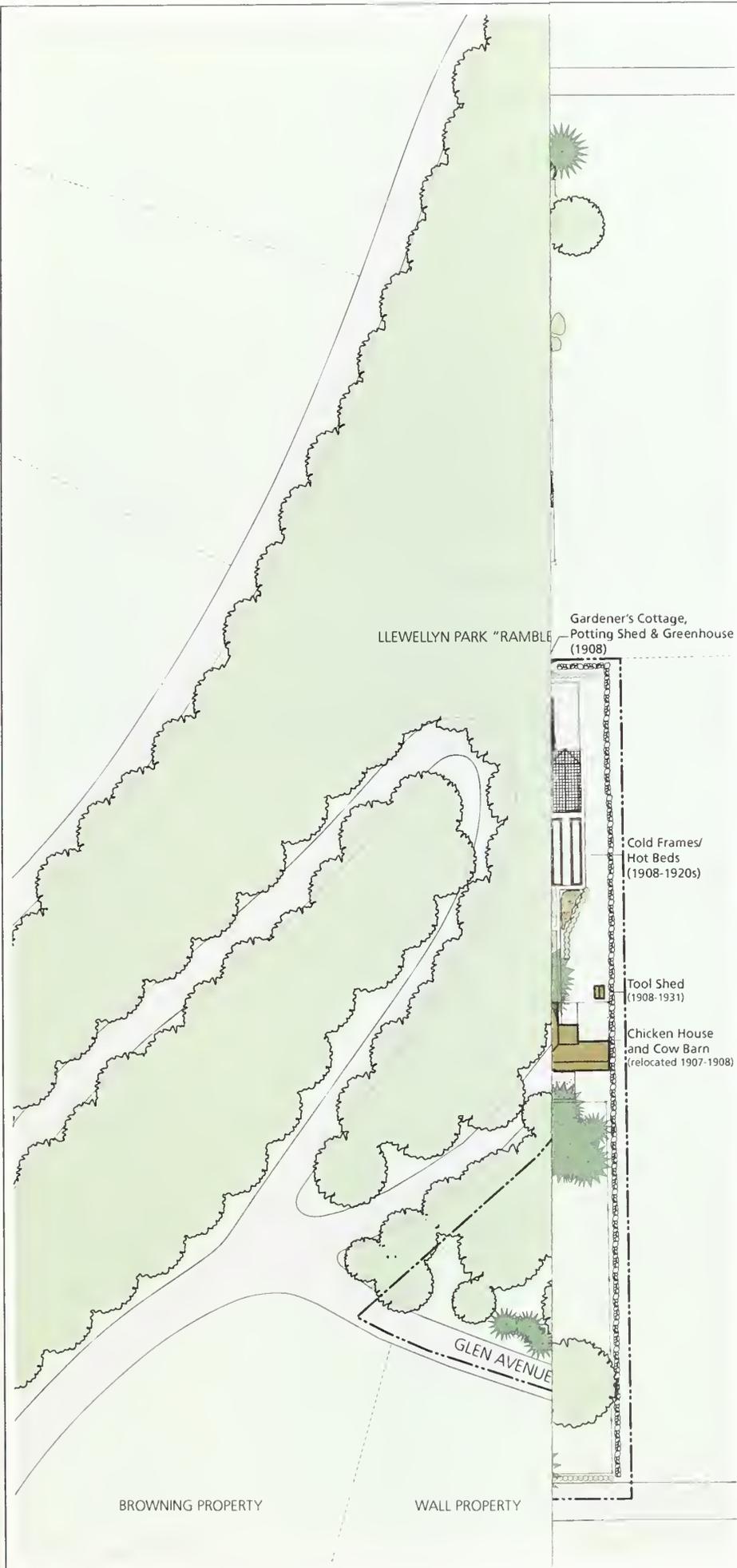
	Date feature added/built, if known
	Removed feature
	Building
	Paved vehicular circulation
	Unpaved vehicular circulation
	Path or walk
	Lawn
	Groundcover or herbaceous bed
	Deciduous specimen tree, wooded area
	Evergreen/coniferous specimen tree or shrub
	Deciduous/broadleaf evergreen shrub
	Stormwater drains
	Flagstone curbing
	Fence
	NPS Property Boundary
	1' Contour

#### NOTES

1. Plan shows conditions in 1931 with changes since 1886.
2. All features shown in approximate scale and location.
3. Contours shown only in project area and not in Cox Property or other adjoining properties.



Drawing 1.2



Thomas Edison National  
Historical Park  
West Orange, New Jersey

Thomas Edison Era, 1886-1931



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

SOURCES

- 1 Atlantic Appraisals Company Inc., "Glenmont" Estate of Thomas A. Edison, Llewellyn Park, West Orange, NJ, 1931
- 2 1940 Aerial Photography of Glenmont.
- 3 Sanborn Map Company Fire insurance maps for West Orange, Essex County showing "Estate of Thomas Edison." Sanborn Maps 1923-24

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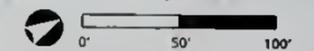
Michael Comisso, AutoCAD 2000 and Illustrator CS 3, 2009

LEGEND

- (1963) Date feature added/built, if known
- Removed feature
- Building
- Paved vehicular circulation
- Unpaved vehicular circulation
- Path or walk
- Lawn
- Groundcover or herbaceous bed
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Drawing 1.2



### **MINA EDISON, 1931-1947**

The Great Depression and revisions to federal tax policy significantly reduced large-scale estate building in the 1930s. After the Second World War, suburbanization spread to the rural areas surrounding major cities and many large estates were subdivided, which included a number of properties in Llewellyn Park.<sup>1</sup>

Between 1931 and 1947, the character of the Glenmont landscape was carefully preserved as Mina Edison continued to manage the property. During this period, improvements to the grounds were mostly discrete additions, which included the planting of a rose garden and the redesign of the flower garden adjacent to the greenhouse and gardener's cottage.

### **SUBDIVISION OF LLEWELLYN PARK**

As fortunes shrank during the Great Depression, the demand for country estates and large-scale suburban residences diminished, and when the United States entered World War II in 1941 construction ceased altogether. Similar to other developments throughout the region, many large estates within Llewellyn Park were subsequently subdivided. Within the park, the subdivision of land fell into two categories: estate dividing and lot splitting. Estate dividing consisted of razing the structures and dividing the property into numerous lots. Lot splitting was simply dividing the property to create two separate parcels. In this case, homes were generally not demolished. By the end of the 1940s and early 1950s, one-acre lots in Llewellyn Park grew by almost thirty-three percent and the majority of five- to ten-acre lots were split into lots of one to five acres in size. The increased number of lots within the park led to more proprietors, new roads and infrastructure, and a mix of architectural styles. Glenmont was the only property in Llewellyn Park that was not subdivided.<sup>2</sup>

### **RENOVATIONS AND MAINTENANCE OF GLENMONT GROUNDS**

Four years after the death of Thomas Edison, Mina Edison married her childhood friend Everett Hughes.<sup>3</sup> The two continued to reside at Glenmont, but also lived in Fort Myers, Florida, for several months of the year, and traveled extensively. They remained married for five years until Hughes' death in 1940.

Throughout the 1930s and 1940s, Mina, as she had during Thomas Edison's lifetime, continued to manage and make subtle changes to the Glenmont property. Within the house, a number of improvements were carried out, including renovations to the Den, Dining Room, West Bedroom, Conservatory, bathroom, and Sun Porch; there was also the construction of a new bathroom.<sup>4</sup>



Figure 1.43. Looking northwest, this view of the Glenmont landscape, 1920-1940, shows a well-manicured landscape with maturing trees and shrubs (EDIS Archives).

Similar to the house, the Glenmont grounds were maintained with a particularly high level of attention to horticultural and maintenance details (Figure 1.43). Lawns were mown and flowerbeds were well tended.<sup>5</sup> Receipts from the F.A. Bartlett Tree Experts and Bobbink and Atkins, Nurserymen and Florists, indicate that many trees and shrubs received cable bracing, pruning, and periodic feeding.<sup>6</sup> While Mina made conscious efforts to preserve the character of the Glenmont landscape at the time of Thomas Edison's death, she did make some changes beginning with the establishment of a rose garden in the west lawn between 1931 and 1935 and the redesign of the formal flower garden located near the greenhouse and gardener's cottage in 1937. For the new garden, Mina turned to a series of earlier 1929 Ellen Shipman plans entitled, *Sketch Plan for Rearrangement of the Garden of Mrs. Thomas Edison*, for inspiration. In the plans, Shipman created a rectangular garden based on an axis that ran north to south. A slight change in elevation was addressed by a rustic dry-laid stone retaining wall with steps, which physically divided the garden into two spaces. The larger garden space – closest to the greenhouse – was structured by a series of grass walks that broke the rectangular area into approximately eight beds. A reflecting pool marked the central intersection. Beyond the stone retaining wall to the south, a smaller garden room included two square beds and a series of grass walks that terminated in a semi-circular loop at the far end with a pool at its center. The garden was embellished with a marble seat at the northern end of the main axis and a privet hedge bordered the driveway (Figure 1.44).

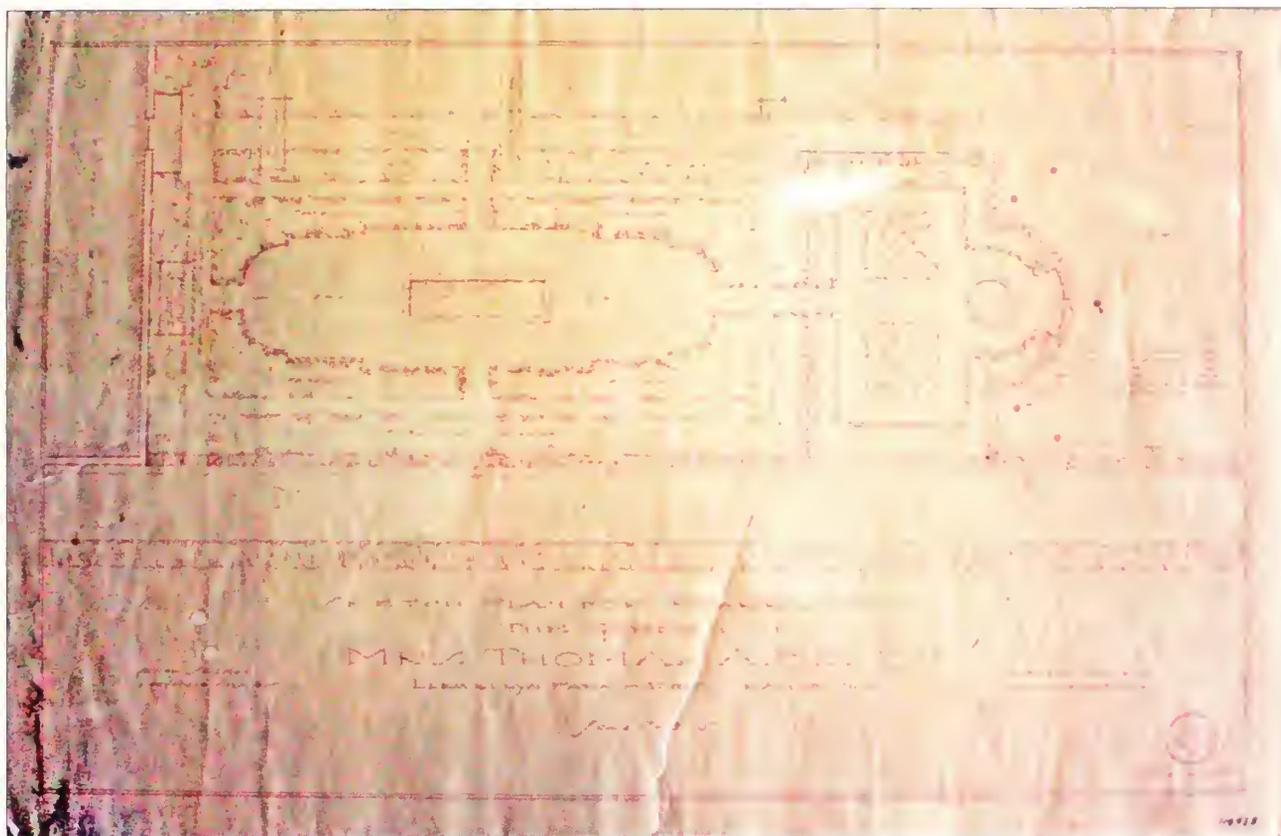


Figure 1.44. Landscape architect Ellen Shipmen provided a series of garden plans for the south side of the greenhouse complex in 1929; it was revisited in 1937 (EDIS Archives).

Although it is uncertain whether or not Shipman’s plans were ever implemented, Mina chose to include features that had been recommended in the plans:<sup>7</sup> It was rectangular, incorporated axial grass paths, and was embellished by old-fashioned naturalized plantings and perennial borders that included peonies, hollyhocks, irises, achillea, larkspur, anthemis, and lilies. In addition, a rustic dry-laid stone retaining wall was constructed and a marble bench surrounded by arborvitae was added.<sup>8</sup>

During the same year, Mina received four chestnut saplings from the Forestry Service in Pennsylvania.<sup>9</sup> The gift may have be attributed to Thomas Edison’s professional relationship with Gifford Pinchot, who at the time, was living in Pennsylvania. Pinchot is generally regarded as the “father” of American conservation because of his great and unrelenting concern for the protection of the American forest.<sup>10</sup> Three Chinese chestnuts were planted near the swimming pool (now referred to as the concrete basin), and an American chestnut was placed in the front lawn.

Between 1935 and 1940, a number of changes took place in the Glenmont landscape. The planted islands within Glenmont’s main drive were altered based on damage caused by vehicles. Irises found in the triangular island, located at the southeastern end of the oval lawn area, were removed and replaced with rhododendrons (*rhododendrons sp.*) and yews (*taxus sp.*) to solve that issue



Figure 1.45. (left) The triangular island bed on the left, filled with a mass of irises, was eventually removed in favor of shrubs that would not be as easily run over by vehicles (EDIS Archives).



Figure 1.46. (right) This view looking west shows the deutzia shrubs, located along the southern edge of the oval lawn area, c. 1920-1940. The plants were removed between 1935 and 1940 (EDIS Archives).

(Figure 1.45)<sup>11</sup>. The triangular island near the northeastern corner of the house was reshaped with rounded corners, and the geraniums were removed and later planted with begonias. Other changes to the landscape included the planting of rhododendrons along the perimeter of the laundry yard and the removal of the playhouse and summerhouse to the north of the house, and the deutzias at the southern end of the oval lawn (Figure 1.46). Meanwhile, rhododendrons were planted along the perimeter of the laundry yard. Upon completion of these improvements, Mina commented in a 1940 letter to her son, Charles Edison, that “Glenmont looks so green and perfect.” The condition and extant features of the landscape were captured in an aerial photograph taken in 1940 (Figure 1.47).<sup>12</sup>

#### **Hollywood comes to Glenmont, 1940**

In 1940 Hollywood paid tribute to Thomas Edison with *Edison the Man*, a Metro-Goldwyn-Mayer production, starring Spencer Tracy and Rita Johnson. The world premiere of the film, held at the Hollywood Theatre in Orange, was part of a two-day festival called the “Pageant of Progress.” During the festivities, a luncheon was held at Glenmont. Mina’s plans to have Spencer Tracy plant a commemorative oak – Thomas Edison’s favorite tree – were cancelled by an unexpected thunderstorm. However, the tree was later planted by the gardeners in the lower lawn, near the intersection of Park Way and Glen Avenue.<sup>13</sup>

#### **SALE OF GLENMONT, 1946**

On June 27, 1946, Mina sold Glenmont to Thomas A. Edison, Inc. – the company founded by Thomas Edison in 1911. However, the sale stipulated that “Glenmont and its contents...be preserved as a memorial to my dear husband and his work.”<sup>14</sup> By this time, the company had taken control of all aspects of Edison’s business enterprises, including the Edison laboratories. Mina retained a life estate in the property, and remained in the residence until her death on August 24, 1947.



Figure 1.47. A 1940 aerial photograph of the Glenmont property shows the grounds, buildings, and circulation (Aerial Viewpoint).

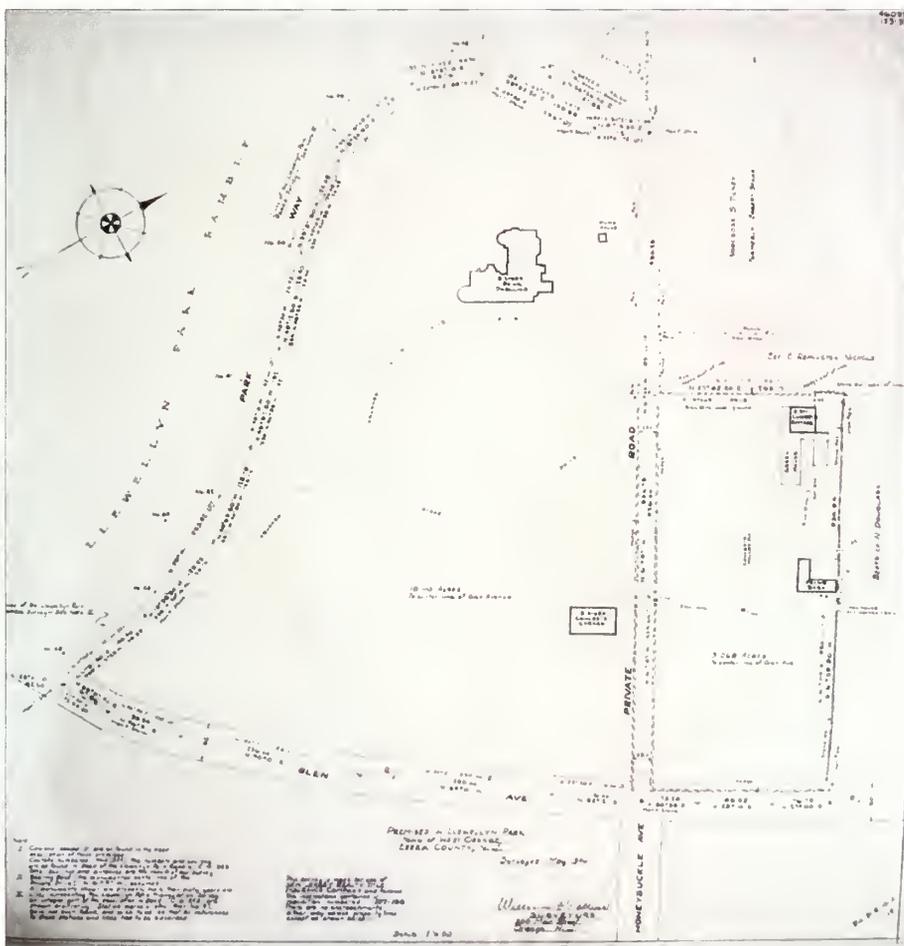


Figure 1.48. A 1946 survey of Glenmont, completed by Williams and Collins for the New Jersey Realty Title Insurance Company, documents the layout and spatial organization of the landscape, and the placement of buildings, structures, drives, and paths (EDIS Archives).

At the time of the sale, a survey of Glenmont was completed by Williams and Collins for the New Jersey Realty Title Insurance Company. With exception to the loss of the summer house and playhouse, the survey documented that there were no significant changes to the layout and spatial organization of the landscape, specifically the placement of buildings, structures, and drives (Figure 1.48).

### LANDSCAPE SUMMARY, 1947

Despite the many properties that were subdivided in Llewellyn Park between 1931 and 1947, the Glenmont landscape remained relatively unchanged by the end of this period. Besides the removal of the playhouse and summer house, the buildings and structures remained in the same locations and in good condition. The islands, located within the main drive were minimally altered, while the rest of the circulation systems were relatively unchanged.

Throughout the landscape, groupings of trees and shrubs continued to grow interspersed within the expansive lawn. Views from the house to the lower lawn were enhanced when the deutzia shrubs were removed along the southern edge of the oval lawn area. The barn, laundry yard, garage, and other service buildings were still in a wooded area, dominated by evergreen trees. The redesigned formal garden now enhanced the south elevation of the greenhouse, gardener's cottage, and potting shed. The rest of the gardens remained intact.

### ENDNOTES

- 1 John Auwaerter, *Cultural Landscape Report for the Mansion Grounds Marsh-Billings-Rockefeller National Historical Park, Volume I, Site History* (Boston: National Park Service, 2005), 147-48.
- 2 Keith Spaulding Robbins, *A History of the Development of the First Planned American Suburban Community: Llewellyn Park, West Orange* (Columbia College, The George Washington University, 1985), 110-130.
- 3 Mina Edison was married to Edward Hughes from October 30, 1935 until his death early in 1940. Hughes lived at Glenmont during those years.
- 4 Barbara A. Yokum, *The House at Glenmont Historic Structure Report, Edison National Historic Site, West Orange, New Jersey* (National Park Service: Building Conservation Branch, Cultural Resources Center, North Atlantic Region, 1998), 63.
- 5 Receipt, the F.A. Bartlett Tree Expert, November 1932.
- 6 F.A. Bartlett Tree Expert Company, Invoice, November 1932; letter from Bobbink & Atkins, Nurserymen & Florists, Rutherford, NJ to Mrs. Mina M. Edison Hughes at Llewellyn Park, West Orange, NJ, 17 November 1938. (Edison Archives, Edison Family Papers, Series 1, Mina Miller Edison Correspondence, Box 5, Folder, 1938).
- 7 It is assumed—based on 1940 aerial photography, images taken in the 1950s, and present-day conditions, that Ellen Shipman's plans entitled *Sketch Plan for Rearrangement of the Garden of Mrs. Thomas Edison* were never implemented. In the plan, Shipman proposes the installation of a pool in the center of the garden and a small garden room beyond the stone retaining wall. In addition, she calls for the relocation of the middle rose arbor and the transplanting of two existing apple trees. However, the pool and small garden room are absent in the 1940 aerial photograph and c. 1950s images; and the rose arbor and apple trees were situated in their original location.
- 8 The rustic-stone retaining wall was constructed above a 1880s linear cistern. Iron bars were placed below the steps to prevent sinking. (Conservation between Arthur Spiegler and Tom Hallstrom at Glenmont, October 8, 1965).

- 9 Although it is not known why Mina received chestnut saplings from the Forestry Service in Pennsylvania, the gift may be attributed to Thomas Edison's relationship with Gifford Pinchot.
- 10 The Forest History Society, U.S. Forest Service History: Gifford Pinchot (1865-1946), <http://www.foresthistory.org>.
- 11 Letter from Bobbink & Atkins, Nurserymen & Florists, Rutherford, NJ to Mrs. Mina M. Edison Hughes at Llewellyn Park, West Orange, NJ, 17 November 1938. (Edison Archives, Edison Family Papers, Series 1, Mina Miller Edison Correspondence, Box 5, Folder, 1938).
- 12 A 1940 letter from Mina Edison to Charles Edison (Edison Archives, Charles Edison Collection, Box 1).
- 13 Victor Zakrzewski, *A History of West Orange* (Orange, New Jersey: Worrall Press, 1975), 95-96.
- 14 Essex County Registry of Deeds, *Mina M. Edison to T.A.E., Inc.*, Book Z107, 124-127.



# Cultural Landscape Report for Glenmont

## Thomas Edison National Historical Park

West Orange, New Jersey

Mina Edison, 1931-1947



National Park Service

Olmsted Center for Landscape Preservation

[www.nps.gov/oclpl](http://www.nps.gov/oclpl)

### SOURCES

- Williams and Collins Surveyors, *Premises in Llewellyn Park, Town of West Orange, Essex County, N.J.*, Surveyed May 1946
- 1940 Aerial Photograph.
- Sanborn Map Company *Fire insurance maps for West Orange, Essex County showing "Estate of Thomas Edison."* Sanborn Maps 1939 and 1944

### DRAWN BY

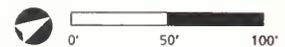
Michael Commisso, AutoCAD 2000 and Illustrator CS 3, 2009

### LEGEND

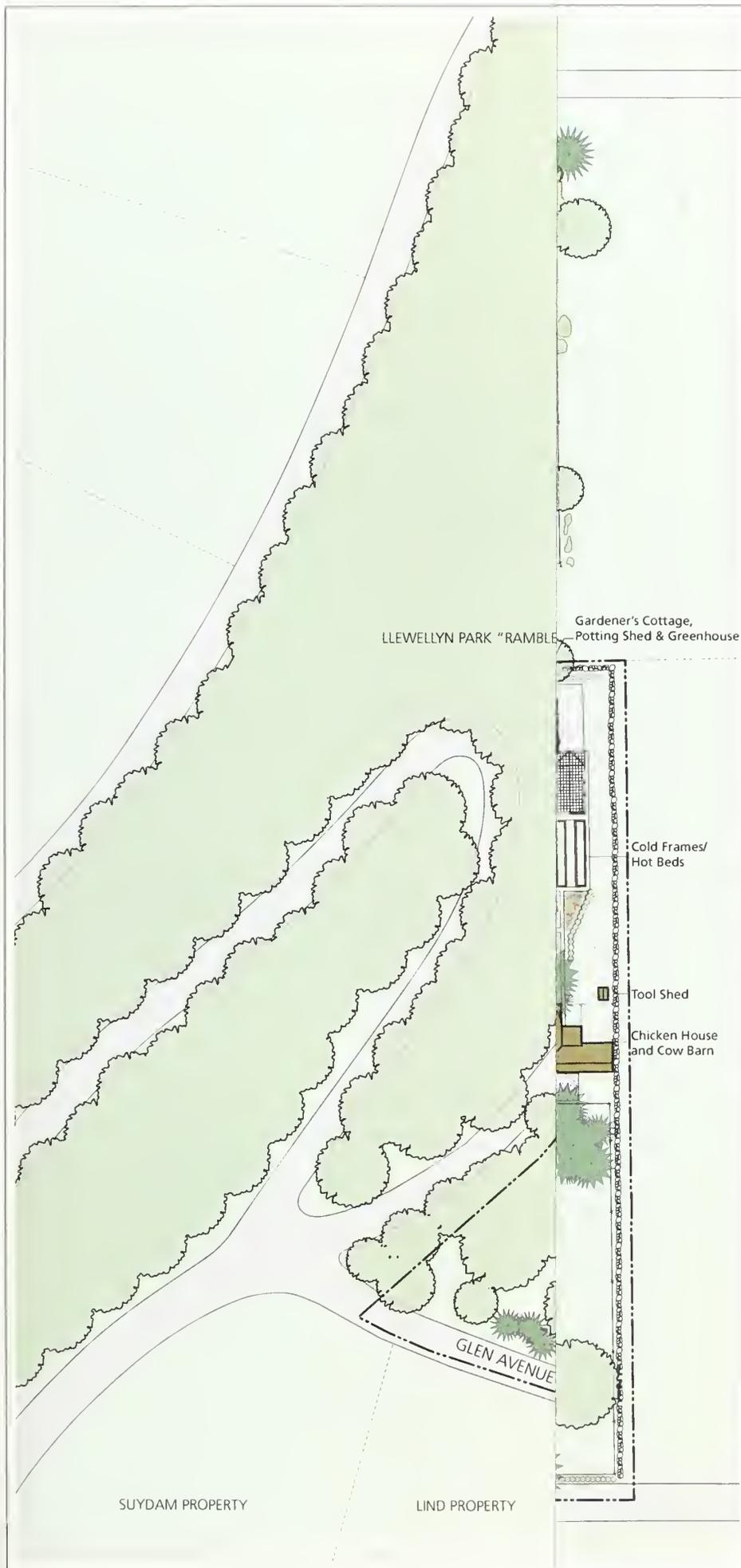
	Date feature added/built, if known
	Removed feature
	Building
	Paved vehicular circulation
	Unpaved vehicular circulation
	Path or walk
	Lawn
	Groundcover or herbaceous bed
	Deciduous specimen tree, wooded area
	Evergreen/coniferous specimen tree or shrub
	Deciduous/broadleaf evergreen shrub
	Stormwater drains
	Flagstone curbing
	Fence
	NPS Property Boundary
	1' Contour

### NOTES

- Plan shows conditions in 1947 with changes since 1931.
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Drawing 1.3



Cultural Landscape Report  
for Glenmont

Thomas Edison National  
Historical Park  
West Orange, New Jersey

Mina Edison, 1931-1947



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

SOURCES

- Williams and Collins Surveyors, *Premises in Llewellyn Park, Town of West Orange, Essex County, N.J.*, Surveyed May 1946
- 1940 Aerial Photograph
- Sanborn Map Company Fire insurance maps for West Orange, Essex County showing "Estate of Thomas Edison" Sanborn Maps 1939 and 1944

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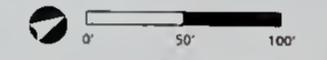
Michael Comisso, AutoCAD 2000 and Illustrator CS 3, 2009

LEGEND

- (1963) Date feature added/built, if known
- Removed feature
- Building
- Paved vehicular circulation
- Unpaved vehicular circulation
- Path or walk
- Lawn
- Groundcover or herbaceous bed
- Deciduous specimen tree, wooded area
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NOTES

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Drawing 1.3



## **THOMAS A. EDISON, INC. OWNERSHIP, 1946-1959**

Following the death of Mina Edison in 1947, Thomas A. Edison, Inc. minimally maintained the house and grounds and occasionally used the unoccupied home for entertaining. During these years, gardening ceased, many buildings and structures deteriorated, and the majority of vegetation became overgrown. In 1955, Glenmont was designated as the Edison Home National Historic Site, and the property later was acquired by the National Park Service in 1959.

## **PLANNING GLENMONT'S FUTURE**

After Mina Edison's death on August 24, 1947, Thomas A. Edison, Inc.—the company formed by Thomas Edison—used the house as a site for receptions and later as a limited-use museum.<sup>1</sup> During this time while many large country estates in Llewellyn Park were being demolished and subdivided, planning efforts began to define the future use of the Glenmont property. Thomas A. Edison, Inc. and the Thomas Alva Foundation proposed to transform the Edison Laboratories from an experimental facility into a research center. They also considered using Glenmont as the president of the center's house and as a place for scientific meetings.<sup>2</sup> As part of their vision, various properties within Llewellyn Park were purchased with the intent to construct a private road to connect the Edison Laboratories and Glenmont, and to eliminate the use of Llewellyn Park roads by employees and visitors of Glenmont (Figures 1.49 and 1.50).

Upon hearing of these plans and the potential to disrupt the character and atmosphere of Llewellyn Park, a meeting was held between the proprietors of Llewellyn Park and Charles Edison, president of Thomas A. Edison, Inc. Besides hearing the proposed plans from Charles Edison, the meeting gave residents of the Park the opportunity to voice their opinions during the meeting. Visions for the future of Glenmont varied. For example, some residents suggested that the house be divided into apartments.<sup>3</sup> At the conclusion of the meeting, a resolution was adopted, stating:

...the property owners of Llewellyn Park wish to record with Governor Edison, and through his kind offices with the present and future Trustees of the Edison Foundation, their belief that the use of Glenmont as a memorial, open to the public, even with restricted or controlled admissions, would be destructive of the purposes for which the Park was created nearly a hundred years ago.

That the Park was planned and has continued as a residential district; that it was because of this that the late Thomas A. Edison chose it for his home, and established outside the Park gates the offices and laboratories in which he carried out the works of his genius; and that it is the feeling of the Proprietors that the use of the property for other than

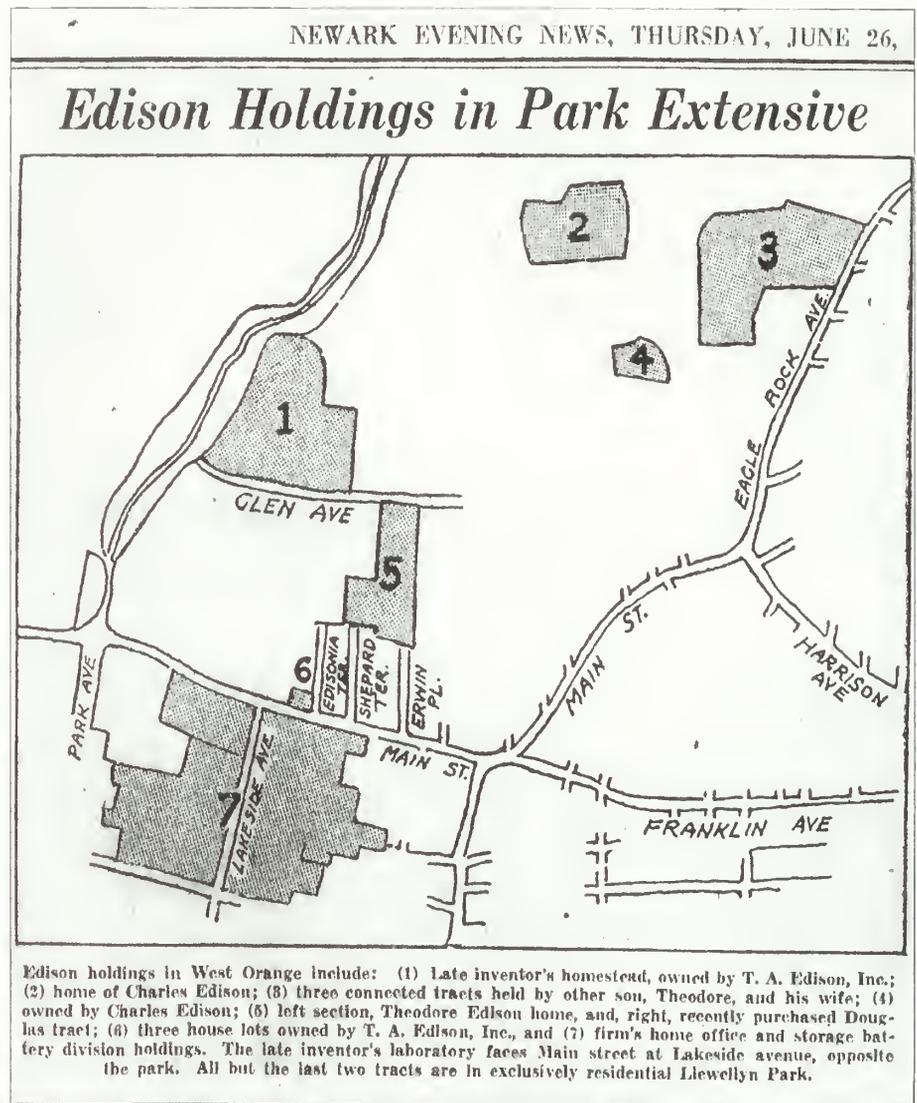


Figure 1.49. A 1947 newspaper article showed the various properties in Llewellyn Park that were owned by Charles Edison, Thomas A. Edison, Inc., and Theodore Edison. Early efforts were made to have a private road constructed, connecting the Edison Laboratories and Glenmont (Newark Evening News, June 1947).

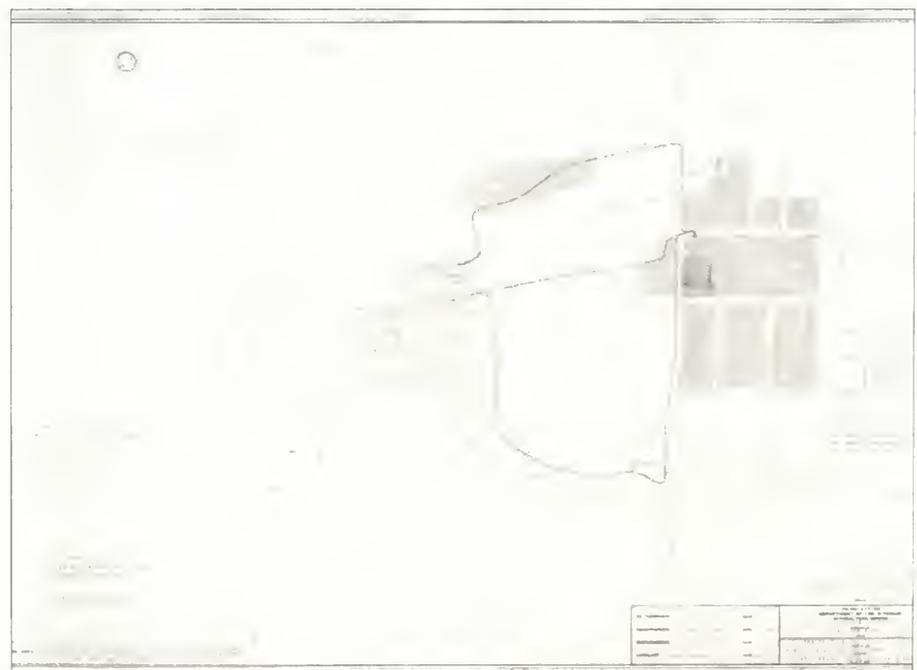


Figure 1.50. A 1955 plan, entitled "Alternate Planning Study," shows the proposed vehicular route connecting the Edison Laboratories and Glenmont (EDIS Archives, included as part of the 1966 Master Plan, updated 1977).



Figure 1.51. (left) Looking northeast, this view of the west elevation of the Glenmont property shows the rose garden and weeping beech in 1947 (EDIS Archives).



Figure 1.52. (right) View looking south at the north elevation of the Glenmont property shows the island planted with begonias in the foreground, a Norway Maple, and foundation plantings surrounding the house. (EDIS Archives).

residential purposes would be contrary to the spirit of neighborly consideration that characterized the late Thomas A. Edison, as it has Mrs. Edison and their descendents here resident.

That the Proprietors hereby express the opinion that the residence of the late Mr. Edison, if it is to be maintained, should only be used as a residence for one family, in keeping with the traditions of the Park and that if it is not to be so used, any future development of the property should in no event be inconsistent with the Park Deed of Trust and the Zoning ordinance of the Town of West Orange.<sup>4</sup>

When early attempts to find a new use for the property were unsuccessful, Glenmont's future remained uncertain for years. Many people began to consider the estate as a unique property that may have outgrown its usefulness.

### **A FORGOTTEN LANDSCAPE**

The 1946 ownership transfer of Glenmont to Thomas A. Edison, Inc. resulted in significant landscape changes. Prior to Mina's death in 1947, Glenmont was maintained according to the standards that prevailed during Edison's life. The condition of the landscape in 1947 is evidenced in photographs taken four days after Mina's death<sup>5</sup> (Figure 1.51-1.54). Under Thomas Edison, Inc.'s stewardship, improvements were made to the interior and exterior of the house, but the grounds were gradually simplified.<sup>6</sup> An August 31, 1947 letter, described the management approach for Glenmont as "House to remain open on a reduced scale...and discontinue greenhouse, except living quarters for gardeners, cows and chickens, chauffeur and garage including living quarters, garden, all but one car, and laundry."<sup>7</sup>



Figure 1.53. This view of the east elevation, looking northwest, shows the house covered in vegetation in 1947 (EDIS Archives).



Figure 1.54. This 1947 view of the south elevation of the Glenmont property, looking north, shows the majestic weeping beech tree and the weeping cherry tree. (EDIS Archives).

With exception to the planting of approximately twenty trees, the Glenmont grounds showed signs of physical decline by the 1950s. A portion of east end of the greenhouse (used for seedlings and chrysanthemums, constructed in the 1920s) began to deteriorate and eventually had to be removed. Within the west lawn, a portion of the historic paths became overgrown and sod-covered. With the exception of the flower garden located along the south elevation of the greenhouse, the majority of gardens found within the property fell into disuse (Figures 1.55-1.58). In addition, several of the fruit trees, located within the fruit garden and near the vegetable garden, were also removed due to age-related decline or disease. Burning areas were soon established in the former vegetable garden and pasture.

Figure 1.55. A 1947 view looking west shows the extensive flower gardens that surrounded the greenhouse and gardener's cottage and potting shed. By 1959, the majority of the Glenmont gardens were either removed or fell into disuse (EDIS Archives).



#### **GLENMONT MEMORIALIZED, 1955**

Following the unsuccessful efforts to find a new use for Glenmont, Charles Edison eventually turned his attention to seeing that Glenmont was formally preserved. He expressed his vision in a 1953 letter to his sister Madeleine Edison:

My dream for Glenmont of course has been that it would be preserved intact just the way mother and father left it so far as appearance and the 'lived in' feeling is concerned...and that it would be operated on a very high plane for the benefit of the more appreciative citizens of the country.<sup>8</sup>

Figure 1.56. (left) This 1950s view of the flower gardens located along the south elevation of the greenhouse, gardener's cottage and potting shed (EDIS Archives).

Figure 1.57. (right) Looking north, this 1950s view of the flower garden located along the south elevation of the greenhouse, gardener's cottage and potting shed shows the planted beds and arbors (EDIS Archives).

On December 6, 1955, Glenmont was designated by the U.S. Secretary of the Interior as the "Edison Home National Historic Site."<sup>9</sup> A cooperative agreement between the United States of America and Thomas A. Edison, Inc. was signed that same day and stated that Glenmont was to be preserved and administered "for the inspiration and benefit of the people of the United States." While Thomas A. Edison, Inc. continued to own and maintain the property, it was made available for public use.<sup>10</sup>





Figure 1.58. Looking west, this 1950s image of the Glenmont property shows the oval lawn and mature vegetation surrounding the house (EDIS Archives).

### LANDSCAPE SUMMARY, 1959

By 1959, the Glenmont landscape still retained its picturesque character, but lacked the vibrant agrarian atmosphere of earlier years. Cows and chickens were no longer part of the landscape, and while all buildings and structures were intact and remained in the same locations, they required extensive repairs. The house was maintained in good condition, but the garage, greenhouse, gardener's cottage and potting shed, and other service buildings were neglected and unused.

With the exception of a section of path abandoned in the west lawn, the circulation patterns found throughout the property remained intact. The most notable change to the landscape at the end of the period was the absence of the vegetable garden, south of the garage, and the flower and cutting gardens near the greenhouse.

### ENDNOTES

- 1 Edison's companies were reorganized under Thomas A. Edison, Inc. in 1911.
- 2 The Thomas Alva Edison Foundation, incorporated as a nonprofit organization in 1946, consisted of men who had previously worked with Thomas Edison. They set out to collect a fund which would be held in trust to be used to sustain Edison's memory and provide a lasting memorial to him. *Minutes of the Special Meeting of the Proprietors of Llewellyn Park*, June 24, 1947.
- 3 Letter from Joseph Berle to Charles Edison, 10 September 1947 (EDIS Archives, Charles Edison Collection, Box 1). The letter states, "Please do not allow Glenmont to go the way the Douglas, Colby, Squire, and Merck buildings went. It seems to me that this spacious building could be divided up into about ten apartments and rented to folks who would appreciate the atmosphere and surroundings."
- 4 *Minutes of the Special Meeting of the Proprietors of Llewellyn Park*, 24 June 1947.
- 5 All photographs, dated 1947, were taken on 28 August 1947, the day after Mina Edison's death. The photographer was George Van of Court Street, Newark, New Jersey.
- 6 Improvements made to the exterior and interior of the house included painting of the exterior, repointing of the chimneys and south stoop, painting of the service rooms, carpentry repairs, roof repairs, reupholstering and repair of furniture, and the procurement of new carpets and new curtains. Barbara Yocum. *The House at Glenmont Historic Structures Report, Volume I and II* (North Atlantic Region: National Park Service, 1998), 67.
- 7 Letter, 31 August 1947 Charles Edison Fund Collection, Charles Edison Papers, Box 4, Folder Dates-1902, 1947, 1949, 1957-1960, 1962.

- 8 Letter from Charles Edison to Madeleine [Edison] Sloane, 27 December 1953 (Folder Glenmont Inventory – 1947-48, 1950, 1953, No Date).
- 9 Secretarial Order 20 F.R. 9347 [F.R. Doc. 55-10021, filed 13 December 1955].
- 10 U.S. Department of the Interior, *the Master Plan: Edison National Historic Site* (National Park Service, 1969).



# Cultural Landscape Report for Glenmont

## Thomas Edison National Historical Park

West Orange, New Jersey

Thomas A. Edison, Inc.  
Ownership, 1946-1959



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

### SOURCES

1. Williams and Collins Surveyors, *Premises in Llewellyn Park, Town of West Orange, Essex County, N.J.*, Surveyed May 1946.
2. 1955 Geological Survey, revised 1970
3. Harold J. Hamilton Associates, *Topographic Survey of Glenmont Unit, Edison National Historic Site, West Orange, NJ*, 1960.

### DRAWN BY

Michael Comisso, AutoCAD 2000 and Illustrator CS 3, 2009

### LEGEND

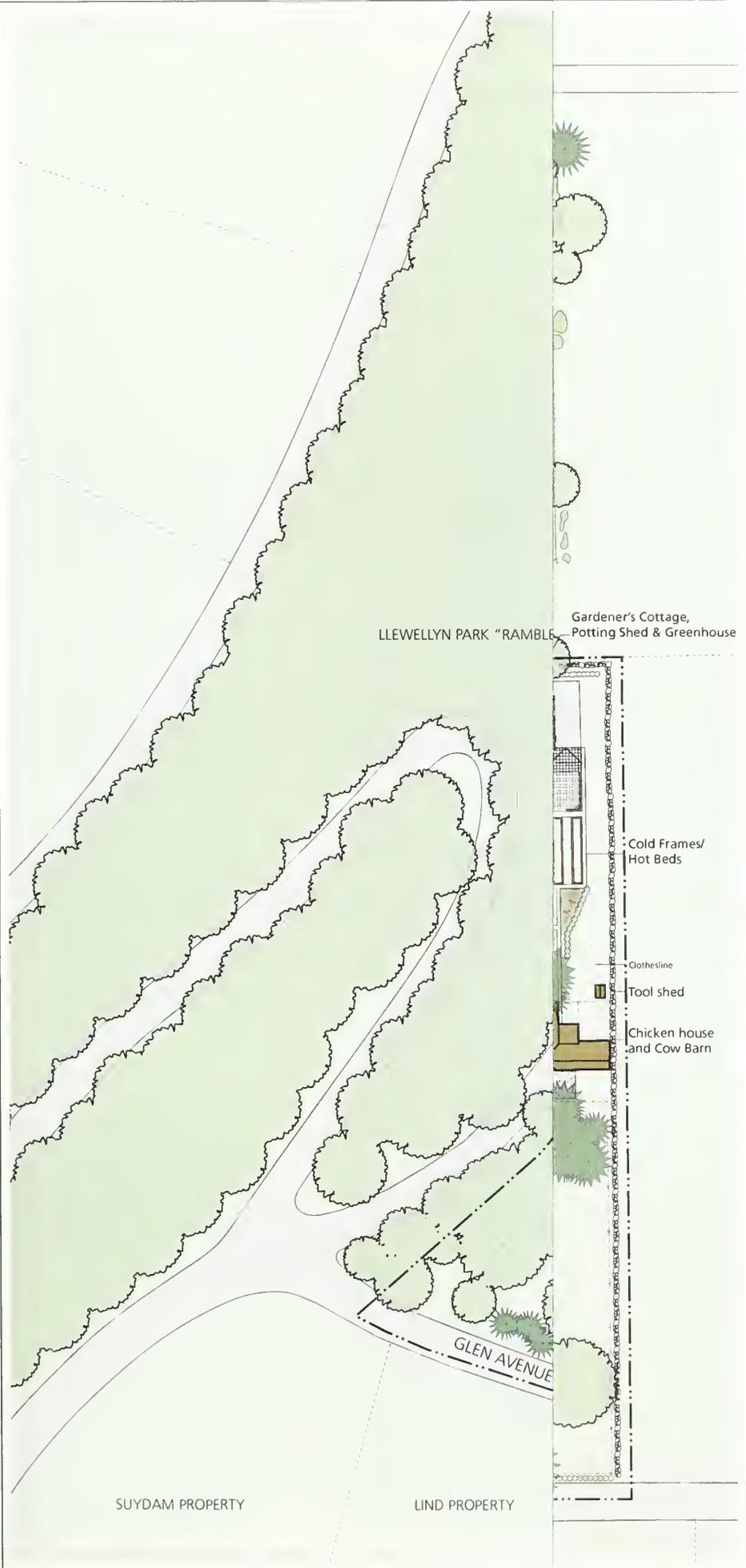
<span style="border: 1px solid black; padding: 2px;">(1963)</span>	Date feature added/built, if known
	Removed feature
	Building
	Paved vehicular circulation
	Unpaved vehicular circulation
	Path or walk
	Lawn
	Groundcover or herbaceous bed
	Deciduous specimen tree, wooded area
	Evergreen/coniferous specimen tree or shrub
	Deciduous/broadleaf evergreen shrub
	Stormwater drains
	Flagstone curbing
	Fence
	NPS Property Boundary
	1' Contour

### NOTES

1. Plan shows conditions in 1959 with changes since 1946.
2. All features shown in approximate scale and location.
3. Contours shown only in project area and not in Tilney Property.



Drawing 1.4



Cultural Landscape Report  
for Glenmont

Thomas Edison National  
Historical Park

West Orange, New Jersey

Thomas A. Edison, Inc.  
Ownership, 1946-1959



National Park Service  
Olmsted Center for Landscape Preservation  
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SOURCES

- Williams and Collins Surveyors, *Premises in Llewellyn Park, Town of West Orange, Essex County, N.J.*, Surveyed May 1946
- 1955 Geological Survey, revised 1970
- Harold J. Hamilton Associates, *Topographic Survey of Glenmont Unit, Edison National Historic Site, West Orange, NJ*, 1960

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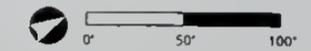
Michael Comisso, AutoCAD 2000 and Illustrator CS 3, 2009

LEGEND

- (1963) Date feature added/built, if known
- Removed feature
- Building
- Paved vehicular circulation
- Unpaved vehicular circulation
- Path or walk
- Lawn
- Groundcover or herbaceous bed
- Deciduous specimen tree, wooded area
- Evergreen/coniferous specimen tree or shrub
- Deciduous/broadleaf evergreen shrub
- Stormwater drains
- Flagstone curbing
- Fence
- NPS Property Boundary
- 1' Contour
- Cold Frames/ Hot Beds
- Goathead
- Tool shed
- Chicken house and Cow Barn
- Burning area (1950)

NOTES

- Plan shows conditions in 1959 with changes since 1946.
- All features shown in approximate scale and location.
- Contours shown only in project area and not in Tilney Property.



Drawing 1.4



## **FEDERAL OWNERSHIP, 1959-2009**

Similar to other regions of the country, West Orange shifted its economic focus from industrial operations to the service sector after 1959. The construction of the Interstate Highway 280 and the resultant taking of Llewellyn Park lands had a detrimental impact on the park landscape. While Glenmont itself was minimally impacted by these developments, the rural character of the entire park was slightly diminished.

The Glenmont property was deeded to the United States of America, specifically to the National Park Service, by the McGraw-Edison Company (formerly Thomas A. Edison, Inc.) on July 22, 1959. In subsequent years, the National Park Service made several improvements to the Glenmont landscape to enhance the beauty and to underscore the historic character of the Glenmont grounds, including the restoration and/or rehabilitation of many buildings and structures, as well as alterations to meet the basic needs of the visiting public. These changes included the installation of directional signs, lighting, trash receptacles, interpretative signage, and parking areas. Despite the later changes, the Glenmont landscape retains features that were extant during Thomas Edison's occupancy: The picturesque landscape is still evident in its rural character, sweeping lawns, curvilinear drives and paths, and distant views.

## **LLEWELLYN PARK AND HIGHWAY CONSTRUCTION**

In addition to the continued subdivision of land within Llewellyn Park during the 1960s and 1970s, the greatest impact on the rural character and integrity of the park occurred with the construction of Interstate Highway 280, begun in 1960 and completed in 1973. Despite years of opposition by proprietors of Llewellyn Park and the West Orange community, the eight-lane thoroughfare was eventually built through the western portion of the park, substantially reducing its overall acreage. While a tunnel through First Watchung Mountain was initially considered, a 120-foot cut through the mountain—one of the deepest cuts east of the Mississippi River, was instead constructed.<sup>1</sup> As a consequence of the freeway, Llewellyn Park was negatively impacted by the obvious loss of land, the increased development along the Park's boundaries, and the increased noise pollution that changed the rural character of the area.

## **PARK LEGISLATION, 1959-2009**

Following its designation as the "Edison Home National Historic Site" in 1955, Glenmont was donated to the United States of America by the McGraw-Edison Company (formerly Thomas A. Edison, Inc.) on July 22, 1959.<sup>2</sup> A ceremony to mark the formal transfer of ownership to the federal government was held outside

the main entrance of the house at Glenmont on August 3, 1959.<sup>3</sup> At the ceremony, Charles Edison presented the deed and key to the front door to Assistant Secretary of the Interior Roger Ernst and remarked:<sup>4</sup>

Secretary Ernst, on behalf of the McGraw-Edison Company, I am privileged at this time formally to turn over to you, as trustee for the people of the United States, the custody and management of Glenmont. I hand to you this deed to the property. This document is important and necessary. But that which I also shall give you, I believe is even more important: that is the key to the entrance to Glenmont.

I hope that in the years ahead, it will also symbolize as a key for unlocking from within the hearts of visitors to Glenmont all full pride in America's heritage and confidence in her future.<sup>5</sup>

Also that day, a Memorandum of Agreement between the National Park Service and Trustees and the Committee of Managers of Llewellyn Park was executed relative to the management of Glenmont.<sup>6</sup> Under the agreement, daily visitation to Glenmont was limited to 100, Monday through Saturday. Vehicles with a capacity of more than nine persons were not permitted in Llewellyn Park, nor were the sale of food or drink. Souvenirs were prohibited, and visitors' services at Glenmont were confined to interpretive tours and walks. Further provisions prohibited the building of new structures or parking areas that were unacceptable to park trustees and managers, and restricted the placement and design of signs.<sup>7</sup>

On September 5, 1962, Edison Home National Historic Site and Edison Laboratory National Monument were combined and designated as the Edison National Historic Site.<sup>8</sup> As part of the Omnibus Public Land Management Act of 2009 (Public Law 111-11, Section 7110), Edison National Historic Site was re-designated as the Thomas Edison National Historical Park in March of 2009.<sup>9</sup>

#### **PLANNING AND DEVELOPING GLENMONT FOR PUBLIC USE**

Soon after the acquisition of Glenmont in 1959, the National Park Service began preparation of a master plan intended to guide park development and operations. The initial priority at Glenmont was to inventory and assess the condition of its resources, as well as to immediately stabilize the buildings and landscape. As part of this process, a series of photographs were taken in October 1960, followed by architectural drawings in 1961. The photographs and drawings documented the interior and exterior appearance of the buildings and structures on the property, along with the landscape (Figures 1.59-1.76). Later reports were primarily focused on the buildings.<sup>10</sup>



Figure 1.59. View looking at the southeast portion of the property from the second floor of the house in 1960. Note the expanse lawn and mature vegetation (EDIS Archives, #12.435.105).



Figure 1.60. View looking at the north portion of the property from the house's widow walk in 1960 (EDIS Archives, #6807).



Figure 1.61. View looking at the northwest portion of the property from the second floor of the house in 1960. Note the rose garden, removed in the 1980s (EDIS Archives, #6808).

Figure 1.62. View looking at the west side of the property from the second floor of the house in 1960. Note the weeping beech, replaced in c.1981(EDIS Archives, #6809).



Figure 1.63. View looking at the southern portion of the property from the second floor of the house in 1960. Note the existence of mature trees and shrubs within the oval lawn area. Many of these trees and shrubs were later removed (EDIS Archives, #6810).



Figure 1.64. View looking at the southern portion of the property from the second floor of the house in 1960. Note the existence of mature trees and shrubs within the oval lawn area. Many of these trees and shrubs were later removed (EDIS Archives, #6811).



Figure 1.65. View looking at the southeastern portion of the property from the second floor of the house in 1960. In the foreground is a Norway Maple, a favorite of the Edison family, removed in the 1960s (EDIS Archives, #6812).



Figure 1.66. View looking west at the northeastern portion of the property in 1960. Note the existence of the pumphouse and hose house. Historically, the hose house was located across from the pumphouse in the laundry yard (EDIS Archives, #6816).



Figure 1.67. View of the north elevation in 1960. The pathway passes through the area, extending into the western portion of the property (EDIS Archives, #6818).



Figure 1.69. View looking south towards the northwest portion of the property in 1960. Seen in the foreground is the rose bed, removed in 1982. Note the ivy covering the house. The ivy was later removed in the mid-1960s (EDIS Archives, #6820).



Figure 1.70. View looking northwest of the south elevation of the property in 1960. Seen in the foreground is the Norway Maple, removed in the 1960s, replanted shortly thereafter with a Silver Maple, but again was lost by 1995 (EDIS Archives, #6824).



Figure 1.71. View looking south towards the expanse lawn in 1960. Many trees shown in the image were planted between 1886 and 1931 (EDIS Archives, #6826).



Figure 1.72. View looking northeast towards the greenhouse, gardener's cottage and potting shed, pool, and barn in 1960. Prior to the late 1940s and early 1950s, this area contained fruit trees, flower and cutting gardens, as well as vegetable gardens (EDIS Archives, #6829).



Figure 1.73. View looking west towards the previous location of the vegetable garden near the garage in 1960. The vegetable garden fell into disuse between 1947 and 1959. Seen in the foreground is a burning area, established after 1959 (EDIS Archives, #6832).



Figure 1.74. View looking northwest towards the former pasture area in 1960. Seen in the background is an additional burning area defined by a stone wall (EDIS Archives, #6833).





Figure 1.75. (left) View looking southeast towards the barn, constructed in the 1880s and relocated in between 1908 and 1909. The hedge shown in the foreground was historically used to screen the laundry that was hung from the clothesline previously located within the space (EDIS Archives).



Figure 1.76. (right) View looking north towards the greenhouse, gardener's cottage and potting shed, and remaining flower garden in 1960. The flower garden was redesigned in 1937 (EDIS Archives).

As the park prepared for Glenmont's opening on May 16, 1961, initial improvements were completed, including the installation of catch basins drains, and hydrants by Samuel Spina between 1960 and 1963. He later improved Honeysuckle Avenue from Glen Avenue to the Gardeners Cottage Road. In 1961, the Essex Sign Company installed informational signs throughout the Glenmont landscape.

As part of the master planning efforts, a General Development Plan was completed in 1962 to provide guidance for future development and use of the site.<sup>11</sup> Besides identifying proposed uses for the buildings and structures on site, the plan recommended the restoration of the flower and vegetable gardens; stabilization of the concrete swimming pool; and acquisition of the adjacent Johnson-Tilney property for parking and a comfort station. At that time, visitors were directed to park along Honeysuckle Avenue or in a small parking area in a former pasture near the intersection of Glen and Honeysuckle avenues.

#### **Reinterment of Thomas and Mina Edison**

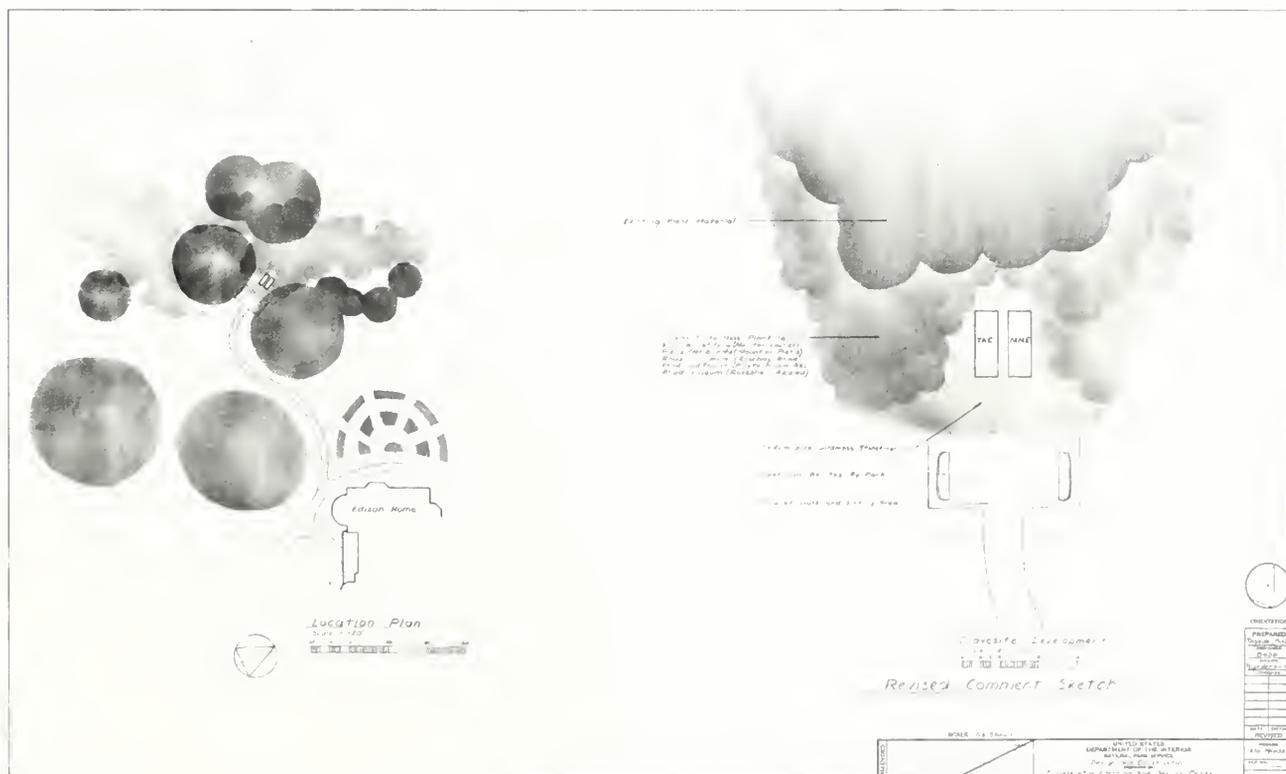
Early in the preparation of the General Development Plan, the Edison children asked that the remains of their parents be moved from their resting place in Rosedale Cemetery, located along the border of Montclair, Orange, and West Orange, N.J., to Glenmont. Their 1962 letter of request was sent to the Director of the National Park Service, Conrad Wirth:

Now that the care and future preservation of Glenmont have become a responsibility of the National Park Service, to our great satisfaction, and we hope to all American people as well, it seems to us that the reinterment of these remains of Mr. and Mrs. Edison on the grounds of Glenmont, close by the home which they and we loved so well, would be most fitting and appropriate. It is also our belief that to accomplish this would greatly enhance the dignity, character, and general public interest of the Edison National Historic Site for present and future generations, besides assuring that the last resting place of the famous inventor and his wife would be inviolate for all time to come.<sup>12</sup>

On October 30, 1962, the National Park Service obtained the approval of the Trustees and the Committee of Managers of Llewellyn Park for the reinterment with the understanding that: there would be no other burials at Glenmont, either of members of the Edison family or other persons; the same stone ledgers would be used to mark the graves at Glenmont as at Rosedale Cemetery; the markers would be placed flushed with the ground as at the cemetery; and no high standing monuments would be erected. A break in the hedge along Park Way, near the proposed reinterment site, would also be replanted, so the gravesite would not be obvious from Park Way itself.<sup>13</sup>

Without publicity, the reinterment of Thomas and Mina Edison at Glenmont was quietly carried out on April 3, 1963. As shown in a 1963 plan, entitled "Landscape Treatment of Edison Gravesite," produced by the National Park Service, the gravesite was sited on the west lawn within a large grouping of rhododendrons, laurels, and Japanese maples. The plan proposed mountain laurel (*Kalmia latifolia*), mountain pieris (*Pieris floribunda*), rosebay rhododendron (*Rhododendron maximum*), pinxterbloom azalea (*Rhododendron nudiflorum*), and roshell azalea (*Rhododendron roseum*) to supplement the existing plant material. Surrounding the stone ledgers, goldmoss stonecrop (*Sedum spp.*) was suggested. The plan also showed a curvilinear gravel walk and seating area (Figure 1.77). The gravesite landscape, as constructed, incorporated rhododendrons and mountain laurels for screening, goldmoss stonecrop as groundcover, and a brick pad bordered by Japanese holly (*Ilex crenata 'Convexa'*). The seating area and gravel walk were never implemented. In 2003-2004, with funding from the

Figure 1.77. The 1963 Plan, entitled "Landscape Treatment of the Edison Gravesite", which identifies the location of the gravesite and the recommended plantings (EDIS Archives).



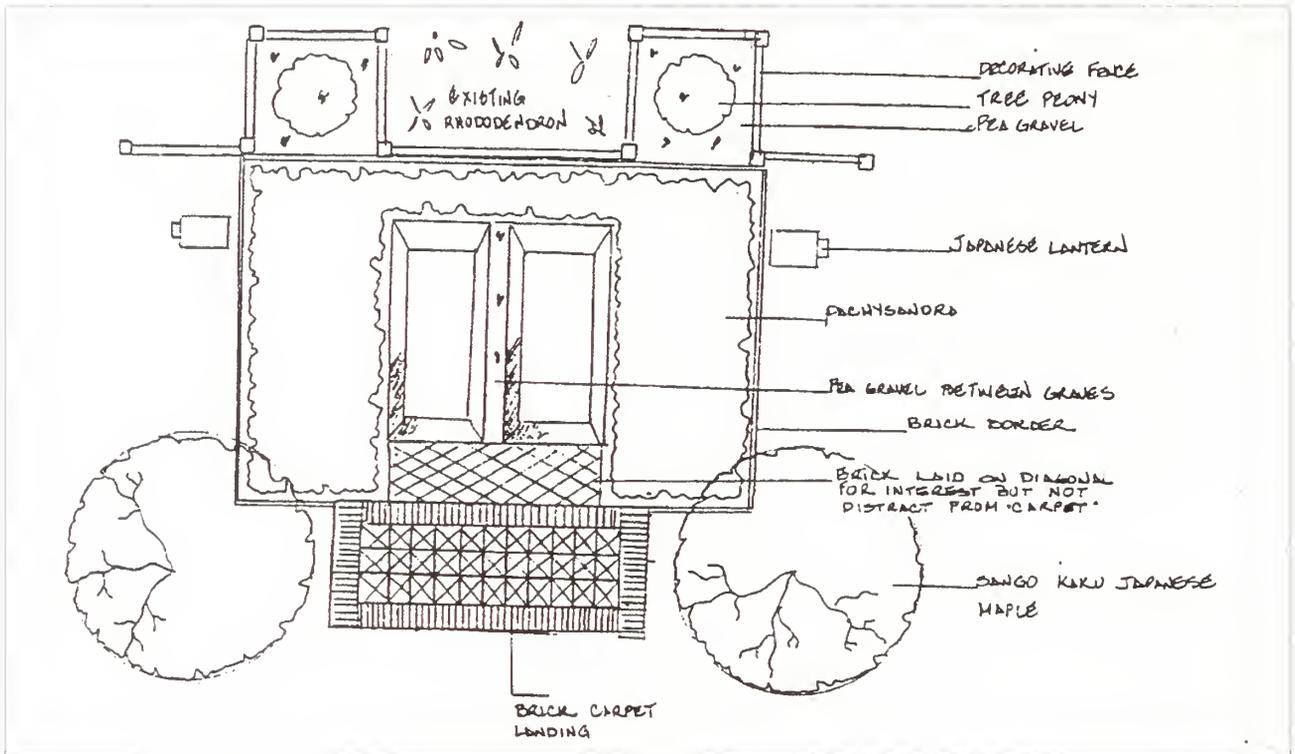


Figure 1.78. The 2004 Plan, entitled "Thomas Edison Grave Plots", which shows the improvements that were made to the Edison gravesite in 2003-2004. The work included the installation of a cedar decorative fence, an "oriental carpet" brick observation landing, the removal of the Japanese Holly hedge and goldmoss stonecrop groundcover, and the planting of pachysandra (*Pachysandra terminalis*), tree peonies (*Paeonia suffruticosa*), and two 'Sango Kaku' Japanese Maples (*Acer palmatum* 'Sango Kaku'). 'In addition, two Yunoki-type stone lanterns were included as a backdrop (EDIS Archives).

Charles Edison Fund, the National Park Service contracted Garden Designs by Elizabeth to make improvements to the gravesite. The work included the installation of a cedar decorative fence, an "oriental carpet" brick observation landing, the removal of the Japanese Holly hedge and goldmoss stonecrop groundcover, and the planting of pachysandra (*Pachysandra terminalis*), tree peonies (*Paeonia suffruticosa*), and two 'Sango Kaku' Japanese Maples (*Acer palmatum* 'Sango Kaku'). 'In addition, two Yunoki-type stone lanterns were included as a backdrop (Figure 1.78). The stone lanterns were a gift from Japan in 1935 as an expression of the "Japanese people's appreciation of Edison's contribution to the welfare of mankind." The lanterns were originally located at the laboratory, but were relocated to the gravesite by PreCon LogStrat, LLC in preparation for the reconstruction of Building 11 in 2003.<sup>14</sup>

#### Rehabilitation of the Glenmont Landscape, 1960s-2009

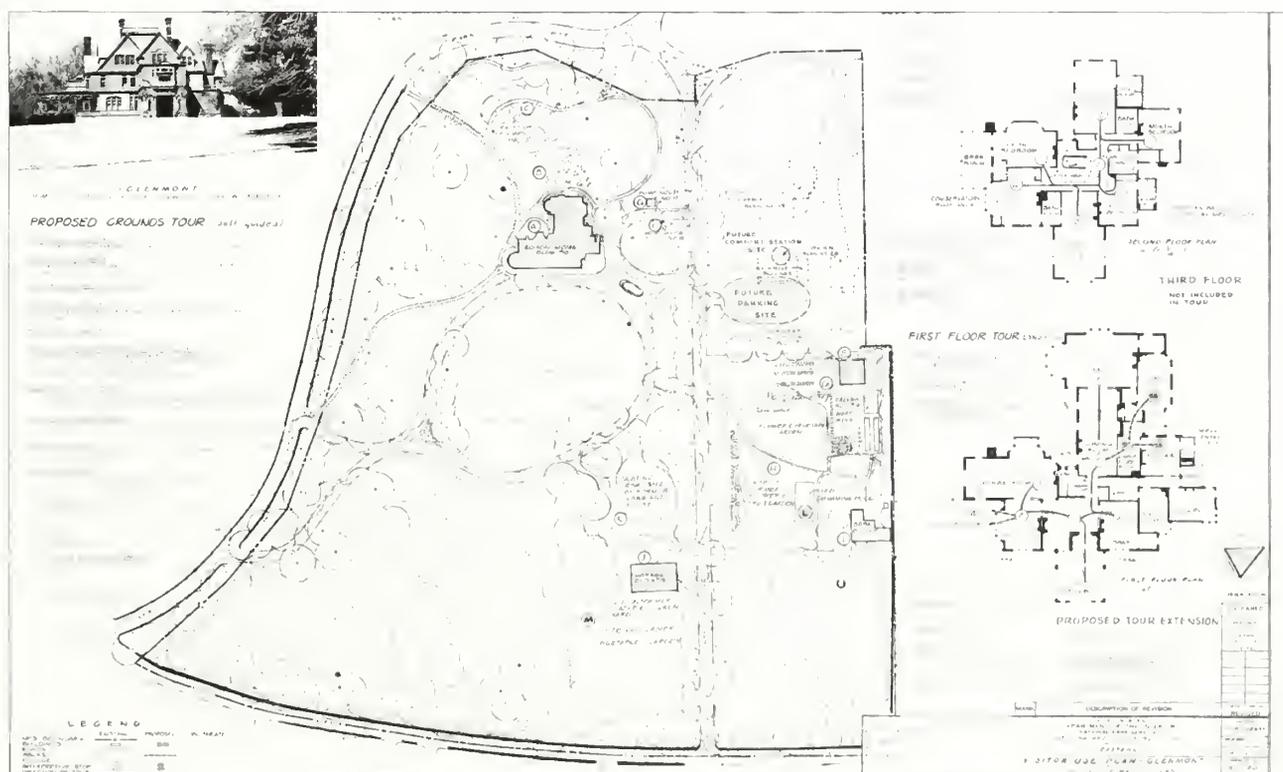
Besides improvements to the exterior and interior to the Glenmont house, work was done to the landscape throughout the 1960s.<sup>15</sup> In 1963, the park began implementing some of the recommendations set forth in the General Development Plan for the restoration of the rose garden, located in the west lawn. The garden consisted of forty rose bushes, laid out in a concentric half circle. A water line to the garden was installed by Litzebauer. In that same year, an additional pipeline was installed along Glen Avenue to Circle Drive by Fritz Contracting Company. They later installed a fire line, equipped with a fire hydrant and manhole, and connected it to the main line.

Harold J. Hamilton Associates completed a comprehensive topographic survey for Glenmont on November 1, 1963. Besides providing the existing topography of the land, the survey identified all buildings and structures, circulation patterns, utilities and small-scale features, along with all trees and shrubs found within the property. Existing trees were numbered by attaching a metal disc to the trunk of the tree with the identifying number incised into the metal. A key to the numbered trees accompanied the topographic drawings (Figure 1.79). Later, on November 29, 1963, the McGraw-Edison Company donated the 2.13-acre Johnson-Tilney property to the north of the Glenmont house to the federal government.

**Figure 1.79. A comprehensive topographic survey completed by Harold Hamilton Associates. Besides showing the topography of the site, the survey identifies all buildings and structures, circulation patterns, utilities and small-scale features, and all trees and shrubs found within the property (EDIS archives, Master Plan, 1966, updated 1977).**

By the mid-1960s, many of the buildings and structures at Glenmont were deteriorating and needed repairs. In 1964, the hose house—smallest building on the property—had to be reconstructed as it was beyond repair. Between 1964 and 1966, work began on the conservatory by restoring the rotted woodwork, replacing the roof, and installing a new lighting-protection system. While the renovations to the house proceeded, repairs were made to the garage, gardener's cottage and greenhouse, and pump house.<sup>16</sup> Other work completed during this time period included the construction of antique garden furniture and repairs to the Edison grape arbors by Florentine Craftsman, Inc. in 1964 and the restoration of the gazebo bird feeder in 1966.<sup>17</sup>

Parallel to the work being carried out on the buildings, efforts began on the surrounding landscape. By the 1960s, many trees had approached their life



expectancy or were diseased and in need of removal. The majority of the declining trees were later replaced in-kind. While the Edisons typically had between three and four gardeners on staff throughout the year, on-site staff dwindled once the property transferred to the National Park Service.<sup>18</sup> Because of the intensive maintenance that was required, additional paths and some flower beds were removed by the mid-1960s. Other features removed included the burning areas that were established between 1947 and 1959 and the toolshed, located near the barn.

In 1966, the “Master Plan for Edison National Historic Site,” was completed (revised in 1977). As identified in the plan, Glenmont and the laboratory would be preserved and restored to the historic environment of c. 1931 to the extent practicable. At Glenmont, the park would operate in a cooperative relationship between the National Park Service and proprietors of Llewellyn Park. Maintenance of the landscape would focus on the preservation of the buildings and structures, the surrounding expansive lawn areas, flower gardens, and plantings. Should trees or shrubs become overgrown or fall victim to storm or disease, they were to be replanted in-kind. The concrete swimming pool basin would be stabilized, and the vegetable, flower gardens, and orchards, would be restored if financially feasible. While the majority of the walkways and drives at Glenmont were unchanged, some paths would be restored. Lastly, a path from the Edison Laboratories to the house would be developed along the same route that Thomas Edison walked during the historic period.<sup>19</sup>

With the exception of Charles Edison’s funeral in 1969, there was minimal activity within the Glenmont landscape in ensuing years.<sup>20</sup> However, over the next four decades, the National Park Service implemented many of the recommendations that were proposed in the master plan.

After Glenmont opened to the public in the 1960s, the most pressing issue for the park was visitor accessibility, particularly buses not being allowed in Llewellyn Park. In 1971, the park proposed the development of a footpath from the visitor parking area (near the intersection of Main Street and Edisonia Terrace) to the east end of Honeysuckle Road, but the plan was later dismissed because of opposition from the proprietors of Llewellyn Park. Within the Tilney property, additional visitor accessibility issues were addressed, such as the removal of the house and ancillary structures in the mid-1970s and installation of a parking lot. An additional parking area for employees was later constructed in the vicinity of the barn, directly across from the garage.

Despite National Park Service efforts to restore the rose garden in the 1960s, the shrubs struggled; the clay surface (soil) was never mitigated and drainage

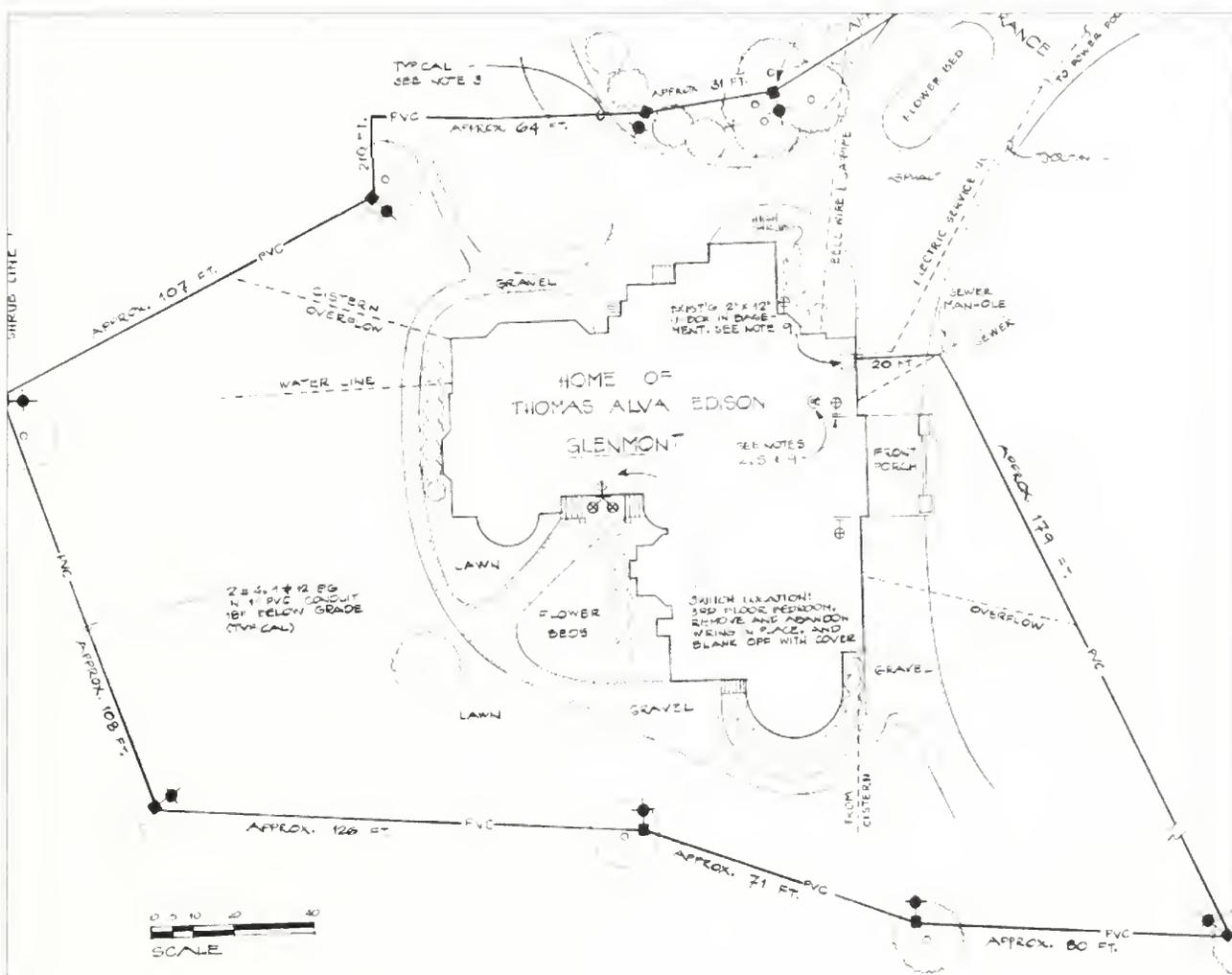


Figure 1.80. A 1985 plan showing the locations of the lighting fixtures that were installed throughout the Glenmont property in the mid-1980s (EDIS Archives).

problems persisted. During a casual visit to Glenmont in the early 1980s, Ann Edison, Theodore Edison’s wife, suggested that the garden be removed. Shortly thereafter, the rose garden was eliminated.<sup>21</sup> Between 1980 and 1985, a security system along with ground-level lighting was installed at Glenmont. The security system was later upgraded in 1992 (Figures 1.80 and 1.81).

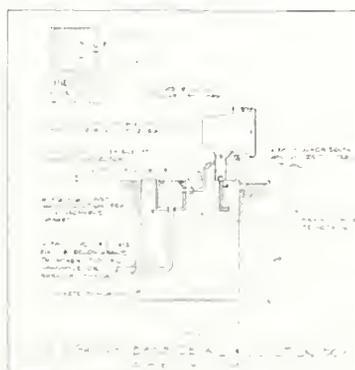


Figure 1.81. A detail of the lighting fixture that was installed as part of the lighting improvements made to Glenmont in 1985 (EDIS archives).

By the mid-1980s, the non-historic macadam driveways had deteriorated to the point of being hazardous, and the paths throughout the Glenmont landscape were overgrown and sod-covered.<sup>22</sup> In 1985, the National Park Service commissioned Viola Construction Company of Nutley, N.J., to restore the grounds to its 1931 appearance. The work included re-establishing the walkways, garden paths, driveways, and flagstone curbing. While attempts were made to obtain the original stone, the South Orange Quarry from where it had been purchased had since closed. However, efforts were made to replicate the original stone mix (Figures 1.82 and 1.83).<sup>23</sup> Later, Viola Construction Company was again used for improvements to Honeysuckle Avenue, including the reconstruction of the roadway with an aggregate base, asphalt pavement, stone paved waterway, and manhole adjustments.

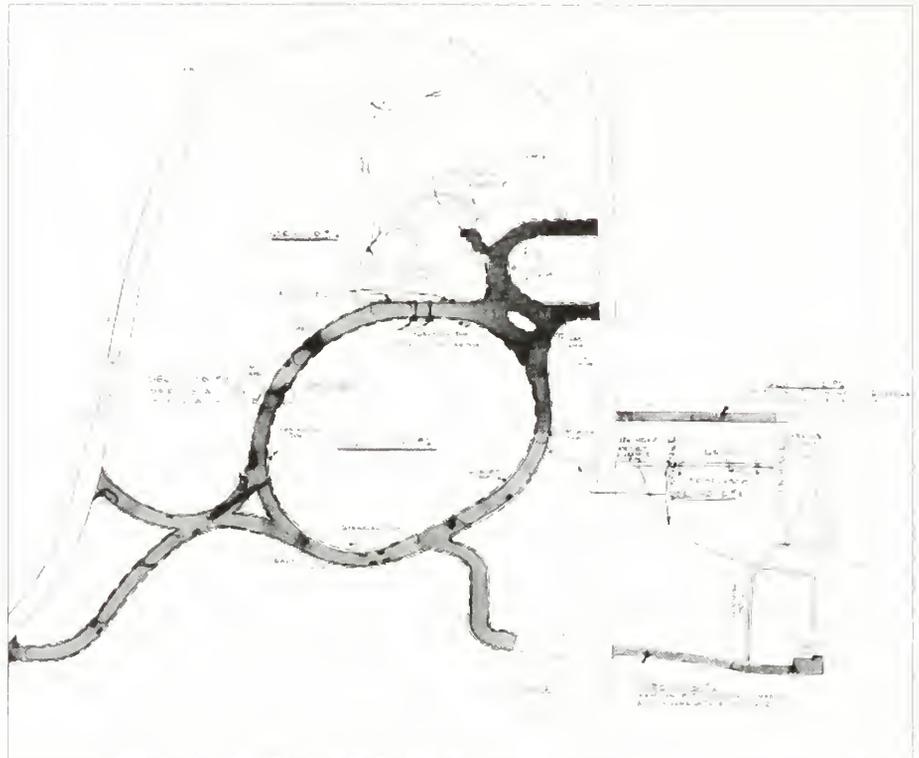


Figure 1.82. A 1985 plan showing the proposed rehabilitation work for the drives, walkways, and flagstone curbing at Glenmont (EDIS-403 81407).

In 1992, Thomas Edison National Historical Park (formerly Edison National Historic Site) requested assistance from the Olmsted Center for Landscape Preservation to complete a three-phased project; an interview with George Crothers, the head gardener at Glenmont; a scope of work for a cultural landscape report; and the preparation of a cultural landscape report. In addition to finishing the first two phases of the project, the Olmsted Center completed a Tree Preservation Maintenance Guide (1994) and Historic Plant Inventory (1995). In completing the Historic Plant Inventory, the Harold J. Hamilton Associates topographic survey was referenced as an aid in the identification of the plants. As a result of the inventory, it was found that the majority of trees and shrubs inventoried in 1963 were still extant in 1995 (Figure 1.84).



Figure 1.83. A detail of the flagstone curbing that exists along the drives within the Glenmont property (EDIS-403 81407).

By 1999, the bluestone stoop in the west lawn was structurally unstable and had to be repaired, which included disassembling and resetting the stoop. Between 2002 and 2003, Glenmont was closed to the public for renovations. Work included installation of geothermal HVAC system within the house. For this project, a geothermal exchanger system—consisting of approximately twelve 300 foot deep bores, spaced at 15 foot intervals in two rows—had to be installed at the Tilney property. Underground pipes currently transport the looped system to the heat pumps located in the house. Additional work in the house included the installation of a fire detection and suppression systems. Besides work to the house, other improvements included exterior improvements to the barn, greenhouse, and gardener’s cottage and potting shed.

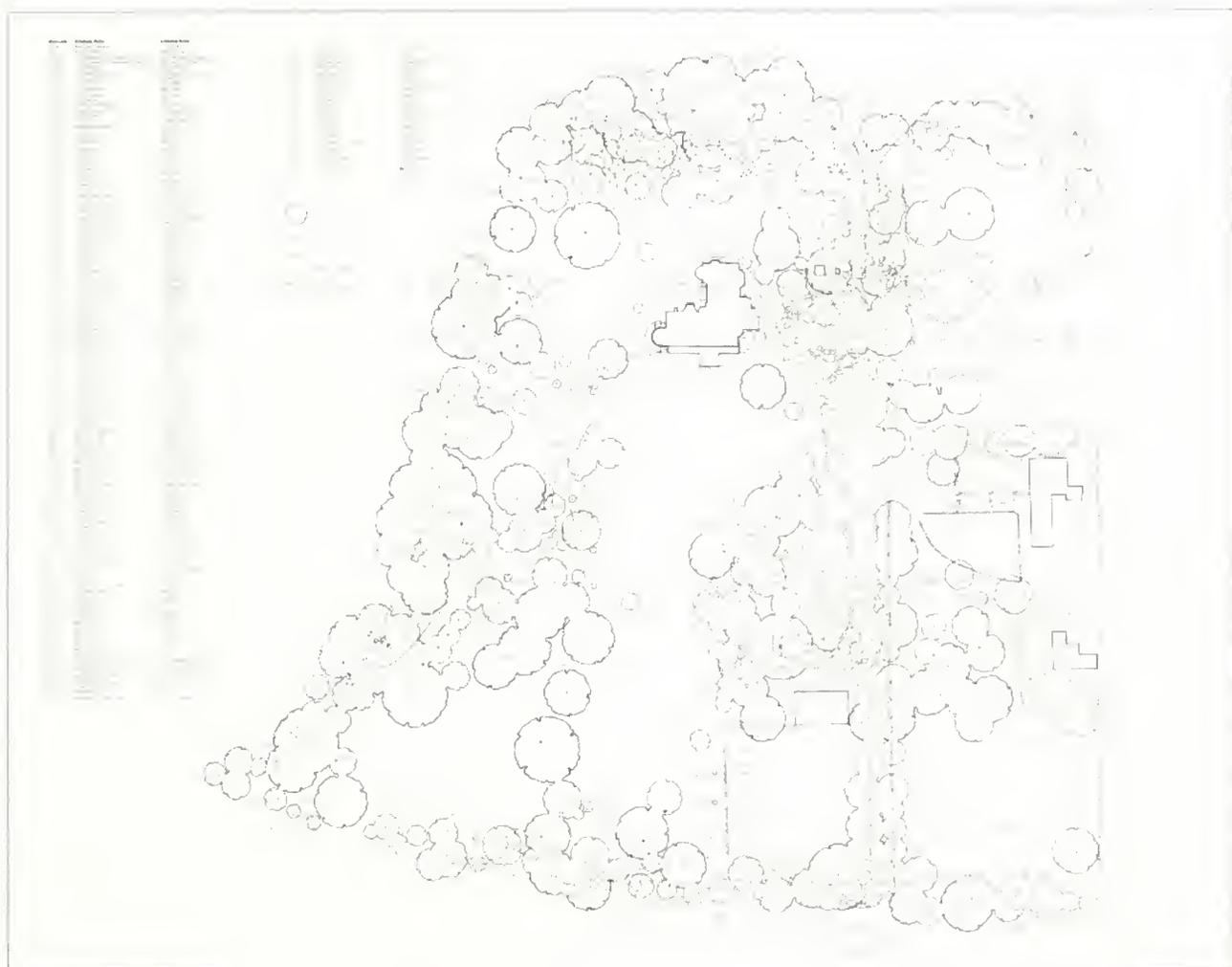


Figure 1.84. A 1995 historic plant inventory completed by the Olmsted Center for Landscape Preservation. The inventory identifies all buildings and structures, circulation patterns, and all trees and shrubs found within the property (Olmsted Center for Landscape Preservation, 1995).

#### LANDSCAPE SUMMARY, 2009

Since 1959, the Glenmont landscape has seen many improvements. Following its transfer of ownership to the National Park Service in 1959, many changes were made to address visitor accessibility and safety. These improvements, as reflected in the landscape in 2009 include benches, directional signs, lighting, trash receptacles, and interpretative signage. Other more noticeable changes included the installation of the parking areas, located on the adjacent Tilney property and along the barn drive.

Alterations to the circulation patterns throughout the landscape were not limited to the installation of parking areas. By 2009, many historic paths were removed, including the path within the west lawn. With exception to the buildings removed on the Tilney property, all of the buildings and structures are intact and in good condition—the majority of buildings and structures were rehabilitated in between 2000 and 2003. Although approximately 87 trees were lost after 1959, many, if not all, were replaced and have continued to thrive in the landscape. As of 2009, approximately 100 trees have been planted on the property since 1959. Despite a limited number of gardeners currently on staff, the lawns and hedges are

maintained at a high level. Overall, the landscape continues to reflect the natural style of gardening implemented throughout the Edison occupancy. For a more detailed description of the condition of the Glenmont landscape in 2009, refer to the Existing Conditions chapter of this report.

## ENDNOTES

- 1 Newark Evening News, *\$20 Million Link... Interstate Goes Over First Mountain* (Newark Evening News, 1959).
- 2 Essex County Registry of Deeds, Book 3653, p.349.
- 3 Prior to its conveyance to the Federal Government by the McGraw-Edison Company in 1959, The Edison Home National Historic Site was classified in the nonfederally owned category.
- 4 News release by Wes Bowers, *Glenmont Dedication* (J. Walter Thompson Company: NY, 1959).
- 5 News release by Wes Bowers, *Glenmont Dedication, Excerpts from remarks by Charles Edison* (J. Walter Thompson Company: NY, 1959).
- 6 Based on the research for this project, the Trustees and Committee of Managers of Llewellyn Park waived the restrictions regarding the use of the property—as referred to in the deed once it was determined that Glenmont would be administered by the National Park Service.
- 7 U.S. Department of the Interior, *Edison National Historic Site, Statement for Management* (National Park Service, 1990).
- 8 Secretarial Order F.R. 9347, Presidential Proclamation 3148 and P.L. 87-628.
- 9 The Omnibus Public Land Management Act of 2009 (Public Law 111-11, Section 7110) was a compilation of over 160 bills intended to protect millions of acres of wilderness and miles of national wild and scenic rivers. The Lifetime Innovations of Thomas Edison (LITE) Act (H.R.2627 and Sec. 2329), which is part of the omnibus legislation, preserves the intellectual and physical accomplishments of Thomas Edison by commemorating his lifetime achievements; re-designating the Edison National Historic Site, as a National Park; and authorizing appropriations to support the site.
- 10 Numerous reports and studies have been completed in the last forty three years of NPS stewardship for Thomas Edison National Historical Park (formerly Edison National Historic Site). Besides the two National Park Service planning documents, *Final Master Plan and Statement for Management*, reports specifically written for the Glenmont property include Historic Structures Report-Part I, Glenmont Chimneys, 1961; Historic Structures Report-Part I, Glenmont Home of Thomas Alva Edison, Historical Data, 1961; Historic Structures Report-Part I, Glenmont Architectural Data, 1962; Progress Data and Research Notes, Architectural Study of Glenmont, Home of Thomas Alva Edison, 1962; Historic Structures Report-Part I, Glenmont Home of Thomas Alva Edison, Administrative Data, 1963; Historic Structures Report-Part I, Architectural Data Section on Rehabilitation of Glenmont, Home of Thomas A. Edison, 1964; Historic Structures Report-Part II (Portion), The Conservatory, Edison Home, Building No. 10, 1964-1965; Historic Structures Report-Part II (Portion), Rehabilitation of Main Roof, Edison Home, Building No. 10, Historical Data, 1965; Historic Structures Report-Part II (Portion), Architectural Data Section on Den Ceiling, Glenmont Mansion, 1966; Historic Structures Report-Part II (Portion), The Den Ceiling, Edison Home, Building No. 10, Administrative Data, 1966; Structural Investigation-Glenmont, 1975; Historic Structures Report: Glenmont and Laboratory Unit Fire and Intrusion Protection and Replacement of Electrical Systems: Architectural Data, 1976; Historic Paint Colors and Recommendations for Repainting the Exterior of Glenmont, 1977; An Analysis of the First Floor Decorative Finishes at Glenmont, Llewellyn Park, West Orange, 1980; Historic Furnishing Report: The House at Glenmont, 1994; Landscape Report: Glenmont [draft], 1987; Historic Structures Report-Volume I, The House at Glenmont, 1998;
- 11 According the 1959 Master Plan Handbook, Release No. 1, master plans contained a rigidly prescribed sequence of sections, or units, which were to be individually prepared, submitted, reviewed, and approved. The units were to be prepared in sequence: first general information, next the mission, objectives, and policies, then more detailed sections. Development plans, utilities plans, and other management drawings were submitted as part of the master plan package.
- 12 Letter from Charles Edison, Madeline Edison Sloane, Theodore M. Edison, and Marion Edison Oser to Conrad Wirth, November 26, 1962.
- 13 Memorandum from Melvin J. Weig, Superintendent, *Reinterment of Thomas A. Edison and Mina Miller Edison at Glenmont, Informal Agreement with the Proprietors of Llewellyn Park* (Edison National Historic Site, July 21, 1964).
- 14 Kristofer M. Beadenkopf, et. al (Louis Berger Group, Inc.). *Archeological Overview and Assessment Edison National Historic Site [EDIS]: Laboratory, Glenmont Unit, and Maintenance Area* (National Park Service, 2007) DRAFT

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- 15 Identified in the HSR, work completed on the house in 1963 included roof replacement and repairs, interior plumbing improvements, chimney repairs, and conservatory and porch restoration. Barbara A. Yokum, *The House at Glenmont Historic Structure Report, Edison National Historic Site, West Orange, New Jersey* (National Park Service: Building Conservation Branch, Cultural Resources Center, North Atlantic Region, 1998), 75.
- 16 List of Classified Structures Database
- 17 Invoice from Florentine Craftsman, Inc., June 25, 1964 and August 25, 1964. (Edison Archives).
- 18 Gardeners at Glenmont: Arnold Griffin (1990s-Present), George Crothers (1970s-1990s), Tom Halstrom (1935-1970), George Atkinson (1921-1935) with Fabio Definis (1920s-1950s), Walters (c.1917-1921), Drew (1910-c.1917), Doyle (1900-1910), and Harrington (1900s). The list of past gardeners is based on the Oral history, Arthur Spiegler and Tom Halstrom, 22 October 1965.
- 19 U.S. Department of the Interior, *Final Master Plan: Edison National Historic Site* (National Park Service, 1977)
- 20 Charles' funeral prompted the use of herbicides on the property. The public scope of the funeral necessitated weed removal from the driveway. Thirty gallons of sodium arsenic was purchased. Olmsted Center for Landscape Preservation, Preliminary Scope of Work for a Glenmont Edison National Historic Site (National Park Service, November 1992).
- 21 Olmsted Center for Landscape Preservation, Preliminary Scope of Work for a Glenmont Edison National Historic Site (National Park Service, November 1992).
- 22 Section 106 Compliance [141 and 554]
- 23 Newark Evening News, September 17, 1987.



# Cultural Landscape Report for Glenmont

## Thomas Edison National Historical Park

West Orange, New Jersey

Federal Ownership, 1959-2009



National Park Service

Olmsted Center for Landscape Preservation

[www.nps.gov/oclp](http://www.nps.gov/oclp)

### SOURCES

- Olmsted Center for Landscape Preservation, *Historic Plant Inventory for Edison National Historic Site, Existing Conditions*, 1995.
- Aerial photographs, 1995, 1997, 2007, and 2008.
- Site visits, January, April, and July 2009.

### DRAWN BY

Michael Comisso, AutoCAD 2000 and Illustrator CS 3, 2009

### LEGEND

	Date feature added/built, if known
	Removed feature
	Building
	Paved vehicular circulation
	Unpaved vehicular circulation
	Path or walk
	Lawn
	Groundcover or herbaceous bed
	Deciduous specimen tree, wooded area
	Evergreen/coniferous specimen tree or shrub
	Deciduous/broadleaf evergreen shrub
	Stormwater drains
	Flagstone curbing
	Fence
	NPS Property Boundary
	1' Contour

### NOTES

- Plan shows conditions in 2009 with changes since 1959
- All features shown in approximate scale and location
- Contours shown only in project area and not in Tilney Property
- Information on plant identification for 2009 is detailed on the 2009 *Existing Condition Plans* and 1995 *Historic Plant Inventory for Edison National Historic Site*



Drawing 1.5



Thomas Edison National  
Historical Park

West Orange, New Jersey

Federal Ownership, 1959-2009



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

SOURCES

1. Olmsted Center for Landscape Preservation, *Historic Plant Inventory for Edison National Historic Site, Existing Conditions*, 1995.
2. Aerial photographs, 1995, 1997, 2007, and 2008.
3. Site visits, January, April, and July 2009.

DRAWN BY

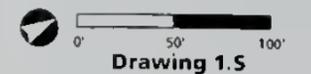
Michael Comisso, AutoCAD 2000 and Illustrator CS 3, 2009

LEGEND

(1963)	Date feature added/built, if known
[Dashed line]	Removed feature
[Solid brown fill]	Building
[Light grey fill]	Paved vehicular circulation
[Dark grey fill]	Unpaved vehicular circulation
[Light tan fill]	Path or walk
[White fill]	Lawn
[Green stippled fill]	Groundcover or herbaceous bed
[Circle with dot]	Deciduous specimen tree, wooded area
[Starburst symbol]	Evergreen/coniferous specimen tree or shrub
[Circle with horizontal lines]	Deciduous/broadleaf evergreen shrub
[Dashed line]	Stormwater drains
[Dotted line]	Flagstone curbing
[Double line]	Fence
[Dashed line]	NPS Property Boundary
[Thin solid line]	1' Contour

NDTES

1. Plan shows conditions in 2009 with changes since 1959
2. All features shown in approximate scale and location
3. Contours shown only in project area and not in Tilney Property
4. Information on plant identification for 2009 is detailed on the 2009 Existing Condition Plans and 1995 Historic Plant Inventory for Edison National Historic Site



Drawing 1.S



JOHN FENCER PROPERTY      G. K. LIND PROPERTY      F.M. POMEROY PROPERTY

## **EXISTING CONDITIONS**

Through the careful stewardship of the National Park Service, Glenmont today is a well preserved rural landscape that reflects the history of the Edison family, as well as the naturalistic and picturesque design principles popularized by Andrew Jackson Downing. Situated within the Llewellyn Park Historic District, the 15.67-acre Glenmont landscape—initially developed between 1879 and 1884, includes a beautiful Queen-Anne style house set within an open lawn dotted with scattered masses of trees and shrubs, curving drives and walks, flower and vegetable gardens, and a variety of service related buildings and structures.

This chapter describes the existing conditions (2009) of the Glenmont landscape, beginning with a description of the regional context, including Llewellyn Park, followed by an overview of the existing park operations, and, finally, a description of the Glenmont landscape. The landscape is described in terms of its landscape characteristics, the natural and cultural processes and features that compose the landscape and define its historic character. The essential characteristics to be described include natural systems and topography, spatial organization, circulation, vegetation, buildings and structures, views and vistas, small-scale features, and archeological sites. The narrative is supplemented by existing conditions plans.

## **LANDSCAPE CONTEXT**

Thomas Edison National Historical Park is located in the township of West Orange. West Orange is a residential/industrial community of roughly 12.1 square miles with a population of around 45,000. The township is located in Essex County, New Jersey's most populated county, with over 800,000 residents. The majority of the county's residents live in the city of Newark, located just three miles east of the park. Manhattan lies less than twenty miles to the east. The park is composed of two separate units, the Laboratory and Glenmont. The Laboratory lies on Main Street between Alden Street and Lakeside Avenue. Glenmont, which consists of 15.67 acres, is approximately one mile west of the Laboratory, situated within the Llewellyn Park Historic District. It is bounded by Park Way and the Llewellyn Park Ramble on the south and west, Glen Avenue on the east, and private properties to the north.

## **LLEWELLYN PARK**

Llewellyn Park is a historic planned residential community encompassing approximately 421 acres situated on the eastern slope of Orange Mountain (also

known as First Mountain).<sup>1</sup> The topography of Llewellyn Park varies, but is largely characterized by natural terraces and steep hillsides. Residential lots are found along a series of winding roads that branch out from Tulip Avenue, Glen Avenue, and Park Way, the three primary roads in Llewellyn Park. Vegetation in the community is mostly mixed hardwood forest, dominated by oaks, beech, hickory, maple, pine, and hemlock, all indigenous to the upland Piedmont region. The architectural housing styles found within Llewellyn Park include Gothic Revival, Italianate, Second Empire, Stick, Victorian, Queen Anne, Shingle, and Tudor and Colonial Revivals. The park is typically divided into four areas: the Ramble, Glen, Forest, and Hill. Glenmont is located in the Glen area (Figure 2.00).<sup>2</sup>

Figure 2.00. Llewellyn Park is typically divided into four areas: the Ramble, Glen, Forest, and Hill. Glenmont is located in the Glen area (2007 aerial photograph, annotated by the Olmsted Center for Landscape Preservation, hereafter OCLP, 2009).

The Ramble, a gorge eroded by a stream, is laid out as a linear area in the center of Llewellyn Park, approximately one mile long and fifty acres in size. It is bounded by Tulip Avenue on the west, Mountain Avenue on the north, and Park Way on the east. The Ramble itself is composed of three zones—the Entrance, Glen Ellyn, and the Upper Ramble—all following the course of the central stream. The entrance area is set back from Main Street, approximately 250 feet, and features a round, stone gate house, a reflecting pond, and a gazebo. Glen Ellyn is a secluded



valley area with steep hillsides and consists of woodland and glades. Beyond Glen Ellyn the steep topography gradually levels out to the Upper Ramble, a large open meadow with gathering areas surrounded by naturalized woodland.<sup>3</sup>

The Glen, the largest of the four areas, is bounded by the Ramble on the south, the steep hill on the west, and by a stream and park limits on the north and east. In response to its gentle topography and relatively open character, the Glen is the most developed area of the park. Scattered throughout the area are large specimen trees, which date from the park's early development, as well as a variety of ornamental trees planted on individual properties over the years.<sup>4</sup>

The Forest lies south of the Ramble and is heavily wooded. The topography is steeper than that of the Glen and it is comprised mostly of oaks, tulips, poplars, beeches, and maples.<sup>5</sup>

The Hill includes the steepest topography in the park. The vegetation is dense consisting of oaks and the geology of the Hill is underlain by a basaltic igneous rock. Historically, these factors made the area undesirable, resulting in the least amount of development in the park. However, in recent years, several new houses have been built on the steep slope directly above Mountain Avenue. The construction of Interstate 280 substantially reduced the size of this area.<sup>6</sup>

## **PARK ADMINISTRATION AND USE**

In an effort to promote an international understanding and appreciation of the life and extraordinary achievements of Thomas Alva Edison, the National Park Service maintains Glenmont in an effort to preserve the historic landscape and buildings for public benefit.<sup>7</sup> The Glenmont grounds are open to the public Wednesday through Sunday from 11:30am to 5:00pm (Friday through Sunday during the winter season). Guided house tours are available from 12:00pm to 4:00pm and begin on the hour. Passes for Glenmont are obtained at the Laboratory Complex Visitor Center.

## **VISITOR SERVICES**

Visitor services are located on the first floor of the gardener's cottage and potting shed, which serves as a gift shop and orientation area for the Glenmont grounds. The park charges an entrance fee that includes access to the Laboratory complex and Glenmont. The Glenmont grounds are accessible by foot and the majority of the buildings (house, gardener's cottage, potting shed, and greenhouse, and garage) are open to the public. Interpretative signage and cell phone tours are available for visitors. In addition to the regular visitor services, the Glenmont house is available for events by special use permit on a limited basis.

## **ADMINISTRATION**

A few park offices are currently housed on the second floor of the gardener's cottage and potting shed.<sup>8</sup> The former chicken house and cow barn have been adapted to serve as facilities for curatorial storage. There are two parking areas designated for visitors and staff. The larger lot is adjacent to the gardener's cottage and potting shed. The remaining parking area—primarily used for park staff—is located across from the garage and north of Honeysuckle Avenue.

Park staff (one head gardener, two seasonal laborers, and between five and six seasonal high school students) manage the overall maintenance of the Glenmont grounds, operating the greenhouse and lawn irrigation, constructing winter protection, maintaining specimen trees, shrubs, foundation plantings, flower garden, and monitoring the landscape on a daily basis. Maintenance operations are housed at the maintenance building on Main Street across from the Laboratory complex, with additional maintenance storage space in the greenhouse, garage, and chicken house and cow barn. In addition to park staff, two volunteer groups, the Garden Club of the Oranges and the Master Gardeners of the Rutgers Cooperative Extension of Essex County, are also instrumental in maintaining the greenhouse and flowerbeds on the grounds.

## **GLENMONT LANDSCAPE CHARACTERISTICS AND FEATURES**

### **NATURAL SYSTEMS AND TOPOGRAPHY**

The Piedmont Province is a region that extends from the Hudson River in New York to Alabama and has a maximum width of about 125 miles. It is divided into Upland and Lowland sections, with New Jersey, falling into the Piedmont Lowland physiographic province. The Piedmont Lowland physiographic province, also known as the Newark Basin or Triassic Lowlands, is characterized as having gently undulating terrain that gradually slopes from the New Jersey Highlands to the Coastal Plain.<sup>9</sup> Its rolling topography is occasionally interrupted by ridges of erosion-resistant igneous rock types, diabase and basalt, commonly called traprock. The most prominent traprock ridges in this region are the three Watchung Mountain ranges (also known as the Orange Mountains). Llewellyn Park, including Glenmont, is located on the southeastern slope of the easternmost range of the Watchung Mountains.

The bedrock underlying the Glenmont landscape consists of soft, hematite-stained red shales, and interbedded sandstones, mudstones, siltstones, and claystones. The soil composition within Glenmont is classified as Boonton silt loam and red sandstone lowland. The soil is considered well-drained and its

**Figure 2.01: Natural Systems and Topography.** Views of the west lawn mound constructed between 1879 and 1884 (OCLP, 2009).



profile contains layers of humus, followed by silt loam and gravelly loam. The primary water source in the area is Wigwam Brook, a tributary of the Second River which drains the area of the First Watchung Mountain from its source near West Orange to its confluence with the Passaic River in Newark. A branch of Wigwam Brook runs through the center of the Llewellyn Park Ramble, approximately 200 feet south of Glenmont.<sup>10</sup>

The topography in the southeastern portion of the Piedmont encompassing the West Orange area, including Glenmont, varies with stretches of low-lying marshland (former marshland) and northeast-southwest-trending sandstone ridges. The Glenmont landscape, situated at an elevation of approximately 300 feet above sea level, is generally level but slopes gently to the southeast.<sup>11</sup> Although its construction is unknown, a small mound, approximately twenty feet in diameter, is located northeast of the house.



**Figure 2.02: Natural Systems and Topography.** The faunal community in the vicinity of Glenmont includes turkey, quail, grouse, squirrel, rabbit, woodchuck, and deer (OCLP, 2009).

In general, the woodlands within the Piedmont Lowlands are classified as a Mixed Oak Forest composed of white oak, red oak, ash, black gum, tulip-tree, pitch pine, and Virginia pine. The predominant understory species are dogwood, ironwood, and sassafras. Within the Glenmont landscape, the property is mostly cultivated turfgrass with scatterings of native and exotic specimens. The faunal community—for upland or interior forest environments—in the vicinity of Glenmont includes turkey, quail, and grouse, squirrel, rabbit, woodchuck, and eastern white-tailed deer. In recent years, the deer population within Llewellyn Park and Glenmont has increased considerably, resulting in the loss of ornamental vegetation on residential properties (Figures 2.01-2.02).<sup>12</sup>

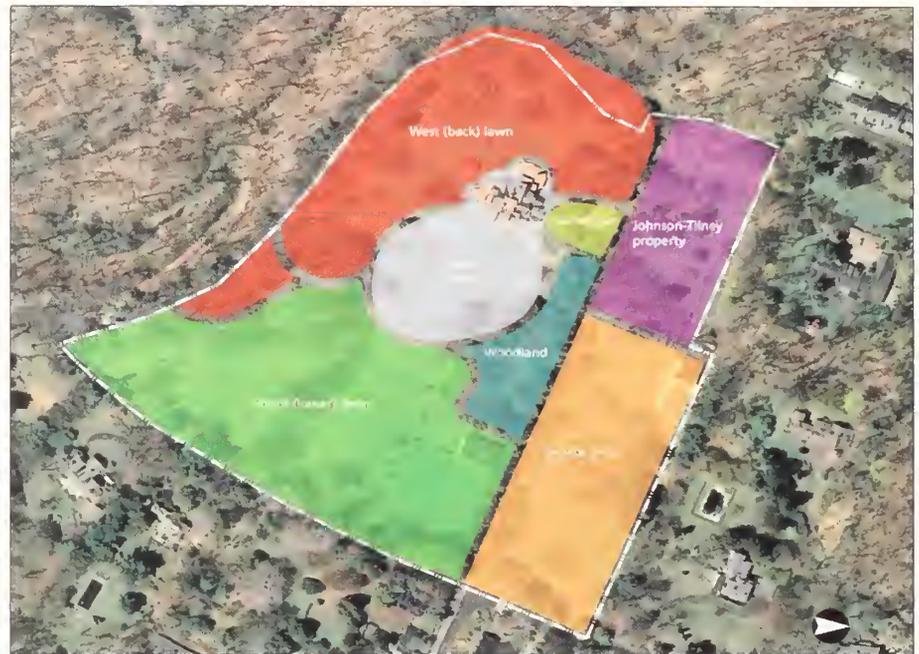


Figure 2.03: Spatial Organization. The Glenmont landscape is currently organized into seven spaces loosely defined by circulation systems and use: the west (back)lawn, front lawn, south (lower) lawn, laundry yard, woodland, service area, and Johnson-Tilney property (OCLP, 2009).

### SPATIAL ORGANIZATION

The Glenmont landscape is informally organized into seven spaces primarily defined by circulation systems and use. They are identified as the west (back) lawn, front lawn, south (lower) lawn, laundry yard, woodland, service area, and the Johnson-Tilney property. These spaces are presented in a counter clockwise order (Figure 2.03).

The west (back) lawn is bounded by Park Way on the west and south, Honeysuckle Avenue on the north, and the path along the perimeter of the house and main and secondary drives to the east and south. The space is bounded by mature perimeter plantings of oak, beech, maple, and ash trees. The interior is largely open with several specimen trees and features the Edison gravesite, pump house, and numerous small-scale features (Figures 2.04).

The front lawn encompasses the Glenmont house and foundation plantings and the oval lawn area delineated by the main drive circle. The oval lawn area is open in character and consists of highly manicured turf bordered by deciduous and evergreen trees and shrubs, which includes copper beech (*Fagus sylvatica* 'Cuprea'), hickory (*Carya* sp.), Norway spruce (*Picea abies*), white pine (*Pinus strobes*), royal paulownia (*Royal paulownia*), Carolina silverbell (*Halesia carolina*), maple (*Acer* sp.), yellow birch (*Betula alleghaniensis*), flowering dogwood (*Cornus florida*), umbrella magnolia (*Magnolia tripetala*), magnolia (*Magnolia* sp.) and Canadian hemlock (*Tsuga canadensis*) (Figure 2.05).



Figure 2.04: (left) Spatial Organization. View looking east of the west lawn, established between 1879 and 1884. Although the majority of paths and some perimeter plantings have been removed, the west lawn remains intact and continues to illustrate a major component of the original Nathan Barrett design (OCLP, 2009).



Figure 2.05: (right) Spatial Organization. View looking northwest towards the front lawn. The space encompassed the house and foundation plantings, as well as the oval lawn area encircled by the main drive. With exception to the foundation plantings, the space was largely open with scattered specimens along the perimeter of the oval lawn (OCLP, 2009).

The south (lower) lawn, east of the house, is defined by Park Way on the south, Honeysuckle Avenue on the north, Glen Avenue on the east, and the main and secondary drives to the east. The interior of the space is largely open lawn dotted with several specimens and clumps of deciduous and evergreen trees, as well as remnant apple orchard. It includes the garage, a rose trellis—partially outlining the former location of the vegetable garden, and numerous small-scale features (Figures 2.06 and 2.07).

The woodland is defined by Honeysuckle Avenue to the north and the main and secondary drives to the south, east, and west. With exception to an organically-shaped depression marking the location of the former skating pond, the interior is largely wooded consisting of cypress (*Chamaecyparis sp.*), hemlock (*Tsuga sp.*), Austrian pine (*Pinus nigra*), white pine (*Pinus strobus*), golden larch (*Pseudolarix amabilis*), American linden (*Tilia Americana*), sweet birch (*Betula lenta*), and Norway maple (*Acer platanoides*). Although the space lacks buildings, it includes many utility structures (cisterns and gas vault), as well as features associated with the former skating pond including rustic stone steps (Figure 2.08).



Figure 2.06: Spatial Organization. View looking northwest of a portion of the south (lower) lawn (OCLP, 2009).



Figure 2.07: Spatial Organization. View looking southwest towards a portion of the south (lower), which historically was a vegetable garden;

The laundry yard, located just north of the house, is encircled by a secondary drive and Honeysuckle Avenue. While the interior is mostly open, it is visually enclosed by deciduous and evergreen trees and shrubs (mostly Austrian pine, [*Pinus nigra*], hemlock [*tsuga sp.*], and rhododendrons [*rhododendron sp.*]) along its perimeter. The space includes six clothesline posts and the hose house.

The service area occupies the northern portion of the property across Honeysuckle Avenue. It is defined by a stone boundary wall on the north, the gardener's cottage, potting shed, and greenhouse driveway on the west, Honeysuckle Avenue on the south, and Glen Avenue to the east. Historically, the space contained a pool and service related buildings and structures, including a gardener's cottage, potting shed, chicken house and cow barn, greenhouse, and hot beds/cold frames, all surrounded by a series of paths and gardens. While the service related buildings and paths remain intact, the majority of the flower and vegetable have been removed and a filled concrete basin is all that remains of the pool (Figures 2.09-2.11).



Figure 2.08: Spatial Organization. View looking northeast towards the woodland. The interior of the space remains largely wooded consisting of evergreen and deciduous trees and remnants of the woodland garden, as well as an organically-shaped depression marking the former location of the skating pond (OCLP, 2009).

Figure 2.09: Spatial Organization. View looking north towards the north pasture, located within the service area. In the background is the chicken house and cow barn screened by evergreen trees (OCLP, 2009).



Figure 2.10: Spatial Organization. The service area, located in the northern portion of the property across Honeysuckle Avenue, includes the gardener's cottage, potting shed, and greenhouse. Adjacent to these structures is the only surviving flower garden, which was redesigned in 1937 (OCLP, 2009).



Figure 2.11: Spatial Organization. View looking north towards the service area, located in the northern portion of the property across Honeysuckle Avenue. It includes the gardener's cottage, potting shed, greenhouse, and concrete basin (pool) (OCLP, 2009).





Figure 2.12: Circulation. (left) View looking northwest of Park Way. In the development of Llewellyn Park in the 1850s, approximately ten miles of sinuous roads encircled the ramble, the park's common park. The perimeter of the ramble was defined by Park Way on the east (shown above), Tulip Avenue on the west, and Mountain Avenue on the north (OCLP, 2009).

Figure 2.13: Circulation. (right) Pedder constructed Honeysuckle Lane (later changed to Honeysuckle Avenue) as a service road in c.1881-1882. During the Thomas Edison period, an alleé was established along Honeysuckle Avenue (OCLP, 2009).

The Johnson-Tilney property, north of the Glenmont house, was acquired by the National Park Service in 1963. It is defined by Honeysuckle Avenue on the south, Elm Court Way on the west, private property to the north, and the gardener's cottage, potting shed, and greenhouse driveway on the east. The roughly two-acre area is scattered with trees and shrubs and includes a parking area. There are no buildings and structures or small-scale features within the space.

### CIRCULATION

The circulation of the Glenmont grounds consists of vehicular and pedestrian systems. The formal main entrance to the landscape, now inaccessible for visitor use, begins at a "Y" intersection off Park Way and curves through the landscape before gently rising to the east side of the Glenmont house where it terminates in a circular turnaround that passes beneath a porte-cochere. Two secondary drives, located near the laundry yard and garage, connect to the main drive by way of Honeysuckle Avenue, a service road that now serves as the primary pedestrian and vehicular entrance to the park. The width of the main and secondary drives is approximately ten feet and lined with flagstone curbing. Honeysuckle Avenue, approximately twelve feet in width, is surfaced in asphalt and lined with cobblestone gutters. Visitor and staff parking areas are located on the adjacent Tilney-Johnson property and along the barn driveway. Pedestrian circulation within the grounds is limited to a small path gravel path around the perimeter of the Glenmont house and a series of paths adjoining the Gardener's Cottage and Potting Shed and Greenhouse (Figures 2.12-2.20).

### VEGETATION

Vegetation within the Glenmont landscape consists of both native and exotic species of trees, shrubs, vines, groundcovers, and herbaceous plants. There are



Figure 2.14: Circulation. View looking southwest of a portion of the main and secondary drives (right side of the house). Within the main and secondary drives, islands (as shown above) were embellished with ornamental flower beds. Following the death of the Mina Edison in 1947, many of the islands were simplified (OCLP, 2009).



Figure 2.15: Circulation. View looking north of the main drive. The main drive curves through the landscape in a naturalistic alignment and ends in oval-shaped loop that passes beneath the porte-cochere of the house (OCLP, 2009).



Figure 2.16: Circulation. The main and secondary drives measures approximately ten feet wide and are surfaced in crushed gravel and lined with flagstone edging (OCLP, 2009).



Figure 2.17: Circulation. (top) View looking north of a section of the main drive; (bottom) View looking south of a section of the main drive (OCLP, 2009).



Figure 2.18: Circulation. View looking north of a portion of the main drive, which begins at Park Way where it branches into two legs that form two triangular islands before entering the front lawn (OCLP, 2009).



Figure 2.19: Circulation. View looking south towards the gravel driveway that leads to the gardener's cottage and potting shed (OCLP, 2009).

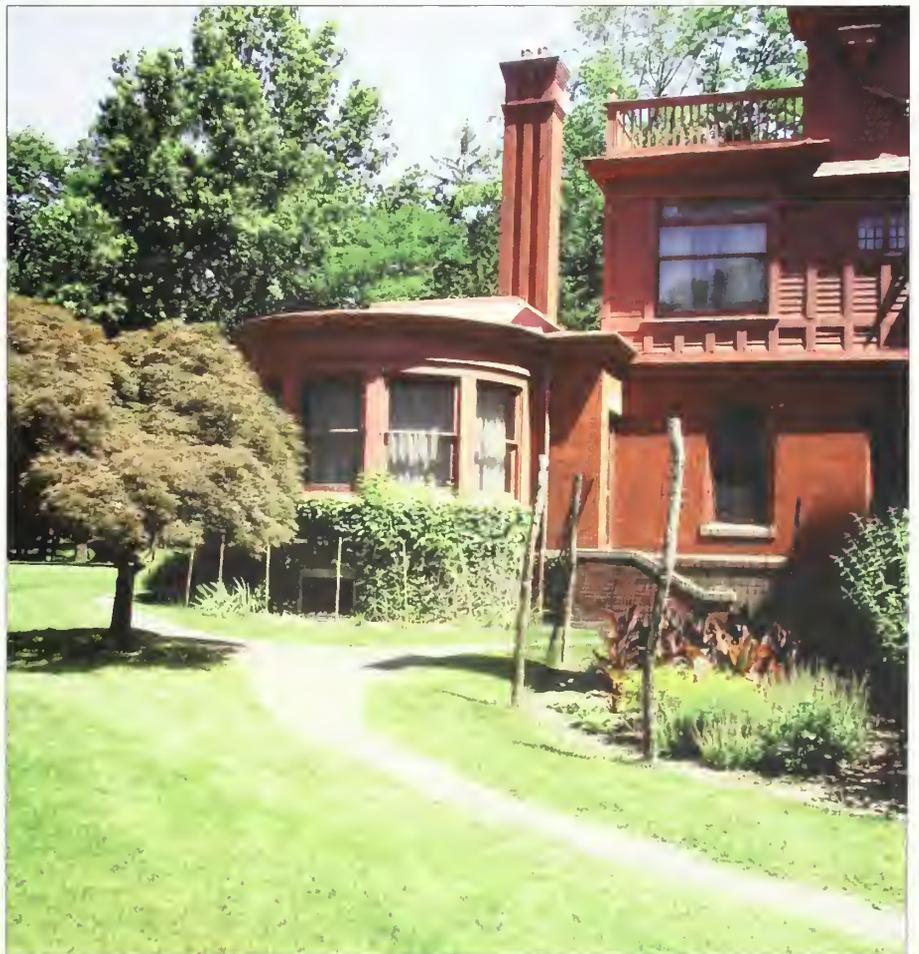


Figure 2.20: Circulation. View looking north of a pedestrian path. Pedestrian circulation within the grounds is limited to a small gravel path around the perimeter of the Glenmont house (OCLP, 2009).

over 650 deciduous and evergreen trees on the property, the majority planted during Thomas Edison's era (1886-1931). The perimeter of the property is the most densely planted, featuring an established canopy of trees dominated by oak (*Quercus sp.*), with scatterings of American beech (*Fagus grandifolia*), copper beech (*Fagus sylvatica 'cuprea'*), cutleaf beech (*Fagus sylvatica 'Lacinata'*), red maple (*Acer rubrum*), and horsechestnut (*Aesculus hippocastanum*). The majority of these mature street trees were planted before 1879, presumably at the direction of Llewellyn Haskell during the initial development of Llewellyn Park. Single specimen trees, primarily located in the south (lower) and west (back) lawns include but are not limited to Japanese maple (*Acer palmatum*), weeping cherry (*Prunus subhirtella*), copper beech (*Fagus sylvatica 'cuprea'*), purple European beech (*Fagus sylvatica 'cuprea'*), weeping beech (*Fagus sylvatica 'pendula'*), royal paulownia (*Paulownia tomentosa*) and horsechestnut (*Aesculus hippocastanum*). Shrubs are found throughout the landscape, however the most prominent are rhododendrons (*Rhododendron sp.*) planted along the periphery of the property. Along the perimeter of the house, foundation shrubs consist of yew (*Taxus sp.*), holly (*Ilex sp.*), buddleia (*Buddleia sp.*), rose (*rosa sp.*), and double bridalwreath spirea (*Spiraea prunifolia*). Hemlock (*Tsuga sp.*) and privet (*Ligustrum sp.*) hedges are found along Honeysuckle Avenue (Figures 2.21-2.31).

Figure 2.21: (left) Vegetation. View looking northwest towards the weeping cherry (*Prunus subhirtella*) and weeping beech (*Fagus sylvatica 'Pendula'*) west lawn (OCLP, 2009).

Figure 2.22: (right) Vegetation. View of the wisteria (*Wisteria sp.*), planted between 1880 and 1882, is located on the mansion porte-cochere. It is intact and in good condition. (OCLP, 2009).

Throughout the Edison years, flower and vegetable beds and gardens were scattered throughout the Glenmont landscape. Ornamental flowerbeds were planted in the main and secondary drive islands, along walks and paths, and around the porte-cochere. A vegetable garden existed in the south (lower) lawn and the flower gardens were across Honeysuckle Avenue within the service area. All that remains today is a planted island within the main drive, some foundation





Figure 2.23: Vegetation. View looking north towards the weeping beech (*Fagus sylvatica* 'Pendula'), weeping cherry (*Prunus subhirtella*) and dissected leaf Japanese maple (*Acer palmatum* "Atropurpureum Dissectum") west lawn (OCLP, 2009).



Figure 2.24: Vegetation. View looking north towards the cutleaf beech (*Fagus sylvatica* 'lacinata') (OCLP, 2009).



Figure 2.25: Vegetation. View looking south of the Japanese maples (*Acer palmatum*) located within the south (lower) lawn. They were planted during the historic period (OCLP, 2009).



Figure 2.26: Vegetation. View looking north towards the bur oak (*Quercus macrocarpa*) located in the south (lower) lawn (OCLP, 2009).

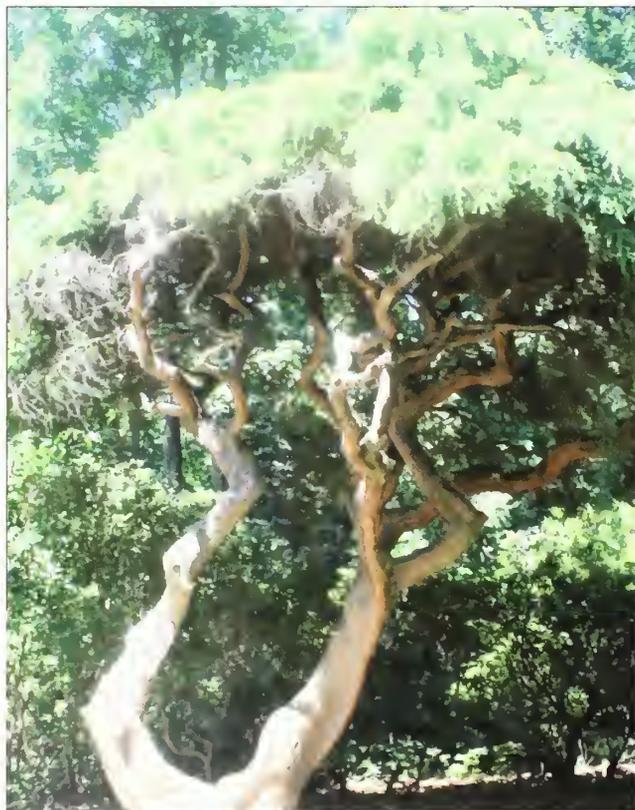


Figure 2.27: Vegetation. View looking northwest towards the weeping hemlock (*Tsuga canadensis 'pendula'*) (OCLP, 2009).



Figure 2.28: Vegetation. View looking northeast towards the remnant orchard. Currently, there are four apple trees of different varieties (Chinese pearleaf crab apple, 'northwest greening' apple, and 'summer rambo' apple) (OCLP, 2009).



Figure 2.29: Vegetation. View looking northwest of the yews (*taxus sp.*) around the conservatory that were planted in the 1970s during the renovations to the conservatory (OCLP, 2009).



Figure 2.30: (left) Vegetation. In 2008-2009, a group of students from the Essex County Master Gardener program installed a new flower bed along the house's west foundation (OCLP, 2009).

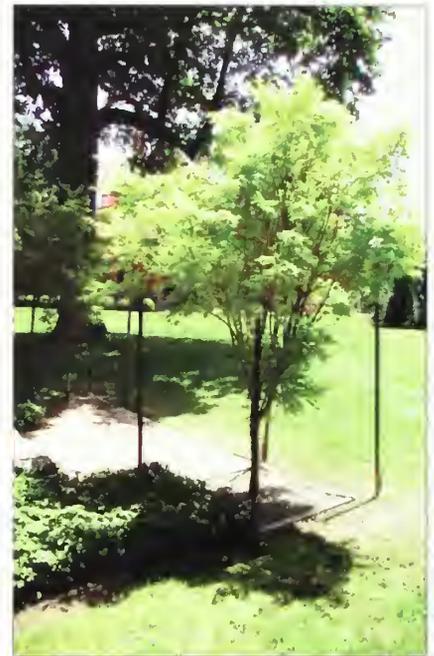


Figure 2.31: (right) Vegetation. The Edison gravesite landscape contains rhododendrons, mountain laurels, pachysandra, and two Japanese maples, shown above (OCLP, 2009).

plantings around the perimeter of the house, a flower garden located adjacent to the gardener's cottage and potting shed, and a linear flower bed—planted with peonies and hosta (*hosta sp.*), along Honeysuckle Avenue. The flower garden is structured by a series of grass walks that break the rectangular space into approximately three linear beds planted with irises, peonies, and daylilies. The garden features a rustic dry-laid retaining wall and rose arbors (Figures 2.32).

The former Johnson-Tilney property vegetation is host to a diverse mix of deciduous and evergreen trees consisting of golden larch (*Pseudolarix amabilis*), copper beech (*Fagus sylvatica 'cuprea'*), shagbark hickory (*Carya ovata*), apple (*malus sp.*), hemlock (*Tsuga sp.*), pine (*Pinus sp.*), ash (*fraxinus sp.*), maple (*Acer sp.*), oak (*Quercus sp.*), and linden (*Tilia sp.*) among others. Rhododendron (*Rhododendron sp.*), Yew (*Taxus spp.*), line the perimeter of the property. [For further information on vegetation, see Kristin Claeys and Margaret Coffin Brown, "Historic Plant Inventory for Edison National Historic Site," National Park Service, 1995; Charlie Pepper and Margie Coffin Brown, "Tree Preservation Maintenance Guide," National Park Service, 1994; and the 2009 Existing Condition Plans].

### **BUILDINGS AND STRUCTURES**

The Glenmont landscape contains seven buildings, the most prominent being the house, as well as the gardener's cottage, potting shed and greenhouse, and garage, and chicken house and cow barn. Smaller buildings and structures in the landscape include the pump house, hose house, skating pond site, concrete basin (pool), stone boundary wall, hot bed foundation, and garden retaining wall.



**Figure 2.32: Vegetation.** In 1937, Mina directed the redesign of the formal flower garden choosing to include features that had been recommended in a series of earlier 1929 Ellen Shipman plans. The new garden (shown above) was rectangular, incorporated axial grass paths, and was embellished by old-fashioned naturalized plantings and perennial borders that included peonies, hollyhocks, irises, achillea, larkspur, anemisis, and lilies. In addition, a rustic dry-laid stone retaining wall was constructed, a marble bench surrounded by arborvitae was added, and an additional rose arbor was built (OCLP, 2009).

The house (mansion), is a three-story structure designed in the Queen-Anne style with multiple gables, porches, and chimneys, and is the focal point of the Glenmont landscape. Situated within an expanse manicured lawn, the building was constructed between 1880 and 1884 for Henry and Louisa Pedder under the direction of architect Henry Hudson Holly. Thomas Edison later purchased the property and all of its contents in 1886. The structural system of the twenty-nine room house is composed of a variety of materials, including stone, brick, wood, iron, and steel. The foundations walls are composed of native bluestone, granite, and stucco. The first story is built of pressed brick and trimmed with Wyoming freestone. The upper stories are of a stick and shingle design. The roof is slate and from it rises eight chimneys. In addition to numerous porches and decks, features of the house include a porte cochere, den addition, and large conservatory. Three stories of the house are open to visitors; however, only one room on the third floor is accessible and currently used as an exhibit depicting a servants' quarter (Figures 2.33).<sup>13</sup>

The gardener's cottage and potting shed, built in 1908, is a two-story concrete structure located east of the house and across Honeysuckle Avenue. Along the exterior of the first floor, the concrete is finished with a smooth surface and at the second floor level, the exterior surface is rough. An elaborate concrete cornice begins directly above the plain second story windows (6/1 double hung sash) and the concrete parapet above the roof is decorated with small, arched top, recessed panels and trimmed with an asphalt concrete coping. The roof is flat with a slight



Figure 2.33: Buildings and Structures. View looking north of the Glenmont house. The house was built between 1880 and 1882, following the plans of prominent New York architect Henry Hudson Holly for Henry and Louisa Pedder. The three-story multi-gabled Queen-Anne style mansion is constructed of stone, brick, and stick and shingle design, and includes an attic, basement and contained twenty-nine rooms (OCLP, 2009).

slope to the roof drain, located in the northeast corner. Currently, the first floor of the building is used as exhibit space, workshop, and storage for some gardening tools and equipment. In addition, it accommodates a Garden Shop. The second floor serves as office space for National Park Service employees.<sup>14</sup> Attached to the east and south sides of the cottage is a greenhouse constructed in 1908. It is a metal (U-frame steel ribs) and wood frame structure on low concrete foundation walls and includes approximately 2,404 square feet of floor space under glass. The interior of the greenhouse is divided into six glass partitioned rooms: palm house, the rose house, orchid house, the lean-to adjoining the palm house, carnation house, and propagation house. The greenhouse continues to serve its historic function and is open to the public for interpretative purposes (Figures 2.34).<sup>15</sup>

The garage, built in 1908, is located east of the house along Honeysuckle Avenue. The two-story structure is one of the earliest examples of monolithic poured concrete construction. The foundation walls, floor, and roof slabs, parapet and decorative features are constructed of reinforced concrete. A concrete water table is surmounted on the first floor by rustication into which windows and doors are cut. These are capped by arches. Windows are double-hung with a system of triangular lights in the upper sash and three vertical ones in the lower. Below each window is a recessed panel. The floors are separated by an elaborate projecting cornice below which is heavy dentilation. Windows on the second floor are framed in concrete and retain the system of lights seen on the first floor. The



**Figure 2.34: Buildings and Structures.** View looking north towards the gardener's cottage, potting shed, and greenhouse. The gardener's cottage and potting shed, built in c.1908, is one of the earliest examples of monolithic concrete construction developed by Thomas Edison (OCLP, 2009).

corners of the building are defined by pilasters and the entire structure is capped by a heavy overhanging decorative cornice above which is a low parapet. The first floor of the garage is currently used as exhibit space and storage for heavy grounds maintenance equipment, while offices for National Park Service staff occupy the second floor (Figures 2.35).

The chicken house and cow barn (identified as “barn” in the list of classified structures database), built between 1880 and 1882, was originally situated on the site of the present garage, but was relocated to its current location across Honeysuckle Avenue in the service area in 1908. The Victorian style barn is an L-shaped structure, measuring approximately fifty-one feet by forty-two feet. The one-story structure is wood frame on a concrete foundation. The chicken house and cow barn is currently used for storing artifacts and maintenance equipment (Figure 2.36).

The pump house, built between 1882 and 1884, is located north of the house and is adjacent to the laundry yard. Similar in Victorian architectural design and construction as the house, the pump house is a small wooden structure with a cross gable roof set on a fieldstone and mortar foundation. It is set over a drilled well and contains a water-pump and electric-motor combination to draw potable drinking water for the house. The pump house is currently not in operation. The hose house, located approximately sixty feet from the house in the laundry



**Figure 2.35: Buildings and Structures.** View looking north towards the garage. It is one of the earliest examples of monolithic concrete construction developed by Thomas Edison. The two-story structure was erected in 1908, east of the house along Honeysuckle Avenue, and in the former location of Pedder's L-shaped chicken house and cow barn (OCLP, 2009).

yard, was originally constructed c. 1904-1905, and reconstructed in 1964. It is the smallest building at Glenmont, historically used to house a fire-hose cart (Figures 2.37-2.38).

The skating pond site is situated within the woodland space along Honeysuckle Avenue in the former location of the Pedder barn—removed in 1920. The pond was completed in 1925-1926, but was poorly constructed and did not retain water. All that remains of the skating pond, is a roughly 90' x 75' organically-shaped earthen depression lined with stone, rustic dry-laid stone steps, and associated plumbing systems (Figures 2.39).

A concrete basin, located east of the house across Honeysuckle Avenue, was constructed c. 1907-1908 as a swimming pool for the Edison family. By 1920, it was no longer used for recreation. In the 1970s, the National Park Service stabilized the structure, filling in the basin and leaving the concrete sides exposed. The rectangular concrete basin is approximately twenty-feet in width and fifty feet in length (Figure 2.40).

Additional buildings and structures located across Honeysuckle Avenue in the service area includes a stone boundary wall, hotbed foundations, garden retaining wall, portable restroom, and fireproof metal structure. Although uncertain, the stone boundary was constructed, presumably as early as 1908, when several improvements to the grounds were underway, notably the construction of

**Figure 2.36: Buildings and Structures.** View looking northeast of the chicken house and cow barn. The Victorian style chicken house and cow barn, built between 1880 and 1882, is east of the house along Honeysuckle Avenue. The L-shaped wood frame structure is one story high with a loft over the main portion. The exterior is sheathed in wood shingles and has a slate covered roof (OCLP, 2009).



the garage, gardener's cottage and potting shed, and swimming pool, and the relocation of the chicken house and cow barn. It is an approximately three feet high loose-laid, rubble wall comprised of brownstone, bluestone, bricks, and concrete chunks. Originally two hot beds/cold frames were located east of the greenhouse's north wing. While the exact date of construction is uncertain, only one hot bed foundation remains. The U-shaped concrete wall is approximately forty-two feet long by two feet high and is comprised of mortared brick sheathed in concrete. A rustic dry-laid retaining wall, constructed c.1937, is located within the flower garden area south of the gardener's cottage and potting shed. The wall, approximately forty feet in length and two feet in height, is surmounted by a manicured yew hedge. A handicap portable restroom, installed between 2006 and 2007, is located adjacent to the gardener's cottage and potting shed. The restroom is an approximately 5' x 5' plastic structure. In recent years, a fireproof metal structure was installed near the visitor parking area. The rectangular structure is currently used for storing maintenance equipment (Figures 2.41-2.43).



**Figure 2.37: Buildings and Structures.** The hose house, constructed in 1904, is a small-wood-frame structure used to house a fire-hose cart. It is situated within the laundry yard (OCLP, 2009).

#### **VIEWS AND VISTAS**

The viewsheds that were established as part of Nathan Franklin Barrett's original design for the Glenmont grounds have been preserved over the years. The position of the grounds on an elevated terrace, coupled with the location of the house on high ground within an expansive manicured lawn, permits expansive views to the east of the front and south (lower) lawn, specimen trees, remnant orchard, and Glen Avenue. Likewise, the location and alignment of the main entrance drive that threads through scatterings of thoughtfully placed trees and open lawn, allows for uninterrupted views of the house, highlighting its beauty and prominence within the landscape. Although Nathan Barrett anticipated that visitors to Glenmont would enter via the main drive—which they did for many years, visitors no longer enter the property from this point (Figures 2.44-2.45).



Figure 2.38: Buildings and Structures. Similar in Victorian architectural design and construction as the house, the pump house built between 1882 and 1884, is a small wooden structure with a cross gable roof set on a fieldstone and mortar foundation (OCLP, 2009).

**SMALL-SCALE FEATURES**

Many small-scale features are located throughout the Glenmont landscape. Aside from the modern National Park Service-era features placed for the visitor comfort, accessibility, and safety, including benches, lighting, and trash receptacles, and directional and interpretative signage, the features reflect the residential character of the site. Several surviving small-scale features include the bird feeders and bird baths, bluestone stoop, gas light poles, and miscellaneous utility structures, rustic arbors, rustic fence, and clothesline posts.

Reflecting Mina Edison’s interest in bird watching, bird baths and feeders of various sizes and materials are found throughout the Glenmont grounds. In particular, the gazebo bird feeder, restored in the late 1960s, is located southwest of the conservatory. It is perhaps the largest of several types of bird feeders installed at Glenmont. The bird feeder is a six foot high, metal-clad, glazed octagonal shelter with a hipped roof and sill perches. Below the feeder box is a rustic multi-bracketed seed tray with a segmented wood “tension ring.”<sup>16</sup> Additional bird feeders and bird baths are located throughout Glenmont grounds (2.46-2.47).

A rectangular blue stone stoop is located at the edge of Park Way, southwest of the Glenmont house. Constructed between 1880 and 1882 as a carriage mounting block, the blue stone stoop remains as the only feature connected to the former



Figure 2.39: Buildings and Structures. View looking east towards the skating pond site, currently situated within the woodland space along Honeysuckle Avenue in the former location of the Pedder barn—removed in 1920. All that remains of the skating pond, is a roughly 90’ x 75’ organically-shaped earthen depression lined with stone, rustic dry-laid stone steps, and associated plumbing systems (OCLP, 2009).



Figure 2.40: Buildings and Structures. View of the concrete basin historically used as a swimming pool. In the mid-1970s, the National Park Service filled in the pool with swamp mud from Morris County, leaving the concrete sides exposed. The structure was later stabilized in 2003. The rectangular concrete basin is approximately 26'x45' (OCLP, 2009).



Figure 2.41: Buildings and Structures. The stone boundary wall, located along the northern boundary of the service area across Honeysuckle Avenue, was constructed c.1908 when several improvements to the grounds were underway (OCLP, 2009).



Figure 2.42: Buildings and Structures. The hotbed (or cold frames) foundation, built between 1882 and 1884, contributes to the significance of Glenmont as a remnant of the original greenhouse complex that was constructed by Henry Pedder. (OCLP, 2009).



Figure 2.43: (left) Buildings and Structures. View looking east of the rustic dry-laid retaining wall. In 1937, the wall—located near the gardener’s cottage, potting shed, and greenhouse—was built as part of the redesigned flower garden. At the time of its construction, the wall was built over an early cistern, which required the use of iron bars for stability and support. In recent years, the bars have rusted causing the wall to fail in certain areas, specifically in the location of the stone steps (OCLP, 2009).



Figure 2.44: (right) Views and vistas. The main entrance drive view (OCLP, 2009).



Figure 2.45: Views and vistas. The house was located on high ground within an expansive manicured lawn, allowing for uninterrupted views to the east towards Glen Avenue (OCLP, 2009).

network of sinuous paths that meandered through the west and southwest portion of the property, eventually leading up to and around the house. It is comprised of two steps and a large square landing, flanked on each side by monolithic stone piers (Figure 2.48).<sup>17</sup>

As part of the initial development of Glenmont in the early 1880s, Henry Pedder built extensive above and underground utility systems for water and gas (lighting) throughout the Glenmont grounds. These systems, still extant within the landscape, include two cisterns in the west and south lawns, a well, cesspool, a network of storm drains along the edges of the drives, a gas vault, and two gas cast-iron lamp standards (Figures 2.49-2.50).

Features of the flower and vegetable gardens that once existed within the Glenmont grounds include rustic arbors and a section of wooden fencing. The three wooden rustic arbors, constructed between 1886 and 1931, are located along the walkway within the remaining flower garden, adjacent to the gardener’s cottage, potting shed and greenhouse. The section of wooden fencing, constructed c. 1882, is found south of the garage in the former location of the vegetable garden (Figures 2.51-2.54).

Six wooden posts, located in the laundry yard, stand as a reminder of the daily household activities that were carried out during the Pedder and Edison eras. The posts are approximately six feet tall and were used to hang laundry lines (Figure 2.55).

The Edison gravesite, located within the west lawn (back lawn), is situated within a large grouping of rhododendrons, laurels, and Japanese maples. It is marked by two rectangular marble tablets memorializing Thomas and Mina Edison. The tablets rest atop granite slabs, surrounded by pachysandra, and are bordered by two Yunoki-type stone lanterns and a cedar decorative fence (Figures 2.56-2.57)



Figure 2.46: (left) Small-scale features.

The gazebo bird feeder, restored in the late 1960s, is located southwest of the conservatory. It is perhaps the largest of several types of bird feeders installed at Glenmont. The bird feeder is a six foot high, metal-clad, glazed octagonal shelter with a hipped roof and sill perches. Below the feeder box is a rustic multi-bracketed seed tray with a segmented wood "tension ring." (OCLP, 2009).

Figure 2.47: (right) Small-scale features. Located throughout the Glenmont landscape are various bird feeders, houses, and baths (OCLP, 2009).

#### ARCHEOLOGICAL SITES

As indicated in the archeology study, An Overview and Assessment Edison National Historic Site: Laboratory Unit, Glenmont Unit, and Maintenance Area, West Orange, New Jersey [draft] conducted by The Louis Berger Group, few prehistoric (Native American) or historic archeological sites have been previously recorded within Thomas Edison National Historical Park (EDIS), or within a 1.0 mile radius of the park.<sup>18</sup>

Given the former environmental conditions (well drained soils with several creek beds and moderate slopes), nineteenth century accounts of Native American presence within the area, and the fact that the Glenmont grounds were relatively undisturbed prior to 1880, there is potential for intact prehistoric cultural resources.<sup>19</sup> Further analysis and testing is warranted to determine the sensitivity of the Glenmont landscape for the presence of prehistoric remains.<sup>20</sup>

Figure 2.48: (bottom) Small-scale features. View looking north of the bluestone stoop, constructed between 1880 and 1882. Located along Park Way, the rectangular bluestone stoop was more than likely used for mounting carriages and consists of two steps with nosings; a large square landing with mitered border; and is flanked on each side by monolithic stone piers connected by low walls (OCLP, 2009).





Figure 2.49: Small-scale features. A gas light pole found within the Glenmont property, installed in c.1880. Only two gas lamp posts remain from the historic period (OCLP, 2009).



Figure 2.50: Small-scale features. Llewellyn Park gas lamp posts, installed 1880s (OCLP, 2009).



Figure 2.51: Small-scale features. Rustic arbor found within the flower garden adjacent to the greenhouse complex. These rustic arbors were reconstructed in 2008 (OCLP, 2009).



Figure 2.52: (top) Small-scale features. Grape arbor/trellis found within the service area (OCLP, 2009).

Figure 2.53: (bottom left) Small-scale features. The remaining section of rustic fencing along the southern boundary of the former vegetable garden (OCLP, 2009).

Figure 2.54: (bottom middle) Small-scale features. (top) An historic iron planter used during the Edison period, 1886-1931m(OCLP, 2009).

Figure 2.55: (bottom right) Small-scale features. View of the wooden posts located in the laundry yard (OCLP, 2009).

The Glenmont grounds may have archeological resources from the historic period that could aid in understanding the development and use of the landscape, particularly during the Pedder, Arnold Constable & Company (1879-1886) and Thomas Edison (1886-1931) eras. These include both surface and subsurface resources such as the Pedder large rectangular barn or stable site, original Pedder greenhouse site, summer house, playhouse, skating pond site, carriage house site, croquet lawn site, west lawn (back lawn) paths, vegetable and flower garden sites, and the Johnson-Tilney, residence, garage, and outbuildings. [For further information, see Kristofer M. Beadenkopf et. al, *The Louis Berger Group, Inc., An Overview and Assessment Edison National Historic Site: Laboratory Unit, Glenmont Unit, and Maintenance Area, West Orange, New Jersey*, [draft] National Park Service, 2009.]



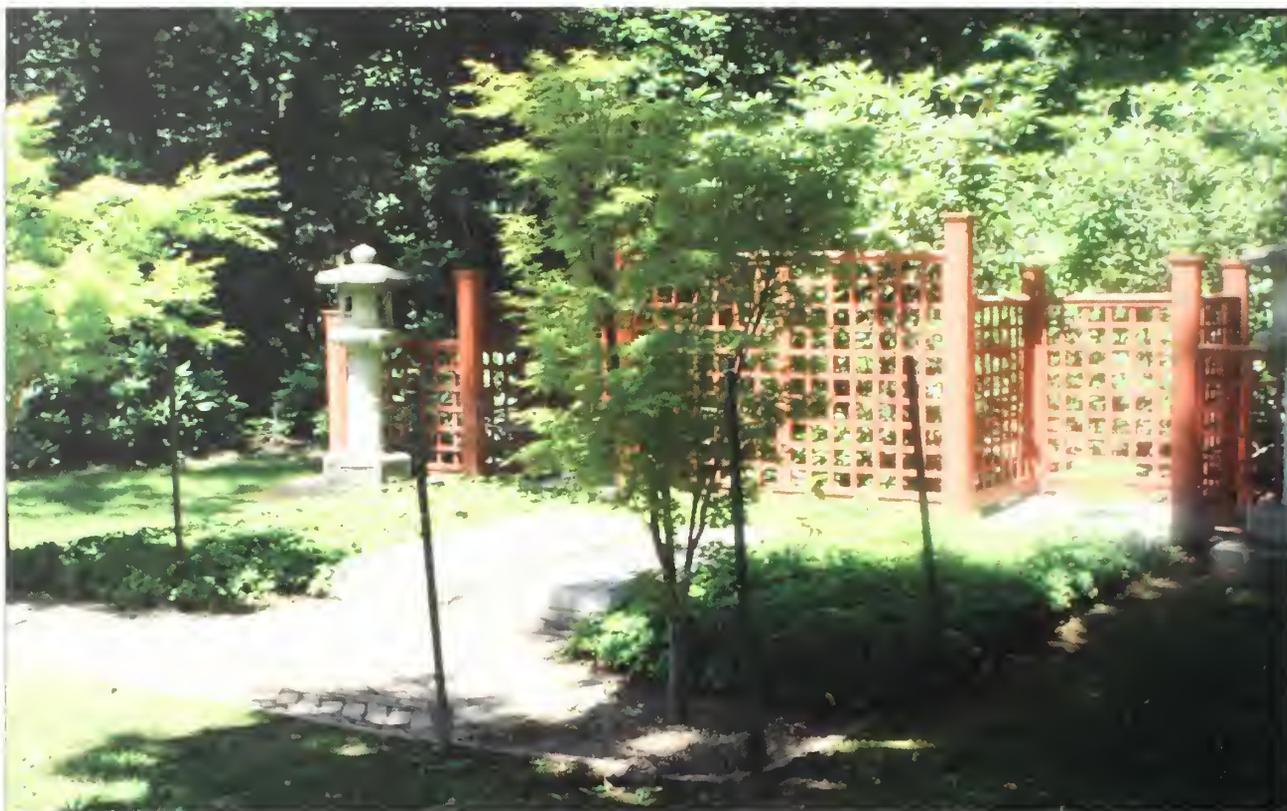


Figure 2.56: Small-scale features. The Edison gravesite landscape is sited on the west lawn within a grouping of rhododendrons and mountain laurels and contains the same stone ledgers that marked the graves at Rosedale Cemetery (OCLP, 2009).



Figure 2.57: Small-scale features. In 2003, two Yunoki-type stone lanterns and a cedar decorative fence were included as a backdrop to the Edison gravesite. The stone lanterns were a gift from Japan in 1935 as an expression of the "Japanese people's appreciation of Edison's contribution to the welfare of mankind."

**TABLE 2.0: PLANTS AT GLENMONT, THOMAS EDISON NATIONAL HISTORICAL PARK**

Map Code	Species (Latin name, common name)
<b>Trees</b>	
Abi no	<i>Abies nordmanniana</i> , Nordmann's Fir
Ace pa	<i>Acer palmatum</i> , Japanese Maple
Ace pa 'A'	<i>Acer palmatum</i> 'Atropurpureum Group', Red Leaf Japanese Maple
Ace pa 'D'	<i>Acer palmatum</i> 'Atropurpureum Dissectum', Dissected Leaf Japanese Maple
Ace pl	<i>Acer platanoides</i> , Norway Maple
Ace pl 'S'	<i>Acer platanoides</i> 'Schwedleri' Schwedler's, Norway Maple
Ace ps	<i>Acer pseudoplatanus</i> , Sycamore Maple
Ace ru	<i>Acer rubrum</i> , Red Maple
Ace sa	<i>Acer saccharum</i> , Sugar Maple
Ace sc	<i>Acer saccharinum</i> , Silver Maple
Ace sp.	<i>Acer species</i> , Maple
Aes hi	<i>Aesculus hippocastanum</i> , Horsechestnut
Aes oc v	<i>Aesculus octandra</i> f. <i>virginica</i> , Sweet Buckeye
Aes sp.	<i>Aesculus species</i> , Ohio Buckeye Chestnut
Ber th	<i>Berberis thunbergii</i> , Japanese Barberry
Bet al	<i>Betula alleghaniensis</i> , Yellow Birch
Bet le	<i>Betula lenta</i> , Sweet Birch
Bet pa	<i>Betula papyrifera</i> , Paper Birch
Bet sp.	<i>Betula species</i> , Birch
Car gl	<i>Carya glabra</i> , Pignut Hickory
Car ov	<i>Carya ovate</i> , Shagbark Hickory
Car sp.	<i>Carya species</i> , Hickory
Car te	<i>Carya texana</i> , Black Hickory
Car to	<i>Carya tomentosa</i> , Mockernut
Cas mo	<i>Castanea mollissima</i> , Chinese Chestnut
Cel oc	<i>Celtis occidentalis</i> , Hackberry
Cha pi	<i>Chamaecyparis pisifera</i> , Sawara False Cypress
Cha pi 'F'	<i>Chamaecyparis pisifera</i> 'Filifera', Thread Sawara False Cypress
Cha pi 'S'	<i>Chamaecyparis pisifera</i> 'Squarrosa', Moss Sawara False Cypress
Chi vi	<i>Chionanthus virginicus</i> , White Fringetree
Cla ke	<i>Cladrastis kentukea</i> , American Yellowwood
Cle ba	<i>Clethra barbinervis</i> , Japanese Clethra
Cor am	<i>Corylus Americana</i> , American Filbert
Cor fl	<i>Cornum florida</i> , Flowering Dogwood
Cor fl 'R'	<i>Cornus florida</i> 'Rubra', Pink Flowering Dogwood
Cor ma	<i>Cornus mas</i> , Cornelian-cherry
Cor ma p	<i>Corylus maxima</i> f. <i>purpurea</i> , Giant Filbert
Cor sp.	<i>Cornus species</i> , Dogwood
Fag gr	<i>Fagus grandifolia</i> , American Beech
Fag sp.	<i>Fagus species</i> , Beech species
Fag sy 'C'	<i>Fagus sylvatica</i> 'Cuprea', Copper Beech
Fag sy 'L'	<i>Fagus sylvatica</i> 'Lacinata', Cutleaf Beech
Fag sy 'P'	<i>Fagus sylvatica</i> 'Pendula', Weeping Beech
Fag sy p	<i>Fagus sylvatica</i> f. <i>purpurea</i> , Purple European Beech

Fra am	<i>Fraxinus Americana</i> , White Ash
Fra or	<i>Fraxinus ornus</i> , Flowering Ash
Fra sp.	<i>Fraxinus species</i> , Ash
Gle tr i	<i>Gleditsia triacanthos f. inermis</i> , Thornless Honey Locust
Hal te	<i>Halesia tetraptera</i> , Carolina Silverbell
Jug ci	<i>Juglans cinerea</i> , Butternut
Jug ni	<i>Juglans nigra</i> , Black Walnut
Jun vi	<i>Juniperus virginiana</i> , Eastern Red cedar
Lir tu	<i>Liriodendron tulipifera</i> , Tulip Tree
Mag ac	<i>Magnolia acuminata</i> , Cucumber Magnolia
Mag so	<i>Magnolia x soulangeana</i> , Saucer Magnolia
Mag st	<i>Magnolia stellata</i> , Star Magnolia
Mag tr	<i>Magnolia tripetala</i> , Umbrella Magnolia
Mag vi	<i>Magnolia virginiana</i> , Sweet Bay Magnolia
Mal ba	<i>Malus baccata</i> , Siberian Crab Apple
Mal 'GD'	<i>Malus 'Golden Delicious'</i> , 'Golden Delicious' Apple
Mal 'GG'	<i>Malus 'Grimes Golden'</i> , 'Grimes Golden' Apple
Mal 'NG'	<i>Malus 'Northwest Greening'</i> , 'Northwest Greening' Apple
Mal pr r	<i>Malus prunifolia var. rinkii</i> , Chinese Pearleaf Crab Apple
Mal pu	<i>Malus pumila</i> , Apple
Mal 'SR'	<i>Malus 'Summer Rambo'</i> , 'Summer Rambo' Apple
Mor al	<i>Morus alba</i> , White Mulberry
Oxy ar	<i>Oxydendrum arboretum</i> , Sourwood
Pau to	<i>Paulownia tomentosa</i> , Royal Paulownia
Pic ab	<i>Picea abies</i> , Norway Spruce
Pic ab 'p'	<i>Picea abies 'pendula'</i> , Weeping Spruce
Pic or	<i>Picea orientalis</i> , Japanese Spruce
Pic pu 'G'	<i>Picea pungens 'Glauca'</i> , Colorado Blue Spruce
Pic sp.	<i>Picea species</i> , Spruce
Pin ce	<i>Pinus cembra</i> , Swiss Stone Pine
Pin ni	<i>Pinus nigra</i> , Austrian Pine
Pin st	<i>Pinus strobes</i> , White Pine
Pla ac	<i>Platanus x acerifolia</i> , London Planetree
Pla hy	<i>Platanus x hybrid</i> , Hybrid of London Planetree
Pru ce	<i>Prunus cerasus</i> , Sour Cherry
Pru sp.	<i>Prunus species</i> , Cherry
Pru su	<i>Prunus subhirtella var. pendula</i> , Weeping Higan Cherry
Pse am	<i>Pseudolarix amabilis</i> , Golden Larch
Pse me	<i>Pseudotsuga menziesii</i> , Douglas Fir
Pry 'S'	<i>Pyrus 'Seekel'</i> , 'Seekel' Pear
Pry sp.	<i>Pyrus species</i> , Pear
Que al	<i>Quercus alba</i> , White Oak
Que ma	<i>Quercus macrocarpa</i> , Bur Oak
Que mi	<i>Quercus michauxii</i> , Swamp Chestnut Oak
Que pa	<i>Quercus palustris</i> , Pin Oak
Que pr	<i>Quercus prinus</i> , Chestnut Oak
Que ro	<i>Quercus robur</i> , English Oak

Que ru	<i>Quercus rubra</i> , Red Oak
Que sp.	<i>Quercus species</i> , Oak species
Que ve	<i>Quercus velutina</i> , Black Oak
Sas al	<i>Sassafras albidum</i> , Sassafras
Sor au	<i>Sorbus aucuparia</i> , European Mountain Ash
Til am	<i>Tilia Americana</i> , American Linden
Til co	<i>Tilia cordata</i> , Littleleaf Linden
Til sp.	<i>Tilia species</i> , Linden
Til to	<i>Tilia tomentosa</i> , Silver Linden
Tsu ca	<i>Tsuga Canadensis</i> , Canadian Hemlock
Tsu ca 'p'	<i>Tsuga canadensis 'pendula'</i> , Weeping Hemlock
Tsu sp.	<i>Tsuga species</i> , Hemlock species
Ulm sp	<i>Ulmus species</i> , Elm
Zel se	<i>Zelkova serrata</i> , Sawleaf Zelkova
<b>Shrubs</b>	
Cal fl	<i>Calycanthus floridus</i> , Sweetshrub
Deu sp.	<i>Deutzia species</i> , Deutzia
Euo al	<i>Euonymus alata</i> , Winged Euonymus
For sp.	<i>Forsythia species</i> , Forsythia
Ham ver	<i>Hamamelis vernalis</i> , Common Witch Hazel
Hib sy	<i>Hibiscus syriacus</i> , Rose of Sharon
Hyd pa	<i>Hydrangea paniculata</i> , Panicle Hydrangea
Ile cr 'C'	<i>Ilex crenata 'Convexa'</i> , Japanese Holly
Ile op	<i>Ilex opaca</i> , American Holly
Ile sp.	<i>Ilex species</i> , Holly
Jun ch 'C'	<i>Juniperus chinensis 'Columnaris'</i> , Columnar Juniper
Jun sp	<i>Juniperus species</i> , Juniper
Kal la	<i>Kalmia latifolia</i> , Mountain Laurel
Lig ov	<i>Ligustrum ovalifolium</i> , California Privet
Lig sp.	<i>Ligustrum species</i> , Privet
Phi co	<i>Philadelphus coronarius</i> , Mock Orange
Pie fl	<i>Pieris floribunda</i> , Mountain Pieris
Rho ca	<i>Rhododendron catawbiense</i> , Catawba Rhododendron
Rho ca 'A'	<i>Rhododendron catawbiense 'Alba'</i> , White Catawba Rhododendron
Rho ca 'R'	<i>Rhododendron catawbiense 'Roseum'</i> , Pink Catawba Rhododendron
Rho cal	<i>Rhododendron calendulaceum</i> , Flame Azalea
Rho fe	<i>Rhododendron feiusianum</i> , Azalea
Rho sp.	<i>Rhododendron species</i> , Rhododendron
Rho sp. A	<i>Rhododendron species</i> , Azalea
Rho we	<i>Rhododendron wellesleyanum</i> , Wellesley Rhododendron
Rob ps	<i>Robinia pseudoacacia</i> , Black Locust
Ros sp.	<i>Rosa species</i> , Rose
Spi ja	<i>Spiraea x bumalda</i> , Japanese Spirea
Spi sp.	<i>Spiraea species</i> , Spirea
Spi va	<i>Spiraea x vanhouttei</i> , Vanhoutte Spirea
Spi pr	<i>Spiraea prunifolia</i> , Double Bridalwreath Spirea
Syr vu	<i>Syringa vulgaris</i> , Common Lilac

Tax cu	<i>Taxus cuspidate</i> , Japanese Yew
Tax sp.	<i>Taxus species</i> , Yew
Thu oc	<i>Thuja occidentalis</i> , Arborvitae
Thu pl	<i>Thuja plicata</i> , Giant Arborvitae
<b>Vines</b>	
Vib di	<i>Viburnum dilatatum</i> , Linden Viburnum
Lon fr	<i>Lonicera fragrantissima</i> , Winter Honeysuckle
Lon ma	<i>Lonicera maackii</i> , Amur Honeysuckle
Par tr	<i>Parthenocissus tricuspidata</i> , Japanese Creeper
Vit sp.	<i>Vitis species</i> , Grape
Wis sp.	<i>Wisteria species</i> , Wisteria

## ENDNOTES

- 1 Robert P. Guter, with Jane B. Davies and Donald C. Richardson, *National Register of Historic Places Nomination for Llewellyn Park Historic District* (United States Department of the Interior: National Park Service, 1986), pgs. 1-2.
- 2 Robert P. Guter, with Jane B. Davies and Donald C. Richardson, *National Register of Historic Places Nomination for Llewellyn Park Historic District* (United States Department of the Interior: National Park Service, 1986), pgs. 1-7.
- 3 LANDSCAPES, Landscape Architecture, Planning, Historic Preservation, *Llewellyn Park Ramble Landscape: Preservation & Maintenance Master Plan* (Charlotte, VT: LANDSCAPES, 2001), 17-20.
- 4 LANDSCAPES, Landscape Architecture, Planning, Historic Preservation, *Llewellyn Park Ramble Landscape: Preservation & Maintenance Master Plan* (Charlotte, VT: LANDSCAPES, 2001), 17-20.
- 5 LANDSCAPES, Landscape Architecture, Planning, Historic Preservation, *Llewellyn Park Ramble Landscape: Preservation & Maintenance Master Plan* (Charlotte, VT: LANDSCAPES, 2001), 17-20.
- 6 LANDSCAPES, Landscape Architecture, Planning, Historic Preservation, *Llewellyn Park Ramble Landscape: Preservation & Maintenance Master Plan* (Charlotte, VT: LANDSCAPES, 2001), 17-20.
- 7 National Park Service, "Thomas Edison National Historical Park Management," Thomas Edison National Historical Park, <http://www.nps.gov/edis/parkmgmt/index.htm>
- 8 At the time of this report (2009-2010), park administration is housed on the second floors of the gardener's cottage, potting shed, and garage. However, park administration will likely be relocated to the Laboratory complex following its rehabilitation in 2010.
- 9 Kristopher M. Beadenkopf, Zachary J. Davis, and Roderick S. Brown, *Archeological Overview and Assessment, Edison National Historic Site* [draft] (East Orange, NJ: The Louis Berger Group, Inc. 2007), 3.
- 10 Kristopher M. Beadenkopf, Zachary J. Davis, and Roderick S. Brown, *Archeological Overview and Assessment, Edison National Historic Site* [draft] (East Orange, NJ: The Louis Berger Group, Inc. 2007), 5.
- 11 Kristopher M. Beadenkopf, Zachary J. Davis, and Roderick S. Brown, *Archeological Overview and Assessment, Edison National Historic Site* [draft] (East Orange, NJ: The Louis Berger Group, Inc. 2007), 3.
- 12 Kristopher M. Beadenkopf, Zachary J. Davis, and Roderick S. Brown, *Archeological Overview and Assessment, Edison National Historic Site* [draft] (East Orange, NJ: The Louis Berger Group, Inc. 2007), 3.
- 13 Anne Booth, *National Register of Historic Places Nomination for Edison National Historic Site* (United States Department of the Interior: National Park Service, 1979), pgs. 1-2.
- 14 Norman M. Souder, *Historic Structures Report: Part I Architectural Data Section on Gardener's Cottage, Potting Shed, and Greenhouse* (United States Department of the Interior: National Park Service, 1964), 1-3.
- 15 Specification for Greenhouses of Thomas Edison, Pierson U-Bar Company, 1907.
- 16 List of Classified Structures Database, Glenmont-Gazebo Bird Feeder, <http://www.hscl.cr.nps.gov>
- 17 List of Classified Structures Database, Glenmont-Bluestone Stoop, <http://www.hscl.cr.nps.gov>

- 18 One prehistoric site has been previously registered within a 2.0-mile radius: the Indian Knoll site (28-EX-92) located 1.7-miles to the east of EDIS in Watsessing Park in the Town of Bloomfield; Kristofer M. Beadenkopf, Zachary J. Davis, and Roderick S. Brown, *Archeological Overview and Assessment, Edison National Historic Site* [draft] (East Orange, NJ: The Louis Berger Group, Inc. 2007), 23.
- 19 Kristopher M. Beadenkopf, Zachary J. Davis, and Roderick S. Brown, *Archeological Overview and Assessment, Edison National Historic Site* [draft] (East Orange, NJ: The Louis Berger Group, Inc. 2007), 33.
- 20 Kristopher M. Beadenkopf, Zachary J. Davis, and Roderick S. Brown, *Archeological Overview and Assessment, Edison National Historic Site* [draft] (East Orange, NJ: The Louis Berger Group, Inc. 2007), 34.



# Cultural Landscape Report for Glenmont

## Thomas Edison National Historical Park

West Orange, New Jersey

### 2009 Existing Conditions Overview



National Park Service

Olmsted Center for Landscape Preservation

[www.nps.gov/oclplp](http://www.nps.gov/oclplp)

#### SOURCES

1. Olmsted Center for Landscape Preservation, *Historic Plant Inventory for Edison National Historic Site, Existing Conditions*, 1995.
2. Aerial photographs, 1995, 1997, 2007, and 2008.
3. Site visits, January, April, and July 2009.

#### DRAWN BY

Michael Comisso, AutoCAD 2000 and Illustrator CS 3, 2009

#### LEGEND

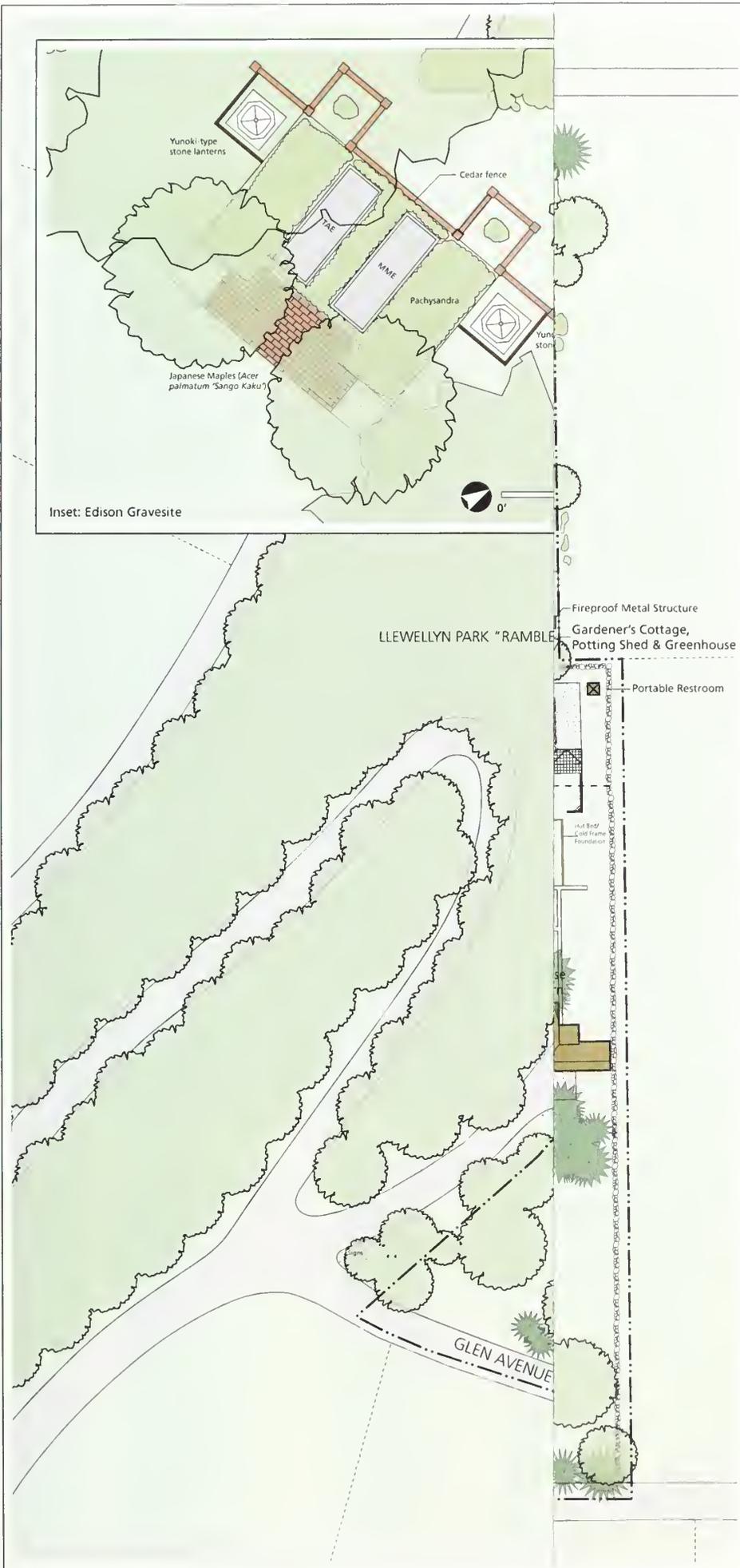
	Building
	Paved vehicular circulation
	Unpaved vehicular circulation
	Path or walk
	Lawn
	Groundcover or herbaceous bed
	Deciduous specimen tree, wooded area
	Evergreen/coniferous specimen tree or shrub
	Deciduous/broadleaf evergreen shrub
	Stormwater drains
	Flagstone curbing
	Fence
	NPS Property Boundary
	1' Contour

#### NOTES

1. Plan shows conditions in 2009
2. All features shown in approximate scale and location.
3. Cut lines for existing conditions plans are in approximate locations.
3. Contours shown only in project area and not in Tilney Property
4. Information on plant identification for 2009 is detailed on the 2009 Existing Condition Plans and 1995 *Historic Plant Inventory for Edison National Historic Site*



Drawing 2.0



Cultural Landscape Report  
for Glenmont

Thomas Edison National  
Historical Park  
West Orange, New Jersey

2009 Existing Conditions  
Overview



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

SOURCES

- Olmsted Center for Landscape Preservation, *Historic Plant Inventory for Edison National Historic Site, Existing Conditions, 1995.*
- Aerial photographs, 1995, 1997, 2007, and 2008.
- Site visits, January, April, and July 2009.

DRAWN BY

Michael Comisso, AutoCAD 2000 and Illustrator CS 3, 2009

LEGEND

- Building
- Paved vehicular circulation
- Unpaved vehicular circulation
- Path or walk
- Lawn
- Groundcover or herbaceous bed
- Deciduous specimen tree, wooded area
- Evergreen/coniferous specimen tree or shrub
- Deciduous/broadleaf evergreen shrub
- Stormwater drains
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- NPS Property Boundary
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NOTES

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- Cut lines for existing conditions plans are in approximate locations
- Contours shown only in project area and not in Tilney Property
- Information on plant identification for 2009 is detailed on the 2009 Existing Condition Plans and 1995 Historic Plant Inventory for Edison National Historic Site



Drawing 2.0



# Cultural Landscape Report for Glenmont

## Thomas Edison National Historical Park

West Orange, New Jersey

### 2009 Existing Conditions Section One



National Park Service

Olmsted Center for Landscape Preservation

www.nps.gov/oclp

#### SOURCES

1. Olmsted Center for Landscape Preservation, *Historic Plant Inventory for Edison National Historic Site, Existing Conditions*, 1995.
2. Aerial photographs, 1995, 1997, 2007, and 2008.
3. Site visits, January, April, and July 2009.

#### DRAWN BY

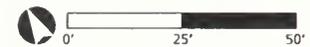
Michael Comisso, AutoCAD 2000 and Illustrator CS 3, 2009

#### LEGEND

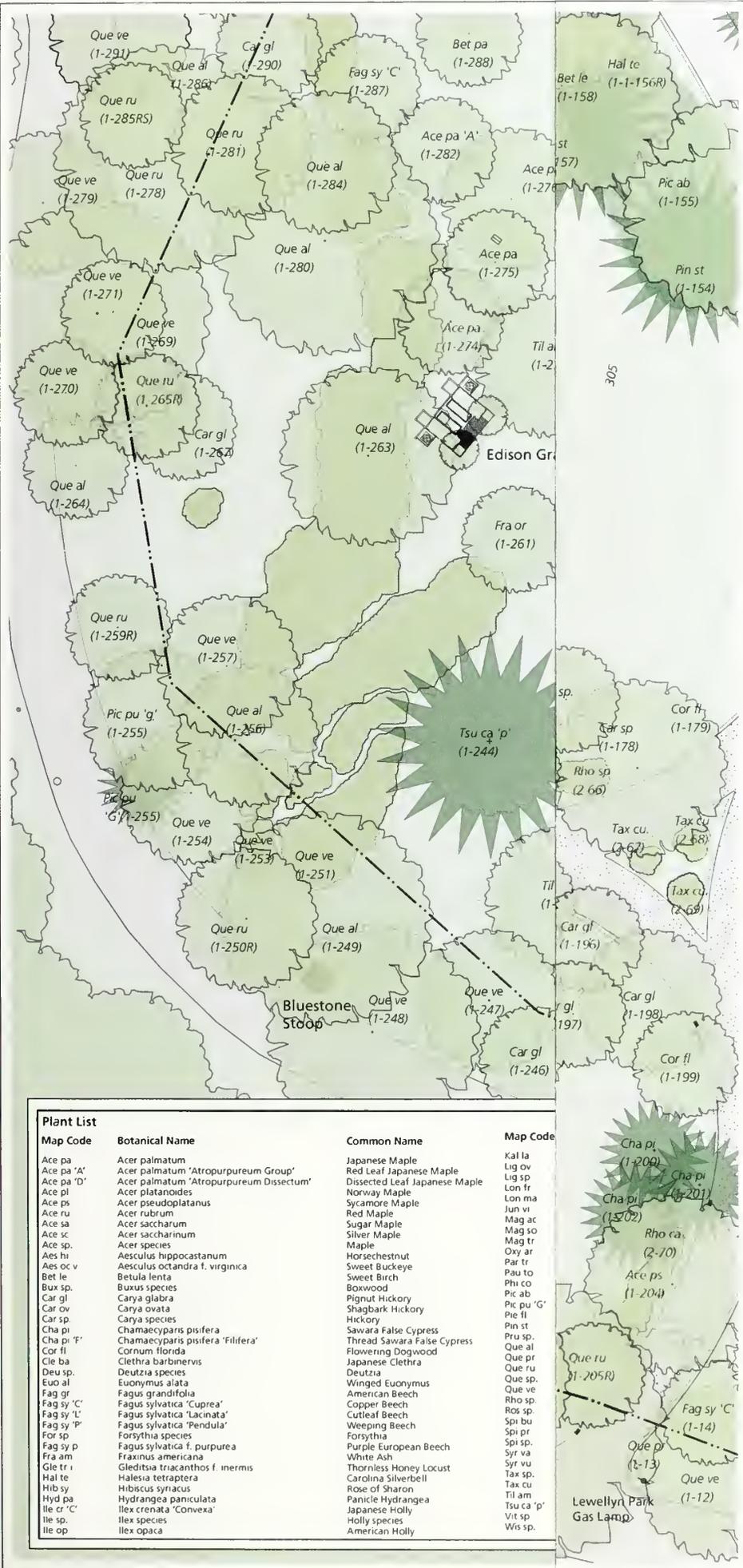
- Building
- Paved vehicular circulation
- Unpaved vehicular circulation
- Path or walk
- Lawn
- Groundcover or herbaceous bed
- Deciduous specimen tree, wooded area
- Evergreen/coniferous specimen tree or shrub
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- Fence
- NPS Property Boundary
- 1' Contour

#### NOTES

1. Plan shows conditions in 2009.
2. All features shown in approximate scale and location.
3. Contours shown only in project area and not in Tilney Property
4. Plant Information such as level of identification, the historical and botanical selection criteria, size, condition, and approximate age is detailed in the 1995 *Historic Plant Inventory for Edison National Historic Site*.



Drawing 2.1



#### Plant List

Map Code	Botanical Name	Common Name	Map Code
Ace pa	Acer palmatum	Japanese Maple	Kal la
Ace pa 'A'	Acer palmatum 'Atropurpureum Group'	Red Leaf Japanese Maple	Lig ov
Ace pa 'D'	Acer palmatum 'Atropurpureum Dissectum'	Dissected Leaf Japanese Maple	Lig sp
Ace pl	Acer platanoides	Norway Maple	Lon fr
Ace ps	Acer pseudoplatanus	Sycamore Maple	Lon ma
Ace ru	Acer rubrum	Red Maple	Jun vi
Ace sa	Acer saccharum	Sugar Maple	Mag ac
Ace sc	Acer saccharinum	Silver Maple	Mag so
Ace sp	Acer species	Maple	Oxy ar
Aes hi	Aesculus hippocastanum	Horsechestnut	Par tr
Aes oc v	Aesculus octandra f. virginica	Sweet Buckeye	Pau to
Bet le	Betula lenta	Sweet Birch	Phi co
Bux sp.	Buxus species	Boxwood	Pic ab
Car gl	Carya glabra	Pignut Hickory	Pic pu 'G'
Car ov	Carya ovata	Shagbark Hickory	Pie fl
Car sp.	Carya species	Hickory	Pin st
Cha pi	Chamaecyparis pisifera	Sawara False Cypress	Pru sp
Cha pi 'F'	Chamaecyparis pisifera 'Filifera'	Thread Sawara False Cypress	Que al
Cor fl	Cornum florida	Flowering Dogwood	Que pr
Cle ba	Clethra barbinervis	Japanese Clethra	Que ru
Deu sp.	Deutzia species	Deutzia	Que sp
Eu al	Euonymus alata	Winged Euonymus	Que ve
Fag gr	Fagus grandifolia	American Beech	Rho sp
Fag sy 'C'	Fagus sylvatica 'Cuprea'	Copper Beech	Ros sp
Fag sy 'L'	Fagus sylvatica 'Lacinata'	Cutleaf Beech	Spi bu
Fag sy 'P'	Fagus sylvatica 'Pendula'	Weeping Beech	Spi pr
For sp	Forsythia species	Forsythia	Syr va
Fag sy 'P'	Fagus sylvatica f. purpurea	Purple European Beech	Tax cu
Fra am	Fraxinus americana	White Ash	Til am
Gle tr	Gleditsia triacanthos f. mermis	Thornless Honey Locust	Tsu ca 'p'
Hal te	Halesia tetrapetala	Carolina Silverbell	Vit sp
Hib sy	Hibiscus syriacus	Rose of Sharon	Wis sp
Hyd pa	Hydrangea paniculata	Panicle Hydrangea	
Ile cr 'C'	Ilex crenata 'Convexa'	Japanese Holly	
Ile sp.	Ilex species	Holly species	
Ile op	Ilex opaca	American Holly	



# Cultural Landscape Report for Glenmont

## Thomas Edison National Historical Park

West Orange, New Jersey

### 2009 Existing Conditions Section Two



National Park Service

Olmsted Center for Landscape Preservation

[www.nps.gov/olcp](http://www.nps.gov/olcp)

#### SOURCES

- Olmsted Center for Landscape Preservation, *Historic Plant Inventory for Edison National Historic Site, Existing Conditions*, 1995.
- Aerial photographs, 1995, 1997, 2007, and 2008.
- Site visits, January, April, and July 2009.

#### DRAWN BY

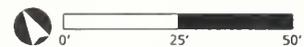
Michael Commisso, AutoCAD 2000 and Illustrator CS 3, 2009

#### LEGEND

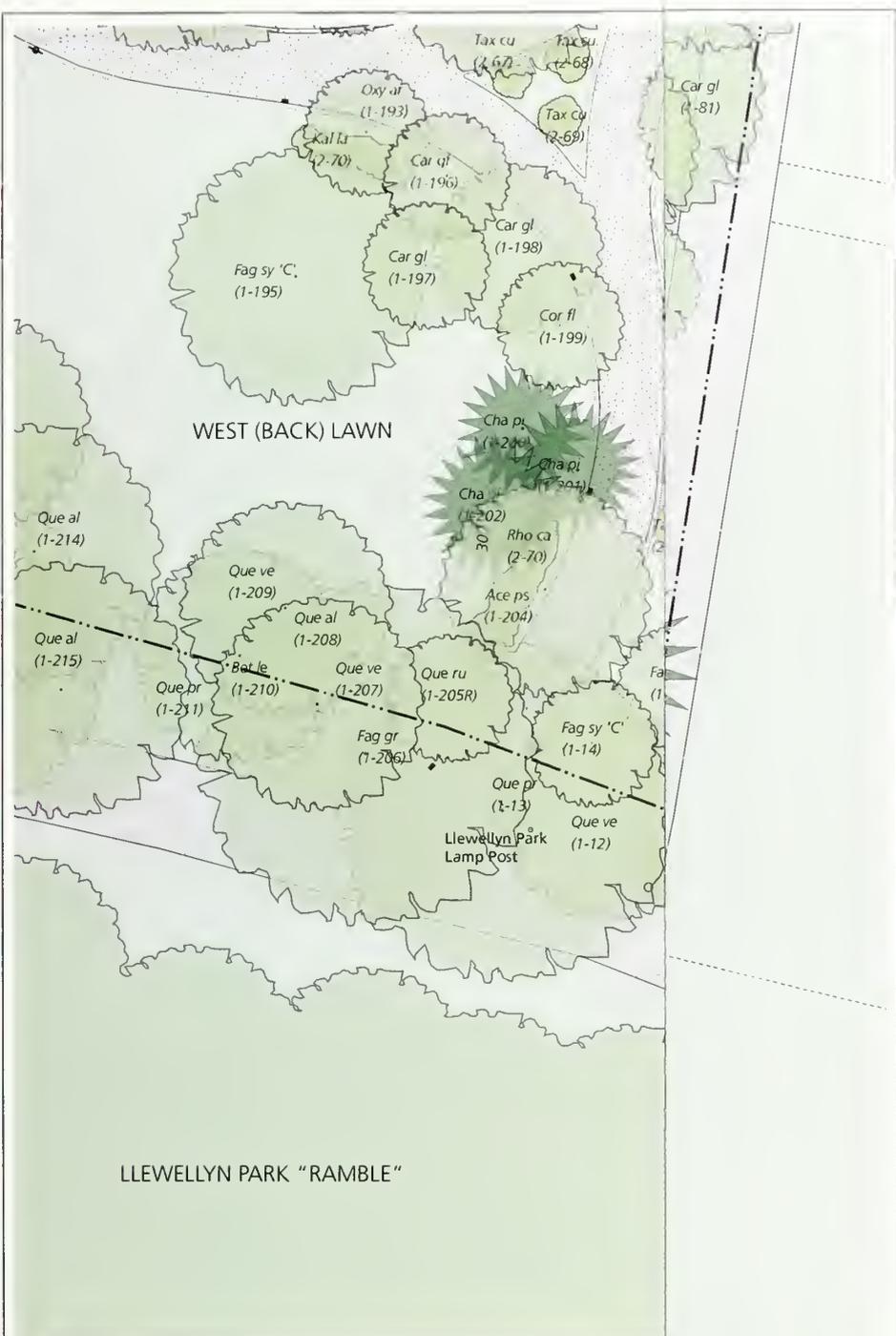
- Building
- Paved vehicular circulation
- Unpaved vehicular circulation
- Path or walk
- Lawn
- Groundcover or herbaceous bed
- Deciduous specimen tree, wooded area
- Evergreen/coniferous specimen tree or shrub
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- Stormwater drains
- Flagstone curbing
- Fence
- NPS Property Boundary
- 1' Contour

#### NOTES

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- All features shown in approximate scale and location.
- Contours shown only in project area and not in Tinley Property.
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Drawing 2.2



#### Plant List

Map Code	Botanical Name	Common Name	Map Code
Ace pa	Acer palmatum	Japanese Maple	Lon ma
Ace ps	Acer pseudoplatanus	Sycamore Maple	Lir tu
Ace ru	Acer rubrum	Red Maple	Oxy ar
Ace sa	Acer saccharum	Sugar Maple	Par tr
Ace sc	Acer saccharinum	Silver Maple	Phi co
Ace sp	Acer species	Maple	Pic ab
Aes hi	Aesculus hippocastanum	Horsechestnut	Pie fl
Bet al	Betula alleghaniensis	Yellow Birch	Pin ce
Bux sp	Buxus species	Boxwood	Pin ni
Car gl	Carya glabra	Pignut Hickory	Pin st
Car sp	Carya species	Hickory	Que al
Car to	Carya tomentosa	Mockernut	Que ma
Cas mo	Castanea mollissima	Chinese Chestnut	Que mi
Cha pi	Chamaecyparis pisifera	Sawara False Cypress	Que pa
Chi vi	Chionanthus virginicus	White Fringetree	Que pr
Cle ba	Clethra barbinervis	Japanese Clethra	Que ro
Deu sp	Deutzia species	Deutzia	Que ru
Euo al	Euonymus alata	Winged Euonymus	Que sp
Cor fl	Cornus florida	Flowering Dogwood	Que ve
Cor ma	Cornus mas	Cornelian-cherry	Rho sp
Fag gr	Fagus grandifolia	American Beech	Rob ps
Fag sy 'C'	Fagus sylvatica 'Cuprea'	Copper Beech	Ros sp
Fag sy 'L'	Fagus sylvatica 'Lacinata'	Cutleaf Beech	Spl bu
For sp	Forsythia species	Forsythia	Spi pr
Hib sy	Hibiscus syriacus	Rose of Sharon	Spi sp
Hyd pa	Hydrangea paniculata	Panicle Hydrangea	Syr va
Ile cr 'C'	Ilex crenata 'Convexa'	Japanese Holly	Syr vu
Ile sp	Ilex species	Holly species	Tax cu
Ile op	Ilex opaca	American Holly	Tax sp
Kal la	Kalmia latifolia	Mountain Laurel	Til am
Lig ov	Ligustrum species	California Privet	Til co
Lig sp	Ligustrum species	Privet	Til sp
Jug ni	Juglans nigra	Black Walnut	Vit sp
Lig sp	Ligustrum species	Privet	Wis sp
Lon fr	Lonicera fragrantissima	Winter Honeysuckle	

# Cultural Landscape Report for Glenmont

## Thomas Edison National Historical Park

West Orange, New Jersey

### 2009 Existing Conditions Section Two



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

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- Aerial photographs, 1995, 1997, 2007, and 2008.
- Site visits, January, April, and July 2009.

#### DRAWN BY

Michael Comisso, AutoCAD 2000 and Illustrator CS 3, 2009

#### LEGEND

- Building
- Paved vehicular circulation
- Unpaved vehicular circulation
- Path or walk
- Lawn
- Groundcover or herbaceous bed
- Deciduous specimen tree, wooded area
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- Deciduous/broadleaf evergreen shrub
- Stormwater drains
- Flagstone curbing
- Fence
- NPS Property Boundary
- 1' Contour

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Drawing 2.2



Map Code	Botanical Name	Common Name	Map Code	Botanical Name	Common Name
Ace pa	Acer palmatum	Japanese Maple	Ton ma	Lonicera maackii	Amur Honeysuckle
Ace ps	Acer pseudoplatanus	Sycamore Maple	Tir tu	Liriodendron tulipifera	Tulip Tree
Ace ru	Acer rubrum	Red Maple	Oxy ar	Oxydendrum arietinum	Sourwood
Ace sa	Acer saccharum	Sugar Maple	Pat tr	Parthenocissus tricuspidata	Japanese Creeper
Ace sr	Acer saccharinum	Silver Maple	Phi co	Philadelphus coronarius	Mock Orange
Ace sp	Acer species	Maple	Pic ab	Picea abies	Norway Spruce
Aes hi	Aesculus hippocastanum	Horsechestnut	Pie fl	Pieris floribunda	Mountain Pieris
Bet al	Betula alleghaniensis	Yellow Birch	Pin ce	Pinus cembra	Swiss Stone Pine
Bux sp	Buxus species	Buxwood	Pin nr	Pinus nigra	Austrian Pine
Car gl	Carya glabra	Pignut Hickory	Pin st	Pinus strobus	White Pine
Car sp	Carya species	Hickory	Que al	Quercus alba	White Oak
Car to	Carya tomentosa	Mockernut	Que ma	Quercus macrocarpa	Bur Oak
Cas mo	Cassia molissima	Chinese Chestnut	Que ml	Quercus michauxii	Swamp Chestnut Oak
Cha pr	Chamaecyparis parifera	Sawara False Cypress	Que pa	Quercus palustris	Pin Oak
Chi vi	Chionanthus virginicus	White Fringetree	Que pr	Quercus prinus	Chestnut Oak
Cle ba	Clethra barbinervis	Japanese Clethra	Que ro	Quercus robur	English Oak
Deutia sp	Deutzia species	Deutzia	Que ru	Quercus rubra	Red Oak
Eug al	Euonymus alata	Winged Euonymus	Que sp	Quercus species	Oak species
Cor fl	Cornus florida	Flowering Dogwood	Que ve	Quercus velutina	Black Oak
Cor ma	Cornus mas	Cornelian-cherry	Rho sp	Rhododendron species	Rhododendron
Fag gr	Fagus grandifolia	American Beech	Rob ps	Robinia pseudoacacia	Black Locust
Fag sy 'C'	Fagus sylvatica 'Cupress'	Copper Beech	Ros sp	Rosa species	Rose species
Fag sy 'L'	Fagus sylvatica 'Lacinalia'	Curtled Beech	Spi bu	Spiraea bumalda	Japanese Spiraea
For sp	Forsythia species	Forsythia	Spi pr	Spiraea prunifolia	Double Bridalwreath Spiraea
Hib sy	Hibiscus syriacus	Rose of Sharon	Spi sp	Spiraea species	Spiraea species
Hyd pa	Hydrangea paniculata	Panicle Hydrangea	Syr va	Syringa vanhouttei	Vanhoutte Spirea
Ile cr 'C'	Ilex crenata 'Convexa'	Japanese Holly	Syr vu	Syringa vulgaris	Common Lilac
Ile sp	Ilex species	Holly species	Tai cu	Taxus cuspidata	Japanese Yew
Ile op	Ilex opaca	American Holly	Tai sp	Taxus species	Yew
Kal la	Kalmia latifolia	Mountain Laurel	Til am	Tilia americana	American Linden
Lig ov	Ligustrum species	California Privet	Til co	Tilia cordata	Littleleaf Linden
Lig sp	Ligustrum species	Privet	Til sp	Tilia species	Linden
Lug nr	Ligularia nigra	Black Walnut	Vit sp	Vitis species	Grape
Lug sp	Ligustrum species	Privet	Wio sp	Wisteria species	Wisteria species
Lon tr	Lonicera fragrantissima	Winter Honeysuckle			

# Cultural Landscape Report for Glenmont

## Thomas Edison National Historical Park West Orange, New Jersey

### 2009 Existing Conditions Section Three



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

#### SOURCES

1. Olmsted Center for Landscape Preservation, *Historic Plant Inventory for Edison National Historic Site, Existing Conditions*, 1995.
2. Aerial photographs, 1995, 1997, 2007, and 2008.
3. Site visits, January, April, and July 2009.

#### DRAWN BY

Michael Commisso, AutoCAD 2000 and Illustrator CS 3, 2009

#### LEGEND

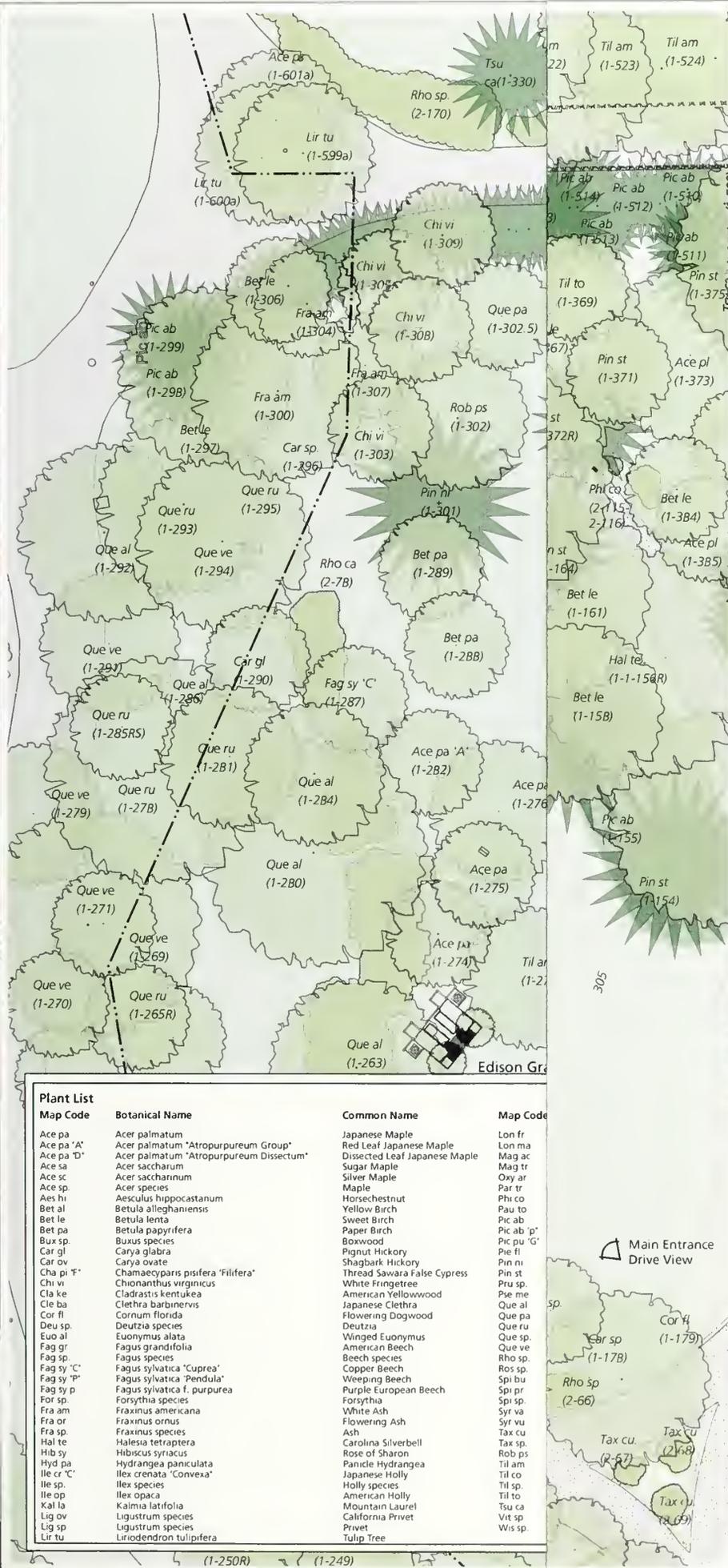
- Building
- Paved vehicular circulation
- Unpaved vehicular circulation
- Path or walk
- Lawn
- Groundcover or herbaceous bed
- Deciduous specimen tree, wooded area
- Evergreen/coniferous specimen tree or shrub
- Deciduous/broadleaf evergreen shrub
- Stormwater drains
- Flagstone curbing
- Fence
- NPS Property Boundary
- 1' Contour

#### NOTES

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Drawing 2.3



Map Code	Botanical Name	Common Name	Map Code
Ace pa	Acer palmatum	Japanese Maple	Lon fr
Ace pa 'A'	Acer palmatum 'Atropurpureum Group'	Red Leaf Japanese Maple	Lon ma
Ace pa 'D'	Acer palmatum 'Atropurpureum Dissectum'	Dissected Leaf Japanese Maple	Mag ac
Ace sa	Acer saccharum	Sugar Maple	Mag tr
Ace sc	Acer saccharinum	Silver Maple	Oxy ar
Ace sp.	Acer species	Maple	Par tr
Aes hi	Aesculus hippocastanum	Horsechestnut	Phi co
Bet al	Betula alleghaniensis	Yellow Birch	Pau to
Bet le	Betula lenta	Sweet Birch	Pic to
Bet pa	Betula papyrifera	Paper Birch	Pic ab 'p'
Bux sp.	Buxus species	Boxwood	Pic pu 'G'
Car gl	Carya glabra	Pignut Hickory	Pie fl
Car ov	Carya ovata	Shagbark Hickory	Pin ni
Cha pi 'F'	Chamaecyparis pisifera 'Filifera'	Thread Sawara False Cypress	Pin st
Chi vi	Chionanthus virginicus	White Fringetree	Prus sp.
Cla ke	Cladrasia kentukea	American Yellowwood	Pse me
Cle ba	Clethra barbinervis	Japanese Clethra	Que al
Cor fl	Cornum florida	Flowering Dogwood	Que ru
Deu sp.	Deutzia species	Deutzia	Que sp.
Euo al	Euonymus alata	Winged Euonymus	Que ve
Fag gr	Fagus grandifolia	American Beech	Rho sp.
Fag sp.	Fagus species	Beech species	Ros sp.
Fag sy 'C'	Fagus sylvatica 'Cuprea'	Copper Beech	Spi bu
Fag sy 'P'	Fagus sylvatica 'Pendula'	Weeping Beech	Spi pr
Fag sy p	Fagus sylvatica f. purpurea	Purple European Beech	Spr va
Foi sp.	Forsythia species	Forsythia	Syr vu
Fra am	Fraxinus americana	White Ash	Tax cu
Fra or	Fraxinus ornus	Flowering Ash	Tax cu
Fra sp.	Fraxinus species	Ash	Tax cu
Hal te	Halesia tetraptera	Carolina Silverbell	Tax cu
Hib sy	Hibiscus syriacus	Rose of Sharon	Tax cu
Hyd pa	Hydrangea paniculata	Panicle Hydrangea	Til am
Ile cr 'C'	Ilex crenata 'Convexa'	Japanese Holly	Til co
Ile sp.	Ilex species	Holly species	Til sp.
Ile op	Ilex opaca	American Holly	Til to
Kal la	Kalmia latifolia	Mountain Laurel	Tsu ca
Lig ov	Ligustrum species	California Privet	Vit sp
Lig sp.	Ligustrum species	Privet	Wis sp.
Lir tu	Liriodendron tulipifera	Tulip Tree	

# Cultural Landscape Report for Glenmont

Thomas Edison National Historical Park  
West Orange, New Jersey

## 2009 Existing Conditions Section Three



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

### SOURCES

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- Aerial photographs, 1995, 1997, 2007, and 2008.
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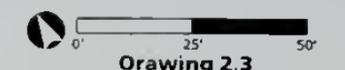
Michael Comisso, AutoCAD 2000 and Illustrator CS 3, 2009

### LEGEND

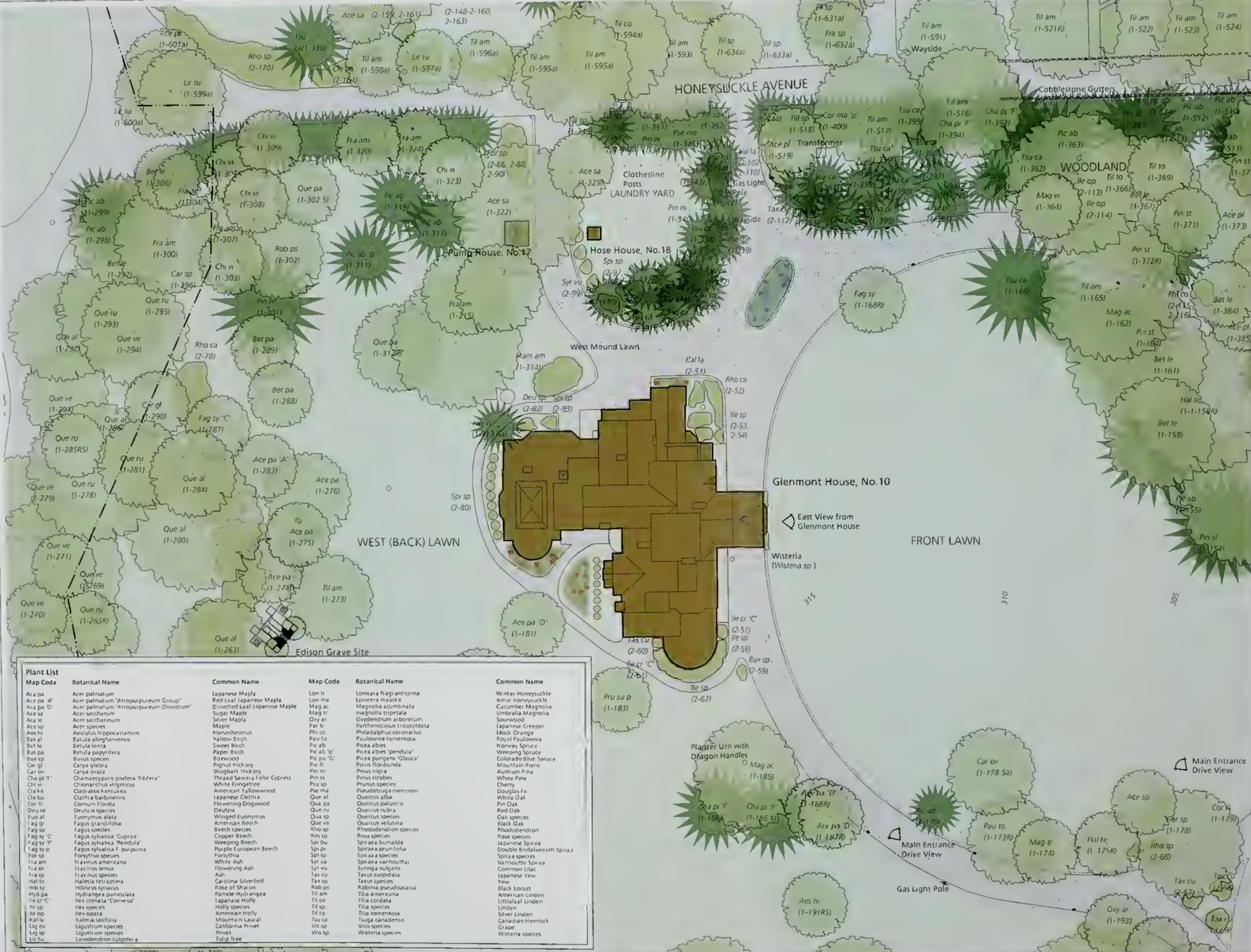
- Building
- Paved vehicular circulation
- Unpaved vehicular circulation
- Path or walk
- Lawn
- Groundcover or herbaceous bed
- Deciduous specimen tree, wooded area
- Evergreen/coniferous specimen tree or shrub
- Deciduous/broadleaf evergreen shrub
- Stormwater drains
- Flagstone curbing
- Fence
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Drawing 2.3



Map Code	Botanical Name	Common Name	Map Code	Botanical Name	Common Name
Aca pa	<i>Acer palmatum</i>	Japanese Maple	Lon li	<i>Lonicera fragrantissima</i>	Winter Honeysuckle
Ace pa 'A'	<i>Acer palmatum</i> "Atropurpureum Group"	Red Leaf Japanese Maple	Lon ma	<i>Lonicera maackii</i>	Amur Honeysuckle
Ace pa 'D'	<i>Acer palmatum</i> "Atropurpureum Dissectum"	Dissected Leaf Japanese Maple	Mag ac	<i>Magnolia acuminata</i>	Cucumber Magnolia
Ace sa	<i>Acer saccharum</i>	Sugar Maple	Mag tr	<i>Magnolia tripetala</i>	Umbrella Magnolia
Aca sc	<i>Acer saccharinum</i>	Silver Maple	Dry ai	<i>Oxydendrum arboreum</i>	Sourwood
Ace sp	<i>Acer</i> species	Maple	Par tr	<i>Parthenocissus tricuspidata</i>	Japanese Creeper
Ane hi	<i>Anculus hippocastanum</i>	Horsechestnut	Phi co	<i>Philadelphus coronatus</i>	Mock Orange
Bas al	<i>Betula alleghaniensis</i>	Yellow Birch	Pau to	<i>Paulownia tomentosa</i>	Royal Paulownia
Bet le	<i>Betula lenta</i>	Sweet Birch	Pic ab	<i>Picea abies</i>	Norway Spruce
Bas pa	<i>Betula papyrifera</i>	Paper Birch	Pice a'bies 'pendula'	<i>Picea abies 'pendula'</i>	Weeping Spruce
Bux sp	<i>Buxus</i> species	Buxwood	Picea pungens 'Glauca'	<i>Picea pungens 'Glauca'</i>	Colorado Blue Spruce
Car gl	<i>Carya glabra</i>	Pignut Hickory	Pier n	<i>Pieris floribunda</i>	Mountain Pieris
Car ov	<i>Carya ovata</i>	Shagbark Hickory	Pin ni	<i>Pinus nigra</i>	Austrian Pine
Cha pl 'F'	<i>Chamaecyparis pfitzeri</i> "Filitera"	Thread Sawara False Cypress	Pin ss	<i>Pinus strobus</i>	White Pine
Chi vi	<i>Chionanthus virginicus</i>	White Fringetree	Pru sp	<i>Prunus</i> species	Cherry
Cla ke	<i>Cladonia krentzi</i> ssp. <i>usaea</i>	American Yellowwood	Pse ma	<i>Pseudotsuga menziesii</i>	Douglas Fir
Cle ba	<i>Clathra bartonensis</i>	Japanese Clematis	Que al	<i>Quercus alba</i>	White Oak
Cor li	<i>Cornum florida</i>	Flowering Dogwood	Que pa	<i>Quercus palustris</i>	Pin Oak
Deu sp	<i>Deutzia</i> species	Deutzia	Que ru	<i>Quercus rubra</i>	Red Oak
Evo al	<i>Euonymus alata</i>	Winged Euonymus	Que sp	<i>Quercus</i> species	Oak species
Fag sp	<i>Fagus grandifolia</i>	American Beech	Que ve	<i>Quercus velutina</i>	Black Oak
Fag sp	<i>Fagus</i> species	Beech species	Rho sp	<i>Rhododendron</i> species	Rhododendron
Fag sy 'C'	<i>Fagus sylvatica 'Cuprea'</i>	Copper Beech	Ros sp	<i>Rosa</i> species	Rose species
Fag sy 'P'	<i>Fagus sylvatica 'Pendula'</i>	Weeping Beech	Spi bu	<i>Spiraea bumalda</i>	Japanese Spiraea
Fag sy 'D'	<i>Fagus sylvatica 'Pendula'</i>	Purple European Beech	Spi pr	<i>Spiraea prunifolia</i>	Double Bridalwreath Spiraea
For sp	<i>Forsythia</i> species	Forsythia	Spi sa	<i>Spiraea alba</i> species	Spiraea species
Fra am	<i>Fraxinus americana</i>	White Ash	Syr va	<i>Syringa vanhouttei</i>	Vanhoutte Spiraea
Fra sp	<i>Fraxinus</i> species	Flowering Ash	Syr vu	<i>Syringa vulgaris</i>	Common Lilac
Hal te	<i>Halesia tetrapetala</i>	Ash	Tax cu	<i>Taxus cuspidata</i>	Japanese Yew
Hib sy	<i>Hibiscus syriacus</i>	Carolina Silverbell	Tax sp	<i>Taxus</i> species	Yew
Hyd pa	<i>Hydrangea paniculata</i>	Rose of Sharon	Rob ps	<i>Robinia pseudoacacia</i>	Black Locust
Ile cr 'C'	<i>Ilex crenata 'Convexa'</i>	Panicle Hydrangea	Til am	<i>Tilia americana</i>	American Linden
Ile sp	<i>Ilex</i> species	Japanese Holly	Til co	<i>Tilia cordata</i>	Littoral Linden
Ile op	<i>Ilex opaca</i>	Holly species	Til sp	<i>Tilia</i> species	Linden
Kal la	<i>Kalmia latifolia</i>	American Holly	Til to	<i>Tilia tomentosa</i>	Silver Linden
Lig cu	<i>Ligustrum</i> species	Mountain Laurel	Tsu ca	<i>Tsuga canadensis</i>	Canadian Hemlock
Lig sp	<i>Ligustrum</i> species	California Privet	Vit sp	<i>Vitis</i> species	Grape
Lil tu	<i>Liriodendron tulipifera</i>	Tulip tree	Wia sp	<i>Wisteria</i> species	Wisteria species

# Cultural Landscape Report for Glenmont

## Thomas Edison National Historical Park

West Orange, New Jersey

### 2009 Existing Conditions Section Four



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

#### SOURCES

1. Olmsted Center for Landscape Preservation, *Historic Plant Inventory for Edison National Historic Site, Existing Conditions*, 1995.
2. Aerial photographs, 1995, 1997, 2007, and 2008.
3. Site visits, January, April, and July 2009.

#### DRAWN BY

Michael Commisso, AutoCAD 2000 and Illustrator CS 3, 2009

#### LEGEND

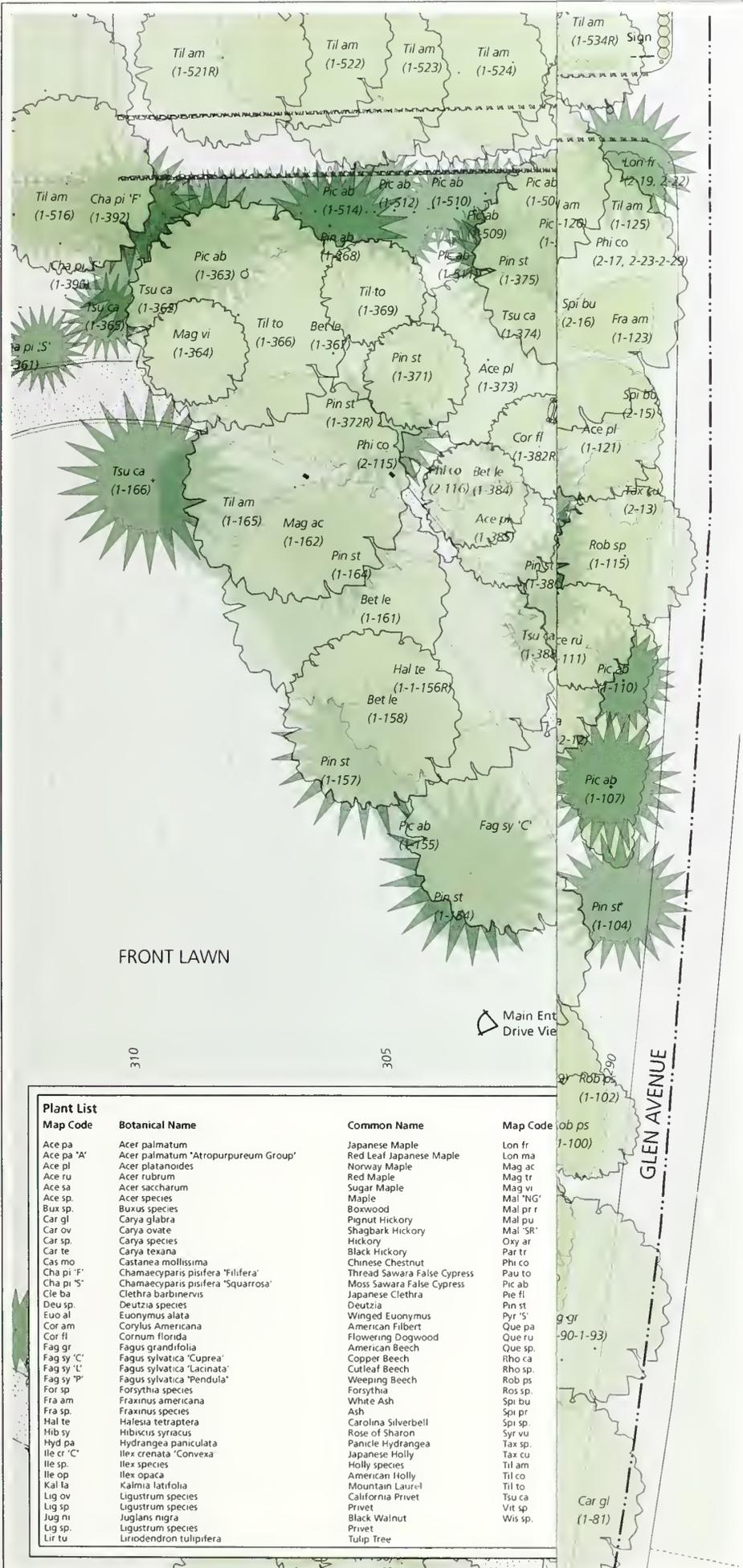
- Building
- Paved vehicular circulation
- Unpaved vehicular circulation
- Path or walk
- Lawn
- Groundcover or herbaceous bed
- Deciduous specimen tree, wooded area
- Evergreen/coniferous specimen tree or shrub
- Deciduous/broadleaf evergreen shrub
- Stormwater drains
- Flagstone curbing
- Fence
- NPS Property Boundary
- 1' Contour

#### NOTES

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Drawing 2.4



Map Code	Botanical Name	Common Name	Map Code
Ace pa	Acer palmatum	Japanese Maple	Lon fr
Ace pa 'A'	Acer palmatum 'Atropurpureum Group'	Red Leaf Japanese Maple	Lon ma
Ace pl	Acer platanoides	Norway Maple	Mag ac
Ace ru	Acer rubrum	Red Maple	Mag tr
Ace sa	Acer saccharum	Sugar Maple	Mag vi
Ace sp	Acer species	Maple	Mal 'NG'
Bux sp.	Buxus species	Boxwood	Mal pr r
Car gl	Carya glabra	Pignut Hickory	Mal pu
Car ov	Carya ovata	Shagbark Hickory	Mal 'SR'
Car sp	Carya species	Hickory	Oxy ar
Car te	Carya texana	Black Hickory	Par tr
Gas mo	Castanea mollissima	Chinese Chestnut	Phi co
Cha pi 'F'	Chamaecyparis pisifera 'Filifera'	Thread Sawara False Cypress	Pau to
Cha pi 'S'	Chamaecyparis pisifera 'Squarrosa'	Moss Sawara False Cypress	Pic ab
Cle ba	Clethra barbinervis	Japanese Clethra	Pie fi
Deu sp.	Deutzia species	Deutzia	Pin st
Euo al	Euonymus alata	Winged Euonymus	Pyr 'S'
Cor am	Cornus Americana	American Filbert	Que pa
Cor fl	Cornum florida	Flowering Dogwood	Que ru
Fag gr	Fagus grandifolia	American Beech	Que sp
Fag sy 'C'	Fagus sylvatica 'Cuprea'	Copper Beech	Rho ca
Fag sy 'L'	Fagus sylvatica 'Lacinata'	Cutleaf Beech	Rho sp
Fag sy 'P'	Fagus sylvatica 'Pendula'	Weeping Beech	Rob ps
For sp	Forsythia species	Forsythia	Ros sp
Fra am	Fraxinus americana	White Ash	Spi bu
Fra sp.	Fraxinus species	Ash	Spi pr
Hal te	Halesia tetraptera	Carolina Silverbell	Spi sp
Hib sy	Hibiscus syriacus	Rose of Sharon	Syr vu
Hyd pa	Hydrangea paniculata	Panicle Hydrangea	Tax sp
Ilex cr 'C'	Ilex crenata 'Convexa'	Japanese Holly	Tax cu
Ilex sp.	Ilex species	Holly species	Til am
Ilex op	Ilex opaca	American Holly	Til co
Kal la	Kalmia latifolia	Mountain Laurel	Til to
Lig ov	Ligustrum species	California Privet	Tsu ca
Lig sp	Ligustrum species	Privet	Vit sp
Jug ni	Juglans nigra	Black Walnut	Wis sp
Lig sp.	Ligustrum species	Privet	
Lir tu	Liriodendron tulipifera	Tulip Tree	

# Cultural Landscape Report for Glenmont

Thomas Edison National Historical Park  
West Orange, New Jersey

## 2009 Existing Conditions Section Four



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### DRAWN BY

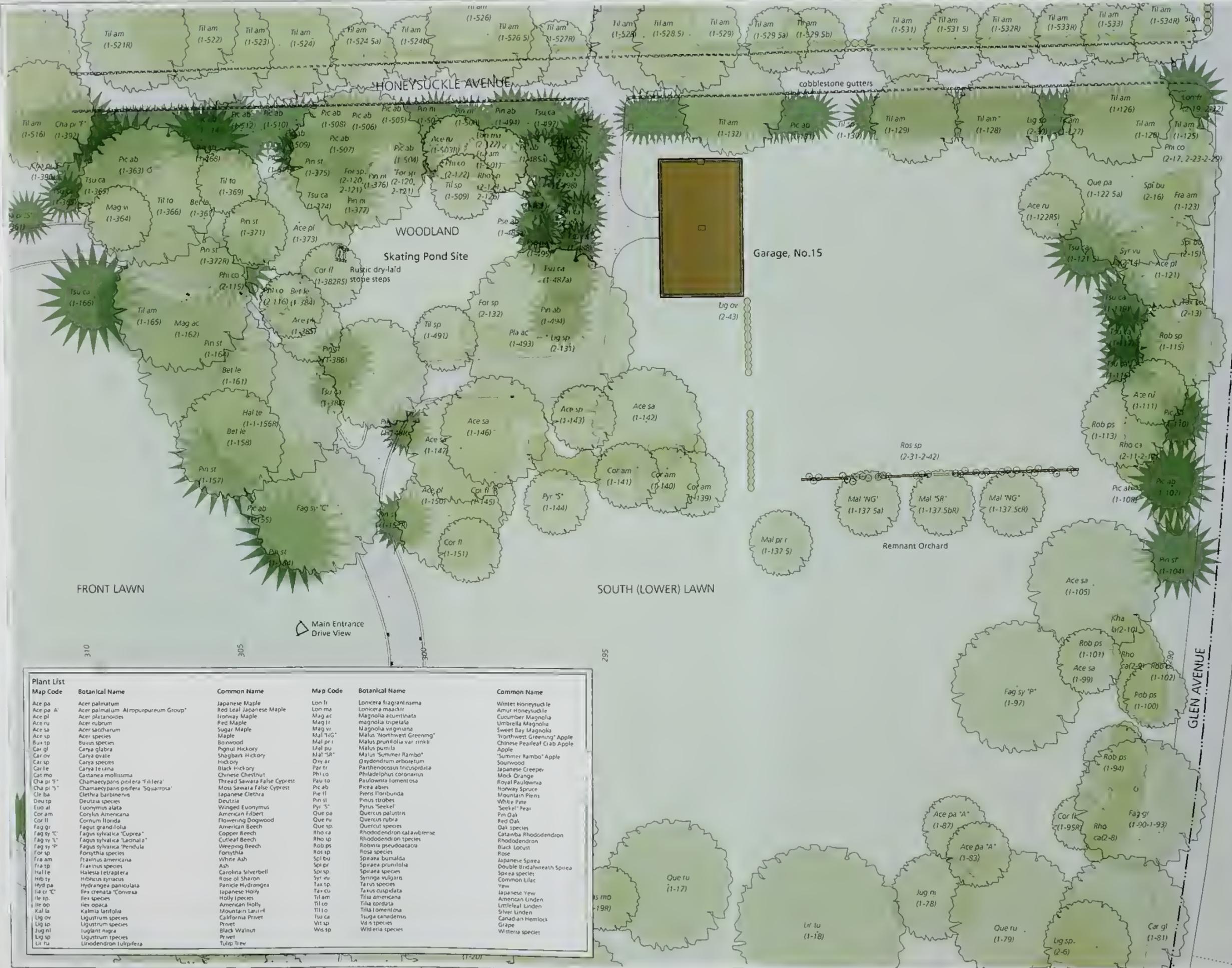
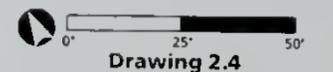
Michael Comisso, AutoCAD 2000 and Illustrator CS 3, 2009

### LEGEND

- Building
- Paved vehicular circulation
- Unpaved vehicular circulation
- Path or walk
- Lawn
- Groundcover or herbaceous bed
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- Fence
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Map Code	Botanical Name	Common Name	Map Code	Botanical Name	Common Name
Ace pa	Acer palmatum	Japanese Maple	Lon li	Lonicera fragransma	Winter Honeysuckle
Ace pa A	Acer palmatum 'Atropurpureum Group'	Red Leaf Japanese Maple	Lon ma	Lonicera maackii	Amur Honeysuckle
Ace pl	Acer platanoides	Ironway Maple	Mag ac	Magnolia acuminata	Cucumber Magnolia
Ace ru	Acer rubrum	Red Maple	Mag tr	Magnolia tripetala	Umbrella Magnolia
Ace sa	Acer saccharum	Sugar Maple	Mag vr	Magnolia virginiana	Sweet Bay Magnolia
Ace sp	Acer species	Maple	Mal 'IG'	Malus 'Northwest Greening'	'Northwest Greening' Apple
Bux sp	Buxus species	Boxwood	Mal pr i	Malus prunifolia var. rinkyil	Chinese Pearleaf Crab Apple
Car gl	Carya glabra	Pignut Hickory	Mal pu	Malus pumila	Apple
Car ov	Carya ovale	Shagbark Hickory	Mal 'SR'	Malus 'Summer Rambo'	'Summer Rambo' Apple
Car sp	Carya species	Hickory	Oxy ar	Oxydendrum arboreum	Sourwood
Car le	Carya tejana	Black Hickory	Par tr	Parthenococcus truncipetalus	Japanese Creeper
Cat mo	Castanea mollissima	Chinese Chestnut	Phi co	Philadelphus coronarius	Mock Orange
Cha pi 'T'	Chamaecyparis pinitera 'Filifera'	Thread Sawara False Cypress	Pau to	Paulownia tomentosa	Royal Paulownia
Cha pi 'S'	Chamaecyparis pinitera 'Squarrosa'	Moss Sawara False Cypress	Pic ab	Picea abies	Norway Spruce
Cle ba	Clethra barbinervis	Japanese Clethra	Pie fl	Pieris floribunda	Mountain Pieris
Deut sp	Deutzia species	Deutzia	Pin st	Pinus strobus	White Pine
Euo al	Euonymus alata	Winged Euonymus	Pyr 'S'	Pyrus 'Seekel'	'Seekel' Pear
Cor am	Corylus americana	American Filbert	Que pa	Quercus palustris	Pin Oak
Cor fl	Cornus florida	Flowering Dogwood	Que ru	Quercus rubra	Red Oak
Fag gr	Fagus grandifolia	American Beech	Que sp	Quercus species	Oak species
Fag sy 'C'	Fagus sylvatica 'Cupress'	Copper Beech	Rho ca	Rhododendron calawbiense	Catawba Rhododendron
Fag sy 'L'	Fagus sylvatica 'Lacinated'	Cutleaf Beech	Rho sp	Rhododendron species	Rhododendron
Fag sy 'P'	Fagus sylvatica 'Pendula'	Weeping Beech	Rob ps	Robinia pseudoacacia	Black Locust
For sp	Forsythia species	Forsythia	Ros sp	Rosa species	Rose
Fra am	Fraxinus americana	White Ash	Spi bu	Spiraea bumalda	Japanese Spirea
Fra sp	Fraxinus species	Ash	Spi pr	Spiraea prunifolia	Double Bridalwreath Spirea
Halle	Halesia tetrapetala	Carolina Silverbell	Spi sp	Spiraea species	Spirea species
Hib ty	Hibiscus syriacus	Rose of Sharon	Syr vu	Syringa vulgaris	Common Lilac
Hyd pa	Hydrangea paniculata	Panicle Hydrangea	Tax sp	Taxus species	Yew
Ila cr 'C'	Ilex crenata 'Convexa'	Japanese Holly	Tax tu	Taxus cuspidata	Japanese Yew
Ile sp	Ilex species	Holly species	Til am	Tilia americana	American Linden
Ile op	Ilex opaca	American Holly	Til co	Tilia cordata	Little-leaf Linden
Kal la	Kalmia latifolia	Mountain Laurel	Til lo	Tilia lomentosa	Silver Linden
Lig ov	Ligustrum species	California Privet	Tsu ca	Tsuga canadensis	Canadian Hemlock
Lig sp	Ligustrum species	Privet	Vit sp	Vitis species	Grape
Lug ni	Luglandis nigra	Black Walnut	Wis sp	Wisteria species	Wisteria species
Lig sp	Ligustrum species	Privet			
Lil tr	Liriodendron tulipifera	Tulip Tree			





National Park Service  
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DRAWN BY

Michael Comisso, AutoCAD 2000 and Illustrator CS 3,  
2009

LEGEND

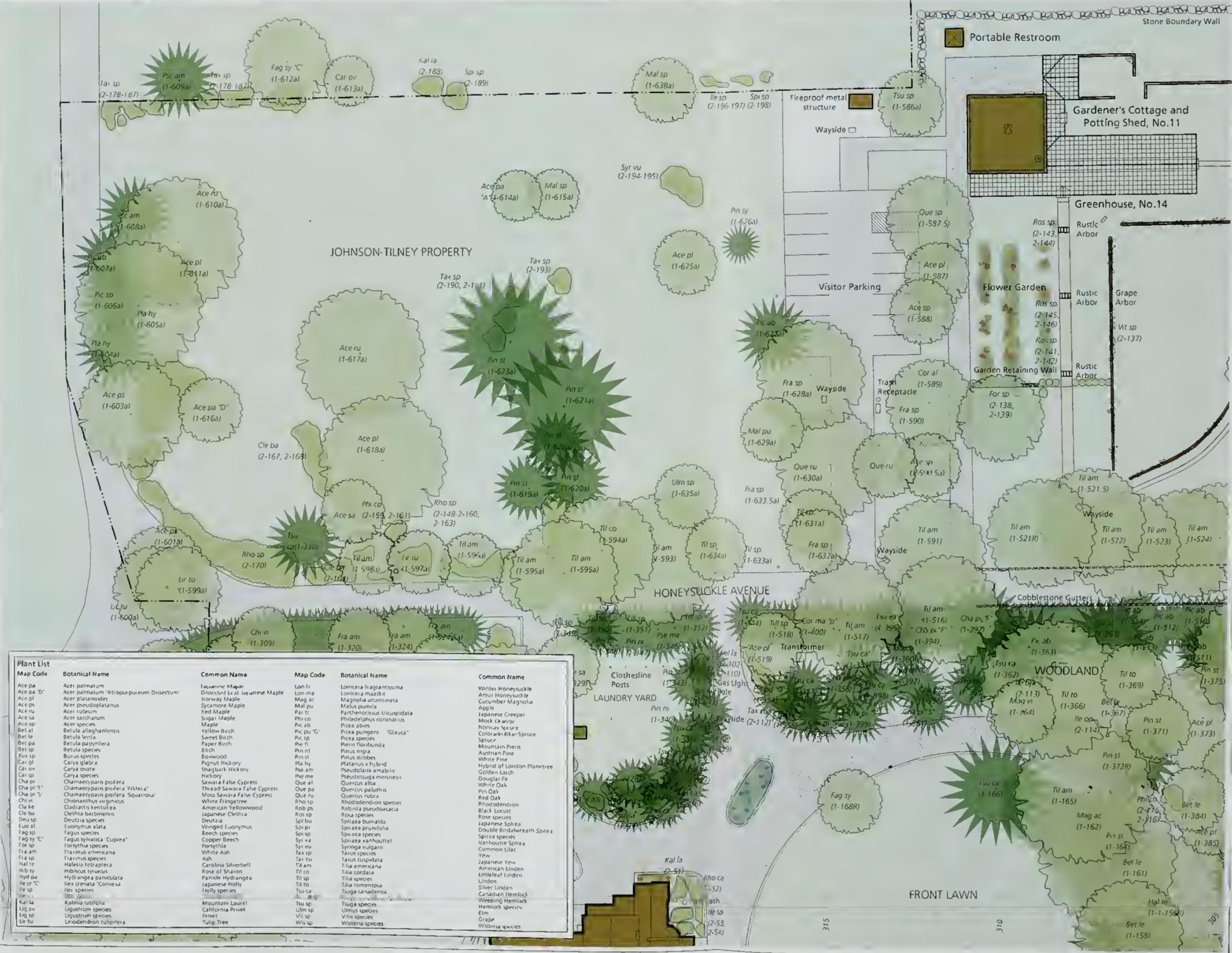
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Drawing 2.5



Map Code	Botanical Name	Common Name	Map Code	Botanical Name	Common Name
Ace pa	<i>Acer palmatum</i>	Japanese Maple	Lon li	<i>Lonicera ligustrina</i>	Winter Honeyuckle
Ace pa 'D'	<i>Acer palmatum</i> 'Atropurpureum Dissectum'	Dissected Leaf Japanese Maple	Lon ma	<i>Lonicera maackii</i>	Amur Honeyuckle
Ace pl	<i>Acer platanoides</i>	Honway Maple	Mal pu	<i>Malus pumila</i>	Cucumber Magnolia
Ace ps	<i>Acer pseudoplatanus</i>	Sycamore Maple	Mal sp	<i>Malus sp.</i>	Apple
Ace ru	<i>Acer rubrum</i>	Red Maple	Par tr	<i>Parthenocissus tricuspidata</i>	Japanese Creeper
Ace sa	<i>Acer saccharum</i>	Sugar Maple	Phi co	<i>Philadelphus coronatus</i>	Mock Orange
Ace sp	<i>Acer species</i>	Maple	Pic ab	<i>Picea abies</i>	Norway Spruce
Bet al	<i>Betula alleghaniensis</i>	Yellow Birch	Pic pu 'G'	<i>Picea pungens</i> 'Glauca'	Spruce
Bet le	<i>Betula lenta</i>	Sweet Birch	Pic sp	<i>Picea species</i>	Spruce
Bet pa	<i>Betula papyrifera</i>	Paper Birch	Pie fl	<i>Pieris floribunda</i>	Mountain Pieris
Bet sp	<i>Betula species</i>	Birch	Pin ni	<i>Pinus nigra</i>	Austrian Pine
Bui sp	<i>Bursera speciosa</i>	Boerwood	Pin st	<i>Pinus strobus</i>	White Pine
Car ol	<i>Carya glabra</i>	Pignut Hickory	Pla hy	<i>Platanus hybrid</i>	Hybrid of London Planetree
Car ov	<i>Carya ovata</i>	Shagbark Hickory	Pse am	<i>Pseudotsuga amabilis</i>	Golden Larch
Car sp	<i>Carya species</i>	Hickory	Pse me	<i>Pseudotsuga menziesii</i>	Douglas Fir
Cha pi 'T'	<i>Chamaecyparis pfitteriana</i>	Sawara False Cypress	Que al	<i>Quercus alba</i>	White Oak
Cha pi 'S'	<i>Chamaecyparis pfitteriana</i> 'Squarrosa'	Thread Sawara False Cypress	Que ba	<i>Quercus bicolor</i>	Red Oak
Chi vi	<i>Chionanthus virginicus</i>	Moss Sawara False Cypress	Que nu	<i>Quercus rubra</i>	Rhododendron
Cle ke	<i>Clethra alnifolia</i>	White Flingtree	Rho sp	<i>Rhododendron species</i>	Black Locust
Cle ba	<i>Clethra barbinervis</i>	American Yellowwood	Ros sp	<i>Rosa species</i>	Rose species
Deu sp	<i>Deutzia species</i>	Japanese Clethra	Ros sp	<i>Rosa species</i>	Double Bridalwreath Spirea
Euo al	<i>Euonymus alata</i>	Deutzia	Spi ca	<i>Spiraea cuneata</i>	Spirea species
Fag sp	<i>Fagus species</i>	Winged Euonymus	Spi ca	<i>Spiraea cuneata</i>	Spirea species
Fag sp 'C'	<i>Fagus sylvatica</i> 'Cuprea'	Beech species	Spi ca	<i>Spiraea vanhouttei</i>	Vanhoutte Spirea
For sp	<i>Forsythia species</i>	Copper Beech	Syr va	<i>Syringa vulgaris</i>	Common Lilac
Fra am	<i>Fragaria americana</i>	Ponylilia	Syr vu	<i>Syringa vanhouttei</i>	Common Lilac
Fra sp	<i>Fragaria species</i>	White Ash	Tax cu	<i>Taxus cuspidata</i>	Yew
Hal te	<i>Halesia tetraaptera</i>	Ash	Til co	<i>Tilia cordata</i>	Japanese Yew
Hib sp	<i>Hibiscus syriacus</i>	Carolina Silverbell	Til sp	<i>Tilia species</i>	American Linden
Hyd sp	<i>Hydrangea paniculata</i>	Rose of Sharon	Til to	<i>Tilia tomentosa</i>	Littleleaf Linden
Ile sp 'C'	<i>Ilex crenata</i> 'Convexa'	Panicle Hydrangea	Tuo ca	<i>Tilia cordata</i>	Linden
Ile sp	<i>Ilex species</i>	Japanese Holly	Tsu sp	<i>Thuja occidentalis</i>	Silver Linden
Kal la	<i>Kalmia latifolia</i>	Holly species	Ulm sp	<i>Ulmus species</i>	Canadian Hemlock
Liq ov	<i>Ligustrum ovalifolium</i>	Mountain Laurel	Vit sp	<i>Vitis species</i>	Weeping Hemlock
Liq sp	<i>Ligustrum species</i>	California Privet	Wis sp	<i>Wisteria species</i>	Hemlock species
Lir tu	<i>Liriodendron tulipifera</i>	Privet			Elm
		Tulip Tree			Grape

# Cultural Landscape Report for Glenmont

## Thomas Edison National Historical Park West Orange, New Jersey

### 2009 Existing Conditions Section Six



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

#### SOURCES

1. Olmsted Center for Landscape Preservation, *Historic Plant Inventory for Edison National Historic Site, Existing Conditions*, 1995.
2. Aerial photographs, 1995, 1997, 2007, and 2008.
3. Site visits, January, April, and July 2009.

#### DRAWN BY

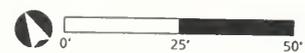
Michael Comisso, AutoCAD 2000 and Illustrator CS 3, 2009

#### LEGEND

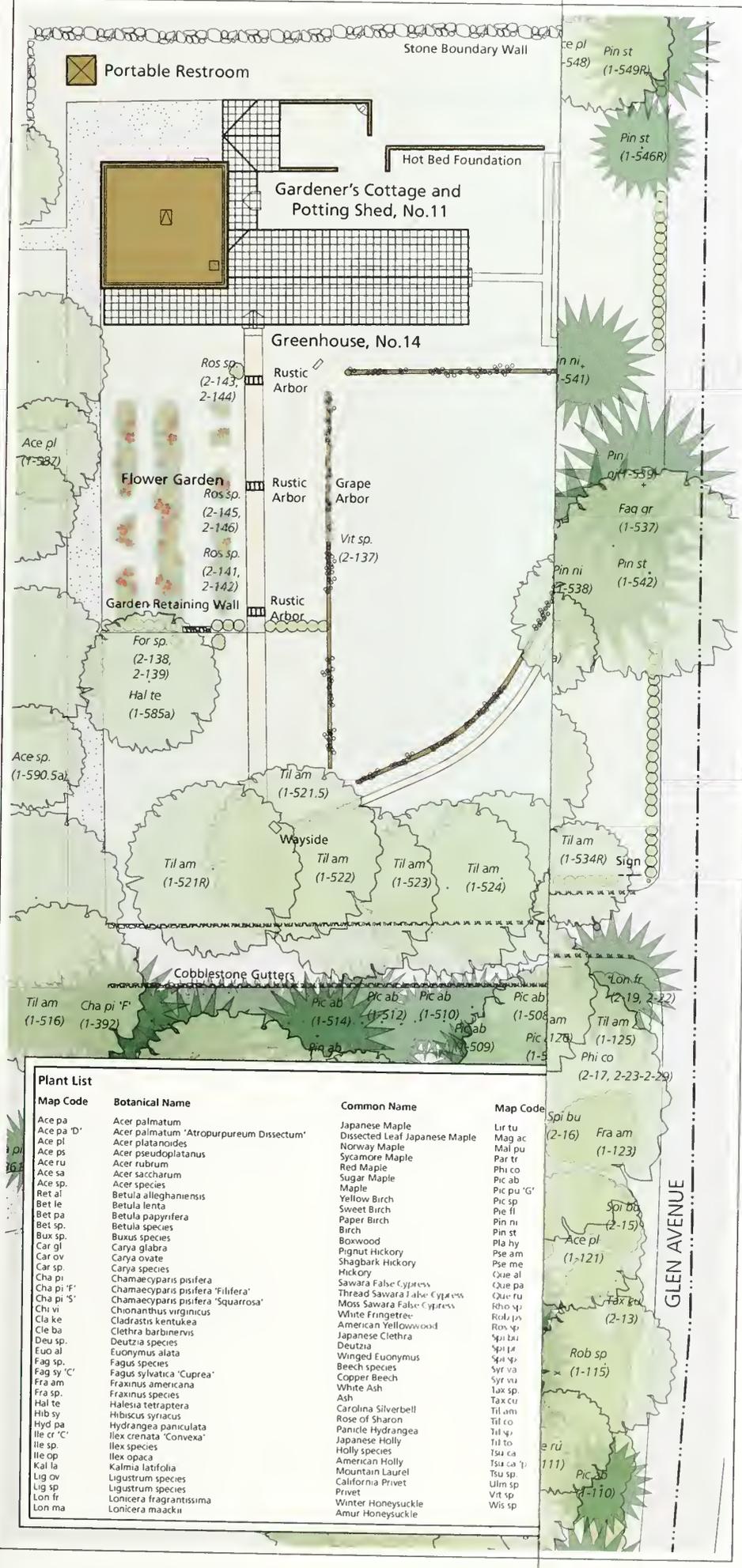
- Building
- Paved vehicular circulation
- Unpaved vehicular circulation
- Path or walk
- Lawn
- Groundcover or herbaceous bed
- Deciduous specimen tree, wooded area
- Evergreen/coniferous specimen tree or shrub
- Deciduous/broadleaf evergreen shrub
- Stormwater drains
- Flagstone curbing
- Fence
- NPS Property Boundary
- 1' Contour

#### NOTES

1. Plan shows conditions in 2009
2. All features shown in approximate scale and location.
3. Contours shown only in project area and not in Tilney Property
4. Plant information such as level of identification, the historical and botanical selection criteria, size, condition, and approximate age is detailed in the 1995 *Historic Plant Inventory for Edison National Historic Site*



Drawing 2.6



#### Plant List

Map Code	Botanical Name	Common Name	Map Code
Ace pa	Acer palmatum	Japanese Maple	Lir tu
Ace pa 'D'	Acer palmatum 'Atropurpureum Dissectum'	Dissected Leaf Japanese Maple	Mag ac
Ace pl	Acer platanoides	Norway Maple	Mal pu
Ace ps	Acer pseudoplatanus	Sycamore Maple	Par tr
Ace ru	Acer rubrum	Red Maple	Phi co
Ace sa	Acer saccharum	Sugar Maple	Pic ab
Ace sp.	Acer species	Maple	Pic pu 'G'
Ret al	Betula alleghaniensis	Yellow Birch	Pic sp
Bet le	Betula lenta	Sweet Birch	Phe fl
Bet pa	Betula papyrifera	Paper Birch	Pin ni
Bet sp.	Betula species	Birch	Pin st
Bux sp.	Buxus species	Bowwood	Pla hy
Car gl	Carya glabra	Pignut Hickory	Pse am
Car ov	Carya ovata	Shagbark Hickory	Pse me
Car sp.	Carya species	Hickory	Que al
Cha pa	Chamaecyparis pisifera	Sawara False Cypress	Que pa
Cha pi 'F'	Chamaecyparis pisifera 'Filifera'	Thread Sawara False Cypress	Rho sp
Cha pi 'S'	Chamaecyparis pisifera 'Squarrosa'	White Fringetree	Ron sp
Chi vi	Chionanthus virginicus	American Yellowwood	Spi ba
Cla ke	Cladrastis kentukea	Japanese Clethra	Spi fl
Cle ba	Clethra barbinervis	Deutzia	Spi sp
Deu sp.	Deutzia species	Winged Euonymus	Syr va
Euo al	Euonymus alata	Beech species	Syr vu
Fag sp.	Fagus species	Copper Beech	Tax sp
Fag sy 'C'	Fagus sylvatica 'Cuprea'	White Ash	Tax cu
Fra am	Fraxinus americana	Ash	Til am
Fra sp.	Fraxinus species	Carolina Silverbell	Til co
Hal te	Halesia tetraaptera	Rose of Sharon	Til sp
Hib sy	Hibiscus syriacus	Panicle Hydrangea	Til to
Hyd pa	Hydrangea paniculata	Japanese Holly	Tsu ca
Ille cr 'C'	Illex crenata 'Convexa'	Holly species	Tsu ca 'I'
Ille sp.	Illex species	American Holly	Tsu sp
Ille opaca	Illex opaca	Mountain Laurel	Ulm sp
Kal la	Kalmia latifolia	Privet	Vit sp
Lig ov	Ligustrum species	Winter Honeysuckle	Wis sp
Lig sp	Ligustrum species	Amur Honeysuckle	
Lon fr	Lonicera fragrantissima		
Lon ma	Lonicera maackii		

# Cultural Landscape Report for Glenmont

Thomas Edison National Historical Park  
West Orange, New Jersey

## 2009 Existing Conditions Section Six



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

### SOURCES

- Olmsted Center for Landscape Preservation, *Historic Plant Inventory for Edison National Historic Site, Existing Conditions*, 1995.
- Aerial photographs, 1995, 1997, 2007, and 2008.
- Site visits, January, April, and July 2009.

### DRAWN BY

Michael Comisso, AutoCAD 2000 and Illustrator CS 3, 2009

### LEGEND

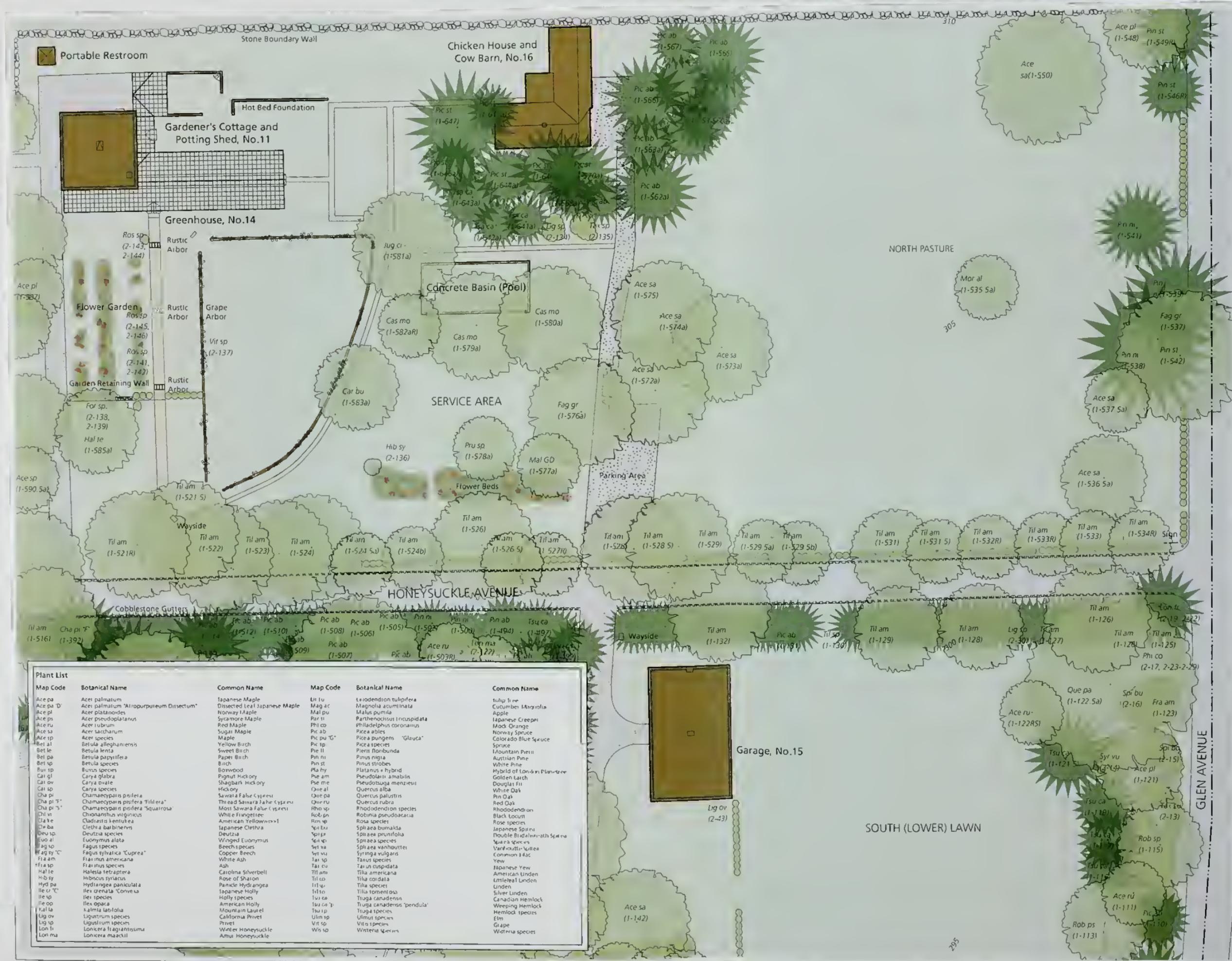
- Building
- Paved vehicular circulation
- Unpaved vehicular circulation
- Path or walk
- Lawn
- Groundcover or herbaceous bed
- Deciduous specimen tree, wooded area
- Evergreen/coniferous specimen tree or shrub
- Deciduous/broadleaf evergreen shrub
- Stormwater drains
- Flagstone curbing
- Fence
- NPS Property Boundary
- 1' Contour

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- Plan shows conditions in 2009
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Drawing 2.6



Map Code	Botanical Name	Common Name	Map Code	Botanical Name	Common Name
Ace pa	Acer palmatum	Japanese Maple	Lir lu	Liriodendron tulipifera	Tulip Tree
Ace pa D	Acer palmatum 'Dissectum'	Dissected Leaf Japanese Maple	Mag ac	Magnolia acuminata	Cucumber Magnolia
Ace pl	Acer platanoides	Norway Maple	Mal pu	Malus pumila	Apple
Ace ps	Acer pseudoplatanus	Sycamore Maple	Par ii	Parthenocissus incuspidata	Japanese Creeper
Ace ru	Acer rubrum	Red Maple	Phil co	Philadelphus coronarius	Mock Orange
Ace sa	Acer saccharum	Sugar Maple	Pic ab	Picea abies	Norway Spruce
Ace sp	Acer species	Maple	Pic pu G	Picea pungens 'Glauca'	Colorado Blue Spruce
Bel al	Betula alleghaniensis	Yellow Birch	Pic sp	Picea species	Spruce
Bel le	Betula lenta	Sweet Birch	Pie II	Pieris floribunda	Mountain Pieris
Bel pa	Betula papyrifera	Paper Birch	Pin ni	Pinus nigra	Austrian Pine
Bel sp	Betula species	Birch	Pin st	Pinus strobus	White Pine
Bur sp	Bursera species	Bursera	Pla hy	Platanus hybrid	Hybrid of London Plane-tree
Cai gl	Carya glabra	Pignut Hickory	Pue am	Pseudotsuga amabilis	Golden Larch
Cai ov	Carya ovata	Shagbark Hickory	Pse me	Pseudotsuga menziesii	Douglas Fir
Cai sp	Carya species	Hickory	Que al	Quercus alba	White Oak
Cha sp	Chamaecyparis pisifera	Sawara False Cypress	Que pa	Quercus palustris	Pin Oak
Cha pi T	Chamaecyparis pisifera 'Tidiera'	Most Sawara False Cypress	Que ru	Quercus rubra	Red Oak
Cha pi S	Chamaecyparis pisifera 'Squarrosa'	White Fingertee	Rho sp	Rhododendron species	Rhododendron
Chi vi	Chionanthus virginicus	White Fringetree	Rob gn	Robinia pseudoacacia	Black Locust
Cla ye	Cladonia lentulea	American Yellowwax	Ros sp	Rosa species	Rose species
Cla ba	Clethra barbinervis	Japanese Clethra	Spi bu	Spiraea bumalda	Japanese Spiraea
Dev sp	Devonshire species	Devonshire	Spi pu	Spiraea prunifolia	Double Birdalwart Spirea
Euo al	Euonymus alata	Winged Euonymus	Syr va	Syringa vanhouttei	Vanhouttei Lilac
Fag so	Fagus species	Beech species	Syr vu	Syringa vulgaris	Common Lilac
Fag sy C	Fagus sylvatica 'Cuprea'	Copper Beech	Tax sp	Taxus species	Yew
Fia am	Ficus americana	White Ash	Tai cu	Taius species	Japanese Yew
Fia sp	Ficus species	Ash	Til am	Tilia ussipedata	American Linden
Hal le	Halesia tetragyna	Carolina Silverbell	Til co	Tilia cordata	Littleleaf Linden
Hib sy	Hibiscus syriacus	Rose of Sharon	Til da	Tilia dasycarpa	Linden
Hyd pa	Hydrangea paniculata	Panicle Hydrangea	Til to	Tilia tomentosa	Silver Linden
Ile cr C	Ilex crenata 'Convexa'	Japanese Holly	Til ca	Tilia canadensis	Canadian Hemlock
Ile sp	Ilex species	Holly species	Tsu ca T	Tsuga canadensis 'pendula'	Weeping Hemlock
Ile op	Ilex opaca	American Holly	Tsu sp	Tsuga species	Hemlock species
Mal la	Malva latifolia	Mountain Laurel	Ulm sp	Ulmus species	Elm
Lig ov	Ligustrum species	California Privet	Vit sp	Vitis species	Grape
Lig sp	Ligustrum species	Privet	Win sp	Wisteria species	Wisteria species
Lon li	Lonicera fragrantissima	Winter Honeysuckle			
Lon ma	Lonicera maackii	Amur Honeysuckle			

## **ANALYSIS AND EVALUATION**

This chapter provides a summary analysis of the historical significance of the Glenmont landscape and an evaluation of its historic character based on the findings of the site history and existing conditions chapters. The analysis and evaluation have been developed according to the National Register Criteria for Evaluation and the National Park Service's *Guide to Cultural Landscape Reports: Contents, Process, and Techniques* (1998). This chapter is divided into two main sections. The first examines the historical significance of the landscape according to the *National Register Criteria for the Evaluation of Historic Properties*. Included within this is a summary of existing National Register documentation for Thomas Edison National Historical Park and Llewellyn Park; a statement of significance for the Glenmont landscape that includes the period of significance and areas of significance; and an evaluation of historical integrity according to the seven aspects defined by the National Register. The second section of the chapter evaluates the historic character of the Glenmont landscape based on National Park Service cultural landscape methodology that organizes the landscape into landscape characteristics and associated features.<sup>1</sup> Historic and existing conditions of extant features are compared to assess historic character and change over time. Each feature is evaluated to determine whether it contributes to the historic character of the landscape or not. These findings are summarized in table 3.2 at the end of the chapter.

### **NATIONAL REGISTER STATUS AND STATEMENT OF SIGNIFICANCE**

The National Park Service evaluates the historical significance of properties through a process of identification and evaluation defined by the National Register of Historic Places program. According to the National Register, historic significance may be present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association. A property can be found to have significance on a national, state, or local level, and must meet one or more of the following criteria in order to be considered eligible for the National Register:

- A. Association with the events that have made a significant contribution to the broad patterns of history; or
- B. Association with the lives of persons significant in our past; or

- C. Embody the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; or
- D. Has yielded, or may yield, information important to that study of history or prehistory.<sup>2</sup>

#### **EXISTING NATIONAL REGISTER DOCUMENTATION**

On December 6, 1955, Glenmont was designated as Edison Home National Historic Site. It was later combined with Edison Laboratory National Monument to form Edison National Historic Site on September 5, 1962.<sup>3</sup> As part of the Omnibus Public Land Management Act of 2009 (Public Law 111-11, Section 7110), Edison National Historic Site was redesignated as the Thomas Edison National Historical Park in March of 2009.<sup>4</sup> It was administratively added to the National Register of Historic Places on October 15, 1966, with the passage of the National Historic Preservation Act (NHPA). Official National Register documentation for the site was completed in March 10, 1980. The nomination form (NRIS # 66000052) identifies significance under Criterion A within the areas of industry and science and Criterion B for its association with the scientific achievements and the private life of Thomas Alva Edison. The period of significance for Edison National Historic Site begins in 1887 with the construction of the laboratory complex and ends in 1931, the year of Thomas Edison's death. While the nomination form did not adequately detail the significance of the Glenmont landscape, it identified seven major features of the property: Glenmont House (No. HS 10), Gardener's Cottage and Potting Shed (No. HS 11), Greenhouse (No. HS 14), Garage (No. HS 15), Barn (No. HS 16), Pump House (No. HS 17), and Hose House (No. HS 18).<sup>5</sup> In 1996, the Keeper of the National Register determined that 1963 was also significant, the year that Thomas Edison and his wife Mina were reinterred on the property.<sup>6</sup>

On February 26, 1986, Glenmont was listed in the National Register of Historic Places as a contributing resource within the Llewellyn Park Historic District (NRIS# 86000423). The district was listed for its local significance in the areas of architecture, community planning, and landscape architecture. Within the district context, Glenmont's period of significance dates to 1880, the year during which Henry Pedder began the construction of the residence. The nomination form did not, however, document the significance of the Glenmont landscape. Llewellyn Park, begun in 1853 (platted in 1857) by Llewellyn Haskell, is considered the first romantically landscaped planned residential community in the United States. Indebted to English antecedents in landscape design, Llewellyn Park was influenced directly by Alexander Jackson Davis, architect of a number of the houses there, and indirectly, by the writings of Andrew Jackson Downing.

Haskell's planned community, in turn, influenced the work of Frederick Law Olmsted and a generation of town planners and landscape architects. According to the National Register nomination, its design remains virtually intact and stands as the chief surviving exponent of how mid-19<sup>th</sup> century picturesque ideals might be transformed into reality.<sup>7</sup>

#### **STATEMENT OF SIGNIFICANCE FOR GLENMONT**

The Glenmont landscape, part of the larger Thomas Edison National Historical Park, is significant for its association with the productive life and work of Thomas Alva Edison who lived on the property between 1886 and 1931, who possessed an unsurpassed technological genius and industriousness that made him preeminent among the inventors of the 20th century.

The Glenmont property is also significant prior to the Edison's ownership, as being a rare surviving large tract component of Llewellyn Park, the first planned suburban community in the United States. Llewellyn Park was a mid-nineteenth century designed community modeling environmental values and landscape forms that adapted building sites and civic infrastructure to existing topography, these being widely adopted and implemented nationwide during the late nineteenth and early twentieth century throughout the United States.

Additionally, the Glenmont landscape is significant as an independent work of landscape design, typifying the approach to the design of rural residences popularized in the United States by the writings of Andrew Jackson Downing, who proposed that design choices regarding the development of buildings and grounds should be in sympathy with the pre-existing qualities of landscape topography and vegetation. These multiple themes include overlapping periods of significance relating to those themes. The earliest of these is associated with Community Planning and Development as it relates to the Llewellyn Park planned community, from its establishment in 1857 to the widespread subdivision of its remaining large lots after 1913. Glenmont's significance as an independent work of landscape design begins with its purchase by Henry Pedder and initial development of the Glenmont house and grounds in 1879 to the completion of a program of landscape improvements in the mid-to late 1920s. Beyond this aggregate span of years (1857-1931), 1963 has been determined significant as the date when Thomas and Mina Edison were reinterred within a new gravesite on the Glenmont property.

The following section discusses landscape related areas of significance applicable to the Thomas Edison National Historical Park and the Glenmont landscape under National Register Criteria B and C for the period of significance extending from 1857 (establishment of Llewellyn Park ) to 1931 (date of Thomas

Edison's death).<sup>8</sup> This discussion expands upon the existing National Register documentation to address landscape significance for the Glenmont property.

**National Register Criterion B (Person):** *Properties associated with the lives of persons significant in our past*

*Thomas Edison*

The Glenmont landscape is nationally significant under Criterion B for its association with Thomas Alva Edison (1847-1931), an American inventor, scientist, and businessman who developed many devices and obtained approximately 1,093 patents that significantly improved life around the world. Following the death of his first wife, Mary Stillwell, Edison eventually moved from Menlo Park to West Orange, New Jersey in 1886 when he purchased Glenmont as a wedding gift for his bride-to-be Mina. By this time, Edison was already well established and renowned as the inventor of the electric light and electrical generating system.

Shortly after the purchase of the Glenmont property, Edison built a laboratory complex, approximately one mile east of his home in West Orange. Completed in November 1887, the Laboratory served as the inventor's headquarters for the remaining forty-four years of his life. At the Laboratory Edison developed the phonograph, the first successful motion picture camera, and a host of other important inventions and patents. In addition to his inventions and his industrial accomplishments, Edison made two significant discoveries in pure science. One was "etheric force," the electromagnetic waves later used in radio transmission; the other, a fundamental phenomenon of electronics which has since become known as the "Edison Effect" and which led to a worldwide advance in radio communications and space technology.<sup>9</sup>

While the majority of Edison's time was spent at the Laboratory, Glenmont was a place of rest and solitude for himself, his family, and occasional guests, which included the King of Siam, President Herbert Hoover, Helen Keller, Orville Wright, Henry Ford, Harvey Firestone, and family members. It was also a site for occasional experimentation. During the years Edison was involved in the Portland cement business and experimentation with concrete houses, he constructed a garage, two-story concrete gardener's cottage, and pool (now referred to as the concrete basin) on the grounds, all of which survive today.

**National Register Criterion C (Design/Construction):** *Properties that embody the distinctive characteristic of a type, period, or method of construction or that represent the work of a master*

### *Community Planning and Development*

The Glenmont landscape is locally significant under Criterion C in the area of community planning and development as a contributing resource within the Llewellyn Park Historic District. The district represents an early and influential residential subdivision that served as a model for urban and suburban development during the late nineteenth and early twentieth centuries.

In an effort to move away from the poor living conditions, air quality, and health hazards that plagued crowded cities in the mid-nineteenth century, Llewellyn Haskell purchased a sixty-five acre tract of semi-wilderness and farmland on the southeastern slope of Orange Mountain (now known as West Orange). Soon after, he engaged his friend and neighbor Alexander Jackson Davis, a prominent New York architect, to transform an old farmhouse on the property into a picturesque rustic dwelling, which was later called the Eyrie. By 1857, Haskell had acquired an additional 350 acres south of the sixty-five acres where he envisioned a large residential park to be laid out according to the naturalistic gardening principles advocated by John Claudius Loudon and Andrew Jackson Downing, and reflecting the layout and forms promoted by the Rural Cemetery movement.

With assistance from Alexander Jackson Davis and landscape architects, Haskell created a picturesque residential park that contrasted sharply with the gridiron street layout then popular in most urban areas. Sharing many of the characteristics seen throughout the park, residential sites, such as Glenmont, displayed similar naturalistic and picturesque qualities. The style of homes, some of which were designed by Alexander Jackson Davis, consisted of romantic and Victorian revivals. In the twentieth century several physical changes adversely impacted the Llewellyn Park landscape, notably the introduction of new roads and subdivision of existing lots after 1913. Despite these changes, the character and design of Llewellyn Park remains intact and continues to embody the ideals that set the framework for later suburbs laid out in the picturesque style.

### *Landscape Architecture: the naturalistic landscape design principles [natural style] advocated by Andrew Jackson Downing*

The Glenmont landscape is locally significant under Criterion C in the area of landscape architecture as it reflects the naturalistic landscape design principles popularized in the United States by Andrew Jackson Downing. In his influential 1841 publication, *A Treatise on the Theory and Practice of Landscape Gardening*, Downing reinterpreted principles of English landscape gardeners and provided

extensive instructions on the location, layout, and plantings for rural homes. He introduced an American audience to the ideals of naturalistic landscape gardening, characterized as “Picturesque” or “Beautiful,” that sought to make design choices that were aesthetically compatible with the natural environment. The Beautiful was expressed through smooth, graceful, and harmonious elements such as sweeping lawns, curving drives, and clumps of trees, while the Picturesque was associated with the untamed aspects of nature through its rough, wild, and irregular forms including spiky evergreens, rock outcroppings, and rustic architecture. Downing’s naturalistic gardening principles eventually attracted a popular following and established the philosophical underpinnings for the subsequent development of many residential landscapes, parks, and planned suburbs, among these Llewellyn Park—considered the earliest planned residential community in the United States.

Llewellyn Park, begun in 1853 (platted in 1857) by drug importer Llewellyn Haskell with assistance from Alexander Jackson Davis, and landscape architects Eugene Baumann and Howard Daniels, featured a layout of curvilinear roads, irregular lot divisions, native and exotic trees, rustic buildings and furnishings, and a common natural park that came to be known as the “Ramble.” In an effort to harmonize with the environment, many individual residential sites—such as Glenmont, were also laid out according to the principles promoted by Downing.

Between 1879 and 1884, Henry Pedder, a confidential clerk at Arnold Constable and Company, hired architect Henry Hudson Holly and landscape gardener Nathan Franklin Barrett to construct a beautiful Queen-Anne style home constructed within a stylized rural landscape based on the popular naturalistic and picturesque style of landscape gardening. The house was located within an expansive manicured lawn and enframed by single specimen and clumps of trees and shrubs. Beyond the house were pastures and service-related functions, including a barn, chicken house and stable, greenhouse complex and vegetable and flower gardens. A series of curvilinear drives meandered through the landscape, as well as a network of sinuous walks and paths in the west and southwest portions of the property. Additional features included oval, teardrop, quadrilateral, and arabesque-shaped ornamental flowerbeds planted in various “bedding-out” schemes.

When Thomas and Mina Edison purchased the Glenmont property in 1886, they retained the naturalistic design elements, as well as the fashionable carpet bedding. Between 1907 and 1910, the Edisons hired landscape gardener Ernest W. Bowditch to redesign the grounds. Despite his efforts to overlay neoclassical elements onto the Glenmont landscape, the Edisons preferred the pre-existing naturalistic approach popularized by Andrew Jackson Downing and found

throughout Llewellyn Park. However, they did follow the general concept of Bowditch's design for the grounds, with regards to his land planning principles and the spatial organization of the property, specifically relocating and unifying service buildings and structures away from the house.

In later years, the Edisons gradually simplified the landscape. By 1920, the Pedder barn, sections of path, carpet bedding, and container plants were removed or abandoned. However, they continued to make improvements to the landscape up until the mid-to late 1920s. The skating pond and its associated features, constructed between 1925 and 1926, were among the last additions to the landscape during the period of significance. The organically-shaped pond was lined with stone and featured a skating shack and rustic dry-laid stone steps.

**National Register Criteria Considerations B (Moved Properties) and C (Birthplaces or Graves):**

*A property removed from its original or historically significant location can be eligible if it is significant primarily for architectural value or it is the surviving property most importantly associated with a historic person or event; and*

*A birthplace or grave of a historical figure is eligible if the person is of outstanding importance and if there is no other appropriate site or building directly associated with his or her productive life*

The Glenmont landscape is significant under Criteria Considerations B and C as the reinterment site of Thomas and Mina Edison. On April 3, 1963, at the request of their children and prior approval of the Trustees and the Committee of Managers of Llewellyn Park, the remains of Thomas and Mina were moved from their resting place in Rosedale Cemetery, located along the border of Montclair, Orange, and West Orange, N.J., to Glenmont. The gravesite is situated within a large grouping of rhododendrons and mountain laurels and contains the same stone ledgers that marked the graves at Rosedale Cemetery. It also includes a decorative cedar fence and two stone lanterns that were given as a gift from Japan in 1935.

**ADDITIONAL AREAS OF SIGNIFICANCE**

Although documenting significance in the area of architecture is beyond the scope of this cultural landscape report, the Glenmont house (No. HS 10) is locally significant under National Register Criterion C in the area of architecture as a distinctive example of Queen Anne-style designed by Henry Hudson Holly. Additional architectural significance includes the Gardener's Cottage and Potting Shed (No. HS 11) and Garage (No. HS 15) as rare surviving examples

of Thomas Edison’s experimentation with concrete buildings. The significance is documented in the List of Classified Structures database (LCS) and the existing National Register listing for the Llewellyn Park Historic District [briefly mentioned in Edison NHS National Register documentation].

**TABLE 3.0: RECOMMENDED AREAS OF SIGNIFICANCE AND PERIODS OF SIGNIFICANCE**

Thomas Edison (NR Criteria B)	1886-1931
Community Planning and Development(NR Criteria C)	1857-c.1913
Landscape Architecture: Naturalistic Landscape Design (NR Criteria C)	c.1879-late 1920s
Association with Thomas Edison -Reinterment (NR Criteria Considerations B and C)	1963

**EVALUATION OF LANDSCAPE INTEGRITY**

Integrity is the ability of a property to convey its significance. In order for a property to retain its integrity, it must possess the essential characteristics and features that characterized it during the period of significance. The National Register program identifies seven aspects of integrity including location, design, setting, materials, workmanship, feeling and association. To retain integrity, a property must possess the aspects that best convey a sense of a particular time and place.

**Location**

*Location is the place where the historic property was constructed or the place where the historic event occurred.*

Situated on the southeastern slope of Orange Mountain (now West Orange), Llewellyn Park remains in the same location as it did when it was laid out in the mid-1850s. The park is still divided into four physiographic areas—the Ramble, Glen, Forest, and Hill; with the Glen encompassing some of the largest and most historic houses, including Glenmont. Within the Glenmont landscape, the majority of features associated with Thomas Edison remain in their original locations and continue to evoke the naturalistic and picturesque design characteristics popularized by Andrew Jackson Downing. They include the house, hose house, pump house, garage, chicken house and cow barn, and gardener’s cottage, potting shed and greenhouse, concrete basin (pool), drives and walks, flower gardens, and a variety of native and exotic trees and shrubs.

**Design**

*Design is the combination of elements that create the form, plan, space, structure, and style of a property.*

Llewellyn Park and the Glenmont landscape continue to evoke the naturalistic and picturesque landscape design principles popularized by Andrew Jackson Downing. Within the park, the Ramble is still at the center of the residential development and continues to be the focal point for many properties. Surrounding the Ramble is a series of curvilinear roads and suburban houses laid out in irregular lot divisions. Other features include native and exotic trees and shrubs and rustic buildings and furnishings.

At Glenmont, the rural landscape characteristics are still represented in the location of the house set within an expansive manicured lawn; curving drives and walks; trees and shrubs planted to enframe the house and enhance the beauty of the grounds, frame views, and screen service areas; and service related functions including a laundry yard, barn, garage, chicken house and cow barn, greenhouse complex and vegetable and flower gardens.

**Setting**

*Setting is the physical environment of a historic property.*

Despite the increased number of lot sizes and construction of Interstate 280 in the northern portion of the Llewellyn Park, the picturesque setting, including the views and vistas, vegetation patterns, and circulation systems, of the park appears to have changed relatively little since the historic period (1857-1931). The relationship between the areas surrounding the Glenmont house, including the west, front, and south (lower) lawns, laundry yard, woodland, service areas, circulation systems, and the nearby features—garage, gardener's cottage, potting shed and greenhouse, barn, hose house, pump house, and major circulation features—is still generally the same as when it was originally developed by Henry Pedder and Thomas and Mina Edison. Additions, removals, and changes have occurred to some of the buildings, paths, and vegetative features since the historic period, but overall have not diminished the site's setting.

**Materials**

*Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.*

In the initial development of Llewellyn Park and Glenmont, natural materials were used to create a romantic effect that while contrived, did not appear overly

designed. Within Llewellyn Park, these elements can be seen in the circulation systems, through the use of native stone for box culverts, curbing and headwalls, as well as in the embellishments, such as the rustic wooden bridges, furniture, and gazebos. Within the Glenmont landscape, flagstone curbing lines the main and secondary drives, cobblestone gutters are found along Honeysuckle Avenue, and many of the historic small-scale features that still exist are rustic, notably the rustic fencing, arbors, bird feeders, and clothesline posts.

While many buildings and structures have been rehabilitated, restored, or reconstructed within the Glenmont landscape, they all retain their original materials. Despite the loss of vegetative materials since the historic period, the majority of vegetation is intact and is either the original plant material, or similar to the historic species, in scale, type, and visual effect.

### **Workmanship**

*Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.*

Within Llewellyn Park and Glenmont landscape, workmanship remains evident in the design of the buildings and structures and circulation systems, the planting and maintenance of vegetation, as well as the construction methods of the small-scale features. Many of the buildings and structures have been either restored or reconstructed; the majority of trees and shrubs have been maintained or replaced in-kind, and the main and secondary drives, as well as local roads still include flagstone curbing and cobblestone drainage swales. While many original small-scale features in Llewellyn Park have been lost or ruined over time, replaced features have been designed in the rustic style and fit well into the surrounding landscape. Many historic small-scale features at Glenmont are original and remain intact including the bluestone stoop, gas light poles, rustic wooden fence, and the clothesline posts. The rustic arbors and gazebo bird feeder have been replaced since the historic period, but were reconstructed in-kind.

### **Feeling**

*Feeling is a property's expression of the aesthetic or historic sense of a particular period of time.*

During the historic period, Llewellyn Park, including the Glenmont landscape, was largely characterized by its rural and agrarian setting, as well as a quiet and peaceful atmosphere. While agricultural activities no longer exist today within the park and Glenmont, both continue to reflect the idealized rural landscape characteristics represented by sweeping lawns, curvilinear drives and walks, rustic embellishments, and groupings of trees and shrubs. Furthermore,

Glenmont retains the features that addressed the contemporary domestic needs of a suburban residence, including the gardener's cottage, potting shed and greenhouse, a chicken house and cow barn, hose house, and pump house.

#### Association

*Association is the direct link between an important historic event or person and a historic property.*

Although many residential properties in Llewellyn Park were subdivided following the historic period (1857-1931), Glenmont remains unaltered and continues to convey the original design intent for residential sites within the picturesque setting of Llewellyn Park. The majority of features within the landscape are linked to Thomas Edison and collectively embody distinct naturalistic and picturesque design characteristics that were prevalent in the nineteenth century.

**TABLE 3.1: CULTURAL LANDSCAPE INTEGRITY FOR GLENMONT LANDSCAPE**

Overall	Location	Design	Setting	Materials	Workmanship	Feeling	Association
<b>Thomas Edison (1886-1931)</b>							
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Community Planning and Development, Llewellyn Park (1857-c.1913)</b>							
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Landscape Architecture, Naturalistic Gardening Design( 1879- late 1920s)</b>							
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Reinterment of Thomas and Mina Edison (1963)</b>							
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

## **ANALYSIS OF LANDSCAPE CHARACTERISTICS AND FEATURES**

Landscape characteristics are the broad patterns, systems, and feature categories that compose the landscape and determine how people interact with it. The analysis of landscape characteristics and features serves to identify the components of the landscape that define the historic character and contribute to the historic significance of the property. The analysis entails comparing existing conditions to what was present during the historic period and making an evaluation of whether the landscape characteristic or feature contributes to the landscape's historic character. The landscape characteristics and features evaluated for Glenmont include natural systems and topography, spatial organization, circulation, vegetation, buildings and structures, views and vistas, small-scale features, and archeological sites. For each characteristic, the analysis is organized and presented in the following manner:

*Historic Condition*, a brief discussion of the feature's history and evolution as it relates to the period of significance;

*Post Historic and Existing Conditions*, an overview of changes that have occurred since the end of the period of significance (1931); and

*Evaluation*, a determination of whether the feature contributes to the historic character of the landscape.

Contributing features generally date to the period of significance, 1857-1931, and retain association with Llewellyn Park, Thomas Edison or help convey the ground's historic design and character. Non-contributing features generally post-date the period of significance or have been so altered from the historic condition that they no longer help convey the site's significance.

Each feature includes a corresponding List of Classified Structures number and building number, if applicable, and is labeled on the existing condition plans at the end of the existing conditions chapter (Drawings 2.0-2.6). In addition, an analysis and evaluation plan is provided that identifies features added or removed since 1931 (Drawings 3.0).

### **NATURAL SYSTEMS AND TOPOGRAPHY**

This characteristic is comprised of the natural aspects that influence the development of a landscape. The existing landscape of Glenmont is an entirely constructed landscape and therefore has no natural systems and features. However, the context is important in understanding the physical development

of the landscape. The Glenmont landscape is within the Piedmont Lowland physiographic zone (Newark Basin or Triassic Lowlands), a section of the Piedmont province, that stretches from the Hudson River near the border of New Jersey and New York southward through Maryland into Virginia. The Piedmont Lowlands is a relatively low-lying area with broad valley and low hills that gently slopes in a southeastward direction from the New Jersey Highlands to the Coastal Plain. The Glenmont landscape is located within the Mixed Oak Forest with a high density of game birds, squirrel and deer. The climate of West Orange, New Jersey, including Llewellyn Park and Glenmont, has remained the same since the historic period. Average precipitation is 51.90 inches per year and the mean temperatures average 70° Fahrenheit in the summer and 20° Fahrenheit in the winter. West Orange is in hardiness zone 6 and 7.

Although there are currently no natural or engineered hydrologic systems within the Glenmont landscape, a branch of Wigwam brook—a tributary of the Second River—is located along the south and southwestern boundaries of the property within the Llewellyn Park Ramble. During the historic period, the Edison children spent much of their time in the brook by building dams and other waterworks.<sup>10</sup>

### **Ecology**

#### *Historic Condition and Existing Conditions:*

Prior to European settlement and the development of Llewellyn Park, the ecology of the Glenmont landscape was classified as the Oak-Chestnut forest, but was later changed to Mixed Oak forest following die-off the American chestnut trees. It was dominated by white oak (*Quercus alba*), red oak (*Quercus rubra*), and black oak (*Quercus velutina*), chestnut oak (*Quercus prinus*), white ash (*Fraxinus americana*), tuliptree (*Liriodendron tulipifera*), and American beech (*Fagus grandifolia*). Understory trees and shrubs included flowering dogwood (*Cornus florida*), American hornbeam, sassafras, ironwood, spicebush, maple-leaved viburnum, arrowwood viburnum, and witch hazel, among others.<sup>11</sup> European settlers later cleared the native forest for agriculture, dramatically changing the ecology of the Glenmont grounds and surrounding environment. When Llewellyn Haskell acquired the land encompassing Glenmont in the 1850s, the majority of the grounds had probably been cleared for agriculture. Following Glenmont's acquisition by Henry Pedder in 1879, and later Thomas Edison in 1886, the landscape was planted with many exotic and native specimen trees and shrubs. The Glenmont landscape today is very similar in appearance to the historic period, consisting of a mix of both native and non-native tree and shrub species. In addition, the faunal community in the vicinity of Glenmont includes turkey, quail, and grouse, squirrel, rabbit, woodchuck, and deer.

*Evaluation: Contributing*

Ecology contributes to the significance of the of the Glenmont landscape as it has remained unchanged since the historic period. However, in recent years, the population of deer has proliferated resulting in the loss of vegetation within Glenmont and adjoining residential properties.

**Geology and topography***Historic Condition and Existing Conditions:*

The geological and topographical conditions of the Glenmont grounds have remained constant throughout the historic period (1886-1931). Within the Piedmont Lowlands are a series of ridges, the most prominent being the three Watchung Mountain ranges in New Jersey. Llewellyn Park and the Glenmont grounds lie along the southeastern slope of the first range. The bedrock of the Piedmont Lowlands is a continuous formation of reddish shales, mudstones, and sandstones ranging in age from the late Triassic and early Jurassic periods. The native surface soils of the Glenmont landscape are covered by deposits of glacial till and glacial outwash, categorized as Boonton silt loam, redstone lowland. Soil characteristics consist of humus, silt loam, sandy loam, and gravelly sandy loam.

With exception to a small mound situated northeast of the house, the topographic setting of Glenmont is fairly level, but generally slopes gently to the southeast as natural terraces. At the time of Glenmont's initial development in 1879, Henry Pedder and Henry Hudson Holly took advantage of the slight change in grade by siting the house at the highest elevation in effort to maximize views to the south and southeast.

*Evaluation: Contributing*

Geology and topography contributes to the significance of the Glenmont landscape. The geology and topography (natural terraces) of the land lent itself beautifully as a picturesque backdrop for the development of Glenmont, as well as the larger Llewellyn Park Historic District. There have been no changes since the historic period.

**West lawn mound***Historic Condition and Existing Conditions:*

Although unknown, the west lawn mound was presumably constructed during the Pedder years in the initial development of the Glenmont landscape between 1879 and 1884. During the Thomas Edison (1886-1931) and Mina Edison (1931-1947) periods, an apple tree was planted on the mound. In the ensuing years, the apple tree underwent substantial decay, leaving a large hole in the mound (Drawing 2.3).<sup>12</sup>

*Evaluation: Contributing*

The west lawn mound, contributes to the significance of the Glenmont landscape as it has remained unchanged since the historic period.

**SPATIAL ORGANIZATION**

This characteristic concerns the arrangement of elements creating the ground, vertical, and overhead planes that define and create spaces. In the development of Llewellyn Park in the 1850s, residential sites followed the natural contours of the land and were laid out around the ramble, the park's centralized common park. The future site of Glenmont was relatively open, situated on a natural terrace that gently rose from the southeast to a level area—where the house would eventually be built—then rose again farther to the north. The thirteen-acre parcel was bound on the east by Glen Avenue, the south and west by Park Way, which divided the site from the neighboring ramble, and an undeveloped lot to the north.

When Henry Pedder purchased the Glenmont property in 1879, he transformed the undeveloped thirteen acres into a fashionable suburban residence. The house was located in the northern portion of the property situated within an expansive manicured lawn, scattered with single specimen and clumps of trees and shrubs. A laundry yard, well house, and pump house were found on the northeast side of the house. To the west, was a croquet lawn bounded by curvilinear paths and perimeter plantings. Southeast of the house was a large oval lawn dotted by trees and shrubs and encircled by the main drive. Beyond the oval lawn, was the south (lower) lawn pasture and service related functions, which included a barn, chicken house and stable, and vegetable garden. Around the service areas, various evergreen and deciduous trees were planted to screen the less than desirable views. The greenhouse complex and flower garden were located east of the house and across Honeysuckle Avenue.

In the ensuing years, the separation and unification of service buildings and structures away from house became a defining element in the spatial organization within the Glenmont landscape. Major alterations came with the relocation of the chicken house/cow barn and the construction of the garage, new greenhouse complex, and swimming pool during the Thomas Edison era (1886-1931), as well as the planting of a hemlock hedge along Honeysuckle Avenue during the Mina Edison era (1931-1947). The changes that occurred during these periods created the character of the landscape seen today.

The Glenmont landscape is currently organized into seven spaces loosely defined by circulation systems and use: the west (back) lawn, front lawn, south (lower) lawn, laundry yard, woodland, service area, and Johnson-Tilney property.

**West (back) lawn***Historic Condition:*

As part of Nathan Barrett's design for the Glenmont grounds, Henry Pedder constructed the west (back) lawn between 1879 and 1884. The space was bounded by perimeter plantings and a hemlock hedge along Honeysuckle Avenue, and included a network of sinuous walks and paths that meandered through scatterings of single specimens and groupings of deciduous and evergreen trees and shrubs. Following completion of the house in 1880, a pump house was built in the northern portion of the space in c.1882. Typical of many country places and suburban properties being built at the time, a croquet lawn was sited within the west lawn. Although little is known of the croquet lawn, the area continued to be used for recreation purposes throughout the Edison era, later serving as the location for a tennis court, and site for the summer house and playhouse. Other changes to the west (back) lawn during the Edison period included the replanting



Figure 3.00: Spatial Organization. A c.1890s view of the west lawn looking north towards the weeping cherry (*Prunus subhirtella*) and house (EDIS Archives, 14.335.7).



Figure 3.01: Spatial Organization. A 2009 image, taken at a similar vantage point, of the west lawn looking north towards a weeping cherry, (*Prunus subhirtella*) and weeping beech (*Fagus sylvatica*). Both trees were replaced in-kind between 1980 and c1990s (OCLP, 2009).

of the hemlock hedges between 1910 and 1925 and the removal of a path that proceeded from the Conservatory to Park Way, southeast of the house (Figures 3.00-3.05).

*Post Historic and Existing Condition (since 1931):*

During the 1930s, the summer house, playhouse, and additional paths were removed within the space and a rose garden was installed in the previous location of a tennis court. In the following years, several perimeter plantings were removed due to age-related decline or disease, as well as the rose garden and majority of paths. Currently, the west (back) lawn is defined by Park Way, Honeysuckle Avenue, the path along the perimeter of the house, and main and secondary drives. The interior is largely open with scatterings of specimen trees and mature perimeter plantings (oaks, maples, beech, and ash trees). It also includes the Edison gravesite, pump house, and numerous small-scale features.

**Figure 3.02: Spatial Organization.** View looking northeast towards the house and young trees within the west lawn, c. 1905-1909 (EDIS Archives, 12.420.26).



**Figure 3.03: Spatial Organization.** Similar view looking northeast towards the house. The open spatial character and vegetation remain very similar today as it existed during the historic period (OCLP, 2009).





Figure 3.04: Spatial Organization. A c. 1913 view looking southeast of the west lawn. Note the open character of the west lawn and orchard in the background (EDIS Archives, 12.420.37).



Figure 3.05: Spatial Organization. This image, oriented in the same direction, shows the west lawn and similar open character. Note the planter (right) and orchard (left) in the distance (OCLP, 2009).

*Evaluation: Contributing*

The west (back) lawn, established between 1879 and 1884, contributes to the significance of the Glenmont landscape. Although the majority of paths and some perimeter plantings have been removed since the historic period, the west (back) lawn remains intact and continues to illustrate a major component of the original Nathan Barrett design (Drawing 2.3).

**Front lawn**

*Historic Condition:*

The front lawn was created by Henry Pedder between 1879 and 1884 according to the design of Nathan Franklin Barrett. The space encompassed the house and foundation plantings, as well as the oval lawn area encircled by the main drive. With exception to the foundation plantings, the space was largely open with scattered specimens along the perimeter of the oval lawn. During the Edison era

Figure 3.06: Spatial organization. Pre-1905 view looking northwest towards children playing tetherball in the front lawn. The image documents the open character of the front lawn, various planters, vines on the house, and the absence of foundation plantings (EDIS Archives).



Figure 3.07: Spatial organization. A 2009 image looking northwest towards the front lawn. While the front lawn remains open in character and wisteria remains extant on the porte-cochere, the conservatory is no longer embowered by vines and foundation shrubs exist around the conservatory and along the east elevation (OCLP, 2009).



(1886-1931), the oval lawn was partially enclosed with the planting of deutzias along the southern edge of the oval lawn and the establishment of evergreen and deciduous trees along the eastern edge of the oval lawn to screen the service related functions—the barn, chicken house and stable, and vegetable garden (Figures 3.06 and 3.07).

*Post Historic and Existing Condition (since 1931):*

In the following decades, the oval lawn became more open with the loss of some specimen trees and the removal of the deutzias in the late 1930s. Currently, the foundation plantings are mature and the oval lawn area is open in character and consists of highly manicured turf bordered by deciduous and evergreen trees and shrubs.

*Evaluation: Contributing*

The front lawn, established between 1879 and 1884, contributes to the significance of the Glenmont landscape. Aside from the loss of a few specimen trees within the oval lawn, the space remains substantially intact and continues to illustrate a major component of the original Nathan Barrett design (Drawing 2.3).

**South (lower) lawn***Historic Condition:*

In the initial development of the Glenmont landscape between 1879 and 1884, the south (lower) lawn was created as part of Nathan Franklin Barrett's overall design for the grounds. Located east of the house, and defined by the local roads and the main and secondary drives, the space was largely open pasture—dotted with clumps of trees and shrubs—and contained service related functions, which included a chicken house and stable (now known as the chicken house and cow barn), a vegetable garden, and small orchard. During the Thomas Edison years (1886-1931), minor changes occurred within the space including the relocation of the chicken house and stable in c.1907-1908; and the construction of a garage (in the former location of the chicken house and stable) in 1908 (Figures 3.08 and 3.09).

*Post Historic and Existing Condition (since 1931):*

Following the deaths of Thomas and Mina Edison, Thomas A. Edison, Inc. minimally maintained the house and grounds, eventually removing the vegetable garden and several fruit trees by 1959. Currently, the National Park Service maintains the former pasture as highly manicured turf and when trees or shrubs succumb to age related decline or disease, they are replaced in-kind.

*Evaluation: Contributing*

The south (lower) lawn, established between 1879 and 1884, contributes to the significance of the Glenmont landscape. Although the lawn is more manicured and the vegetable garden removed, the space remains intact and continues to illustrate a major component of the original Nathan Barrett design (Drawing 2.4).

**Woodland***Historic Condition:*

In the initial development of the Glenmont landscape between 1879 and 1884, the woodland area was created as part of Nathan Barrett's overall design for the grounds. Bound by Honeysuckle Avenue to the north and the main and secondary drives to the south, east, and west, the interior of the space contained a barn, a large rectangular barn or stable—later removed c.1882, and many utility structures including cesspools, cisterns, a gas vault, and a gas cast iron lamp standard. During Thomas Edison's era (1886-1931), the space was densely

**Figure 3.08: Spatial Organization.** A c. 1918 image looking northwest of the south (lower) lawn area and front lawn. Shown in the image are deutzias along the main drive and a variety of ornamental trees and shrubs (EDIS Archives, 12.420.46).



**Figure 3.09:** This is the same area, taken in 2009, showing the evergreen and deciduous trees along the eastern edge of the front lawn. Despite the loss of pasture and meadow, the open spatial character remains similar to the historic period (OCLP, 2009).



planted with evergreen and deciduous vegetation. In 1920, the barn was removed; and in its former location, a skating pond was constructed c.1925-1926. It later was abandoned as it did not retain water. Soon after the pond was built, wild gardens were established based on the principles of British landscape gardener and author William Robinson.

*Post Historic and Existing Condition (since 1931):*

Today, an organically-shaped depression marks the former location of the skating pond, and the interior remains largely wooded consisting of evergreen and deciduous trees and remnants of the woodland garden, which fell into disuse following the death of Mina Edison. Although the space lacks buildings, it includes many utility structures as well as features associated with the former skating pond including rustic stone steps (Drawing 2.3 and 2.4).

*Evaluation: Contributing*

The woodland, established between 1879 and 1884, contributes to the significance of the Glenmont landscape. The space and associated features remain intact since the historic period and continues to illustrate a major component of the original Nathan Barrett design (Drawing 2.3).

**Laundry yard***Historic Condition:*

In the initial development of the Glenmont landscape between 1879 and 1884, the laundry yard (although not identified as laundry yard at that time) was created as part of Nathan Franklin Barrett's overall design for the grounds. During the historic period, the space contained clothesline posts and was used to dry laundry. In an effort to screen the less than desirable service area, evergreen trees and shrubs were planted along the perimeter. Between 1882 and 1886, a hemlock hedge was established along Honeysuckle Avenue. It was replanted between 1910 and 1925. In 1904, a hose house was constructed within the space.

*Post Historic and Existing Condition (since 1931):*

Between 1935 and 1940, Mina Edison planted rhododendrons around the perimeter of the laundry yard. Similar to its historic appearance, the laundry yard remains bounded by secondary drives and perimeter evergreen plantings. The interior remains mostly open and contains a hose house and six original clothesline posts (Drawing 2.3).

*Evaluation: Contributing*

The laundry yard, established between 1879 and 1884, contributes to the significance of the Glenmont landscape. The space and associated features remain intact since the historic period and continues to illustrate a major component of the original Nathan Barrett design.

**Service Area***Historic Condition:*

Soon after Henry Pedder acquired the Glenmont property, he purchased an adjoining three acre parcel across Honeysuckle Avenue from David E. Green in 1881. There he constructed a greenhouse complex and flower garden. During the Thomas Edison era (1886-1931), efforts were made to further separate and unify service buildings and structures away from the house according to the 1907 plan prepared by Ernest Bowditch. Between 1907 and 1908, the spatial organization of the space changed with the addition of a new gardener's cottage, potting shed and greenhouse, a swimming pool, tool shed, and chicken house and cow barn, which previously was located in the area now occupied by the garage.

In later years, the Edisons created additional informal and formal flower gardens, planted fruit trees, established the north pasture and added an evergreen screen around the chicken house and cow barn.

*Post Historic and Existing Condition (since 1931):*

Following the death of Thomas Edison in 1931, Mina redesigned the formal flower garden located near the greenhouse and gardener's cottage and added three Chinese chestnuts near the swimming pool. Under Thomas A. Edison, Inc.'s stewardship of the property between 1946 and 1959, the grounds were gradually simplified. The hot beds/cold frames and a portion of the east end of the greenhouse began to deteriorate and eventually had to be removed and the majority of gardens within the space fell into disuse. Since 1959, minimal changes have occurred within the space. Currently, the service area is defined by a stone boundary wall on the north, the gardener's cottage, potting shed, and greenhouse driveway on the west, Honeysuckle Avenue on the south, and Glen Avenue to the east.

*Evaluation: Contributing*

The service area, established between 1881 and 1884, contributes to the significance of the Glenmont landscape. The space and associated features remain intact since the historic period and continues to reflect the naturalistic landscape design principles that were used in the layout of country places, suburban villas, and small gentlemen farms in the nineteenth century, specifically the separation of service buildings and structures away from the house (Drawings 2.5 and 2.6).

**Johnson-Tilney property**

*Historic Condition and Existing Conditions:*

Prior to its acquisition by the National Park Service, the Johnson-Tilney property was privately owned land. On November 29, 1963, the McGraw-Edison Company donated the 2.13-acre parcel—located north of the Glenmont house—to the federal government. At the time of its transfer, the property contained a house and three ancillary structures. In the mid-1970s, as part of the master planning efforts, all buildings and structures on the property were removed and a visitor parking lot was installed. Today, the Johnson-Tilney property is scattered with trees and shrubs and contains the visitor parking area. There are no buildings and structures or small-scale features within the space.

*Evaluation: Non-contributing*

The Johnson-Tilney property, established in 1963, does not contribute to the significance of the Glenmont landscape. However, the space plays a pivotal role in the management of Glenmont, specifically ensuring that site facilities provide

efficient park administration and essential visitor services space consistent with the preservation objectives of the site (Drawing 2.5).

### **CIRCULATION**

This characteristic describes systems of movement through the landscape. Beginning in the early 1880s, Henry Pedder built a naturalistic, irregular system of drives and paths based on the plan by Nathan Franklin Barrett. This circulation system was in keeping with the popular natural style of landscape gardening. The main and secondary drives featured flagstone curbing, while Honeysuckle Avenue—the service road built by Pedder—was lined with cobblestone gutters. In addition to the drives, the landscape included a network of sinuous paths and walks that meandered through the west and southwest portions of the property. During the Thomas Edison era (1886-1931), the circulation system was altered with the addition and removal of some paths and drives, notably the removal of the walking path that proceeded from the Conservatory to Park Way, the reduction of the paths and drives around the Pedder barn site, and the realignment of the paths to the south of the greenhouse complex. With exception to minimal alterations to islands within the main drive and a section of path abandoned in the west lawn, the overall naturalistic circulation system was retained during the Mina Edison (1931-1947) and Thomas A. Edison, Inc. (1946-1959) eras. Following its transfer of ownership to the National Park Service (1959-2009), two parking areas were constructed—on the adjacent Tilney-Johnson property and along the barn drive, and many historic paths were removed, including the path within the west lawn.

Today the overall vehicular circulation systems within the Glenmont grounds remain largely intact to the historic period. The property remains bounded by Park Way and Glen Avenue and the main and secondary drives—connected by the cobblestone-lined Honeysuckle Avenue—continue to follow the same historic alignment within the landscape. While pedestrian paths within the landscape have been removed or abandoned over time, portions that remain are unchanged since the historic period.

#### **Local roads (Park Avenue, Glen Avenue, and Honeysuckle Avenue)**

##### *Historic Condition:*

In the development of Llewellyn Park in the 1850s, approximately ten miles of sinuous roads encircled the ramble, the park's common park. The perimeter of the ramble was defined by Park Way on the east, Tulip Avenue on the west, and Mountain Avenue on the north. Other roads that intersected the ramble included Forest Way, Glen Avenue, Wildwood Avenue, Oak Bend, Bloomfield Way, Linwood Way, and Long Branch. The undeveloped thirteen-acre site of Glenmont was bounded by Glen Avenue on the east and Park Way to the

south—two of the earliest roads within the park. The roads in Llewellyn Park were originally dirt surfaced and included curbing and cobblestone guttering. Between 1867 and 1924, the roads were slowly resurfaced in macadam asphalt. In the initial development of the Glenmont landscape, Henry Pedder constructed Honeysuckle Lane (later changed to Honeysuckle Avenue) as a service road in c.1881-1882.<sup>13</sup>

*Post Historic and Existing Condition (since 1931):*

Since the historic period the circulation patterns within Llewellyn Park has remained relatively unchanged. The roads are bituminous asphalt pavement of varying widths. Some roads do not have curbing or edge treatments, while others have various curb types, including four foot lengths of granite, five inch squares of granite or cobblestone gutters. Between 2001 and 2003, the National Park Service commissioned Viola Construction Company to make improvements to Honeysuckle Avenue, which included the reconstruction of the roadway with an aggregate base, asphalt pavement, stone paved waterway, and manhole adjustments.<sup>14</sup>

*Evaluation: Contributing*

The local roads—Glen Avenue, Park Way, and Honeysuckle Avenue, built between 1857 and 1882, resurfaced between 1867 and 1924, and 2003, contributes to the significance of the Glenmont landscape. Despite changes to the surface materials, the local roads remain intact since the historic period and continue to illustrate a major component of Llewellyn Haskell's original design for Llewellyn Park, as well as the nineteenth century naturalistic gardening principles advocated by Andrew Jackson Downing (Drawings 2.1-2.6).

**Driveways and paths (Main and secondary drives), LCS ID: 040671**

*Historic Condition:*

Upon completion of the Glenmont house in 1880, Henry Pedder had the main and secondary drives constructed according to Nathan Franklin Barrett's design for the Glenmont grounds. Beginning at a "Y" intersection at Park Way, the main drive curved through the landscape in a naturalistic alignment and ended in oval-shaped loop that passed beneath the porte-cochere of the house. Two secondary entrance drives, located near the laundry yard and carriage house, connected to the main drive by way of Honeysuckle Avenue, the service road that was built shortly after Henry Pedder purchased the property. The drives were approximately ten feet wide lined with flagstone curbing and surfaced in crushed stone obtained from the South Orange Quarry. With exception to repairs in the early 1900s, minimal changes occurred to the drives until the 1920s when the removal of the Pedder barn necessitated the reduction of the drives around the site.

Along with the drives, the landscape included a network of sinuous paths and walks. Marked by a rectangular bluestone stoop on the west and set of steps to the south, the paths began at Park Way and meandered through the west and southwest portions of the property, eventually leading up to and around the house. Additional paths were located within the service area across Honeysuckle Avenue. By 1914, the walking path that proceeded from the Conservatory to Park Way heading southeast was removed. Around the same time, paths located south of the greenhouse complex changed from curvilinear to straight walkways to create a rectangular formal flower garden (Figures 3.10-3.13).

Figure 3.10: Circulation. A c. 1886-1890 image looking north of the main drive. The main drives curves through the landscape in a naturalistic alignment and ends in an oval-shaped looped that passes beneath the wisteria covered portecochere. Note the young trees and shrubs along the drive (EDIS Archives).



Figure 3.11: Circulation. A 2009 image, taken in the same area, that shows a mature landscape with the wisteria on the absence of the southwest path and carpet bedding. Note the overgrown dwarf alberta spruce (*Picea glauca* 'Conica') (right) (OCLP, 2009).



*Post Historic and Existing Condition (since 1931):*

The National Park Service had the drives surfaced in asphalt in 1962; and again 1975. In 1985, the drives were restored to their 1931 appearance. The work included re-establishing the walkways, garden paths, drives, and flagstone curbing. Currently, the main and secondary drives begin at Park Way where it branches into two legs that form two triangular islands before entering the front lawn. Upon entering the front lawn, it forms an approximate 220 foot diameter oval circle that passes beneath the house's porte cochere. The first secondary drive that encircles the laundry yard intersects the north side of the circle, while the other secondary drive, connecting the garage to the main drive, intersects the circle on the east side. The drives measures approximately ten feet wide surfaced in crushed gravel and lined with flagstone edging. Drainage is provided by fourteen catch basins.

Figure 3.12: Circulation. A photograph taken during Madeline Edison's wedding in 1914. Note the triangular island planted with annuals and dracaena. Islands within the main drive were often embellished with ornamental flower beds throughout the historic period (EDIS Archives, Album 113).



Figure 3.13: A similar view looking northeast towards the same island within the main drive. Following the death of Mina Edison, many islands were simplified. This particular island currently contains periwinkle (*Vinca minor*) (OCLP, 2009).



The main drive is no longer used as the main entrance. Visitors generally access Glenmont via Honeysuckle Avenue.

Following the deaths of Thomas Edison in 1931 and his wife Mina in 1947, many historic paths were removed, including the paths within the west lawn. However, paths that remain intact from the historic period include the walking path around the perimeter of the house and the paths within the service area across Honeysuckle Avenue

*Evaluation: Contributing*

The drives and paths, built between 1880 and 1882, repaired in c.1907, altered in the c.1920s, and resurfaced in 1962, 1970s, and 1985, contributes to the significance of the Glenmont landscape. The alignment of the drives remain intact since the historic period and continue to illustrate a major component of the original Barrett design, as well as the nineteenth century naturalistic gardening principles advocated by Andrew Jackson Downing (Drawings 2.1-2.6).

**Parking areas**

*Historic Condition:*

The parking areas did not exist during the historic period (1857-1931).

*Post Historic and Existing Condition:*

After Glenmont opened to the public in the 1960s, the most pressing issue for the park was visitor accessibility. At that time, visitors to the site were directed to park along Honeysuckle Avenue or in a small parking area in a former pasture near the intersection of Glen and Honeysuckle Avenues. In the mid-1970s, parking issues were eventually addressed on the Tilney-Johnson property with the removal of the house and ancillary structures and the installation of a visitor parking lot. As part of the greenhouse rehabilitation in 2002-2003, a staging area was constructed next to the visitor parking lot, as well as an additional contractor parking area in the vicinity of the barn, directly across from the garage. Currently, the visitor parking lot, located on the Tilney-Johnson property, measures approximately 75 feet by 50 feet, is surfaced in bituminous asphalt and contains fifteen (one handicap) parking spaces. The contractor parking area, now used by both visitors and park employees, is a gravel-surfaced unmarked lot measuring approximately 60 feet by 18 feet, with room for approximately 6-7 vehicles.

*Evaluation: Non-contributing*

The parking areas were built in the mid-1970s and 2002-2003 after the historic period and therefore do not contribute to the significance of the Glenmont landscape (Drawings 2.1-2.6).

## VEGETATION

This characteristic is defined as the individual and aggregate plant features of deciduous and evergreen trees, shrubs, vines, groundcovers, and herbaceous plants, and plant communities, whether indigenous or introduced. Prior to the development of the Glenmont grounds in the early 1880s, the property was largely open and consisted of mostly specimen trees (oaks, maples, and beeches) along Park Way and Glen Avenue. Between 1880 and 1884, Henry Pedder transformed the character of vegetation on the Glenmont grounds through extensive ornamental plantings. He laid out deciduous and evergreen trees (mostly oak, beeches, ash, maples, white pine and Norway spruce), established a hemlock hedge along Honeysuckle Avenue, and added a wide variety of small-scale vegetation such as flower and vegetable gardens, ornamental carpet bedding, and shrubs. The Edisons continued to add trees, flowerbeds, flower and wild gardens, foundation plantings, and hedges, but eventually removed the ornamental carpet-bedding by 1914. They also had the hemlock hedge replanted between 1910 and 1925.

Following Thomas Edison's death in 1931, Mina retained the majority vegetative features, but redesigned a portion of the flower garden. Under Thomas A. Edison, Inc. ownership, the vegetable garden and majority of the flower and cutting gardens were removed. With the exception of plantings added in 1963 as part of the Edison gravesite, the National Park Service has preserved the vegetation throughout the landscape, replacing in-kind when necessary.

The Glenmont landscape today consists of both native and exotic species, largely dominated by deciduous and evergreen trees found in groupings or as specimens (approximately 650). Shrubs are found throughout the landscape—mostly along the perimeter—and include foundation shrubs around the house, hedges along Honeysuckle Avenue, and hedges in the flower garden near the gardener's cottage, potting shed, and greenhouse. Other vegetative features include the herbaceous beds in the flower garden and along the foundation of the house, and woodland plantings.

### Vines on buildings and structures

#### *Historic Condition:*

Vines were likely introduced to the Glenmont landscape in the mid to late 1880s following the construction of the buildings and structures. During that time, Dutchman's pipe (*Aristolochia elegans*), Japanese creeper (*Parthenocissus tricuspidata*) common or English ivy (*Hedra helix*), honeysuckle (*Lonicera sp.*) trumpet vine (*Campsis radicans*), and wisteria (*wisteria sp.*) were planted on the house, barn, and chicken house and cow stable (now chicken house and cow barn). By the early 1900s, vines were growing on the house's porte-

cochere, Conservatory, and along the south and west elevations. Following the construction of the garage, garden's cottage, and potting shed, English ivy was planted to cover the walls of the buildings.

*Post Historic and Existing Condition (since 1931):*

By the mid-1960s, the majority of the buildings and structures at Glenmont were deteriorated and needed repairs. With exception of the wisteria on the house's porte-cochere, at that time many vines on buildings were removed for preservation purposes.

*Evaluation: Contributing*

Vines on buildings and structures, planted between 1880 and 1908, and altered in 1963, contribute to the significance of the Glenmont landscape as a characteristic vegetative feature of the historic period (1857-1931). The wisteria (*Wisteria sp.*) on the mansion porte-cochere is intact and in good condition. However, the widespread removal of vines from historic buildings, undertaken as a preservation measure, has altered the historic character of the landscape (Drawing 2.3).

**Lawns, pastures, and meadows**

*Historic Condition:*

During the Henry Pedder (1879-1884) and Thomas Edison (1886-1931) years, the house and front lawn and west lawn (back lawn) areas were maintained as low, manicured lawn, while the south (lower) lawn and north pasture areas were maintained as meadow and pasture. While the types of grasses Pedder and Edison established within the front and west lawns are unknown, they were cut with a mechanical mower, and in the spring and fall were overseeded and enriched with fertilizers and manure. The pasture and meadow areas, tinted with daisies (*Chrysanthemum sp.*), black-eyed Susans (*Rudbeckia hirta*), buttercups (*Ranunculus sp.*) and other wildflowers, were used as grazing areas for the cows and horses and cut for hay (Figures 3.14 and 3.15).

*Post Historic and Existing Condition (since 1931):*

Shortly after Glenmont's acquisition by Thomas A. Edison, Inc. in 1946, livestock were no longer part of the Glenmont landscape and the pasture and meadows were eventually maintained in similar manner as the lawn areas. In the 1980s, Head Gardener George Crothers wanted to maintain the area historically known as the north pasture area, located at the corner of Honeysuckle Avenue and Glen Avenue, as pasture by reducing the amount of mowing to twice a year; it was later met with firm opposition from Llewellyn Park residents. Currently, the National Park Service maintains all turf areas at a short height and uniform appearance.



Figure 3.14: (top) Vegetation. A c.1918-1930 image looking south towards the south (lower) lawn pasture area (Edison Archives, 12.420.42).

Figure 3.15: (bottom) Vegetation. Following the death of the Thomas and Mina Edison, the pasture areas were maintained as manicured turf area (OCLP, 2009).

*Evaluation: Contributing*

Lawns, established between 1880 and 1886, and altered c.1950s, contributes to the significance of the Glenmont landscape as characteristic vegetative features of the historic period (1857-1931). However, the loss of pastures and meadows has affected the overall character of the Glenmont landscape (Drawings 2.1-2.6).

**Woodland plantings (groundcover)**

*Historic Condition and Existing conditions:*

During the Thomas Edison period (1886-1931), a wild garden was established within the woodland space. Largely influenced by the wild gardening concepts of William Robinson, the garden featured bulbs and wildflowers such as allium, anemone, artemisia, bleeding heart, Chinese heart, columbine, daffodil, daylily, erythronium, evening primrose, forget-me-not, foxglove, fritillary, goldenrod, hellebore, honesty, lily-of the valley, primrose, pulmonary, Queen Anne's lace, scilla, snowdrop, Solomon's seal, sweet woodruff, tulip, violet, and yarrow. Since the 1950s, dense shade from the evergreen and deciduous trees has contributed to the decline of the wild gardens.

*Evaluation: Contributing*

The woodland plantings (remnants of the wild garden), established in the 1920s, contribute to the significance of the Glenmont landscape as a characteristic vegetative feature of the historic period (1857-1931). However, all that remains of the wild gardens are drifts of scilla, lily-of-the-valley, yellow trout lily, and daffodils. Indian pipes (*Monotropa uniflora*) can be seen in the early summer and ferns are found in the damp, wooded areas (Drawing 2.3 and 2.4).

**Deciduous and evergreen trees and shrubs***Historic Condition:*

In the development of Llewellyn Park in the 1850s, Llewellyn Haskell, with assistance from Alexander Jackson Davis and landscape architects Eugene Bauman and Howard Daniels, thoughtfully integrated native and exotic trees and shrubs into the natural landscape in an effort to create varied experiences throughout the park. Along the perimeter of the undeveloped future site of Glenmont—lining Park Way and Glen Avenue—a variety of overstory and understory trees and shrubs were planted, included oak, maple, beech, hickory, and rhododendrons. Between 1879 and 1884, Henry Pedder commissioned Nathan Franklin Barrett to lay out the undeveloped Glenmont landscape. Following the naturalistic gardening principles prescribed by Andrew Jackson Downing, trees and shrubs were planted to enhance the natural beauty of the grounds, frame views, and screen service areas. During the Thomas Edison period (1886-1931), the trees and shrubs grew to maturity and other trees and shrubs were added. By 1931, the landscape consisted of single specimens and groupings of trees; these included but were not limited to maples, beeches, chestnuts, lindens, ash, oaks, Norway spruce, white pine, Nordmann's fir, copper beech, weeping beech, weeping cherry, weeping spruce, paulownia, Sargent weeping hemlock, hackberry, and sassafras. The most prominent shrubs were rhododendrons, which were planted in naturalistic groupings along the perimeter of the property.

*Post Historic and Existing Condition (since 1931):*

Throughout the 1930s, the Glenmont grounds were maintained at a particularly high level as trees and shrubs received cable bracing, pruning, and periodic feeding. In 1937, three Chinese chestnuts were established near the swimming pool, and an American chestnut was placed in the front lawn. Other changes included the planting of a commemorative oak in 1940 as part of a two day festival honoring Thomas Edison. Since 1959, approximately 87 trees have been removed, but many were replanted by the National Park Service and continue to thrive in the landscape. As of 2009, approximately 100 trees have been planted since 1959. [For further information on the vegetation at Glenmont, see the existing condition plans, located at the end of the *Existing Conditions* chapter of this cultural landscape report.]

*Evaluation: Contributing*

The deciduous and evergreen trees and shrubs, established between 1860 and 1931, contribute to the significance of the Glenmont landscape. The layout and arrangement of the plantings remain intact since the historic period and continue to evoke the naturalistic gardening principles advocated by Andrew Jackson Downing. While many trees and shrubs have been lost to age-related decline,

disease, or storm damage, the National Park Service has judicially replanted many plants in-kind (Drawings 2.1-2.6).

#### **Remnant orchard**

##### *Historic Condition and Existing Conditions:*

In c. 1882, Henry Pedder established an orchard along the south side of the extensive vegetable garden located east of the chicken house and cow stable (current location of the garage) in the south (lower) lawn. The orchard included apple and pear trees. Throughout the historic period (1886-1931), the orchards were maintained, but by 1992 the majority of apple trees had to be replaced. A Chinese Pearleaf crap apple tree is all that remains from the historic period.

##### *Evaluation: Contributing*

The remnant orchards, planted in c.1882, replaced in 1992, contribute to the significance of the Glenmont landscape as a characteristic vegetative feature of the historic period (1857-1931) (Drawing 2.4).

#### **Foundation plantings**

##### *Historic Condition:*

During the initial development of the Glenmont grounds in early 1880s, Henry Pedder incorporated a series of showy ornamental garden beds—consisting of mostly annuals, and a few deciduous shrubs along the south and west foundations of the Glenmont house. With exception to vines growing on the house and potted plants, the north and east sides of the house were devoid of vegetation. During the Thomas Edison era (1886-1931), additional evergreen shrubs were added around the foundation of the house, specifically along the east elevation and near the Conservatory (Figures 3.16-3.17).

##### *Post Historic and Existing Condition (since 1931):*

The evergreen shrubs around the Conservatory were removed in c. 1960s during the renovations to the Conservatory and later replaced in the 1970s. In 2008-2009, a group of students from the Essex County Master Gardener program installed a new flower bed along the house's west foundation. Work included pruning historic rose bushes and reestablishing historic plant material, which included giant cannas and buddleia.

##### *Evaluation: Contributing*

The foundation plantings, established in the 1880s, altered in the 1920s, 1960s, and 2008-2009, contribute to the significance of the Glenmont landscape as vegetative features of the historic period (1857-1931) (Drawing 2.3).



Figure 3.16: (left) Vegetation. A c1909-1914 image of the “fern’ house and various tropical plants, such as palms (EDIS Archives).



Figure 3.17: (right) Vegetation. This image, taken in 2009, shows the fern house without awnings, potted plants, and foundation plantings (OCLP, 2009).

### Edison gravesite plantings

#### *Historic Condition:*

The Edison gravesite plantings did not exist during the historic period.

#### *Post Historic and Existing Condition (since 1931):*

In 1963, the remains of Thomas and Mina were moved from their resting place in Rosedale Cemetery, in Montclair, N.J., to Glenmont. At the time of its installation, the gravesite included rhododendrons and mountain laurels for screening, goldmoss stoncrop as groundcover, and a Japanese holly hedge (*Ilex crenata* ‘Convexa’). Between 2003 and 2004, the Japanese holly hedge and goldmoss stoncrop were replaced with pachysandra (*Pachysandra terminalis*), tree peonies (*Paeonia suffruticosa*), and two ‘Sango Kaku’ Japanese Maples (*Acer palmatum* ‘Sango Kaku’).

#### *Evaluation: Contributing*

The Edison gravesite plantings, installed in c.1963, altered between 2003 and 2004, contributes to the significance of the Glenmont landscape as characteristic vegetative features of the reinterment site of Thomas and Mina Edison. The site was determined significant by the Keeper of the National Register in 1996 (Drawing 2.3).

### Flower and vegetable beds and gardens

#### *Historic Condition:*

Shortly after the completion of the house and service buildings, initial improvements were made to the surrounding landscape. Beginning in 1882, Henry Pedder added a series of oval, teardrop, arabesque-shaped ornamental flower beds. Established on the south and west sides of the house, the flowerbeds were planted in the “bedding-out” schemes with patterns of colorful flowering annuals including marigolds, alyssums, and impatiens. Additional informal flower beds, which included acanthus, daylilies, yucca, peonies, phlox, and begonias, were found along the walks and islands. Around the same time, a large four-square vegetable garden was created on the corner of Honeysuckle Avenue and Glen Avenue, and a flower (cutting) garden—encircled by a grape arbor—was established adjacent to the greenhouse complex across Honeysuckle Avenue.

During the Thomas Edison era (1886-1931), a wild garden was established within the woodland along Honeysuckle Avenue. In keeping with the wild gardening concepts of British landscape gardener and author William Robinson, the wild garden consisted of bulbs and wildflowers. Along with the wild garden, additional formal and informal flower gardens were established within the service area across Honeysuckle Avenue. Located near the gardener’s cottage, potting shed, and greenhouse, a formal flower garden was established. The garden began at the gardener’s cottage and extended to Honeysuckle Avenue. It featured oval, triangular, and round annual beds. Beyond the formal flower garden, a series of flower and fruit gardens were established throughout the service area, surrounding the gardener’s cottage and potting shed, greenhouse, and chicken house and cow barn. By 1914, the Edisons removed the carpet bedding and container plants.

#### *Post Historic and Existing Condition (since 1931):*

In 1937, Mina chose to include features that had been suggested in an earlier 1929 Ellen Shipman plan entitled, *Sketch Plan for Rearrangement of the Garden of Mrs. Thomas Edison*. The new garden was rectangular, incorporated axial grass paths, and was embellished by old-fashioned naturalized plantings and perennial borders that included peonies, hollyhocks, irises, achillea, larkspur, anthemis, and lilies. In addition, a rustic dry-laid stone retaining wall was constructed, a marble bench surrounded by arborvitaes was added, and an additional rose arbor was built.<sup>15</sup>

After Mina’s death in 1947, Thomas A. Edison, Inc. removed the majority of the flower gardens, fruit trees, and vegetable garden. All that remains today is a flower garden located near the gardener’s cottage and potting shed and a linear flower bed—planted with peonies and hosta (*hosta sp.*), along Honeysuckle Avenue.

*Evaluation: Contributing*

The flower and vegetable beds and gardens, established between 1882 and 1910, altered between 1910 and 1914, 1937, and in the 1950s, contribute to the significance of the Glenmont landscape. While many beds and gardens have been removed, and others modified since the historic period, the historic character of the existing beds and gardens are determined by scale, location, and variety of plant material (Drawings 2.5 and 2.6).

**Honeysuckle Avenue hemlock hedge***Historic Condition:*

Although it is unclear, the hemlock hedge (*Tsuga canadensis*) along Honeysuckle Avenue was presumably first established between 1882 and 1886. Following the relocation of the chicken house and cow barn and construction of the greenhouse complex, Mina—apparently looking to improve screening of the service area—had the hedges replanted between 1910 and 1925.

*Post Historic and Existing Condition (since 1931):*

Following the deaths of Thomas and Mina Edison, the hemlocks were left unclipped and allowed to mature into trees. Currently, the row of hemlocks are roughly thirty feet in height and approximately 900 linear feet (entire length of Honeysuckle Avenue). In recent years, the dense shade from the hemlocks and American linden trees has been responsible for the decline of historic plant material within the service area and along Honeysuckle Avenue, specifically the privet hedges (*Ligustrum sp.*).

*Evaluation: Contributing*

The Honeysuckle Avenue hemlock hedge, initially established between 1882 and 1886, and replanted between 1910 and 1925, contributes to the significance of the Glenmont landscape. The hemlocks, however, no longer fulfill their historic design intent and have negatively impacted the historic character of the site, contributing to the decline of historic vegetation (Drawings 2.3-2.6).

**Johnson-Tilney trees and shrubs***Historic Condition:*

During the historic period (1857-1931), the Johnson-Tilney property was privately owned and had no affiliation with Glenmont.

*Post Historic and Existing Condition (since 1931):*

On November 29, 1963, the McGraw-Edison Company donated the 2.13-acre Johnson-Tilney property—located north of the Glenmont house—to the federal government. At the time of its acquisition, the landscape consisted of a diverse

mix of deciduous and evergreen trees (varying in age). In recent years, the National Park Service has maintained the existing vegetation, while using the property as a nursery for future plantings at Glenmont [For further information on the vegetation at Glenmont, see the existing condition plans, located at the end of the *Existing Conditions* chapter of this cultural landscape report.]

*Evaluation: Non-contributing*

The Johnson-Tilney trees and shrubs do not contribute to the significance of the Glenmont landscape because the property privately-owned during the historic period. However, the trees and shrubs are compatible with the naturalistic planting characteristics found within the Glenmont landscape (Drawing 2.5).

### **BUILDINGS AND STRUCTURES**

This characteristic is defined as the elements constructed primarily for sheltering any form of human activities. Between 1879 and 1886, Henry Pedder constructed a number of buildings and structures on the undeveloped thirteen acres within Llewellyn Park. By 1884, the Glenmont grounds consisted of the house (1882), greenhouse complex, chicken house/cow stable (1882-1884), barn, pump house (c. 1882), hose house (c. 1882), and well house. Although a large rectangular barn existed on the property in 1881, by 1882 it was removed. During the Thomas Edison years, the Pedder carriage barn/stable was removed, the chicken house and cow barn was relocated, and additional buildings and structures were constructed, which included a garage (1908), gardener's cottage, potting shed and greenhouse (1908)—which replaced the previous greenhouse complex, tool shed (c. 1908-1920s), pool (c. 1907), cold frames/hot beds (c. 1908-1920s), stone boundary wall, playhouse, and summer house. A skating pond was built in the former location of the Pedder barn, but was later removed. Around the same time, a house and other utilitarian buildings were constructed on the adjoining property (Johnson-Tilney property). Following the death of Thomas Edison in 1931, the playhouse and summer house were removed and a retaining wall (1937) was constructed in the flower garden. Glenmont's transfer of ownership to the National Park Service in 1959 led to many changes that included the filling in of the swimming pool, removal of the buildings and structures on the Johnson-Tilney property, and installation of a portable restroom and fireproof metal structure.

The Glenmont grounds currently contains seven buildings, the most prominent being the house, gardener's cottage, potting shed and greenhouse, and garage, and chicken house and cow barn. Smaller buildings and structures in the landscape include the pump house, hose house, skating pond site, concrete basin (pool), stone boundary wall, hot bed foundation, and garden retaining wall.

**Glenmont house (No. 10), LCS #000264***Historic Condition:*

The Glenmont House was built between 1880 and 1882, following the plans of prominent New York architect Henry Hudson Holly for Henry and Louisa Pedder. The three-story multi-gabled Queen-Anne style mansion was constructed of stone, brick, and stick and shingle design, and included an attic, basement, and contained twenty-nine rooms. The roof was slate with eight paneled brick chimneys.<sup>16</sup> Features of the house included a porte cochere, two narrow verandahs on either side of the porte cochere, a Conservatory on the south side of the house, and a small verandah on the north side. A dining room “den” was located along the west elevation, but was incomplete when Thomas Edison purchased the house in 1886. It was later finished between 1886 and 1891.

Following its acquisition by the Edison family, a series of improvements were made to the house between 1886 and 1890, which included the installation of telephones and a burglar-alarm system, supplementing the existing gas-lighting system with electric lighting, and repainting the house (exterior wood work was painted gray, repainted brick red c. 1905-1910). In 1899, upgrades were made to the electrical and plumbing systems and many rooms were remodeled. The first decade of the new century was prosperous for Thomas Edison, which was largely attributed to financial success of his motion-picture machines and films. As a result, between 1900 and 1915 many improvements were made to the house including remodeling of the dining room, improving the plumbing and heating systems, enlarging bedrooms, adding bathrooms, and constructing a small room, now known as the “fern room.” Minor general improvements such as painting, plumbing, and carpentry work were made throughout the 1920s and early 1930s.<sup>17</sup> [For further information, see Barbara Yocum, “Historic Structure Report for the House at Glenmont,” National Park Service, 1998.]

*Post Historic and Existing Condition (since 1931):*

Following the death of Thomas Edison in 1931, Mina Edison continued to live at Glenmont until her death in 1947. During that time, a new bathroom was built in the second story off the east bedroom and the Conservatory was repainted and its floor repaired.<sup>18</sup> Thomas A. Edison, Inc. purchased Glenmont from Mina in 1946 (Mina obtained a life estate). After Mina’s death, the house was used by Thomas A. Edison, Inc., as a site for receptions, and later as a limited-use museum. During this time, the exterior and some interior rooms were repainted, the chimneys repointed, and roof repairs were carried out. Glenmont was donated to the United States by the McGraw-Edison Company (the successor to Thomas A. Edison, Inc.) on July 22, 1959. The contents of the building, including the furniture, were also donated at that time. Beginning in 1965, the National Park Service restored the Conservatory, repaired the slate roof, and renovated the

heating and electrical systems. In the 1970s, deteriorated areas of the foundation walls were repaired and the exterior brick was repointed, a new fire-protection system was installed, and the exterior of the house was repainted. Between 1980 and 1990, a security system was installed. The security system was upgraded in 1992. In addition roof repairs were made in 1990.<sup>19</sup> Currently, two stories of the house are open to the public, while the third floor serves as storage space. [For further information, see Barbara Yocum, *Historic Structure Report for the House at Glenmont*, National Park Service, 1998.]

*Evaluation: Contributing*

The Glenmont House, built between 1880 and 1882, according to the design of architect Henry Hudson Holly, contributes to the significance of the Glenmont landscape. The house is the focal point and its exterior remains largely intact since 1880s. There have been no changes to the exterior since the historic period. The house is also significant on a state and local level as a distinctive example of Queen Anne-style architecture and as the work of architect Henry Hudson Holly (Drawing 2.3).

**Gardener's cottage and potting shed (No. 11), LCS #000265;**

*Historic Condition:*

The gardener's cottage and potting shed is one of the earliest examples of monolithic concrete construction developed by Thomas Edison. The two-story structure was erected in 1908, northeast of the house and across Honeysuckle Avenue, on the site of an earlier structure built by Henry Pedder. The concrete exterior of the gardener's cottage was finished with a smooth surface on the first floor and roughly textured on the second. It also included a flat roof, ornamented parapet, and modillion cornice. During the historic period, the first floor was used as storage for the gardening tools and equipment, while the second floor served as the gardener's living quarters.

*Post Historic and Existing Condition (since 1931):*

While minor repairs were made to the gardener's cottage and potting shed in the 1960s, it was not until 2003 that it received a complete rehabilitation. Work included but was not limited to repairing the roof, spalled concrete, window frames, chimney, and repainting the exterior. Currently, the first floor of the building is used as exhibit space, workshop, and storage for some gardening tools and equipment. In addition, it accommodates a small National Park Service gift store.

*Evaluation: Contributing*

The gardener's cottage and potting shed, built in 1908, repaired in the 1960s, and rehabilitated in 2003, contributes to the significance of the Glenmont landscape and remains in good condition with minimal changes since the historic period (Drawings: 2.5 and 2.6) .

**Greenhouse (No. 14), LCS #000266;***Historic Condition:*

In the 1880s, a greenhouse complex was constructed by Henry Pedder on the north side of Honeysuckle Avenue (service area space). In c.1907-1908, Mina Edison had the Pierson U-Bar Company design and build a new greenhouse attached to the new gardener's cottage and existing north wing of the earlier greenhouse built by Pedder. The greenhouse's design, similar to the layout Ernest Bowditch indicated in his plan for the grounds, called for a U-shaped plan, with the main structure in an east-west orientation. The greenhouse was divided into various houses: the palm house, originally used to grow plants for the Glenmont house Conservatory; the orchid house (indicated as fern house in the original specifications), used for growing tropical plants, such as orchids, that required special heat and humidity; the lean-to adjoining the palm house, used mostly for growing poinsettias that were placed in the house during the holidays; the rose house, used for growing many types of roses; a carnation house, used to grow carnations and other cut flowers for decorating the Edison house; and a propagation house—placed as a partition between the earlier Pedder greenhouse and orchid house, used for the propagation of seeds in the springtime and for chrysanthemums in the fall.<sup>20</sup> By the 1920s, the condition of the north wing of the greenhouse—an earlier section of the greenhouse built by Pedder—had deteriorated and had to be replaced.

*Post Historic and Existing Condition (since 1931):*

Following the death of Mina Edison in 1946, the Glenmont grounds showed signs of physical decline and many buildings were no longer used, such as the greenhouse. Furthermore, a portion of the east side of the greenhouse—constructed in the 1920s—began to deteriorate and eventually had to be removed in 1950. Following the property's acquisition by the National Park Service, the greenhouse was repaired in the 1960s and eventually rehabilitated in 2003.

Attached to the east and south sides of the gardener's cottage and potting shed, the greenhouse is a metal (U-frame steel ribs) and wood frame structure on low concrete foundation walls and includes approximately 2,404 square feet of floor space under glass. The interior of the greenhouse is divided into six glass partitioned rooms and continues to serve its historic function. It is open to the public for interpretative purposes.

*Evaluation: Contributing*

The greenhouse, built in c.1907-1908, altered in the 1920s, repaired in the 1960s, and rehabilitated in 2003, contributes to the significance of the Glenmont landscape. Aside from the removal of a portion of the east end of the greenhouse, the greenhouse remains in good condition with minimal changes since the historic period (Drawings 2.1-2.6).

**Garage (No. 15), LCS #000267***Historic Condition:*

The garage is one of the earliest examples of monolithic concrete construction developed by Thomas Edison. The two-story structure was erected in 1908, east of the house along Honeysuckle Avenue, and in the former location of Pedder's L-shaped chicken house and cow barn. The concrete exterior of the garage was elaborately ornamented, with a flat roof and parapet, an overhanging cornice, corners defined by pilasters on both first and second stories, and the windows contained a system of triangular lights in the upper sash. During the historic period, the garage—heavily covered with vines--housed the family automobiles, which were moved to their assigned places with the aid of a circular turn-table set into the floor. The upper floor originally consisted of eight rooms and a bath for a chauffeur's quarters.

*Post Historic and Existing Condition (since 1931):*

In the 1960s, the garage—like so many other buildings and structures at Glenmont—had deteriorated and needed repairs. In the mid-1980s and early 1990s, a new furnace was installed and the roof replaced. It was during this time that vines, covering the building, were removed. Today, the first floor of the garage is used as exhibit space and to store heavy grounds maintenance equipment, while the second-floor serves as office space for National Park Service staff. The concrete exterior of the garage remains similar to its historic appearance.

*Evaluation: Contributing*

The garage, built in 1908 and repaired in the 1960s and mid-1980s, contributes to the significance of the Glenmont landscape. Aside from the removal of vines that historically covered the majority of the building in the 1960s, the garage remains in good condition with minimal changes since the historic period (Drawing 2.4).

**Chicken house and cow barn (No. 16), LCS #000268***Historic Condition:*

The Victorian style chicken house and cow barn, known as the chicken house and stable prior to the 1920s, was built between 1880 and 1882, east of the house along Honeysuckle Avenue. The L-shaped wood frame structure was one story high with a loft over the main portion. The exterior was sheathed in wood shingles

and had a slate covered roof, while the interior included a chicken house, pony stable, feed room, and cow stable. During the historic period, the Edisons housed chickens, cows, and a pony within the barn. In c.1907-1908, Thomas and Mina Edison relocated the chicken house and cow barn across Honeysuckle Avenue, according to the 1907 plan by Ernest Bowditch. A new garage was later constructed on the site in 1908. In the 1920s, a new calf shed was added to the barn.

*Post Historic and Existing Condition (since 1931):*

Following the property's acquisition by the National Park Service in 1959, a series of improvements were made to the barn, beginning with the replacement of the slate roof in the mid-1980s. In 2003, the barn was rehabilitated and included repairing shingles, flashing, trim, and repainting the exterior. Currently, the chicken house and cow barn is used to store artifacts and grounds maintenance equipment. The exterior of the barn remains similar to its historic appearance.

*Evaluation: Contributing*

The chicken house and cow barn, built between 1880 and 1882, relocated in c.1907-1908, altered in the 1920s, repaired in 1980, and rehabilitated in 2003, contributes to the significance of the Glenmont landscape and remains in good condition with minimal changes since the historic period (Drawing 2.6).

**Pump house (No. 17), LCS #000269**

*Historic Condition:*

Following the construction of the Glenmont house in c.1880, a number of utilitarian buildings and structures were constructed for potable water supply. Initially, a well house was built near the north side of the house, but was later replaced between 1882 and 1884 with a pump house. Similar in Victorian architectural design and construction as the house, the pump house was a small wooden structure with a cross gable roof set on a fieldstone and mortar foundation. Shortly after acquiring the property in 1886, Thomas Edison installed an electric motor in the pump house, eliminating the need to draw drinking water by hand. Besides supplying water to the house, the pump house also furnished water for other uses, such as the animals in the chicken house and cow barn, and for the gardener's cottage, potting shed, and greenhouse. Likewise, in 1925, the pump house provided water to fill the ice skating pond.<sup>21</sup>

*Post Historic and Existing Condition (since 1931):*

By 1950, the pump house and well were discontinued, when the D. C. electric line became damaged and to be replaced with a service that was incompatible with the obsolete motor. Following the property's acquisition by the National Park Service in 1964, the pump house was repaired and restored. Today, the pump house

stands in its original location adjacent to the laundry yard and remains similar in appearance to the historic period (1857-1931).

*Evaluation: Contributing*

The pump house, built between 1882 and 1884, and repaired and restored in 1964, contributes to the significance of the Glenmont landscape and remains in good condition with minimal changes since the historic period (Drawing 2.3).

**Hose house (No. 18), LCS #000270**

*Historic Condition:*

In conjunction with the installation of a new water line and hydrant for fire protection in the early 1900s, a small wood-frame hose house was constructed in 1904. Situated within the laundry yard, the hose house was used to house a fire-hose cart. Minimal changes to the building occurred during the historic period.

*Post Historic and Existing Condition (since 1931):*

By 1950, the hose house had deteriorated and became overgrown with shrubbery. Despite efforts by Thomas A. Edison, Inc. to repair the pump house, the building was beyond repair and subsequently had to be reconstructed in 1964. During that year the hose house, which was moved in 1951, was returned to its original location within the laundry yard. Currently, the hose house is the smallest building at Glenmont measuring 4'8" x 6'-3", with a shed roof and one board and batten door.

*Evaluation: Contributing*

The hose house, built c.1904, repaired and moved in 1951, relocated and reconstructed in 1964, contributes to the significance of the Glenmont landscape and remains in good condition (Drawing 2.3).

**Skating pond site**

*Historic Condition:*

In 1925, Mina Edison hired Pentecost & Martin, Inc., Landscape Architects, and William Neill and Son, Landscape Engineers and Contractors, to construct a new skating pond and shack—a replacement of a previous pond built in the early 1900s—in the former location of the Pedder barn. By 1926, the skating pond was completed, but was poorly constructed and did not retain water. It is unclear to whether or not the skating shack was ever built. Disappointed with the outcome, Mina Edison turned to Ellen Shipman to redesign the skating pond. Shipman's plan retained the organic shape of the pond and associated plumbing systems, but proposed the use of brick and concrete for the walls and base. Although estimates were prepared for her proposal, it is unclear whether or not her design was ever implemented; present conditions resemble the earlier Pentecost plan.

*Post Historic and Existing Condition (since 1931):*

The skating pond site currently situated within the woodland space along Honeysuckle Avenue in the former location of the Pedder barn—removed in 1920. All that remains of the skating pond, is a roughly 90' x 75' organically-shaped earthen depression lined with stone, rustic dry-laid stone steps, and associated plumbing systems.

*Evaluation: Contributing*

The skating pond site, built c.1925-1926, and abandoned by 1927, contributes to the significance of the Glenmont landscape. Although the pond no longer holds water, it never retained water during the historic period. Currently, many features associated with the pond are intact and remain in their original locations (Drawing 2.3 and 2.4).

**Concrete basin (pool)***Historic Condition:*

Around the time Thomas Edison began experimenting with concrete buildings on the grounds, a concrete swimming pool was constructed in c. 1907. The pool was located east of the house across Honeysuckle Avenue. The rectangular concrete basin was approximately twenty feet in width and fifty feet in length. By 1920, however, the pool was no longer used for recreation.

*Post Historic and Existing Condition (since 1931):*

In the mid-1970s, the National Park Service filled in the pool with swamp mud from Morris County, leaving the tops of the concrete sides exposed. The structure was later stabilized in 2003. The rectangular concrete basin is approximately 26'x45'.

*Evaluation: Contributing*

The concrete basin, built c.1907-1908, altered in the 1920s, backfilled in the 1970s, and stabilized in 2003, contributes to the significance of the Glenmont landscape as a feature constructed by Thomas Edison during the time of his experimentation with concrete buildings (Drawing 2.6).

**Stone boundary wall, S-9***Historic Condition and Existing Conditions:*

The stone boundary wall, located along the northern boundary of the service area across Honeysuckle Avenue, was constructed c.1908 when several improvements to the grounds were underway, notably the construction of the garage, gardener's cottage and potting shed, and swimming pool, and the relocation of the chicken house and cow barn. It was added to in the 1920s following the removal of the Pedder barn. As part of the renovations carried out by the National Park Service

in 2002-2003, the stone boundary wall was repaired and preserved. Currently, the wall is approximately three feet high loose-laid, rubble wall comprised of brownstone, bluestone, bricks, and concrete chunks.

*Evaluation: Contributing*

The stone boundary wall, constructed c.1908, added to in the 1920s, and preserved in 2003, contributes to the significance of the Glenmont landscape and remains unchanged since the historic period (Drawing 2.5 and 2.6).

**Hotbed foundation, (LCS ID: 040691)**

*Historic Condition and Existing Conditions:*

Between 1882 and 1884, Henry Pedder constructed a greenhouse complex on the 3.07-acre parcel (now referred to as the service area), north of Honeysuckle Avenue. Around this time, adjoining the east side of the greenhouse, a hotbed (or cold frame) was constructed. The hot bed (or cold frame) was approximately 42' long by 2' high and comprised of mortared bricks sheathed in concrete and probably used for ornamental horticulture. During the construction of the new greenhouse in 1908, an additional hotbed (or cold frame) was constructed immediately north of the earlier hotbed. It measured 42' long and 1' high and was built of similar materials as the earlier structure. Both structures were positioned in an east-west orientation to maximize sunlight. Following the property's acquisition by the National Park Service in 1959, the hotbeds (or cold frames) fell into disuse and eventually deteriorated resulting in the removal of the 1908 (northerly) hotbed. Currently, remnants of the earlier (southerly) hotbed foundation are all that remains.

*Evaluation: Contributing*

The hotbed (or cold frames) foundation, built between 1882 and 1884, contributes to the significance of the Glenmont landscape and stands as a remnant of the original greenhouse complex that was constructed by Henry Pedder (Drawing 2.6).

**Portable restroom**

*Historic Condition:*

The portable restroom did not exist during the historic period.

*Post Historic and Existing Condition (since 1931):*

Following the rehabilitation of the gardener's cottage, potting shed, and greenhouse, and barn in 2006, a handicap portable restroom was installed. The 5' x5' plastic structure is located adjacent to the gardener's cottage and potting shed.

*Evaluation: Non-contributing*

The portable restroom, installed in 2003, does not contribute to the significance of the Glenmont landscape because it did not exist during the historic period. The restroom currently detracts from the historic character of the landscape (Drawing 2.5 and 2.6).

**Fireproof metal structure***Historic Condition:*

The fireproof metal structure did not exist during the historic period.

*Post Historic and Existing Condition (since 1931):*

Between 2006 and 2010, a fireproof metal structure was installed near the visitor parking area. The rectangular structure is currently used for storing maintenance equipment.

*Evaluation: Non-contributing*

The fireproof metal structure, installed in between 2006 and 2010, does not contribute to the significance of the Glenmont landscape because it did not exist during the historic period. The metal structure currently detracts from the historic character of the landscape (Drawing 2.5 and 2.6).

**Garden retaining wall, LCS ID: 040695***Historic Condition:*

The garden retaining wall did not exist during the historic period.

*Post Historic and Existing Condition (since 1931):*

In 1937, the rustic dry-laid retaining wall—located near the gardener’s cottage, potting shed, and greenhouse—was built as part of the redesigned flower garden based on earlier 1929 Ellen Shipman plans entitled, *Sketch Plan for Rearrangement of the Garden of Mrs. Thomas Edison*. At the time of its construction, the wall was built over an early cistern, which required the use of iron bars for stability and support. In recent years, the bars have rusted causing the wall to fail in certain areas, specifically in the location of the stone steps. Resting atop the 40’x 2’ wall is a manicured yew hedge.

*Evaluation: Undetermined*

An evaluation of the garden retaining wall remains undetermined until further research on Ellen Shipman’s involvement with the perennial garden is conducted. Despite areas of failure within the retaining wall, it remains in fair condition (Drawing 2.5 and 2.6).

## **VIEWS AND VISTAS**

Views are the expansive or panoramic prospect of a broad range of vision, which may be naturally occurring or deliberately contrived. Vistas are the controlled prospect of a discrete, linear range of vision, which is deliberately contrived. Prior to its development, the natural elevated terrace and open spatial character of the Glenmont grounds permitted panoramic views to the south and east toward Glen Avenue. These views were instrumental in the layout of the landscape as designed by Nathan Barrett and implemented by Henry Pedder in the 1880s. The placement of buildings, trees and shrubs, and drives and paths, were all organized around existing viewsheds, which include the east view from the house and the main entrance drive view. These views remain today and contribute to the character and significance of the landscape.

### **East view from Glenmont house**

#### *Historic Condition:*

The open spatial character and position of the grounds on an elevated terrace, historically allowed for expansive views to the east towards Glen Avenue. In the initial development of the grounds between 1880 and 1882, Henry Pedder and Nathan Barrett took advantage of these views in the layout and organization of the Glenmont landscape. In particular, the house was located on high ground (northern portion of the property) within an expansive manicured lawn, allowing for uninterrupted views to the east and Glen Avenue. In the following years, Thomas and Mina Edison maintained the open character of the front and lower lawn and retained the views.

#### *Post Historic and Existing Condition (since 1931):*

The view east from the house encompasses the front and south (lower) lawn, scatterings of specimen trees, a remnant orchard, and Glen Avenue.

#### *Evaluation: Contributing*

The east view from the house, created between 1880 and 1882, contributes to the significance of the Glenmont landscape. Views are still maintained and are unobstructed by vegetation (Drawing 2.3).

### **Main entrance drive view**

#### *Historic Condition:*

The layout and alignment of the main entrance drive was—and still remains—an important element of Nathan Barrett's design for Glenmont as it contributed to a visitor's first impression of the landscape. As designed, the main entrance drive threaded through a scattering of trees before entering an open lawn area dominated by the first view of the house at a slight angle to display the architectural beauty and prominence within the grounds. During the Edison

years, the layout and alignment of the main entrance drive remained the same and the views of the house were retained (Figures 3.18 and 3.21).

*Post Historic and Existing Conditions (since 1931):*

Although visitors to the park no longer enter from the main entrance drive, views from the drive of the house have remained similar to the historic period. In recent years, however, trees along the main entrance drive have been removed due to age-related decline or wind damage. In time, the loss of trees may adversely impact Barrett's original design intent for the main drive and the views associated with a visitor's first experience of the house.

*Evaluation: Contributing*

The main entrance drive view, created between 1880 and 1882, contributes to the significance of the Glenmont landscape. While visitors to the park no longer enter via the main entrance drive, the views are still maintained and are unobstructed by vegetation (Drawings 2.3 and 2.4).

Figure 3.18: Views and Vistas. A 1907 image looking north along the main drive towards the Glenmont house. Note the southwest path and carpet bedding (EDIS Archives, 12.420.13).



Figure 3.19: Views and Vistas. A 2009 image, taken in the same area, that shows the absence of the southwest path and carpet bedding (OCLP, 2009).





Figure 3.20: (left) Views and Vistas. A c. 1914 views looking north towards the Glenmont house. The image shows barberry (*Berberis species*) surrounding a lamppost (left), and a clump of dwarf alberta spruce (*Picea glauca 'Conica'*) (right). (EDIS Archives, Album 113).

Figure 3.21: (right) Views and Vistas. A 2009 image looking north towards the Glenmont house that shows only one overgrown dwarf alberta spruce (*Picea glauca 'Conica'*). Absent is the barberry (*Berberis species*) around the lamppost (OCLP, 2009).

### SMALL-SCALE FEATURES

This characteristic describes minor built features that provide aesthetic detail and function, such as benches, signs, light fixtures, bollards, and fencing. Beginning with Henry Pedder's development of the landscape into a fashionable suburban residence in 1879, a variety of small-scale features were added to the landscape for both aesthetic and practical purposes; these included a bluestone stoop, gas light poles, rustic rose trellises, clothesline posts, and miscellaneous utility structures. During the Edison era (1886-1931) small-scale features were added to the landscape including potted tropical plants (later removed during the period), bird houses, feeders, and baths, rustic lawn furnishings, and rustic arbors. Following the acquisition of Glenmont by the National Park Service in 1959, many changes were made to address visitor accessibility and safety. These improvements, as reflected within the landscape included the installation of many small-scale features such as benches, directional signs, lighting, trash receptacles, and interpretative signage.

There are many small-scale features that currently exist in the landscape that date to the historic period (1857-1931) including a gazebo bird feeder, bluestone stoop, gas light poles, utility structures, clothesline posts, rustic arbors and a rose trellis. Small-scale features added since the historic periods were mostly installed by the National Park Service; these include benches, signs, plant labels, and features associated with the Edison gravesite.

#### **Misc. utility structures (including the gas light poles, [LCS ID: 040683]):**

##### *Historic Condition:*

In the initial development of Llewellyn Park, infrastructure was primarily associated with stormwater runoff. Designed for both aesthetic and utilitarian purposes, the Ramble served as the main stormwater management system, containing series ponds that functioned in the retention and detention of stormwater runoff. Along with the Ramble, a network of sub-surface drainage

features were built throughout the park including cobblestone gutters and curbs, stone box culverts, and pipe culverts with stone headwalls. By the 1890s, a series of gas lamp posts were installed along the roadways; two gas lamp posts were found on the Glenmont property.<sup>22</sup> Parallel to the construction of water mains by the Town of West Orange in the early 1890s, six water lines were built within the park between 1891 and 1894. Around the same time, telephone lines were installed throughout the park.

Between 1880 and 1882, Henry Pedder constructed underground utilities at an early stage in the development of the Glenmont property. Cisterns were built within the west and south lawns and in the northeast corner of the barn (currently the skating pond site). Water was pumped from a well and cisterns into the northwest portion of the house cellar. Wastewater and sewage drained from the house to two cesspools on the west side of the barn, while sewage from the barn drained to a cesspool located in the south (lower) lawn area. Corresponding with the water system, a network of storm water drains were built along the edges of the drives. Henry Pedder also installed gas lines to provide gas lamps along the southeast side of the main drive oval and at the secondary drive near Honeysuckle Avenue. During the Thomas Edison period (1886-1931), Thomas Edison added a telephone service in 1886 and electrical wiring in 1887. The electrical wires extended underground to the generating plant at the Edison laboratory. By the late 1890s, Glenmont was connected to the municipal water lines being constructed by West Orange and Llewellyn Park. Between 1902 and 1904, a new cesspool was excavated and a fire hydrant was installed between the north side of the house and Honeysuckle Avenue. By 1925, a sewerage pipe system extended to the greenhouse complex, swimming pool, chicken house and cow barn, and newly completed skating pond.

*Post Historic and Existing Condition (since 1931):*

With exception to the improvements that were made to the electrical systems in the 1940s, minimal changes have occurred to Llewellyn Park's infrastructure since the historic period. The original gas lighting system is still in operation and many of the historic gas lamps remain intact, including the two located on the Glenmont property.

Following Glenmont's acquisition by the National Park Service in 1959, a series of improvements were made to the utility systems including the installation of a water line, fire hydrant and a manhole in 1963, as well as HVAC and fire detection and systems and electrical upgrades in 2003. While many are no longer operable, the majority of utility structures that existed during the historic period currently remain intact, notably stormwater drains along the drives, the sewerage pipe systems, well and cisterns, a gas vault, and two segmented cast-iron light poles,

(not to be confused with the gas light poles found along Park Way) located within the main drive oval and near Honeysuckle Avenue.

*Evaluation: Contributing:*

The utility structures (including the gas light poles, LCS # 040683), installed between 1880 and 1904, and altered in 1925, 1940s, 1963, and 2003, contribute to the significance of the Glenmont landscape as small-scale features that existed during the historic period (1857-1931) (Drawings 2.1-2.6).

**Landscape fixtures (including gazebo bird feeder [LCS ID: 040693])**

*Historic Condition:*

In keeping with the picturesque and naturalistic style of landscape gardening in the early nineteenth century, many country places and suburban residences were often embellished with rustic features, which included fences, arbors, trellises, lawn seats, bird baths and feeders, and other decorative elements. In the initial development of Glenmont in the early 1880s, rustic features were placed throughout the landscape. In the establishment of the vegetable garden at the corner of Honeysuckle Avenue and Glen Avenue, a rustic wooden post fence—which supported old-fashioned roses—was constructed along its border. Henry Pedder also established a grapery (grape arbor) around a flower garden located adjacent to the greenhouse complex across Honeysuckle Avenue.

During the Thomas Edison period, a variety of garden fixtures were added to the Glenmont landscape; these included planted vases and urns; three rustic arbors near the formal garden adjoining the greenhouse complex and a collection of cast-iron and rustic wooden lawn seats set out in the front, west (back), and south lawns. As an avid birdwatcher, Mina Edison had a variety of bird baths, feeder, and houses situated throughout the Glenmont landscape. <sup>23</sup> In 1920, Mina had a bird fountain designed and placed on the lawn near the house. The fountain was electronically wired to keep the water from freezing in winter. It was later moved from the lawn to the roof of the Conservatory where it remained until the 1940s (Figures 3.22 and 3.23).

*Post Historic and Existing Condition (since 1931):*

Following the historic period, the vegetable garden and greater part of the rustic fence were removed, and many garden furnishings were lost. However, there are currently some historic garden furnishings and objects within the Thomas Edison National Historical Park archival collection, as well as two historic iron urns (with two dragon heads as handles) and some cast iron lawn furnishings found throughout the property. One of the bird feeders—the gazebo bird feeder, located southwest of the Conservatory, was restored in the late 1960s. The bird feeder is a six foot high, metal-clad, glazed octagonal shelter with a hipped roof

and sill perches. Below the feeder box is a rustic multi-bracketed seed tray with a segmented wood “tension ring.”<sup>24</sup> Additional bird feeders, baths, and houses extant during the historic period continue to be found throughout Glenmont grounds. In 2008, the three rustic arbors were reconstructed and repairs were made to the remaining section of fence situated along the southern boundary of the former vegetable garden.

Figure 3.22: Small-scale features. A 1912 winter image of the Glenmont house that shows a planter surrounded by recently planted evergreen foundation plantings. Note the Norway maple (*Acer platanoides*) in the foreground (left) (EDIS Archives, 12.420.11).



Figure 3.23: Small-scale features. A 2009 image, taken in the same area, shows the planter surrounded by a mass of rhododendrons, Japanese holly, and mountain laurel (OCLP, 2009).



*Evaluation: Contributing*

The landscape fixtures, installed between 1880 and 1931, restored and reconstructed in the 1960s and 2007-2008, contributes to the significance of the Glenmont landscape as small-scale features that existed during the historic period (1857-1931). However, the gazebo bird feeder's National Register status is currently being re-evaluated (Drawings 2.1-2.6).

**Bluestone stoop (LCS ID: 040694)***Historic Condition and Existing Conditions:*

Between 1880 and 1882, Henry Pedder constructed a bluestone stoop and set of steps as part the network of walks and paths established in the west and southwest portions of the Glenmont property. Located along Park Way, the rectangular bluestone stoop was more than likely used for mounting carriages and consisted of two steps with nosings; a large square landing with mitered border; and was flanked on each side by monolithic stone piers connected by low walls.<sup>25</sup> Between 1910 and 1913, the walking path that proceeded from the Conservatory to Park Way, heading southeast, was removed along with the set of steps near the main drive entrance. By 1999, the bluestone stoop was structurally unstable and had to be repaired, which included disassembling and resetting the stoop.

*Evaluation: Contributing*

The bluestone stoop, constructed between 1880 and 1882, preserved in 1999, contributes to the significance of the Glenmont landscape as characteristic small-scale feature of the historic period and integral component of the original Nathan Barrett design (Drawing 2.1).

**Edison gravesite (LCS ID: 040688)***Historic Condition:*

The Edison gravesite s did not exist during the historic period.

*Post Historic and Existing Condition (since 1931):*

On April 3, 1963, the remains of Thomas and Mina were moved from their resting place in Rosedale Cemetery to Glenmont. The gravesite landscape was sited on the west lawn within a grouping of rhododendrons and mountain laurels and contained the same stone ledgers that marked the graves at Rosedale Cemetery. In 2003, two Yunoki-type stone lanterns and a trellis were included as a backdrop. The stone lanterns were a gift from Japan in 1935 as an expression of the "Japanese people's appreciation of Edison's contribution to the welfare of mankind."

*Evaluation: Contributing*

The stone ledgers, Yunoki-type stone lanterns, and trellis, installed in 1963 and 2003, contributes to the significance of the Glenmont landscape as characteristic

small-scale features of the Thomas and Mina Edison gravesite. The site was determined significant by the Keeper of the National Register in 1996 (Drawing 2.3).

#### **Clothesline posts**

##### *Historic and Existing Conditions:*

Eight clothesline posts, located in the laundry yard on the northeast side of the house, were used to hang laundry lines during the Pedder and Edison eras. While the date of construction is unknown, it is assumed that the six foot tall posts were installed at the time of Henry Pedder's ownership between 1879 and 1884. Currently, there are six clothesline posts. In 2009, one pole was in disrepair and had to be removed; it is currently stored in the chicken house and cow barn.

##### *Evaluation: Contributing*

The clothesline poles, installed between 1880 and 1884, contribute to the significance of the Glenmont landscape as a small-scale feature that existed during the historic period (1857-1931) (Drawing 2.3 -2.5).

#### **National Park Service signs (interpretative, informational, and directional)**

##### *Historic Condition:*

The National Park Service signs did not exist during the historic period.

##### *Post Historic and Existing Condition (since 1931):*

As the park prepared for Glenmont's opening in 1961, the National Park Service hired the Essex Sign company to install informational signage throughout the landscape to direct and orient visitors. Two years later, Harold J. Hamilton Associates completed a comprehensive topographic survey for Glenmont, which included numbering existing trees and attaching a metal disc to the trunk of the tree with the identifying number incised into the metal. In 1992, six waysides were added to the landscape in various locations; adjacent to the visitor parking lot, in the laundry yard and flower garden, and near the garage. A bulletin board, located near the visitor parking lot was added in 2009.

##### *Evaluation: Non-contributing*

The National Park Service signs, installed between 1961 and 2009, do not contribute to the significance of the Glenmont grounds because they did not exist during the historic period. However, due to their small-scale and unobtrusive color, the signs do not detract from the historic character of the landscape (Drawing 2.1-2.6).

**National Park Service furnishings (benches and receptacles)***Historic Condition:*

National Park Service furnishings did not exist during the historic period.

*Post Historic and Existing Condition (since 1931):*

Following Glenmont's transfer to the National Park Service in 1959, many changes were made to address visitor accessibility and safety including the installation of Victorian-style metal benches and trash receptacles.

*Evaluation: Non-contributing*

The National Park Service furnishings, installed between 1961 and 2009, do not contribute to the significance of the Glenmont grounds because they did not exist during the historic period. However, due to their small-scale and unobtrusive color, the benches and trash receptacles do not detract from the historic character of the landscape (Drawing 2.5).

**In-ground security lighting***Historic Condition:*

The in-ground security lighting at Glenmont did not exist during the historic period.

*Post Historic and Existing Condition (since 1931):*

In 1985, the National Park Service installed a system of in-ground security lighting around the perimeter of the Glenmont house as a security measure and to provide uplighting beneath specimen trees. There are currently nine in-ground floodlights within the landscape.

*Evaluation: Non-contributing*

The in-ground security lighting, installed in 1985, do not contribute to the significance of the Glenmont grounds because they did not exist during the historic period. However, due to their unobtrusive small size, the in-ground security lighting does not detract from the historic character of the landscape (Drawing 2.3).

**ARCHEOLOGICAL SITES**

This characteristic is defined as any material remains or physical evidence of past human life or activities that are of archeological interest, including the record of the effects of human activities on the environment. Prior to European settlement, the Glenmont grounds were part of a larger area inhabited by Native Americans, namely the Hackensacks. Within the vicinity of Glenmont, the first European settlers arrived in the late 1670s; they built houses, cleared fields, farmed the

land, and started industries. By 1857, the Glenmont grounds were part of the larger Llewellyn Park Historic District. Beginning in 1879, Henry Pedder, with assistance from architect Henry Hudson Holly and landscape gardener Nathan Franklin Barrett, constructed buildings and structures (house, rectangular barn, carriage house, well house, pump house, hose house, chicken house/cow stable, and greenhouse complex), lawns, drives, paths, vegetable and flower gardens, and underground utilities. It is assumed that the majority of this work disturbed any prehistoric remains. Thomas and Mina Edison later constructed (garage, gardener's cottage, potting shed, tool shed, swimming pool, skating pond, playhouse, summer house, flower beds, stone boundary wall), relocated (chicken house), and demolished (carriage house and well house), many features between 1886 and 1947; Thomas A. Edison, Inc., removed features (portion of paths, the vegetable garden and majority of the flower gardens) in the late 1940s and early 1950s; and the National Park Service removed a few buildings (tool shed, Tilney house, barn, and outbuildings) and added features to address visitor accessibility and safety since 1959 (parking areas, benches, signs, lighting, trash receptacles).

Currently no surface or subsurface archeological resources of either historic or prehistoric origin have been identified within the Glenmont grounds. However, an archeological survey, *An Overview and Assessment Edison National Historic Site: Laboratory Unit, Glenmont Unit, and Maintenance Area, West Orange, New Jersey*, by The Louis Berger Group, Inc., is underway. Upon further research and investigation, the Glenmont grounds may reveal significant information regarding Native American occupation, the Pedder, Arnold Constable & Company (1879-1886) and Thomas Edison (1886-1931) eras. These include both surface and subsurface resources such as the Pedder large rectangular barn or stable site, original Pedder greenhouse site, carriage house site, summer house site, playhouse site, croquet lawn site, early 1900s skating pond site, west lawn (back lawn) paths, vegetable and flower garden sites, and the Johnson-Tilney, residence, garage, and outbuildings.

**TABLE 3.2: CULTURAL LANDSCAPE EVALUATION SUMMARY, GLENMONT**

<b>CHARACTERISTIC / FEATURE</b>	<b>LSC/ASMIS ID</b>	<b>EVALUATION</b>	<b>COMMENTS</b>
<b>Natural Systems and Topography</b>			
Geology (escarpment, ridges, ravines), flora and fauna		Contributing	
West lawn mound		Contributing	
<b>Spatial Organization</b>			
West (back) lawn		Contributing	
Front lawn		Contributing	
South (lower) lawn		Contributing	
Woodland		Contributing	
Laundry yard		Contributing	
Service area (north of Honeysuckle Road)		Contributing	
Johnson-Tilney property		Non-contributing	
<b>Circulation</b>			
Local roads (Park Way, Glen Avenue, and Honeysuckle Avenue)		Contributing	
Driveways and paths (main and secondary drives)	LCS ID: 040671	Contributing	
Parking service areas		Non-contributing	
<b>Vegetation</b>			
Vines on buildings and structures		Contributing	
Lawns, pastures, and meadows		Contributing	
Woodland plantings (groundcover)		Contributing	
Deciduous and evergreen trees and shrubs		Contributing	
Remnant orchard		Contributing	
Foundation plantings		Contributing	
Edison gravesite plantings		Contributing	
Flower and vegetable beds and gardens		Contributing	
Honeysuckle Avenue hemlock hedge		Contributing	
Johnson-Tilney trees and shrubs		Non-contributing	
<b>Building and Structures</b>			
Glenmont house, No. 10	LCS ID: 000264	Contributing	
Gardener's cottage and potting shed, No. 11	LCS ID: 000265	Contributing	
Greenhouse, No. 14	LCS ID: 000266	Contributing	
Garage, No. 15	LCS ID: 000267	Contributing	
Barn (chicken house and cow barn), No. 16	LCS ID: 000268	Contributing	
Pump house, No. 17	LCS ID: 000269	Contributing	
Hose house, No. 18	LCS ID: 000270	Contributing	
Skating pond site	LCS ID: 040676	Contributing	
Concrete basin (pool)	LCS ID: 040683	Contributing	
Stone boundary wall	LCS ID: 040684	Contributing	

Hot bed foundation	LCS ID: 040691	Contributing	
Portable restroom		Non-contributing	
Fireplace metal structure		Non-contributing	
Garden retaining wall	LCS ID: 040695	Undetermined	
<b>Views and Vistas</b>			
East view from Glenmont house		Contributing	
Main entrance drive view		Contributing	
<b>Small-Scale Features</b>			
Misc. utility structures (including gas light poles)	LCS ID: 040683	Contributing	
Edison grave site	LCS ID: 040688	Contributing	
Landscape fixtures (including Gazebo bird feeder)	LCS ID: 040693	Contributing	The gazebo bird feeder's National Register status is currently being re-evaluated.
Bluestone stoop	LCS ID: 040694	Contributing	
Clothesline posts		Contributing	
National Park Service furnishings (benches and receptacles)		Non-contributing	
National Park Service signs (interpretative/informational/directional)		Non-contributing	
In-ground security lighting		Non-contributing	
<b>Archeological Sites</b>			
Pedder rectangular barn (removed c. 1882)		Undetermined	
Original Pedder greenhouse site		Undetermined	
Pedder carriage barn site (removed 1920s)		Undetermined	
Summerhouse site		Undetermined	
Playhouse site		Undetermined	
Early 1900s pond		Undetermined	
Croquet lawn site		Undetermined	
Vegetable and flower garden sites		Undetermined	
West lawn (back lawn) paths		Undetermined	
Johnson-Tilney residence		Undetermined	
Johnson-Tilney carriage house/garage		Undetermined	
Johnson-Tilney outbuildings		Undetermined	

## ENDNOTES

- 1 Robert R. Page, Cathy A. Gilbert, and Susan A. Dolan, *A Guide to Cultural Landscape Reports: Contents, Process, and Techniques* (Washington, D.C.: National Park Service, 1998).
- 2 United States Department of the Interior, National Park Service, Cultural Resources, National Register Bulletin 16A: How to Complete the National Register Nomination Form (Washington, DC: Government Printing Office, 1991).
- 3 Secretarial Order F.R. 9347, Presidential Proclamation 3148 and P.L. 87-628.
- 4 The Omnibus Public Land Management Act of 2009 (Public Law Management Act of 2009 (Public Law 111-11, Section 7110).
- 5 NPS correspondence with the New Jersey State Historic Preservation Officer for written confirmation of this date [Terry W. Savage to Terry Karschner, April 16, 1996; countersigned July 1, 1996].
- 6 NPS correspondence between Patrick Andrus and Paul Weinbaum for written confirmation of two periods of significance (January 26, 1996).
- 7 Robert P. Guter, with Jane B. Davies and Donald C. Richardson, *National Register of Historic Places Nomination for Llewellyn Park Historic District* (United States Department of the Interior: National Park Service, 1986), Statement of Significance (Section 8) pgs. 1-2.
- 8 The Glenmont landscape is also significant under National Register Criterion C in the areas of architecture, but documenting this is beyond the scope of this project. A brief mention is made.
- 9 Anne Booth, *National Register of Historic Places Nomination for Edison National Historic Site* (United States Department of the Interior: National Park Service, 1979), Statement of Significance (Section 8) pgs. 1-2.
- 10 Theodore M. Edison, *Backward Glances of Treasured Memories* (West Orange Chronicle: Worrall Publications, date unknown).
- 11 Beryl Robichaud and Karl Anderson, *Plant Communities of New Jersey: A Study in Landscape Diversity* (New Brunswick, New Jersey: Rutgers University Press, 1994).
- 12 Loretta Schmidt, Interview with Tom Hallstrom (Edison National Historic Site: Oral History Program, 1969), 1-21.
- 13 Keith S. Robbins, *A History of the Development of the First planned American Suburban Community: Llewellyn Park, West Orange* (Columbian College, The George Washington University, 1985), 106-107.
- 14 Final Construction Report, Edison National Historic Site, Project PRA-EDIS 10(1).
- 15 The rustic-stone retaining wall was constructed above a 1880s linear cistern. Iron bars were placed below the steps to prevent sinking. (Conversation between Arthur Spiegler and Tom Hallstrom at Glenmont, October 8, 1965).
- 16 Anne Booth, *National Register of Historic Places Nomination for Edison National Historic Site* (United States Department of the Interior: National Park Service, 1979), pgs. 1-2.
- 17 Barbara A. Yokum, *The House at Glenmont Historic Structure Report, Edison National Historic Site, West Orange, New Jersey, Volume 1* (Lowell, MA: U.S. Department of the Interior, Building Conservation Branch, Cultural Resources Center, 1998)32-63.
- 18 Barbara A. Yokum, *The House at Glenmont Historic Structure Report, Edison National Historic Site, West Orange, New Jersey, Volume 1* (Lowell, MA: U.S. Department of the Interior, Building Conservation Branch, Cultural Resources Center, 1998)63-66.
- 19 Barbara A. Yokum, *The House at Glenmont Historic Structure Report, Edison National Historic Site, West Orange, New Jersey, Volume 1* (Lowell, MA: U.S. Department of the Interior, Building Conservation Branch, Cultural Resources Center, 1998)78-79.
- 20 Melvin J. Weig, *The Glenmont Grounds*, October 7, 1965.
- 21 Melvin J. Weig et. al, *Historic Structures Report-Part I: Building No. 17, Pump House* (U.S. Department of the Interior, 1964).
- 22 Keith S. Robbins, *A History of the Development of the First Planned American Suburban Community: Llewellyn Park, West Orange* (Columbian College, The George Washington University, 1985), 67-70.
- 23 Mina Edison was the founder and President of the Bird and tree Club at Chautauqua and an active member of the NYC chapter of the Audubon Society. She kept detailed birding journals throughout her life that indicated the species sighted, date, time, location, etc.
- 24 List of Classified Structures Database, Glenmont-Gazebo Bird Feeder, <http://www.hscl.cr.nps.gov>
- 25 List of Classified Structures Database, Glenmont-Bluestone Stoop, LF-4, (LCS ID: 040694).



# Cultural Landscape Report for Glenmont

## Thomas Edison National Historical Park West Orange, New Jersey

### Analysis and Evaluation



National Park Service

Olmsted Center for Landscape Preservation

[www.nps.gov/oclp](http://www.nps.gov/oclp)

#### SOURCES

1. CLR period plans and existing conditions plan.
2. Aerial photographs, 1995, 1997, 2007, and 2008.
3. Site visits, January, April, and July 2009.

#### DRAWN BY

Michael Commisso, AutoCAD 2000 and Illustrator CS 3, 2010

#### LEGEND

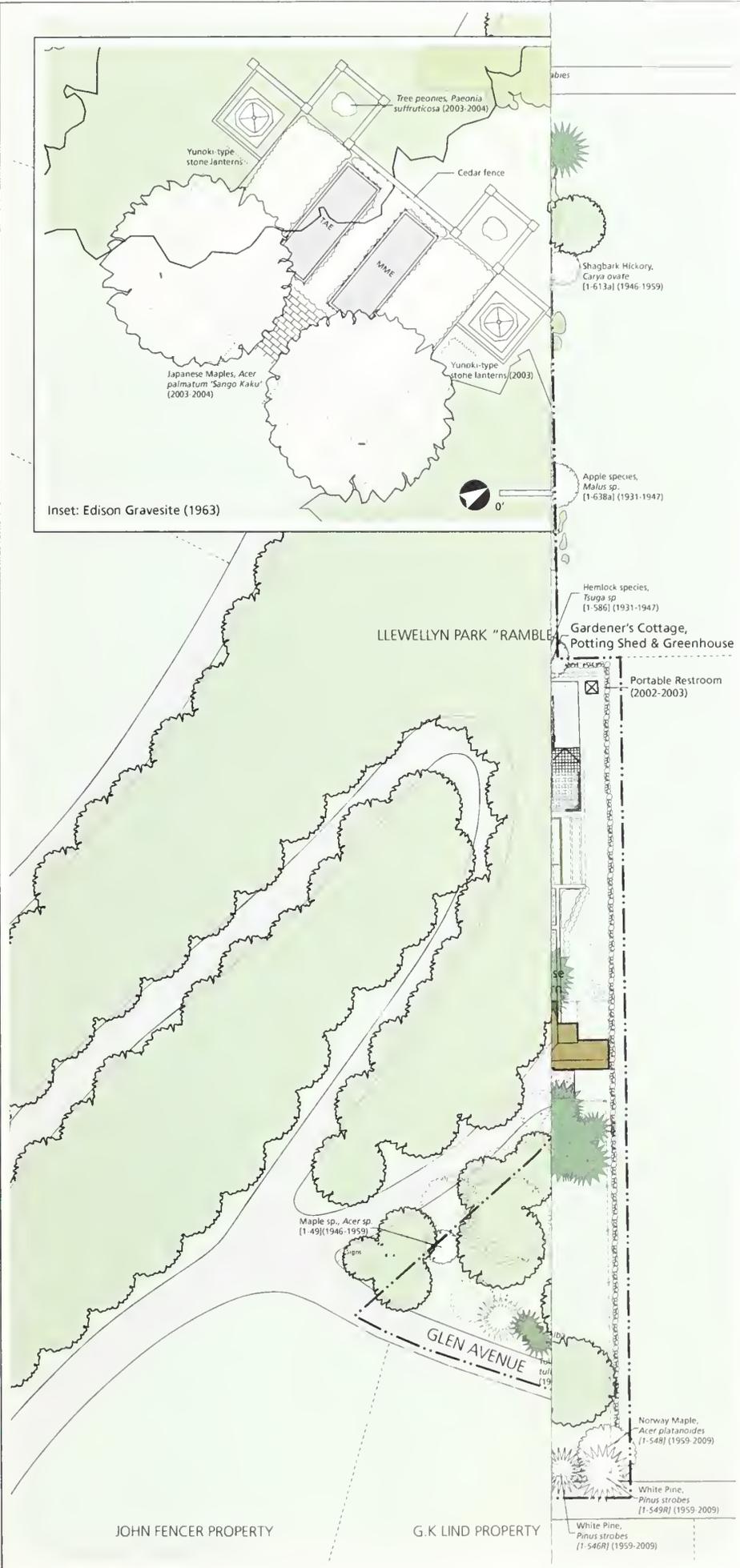
	Feature added/built since 1931
	Feature removed since 1931
	Building
	Paved vehicular circulation
	Unpaved vehicular circulation
	Path or walk
	Lawn
	Groundcover or herbaceous bed
	Deciduous specimen tree, wooded area
	Evergreen/coniferous specimen tree or shrub
	Deciduous/broadleaf evergreen shrub
	Flagstone curbing
	Fence
	NPS Property Boundary
	1' Contour

#### NOTES

1. Plan evaluates existing conditions in 2009 with features removed/added since the end of the historic period (1931)
2. Dates in brackets indicate date of initial construction and removal where applicable
3. The majority of vegetation established since 1959 are replacements (in-kind) of plant material extant during the historic period (1857-1931)
4. All features shown in approximate scale and location.
5. Contours shown only in project area and not in Tinley Property



Drawing 3.0



Inset: Edison Gravesite (1963)

# Cultural Landscape Report for Glenmont

Thomas Edison National  
Historical Park  
West Orange, New Jersey

## Analysis and Evaluation



National Park Service  
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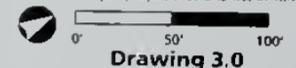
Michael Comisso, AutoCAD 2000 and Illustrator CS 3,  
2010

### LEGEND

- Feature added/built since 1931
- Feature removed since 1931
- Building
- Paved vehicular circulation
- Unpaved vehicular circulation
- Path or walk
- Lawn
- Groundcover or herbaceous bed
- Deciduous specimen tree, wooded area
- Evergreen/coniferous specimen tree or shrub
- Deciduous/broadleaf evergreen shrub
- Flagstone curbing
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### NOTES

1. Plan evaluates existing conditions in 2009 with features removed/added since the end of the historic period (1931)
2. Dates in brackets indicate date of initial construction and removal where applicable
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4. All features shown in approximate scale and location.
5. Contours shown only in project area and not in Tilney Property.



Drawing 3.0



JOHN FENCER PROPERTY

G.K. LIND PROPERTY

F.M. POMEROY PROPERTY

## TREATMENT

As documented in the previous chapter, the Glenmont landscape, with its sweeping lawns, trees and shrubs, winding drives, Queen-Anne style house and service related buildings, continues to reflect the history of the Edison family, as well as the naturalistic and picturesque design principles popularized by Andrew Jackson Downing. However, over the years, the landscape has lost some of the domestic and human qualities that contribute to its historic character through changes in vegetation, circulation, buildings and structures, and small-scale features. This chapter establishes a plan for the treatment of the historic landscape that will help the park address these issues and preserve and enhance the historic character of the site.

As defined by National Park Service cultural landscape methods, the purpose of a landscape treatment plan is to set forth guidelines for preserving and enhancing historic landscape characteristics and features within the context of contemporary park uses.<sup>1</sup> Treatment essentially describes the future appearance of the landscape at the level of planning and preliminary design; it does not generally provide construction-level details necessary for implementation. Treatment also does not address routine and cyclical measures, such as tree pruning and lawn mowing, necessary to maintain the existing character of a landscape.<sup>2</sup>

The chapter begins by presenting a framework that, based on applicable policies, standards, and regulations, establishes an overall treatment philosophy that describes the intended historic character of the landscape. Based on this framework and a summary of general treatment issues, the body of this chapter provides narrative guidelines and tasks to preserve and enhance the historic character of the landscape. The narrative guidelines are supported by graphics including a series of treatment plans (Drawings 4.0-4.3).

## TREATMENT FRAMEWORK

The framework for treatment of the Glenmont landscape is guided broadly by the legislation of Thomas Edison National Historical Park, which calls for the commemoration of Thomas Alva Edison through the preservation of his research, laboratory complex, estate, and their collections (Secretarial Order F. R. 9347, Presidential Proclamation 3148 and P.L. 87-628).<sup>3</sup> Treatment is also guided by the mission of the National Park Service "...to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations (Organic Act of 1916).<sup>4</sup> The application of this

mission to cultural landscapes is articulated in the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, which in turn are interpreted within a hierarchy of regulations and policies in National Park Service management. As a cultural resource, management of the Glenmont landscape is defined by 36 CFR Part 2: *Resource Protection, Public Use and Recreation (Preservation of Natural, Cultural, and Archeological Resources)*. The application of these regulations to cultural landscapes are contained within National Park Service Management Policies (2006), Director's Order #28 (Cultural Resource Management), and *National Park Service Resource Management Guidelines (NPS-28)*.

Of relevance to the Glenmont landscape, NPS-28 provides guidance on management of biotic systems, which it defines as plant and animal communities associated with human settlement and use. It directs management of specimen vegetation such as trees, hedges, and orchards to ensure health and vigor and, if appropriate, provide for propagation of the next generation, especially for rare or unavailable plants. For vegetation systems such as woods and agricultural lands, NPS-28 calls for managing for overall patterns to allow for natural dynamics and crop rotation. Exotic plant species, which are often part of cultural landscapes, should be monitored and controlled to avoid spreading and disrupting adjacent natural plant communities. In addition to biotic systems, NPS-28 states that historic circulation features are rehabilitated to accommodate health and safety codes (such as the American with Disabilities Act), but in ways that minimize impacts on historic character.<sup>5</sup>

In addition to its management as a cultural resource within the National Park Service, Glenmont is also subject to regulations and policies specific to its location within a residential subdivision—the Llewellyn Park Historic District. According to a 1959 Memorandum of Agreement (revised as a Cooperative Agreement in 1989) between the National Park Service and Trustees and the Committee of Managers of Llewellyn Park, visitation at Glenmont is limited to daily maximum of 175 visitors per day except by special request for specific events; the sale of food or drink are prohibited; and the building of new structures, parking areas and placement of signs require prior approval from the Trustees and Managers.

#### **RELATIONSHIP TO PARK PLANNING**

Specific direction on the treatment of Glenmont landscape is found in a number park planning documents, the earliest of which is the park *Master Plan* (written in 1969, approved in 1971, and revised in 1977). The plan recommended that the landscape be managed to “restore, maintain, and preserve the site grounds, as accurately and practicably as possible, as they were in the historic period, 1886-1931.” The plan recognized the need for further research to determine the

appearance of the grounds in Edison's last years and that a Historic Grounds Report should be prepared.<sup>6</sup> The *Master Plan* included a number of specific recommendations for the landscape, which included the enlargement and revegetation of the greenhouse flower and vegetable gardens to their approximate historic size and condition; replacement of missing specimen trees and shrubs; stabilization of the concrete swimming basin; installation of signs and interpretive aids, and the construction of a parking area.<sup>7</sup> The plan also called for the removal of the house and ancillary structures on the former Johnson-Tilney property and installation of a parking lot. The park subsequently implemented a number of the recommendations of the *Master Plan*. In 1980, a *Statement for Management* (revised 1990) built upon the direction of the 1977 *Master Plan* suggesting that management at Glenmont emphasize the 1921 to 1931 period, despite subsequent changes by Mina Edison through 1947.<sup>8</sup>

Other reports and plans that have been developed to address the Glenmont landscape include a *Draft Cultural Landscape Report* (1987), a *Tree Preservation Maintenance Guide* (1994) and *Historic Plant Inventory* (1995). The draft cultural landscape report identified management issues and provided recommendations which included the replanting of missing specimen trees and the re-establishment of foundation plantings, container plants, and vegetable and flower gardens. Both the maintenance guide and plant inventory identified and recorded the approximate age, size, and condition of the trees and shrubs on the property; however the maintenance guide went on further to identify maintenance needs and recommended emergency and cyclic preservation work to halt and mitigate landscape deterioration.

The most recent planning document that informs future treatment of the Glenmont landscape is the *Thomas Edison National Historical Park Long Range Interpretive Plan*, completed in September 2009. The plan defines the overall vision and long-term (5-7 year) interpretive goals of the park, examines issues and influences affecting interpretation and education, and addresses programming, accessibility, wayfinding, and interpretive and visitor services. The plan identifies five interpretive themes—innovation/impact (theme 1), Thomas Edison (theme 2), the process of invention/the workers (theme 3), Glenmont (theme 4), and the resources (theme 5), which included several program recommendations. Specific to the Glenmont landscape, “Theme Four: Glenmont” proposes expanding interpretation of the cultural landscape by opening more outbuildings to the public, adding plant labels on the grounds (to identify plant specimens), and providing a downloadable map of trees species throughout the grounds on the park website.<sup>9</sup>

**GENERAL TREATMENT ISSUES**

The following are general treatment issues that inform the treatment guidelines and tasks in the second part of this chapter. Properly addressing these issues will improve accessibility throughout the site; expand landscape interpretation of Thomas Edison, his life, and family; and enhance the historic character of the Glenmont property.

**Landscape Interpretation**

The interpretative program at Glenmont is primarily focused on a guided tour of the house. Visitors may take a cellular phone tour of the estate's grounds, but it generally limited to a walk through the greenhouse and garage. Based on the recently completed *Thomas Edison National Historical Park Long Range Interpretive Plan (2009)*, public understanding of the Glenmont landscape could be greatly enhanced by expanding interpretation through programmed and self-guided methods throughout the landscape to include the service area, the west (back) lawn, the lower (south) lawn, and woodland. Interpretation should focus on the existing landscape and its layers of historic development, but should also address features no longer extant. The preferred method for enhancing interpretation is to supplement the existing cellular phone tour with brochures and interpretative signage and markers. However, the use of interpretative signage should be minimal and be designed in an inconspicuous manner to avoid impacting the historic character of the landscape. Other opportunities to improve interpretation at Glenmont could involve volunteer organizations—such as the Garden Club of the Oranges and the Master Gardeners of the Rutgers Cooperative Extension of Essex County. At present, the Garden Club of the Oranges maintains the Glenmont greenhouse.

**Public Access**

According to *Director's Order #42, Accessibility for Visitors with Disabilities in National Park Service Programs and Services*, the goal of the National Park Service is to ensure that all people, including the estimated 54 million citizens with disabilities, have the highest level of accessibility that is reasonable to the programs, facilities, and services in conformance with applicable regulations and standards. Based on current regulations and standards, most of Glenmont's buildings and primary walks and drives are currently inaccessible to people with mobility impairments. In an effort to improve the currently limited visitor access, as well as enhance landscape interpretation, circulation within Glenmont landscape should be made universally accessible (see Appendix D: Technical Provisions for Accessible Routes).

**White-Tailed Deer Control**

Landscape damage from deer browsing has become a major issue in recent years within the Llewellyn Park Historic District and Glenmont property. The deer overpopulation is due to the lack of predators, mild winters, and increased suburban development throughout Essex County. While measures have been taken to reduce the deer population in Llewellyn Park, such as annual deer culling, the loss of vegetation within Glenmont and adjoining properties continues.

**Loss of Domestic Character**

Although the Glenmont landscape retains many characteristics that reflect landscape design principles of the mid-nineteenth century, the domestic elements that reflected daily use and enjoyment of the landscape by Mina Edison and her family have been diminished. Glenmont historically incorporated elements of an idealized rural landscape, including pastures and meadows, orchards, flower and vegetable gardens, and buildings embowered with climbing vines. Following Glenmont's acquisition by Thomas A. Edison, Inc., and later by the National Park Service, these landscape characteristics and features that once spoke to the domestic use and rural ideal of the Edison family were removed. This loss includes the diminished horticultural abundance and variety in the landscape and has led the historic property toward a decidedly more institutional character.

**TREATMENT PHILOSOPHY**

In accordance with applicable legislation, policy, and park planning, the overall treatment philosophy for the Glenmont cultural landscape is to enhance its historic character so that it more closely reflects its appearance prior to Thomas Edison's death in 1931. At this time, the property represented an idealized rural landscape developed and embellished according to the wishes of the Edison family and reflected the naturalistic design principles popularized by Andrew Jackson Downing during the mid-nineteenth century.

This intent of this treatment philosophy is to reestablish the domestic and human qualities of the landscape that helps convey its historic character, as well as provide the public with the opportunity to experience the landscape that was familiar to Thomas Edison and his family. The treatment of Glenmont will preserve and enhance the historic characteristics of the landscape while allowing for cyclical and long-term changes inherent in natural systems and land-use practices. It allows for accommodation of public use (i.e. universal accessibility and interpretative signage) and the rehabilitation, restoration, or reconstruction of lost or altered features to enhance historic character. Park furnishings and other changes necessary for public use will be inconspicuous and compatible with the historic rural character of the landscape.

Within this treatment philosophy, the existence of the Edison gravesite within the west (back) lawn demands special treatment to impart honor and respect in the landscape. This will be ensured through a high level of maintenance, use of inconspicuous and high-quality contemporary features if necessary, and appropriate standards of visitor conduct.

#### **Primary Treatment**

To implement this treatment philosophy, the recommended primary treatment for the Glenmont landscape is Rehabilitation, one of four treatments defined by the Secretary of the Interior along with Preservation, Restoration, and Reconstruction.<sup>10</sup> Rehabilitation is defined as “. . .the act or process of making possible a compatible use of a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.”<sup>11</sup> The Secretary of the Interior identifies the following ten standards under Rehabilitation:

1. *A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.*
2. *The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.*
3. *Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.*
4. *Changes to a property that have acquired historic significance in their own right shall be retained and preserved.*
5. *Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.*
6. *Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.*
7. *Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.*
8. *Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.*

9. *New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.*
10. *New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.*

Rehabilitation is the most appropriate treatment for the Glenmont landscape because of the need to provide for contemporary park functions, visitor services, and environmental sustainability. This treatment focuses on managing the landscape for its historic character by preserving significant landscape characteristics and features, replacing in-kind key features that have been lost, and allowing for change to accommodate park visitors. Contemporary changes will be in keeping with the historic character of the landscape and represent a minor component in the overall treatment. Within rehabilitation as the primary treatment, much of the feature-level treatment will involve *Preservation*, *Restoration*, and *Reconstruction* in order to retain and enhance the historic character of the landscape.

#### **Treatment Date**

Definition of a treatment date provides a benchmark for managing historic character in a landscape. A treatment date corresponds to a time during the historic period when the landscape reached the height of its development and when it best illustrates the park's significance and interpretative themes. The recommended treatment date for the Glenmont landscape is the time of Thomas Edison's death in 1931. This date incorporates early development of the property as it relates to the establishment of the Llewellyn Park planned community in 1857, as well as later improvements by Henry Pedder and the Edisons. The year 1931 is the most appropriate treatment date for the Glenmont landscape for the following reasons:

- The Glenmont landscape is nationally significant for its association with Thomas Alva Edison, the American inventor, scientist, and businessman, who died in 1931.
- The skating pond and its associated features were among the last additions to the landscape during the period of significance. Very few additions to the landscape occurred after 1931.

- Following the death of Thomas Edison in 1931, the landscape lost some integrity when it lost some buildings, paths, and vegetative features. The loss of integrity impacts the ability to experience the landscape as Thomas Edison did.
- While the 1931 treatment period emphasizes the character of the landscape at that time, it does not preclude interpretation of either earlier or later history. Features lost prior to 1931 can still be interpreted in the landscape through surviving traces or their physical sites.

Aside from 1931, the property has an additional treatment date of 1963—the date Thomas and Mina Edison were reinterred on the property. The 1963 date only pertains to the Edison gravesite.

## **TREATMENT GUIDELINES AND TASKS**

The following treatment guidelines and tasks are organized by the property's landscape characteristics, including spatial organization, circulation, vegetation, buildings and structures, views and vistas, and small-scale features. The guidelines provide a brief overview of each landscape characteristic, and where appropriate, are followed by a discussion of rehabilitation tasks for individual landscape features that comprise the characteristic. The individual treatment tasks are listed by a code using the characteristic abbreviation (SO, CR, VG, BS, VV, and SS), and ordered by priority for implementation. Each task is followed by a bulleted list of the affected landscape features as inventoried in the Analysis and Evaluation chapter. Preservation is the default treatment for historic landscape features having no specific tasks identified. Treatment tasks are keyed to a property-wide treatment plan (Drawing 4.0) and three detail plans (Drawings 4.1-4.3). A summary lists of tasks and list of recommended plant materials are included at the end of the chapter in table 4.0.

### **SPATIAL ORGANIZATION**

The landscape is currently organized into seven spaces defined by circulation systems, vegetation, and use. The spatial organization continues to reflect the naturalistic landscape design principles that were used in the layout of country places and suburban villas in the nineteenth century, specifically the separation of service buildings and structures away from the house. Spaces are generally delineated by the limits and location of woodland, lawns, specimen trees, shrubs, circulation systems, and buildings. Where new features are required, they should be designed in a manner that does not detract from the spatial organization of the landscape. Because the spaces in the landscape are delineated in large part by vegetation, changes to these features—such as the loss of specimen trees—should be closely controlled to limit change.

### **CIRCULATION**

The Glenmont property remains surrounded by Park Way and Glen Avenue and the main and secondary drives—connected by Honeysuckle Avenue—continue to follow the same historic alignment within the landscape. Since the end of the historic period, however, the local roads and main and secondary drives were resurfaced, and many pedestrian paths have been removed or abandoned.

The overall treatment objective for the circulation within the Glenmont landscape is to retain, enhance, and reintroduce historic circulation patterns and features, while providing the highest level of accessibility for people with disabilities. Treatment tasks include resurfacing and reestablishing historic roads and paths, and providing universally accessible throughout the landscape.

**CR Task 1: Consolidate visitor and staff parking***Affected features:*

- Circulation: Parking areas (Non-contributing)
- Spatial Organization: Service area (Contributing)

As part of the greenhouse rehabilitation in 2002-2003, a contractor parking area was constructed in the vicinity of the barn, directly across from the garage. It was retained following the project and now serves as a parking area for National Park Service staff. The former gravel-surfaced unmarked lot, measuring roughly 60 feet by 18 feet parking area, is incompatible with the historic rural character of the landscape. To address this contemporary use and enhance the historic character of the Glenmont landscape—specifically the service area, the gravel parking area should be removed and be reestablished as pasture. The visitor parking area on the Tilney-Johnson property should be enlarged (refer to CR Task 2 for recommended surface treatment) (Figures 4.0 and 4.1) (Drawing 4.0: Treatment Plan).



Figure 4.00. View looking at the parking area near the chicken house and cow barn in the service area (OCLP, 2010).

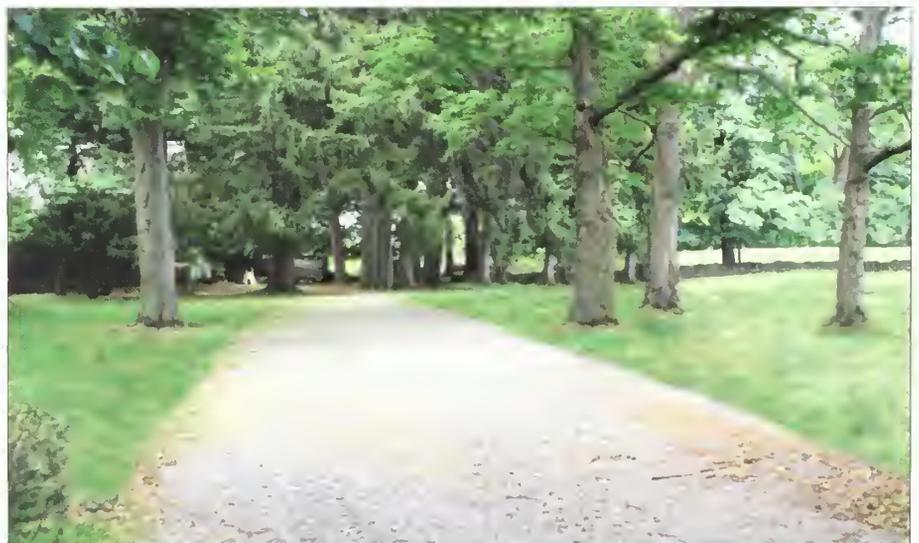


Figure 4.01. This photo simulation depicts the service area with the gravel parking area removed (OCLP, 2010).

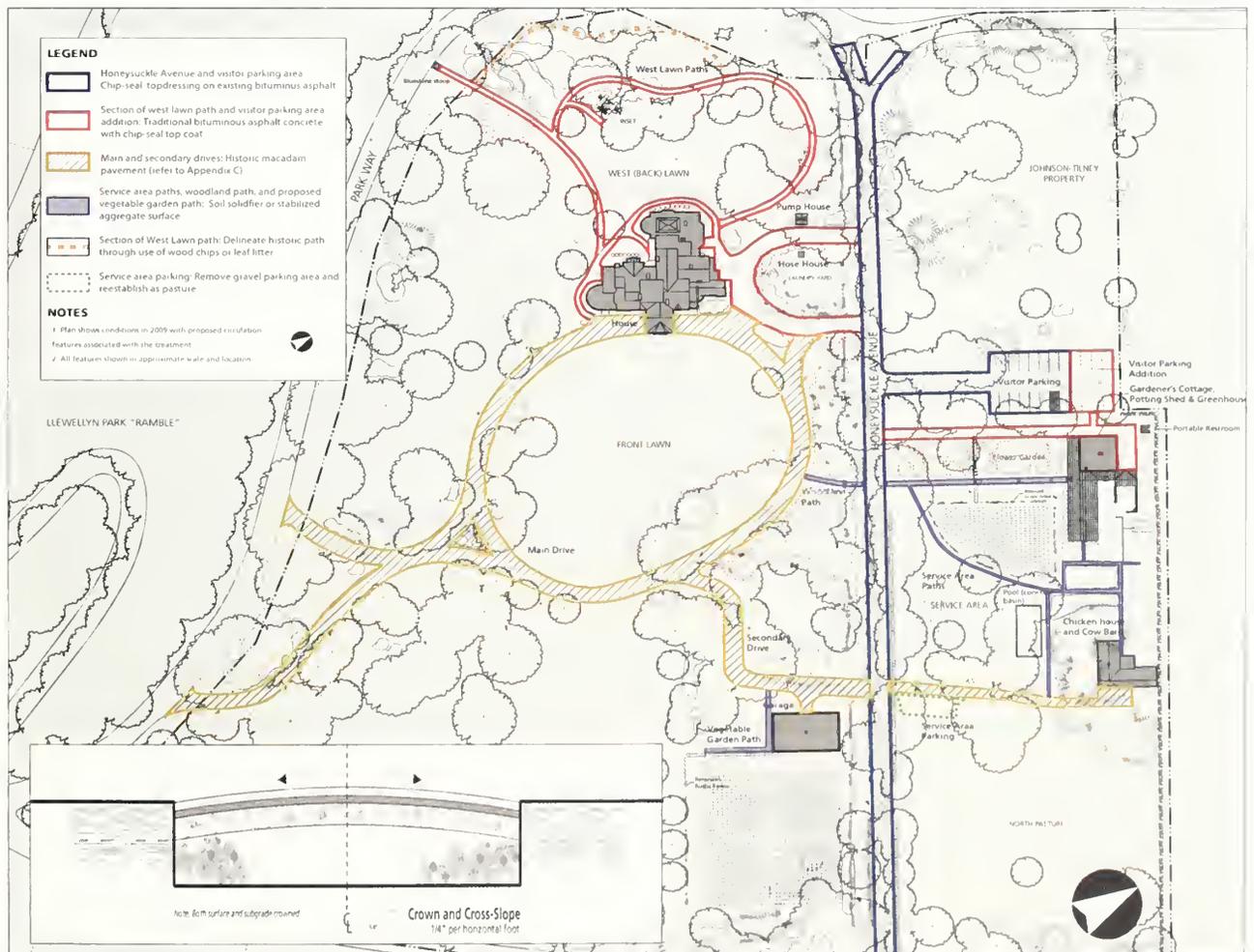
## CR Task 2: Rehabilitate existing historic roads, drives, walkways and paths

### Affected features:

- Circulation: Driveways and paths (Contributing)
- Spatial Organization: West (back) lawn (Contributing)
- Spatial Organization: Service area (Contributing)

The roads, drives, walkways, and paths at Glenmont were historically unpaved. The local roads, such as Park Avenue, Glen Avenue, and Honeysuckle Avenue, and the drives and walks were surfaced in gravel. Following the historic period, the drives, paths, and service road were altered and resurfaced, but were restored between 1985 and 2003. Currently, the drives and paths are surfaced with blue gray coarse gravel or pea stone and the local roads—including Honeysuckle Avenue, are paved in bituminous asphalt concrete. While the drives and walks visually conform to the historic character of the landscape, the gravel surface is not suitable for wheelchairs and creates an unstable walking surface. On the contrary, Honeysuckle Avenue is universally accessible, yet visually does not reflect its historic appearance. In an effort to address this issue and be universally accessible, the following are treatment recommendations for enhancing the drives, walkways and paths. The implementation of these recommendations will require

**Figure 4.02. Diagrammatic circulation plan to enhance the historic landscape character at Glenmont while providing the highest level of accessibility. The plan indicates the recommended surface materials for all drives and paths (OCLP, 2010).**



additional planning and design to give results that are consistent with the character of the historic landscape and practical with the ongoing operations of the park (Figure 4.2) (Appendix C).

#### *Honeysuckle Avenue and Visitor Parking Area*

The most historically appropriate treatment is to remove the existing non-historic bituminous asphalt and return to the historic gravel surface. However, since this treatment alternative is unrealistic due to accessibility and maintenance issues, Honeysuckle Avenue and the parking area on the former Tilney-Johnson property should be surfaced with chip-seal asphalt. This is traditional asphalt with larger and coarser aggregate top-coat that creates a more textured, varied surface that is similar to a loose gravel surface. The chip seal surface can be top-dressed with a wide range of aggregates that reproduce the appearance of the historic gravel surface (Figure 4.2).

#### *Main and Secondary Drives*

With exception to the secondary drive near the laundry yard, all main and secondary drives should be resurfaced with crushed stone aggregate. Leaving the existing aggregate base in place, the coarse gravel should be replaced with the crushed aggregate surface consisting of hard, durable particles or fragments of crushed stone or gravel. Inorganic clay should be used as binder (Figure 4.2). (refer to Appendix C).

#### *Laundry Yard Secondary Drive and Perimeter Paths*

In response to heavy use, accessibility, and maintenance limitations, the use of bituminous asphalt top-dressed with a chip-seal is recommended for the laundry yard secondary drive and perimeter path. Like the main drive, the existing aggregate base should be retained during the installation of the asphalt mix. The chip-seal top coat used within the laundry yard drive should be similar in appearance with the crushed stone aggregate proposed in the main drive. The chip seal asphalt perimeter path should be widened to approximately three feet and have a centerline crown with a cross-slope of 2%, or ¼" of fall per horizontal foot of path (Figure 4.2) (refer to Appendix D).

#### *Service Area Paths*

There are two alternatives to the existing pea gravel on the service area paths that should be considered to enhance the historic character and improve accessibility; a stabilized aggregate surface or soil solidifier (hydrophobic polyurethane system). A stabilized pathway mix consists of decomposed granite or crushed stone blended with non-toxic, non-staining water activated powder binder. This powder, consisting of Psyllium and Mucilliod, binds and locks the crushed stone screenings to provide a durable, permeable, natural aggregate surface. Brands

of this powder on the market include “Stabilizer” as manufactured by Stabilizer Solutions, Inc. A soil solidifier is a binding system that can be applied over the existing gravel surfaces. Brands on the market include Klingstone 400 [www.klingstone.com](http://www.klingstone.com). In addition to surface treatments, the service area paths should be widened to approximately three feet (Figure 4.2) (refer to Appendix D).

### **CR Task 3: Reestablish paths in west lawn and woodland area**

#### *Affected features:*

- Circulation: Driveways and paths (Contributing)
- Spatial Organization: West (back) lawn (Contributing)
- Spatial Organization: Woodland (Contributing)

During the historic period, the Glenmont landscape included a network of sinuous gravel paths and walks. Following the deaths of Thomas and Mina Edison, many historic paths were removed, notably the paths within the west lawn and woodland along Honeysuckle Avenue. To recapture the historic appearance of the landscape prior to Edison’s death in 1931 and enhance the character of the Glenmont landscape, the paths should be reestablished. The addition of the west lawn path will also provide universal accessibility to the Edison Gravesite. To address high use and maintenance limitations, the majority of the west lawn path should be surfaced with bituminous asphalt and top-dressed with a chip-seal. The remaining portion of the historic path—along Parkway—should be delineated through the use of wood chips or leaf litter. The chip seal section of path should look similar in appearance to the perimeter path, be approximately three feet wide, and have a centerline crown with a cross-slope of 2%, or ¼” of fall per horizontal foot of path. Prior to path construction, measures should be taken to preserve and protect the historic trees. Recommended actions and measures may include staking and avoiding compaction of soils within the drip line of the tree. The woodland path should be approximately three feet wide and be surfaced with a crushed irregularly shaped stone gravel and stabilizer (refer to Appendix D).

### **CR Task 4: Improve accessibility to historic structures and grounds**

#### *Affected features:*

- Circulation: Driveways and paths (Contributing)
- Buildings and structures: Glenmont house, No. 10 (Contributing)

The majority of buildings and structures at Glenmont, built between 1880 and 1908, were not designed to provide universal access for all visitors. At present, it appears most walks and drives, including the entrances into buildings do not meet accessibility specifications. Based on the *Director’s Order #42, Accessibility for Visitors with Disabilities in National Park Service Programs and Services*, structures, grounds, and facilities at Glenmont should be universally accessible to the greatest degree possible.

Future efforts should be undertaken in to provide universal access into the garage, chicken house and cow barn, and gardener's cottage, potting shed and greenhouse. However, the current treatment priority is to provide universal access to the Glenmont house, the park's primary resource. Presently, there is no universal accessibility route between the house and visitor parking lot. Through consultation with Regional Accessibility Coordinator Richard Dretsch, it was determined that the most suitable location for universal access into the house was the den entrance along the south elevation of the house. Construction of a compliant accessible ramp at this entrance will allow the greatest opportunity to view a number of interior rooms, and minimally impact the architectural fabric, views, and cultural landscape. An accessible route from the visitor's parking lot to the entrance will be provided following the rehabilitation of the existing drives and walkways (Figures 4.3 and 4.4) (Drawing4.1).

### **VEGETATION**

In general, treatment of ornamental plant material consisting of both native and exotic species of trees, shrubs, vines, groundcovers, and herbaceous plants, should maintain the palette used historically. While changes due to natural growth and decline of features such as specimen trees are appropriate, they should be managed where it conflicts with other historic characteristics such as spatial organization and views. Where natural growth was managed historically, such as the clipping and pruning of hedges and shrubs and mowing of lawns, this treatment should continue. Herbaceous plantings should maintain bed limits, scale, form, general plant types, bloom period, and color present during the historic period (1857-1931).

While preservation is the primary treatment for all woody plant material within the landscape, replacement may be necessary if the feature is in irreversible decline, posing a threat to safety or adjoining historic features, or no longer fulfills its historic design intent. Vegetative material should be replaced in-kind unless documented to be invasive and a threat to native plant communities in the region. In this case, it is appropriate to use substitute plant species that are similar in character to the historic species. The following vegetation treatment tasks address protection of historic extant plant material, effective deer control methods, replacement of missing features, removal of non-historic plants, and management of invasive non-native plant species.

To assist staff in garden maintenance and completing the vegetative treatment tasks outlined within this report, the park should establish partnerships with local garden clubs, volunteer organizations, and universities, such as Garden Club of New Jersey, Rutgers Cooperative Extension, Master Gardeners of the Rutgers Cooperative Extension of Essex County, and the Garden Club of Montclair, NJ.



Figure 4.03. View looking at the proposed location for universal access into the Glenmont house (OCLP, 2010).



Figure 4.04. This photo simulation depicts the den entrance along the south elevation of the Glenmont house with a compliant accessible ramp. This ramp will allow for the greatest opportunity to view the majority of the interior rooms, and minimally impact the architectural fabric, views, and cultural landscapes (OCLP, 2010).

**VG Task 5: Protect the garden areas and individual plants***Affected features:*

- Spatial Organization: Service area (Contributing)
- Vegetation: Flower and vegetable beds and gardens (Contributing)
- Vegetation: Foundation plantings (Contributing)

Landscape damage from deer browsing has become a major issue in recent years within the Llewellyn Park Historic District and Glenmont property. Despite efforts by the Llewellyn Park Proprietors and National Park Service staff to mitigate landscape damage, deer are persistent and adaptable, and no reasonable method of deer exclusion will be one hundred percent effective at preventing deer damage. To maximize success, deer control should utilize an integrated pest management approach, employing multiple means including exclusion, scare devices, and/or repellents. Plant selection may also reduce deer damage, favoring plants that show a tolerance to deer browsing.

Due to the complex factors involved in deer control, including maintenance costs and operational constraints, it is recommended that the park contract with a deer-control specialist to design a system specifically for the site. The following recommendations may provide initial guidance for the design of a comprehensive deer control system for the Glenmont landscape in the context of maintaining Glenmont's historic character.

*Exclusion Methods*

Deer fencing should be introduced in the least conspicuous manner. Appropriate materials include black galvanized wire or plastic mesh attached to thin poles or trees. Bright orange or other highly visible fencing is not appropriate. The park currently utilizes deer fencing; however it negatively impacts the historic character of the property.

Some vulnerable shrubs or hedges may be draped or wrapped with plastic netting to reduce deer damage. Several products are available that interfere with chewing and deter deer browsing. Netting should be used primarily during the winter when deer damage is the most severe, and may be installed as part of the process of winterizing the landscape.

*Deer Resistant Plants*

Plant selection may help reduce the damage by deer. Unfortunately, constraints on plant selection due to maintenance needs, plant availability, and historic character, may limit the options for plant substitution. Success of any deer resistant plant in the landscape will depend on local deer population and weather conditions (Refer to Appendix E).

### Other Methods

Other methods of deer control include chemical repellents and physical scare devices. Chemical repellents, including commercial repellents and pepper sprays, may be effective in combination with other methods. The sprays are applied to the vulnerable foliage rendering them unpalatable to the deer. From a landscape character perspective, repellents are appropriate because they are reversible and can be placed inconspicuously. Physical scare devices are usually conspicuous (by design) and incompatible with the historic character and are typically not effective over the long term. Deer become accustomed to the devices over time.

### VG Task 6: Reestablish pasture areas

#### Affected features:

- Vegetation: Lawns, pastures, and meadows (Contributing)
- Spatial Organization: South (lower) lawn (Contributing)
- Spatial Organization: Service Area (north of Honeysuckle Avenue) (Contributing)

Historically, the south (lower) lawn and north pasture areas were maintained as meadow and pasture. To reestablish the idealized rural character of the Glenmont landscape, pasture and meadow areas might be effectively reestablished in the south (lower) lawn and north pasture areas. The process should begin with testing the soils to determine the existing fertility and pH (acidity) of the soil. Fertile, slightly acidic soil is ideal for grass production. A non-selective herbicide should then be applied across both areas to kill the existing grasses and



Figure 4.05. Diagrammatic mowing plan to enhance the historic landscape character of Glenmont's open spaces. The plan indicates the area, frequency, height, and season for mowing (OCLP, 2010).

herbaceous material. Following their removal, both the south (lower) lawn and north pasture areas should be seeded with a mixture of native and warm season grasses and wildflowers, which include daisies, black-eyed Susans, and buttercups. After the newly seeded areas are established, they should be mown once during the growing season (Figure 4.5).

#### **VG Task 7: Reestablish vines on buildings and structures**

##### *Affected features:*

- Spatial Vegetation: Vines on buildings and structures (Contributing)
- Buildings and Structures: Glenmont house (Contributing)
- Buildings and Structures: Gardener's cottage and potting shed (Contributing)
- Buildings and Structures: Garage (Contributing)

The Dutchman's pipe (*Aristolochia elegans*), Japanese creeper (*Parthenocissus tricuspidata*) common or English ivy (*Hedra helix*), honeysuckle (*Lonicera sp.*) trumpet vine (*Campsis radicans*), and wisteria (*wisteria sp.*) vines that covered the majority of buildings and structures at Glenmont during the historic period were important visual and historic component of the mid-nineteenth and early twentieth century stylized rural landscape. According to Andrew Jackson Downing:

Fine climbers, and several others to be found in the catalogues...contribute in a wonderful degree to the variety, elegance, and beauty of a country residence; and to neglect to introduce them would be to refuse the aid of some of the most beautiful accessories that are capable of being combined with trees, as well as with buildings, gardens, and fences.<sup>12</sup>

With exception of the wisteria on the house's porte-cochere, the majority of vines on the buildings and structures were removed following the historic period. In an effort to enhance the historic character of the Glenmont landscape, honeysuckle (*Lonicera sp.*) should be planted along the Glenmont house's front porch foundation (also referred to as verandah); and English ivy (*Hedra helix*) should be reestablished along the east and south elevations of the garage, west and south elevations of the house; and south elevation of the gardener's cottage and potting shed. In order to minimize impacts and reduce maintenance difficulties, a detachable trellis system to support the vines should be installed on the buildings

and structures. Once established, the vines should be carefully monitored to prevent damage to building features. If not monitored and managed, the vines can damage historic clapboard or masonry buildings in a number of ways. Roots growing near buildings retain moisture and can put pressure on foundations, displacing materials and providing entry points for water, insects, and rodents. Vines should be pruned two times a year, preferably in the spring and fall. Design

details for such a system can be found in Appendix F; Restoring Vines on Historic Buildings.

#### **VG Task 8: Reestablish hemlock hedge along Honeysuckle Avenue**

##### *Affected features:*

- Vegetation: Honeysuckle Avenue hemlock hedge (Contributing)

Honeysuckle Avenue was historically bordered by a hemlock hedge (*Tsuga canadensis*).<sup>13</sup> Overall, these hedges were approximately 900 linear feet (entire length of Honeysuckle Avenue). Between 1910 and 1925, the hedges were replanted, but have since been allowed to grow into trees. In recent years, the dense shade from the hemlocks has also been responsible for the decline of historic plant material within the service area.

To reestablish the hedges, the existing hemlocks should be removed and be replanted. In an effort to avoid gaps, the full length of the hedge should be planted all at one time or in sections. Although the historic profile for the hemlock hedge is unknown, based on common practice during this period, the hedge should be maintained as a clipped hedge—approximately 8'-10' in height—with straight sides to 2/3 of the height and a rounded batter at the top third. A battered profile is optimal for enhancing light levels and reducing snow-load stress. Prior to planting, implement deer control to protect the hedges from browsing. Because hemlock woolly adelgid can be controlled on small-scale plantings with an application of dormant oil, Eastern hemlock should continue to be used for hedges and shrubs. However, if a substitute is desired, potential substitutes include Western hemlock (*Tsuga heterophylla*), Northern Japanese hemlock (*Tsuga diversifolia*), or Siebold hemlock (*Tsuga sieboldii*).

#### **VG Task 9: Reestablish the vegetable garden and small orchard**

##### *Affected tasks:*

- Spatial Organization: South (lower) lawn (Contributing)
- Vegetation: Flower and vegetable beds and gardens (Contributing)

During the historic period, a large four-square vegetable garden and small orchard, consisting of pear and apple trees, were situated at the corner of Honeysuckle Avenue and Glen Avenue, east of the garage. Bordered by a wooden post fence and rose trellis, the vegetable garden was organized around two straight paths that intersected at a right angle, yielding four square planting beds. At

the intersection of the paths, a small circular bed was laid out and planted with a cherry tree; it was later replaced by a peach tree. Encircling the four square planting beds was a small path and an additional four rectilinear beds. The vegetable garden included a variety of fruits vegetables that included blackberries, raspberries, asparagus, rhubarb, celery, cabbage, and corn.

Since the historic period, the vegetable garden has been removed and the orchards had to be replaced. In an effort to reestablish the historic spatial organization and agricultural character of the Glenmont landscape, the vegetable garden and orchard should be reestablished. To address deer browsing, garden path surface material and width should be modified to meet universal accessibility standards and the vegetative material of the garden should be deer resistant (Drawing 4.2).

**VG Task 10: Reestablish wild garden**

*Affected features:*

- Spatial Organization: Woodland (Contributing)
- Vegetation: Woodland plantings (groundcover)

During the historic period, a wild garden was established within the woodland area and featured bulbs and wildflowers. However, all that remains today are drifts of scilla, lily-of-the-valley, yellow trout lily, and daffodils. The wild garden should be reestablished to reflect the wild gardening concepts of William Robinson. Based on historic documentation such as receipts from nurseries, historic deer resistant vegetative material should be replanted within the woodland area (Appendix E).

**VG Task 11: Reestablish planted islands within main drive**

*Affected features:*

- Circulation: Driveways and paths (Contributing)
- Vegetation: Flower and vegetable beds and gardens (Contributing)

Throughout the Edison years, ornamental flowerbeds were planted in the main drive islands. The triangular island near the northeastern corner of the house was often filled with neat rows of annuals and supplemented by masses of perennials or exotics, such as palms. Irises were found in the triangular island at the southeastern end of the oval lawn area. Following the death of Thomas Edison, the planted islands were altered based on damage caused by vehicles. The irises were removed and replaced with rhododendrons and yews, while the northeastern triangular island was reshaped with rounded corners and replanted with geraniums and later begonias; the bed currently is planted with periwinkle. Treatment of the Glenmont landscape should include reestablishing planted islands within the main drive islands. Annuals and perennials should be deer resistant and be similar in form and character as the historic vegetation (Appendix E).

**VG Task 12: Replant Specimen Deciduous and Evergreen Trees**

*Affected features:*

- Vegetation: Deciduous and evergreen trees and shrubs (Contributing)

Throughout the historic period, native and exotic trees were integral features of the Glenmont landscape as they enhanced the natural beauty of the grounds,

framed views, and screened undesirable areas. Since 1931, some trees have been lost due to age-related decline, disease, or storm damage. While the National Park Service has judicially reestablished many plants in-kind, approximately 50 trees need to be replanted.

While replacement plantings should be made once the tree has been removed, historic specimen trees that have not been replanted should be replaced through the use of the 1963 Harold J. Hamilton Associates comprehensive topographic survey and a variety of historic photographs, which documents the location, size, and species of trees. In general, replacement plantings should be made once the historic tree has been removed, and in the same location. The trees should also be replaced in-kind unless documented to be invasive and a threat to native plant communities in the region. In this case, it is appropriate to use substitute plant species that are similar in character to the historic species. As an example, the invasive Norway maple (*Acer platanoides*), historically located in the northern portion of the front lawn, should be replaced with a sugar maple (*Acer saccharum*).

To assist staff in the management of important historic trees at Glenmont, the park should work in collaboration with the Olmsted Center for Landscape Preservation Historic Plant Preservation Program to propagate historic plant material. In addition, the *Tree Preservation Maintenance Guide, Edison National Historic Site*, completed by the Olmsted Center in 1994, should be used as a reference for future work in the landscape. This guide identified the condition of individual plants and provided recommendations for their treatment (Drawing 4.0).

### **VG Task 13: Reestablish foundation plantings**

#### *Affected features:*

- Spatial Organization: Front lawn (Contributing)
- Vegetation: Foundation plantings (Non-contributing)

During the historic period, the Glenmont house was bordered along the east, west, and south sides by a massing of shrubs and herbaceous beds. Evergreen shrubs—such as epimedium, Japanese holly, rhododendron, and Japanese Andromeda—surrounding the bird bath along the northeast elevation and spirea extended along the den’s foundation on the west side of the house. Other foundation plantings found along the west and south sides of the house included tamarisk and rose bushes and herbaceous material. A hedge of evergreen shrubs—accentuated by perennials, lined the conservatory foundation. Since the end of the historic period, many shrubs and herbaceous beds have been removed or replaced with other plantings.

In 2008-2009, students from the Essex County Master Gardener program installed a new flower bed along the house's west foundation, which included the pruning of historic rose bushes and reestablishment of historic plant material. In the future, additional work should include replacing the yews along the conservatory with Japanese holly fronted by annuals and perennials (coral bells, dusty feather, etc); maintaining the evergreen shrubs along the east elevation with a loosely clipped, natural form to a height that allows the bird bath to be in view; and allowing the tamarisk and spirea to be maintained in its natural habit. In addition, annual plantings should be placed in cast iron pedestal urns and situated on either side of the porte-cochere.

**VG Task 14: Reestablish flower gardens and replant fruit trees in service area**

*Affected features:*

- Spatial Organization: Service area (Contributing)
- Vegetation: Flower and vegetable beds and gardens

During the historic period, formal and informal flower gardens were established within the service area across Honeysuckle Avenue. Located near the gardener's cottage, potting shed, and greenhouse, a formal flower garden was established. The garden began at the gardener's cottage and extended to Honeysuckle Avenue and featured oval, triangular, and round annual beds. It is assumed that planting schemes were changed annually (in masses or ribbon lines), but the overall character of the beds remained constant; taller annuals were planted at the center and gradually tapered to the front with smaller plantings.

Adjacent to the formal flower garden, a cutting garden was established. Surrounded by a grape arbor, the cutting garden included an extensive selection of dahlias and other cut flowers. The Edison's grew so many Dahlia's that a new variety was introduced in 1929 as the 'Thomas A. Edison' Dahlia. (Refer to Appendix E). Beyond the cutting garden, a series of additional flower, vegetable, and fruit gardens were found near the gardener's cottage and potting shed, greenhouse, and chicken house and cow barn.

Since the historic period, the formal flower garden was removed and redesigned as perennial garden, which includes a rustic dry-laid stone retaining wall. In addition, the majority of the flower beds and fruit trees were removed. All that remains today is the perennial garden located adjacent to the gardener's cottage and potting shed and a linear flower bed-planted with peonies and hosta along Honeysuckle Avenue.

Service related functions, which includes the flower and vegetable gardens and fruit trees were integral components of the Glenmont landscape during the historic period and should be reestablished to highlight the domestic side of

the Edison family. Since the current perennial garden was established after the historic period, it should be removed and replaced with the historic formal annual garden. However, additional research is necessary prior to removing the perennial garden and replacing it with the formal garden. The current perennial garden contains features proposed by Ellen Shipman, yet it is unclear to whether or not her 1929 plans were ever implemented.

With the lack of available documentation and the need to address contemporary use and deer browsing, treatment of flower gardens in the service area does not need to follow a strict planting plan. However, the beds should follow the same layout as the historic period, and the vegetative material should be deer resistant and similar in form and character. In addition, garden path surface material and width should be modified to meet universal accessibility standards (Drawing 4.3).

### **BUILDINGS AND STRUCTURES**

Buildings and structures contribute to the historic significance of the park as a defining landscape characteristic. Historic buildings and structures include the house, gardener's cottage, potting shed and greenhouse, and garage, and chicken house and cow barn. Smaller buildings and structures in the landscape include the pump house, hose house, skating pond site, concrete basin (pool), stone boundary wall, and hot bed foundations. Since the historic period, other important structures have been lost such as the playhouse, summerhouse, and tool shed, while others have been added including a retaining wall in the flower garden and a portable restroom.

The treatment objectives for the buildings and structures are to retain and preserve the extant historic features and replace missing features, if sufficient documentation is available; if not feasible, their sites in the landscape should be interpreted. Non historic buildings or structures should be removed and new features should be compatible in scale, design, and materials with the historic property. The following tasks include interpreting the playhouse and summer house sites, reconstructing the toolshed, hotbeds/cold frames, and skating shack, and removing the portable restroom and fireproof metal structure.

#### **BS Task 15: Interpret summerhouse and playhouse**

##### *Affected features:*

- Spatial Organization: West (back) lawn (Contributing)

During the historic period, a playhouse and summerhouse were located northwest of the house; however, shortly after the death of Thomas Edison in 1931, the structures were removed. With exception to the 1931 appraisal map, entitled "Glenmont Estate of Thomas A. Edison, Llewellyn Park, West Orange, NJ," there is limited documentation currently available on the summerhouse and

playhouse. However, these features should be interpreted since they were integral components of the historic landscape. This interpretation may be done through the installation of traditional waysides, printed brochures or hand-held electronic devices.

#### **BS Task 16: Reconstruct hotbeds/cold frames**

##### *Affected features:*

- Spatial Organization: Service area (Contributing)
- Buildings and structures: Hotbed foundation (Contributing)

Throughout the historic period, two hotbeds (or cold frames) were located along the east side of the greenhouse. Both structures were approximately 42' long and between 1' and 2' high and comprised of mortared bricks sheathed in concrete. Following the property's acquisition by the National Park Service in 1959, the hotbeds (or cold frames) fell into disuse resulting in the removal of the northerly hotbed. Currently, remnants of the southerly hotbed foundation are all that remains. The hotbeds (or cold frames) should be reconstructed based on historic photographs. Return of these structures will aid in the interpretation of their use and allow it to function once again for forcing plants.

#### **BS Task 17: Remove portable restroom and fireproof metal structure**

##### *Affected features:*

- Buildings and structures: Portable restroom (Non-contributing)
- Buildings and structures: Fireproof metal structure (Non-contributing)
- Spatial Organization: Service area (Contributing)

In recent years, a portable restroom and fireproof metal structure were installed near the gardener's cottage, potting shed, and greenhouse. They both currently detract from the historic character of the landscape and should be removed. If possible, in order to minimize impacts to the historic setting of the Glenmont landscape, a new restroom should be incorporated within an existing historic building.

### **VIEWS AND VISTAS**

Views are a defining characteristic of the Glenmont landscape. Today, the open spatial character and position of the grounds on the elevated terrace, continues to allow for expansive views to the east towards Glen Avenue and the main entrance view—created by the layout and alignment of the main entrance drive—remains intact as an important element of Nathan Barrett's design for the landscape. Because these views were historically defined by the placement of buildings and trees and shrubs, future development and the loss or maturation in vegetation may negatively impact these characteristics. In order to preserve and enhance historic views, these features should be controlled to limit change (Figure 4.6).

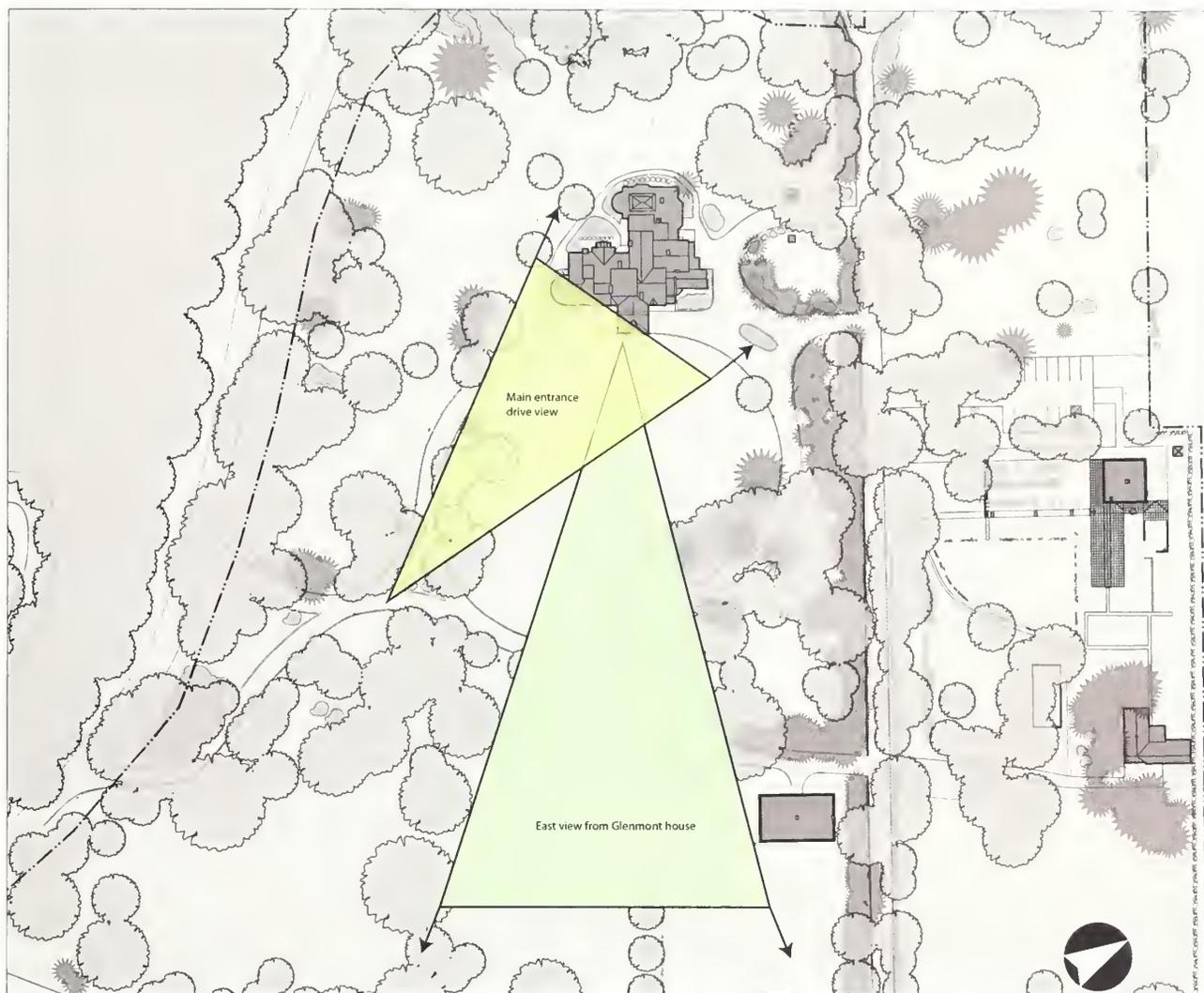


Figure 4.06. Diagram showing viewsheds from the Glenmont house to the east and the main entrance view (OCLP, 2010).

### SMALL-SCALE FEATURES

Small-scale features are a defining landscape characteristic of the Glenmont landscape. Historic features include bird feeders—notably the gazebo bird feeder, bird baths, bluestone stoop, gas light poles, utility structures, clothesline posts, , rustic arbors and rose trellis. Small-scale features added since the historic period has been mostly introduced by the National Park Service to address visitor accessibility and safety. They include benches, signs, lighting, trash receptacles, plant labels, and features associated with the Edison gravesite.

The treatment objectives for small-scale features are to retain and preserve the extant historic features and replace missing features, if sufficient documentation is available. If new small-scale features are introduced for park use should be differentiated from features, but at the same time be compatible with the design of the historic small-scale features and the overall historic character of the landscape. Utilitarian features related to park operations should be kept out of the public eye as much as possible. Those that are necessary visible should blend in with the historic scene.

**SS Task 18: Repair clothesline post (removed in 2009)**

*Affected features:*

- Small-scale features: Clothesline posts (Contributing)

During the historic period, eight clothesline posts were located in the laundry yard on the northeast side of the house. In 2009, one pole was in disrepair and had to be removed. The park should repair and reinstall the clothesline pole (either the original, currently in park storage, or a replica) as it helps convey the historic use of the laundry yard.

**TABLE 4.0: SUMMARY OF LANDSCAPE TREATMENT TASKS FOR THE GLENMONT LANDSCAPE**

Task ID	Task Name	Priority (1=High, 2=Med., 3=Low)
Spatial Organization		
Circulation		
CR Task 1	Consolidate visitor and staff parking	3
CR Task 2	Rehabilitate existing historic drives, walkways and paths	1
CR Task 3	Reestablish paths in west lawn and woodland area	2
CR Task 4	Improve accessibility to historic structures and a grounds	1
Vegetation		
VG Task 5	Protect the garden areas and individual plants	1
VG Task 6	Reestablish pasture areas	3
VG Task 7	Reestablish vines on buildings and structures	3
VG Task 8	Reestablish hemlock hedge along Honeysuckle Avenue	2
VG Task 9	Reestablish the vegetable garden and small orchard	2
VG Task 10	Reestablish wild garden	3
VG Task 11	Reestablish planted islands within main drive	1
VG Task 12	Replant specimen deciduous and evergreen trees	1
VG Task 13	Reestablish foundation plantings	1
VG Task 14	Reestablish flower gardens and replant fruit trees in service area	2
Buildings and Structures		
BS Task 15	Interpret summerhouse and playhouse	3
BS Task 16	Reconstruct hotbeds/cold frames	2
BS Task 17	Remove portable restroom and fireproof metal structure	1
Views and Vistas		
Small-Scale Features		
SS Task 18	Repair clothesline post (removed in 2009)	3

## ENDNOTES

- 1 Robert R. Page, Cathy A. Gilbert, and Susan A. Dolan, *A Guide to Cultural Landscape reports: Contents, process, and Techniques* (Washington, D.C.: National Park Service, 1998), 81.
- 2 Such tasks are addressed in a separate cultural landscape document known in the NPS as a Preservation Maintenance Plan. This plan is not included in the scope of this project.
- 3 On December 6, 1955, Glenmont was designated by the U.S. Secretary of Interior as the "Edison Home National Historic Site" (20 F.R. 9347). Also that day, a cooperative agreement between the Secretary of the Interior and the McGraw-Edison Company (formerly Thomas A. Edison, Inc.) was signed and stated that Glenmont was to be preserved and administered "for the inspiration and benefit of the people of the United States." A later statement in the agreement contains the words "to suitably maintain the character of the home and interpret the life of Thomas Edison." On September 5, 1962, Edison Home National Historic Site and Edison Laboratory National Monument (established in 1956) were combined and designated as the Edison National Historic Site. A Subsequent Act of Congress (March 2009) later redesignated Edison National Historic Site as the Thomas Edison National Historical Park.
- 4 Within the hierarchy of National Park Service policies, standards, and guidelines, management of the landscape as a cultural resource is defined by 36 CFR Part 2: Resource Protection, Public Use and Recreation (Preservation of Natural, Cultural and Archeological Resources). The application of these regulations to cultural landscapes is contained within *National Park Service Management Policies (2006)*, *Director's order #28 (Cultural Resources Management)*, and *National Park Service Cultural Resource Management Guideline (NPS-28)*.

- 5        *NPS-28 Cultural Resource Management Guideline*, Chapter 7: Management of Cultural Landscapes.
- 6        U.S. Department of the Interior, *Final Master Plan: Edison National Historic Site* (National Park Service, 1977) 3.
- 7        U.S. Department of the Interior, *Final Master Plan: Edison National Historic Site* (National Park Service, 1977) 14.
- 8        U.S. Department of the Interior, *Edison National Historic Site, Statement for Management* (National Park Service, 1990)
- 9        The following programs are already in place or under development at the Glenmont Estate, and will continue: Guided tours; changing garden and grounds tours—focus on how they have changed since Edison’s day and continue to be managed; guided tour of the grounds—emphasis on connection to Edisons’ personal life and neighborhood; program/tour focusing on Mina; and opportunity to participate in period games like those the Edison children would have played. Interpretive Solutions, Inc. *Thomas Edison National Historical Park: Long Range Interpretive Plan* (West Chester, Pennsylvania: Interpretive Solutions, Inc., 2009; prepared for US Department of the Interior, National Park Service) 33-40.
- 10       Primary treatment alternatives considered but not recommended: *Preservation* is not recommended as the primary treatment for the Glenmont landscape because it would retain the existing appearance that is not consistent with the historic character of the landscape; *Restoration* is not recommended as the primary treatment for the Glenmont landscape due to the lack of adequate documentation, particularly regarding the vegetation (i.e. layout of the vegetable and flower gardens, etc.) the need to address contemporary park uses and visitor needs, and the existence of the 1963 Edison gravesite, which was determined significant under Criteria Consideration B and C; and *Reconstruction* is not recommended as the primary treatment for the Glenmont landscape because the property retains much of its historic fabric.
- 11       The Secretary of the Interior’s Standards for the Treatment of Historic Properties (Department of the Interior, 1995).
- 12       Andrew Jackson Downing. *Landscape Gardening and Rural Architecture* (New York: Dover Publications, Inc., 1841) 285-286.
- 13       Refer to cost estimate from *Bobbink and Atkins Importers and Nurserymen and Florists*, September 15, 1909 (Edison Archives).

# Cultural Landscape Report for Glenmont

## Thomas Edison National Historical Park

West Orange, New Jersey

### Treatment Plan-Property Wide



National Park Service

Olmsted Center for Landscape Preservation

[www.nps.gov/oclp](http://www.nps.gov/oclp)

#### SOURCES

1. CLR existing conditions and analysis and evaluation plans.
2. Aerial photographs, 1995, 1997, 2007, and 2008.
3. Site visits, January, April, and July 2009.

#### DRAWN BY

Michael Comisso, AutoCAD 2000 and Illustrator CS 3, 2010

#### LEGEND

- Feature to add
- Feature to remove
- Building
- Paved vehicular circulation
- Unpaved vehicular circulation
- Path or walk
- Lawn
- Groundcover or herbaceous bed
- Deciduous specimen tree, wooded area
- Evergreen/coniferous specimen tree or shrub
- Deciduous/broadleaf evergreen shrub
- Flagstone curbing
- Fence
- NPS Property Boundary
- 1' Contour

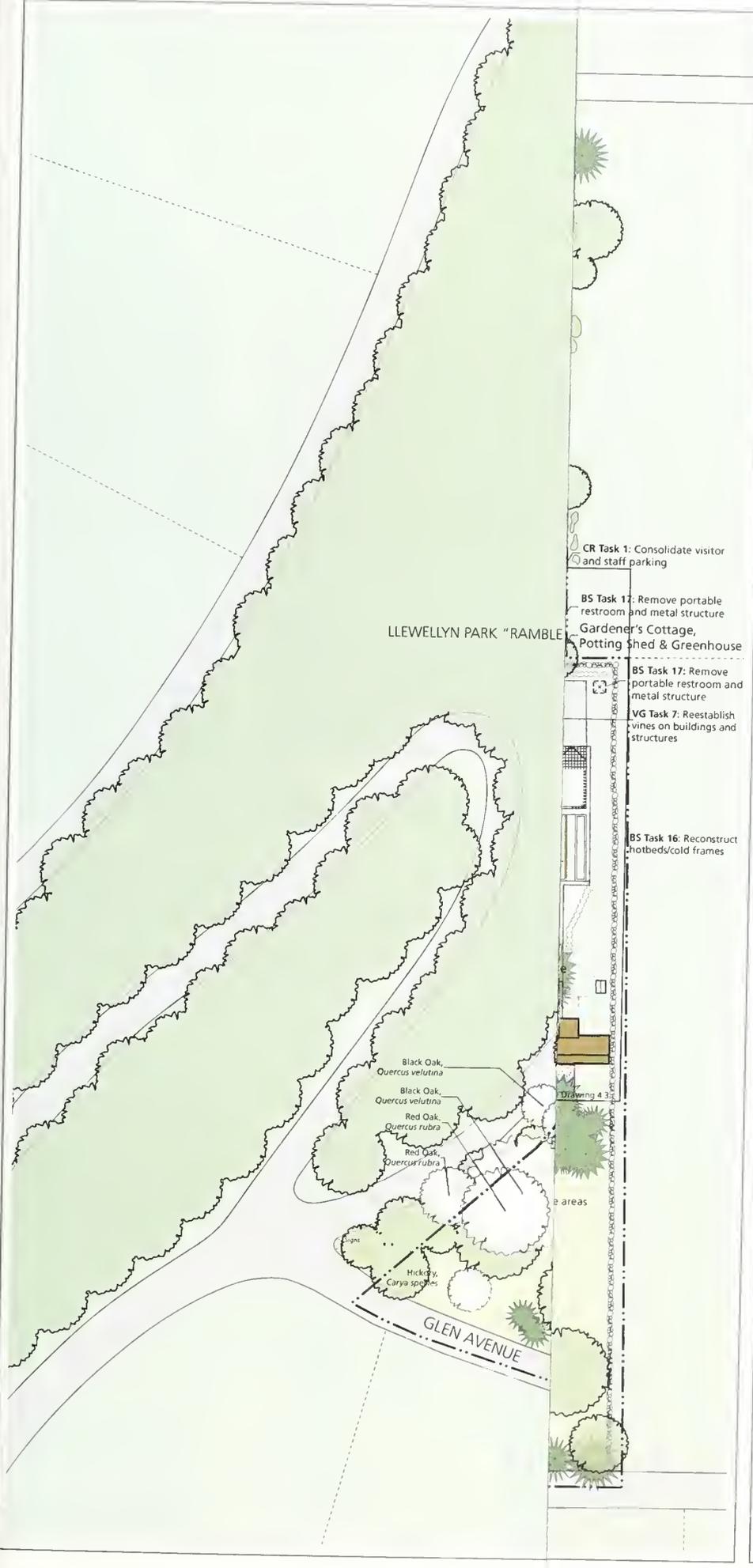
#### NOTES

- 1 Plan shows conditions in 2009
- 2 All features shown in approximate scale and location
- 3 Contours shown only in project area and not in Tilney Property
- 4 Trees and shrubs identified as "requiring treatment" will be replanted, unless noted otherwise
- 5 Plant information such as level of identification, the historical and botanical selection criteria, size, condition, and approximate age is detailed in the 1995 *Historic Plant Inventory for Edison National Historic Site*

Historic Site



Drawing 4.0



Thomas Edison National  
Historical Park

West Orange, New Jersey

Treatment Plan-Property Wide



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

SOURCES

1. CLR existing conditions and analysis and evaluation plans.
2. Aerial photographs, 1995, 1997, 2007, and 2008.
3. Site visits, January, April, and July 2009.

DRAWN BY

Michael Comisso, AutoCAD 2000 and Illustrator CS 3, 2010

LEGEND

- Feature to add
- Feature to remove
- Building
- Paved vehicular circulation
- Unpaved vehicular circulation
- Path or walk
- Lawn
- Groundcover or herbaceous bed
- Deciduous specimen tree, wooded area
- Evergreen/coniferous specimen tree or shrub
- Deciduous/broadleaf evergreen shrub
- Flagstone curbing
- Fence
- NPS Property Boundary
- 1' Contour

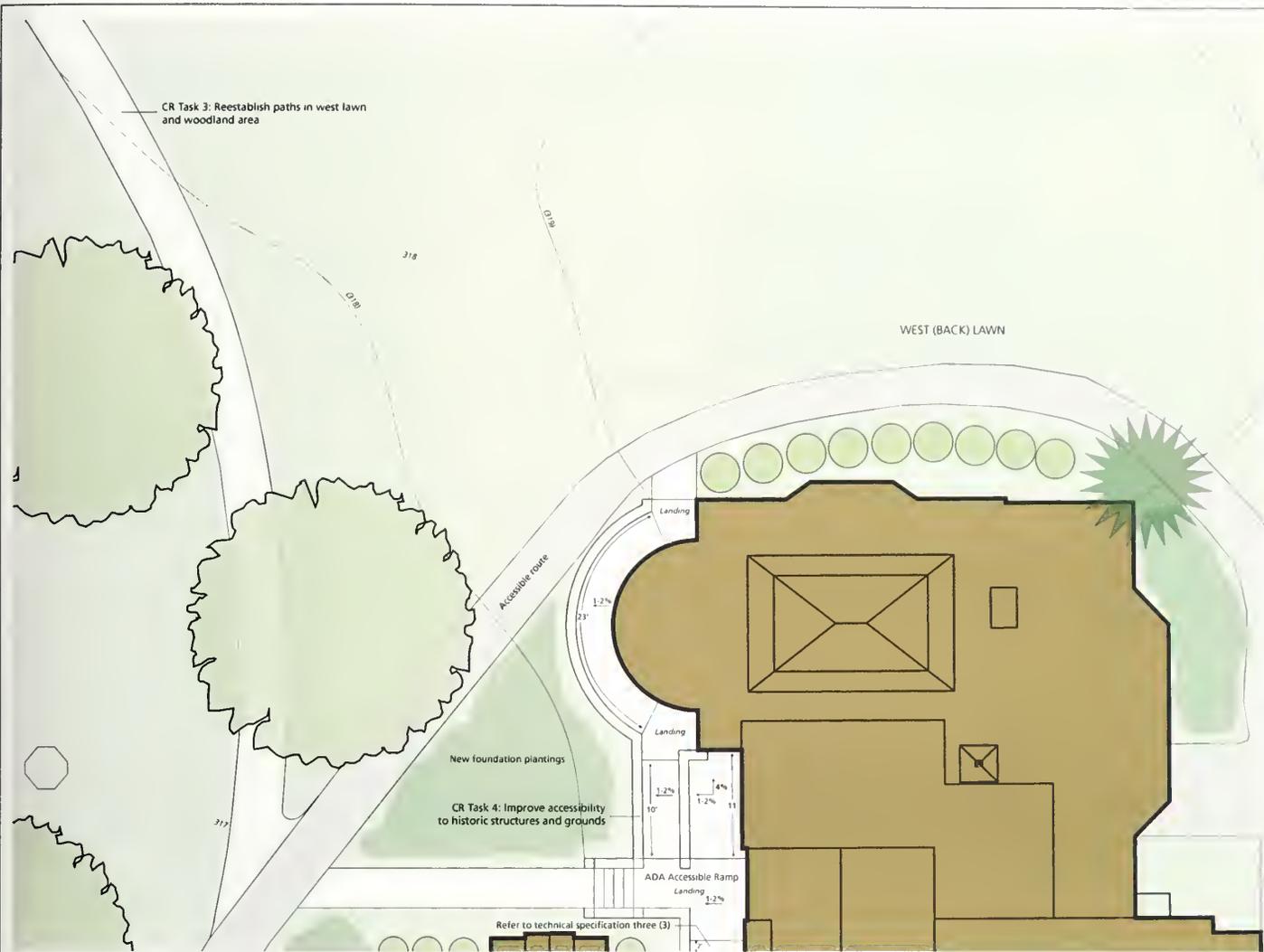
NOTES

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4. Trees and shrubs identified as "requiring treatment" will be replanted, unless noted otherwise
5. Plant information such as level of identification, the historical and botanical selection criteria, size, condition, and approximate age is detailed in the 1995 Historic Plant Inventory for Edison National Historic Site



Drawing 4.0





### Technical Accessibility Requirements for Universal Access Into the Glenmont House

Through consultation with Regional Accessibility Coordinator Richard Dretsch, it was determined that the most suitable location for universal access into the house was the den entrance along the south elevation of the house. A compliant accessible ramp at this entrance will allow the greatest opportunity to view the majority of interior rooms, and minimally impact the architectural fabric, views, and cultural landscape. It should be constructed as followed:

1. Construction of a ramp without handrails will require a gradient of 5 percent or less. In order to achieve the desired gradient, fill (approximately 1') will be required in the back (west) lawn. The proposed changes to the existing topography will result in the removal of two foundation windows along the west elevation of the house;
2. The ramp must be at least 36 inches wide and the surface must be stable, firm, and non-slip;
3. In space limitations, a ramp gradient no greater than 16.6 percent (1:6) may be used for a horizontal run of 2 feet;
4. The ramp cross pitch must be no greater than 2 percent (1:50) gradient;
5. Landings must be located at every 30-inch vertical rise in the ramp; dimensions of landing= 36 inches wide x 60 inches deep at the top and bottom of the ramp run; 60 inches wide x 60 inches deep at the ramp dogleg;
6. The Americans with Disabilities Act Access Board and Dept. of Justice have indicated that curved ramps are allowed so long as designs meet the slope, rise, cross slope, and all other technical ramp requirements. However, special calculations are required for curved ramps because: Inside curve slopes are steeper than outside curve slopes since slopes are a function of rise over run; the shorter distance creating a steeper slope; curved ramps, when in full compliance with slope and cross slope requirements, are in fact a warped plane. Tighter the radius of a curved ramp, the more warped the surface.

Currently, there are no technical recommendations available on minimum curve radii to maintain a reasonably level ramp surface; research may be initiated by the DOJ on this point.

Additional information of the the minimum standards of accessibility for federal buildings and facilities is defined by the Uniform Federal Accessibility Standards.

## Cultural Landscape Report for Glenmont

### Thomas Edison National Historical Park

West Orange, New Jersey

### Treatment Plan, West (Back) Lawn Enlargement



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

#### SOURCES

1. CLR existing conditions and analysis and evaluation plans.
2. Aerial photographs 1995, 1997, 2007, and 2008
3. Site visits, January, April, and July 2009

#### DRAWN BY

Michael Comisso,  
AutoCAD 2000 and  
Illustrator CS3, 2009

#### NOTES

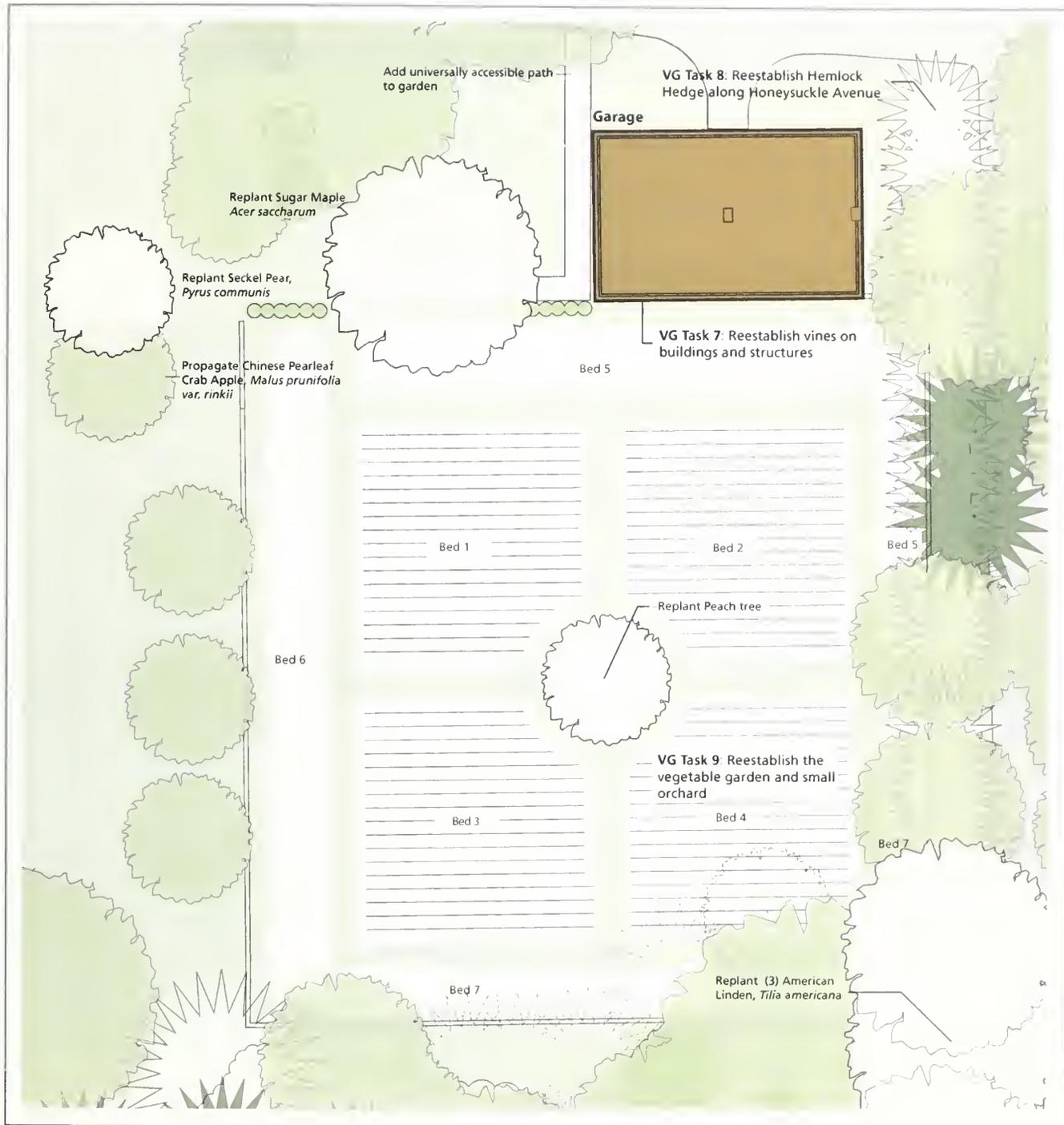
1. Plan shows conditions in 2009
2. All features shown in approximate scale and location.
3. Contours shown only in project area and not in Tilney Property
4. Additional information on the minimum standards of accessibility for federal buildings and facilities is defined by the Uniform Federal Accessibility Standards (UFAS)

#### LEGEND

	Feature added		Evergreen/deciduous specimen tree/shrub
	Feature removed		Deciduous/broadleaf evergreen shrub
	Building		NPS Property Boundary
	Paved/unpaved vehicular circulation		Proposed 1' Contour
	Path or walk		Existing 1' Contour
	Lawn		
	Groundcover or herbaceous bed		
	Deciduous specimen tree/wooded area		

Drawing 4.1





### Recommended Plants for the Vegetable Garden

Vouchers and invoices dating between 1900 and 1905 indicate a number of vegetables and herbs, as well as roses, were grown in the vegetable garden (refer to Appendix XX Historic Plants grown at Glenmont [to be added]). While it is assumed that beds 1 through 4 were rotated annually, the remaining beds were planted with perennial vegetables and fruits such as asparagus (bed 7), rhubarb (bed 7), raspberries (bed 5), blackberries (bed 5), and currants (bed 5); they were not rotated and were planted separately. Roses were located in bed 6. While efforts should be taken to replant the vegetable garden with historic plant material, current issues with deer browsing may require the use of deer resistant plants. The following deer resistant plants are recommended for the vegetable garden. Most are herbs, which are deer resistant with strong aromas and flavors.

#### Beds 1-4

*Allium schoenoprasum*, Chives  
*Allium*, Onions  
*Allium*, Garlic  
*Allium tuberosum*, Garlic Chives

*Anethum graveolens*, Dill  
*Artemisia absinthium*, Artemisia  
*Artemisia dracunculoides*, Tarragon  
*Cucurbita sp.*, Squash  
*Diospyros virginiana*, Persimmon

*Foeniculum vulgare*, Fennel  
*Lavendula angustifolia*, Lavender  
*Matricaria spp.*, Chamomile  
*Melissa officinalis*, Lemon balm  
*Mentha spp.*, Mint Herb

*Nepeta x faassenii*, Catmint  
*Ocimum basilicum*, Sweet Basil  
*Origanum vulgare*, Oregano  
*Petroselinum crispum*, Parsley  
*Rosmarinus officinalis*, Rosemary

*Salvia officinalis*, Sage  
*Satureja montana*, Savory  
*Thymus spp.*, Thyme

**Beds 6**  
*Rosa sp.* (TBD)

**Beds 7**  
*Asparagus officinalis*, Asparagus  
*Rheum x cultorum*, Rhubarb

## Cultural Landscape Report for Glenmont

### Thomas Edison National Historical Park

West Orange, New Jersey

### Vegetable Garden Treatment



National Park Service  
**Olmsted Center for Landscape Preservation**  
[www.nps.gov/olcp](http://www.nps.gov/olcp)



#### SOURCES

- CLR period plans and existing conditions plan
- Site visits, April and July 2009

#### DRAWN BY

Michael Comisso,  
 AutoCAD 2000 and  
 Illustrator CS3, 2009

#### NOTES

- All features shown in approximate scale and location.
- 

#### LEGEND

- Feature added
- Feature removed
- Building
- Paved, unpaved vehicular circulation
- Path or walk
- Lawn
- Groundcover or herbaceous bed
- Deciduous specimen tree, wooded area
- Evergreen/coniferous specimen tree/shrub
- Deciduous/broadleaf evergreen shrub
- Fence
- NPS Property Boundary
- 1' Contour
- Not to scale



# Cultural Landscape Report for Glenmont

## Thomas Edison National Historical Park

West Orange, New Jersey

### Service Area Treatment Plan



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

#### SOURCES

1. CLR existing conditions and analysis and evaluation plans.
2. Aerial photographs, 1995, 1997, 2007, and 2008.
3. Site visits, January, April, and July 2009.

#### DRAWN BY

Michael Commisso, AutoCAD 2000 and Illustrator CS 3, 2010

#### LEGEND

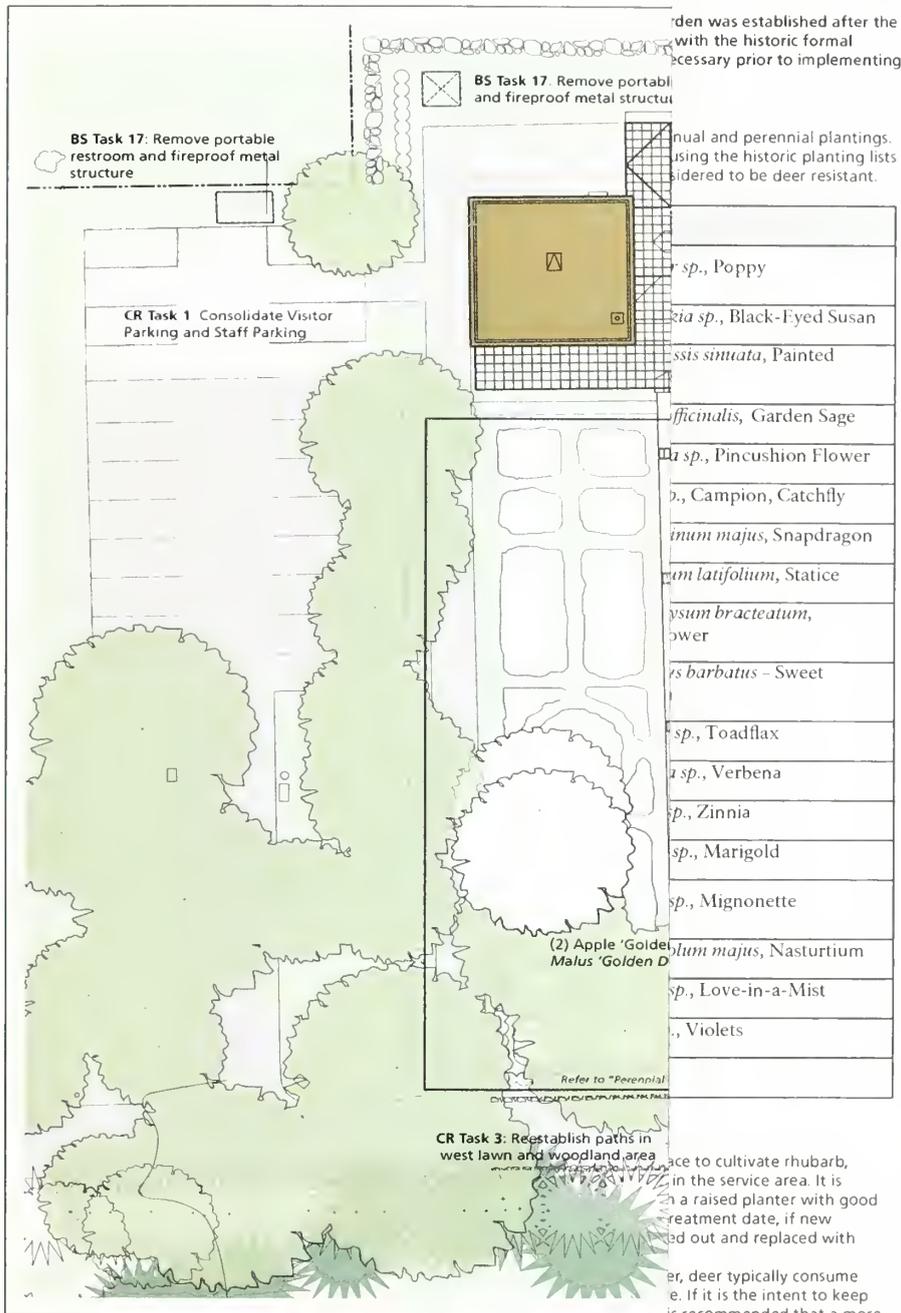
- Feature to add
- Feature to remove
- Building
- Paved, unpaved vehicular circulation
- Path or walk
- Lawn
- Groundcover or herbaceous bed
- Deciduous specimen tree, wooded area
- Evergreen/coniferous specimen tree or shrub
- Deciduous/broadleaf evergreen shrub
- Flagstone curbing
- Fence
- NPS Property Boundary
- 1' Contour

#### NOTES

1. Plan shows conditions in 2009
2. All features shown in approximate scale and location
3. Contours shown only in project area and not in Tilney Property
4. Trees and shrubs identified as "requiring treatment" will be replanted, unless noted otherwise
5. Plant information such as level of identification, the historical and botanical selection criteria, size, condition, and approximate age is detailed in the 1995 Historic Plant Inventory for Edison National Historic Site



Drawing 4.3



#### Recommended Plants for the Service Area

Vouchers and invoices dating between 1900 and 1905 indicate a number of plants grown at Glenmont [to be added]. Based on historic images and original

Bed 1 appears to historically have been a vegetable garden, with plantings similar to sunflowers in the bed. Since sunflowers (*Helianthus* spp.) is a plant frequently browsed by deer, the following plantings, similar in variety are recommended.

Bed 2, located adjacent to the greenhouse vegetable garden as stalked plants can be border composed of herbaceous material. Bed 3, located on the other side of the path of herbaceous plantings. The plantings in those of Bed 2.

Bed 1
<i>Rheum x cultorum</i> , Rhubarb
<i>Anethum graveolens</i> , Common Dill
<i>Capsicum annuum</i> , Hot peppers
<i>Cucumis sativus</i> , Cucumber
<i>Solanum melongena</i> , Eggplant
<i>Ocimum basilicum</i> , Basil
<i>Borago officinalis</i> , Borage

Bed 2 and 3	
Suggestions for herbaceous edging	Sm, Rhubarb
<i>Stachys byzantine</i> , Lamb's Ears	Sc
<i>Heuchera</i> spp., Coralbells	Atosa Rose
<i>Aquilegia</i> spp., Columbine	Ri
<i>Bergenia</i> spp., Bergenia	Pe
	Ahy
	La



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

SOURCES

1. CLR existing conditions and analysis and evaluation plans.
2. Aerial photographs, 1995, 1997, 2007, and 2008.
3. Site visits, January, April, and July 2009.

DRAWN BY

Michael Comisso, AutoCAD 2000 and Illustrator CS 3, 2010

LEGEND

- Feature to add
- Feature to remove
- Building
- Paved, unpaved vehicular circulation
- Path or walk
- Lawn
- Groundcover or herbaceous bed
- Deciduous specimen tree, wooded area
- Evergreen/coniferous specimen tree or shrub
- Deciduous/broadleaf evergreen shrub
- Flagstone curbing
- Fence
- NPS Property Boundary
- 1' Contour

NOTES

1. Plan shows conditions in 2009.
2. All features shown in approximate scale and location.
3. Contours shown only in project area and not in Tinley Property.
4. Trees and shrubs identified as "requiring treatment" will be replanted, unless noted otherwise.
5. Plant information such as level of identification, the historical and botanical selection criteria, size, condition, and approximate age is detailed in the 1995 Historic Plant Inventory for Edison National Historic Site.



\*Perennial Garden: Since the current perennial garden was established after the historic period, it should be removed and replaced with the historic formal annual garden. However, additional research is necessary prior to implementing this treatment.

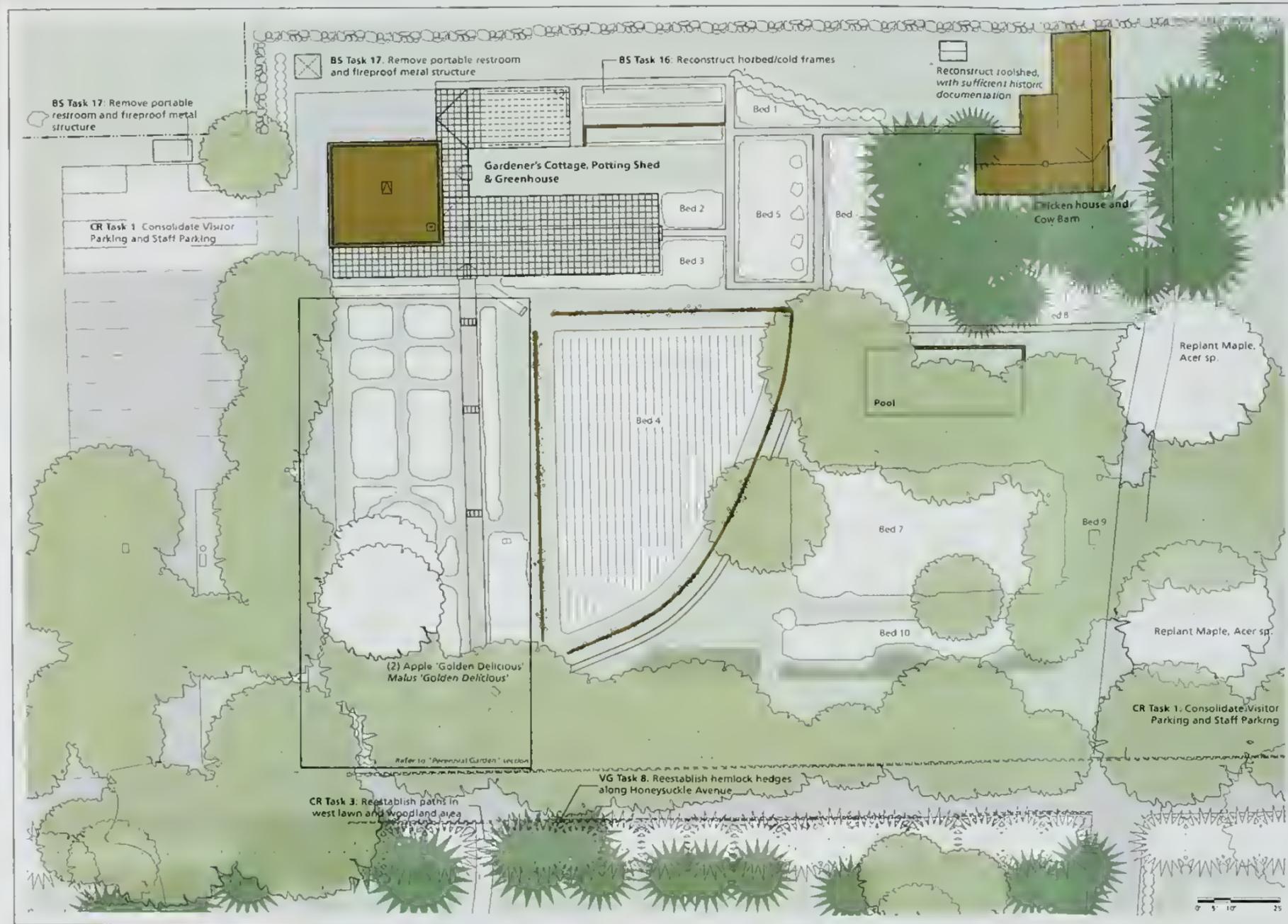
Bed 4 has historically been a cutting garden for annual and perennial plantings. The following list of plantings has been compiled using the historic planting lists and singling out those plantings that are now considered to be deer resistant.

Bed 4	
<i>Ageratum houstonianum</i> , Ageratum	<i>Papaver sp.</i> , Poppy
<i>Achusa capensis</i> , Forget-me-not	<i>Rudbeckia sp.</i> , Black-Eyed Susan
<i>Synphyotrichum sp.</i> , Aster	<i>Salpiglossis sumata</i> , Painted Tongue
<i>Gypsophila sp.</i> , Baby's Breath	<i>Salvia officinalis</i> , Garden Sage
<i>Calendula sp.</i> , Pot Marigold	<i>Scabiosa sp.</i> , Pincushion Flower
<i>Canna sp.</i> , Canna Lily	<i>Silex sp.</i> , Campion, Catchfly
<i>Celosia sp.</i> , Cock's Comb	<i>Antirrhinum majus</i> , Snapdragon
<i>Cerastium sp.</i> , Chickweed	<i>Limonium latifolium</i> , Statice
<i>Salvia sclarea</i> , Clary sage	<i>Helichrysum bracteatum</i> , Strawflower
<i>Cleome sp.</i> , Spider-flower	<i>Dianthus barbatus</i> - Sweet William
<i>Coreopsis sp.</i> , Tickseed	<i>Linaria sp.</i> , Toadflax
<i>Centaurea cyanus</i> , Cornflower	<i>Verbena sp.</i> , Verbena
<i>Delphinium sp.</i> , Larkspur	<i>Zinnia sp.</i> , Zinnia
<i>Dianthus sp.</i> , Dianthus, Pinks	<i>Tagetes sp.</i> , Marigold
<i>Gomphrena globosa</i> , Globe Amaranth	<i>Reseda sp.</i> , Mignonette
<i>Heliotropium sp.</i> , Heliotrope	<i>Tropaeolum majus</i> , Nasturtium
<i>Iris sp.</i> , Iris	<i>Nigella sp.</i> , Love-in-a-Mist
<i>Lobelia sp.</i> , Cardinal Flower	<i>Viola sp.</i> , Violets
<i>Lupinus sp.</i> , Lupine	

After the treatment date, Bed 8 was used as a place to cultivate rhubarb, which is in keeping with the other planting beds in the service area. It is recommended that these plantings be installed in a raised planter with good drainage. Since rhubarb was recorded after the treatment date, if new information arises, these plantings could be moved out and replaced with historical plantings.

Bed 9 was historically planted with roses. However, deer typically consume roses, creating problems with the planting palette. If it is the intent to keep the planter as historically accurate as possible, it is recommended that a more rugged rose, such as the *Rosa rugosa*, which puts off a clove-like scent and is extremely thorny, be planted. However, even this plant is not entirely deer resistant.

Bed 10 was historically described as containing strawberries and peas during Mrs. Edison's time on the property, although it later evolved into a peony garden. Since both pea and strawberry plants are often browsed by deer, it is recommended that the planting bed be planted with peonies, a more deer resistant planting.



Recommended Plants for the Service Area

Vouchers and invoices dating between 1900 and 1905 indicate a number of vegetables and flowers were grown in the vegetable garden and service area during the historic period (refer to Appendix XX: Historic Plants grown at Glenmont [to be added]). Based on historic images and oral histories, the service area included fruit trees, cutting garden, and a variety of vegetable and flower beds.

Bed 1 appears to historically have been a vegetable garden, with plantings similar to sunflowers in the bed. Since sunflowers (*Helianthus spp.*) is a plant frequently browsed by deer, the following plantings, similar in variety are recommended.

Bed 2, located adjacent to the greenhouse doors, appears to also have been some sort of vegetable garden as stalked plants can be seen in it. This bed is edged with a low-lying border composed of herbaceous material.

Bed 3, located on the other side of the pathway from Bed 2, also displays a similar edging of herbaceous plantings. The plantings in the center of this one are notably shorter than those of Bed 2.

Bed 5 appears to have been planted with a variety of low, mounding plantings. No stalks or discernable rows are visible, leading to the belief that it was not historically used for vegetative plants. The following plantings are suggested both for their low, mounding form and for their deer resistant qualities.

Bed 6 appears to have historically been a vegetable planting bed. The northeastern edge of the bed is lined with medium height shrubs, and the planting bed itself has planting in lines. It contains both staked, tall-growing plants, and low vine or herb plantings.

It is not known what was present in Bed 7 at the treatment period. However, in keeping with the tone of the nearby cutting garden and peony garden, herbaceous perennials would create a suitable feel for the planting bed.

Bed 1
<i>Rheum x cultorum</i> , Rhubarb
<i>Anethum graveolens</i> , Common Dill
<i>Capsicum annuum</i> , Hot peppers
<i>Cucumis sativus</i> , Cucumber
<i>Solanum melongena</i> , Eggplant
<i>Ocimum basilicum</i> , Basil
<i>Borago officinalis</i> , Borage

Bed 2 and 3	
<i>Suggestions for herbaceous edging</i>	<i>Suggestions for center plantings</i>
<i>Stachys byzantina</i> , Lamb's Ears	<i>Salvia spp.</i> , Sage
<i>Heuchera spp.</i> , Coralbells	<i>Allium spp.</i> , Onion
<i>Aquilegia spp.</i> , Columbine	<i>Rudbeckia spp.</i> , Coneflower
<i>Bergenia sp.</i> , Bergenia	<i>Perovskia atriplicifolia</i> , Russian Sage
	<i>Monarda sp.</i> , Beebalm
	<i>Lavandula angustifolia</i> , Common Lavender

Bed 5
<i>Arnica saxatilis</i> , Basket-of-gold
<i>Buddleia sp.</i> , Butterfly Bush
<i>Euphorbia polychrome</i> , Cushion Spurge
<i>Melissa sp.</i> , Lemon Balm

Bed 6
<i>Asparagus officinalis</i> , Asparagus
<i>Rheum x cultorum</i> , Rhubarb
<i>Capsicum annuum</i> , Hot peppers
<i>Solanum melongena</i> , Eggplant
<i>Ocimum basilicum</i> , Basil
<i>Tropaeolum majus</i> , Nasturtium
<i>Cucumis sativus</i> , Cucumber

Bed 7
<i>Echinacea purpurea</i> , Purple Coneflower
<i>Rudbeckia spp.</i> , Black-Eyed-Susan
<i>Anemone x hybrid</i> , Japanese anemone
<i>Coreopsis verticillata</i> , Threadleaf coreopsis
<i>Perovskia atriplicifolia</i> , Russian Sage
<i>Digitalis spp.</i> , Foxglove
<i>Lavandula angustifolia</i> , Common Lavender

Bed 8
<i>Rheum x cultorum</i> , Rhubarb
Bed 9
<i>Rosa rugosa</i> , Rugosa Rose
<i>Rosa sp.</i> (TBD)
Bed 10
<i>Paeonia sp.</i> , Peony

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## REPORTS

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Yocum, Barbara A. *The House at Glenmont, Historic Structure Report, Edison National Historic Site, West Orange, New Jersey, Volumes I and II*. Lowell, MA: U.S. Department of the Interior, Building Conservation Branch, Cultural Resources Center, 1998.

## **INTERVIEWS, NOTES, AND CORRESPONDENCE**

Oral History, Arthur Spiegler and C. Thore Hallstrom, at Glenmont, 22 October 1965.

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## **DEEDS AND LEGISLATION**

Essex County Registry of Deeds, Books 3653 and Z107.

Secretarial Order F.R. 9347, Presidential Proclamation 3148 and P. L. 87-628.

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## COLLECTIONS AND REPOSITORIES

### National Park Service Repositories

#### Thomas Edison National Historical Park Archives

- Photo Albums: 5 (Cat # 14,061), 7 (Cat #14,047, Mina Album, 1890-1910), 11 (Cat. #14,238, Wedding, 1914) , 17 (Cat #14,066, 1914-1915), 49 (No Cat #, 1960), 50 (No Cat #, Glenmont Dedication, 1959), 113 (1914)
- Mina Miller Edison Papers, 1877-1947.
- Edison Family Papers, 1867-1950 (1951-1977): Series I, Boxes 1-8, 11, 15, Series II, Boxes 21,22,23, and 26
- Vouchers and Other Financial Documents, 1875-1941: Series 6 Mrs. Thomas A. Edison Vouchers, 1886-1941. Boxes 24, 26, 27,
- Charles Edison Fund Collection, 1873-1987, Boxes 1, 2, 3, 4-9, 12, 21, 22, 27
- Edison General Files. (Specific Files include Edison, TA-General, Edison, T.A-Real Estate, and Edison, T.A.-Glenmont). Edison General File, 1901 , Box 2 (no Glenmont folder); Edison General File, 1902, Box 2 (no Glenmont folder);, Edison General File, 1903, Box 2 (no Glenmont folder); Edison General File, 1904; Edison General File, 1905; Edison General File, 1906 Box 2-Glenmont folder Edison General File, Edison General File, 1907 Box 6-Glenmont folder ; Edison General File, 1908 Box 10-Glenmont folder; Edison General File, 1909 Box 6-Glenmont folder;; Edison General File, 1911 Box 25-Glenmont folder; Edison General File, 1912 Box 21-Glenmont folder; Edison General File, 1913, Box 19-Glenmont folder; Edison General File, 1914, No Box # Glenmont folder; Edison General File, 1915, Box 33-Glenmont folder; Edison General File, 1916, Box 22- Glenmont folder

Denver Service Center, Technical Information Center

Cultural Landscape Inventory

List of Classified Structures Database

National Register Information System

Historic American Buildings Survey (HABS)

ASMIS Data

### **Other Repositories**

National Archives and Records Administration

Rutgers, State University of New Jersey, Special Collections and University Archives

Edison Papers, Rutgers, the State University of New Jersey

- Digital Edition [Edison National Historic Site Archives: Part I (1850-1878), Part II (1879-1886), Part III (1887-1898), Part IV (1899-1910), Part V (1911-1919), and Part VI (1920-1931).
- Book Edition Volumes 1-6

The Chautauqua Institution Archives

The Catalog of Landscape Records [formerly the Wave Hill Catalog of Landscape records], The New York Botanical Garden

New Jersey Historical Society, Newark NJ

New Jersey Department of Environmental Protection

Essex County Registry of Deeds

NJ Geographic Information Network (NJGIN), New Jersey Office of Information Technology, Office of GIS.

Library of Congress

- Olmsted Associates Records, Manuscript Division, Library of Congress

National Union of Catalog Manuscripts (NUCMC)

Llewellyn Park Archives

- Cabinet File "16 Glen Ave"
- Box "Landscapes"
- Box "Photo-Houses #3"
- Box "Photo-Residences #2"
- Box "Photo-Residences #4"
- Box "1870 L.P. Photographs #1"

- Box "Atlases"
- Boxes (2) "150<sup>th</sup> Anniversary"
- Box "Ladies Association Minutes and Socials"
- Box "L.P. Preservation Foundation"
- Box "Articles"
- Box "Postcards Stationary"
- Box "Social Circle"
- Box "Vintage Book keeping, 1900-1920"
- Box "Historical Business"
- Box "#7A Ladies Association"
- Box "LP Promotion Booklets"

Hagley Museum and Library

Cornell University, Library Division of Rare and Manuscript Collections

Newark Public Library, New Jersey Room

Township of West Orange, New Jersey

West Orange Public Library

American Society of Landscape Architecture

Essex County Parks Commission

Pelham, New York Historical Society

Town of Pelham, New York

Boston Public Library, Boston, Massachusetts

College of New Rochelle, Gill Library

Palisades Inter-State Park Commission

New York Public Library, Humanities and Social Sciences Library, Manuscripts and Archives Division

- Alexander Jackson Davis Papers (1803-1892), Call No. 114

New York Historical Society

- J. Davis papers, 1 vol., 1 folder, miscellaneous papers and a volume of Davis genealogy, poetry and watercolor drawings.

Metropolitan Museum of Art

- A.J. Davis Papers, correspondence, sketchbooks, notebooks, professional diary and miscellany

Winterthur Library, The Joseph Downs Collection of Manuscripts and Printed Ephemera

- Alexander Jackson Davis Papers (1803-1892), Call No. 114.

Avery Memorial Architectural Library of Columbia University (Rare Books Collection and Drawings).

- AJ. Davis Papers, 1830-1870, c 1600 items; correspondence, daybook, drawings, engravings, contracts, clippings, and miscellaneous materials

Iona College, Ryan Library and Helen T. Arrigoni Library and Technology Center

City of New Rochelle, New York

Town of Stamford,

Harvard University Graduate School of Design, Frances Loeb Library

David Rumsey Collection

New Jersey State Historic Preservation Office, New Jersey

New Jersey Library, Trenton, New Jersey

New Jersey State Museum

New Jersey Department of Transportation

Phillips Library, Peabody Essex Museum, Salem, MA

- Manuscript Collection, Ernest Bowditch Collection #3/1980, Two Bound Volumes. Volume 2, Box 2, Correspondence EWB [Ernest W. Bowditch] to MSB [Margaret Swann Bowditch]. (Box 2, 10 Folders).
- Vol. 2, Box 2, F-3, contained letter from Ernest W. Bowditch to Margaret Swann Bowditch, July 7, 1907.

Aerial Viewpoint, Spring Texas

Map Mart, Greenwood Village, Colorado

Larson Fisher Associates, Woodstock, New York



## **APPENDIX A: HISTORIC PLANT NURSERY SUPPLIERS FOR GLENMONT**

**The majority of plants used at Glenmont were acquired at the following nurseries.**

- Peter Henderson & Co., Seedsmen and Florists, 35 & 37 Cortlandt Street, New York
- Bobbink & Atkins, Nurserymen, Florists & Importers, Rutherford, New Jersey
- Weeber & Don, Seed Merchants & Growers, 114 Chambers Street, New York
- James Veitch & Sons, Nursery and Seedsmen, Royal Exotic Nursery, King's Road, Chelsea, England
- S.M. Japanese Nursery Co., Importers and Dealers in Rare Japanese Plants, Bulbs, and Seeds, 191 Valley Road near Park Avenue, West Orange, New Jersey
- F.W. Massmann, Seeds, Flowering and Decorative Plants, 557 Main Street, Brick Church, New Jersey
- George Smith, Successor to F.W. Massmann, 557 Main Street, East Orange, New Jersey
- W.E. Marshall & Co., Seeds, Plants, Bulbs, 166 West 23<sup>rd</sup> Street, New York.
- Wm. F. Bassett, Nurseries, Hammonton, New Jersey
- J.H. Troy, Mount Hissarlik Nursery, New Rochelle, New York
- New Jersey & Long Island Nurseries, Jersey City, New Jersey
- United States Nurseries, Pitcher & Manda, Nurserymen, Seedsmen, and Florists, Short Hills, N.J.
- Joseph A. Manda, orchid Expert, Seedsman and Florist, 191 Valley Road, West Orange, New Jersey
- John N. May, Rose Grower, etc., Summit, Union County, New Jersey
- Henry A. Dreer, Seedsmen and Florists, 714 Chestnut Street, Philadelphia, Pennsylvania
- Wholesale Nurserymen's Special Agency, Hartford Building, Jersey City, New Jersey
- Charlton Nursery Company, Importers, Growers, Landscape Gardeners, University Ave., Rochester, New York
- F.R. Pierson Co., Importers, Growers, Landscape Gardeners, University Ave., Rochester, New York
- Richard Purdue, Seedsman and Florist, 373 Main Street, near Arlington Avenue, East Orange, New Jersey
- George Purdue, Successor to Richard Purdue, Seedsman and Florist, 373 Main Street, near Arlington Avenue, East Orange, New Jersey
- Chester Jay Hunt, Holland Spring-Flowering Bulbs, Montclair, New Jersey



**APPENDIX B: MINA MILLER EDISON'S GARDEN BOOKS**

**The following books are located on the second floor family living room at Glenmont, the Edison family house.**

Blanchan, Neltje. *Nature's Garden: An Aid to Knowledge of our Wild Flowers and their Insect Visitors*. Garden City, New York: The Country Life Press, 1900. (EDIS 112564)

Blanchan, Neltje. *The American Flower Garden*. Garden City, New York: Doubleday, Page, and Company, 1909. (EDIS 112579)

Fabre, J.H. *The Wonder of Plant Life*. Philadelphia: J.B. Lippincott Company. 1924. (EDIS 112812)

Mathews, F. Schuyler. *The Book of Wild Flowers for Young People*. New York: Knickerbocker Press, 1923. (EDIS 112517)

Saunders, Elisabeth Hallowell. *California Wild Flowers*. Published privately by E.H. Saunders, 1905. (EDIS 108793)

Balthis, Frank K. *Plants in the Home*. New York: The Macmillan Company, 1944. (EDIS 112321)

Teshigawara, Sofu. *Selected Arrangements of Moribana and Heikwa, Vol. III*. Japan: Yamanaka and Company, 1934. (EDIS 112646)

Hine, Mrs. Walter R. *New Flower Arrangements, Vol. I-III*. New York: Charles Scribner's Sons, 1936. (EDIS 104993-995)

Moribana. *Selected Flower Arrangements of the Ohara School*. Japan: Yamanaka and Company, Hine, No copyright date. (EDIS 112637)

Stevens, Glendon A. *Garden Flowers in Color: A Picture Cyclopeda*. New York: Macmillan Company, 1934. (EDIS 112644)

Blanchan, Neltje. *Nature's Garden*. Garden City, New York: Doubleday, Page, and Company, 1907. (EDIS 112564)

Nichols, Rose Standish. *English Pleasure Gardens*. New York: The MacMillan Company, 1902. (EDIS 112569)

Singleton, Esther. *The Shakespeare Garden*. New York: William Farquhar Payson Publishing, 1931. (EDIS 112643)

- King, Francis. *The Little Garden*. Boston, Massachusetts: The Atlantic Monthly Press, 1921. (EDIS 112512)
- Lewis, Albert Addison. *Boxwood Gardens: Old and New*. Virginia: The William Byrd Press, Inc., 1924. (EDIS 112575)
- Caldwell, Margaret Winston. *Your Garden and Mine*. Tennessee: Southern Women's Magazine, 1914. (EDIS 112575)
- McCauley, Lena May. *The Joy of Gardens*. Chicago/New York: Rand McNally and Company, 1911. (EDIS 112674)
- McKenny, Margaret. *The Wild Garden*. New York: Doubleday, Doran, and Company, Inc., 1936. (EDIS 112518)
- Stevens, Glendon A. *Climbing Roses*. New York: The Macmillan Company, 1933. (EDIS 112524)
- Sconce, Harvey J. *The Romance of Everifarm*. New York: The Macmillan and Company, 1922. (EDIS 112523)
- The American Rose Society. *The American Rose Annual 1931: The 1931 Year-book of Rose Progress*. New York: The American Rose Society, 1931. (EDIS 112519)
- Wilder, Louise Beebe. *My Garden*. New York: Doubleday, Page and Company, 1916. (EDIS 112071)
- Sheckell, Thomas O. *Trees*. New York: Frederick A. Stokes Company, 1936. (EDIS 112642)
- Otis, Charles Herbert. *Michigan Trees*. Regents of the University of Michigan Ann Arbor, 1925. (EDIS 112522)
- Baker, Richard St. Baker. *Men of Trees in the Mahogany Forests of Kenya and Nigeria*. New York: The Dial Press, 1931. (EDIS 112635)
- Miyoshi, Manabu. *Sakura Japanese Cherry*. Japan: Board of Tourist Industry, Japanese Government Railways, 1934.

## APPENDIX C-HISTORIC MACADAM PAVEMENT, CRUSHED STONE AGGREGATE SPECIFICATIONS

The information is included to assist the park in the treatment of the main and secondary drives at Glenmont. The following specifications were used for the rehabilitation of the Carriage Roads at Acadia National Park. :

### CRUSHED AGGREGATE SURFACE COURSE MATERIAL (HALF INCH MINUS)

- Aggregate shall consist of hard, durable particles or fragments of crushed stone or gravel conforming to the following requirements and gradations:

Los Angles abrasion, ASTM C 131 and C 535 .....	50% max.*
Fractured faces (one face) .....	95% min.*
Fracture faces (two faces) .....	75% min.*
Soundness loss, 5 cycles, ASTM C 88 (magnesium) .....	18% max.*
Flat/Elongated (length to width >5 ASTM D4791 .....	15% max.*

\* Based on the portion retained on the 3/8" 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% clay particles by no more than 50% 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%
Liquid Limit .....	30 min.
Plastic Index .....	8 min.

- The fraction of material passing the No. 200 sieve size 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% 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.

6. Gradation shall be obtained by crushing, screening, and blending processes as may be necessary. Material shall meet following screen analysis requirements by weight.

Sieve Designation	Percent Passing
1/2"	100%
3/8"	90-100%
No. 4	60-81%
No. 8	44-60%
No. 40	20-33%
No. 200	10-16%

**CRUSHED STONE AGGREGATE (INCH MINUS)**

7. Material shall be composed of clean, hard, durable fragments or particles of crushed stone or natural gravel. Material shall be free from organic matter and lumps or balls of clay.
8. Material shall have 50% minimum fractured faces per FLH T 507.
9. Obtain the aggregate gradation by crushing, screening, and blending processes as necessary. Fine aggregate, material passing the no. 4 sieve, shall consist of natural or crushed sand and fine mineral particles.
10. Material shall meet following screen analysis requirements by weight.

Sieve Designation	Percent Passing
1 inch	100%
3/4 inch	97 - 100%
3/8 inch	67 - 79%
No. 4	47 - 59%
No. 40	12 - 21%
No. 200	6 - 10%

**BLOWN LEDGE**

11. Material shall be composed of clean, hard, durable fragments of crushed or blasted stone. Material shall be free from organic matter and lumps or balls of clay.

12. 100% of the material shall have at least two fractured faces.
13. Gradation shall be obtained by crushing, screening, and blending processes as may be necessary. Material shall meet following screen analysis requirements by weight.

Sieve Designation	Percent Passing
6"	100%
2"	5%

14. Government reserves the right to approve blown ledge based on visual inspection.



## **APPENDIX D-TECHNICAL PROVISIONS FOR ACCESSIBLE TRAILS**

**Excerpts from the National Center on Accessibility, "What is an Accessible Trail?" *Access Today*, Special Volume, Issue 8 (Fall 2002), online at: <http://ncaonline.org>; These guidelines are presently being proposed in the Americans with Disabilities Act Accessibility Guidelines (ADAAG) as "Accessibility Guidelines for Outdoor Developed Areas," published in the Federal Register, 20 June 2007 (36 CFR Part 1195).**

An accessible trail is a trail that is accessible to and usable by people with disabilities. Accessible trails are identified as meeting minimum guidelines established by the U. S. Access Board. The Access Board is the Federal agency responsible for creating guidelines and standards for accessible environments. After an Advanced Notice of Proposed Rulemaking that drew input across the spectrum of outdoor facilities a Regulatory Negotiations Committee was created by the Access Board to come to consensus on technical provisions for accessibility in outdoor areas. Currently, The Access Board is preparing a Notice of Proposed Rule based on the Regulatory Negotiation Committee's report. The proposed rule, once published, will be available for public comment, issued as a final rule and then adopted by the Department of Justice. During the process of the guidelines being issued and adopted, facilities need to use the "best available information." For outdoor environments, the current best available information is the Outdoor Developed Areas Final Report. The remainder of this technical assistance paper will draw from the Regulatory Negotiation Committee's Final Report: Recommendations for Accessibility Guidelines-Outdoor Developed Areas (September 1999).

### **ACCESSIBLE ROUTES, OUTDOOR ACCESS ROUTES, AND TRAILS**

Accessible routes, outdoor access routes, and trails are all paths that have varying requirements based on their purpose, what they connect to and the environment they fall within. [Note: Access Route is the primarily access to the site/building as defined by the Americans with Disabilities Act Accessibility Guidelines (ADAAG); Outdoor Access Route is a second-tier route; and Trail is a third-tier route.] The following table identifies the technical provisions as they apply to each of the different route types.

**TABLE 1.0: ACCESSIBLE CIRCULATION SPECIFICATIONS**

	Access Route (ADAAG)	Outdoor Access Route	Trail
Surface	Stable, firm, Slip resistant	Firm and Stable	Firm and Stable <i>Exception*</i>
Max Running Slope	1: 12	1: 20 (for any distance) 1: 12 (for max 50 ft) 1: 10 (for max 30 ft)	1: 20 (for any distance) 1: 12 (for max 200 ft) 1: 10 (for max 30 ft) 1: 8 ( for max 10 ft) <i>Exception- 1: 7 (for 5 ft max for open drainage structures)</i> <i>Exception*</i>
Max Cross Slope	1: 50	1: 33 <i>Exception- 1: 20 (for drainage purposes)</i>	1: 20 <i>Exception- 1: 10 (at the bottom of an open drain where clear tread width is a min of 42 inches)</i>
Min Clear Tread Width	36 inches 32 inches (for no more than 24 inches)	36 inches <i>Exception- 32 inches when * applies</i>	36 inches for any distance <i>Exception- 32 inches when * applies.</i>
Edge Protection	Where provided, min of 2 inches.  (Changes in Level)	Where provided, min of 3 inches.	Where provided, 3 inches min.
Tread Obstacles	1/4 inch (no beveled edge) 1/4 - 1/2 inch must have a beveled edge  with a max slope of 1: 2. Over 1/2 inch= ramp.	1 inch high max <i>Exception- 2 inches high max (where beveled with a slope no greater than 1: 2 and where * applies.)</i>	2 inches high max <i>Exception- 3 inches max (where running and cross slopes are 1: 20 or less)</i>  <i>Exception*</i>
Passing Space	Every 200 feet where clear tread width is less than 60 inches, a minimum 60 X 60 inch space, or a t-shaped intersection of two walks or corridors with arms and stem extending min of 48 inches.	Every 200 feet where clear tread width is less than 60 inches, a minimum 60 X 60 inch space, or a t-shaped intersection of two walking surfaces with arms and stem extending min of 48 inches. <i>Exception- every 300 feet where * applies.</i>	Every 1000 feet where clear tread width is less than 60 inches, a 60 X 60 inch min passing space or a t-shaped intersection of two walking surfaces with arms and stem extending min of 48 inches. <i>Exception*</i>
Resting Intervals	(Landings) 60 inch min length, min width as wide as the ramp run leading to it, if change in direction occurs, must have 60 X 60 inch space.	60 inches min length, width at least as wide as the widest portion of the trail segment leading to the resting interval and a max slope of 1: 33 <i>Exception- a max slope of 1: 20 is allowed for drainage purposes.</i>	60 inches min length, width at least as wide as the widest portion of the trail segment leading to the resting interval and a maximum slope of 1: 20. <i>Exception*</i>

\* (16.1.1 Conditions for Departure) The provision may not apply if it cannot be provided because compliance would cause substantial harm to cultural, historic, religious or significant natural features or characteristics; substantially alter the nature of the setting or purpose of the facility; require construction methods or materials that are prohibited by Federal, state or local regulations or statutes; or would not be feasible due to terrain or the prevailing construction practices.

## **Technical Provisions**

The Outdoor Developed Areas Final Report addresses ten provisions of trail accessibility:

### *Surface*

An accessible trail includes a route from accessible parking to the trailhead. Once on the trailhead, the first issue addressed is surface. The trail surface must be firm and stable. Firmness refers to the penetration of the surface that occurs when force is applied, for example when stepped on. Stability on the other hand, refers to the displacement of the surface when a turning motion is applied to the surface such as the twisting of a foot. In other words, firmness is a vertical measure of penetration and stability involves how much surface material shifts when rotated pressure is applied. Examples of firm and stable surfaces include concrete and asphalt. Soil stabilizers are sometimes used to make otherwise inaccessible surfaces more firm and/ or stable.

### *Clear Tread Width*

The next provision involves clear tread width, or the unobstructed width of the trail. The clear tread width of an accessible trail must be a minimum of 36 inches. This allows a wide enough area for a person using a wheelchair or scooter to comfortably stay on the firm and stable trail surface.

### *Openings*

The third guideline addresses openings in trail surfaces, such as spaces between the boards of a boardwalk. These spaces may not allow the passage of a sphere one-half inch in diameter. In addition, the long dimension must run perpendicular or diagonal to the main direction of travel preventing casters from wheelchairs, or tips of canes from being caught in the spaces.

### *Protruding Objects*

The fourth requirement addresses the needs of people who are visually impaired. Protruding objects are required to allow a minimum of 80 inches clear headroom space above the trail. In other words, any protruding objects, including vegetation, must be above a minimum of eighty inches from the ground. This space prevents people who are blind from bumping their heads on tree branches or other objects hanging above the trail. Simple maintenance of trails is often the solution to preventing accessibility issues resulting from protruding objects.

### *Tread Obstacles*

The fifth aspect of the guidelines addresses tread obstacles. Examples of tread obstacles include tree roots, rocks, brush, downed trees or branches projecting from the trail. Tread obstacles cannot exceed a maximum height of two inches.

An exception occurs if running and cross slopes are 1: 20 or less, then the obstacle may be three inches in height.

#### *Passing Space*

The sixth technical provision, passing space, allows people who use wheelchairs to pass other hikers easily. Passing spaces need to be a minimum of 60 X 60 inches and occur at 1,000 foot intervals when the clear tread width of the trail is less than 60 inches. An alternative is a T-shaped space providing the arms and stem extend at least 48 inches beyond the intersection. The T-shape still needs to occur every 1,000 feet, whenever possible, the 60 X 60 space should be utilized to offer a more convenient way for people to pass one another.

#### *Slope*

The seventh provision addresses two slopes that are crucial elements to people with mobility impairments— running slope and cross slope. With the exception for drainage, the cross slope of an accessible trail should be less than 1: 20. In addition, running slopes must comply with one or more of four provisions with no more than 30 percent of the total trail length exceeding 1: 12.

The four provisions are as follows:

Running slope cannot exceed 1: 20 for any distance.

If resting intervals are provided every 200 feet, the running slope may be a maximum of 1: 12.

If resting intervals are provided every 30 feet, the running slope may be a maximum of 1: 10.

If resting intervals are provided every 10 feet, the running slope may be a maximum of 1: 8.

#### *Resting Intervals*

Provision eight addresses resting intervals. Resting intervals must be 60 inches minimum in length, and have a width as wide as the widest portion of the trail segment leading to the resting interval. The slope may not exceed 1: 20 in any direction.

#### *Edge Protection*

The ninth guideline regarding edge protection states edge protection is not necessarily required, however where it is provided, it must have a minimum height of 3 inches.

### Signage

Signage is the final aspect addressed in the Final Report. Accessible trails should include signage with information on the total distance of the accessible segment and the location of the first point of departure from the technical provisions. Although no specific symbol has been chosen to represent an accessible trail one of the four examples displayed here may be utilized.

### Conditions for Departure

Due to the dynamic nature of the outdoor environment, the Outdoor Developed Areas Final Report identifies four conditions for departure or circumstances that allow deviation from the technical provisions. These conditions apply to each of the designated areas in the report. The application of one or more of the conditions is not an overall exemption of the entire trail. When the condition for departure no longer exists, the technical provisions re-apply. The exemption only applies to the respective technical provision, all other aspects should comply. For example, if an endangered plant species only allows 30 inches of clear tread width, the surface should still be firm and stable in addition to compliance with the remaining provisions other than clear tread width. After passing the plant the clear tread width should return to at least 36 inches. The conditions for departure are:

#### *Condition 1*

Where compliance would cause substantial harm to cultural, historic, religious, or significant natural features or characteristics.

Examples of cultural features include such areas as archaeological sites, burial grounds or Indian tribal protected sites. Historic features include properties such as those listed or eligible for the National Register of Historic Places. Examples of religious features include Indian sacred sites and other properties designated or held sacred by an organized religious belief or church. Natural features include properties such as those protected by Federal or State laws and areas with threatened or endangered species.

#### *Condition 2*

Where compliance would substantially alter the nature of the setting or the purpose of the facility, or portion of the facility.

This condition addresses concerns relating to people who choose to recreate in an outdoor setting for a higher degree of challenge and risk. If the designed purpose of the trail were a cross-country training trail, accessibility would interfere with the intended experience.

*Condition 3*

Where compliance would require construction methods or materials that are prohibited by Federal, State or local regulations or statutes.

For example, mechanized equipment may be restricted in State designated wilderness areas, or the introduction of imported materials may be prohibited in order to maintain the natural ecosystem. Although State and local statutes are taken into consideration, new regulations may not be initiated to prevent compliance.

*Condition 4*

Where compliance would not be feasible due to terrain or the prevailing construction practices.

If typically a team of volunteers with hand tools does alterations, there is not an expectation of bringing a bulldozer in to establish a new trail. In addition, this condition applies to soils susceptible to erosion, interfering with the natural drainage, and other issues related to the natural terrain.

## APPENDIX E: LIST OF HISTORICALLY APPROPRIATE PLANTINGS AND RESISTANCE TO DEER DAMAGE

The following is a list of plants known to have been grown at Glenmont during the historic period from 1857 (establishment of Llewellyn Park) to 1931 (date of Thomas Edison's death). This list was compiled from the "Glenmont Voucher Series, 1886-1915," collection located within the Thomas Edison National Historical Park Archives.

<b>LIST OF HISTORICALLY APPROPRIATE PLANTINGS AND RESISTANCE TO DEER DAMAGE</b>		
Species (Latin name, common name)	Deer Resistance (Rarely Damaged, Seldom Severely Damaged, Occasionally Severely Damaged)	Notes
<b>Trees</b>		
<i>Abies nordmanniana</i> , Nordmann's Fir	Seldom Severely Damaged	
<i>Acer palmatum</i> , Japanese Maple	Seldom Severely Damaged	
<i>Acer palmatum</i> 'Atropurpureum Group', Red Leaf Japanese Maple	Seldom Severely Damaged	
<i>Acer palmatum</i> 'Atropurpureum Dissectum', Dissected Leaf Japanese Maple	Seldom Severely Damaged	
<i>Acer platanoides</i> , Norway Maple	Occasionally Severely Damaged	Invasive, substitute desired
<i>Acer platanoides</i> 'Schwedleri' Schwedler's, Norway Maple	Occasionally Severely Damaged	
<i>Acer pseudoplatanus</i> , Sycamore Maple	Seldom Severely Damaged	
<i>Acer rubrum</i> , Red Maple	Seldom Severely Damaged	
<i>Acer saccharum</i> , Sugar Maple	Seldom Severely Damaged	
<i>Acer saccharinum</i> , Silver Maple	Occasionally Severely Damaged	
<i>Acer species</i> , Maple	Occasionally Severely Damaged	

<i>Aesculus hippocastanum</i> , Horsechestnut	Occasionally Severely Damaged	
<i>Aesculus octandra f. virginica</i> , Sweet Buckeye	Occasionally Severely Damaged	
<i>Aesculus species</i> , Ohio Buckeye Chestnut	Occasionally Severely Damaged	
<i>Berberis thunbergii</i> , Japanese Barberry	Rarely Damaged	
<i>Betula alleghaniensis</i> , Yellow Birch	Seldom Severely Damaged	
<i>Betula lenta</i> , Sweet Birch	Seldom Severely Damaged	
<i>Betula papyrifera</i> , Paper Birch	Rarely Damaged	
<i>Betula species</i> , Birch	Seldom Severely Damaged	
<i>Carya glabra</i> , Pignut Hickory	Occasionally Severely Damaged	
<i>Carya ovate</i> , Shagbark Hickory	Occasionally Severely Damaged	
<i>Carya species</i> , Hickory	Occasionally Severely Damaged	
<i>Carya texana</i> , Black Hickory	Occasionally Severely Damaged	
<i>Carya tomentosa</i> , Mockernut	Occasionally Severely Damaged	
<i>Castanea mollissima</i> , Chinese Chestnut	Occasionally Severely Damaged	
<i>Celtis occidentalis</i> , Hackberry	Seldom Severely Damaged	
<i>Chamaecyparis pisifera</i> , Sawara False Cypress	Seldom Severely Damaged	
<i>Chamaecyparis pisifera 'Filifera'</i> , Thread Sawara False Cypress	Seldom Severely Damaged	
<i>Chamaecyparis pisifera 'Squarrosa'</i> , Moss Sawara False Cypress	Seldom Severely Damaged	

<i>Chionanthus virginicus</i> , White Fringetree	Occasionally Severely Damaged	
<i>Cladrastis kentukea</i> , American Yellowwood	Seldom Severely Damaged	
<i>Clethra barbinervis</i> , Japanese Clethra	Seldom Severely Damaged	
<i>Corylus americana</i> , American Filbert	Occasionally Severely Damaged	
<i>Cornus florida</i> , Flowering Dogwood	Seldom Severely Damaged	
<i>Cornus florida</i> 'Rubra', Pink Flowering Dogwood	Seldom Severely Damaged	
<i>Cornus mas</i> , Cornelian-cherry	Occasionally Severely Damaged	
<i>Corylus maxima f. purpurea</i> , Giant Filbert	Occasionally Severely Damaged	
<i>Cornus species</i> , Dogwood	Occasionally Severely Damaged	
<i>Fagus grandifolia</i> , American Beech	Seldom Severely Damaged	
<i>Fagus species</i> , Beech species	Seldom Severely Damaged	
<i>Fagus sylvatica</i> 'Cuprea', Copper Beech	Seldom Severely Damaged	
<i>Fagus sylvatica</i> 'Lacinata', Cutleaf Beech	Seldom Severely Damaged	
<i>Fagus sylvatica</i> 'Pendula', Weeping Beech	Seldom Severely Damaged	
<i>Fagus sylvatica f. purpurea</i> , Purple European Beech	Seldom Severely Damaged	
<i>Fraxinus americana</i> , White Ash	Seldom Severely Damaged	
<i>Fraxinus ornus</i> , Flowering Ash	Seldom Severely Damaged	
<i>Fraxinus species</i> , Ash	Seldom Severely Damaged	

<i>Gleditsia triacanthos f. inermis</i> , Thornless Honey Locust	Seldom Severely Damaged	
<i>Halesia tetraptera</i> , Carolina Silverbell	Seldom Severely Damaged	
<i>Juglans cinerea</i> , Butternut	Seldom Severely Damaged	
<i>Juglans nigra</i> , Black Walnut	Seldom Severely Damaged	
<i>Liriodendron tulipifera</i> , Tulip Tree	Seldom Severely Damaged	
<i>Magnolia acuminata</i> , Cucumber Magnolia	Seldom Severely Damaged	
<i>Magnolia x soulangeana</i> , Saucer Magnolia	Seldom Severely Damaged	
<i>Magnolia stellata</i> , Star Magnolia	Seldom Severely Damaged	
<i>Magnolia tripetala</i> , Umbrella Magnolia	Seldom Severely Damaged	
<i>Magnolia virginiana</i> , Sweet Bay Magnolia	Seldom Severely Damaged	
<i>Malus baccata</i> , Siberian Crab Apple	Occasionally Severely Damaged	
<i>Malus</i> 'Golden Delicious', 'Golden Delicious' Apple	Occasionally Severely Damaged	
<i>Malus</i> 'Grimes Golden', 'Grimes Golden' Apple	Occasionally Severely Damaged	
<i>Malus</i> 'Northwest Greening', 'Northwest Greening' Apple	Occasionally Severely Damaged	
<i>Malus prunifolia var. rinkii</i> , Chinese Pearleaf Crab Apple	Occasionally Severely Damaged	
<i>Malus pumila</i> , Apple	Occasionally Severely Damaged	
<i>Malus</i> 'Summer Rambo', 'Summer Rambo' Apple	Occasionally Severely Damaged	
<i>Morus alba</i> , White Mulberry	Occasionally Severely Damaged	

<i>Oxydendrum arboretum</i> , Sourwood	Seldom Severely Damaged	
<i>Paulownia tomentosa</i> , Royal Paulownia	Seldom Severely Damaged	Invasive
<i>Picea abies</i> , Norway Spruce	Seldom Severely Damaged	
<i>Picea abies</i> 'pendula', Weeping Spruce	Seldom Severely Damaged	
<i>Picea orientalis</i> , Japanese Spruce	Seldom Severely Damaged	
<i>Picea pungens</i> 'Glauca', Colorado Blue Spruce	Seldom Severely Damaged	
<i>Picea species</i> , Spruce	Seldom Severely Damaged	
<i>Pinus cembra</i> , Swiss Stone Pine	Seldom Severely Damaged	
<i>Pinus nigra</i> , Austrian Pine	Seldom Severely Damaged	
<i>Pinus strobes</i> , White Pine	Occasionally Severely Damaged	
<i>Platanus x acerifolia</i> , London Planetree	Seldom Severely Damaged	
<i>Platanus x hybrid</i> , Hybrid of London Planetree	Seldom Severely Damaged	
<i>Prunus cerasus</i> , Sour Cherry	Frequently Severely Damaged	
<i>Prunus species</i> , Cherry	Frequently Severely Damaged	
<i>Prunus subhirtella</i> var. <i>pendula</i> , Weeping Higan Cherry	Frequently Severely Damaged	
<i>Pseudolarix amabilis</i> , Golden Larch	Seldom Severely Damaged	
<i>Pseudotsuga menziesii</i> , Douglas Fir	Seldom Severely Damaged	
<i>Pyrus</i> 'Seekel', 'Seekel' Pear	Occasionally Severely Damaged	

<i>Pyrus species</i> , Pear	Occasionally Severely Damaged	
<i>Quercus alba</i> , White Oak	Occasionally Severely Damaged	
<i>Quercus macrocarpa</i> , Bur Oak	Occasionally Severely Damaged	
<i>Quercus michauxii</i> , Swamp Chestnut Oak	Seldom Severely Damaged	
<i>Quercus palustris</i> , Pin Oak	Seldom Severely Damaged	
<i>Quercus prinus</i> , Chestnut Oak	Seldom Severely Damaged	
<i>Quercus robur</i> , English Oak	Occasionally Severely Damaged	
<i>Quercus rubra</i> , Red Oak	Occasionally Severely Damaged	
<i>Quercus species</i> , Oak species	Seldom Severely Damaged	
<i>Quercus velutina</i> , Black Oak	Seldom Severely Damaged	
<i>Sassafras albidum</i> , Sassafras	Seldom Severely Damaged	
<i>Sorbus aucuparia</i> , European Mountain Ash	Frequently Damaged	
<i>Tilia americana</i> , American Linden	Occasionally Severely Damaged	
<i>Tilia cordata</i> , Littleleaf Linden	Occasionally Severely Damaged	
<i>Tilia species</i> , Linden	Occasionally Severely Damaged	
<i>Tilia tomentosa</i> , Silver Linden	Occasionally Severely Damaged	
<i>Tsuga canadensis</i> , Canadian Hemlock	Occasionally Severely Damaged	
<i>Tsuga canadensis</i> 'pendula', Weeping Hemlock	Occasionally Severely Damaged	

<i>Tsuga species</i> , Hemlock species	Occasionally Severely Damaged	
<i>Ulmus species</i> , Elm	Occasionally Severely Damaged	
<i>Viburnum dilatatum</i> , Linden Viburnum	Seldom Severely Damaged	
<i>Zelkova serrata</i> , Sawleaf Zelkova	Seldom Severely Damaged	
<b>Shrubs</b>		
<i>Calycanthus floridus</i> , Sweetshrub	Seldom Severely Damaged	
<i>Deutzia species</i> , Deutzia	Seldom Severely Damaged	
<i>Euonymus alata</i> , Winged Euonymus	Occasionally Severely Damaged	
<i>Forsythia species</i> , Forsythia	Seldom Severely Damaged	
<i>Hamamelis vernalis</i> , Common Witch Hazel	Seldom Severely Damaged	
<i>Hibiscus syriacus</i> , Rose of Sharon	Seldom Severely Damaged	
<i>Hydrangea paniculata</i> , Panicle Hydrangea	Occasionally Severely Damaged	
<i>Ilex crenata</i> 'Convexa', Japanese Holly	Occasionally Severely Damaged	
<i>Ilex opaca</i> , American Holly	Occasionally Severely Damaged	
<i>Ilex species</i> , Holly	Occasionally Severely Damaged	
<i>Juniperus chinensis</i> 'Columnaris', Columnar Juniper	Seldom Severely Damaged	
<i>Juniperus species</i> , Juniper	Seldom Severely Damaged	
<i>Juniperus virginiana</i> , Eastern Red cedar	Seldom Severely Damaged	

<i>Kalmia latifolia</i> , Mountain Laurel	Occasionally Severely Damaged	
<i>Ligustrum ovalifolium</i> , California Privet	Seldom Severely Damaged	
<i>Ligustrum species</i> , Privet	Seldom Severely Damaged	
<i>Philadelphus coronarius</i> , Mock Orange	Seldom Severely Damaged	
<i>Pieris floribunda</i> , Mountain Pieris	Rarely Damaged	
<i>Rhododendron catawbiense</i> , Catawba Rhododendron	Occasionally Severely Damaged – Frequently Severely Damaged	
<i>Rhododendron catawbiense</i> ‘Alba’, White Catawba Rhododendron	Occasionally Severely Damaged – Frequently Severely Damaged	
<i>Rhododendron catawbiense</i> ‘Roseum’, Pink Catawba Rhododendron	Occasionally Severely Damaged – Frequently Severely Damaged	
<i>Rhododendron calendulaceum</i> , Flame Azalea	Occasionally Severely Damaged – Frequently Severely Damaged	
<i>Rhododendron feiusianum</i> , Azalea	Occasionally Severely Damaged – Frequently Severely Damaged	
<i>Rhododendron species</i> , Rhododendron	Occasionally Severely Damaged- Frequently Severely Damaged	
<i>Rhododendron maximum</i> , Great laurel	Occasionally Severely Damaged	
<i>Rhododendron wellesleyanum</i> , Wellesley Rhododendron	Occasionally Severely Damaged – Frequently Severely Damaged	
<i>Robinia pseudoacacia</i> , Black Locust	Occasionally Severely Damaged	
<i>Rosa species</i> , Rose	Occasionally Severely Damaged	Varieties included standard roses
<i>Spiraea x bumalda</i> , Japanese Spirea	Seldom Severely Damaged	
<i>Spiraea species</i> , Spirea	Seldom Severely Damaged	
<i>Spiraea x vanhouttei</i> , Vanhoutte Spirea	Seldom Severely Damaged	

<i>Spiraea prunifolia</i> , Double Bridalwreath Spirea	Seldom Severely Damaged	
<i>Syringa vulgaris</i> , Common Lilac	Seldom Severely Damaged	
<i>Taxus cuspidate</i> , Japanese Yew	Frequently Severely Damaged	
<i>Taxus species</i> , Yew	Frequently Severely Damaged	
<i>Thuja occidentalis</i> , Arborvitae	Frequently Severely Damaged	
<i>Thuja plicata</i> , Giant Arborvitae	Frequently Severely Damaged	
<b>Vines</b>		
<i>Lonicera fragrantissima</i> , Winter Honeysuckle	Occasionally Severely Damaged	
<i>Lonicera maackii</i> , Amur Honeysuckle	Occasionally Severely Damaged	
<i>Parthenocissus tricuspidata</i> , Japanese Creeper	Occasionally Severely Damaged	
<i>Vitis species</i> , Grape	Occasionally Severely Damaged	
<i>Wisteria species</i> , Wisteria	Seldom Severely Damaged	
<b>Cutting Garden</b>		
<i>Ageratum houstonianum</i> , Ageratum	Rarely Damaged	
<i>Anchusa capensis</i> , Forget-me-not	Seldom Severely Damaged	
<i>Symphotrichum sp.</i> , Aster	Seldom Severely Damaged	
<i>Gypsophila sp.</i> , Baby's Breath	Seldom Severely Damaged	
<i>Impatiens balsamina</i> , Balsam	Occasionally Severely Damaged	

<i>Calceolaria sp.</i> , Slipper Flower	Occasionally Severely Damaged	
<i>Calendula sp.</i> , Pot Marigold	Rarely Damaged	
<i>Campanula sp.</i> , Bellflower	Occasionally Severely Damaged	
<i>Canna sp.</i> , Canna Lily	Seldom Severely Damaged	
<i>Celosia sp.</i> , Cock's Comb	Seldom Severely Damaged	
<i>Cerastium sp.</i> , Chickweed	Seldom Severely Damaged	
<i>Chrysanthemum sp.</i> , Chrysanthemum	Occasionally Severely Damaged	
<i>Salvia sclarea</i> , Clary sage	Rarely Damaged	
<i>Cleome sp.</i> , Spider-flower	Rarely Damaged	
<i>Coleus sp.</i> , Coleus	Occasionally Severely Damaged	
<i>Coreopsis sp.</i> , Tickseed	Seldom Severely Damaged	
<i>Centaurea cyanus</i> , Cornflower	Seldom Severely Damaged	
<i>Cosmos sp.</i> , Cosmos	Occasionally Severely Damaged	

<i>Dahlia sp.</i> , Dahlia	Occasionally Severely Damaged	Varieties included 'Orange Moon', 'Baby Royal', 'Buckeye Bride', 'Countess of Lonsdale', 'Dwight Morrow', Girl of Hillcrest', 'Grandee', 'H.R.S', 'Indiana Moon', 'Inkyo', 'Jerome Kern', Jersey's Dainty', 'Little Jewel', Miss Belgium', Mrs. George le Boutillier', 'Pink Pearl', Robert Emmett', 'Rudy Vallee', Thomas A. Edison', 'Little Donald', 'Little Beeswing', 'Amber Queen'
<i>Delphinium sp.</i> , Larkspur	Seldom Severely Damaged	
<i>Dianthus sp.</i> , Dianthus, Pinks	Seldom Severely Damaged	
<i>Erigeron sp.</i> , Fleabane	Occasionally Severely Damaged	
<i>Gaillardia sp.</i> , Blanket Flower	Occasionally Severely Damaged	
<i>Geranium sp.</i> , Geranium	Occasionally Severely Damaged	
<i>Gomphrena globosa</i> , Globe Amaranth	Rarely Damaged	
<i>Heliotropium sp.</i> , Heliotrope	Rarely Damaged	
<i>Alcea rosea</i> , Hollyhock	Occasionally Severely Damaged	
<i>Iris sp.</i> , Iris	Rarely Damaged (may eat buds)	
<i>Lilium sp.</i> , Garden Lily	Occasionally Severely Damaged	

<i>Lobelia sp.</i> , Cardinal Flower	Seldom Severely Damaged	
<i>Lupinus sp.</i> , Lupine	Seldom Severely Damaged	
<i>Tagetes sp.</i> , Marigold	Seldom Severely Damaged	
<i>Reseda sp.</i> , Mignonette	Seldom Severely Damaged	
<i>Ipomoea sp.</i> , Morning Glory	Occasionally Severely Damaged	
<i>Tropaeolum majus</i> , Nasturtium	Seldom Severely Damaged	
<i>Nigella sp.</i> , Love-in-a-Mist	Rarely Damaged	
<i>Viola sp.</i> , Violets	Seldom Severely Damaged	
<i>Penstemon sp.</i> , Beardtongue	Occasionally Severely Damaged	
<i>Papaver sp.</i> , Poppy	Rarely Damaged	
<i>Petunia sp.</i> , Garden Petunia	Occasionally Severely Damaged	
<i>Phlox sp.</i> , Phlox	Occasionally Severely Damaged	
<i>Rudbeckia sp.</i> , Black-Eyed Susan	Seldom Severely Damaged	
<i>Salpiglossis sinuata</i> , Painted Tongue	Seldom Severely Damaged	
<i>Salvia officinalis</i> , Garden Sage	Rarely Damaged	
<i>Scabiosa sp.</i> , Pincushion Flower	Seldom Severely Damaged	
<i>Gladiolas</i> , Gladiolas	Occasionally Severely Damaged	
<i>Sedum sp.</i> , Sedum	Occasionally Severely Damaged	

<i>Silene sp.</i> , Campion, Catchfly	Rarely Damaged	
<i>Antirrhinum majus</i> , Snapdragon	Rarely Damaged	
<i>Limonium latifolium</i> , Statice	Rarely Damaged	
<i>Matthiola incarna</i> , Stock	Frequently Severely Damaged	
<i>Helichrysum bracteatum</i> , Strawflower	Rarely Damaged	
<i>Dianthus barbatus</i> – Sweet William	Seldom Severely Damaged	
<i>Linaria sp.</i> , Toadflax	Rarely Damaged	
<i>Verbena sp.</i> , Verbena	Seldom Severely Damaged	
<i>Zinnia sp.</i> , Zinnia	Seldom Severely Damaged	
<b>Wild Garden</b>		
<i>Allium sp.</i> , Ornamental Onion	Rarely Damaged	
<i>Anemone sp.</i> , Anemone	Seldom Severely Damaged	
<i>Artemisia sp.</i> , Silver Mound	Rarely Damaged	
<i>Dicentra spectabilis</i> , Bleeding heart	Rarely Damaged	
<i>Physalis alkekengi</i> , Chinese lantern	Seldom Severely Damaged	
<i>Aquilegia sp.</i> , Columbine	Seldom Severely Damaged	
<i>Narcissus sp.</i> , Daffodil	Rarely Damaged	
<i>Hemerocallis sp.</i> , Daylily	Occasionally Severely Damaged	

<i>Hyacinths, Hyacinthus orientalis</i>	Seldom Severely Damaged	
<i>Erythronium</i> , Trout Lily	Seldom Severely Damaged	
<i>Oenothera sp.</i> , Evening primrose	Occasionally Severely Damaged	
<i>Myosotis sp.</i> , Forget-me-not	Rarely Damaged	
<i>Digitalis sp.</i> , Foxglove	Rarely Damaged	
<i>Fritillaria sp.</i> , Fritilia	Rarely Damaged	
<i>Solidago sp.</i> , Goldenrod	Seldom Severely Damaged	
<i>Helleborus sp.</i> , Lenten or Christmas Rose	Rarely Damaged	
<i>Lunaria sp.</i> , Honesty	Seldom Severely Damaged	
<i>Convallaria majalis</i> , Lily-of-the-valley	Seldom Severely Damaged	
<i>Narcissus sp.</i> , Daffodil	Rarely Damaged	Varieties include 'paper white', 'yellow'
<i>Primula sp.</i> , Primrose	Seldom Severely Damaged	
<i>Pulmonaria sp.</i> , Lungwort	Rarely Damaged	
<i>Daucus carota</i> , Queen Anne's lace	Frequently Severely Damaged	
<i>Scilla siberica</i> , Siberian Squill	Rarely Damaged	
<i>Galanthus nivalis</i> , Snowdrop	Rarely Damaged	
<i>Polygonatum sp.</i> , Solomon's Seal	Occasionally Severely Damaged	
<i>Galium odoratum</i> , Sweet Woodruff	Rarely Damaged	

<i>Tulip sp.</i> , Tulip	Frequently Severely Damaged	
<i>Viola sp.</i> , Violet	Seldom Severely Damaged	
<i>Yarrow filipendulina</i> , Yarrow	Seldom Severely Damaged	
<b>Vegetable Garden</b>		
<i>Asparagus officinalis</i> , Asparagus	Seldom Severely Damaged	
<i>Lactuca sativa</i> , Lettuce	Frequently Damaged	
<i>Allium cepa</i> , Onion	Frequently Damaged	Varieties included White, Yellow, Red Globe
<i>Pisum sativum</i> , Pea	Frequently Damaged	Varieties included Dan O'Rourke, Alaska, Champ of England
<i>Beta vulgaris</i> , Beet	Frequently Damaged	Varieties included Egyptian, Early Blood
<i>Daucus carota</i> , Carrot	Frequently Damaged	Varieties included Long Orange, Danvers
<i>Lactuca sp.</i> , Lettuce	Frequently Damaged	Varieties included Boston Market,
<i>Apium graveolens</i> , Celery	Frequently Damaged	Varieties included White Plume
<i>Zea mays</i> , Corn	Frequently Damaged	Varieties included Stowells Evergreen, Minnesota, Metropolitan, Crosby
<i>Raphanus sativus</i> , Radish	Frequently Damaged	Varieties included French Breakfast
<i>Brassica oleracea</i> , Cabbage	Frequently Damaged	Varieties included Late Flat Dutch
<i>Cucurbita pepo</i> , Squash	Frequently Damaged	Varieties included Hubbard, Heart of Gold

<i>Cucumis melo</i> , Musk Melon	Frequently Damaged	Varieties included Jenny Lind, Rocky Ford
<i>Cucumis sativus</i> , Cucumber	Frequently Damaged	Varieties included White Spine, Long Green
<i>Brassica napa</i> , Turnip	Frequently Damaged	Varieties included Aberdeen, Purple Top White Globe
<i>Lycopersicon esculentum</i> , Tomato	Frequently Damaged	Varieties included Freedom
<i>Solanum tuberosum</i> , Potato	Frequently Damaged	Varieties included Bovee
<i>Phaseolus sp.</i> , Beans	Frequently Damaged	Varieties included Red Valentine, Jersey Lima, Lima King of Garden, Lima Long, and Imperial Golden
<i>Phaseolus lunatus</i> . Lima beans	Frequently Damaged	
<i>Spinacia oleracea</i> , Spinach	Frequently Damaged	Varieties included Red Leaf
<i>Rheum x cultorum</i> , Rhubarb	Seldom Severely Damaged	
<i>Petroselinum crispum</i> , Parsley	Seldom Severely Damaged	
<i>Solanum melongena</i> , Egg Plant	Seldom Severely Damaged	
<i>Beta vulgaris</i> , Swiss Chard,	Frequently Damaged	
<i>Allium ampeloprasum</i> , Leek	Frequently Damaged	
<i>Brassica oleracea</i> , Brussels Sprouts	Frequently Damaged	
<i>Brassica oleracea</i> , Kale	Frequently Damaged	

<i>Lathyrus odoratus</i> , Sweet Peas	Frequently Damaged	Varieties included Emily Henderson, Navy Blue, Firefly, Captivation, Mrs. Eckford, Chamberlain
<b>Greenhouse (Plants for Palm House)</b>		
<i>Phoenix roebelenii</i> , Pygmy Date Palm		
<i>Caryota mitis</i> , Fishtail Palm		
<i>Caladium</i> , Caladium		
<i>Chrysalidocarpus lutescens</i> , Madagascar Palm		
<i>Ptychosperma elegans</i> , Seaforthia Palm		
<i>Chamaedorea elegans</i> , Parlour Palm		
<i>Chamaedorea erumpens</i> , Bamboo Plant		
<i>Chamaedorea seifrizii</i> , Reed Palm		
<i>Athyrium</i> , Japanese Painted Fern		
<i>Adiantum</i> , Maidenhair		
<i>Davallia</i> , Ball Fern		
<i>Nephrolepis</i> , Sword Fern		
<i>Platycerium</i> , Staghorn Fern		
<i>Polystichum</i> , Holly Fern		
<i>Dracaena indivisa</i> , Dracaena		

<i>Dracaena terminalis</i> , Dracaena		
<i>Pandanus utilis</i> , Common Screw-Pine		
<i>Paurotis wrightii</i> , Paurotis Palm		
<i>Rhapis excels</i> , Lady Palm		
<i>Chamaerops humilis</i> , European Fan Palm		
<i>Latania borbonica</i> , Chinese Fan Palm		

## APPENDIX F: RESTORING VINE COVERAGE TO HISTORIC BUILDINGS



### FAIRSTED Frederick Law Olmsted National Historic Site Brookline, Massachusetts

In 1883, Frederick Law Olmsted Sr., noted landscape architect and planner, established his home and office in Brookline, Massachusetts. Olmsted's improvements to the two-acre site transformed the farm into a picturesque suburban estate, which he called Fairsted. Olmsted employed elements from the picturesque and pastoral styles, including an abundance of climbing vegetation on stone walls, trees, and buildings.

To help unify the architecture and the landscape Olmsted planted two twining vines, *Wisteria sinensis* (Chinese Wisteria) and *Actinidia arguta* (Bower Actinidia), which would cover the house. The vines masked the angularities of the building, and thus accomplished Olmsted's intent of obscuring the distinction between the natural and the manmade. The vines climbed profusely on the south side of the house, twining around waterspouts, window boxes, and shutters. Olmsted installed strapping to provide vine support, that ran vertically and horizontally along the facade.

The vines that covered Fairsted are an important visual and historic feature, reflecting Olmsted's interpretation of the ideal garden suburb and his landscape design principles. Unfortunately, the vines eventually contributed to the dete-

rioration of the clapboard house, necessitating that some alternative method be found to protect the building facade from future damage and while still supporting the historic plant material.

#### Problem

Vines can damage historic clapboard or masonry buildings in a number of ways. Roots growing near buildings retain moisture and can put pressure on foundations, displacing materials and providing entry points for water, insects, and rodents. The primary damage caused by all vines is due to moisture. The shade created by extensive vegetation cover prevents the sun from drying the covered wall, and also reduces the drying effect from air circulation. Moisture from condensation, rain water, and plant transpiration is thus slow to evaporate and creates an environment conducive to paint failure, wood rot, and deterioration of soft masonry. The continuous presence of moisture on masonry buildings can weaken mortar and cause structural deterioration. When water trapped in cracks and openings freezes, the ice expands—pressure that can further damage the masonry.

In addition, vines cause other forms of damage depending on their individual

### PRESERVATION

## Tech Notes



U.S. Department of the Interior  
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#### NUMBER 1

### Restoring Vine Coverage to Historic Buildings

Karen E. Day  
Preservation Assistance Division  
National Park Service

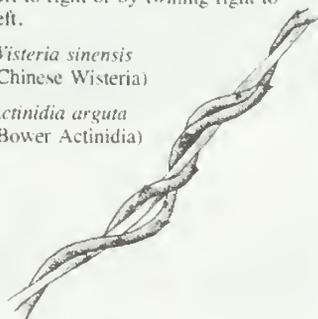
*Where vegetation is essential to the integrity of a historic property, historically significant plant materials and other landscape features should be preserved and maintained while taking steps to protect and maintain historic buildings.*

**Vine Types**

**Twining**

Vines may climb by twining from left to right or by twining right to left.

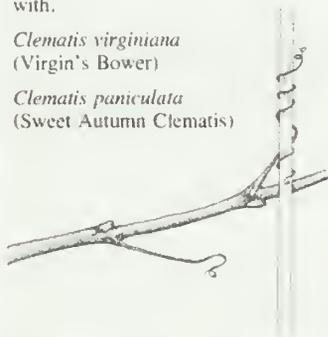
- Wisteria sinensis*  
(Chinese Wisteria)
- Actinidia arguta*  
(Bower Actinidia)



**Tendrill**

The tendrils wrap themselves around anything that they come in contact with.

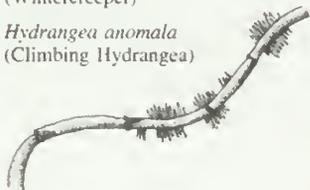
- Clematis virginiana*  
(Virgin's Bower)
- Clematis paniculata*  
(Sweet Autumn Clematis)



**Aerial**

Small roots firmly attach the vine to either wood or masonry.

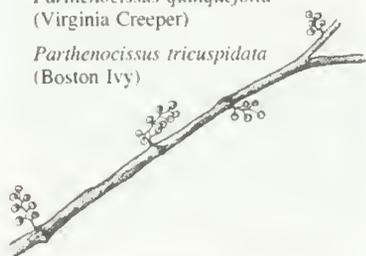
- Euonymus fortunei*  
(Wintercreeper)
- Hydrangea anomala*  
(Climbing Hydrangea)



**Creeper**

This vine clings by sending out small tendrils with adhesive discs that attach themselves to surfaces.

- Parthenocissus quinquefolia*  
(Virginia Creeper)
- Parthenocissus tricuspidata*  
(Boston Ivy)



growth habits. *Twining* vines climb by sending out shoots that wrap around objects and grow in both length and width. As the vine grows thicker, it can constrict these objects, causing features such as louver shutters to snap under the increasing pressure. Furthermore, the spreading shoots penetrate openings and crevices. In time, the growing vine can loosen and separate building materials.

Like twining vines, *tendrill* vines wrap around objects for support. Because they are actually extended leaves, tendrils do not grow in width, only in length. Both twining and tendrill vines, however, can break weather seals on wooden facades, separating wood shingles and siding, as well as fascia and soffit boards on porches. Other vine types include *Aerial* vines which grow small roots along the length of the stem. These rootlets cling to the wall and can force their way into crevices. The fineness and density of the rootlets makes

removal difficult. *Creeping* vines have tiny adhesive pads that cling to the building surface. Commonly found on masonry brick buildings, creeping vines do not generally cause extensive damage to structures while growing, although they may abrade softer mortar. However, they attach themselves so thoroughly to the building surface that paint, mortar, and brick are likely to be damaged when the vines are removed.

In 1980, The National Park Service began structural restoration of the house at Fairsted. To facilitate this work, the historic vines were removed from the facade and cut back to the ground. Since the vines were both historic plant material and an important feature of the property, complete removal was avoided. The vines were kept at ground level, but pruned frequently to prevent reattachment to the house. This situation resulted in weakened plant growth and an appearance quite different from



Figure 1. Historic plant materials can be retained while restoration of the historic structure is underway. The *Wisteria* and *Actinidia* vines that were historically used by Olmsted, were cut back during the restoration of Fairsted in 1988. Photo by Charles Pepper, courtesy of the Olmsted National Historic Site.

Olmsted's intention (see figure 1). Furthermore, long-term frequent pruning risked a higher incidence of pest-related problems to the plants and restricted their natural climbing habit. It was therefore important to the public site that a new trellis system be devised that would protect both the historic vegetation and the historic structure, while re-establishing the appearance of a "vine clad mansion."

### Historic Fairsted Trellises

Development of a new trellis system began with research into the materials, techniques and hardware used in New England between 1880 and 1930, as well as specific investigation into the various techniques used at Fairsted during those years. Historically, the east elevation of the house had two trellis structures supporting *Wisteria sinensis* (Chinese Wisteria). Photographs from as early as 1884 show a wooden trellis system at the entry porch and a spiraled steel strapping system along the house facade (see figure 2). Remnants of these

systems, such as eyebolts and hooks, were found intact at several locations on the structure. The kitchen wall had an interesting trellis consisting of posts with protruding pegs located between windows. Holes in the post indicated that pegs could be added or removed depending on the growth of the plant.

### Solution

After investigating the various types of historic trellis systems at Fairsted, four criteria for the new trellis systems were established to address particular preservation issues. An ideal system would:

1. provide an appropriate historic appearance;
2. suit the specific vine growth characteristics;
3. minimize the impact of the anchorage and support structure of the trellis to the historic building facade; and,
4. provide direct access to the building for preservation and maintenance purposes.

In order to meet both the above criteria and also to test alternative solutions, four different trellis systems were designed and installed for use in a two-year test phase (see figure 3). The first system used spiraled steel strapping; the second, aircraft cable; and the third modular pipe. The fourth system combined strapping and piping.

### Installation and Monitoring

The experimental trellis systems were constructed and installed on the south and west elevations (where the historic plant material is located) in 1989, and have been monitored for the past two years (see figure 6). Plant growth and development, ease of removal, appearance, and effect on the historic structure are being observed and documented regularly. Some recommendations for modification have already been made.

The steel strapping system (system 1), although painted, has shown a great amount of rust. The use of galvanized steel, painted with a zinc oxide primer and a finish coat would have discour-



Figure 2. View of the west elevation at Fairsted which shows a steel strapping trellis system built as early as 1884. Photo courtesy of Olmsted National Historic Site.

Figure 3. The four experimental systems developed at the Olmsted National Historic Site, and some advantages and drawbacks to each.

### System 1 – Spiraled Steel Strapping

#### Fabrication

Materials: 1/8" x 1/2" spiraled steel strapping, hooks, snap hooks, eyebolts, and F & M rings. The steel strapping trellis is modeled after the historic design (c. 1885) developed by Olmsted. Spiraled metal strapping were attached to the house by a series of hooks and metal eyebolts. The eyebolts for this system, as well as the attachment devices for the other trellis systems, are held at least 6" away from the house to allow for air circulation between the plant material, trellis system and building facade. The strapping was fed through intermediate F & M rings located at regular intervals vertically and horizontally along the side of the house.

#### Maintenance

The ends of the spiraled strapping are fitted with snap hooks so that the trellis system can be removed for maintenance purposes, thus creating a flexible trellis system.

#### Evaluation

The spiraled steel strapping is an appropriate support for the growth habit of twining vines. The metal strapping is also effective in recreating the historic appearance of the trellis, and is also the least visible of the systems. The steel, although treated with paint, has already shown a great amount of rust, so an alternative material should be considered.

### System 2 – Aircraft Cable

#### Fabrication

Materials: 1/8" aircraft cable, eyebolts, and hooks. 1/8" aircraft cable was substituted for the spiraled strapping in the first system. A system of eyebolts and hooks was used to secure the aircraft cable to the house.

#### Maintenance

The cable system is similar to the spiral strapping system in that it is flexible. The aircraft cable is attached to the eyebolts with snap hooks that allow the wire and vine to be removed from the building facade without damaging the trellis system, the building, or the historic vegetation.

#### Evaluation

The texture and twist of the cable support and guide to the twining vines. Like the spiral strapping, the vines grow around the cable, so the structure is not visible. The weight of a mature vine growing on the cable will make removal and replacement difficult for one person on a ladder. A temporary pulley system might be used to aid in hoisting the vines back into place.

### System 3 – Modular Pipe

#### Fabrication

Materials: galvanized metal pipe, fittings, eyebolts, and swivel sockets. This modular pipe system is composed of galvanized metal pipe and a series of pipe fittings. This system was hinged at the base to allow the rigid trellis structure to be tilted away from the house. The support pipes were anchored in the ground by inserting them in galvanized metal sleeves that were placed 4' below the ground surface and 6" away from the house. The top portion of the trellis structure was secured to the house by a bolt and clamp combination.

#### Maintenance

More than one person is required to remove this system. The rigid system folds out away from the house on the swivel sockets near the base of the house (see figure 4).

#### Evaluation

Although the rigid system allows the vegetation to remain stable, the pipe structure may also have problems with the weight of fully mature vines. The tilting frame may prove to be difficult to lift back into position. The twining vines do not provide enough coverage to conceal the structure completely.

### System 4 – Combination

#### Fabrication

Materials: spiraled steel strapping, galvanized metal pipe, fittings, eyebolts, and swivel sockets. This solution is a combination of spiraled strapping, galvanized metal pipe and fittings. Eyebolts will separate the strapping from the supporting pipe structure. Swivel sockets near the base of the pipe structure allow the trellis to be tilted away from the house. This combination system provides a historic trellis appearance with the addition of rigid support. The vines are physically separated from the house, thus reducing potential damage to the facade.

#### Maintenance

The spiraled strapping can be unhooked from the pipe system for limited maintenance or the entire structure can be removed for more extensive repair.

#### Evaluation

The weight of a mature vine must also be considered in this solution. This pipe and strapping combination is not historically accurate in appearance. The twining vines cover the strapping, but the pipe structure behind is exposed.

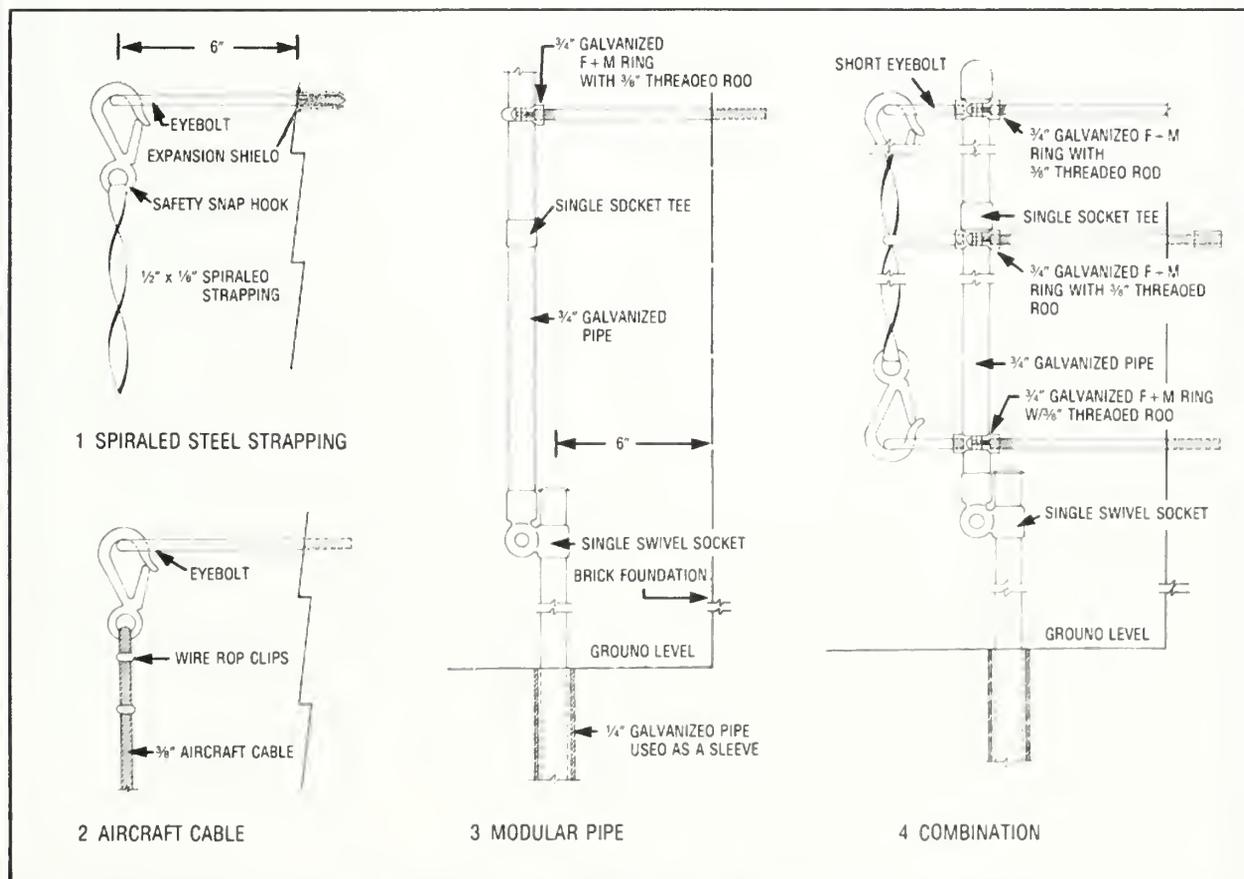


**Figure 4.** The pipe and strapping system, constructed with swivel sockets, allows the rigid support system to fold down away from the house. The strapping can also be removed from the pipe support for limited maintenance. Photo by Karen Day.

aged rapid rusting. The flexible aircraft cable (system 2), with the added weight of a mature vine will make removal and replacement difficult for one person. A temporary pulley system is recommended to aid in hoisting the vines back into place. The third design is a rigid modular pipe system (system 3). Although the rigidity of the system is advantageous to the stability of the vegetation, the weight of the vines may also be prohibitive for easy removal and replacement. The combination strapping and pipe system (system 4) does not re-create a historically accurate appearance. The system was designed in order to remove the vines on the strapping without removing the pipe supporting system. The vines growing on the strapping do not provide sufficient coverage to hide the pipe system behind. Furthermore, additional maintenance is required to keep the vines from growing on the pipe. After the multi-year test period is complete, one of the four systems will be selected, modified as needed, and installed to the east, south and west facades of the house (see figure 7).

**Conclusion**

The trellis system solution will restore a feature that contributes to the unique character and appearance of the historic suburban estate, and thus reinforces the interpretation of the Olmsted National Historic Site. The systems discussed here were developed individually to meet the unique requirements of the property. This trellis development process, which considered the building appearance and historic character of the site in addition to the growth habits of the plant, historical trellis materials, and maintenance needs, can be applied to other sites with different needs and considerations. However, climbing vegetation should not be added to historic buildings if it did not occur historically since careful management and maintenance is required. The vines that covered Fairsted were an integral part of the historic character of the site. When vegetation is essential to the integrity of a historic property, historically significant plant materials and other landscape features should be preserved and maintained while taking steps to protect and maintain historic buildings.



**Figure 5.** Details of the four experimental trellis systems. Drawings by Sharon Runner, National Park Service.

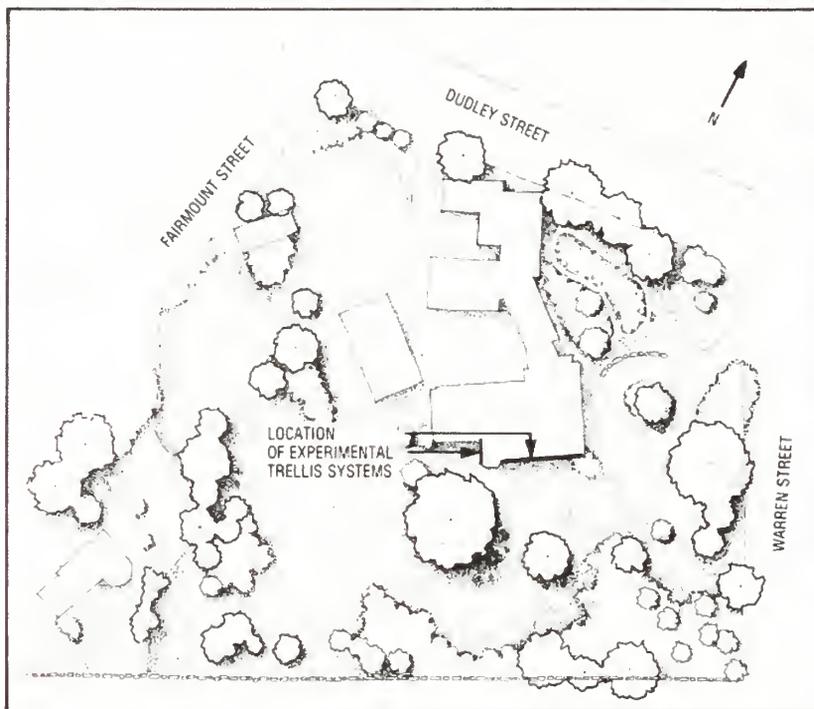


Figure 6. Site plan of Fairsted; the experimental trellis systems were installed on the south and west elevations. Drawing by Karen Day.



Figure 7. View of south facade, the experimental trellis systems have been in place for two growing seasons. Photo by Karen Day.

**PROJECT DATA**

**Site:**

Frederick Law Olmsted National Historic Site  
99 Warren Street  
Brookline, MA

**Owner:**

National Park Service  
U.S. Department of the Interior  
Washington, DC

**Project Dates:**

Spring 1989-Fall 1991

**Project Supervisor:**

Charles Pepper  
Supervisory Horticulturist

**Project costs:**

Materials: \$5,000

**Materials:**

**System #1**

spiraled steel strapping  
hooks  
snap hooks  
eyebolts  
F & M rings

**System #2**

air craft cable 3/8"  
eyebolts  
hooks

**System #3**

galvanized metal pipe  
pipe fittings  
galvanized metal sleeves  
bolt and clamp combo

**System #4:**

spiraled steel strapping  
galvanized metal pipe  
fittings  
eyebolts  
swivel sockets

This PRESERVATION TECH NOTE was prepared by the National Park Service. Charles E. Fisher, Preservation Assistance Division, National Park Service, serves as Technical Editor of the series. Thanks go to Charles Pepper, Supervisory Horticulturist, Frederick Law Olmsted National Historic Site, for providing information on the project and reviewing the draft. Special thanks go to Lauren Meier, Ward Jandl, Michael Auer, and Tom Jester, of the Preservation Assistance Division, National Park Service, for their review and comments on the draft. Cover Photo: Historic view of south facade of "Fairsted". Courtesy of the Frederick Law Olmsted National Historic Site.

Preservation TECH NOTES are designed to provide practical information on innovative techniques and practices for successfully maintaining and preserving cultural resources. All techniques and practices described herein conform to established National Park

Service policies, procedures and standards. This Tech Note was prepared pursuant to the National Preservation Act Amendment of 1980, which direct the Secretary of the Interior to develop and make available to government agencies and individuals information concerning professional methods and techniques for the preservation of historic properties.

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