BUNKER HILL MONUMENT

CULTURAL LANDSCAPE REPORT FOR

BOSTON NATIONAL HISTORICAL PARK
CHARLESTOWN
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CHARLESTOWN

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OLMSTED CENTER FOR LANDSCAPE PRESERVATION
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Cover Photo: Colored engraving of Bunker Hill Monument with the North End of Boston and Beacon Hill in the background, from the Reverend Wolcutt Cutler collection. Courtesy Boston Public Library.
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Various people were instrumental in bringing this project to fruition. Ruth Raphael, Park Planner for Boston National Historical Park served as the park project manager, provided site documentation and project information, and coordinated park and community input. Linda Berkeley, Landscape Architect intern for the Olmsted Center for Landscape Preservation prepared all computer-generated site plans and provided much appreciated technical assistance. Park staff including Ethan Beeler, Bunker Hill Site Manager, Vince Kordack, Park Ranger and Phil Hunt, Museum Specialist, were consistently enthusiastic and cooperative during project research and helped sort out document details.

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INTRODUCTION

The purpose of this Cultural Landscape Report (CLR) is to thoroughly examine and document the physical history and evolution of the site, to document existing conditions, to evaluate the significance and integrity of the site's landscape characteristics, and to provide treatment recommendations for the Bunker Hill Monument landscape. This report has been prepared in advance of a major rehabilitation scheduled for fiscal year 2002 through the Line-Item Construction Program (10-238), which will include repairs to the monument, the adjacent granite lodge, the surrounding six-acre site, and rehabilitation of the neighboring Bunker Hill Museum. In response to management goals for scheduled improvements, the treatment section of this CLR focuses on site improvements needed, which address accessibility, paved surfaces, vegetation, lighting, drainage, and other site features as indicated. This document will serve as preliminary documentation for review by the Massachusetts State Historic Preservation Office for Section 106 compliance, the environmental assessment, and the public community review process.

This CLR has been developed in conjunction with several associated planning documents and management initiatives. First, the CLR treatment chapter provides an investigation of issues and objectives for the grounds that were set forth in the Boston National Historical Park's 1980 General Management Plan. Second, the treatment chapter revisits recommendations provided in the 1982 Historic Structure Report for Bunker Hill Monument. Third, recommendations in the CLR treatment chapter seek to be in concert with the goals and products anticipated in the park's Long-Range Interpretive Plan, which will consider interpretive programs and site opportunities. Fourth, the CLR incorporates available archeological research findings, recognizing that additional site work is needed to adequately protect the site's significant resources.

Historical Overview

Bunker Hill Monument rises at the summit of Breeds Hill in the Charlestown District of Boston, Massachusetts, symbolizing the pride and courage of American soldiers who fought in the "Battle of Bunker Hill" on June 17, 1775, in America's War for Independence (Figure 1). At the time of the battle, Breeds Hill and the surrounds were primarily hayfields and pastureland. The village of Charlestown was centered to the south near Town Hill and flanked on the southeast by a deep harbor with good anchorage. It was a lively commercial hub with a growing economy, which became increasingly stifled by British regulations.

On the night of June 16, 1775, two months after the battles at Lexington and Concord, American troops constructed an earthen fort at Breeds Hill in anticipation of the first full-scale action against British troops. The following morning, the British attacked and, though they suffered greater casualties, ultimately defeated the Americans who ran out of ammunition then fled northwest over Bunker Hill and across the Charlestown Neck. Although the battle was a tactical victory for the British, the fortitude, strength, and tenacity of American troops set the tone for their future triumph.

In 1794, a Tuscan pillar of wood, erected by the Masons, served as the first commemorative marker on the battlefield site. In the following years attempts were made to memorialize the soldiers and the scene of the battle, and to preserve the battlefield in its entirety. The posted sale of the battlefield site in 1822 was ultimately the catalyst that led to the purchase of the land for

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1 The National Park Service has identified the Cultural Landscape Report as the primary guide for the treatment and use of cultural landscapes.
commemoration, the formation of the Bunker Hill Monument Association in 1823, and a competition for the monument design. The 221-foot Bunker Hill Monument, built between 1825 and 1842, was one of the earliest war monuments to be built in the country. Initially to be kept “open and sacred forever,” all but six acres of the battlefield grounds were sold to raise the funds necessary to complete construction of the obelisk. The remaining land, known as “Monument Square” was enclosed by an iron fence and framed with shade trees.

The Association further developed the grounds and maintained Monument Square until 1919, when it was passed to the Metropolitan Parks Commission, later known as the Metropolitan District Commission (MDC). With the concerted efforts of the people of Charlestown, and the Charlestown Historical Society, the Commission revitalized the monument and provided a historical interpretive program for visitors. However, when further renovations and program upgrades became necessary, state funds were insufficient. At the urging of the Association and the general public, and by vote of the MDC, the Bunker Hill Monument became part of the National Park Service (NPS) system in 1974. It is currently managed as a site within Boston National Historical Park and is part of the Freedom Trail.

Study Boundary

The Bunker Hill Monument and the portion of the remaining battlefield known as Monument Square, occupy the top of Breeds Hill, situated approximately one-half mile east of the larger Bunker Hill. Today, Breeds Hill is primarily a thickly settled urban residential area within the Charlestown peninsula, which lies northwest of downtown Boston across the Charles River. Charlestown was annexed to the city of Boston, Massachusetts in 1874.

The title for Monument Square was transferred from the Bunker Hill Monument Association to the Commonwealth of Massachusetts, Metropolitan District Commission (MDC) in 1919. In 1974 the parcel was transferred from the MDC to the NPS, Boston National Historical Park by Deed #3, which described the NPS boundary as Tract No. 102-01, an area of 6.1 acres. The parcel is described as follows:

All that certain tract or parcel of land together with the structures located thereon situated in the City of Boston in that part thereof known as Charlestown, on Breeds Hill, so called, on which stands the monument known as the Bunker Hill Monument, being more particularly described as follows:

Beginning Northeasterly by a street fifty (50) feet wide, about four hundred (400) feet. Southeasterly by a street fifty (50) feet wide, formerly known as Lexington Street or the extension thereof, about four hundred seventeen (417) feet. Southwesterly by a street fifty (50) feet wide, formerly known as High Street, about four hundred (400) feet. Northwesterly by a street fifty (50) feet wide, formerly known as Concord Street or the extension thereof, about four hundred seventeen (417) feet. Said parcel, including the said four surrounding streets fifty (50) feet wide, above mentioned, being known as Monument Square. Together with all the fee and soil of said four streets fifty- (50) feet wide, above mentioned, which said grantor owns abutting upon the parcel of land herein conveyed.

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4 Godefroy’s Battle Monument in Baltimore was constructed between 1814 and 1827. Correspondence from W. Parksdale Maynard to Marty Blatt, Boston NHP, October 10, 2000.


The area of study for this report includes the perimeter fence and sidewalk surrounding Monument Square and all landscape features within (Figure 2). Extension of the park boundary to include the Bunker Hill Museum, located across High Street is anticipated. For the purposes of this study, the museum and the street surrounding the Square will not be specifically addressed. However, the authors recognize the importance of the connection between the site and museum as the future interpretive center, and the plan to restore the lodge to its original use as a commemorative structure.8

Methodology

This CLR consists of four major sections: (1) a site history, (2) documentation of existing conditions, (3) analysis and evaluation of the landscape significance and integrity with a summary of landscape characteristics and features, and (4) treatment guidelines and recommendations. The history of the site is divided into chapters based on the periods of ownership and management of the battlefield site, including prehistoric use, colonial settlers, the Bunker Hill Monument Association, Metropolitan District Commission, and the National Park Service. The existing conditions section provides a description of the extant landscape features. The analysis section reviews the current site documentation with respect to the National Register of Historic Places, proposes additional areas of landscape significance, and examines the integrity of historical landscape characteristics. A summary of landscape characteristics describes the historical site features that contribute to the character of the landscape. The treatment section presents four treatment alternatives, including preservation, rehabilitation, restoration and reconstruction, and the justification for the selected treatment, rehabilitation. The recommended treatment provides guiding principles and recommendations, with some design concepts and details as parameters for design and construction. A description of treatment alternatives considered but rejected is also provided for features that had more complex issues. Final design treatments and construction detailing were not completed as part of this report, and will be performed as a separate project.

The Olmsted Center for Landscape Preservation has worked in collaboration with the Boston National Historical Park staff to develop the CLR for the Bunker Hill Monument. Research for this report, conducted between January and August 2000, consulted primary and secondary source materials at several state and local repositories and from organizations affiliated with the site. Information was also gathered through interviews with individuals familiar with or responsible for more recent physical changes to the landscape. The sources for the historical overview and analysis are listed in footnotes and in the bibliography. Historical images, including photographs, postcards, artist renderings, maps and construction drawings were utilized to document physical changes to the site. Sources and credits for graphic materials are provided below each image. The existing condition and appearance of the landscape was examined and photographed between January and July 2000. This draft report will be available for agency, public, and State Historic Preservation Office review, as part of the compliance process for the rehabilitation work scheduled for 2002.

Summary of Findings

The Bunker Hill Monument property is listed in the National Register of Historic Places as the Bunker Hill Monument site, for its association with the War for Independence and as an early example of historic monumentation. The period of significance was initially listed in 1966 as 1700-1899. In 1996, as part of the National Park Service List of Classified Structures, this period was extended to 1902 to include the construction of the granite lodge. The site was listed as part of the Boston National Historical Park district in 1974 but has not yet been documented. The site was also listed as part of the Monument Square District, which recognizes its significant architecture, landscape architecture, community

8 It is important to note that the National Register Nomination documentation for the Bunker Hill Monument is 3.83 acres and the text implies that the streets are not included. Eliminating the discrepancy between boundary descriptions is addressed in the “Analysis” chapter of this report.
planning (and military events), with a period of significance of 1839 - 1912.\textsuperscript{9} The Bunker Hill Monument site was also designated National Historic Landmark in 1961. A fourth nomination, currently in draft, a Multiple Property Nomination for properties of the Metropolitan District Commission, does not include the Bunker Hill property but provides context for the development of the parcel during the early 20\textsuperscript{th} century and its significance as an urban park and commemorative site.

Based on the research and analysis conducted for this study, the period of significance for the Bunker Hill Monument property should extend from 1775 until 1947. This extension beyond 1902 recognizes the significance of the landscape setting for the monument, which took until 1947 to be realized. The period of 1825 to 1919 recognizes the work carried out by the Bunker Hill Monument Association to shape the grounds into a fitting setting for the monument, work that they were unable to fully accomplish due to financial constraints. The period from 1919 to 1947 begins with the transfer from the Bunker Hill Monument Association to the Metropolitan District Commission (MDC) and extends to the year that the MDC was able to implement the regrading and step construction necessary to provide the desired setting for the monument. This final phase of work between 1919 and 1947 addressed the alterations envisioned by the Bunker Hill Monument Association and worked out in consultation with Frederick Law Olmsted, Jr., the Olmsted Brothers firm, and Arthur Shurtleff, Landscape Architect for the City of Boston. By 1947, the MDC completed these site alterations, which enhanced the monumental character of the landscape. It has been determined that the site retains integrity for both the Bunker Hill Monument Association period (1825-1919) and the early period of MDC ownership (1919-1947), therefore, many of the extant landscape characteristics and features are considered as contributing resources in this report.

\textsuperscript{9} The period of significance does not reflect military events.

This CLR presents rehabilitation as the treatment approach, which is a departure from the recommendations of the Historic Structures Report and the General Management Plan to "selectively" restore to the Bunker Hill Monument Association ownership era. This CLR recommends that existing individual features that capture the essential site character as it existed in 1947 will be retained, repaired or rehabilitated. Specifically, the asphalt path location will be retained but resurfaced as it exists today, rather than relocated to the lower elevation as it existed from the 1840s until the 1920s – 40s. The iron fountains will not be restored or reintroduced to the site. Trees added to the property in random plantings on the slopes and upper terrace in the 1970s will be maintained in the short term, but will eventually be replaced with a more orderly configuration, compatible with the 19\textsuperscript{th} century and early 20\textsuperscript{th} century planting configuration. Site furnishings that are not historic will be placed in less obtrusive locations, including trash receptacles, planters, and signs. Existing cobra lamps on the upper terrace will be replaced with light standards that are compatible with the 19\textsuperscript{th} century style lamps surrounding the square. These treatment recommendations are detailed in Chapter IV, Treatment Recommendations.

Though the Bunker Hill Monument is a nationally significant commemorative site, it has historically been intrinsically linked with Charlestown residents, and continues to serve as a vital residential pocket park for the community. In the interest of maintaining a cooperative spirit, the National Park Service and interested parties should continue to work cooperatively towards implementing this plan, combining the spirit of preservation, partnership and volunteerism to accomplish the goals that serve the site’s community and visitors, as well as protect its physical resources.
Figure 1: Aerial photograph of Bunker Hill Monument. Courtesy of the Boston National Historical Park Archives.
Figure 2: Site plan of Bunker Hill Monument and Monument Square, July 2000.
I. **Site History**

**Early Settlement (Pre-1775)**

**War for Independence (1775-1783)**

**Post War Use of the Site (1783-1825)**

**Bunker Hill Monument Association and Construction of the Monument (1825-1919)**

**Metropolitan District Commission (1919-1974)**

**National Park Service (1974-Present)**
On the north side of Charles River is Charlestown, which is another neck of land on whose north side runs Mystic River. This town for all things may be well paralleled with her neighbor Boston, being in the same fashion with her bare neck and constrained to borrow conveniences from the main, and to provide for themselves farms in the country for better subsistence. At this town there is kept a ferryboat to convey passengers over Charles River, which between the two towns is a quarter mile over, being a very deep channel. Here may ride forty ships at a time.

William Wood
New England's Prospect,
1634
EARLY SETTLEMENT (PRE-1775)

Prehistory

When glacial ice covered New England nearly 12,000 years ago, the Boston Basin, a geological depression bounded by an escarpment to the north and west, was a hilly plain cut by rivers and streams and colonized by various plant and animal species. Within the basin, advancing glaciers formed drumlins—elongated masses of till shaped into smooth-sloped hills—that characterize the landscape of the Charlestown area. Five to eight thousand years later, Paleo-Indian populations and their descendents occupied the region, settling primarily along major river basins. In the late sixteenth century, members of the Algonquin linguistic group of Native Americans occupied the area that would later be named Charlestown and called it Mishawum or Mishawum, translated as “Great Spring,” bounded by the rivers Mistick and Mishaum (later the Charles). These individuals were possibly part of the Massachusetts or Pawtucket Tribe, which were some of the first Native Americans to come in contact with European explorers in the early 1600s. During his second visit to Boston Harbor in 1608, Samuel Champlain anchored between Charlestown and Noddle's Island (later East Boston) and described the indigenous peoples and the cultivation that they practiced.

Along the shore there is a great deal of land cleared up and planted with Indian corn. The country is very pleasant and agreeable, and there is no lack of fine trees....As we continue our course, large numbers came to us in canoes from the island and mainland.

Coastal tribes, such as the Massachuset and Pawtucket, were also the first to be heavily exposed to European diseases, particularly smallpox, which in 1616 and 1619 afflicted entire villages. Many New England colonial settlements were built on the sites of decimated Native American villages, saving them much of the initial effort of claiming and clearing the land.

European Settlement of Charlestown

Thomas Walford established the first English settlement in Charlestown in about 1625. Walford relocated from Wessagusset (now part of North Weymouth), which had been settled by the Robert Georges Company and subsequently abandoned. Walford's episcopal tenets would eventually lead to his departure from Charlestown upon the arrival of Puritans of the Massachusetts Bay Company. The first members of the Massachusetts Bay Company arrived at Charlestown or "Cherton" in 1629, when about one hundred persons relocated from Salem under the leadership of Frances Higginson. The Company's engineer, Thomas Graves, proceeded to "model and layout the form of the town, with streets about the hill." Each inhabitant was allocated a two-acre lot to plant upon, and "all were to fence in common." The southern-most hill, the smallest of four drumlins on the peninsula, was selected as the center of the settlement and named "Town Hill," rising at the confluence of the Charles and Mystic Rivers, where there was deep anchorage. To the west, a narrow isthmus, known as the "Neck," connected the peninsula to abundant inland forests and farmland. The settlers measured out properties, built stone fences to establish the boundary markers, enclosed a common, and erected a "Great House" adjacent to Town Hill. On July 4, 1629, King Charles of England chartered the

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11 Seventeenth century town records referred to the Indians north of the Charles River as Aberginians.


14 Edes in Winsor, 385.
settlement as an independent town, and “Charlestown” became his namesake.\textsuperscript{15}

In 1630, John Winthrop, the designated Governor of the Massachusetts Bay Colony, and his party landed from the Arbella at Salem, found the area undesirable and quickly left for Charlestown. Winthrop selected the town as the seat of government and occupied the “Great House” with several of the patentees, while “the multitude set up cottages, booths, and tents about the Town Hill.”\textsuperscript{16} However, within two months after their arrival, persistent sickness, scarce food and inadequate fresh water drove many of the colonists in search of a better environment. They settled on the Shawmut peninsula and renamed it Boston. Those remaining in Charlestown began to realize Grave’s town plan around Town Hill. The community was solidified by the creation of a board of selectmen in 1634. George Bunker, one of the wealthiest proprietors, signed the document and Robert Moulton was chosen as one of the first selectmen.\textsuperscript{17} One of the earliest orders of Charlestown provided for a great “Cornfield” on the east side of Town Hill, embracing all of the land between Main Street and the Mystic River and the three other hills, Bunker’s, Breeds, and Moulton’s.\textsuperscript{18} The Breed family owned land on the east side of what would later be known as Breed’s Hill.\textsuperscript{19}

In the early 1630s, a fort was erected at the summit of Town Hill and a gun battery was also built on the peninsula’s southern shore, at Sconce Point.\textsuperscript{20} The “Old Training Field,” the current site of Winthrop Square, was established as a drilling ground in the 1640s and occupied a pentagonal lot at the base of Breeds Hill, a short distance from the town square.\textsuperscript{21} Breeds Hill, however, was not put to any military use at this time.

After the departure of Governor Winthrop the Great House was converted to a meetinghouse until 1635 when it became a tavern.\textsuperscript{22} The town square was described in 1650 as “a large marketplace near the water side built round with houses, comely and fair, forth of which there issues two streets orderly built with some very fair houses, beautified with pleasant orchards and gardens.”\textsuperscript{23} Trees along the road from Charlestown across the “Neck” to Cambridge were protected by an early ordinance.\textsuperscript{24} The earliest roads were “the Country Road” (later Main Street) towards the neck and the “Crooked-lane” (later Bow Street) that encircled Town Hill.\textsuperscript{25}

By the eighteenth century, the settlement developed into a thriving community abundant with skilled merchants (Figure 3). Massachusetts had earned the reputation as the “Holland of America.”\textsuperscript{26} Town records list several Charlestown merchants engaged primarily in commerce, carrying on direct trade with the West Indies and Europe, and a number of thriving shipyards. A daily ferry to Boston was launched, facilitating access between the towns. Charlestown listed 412 voters who agreed to pave portions of public streets, and to construct an almshouse. Houses, shops and a busy marketplace flourished along the main street that extended inland from the waterfront, precipitating the town’s transformation into a prosperous seaport. However, increasing constraints imposed by British authorities would result in a dramatic alteration of the Charlestown landscape.
At the outset of the War for Independence, Charlestown consisted of a densely populated seaport center composed of about 400 buildings. A main road running west along the southern base of Breeds Hill to the narrow Charlestown Neck connected with the fertile farmland and thriving inland communities of Cambridge, Menotomy (later Arlington), and beyond. Along the road lay farmhouses backed by clearly demarcated fields and pastures. With the exception of trees along the main roads, most of the peninsula’s timber had long since been harvested, leaving open views to the surrounding Boston Peninsula, Noddle’s Island (later East Boston), and Chelsea (Figure 4).

Figure 3: Charlestown peninsula, a series of glacial drumlins, and the surrounding land in the 1700s overlaid on the current landform. From Decisive Day, The Battle for Bunker Hill, R. Ketchum, 42-43.

Figure 4: Town Hill settlement in Charlestown (foreground), the three drumlins of Charlestown, Bunker’s, Breed’s, and Moulton’s Hill (from left to right), and the Neck, also called the Narrow Pass, (far left) that connected Charlestown to the mainland, as viewed from Beacon Hill. From History of the Siege of Boston, R. Frothingham, 121.

\[27\] Frothingham, 48.
The ground on the peninsula is the strongest I can conceive for the kind of defence [sic] the rebels made, which is exactly like that of the Indians, viz: small inclosures with narrow lanes, bounded by stone fences, small heights which command the passes, proper trees to fire from, and very rough and marshy ground for troops to get over. The rebels defended this ground well, and inch by inch.

British Officer
In Ketchum, Decisive Day, 1974, 191.
WAR FOR INDEPENDENCE
(1775-1783)

Strategic Importance of Charlestown

On June 1, 1774 the Boston Port Bill effectively shut down the port, until the damages and duties of the Boston Tea Party were paid. This crippled the Charlestown economy. The situation worsened in September when the newly-appointed Governor, General Thomas Gage seized the Massachusetts Colony's arsenal at Charlestown. Thousands of local militiamen rushed to Charlestown, beginning a transformation of the peninsula from bucolic farmland and seaport to battleground.

On the eve of April 19, 1775, Paul Revere took the road from Charlestown across the neck to warn Patriots of the impending arrival of British troops in Lexington and Concord. After a harrowing day of fighting the retreating Redcoats dashed across the Charlestown Neck and took refuge on Bunker Hill where they hastily built breastworks and relied on gunfire from their warships to ward off Patriot pursuers. Shortly thereafter, in what was later recognized as a strategic blunder, the British abandoned their Bunker Hill post and the beleaguered soldiers were ferried back to Boston to regroup. Despite the reconsolidation of British troops in Boston, both British General Thomas Gage and American Commander Artemus Ward realized that control of the hills surrounding Boston was the military key, particularly the Charlestown peninsula to the north and Dorchester Heights to the south. As the likelihood of a prolonged battle grew, British threats of military action prompted the nearly 3,000 inhabitants of Charlestown to evacuate their homes by May of 1775, leaving behind less than 200 residents in the shadow of the British Navy.

Battle of Bunker Hill

Despite the British labor expended on the fort at the top of Bunker Hill and its recognized strategic importance, the British troops remained in Boston. The American troops mobilized on June 16, 1775, when Colonel William Prescott led 1,200 untrained farmers, merchants and craftsmen, predominantly from Massachusetts and Connecticut, across the Charlestown Neck in darkness to take control of the 110-foot Bunker Hill. After considerable debate in the middle of the night, Patriot leaders, including Colonel Prescott, General Israel Putnam, and Engineer Richard Gridley, decided on a different strategy more likely to provoke the British. They instructed their troops to construct instead the earthen fortification at the summit of the 62-foot Breeds Hill, also known as Russell's Pasture, Breeds Pasture, Green's Pasture and Green Hill, which lay closer to the British naval ships.

Additional Patriot troops from New Hampshire arrived during the day of the battle and positioned themselves along a rail fence that ran down the northeast slope of Breed's Hill to the Mystic River. The men also built three arrow-shaped barriers, known as fleches, between the Breed's Hill fort and the rail fences. Troops were also dispatched to the abandoned village of Charlestown.

When Gage saw the freshly turned earthen berm at the summit of Breed's Hill, he ordered British artillery on Copp's Hill in Boston to open fire on Charlestown and dispatched nearly 3,000 British soldiers, who landed on two sites at Moulton's Point (Figure 5). The British cannon fire from Copp's Hill onto the Town Hill settlement of Charlestown ignited the...
CULTURAL LANDSCAPE REPORT FOR BUNKER HILL MONUMENT

town. The British Annual Register later reported the town’s fate:

Charlestown was large, handsome, and well built, both in respect to its public and private edifices; it contained about four hundred houses, and had the greatest trade of any port in the province, except Boston...It is now in ruins.

Meanwhile British troops, heavily laden with gear, ascended the slopes of Breed’s Hill from the north and east. Struggling through brambles and over fences, the British were unprepared for the oppressive heat and the tenacity of American soldiers (Figure 6).4

British Occupation of Bunker Hill

After a full day of battle, the Americans exhausted their ammunition and fled across the neck. Colonel Prescott, who held together the American defenses until the end, was recognized as a hero and played an active role in the remainder of the war. Doctor Joseph Warren, who had just been appointed Major General and Commanding Officer of the American troops, fought as a soldier and was fatally wounded shortly before the troops retreated. Warren was the highest-ranking officer killed in the battle. The British took control of the Breeds Hill fort, reclaimed their fort on Bunker Hill, and hastily buried the dead on the battleground. Though victorious, the British had more than twice the fatalities than the Patriots, and lost one-seventh of their entire army, rendering them incapable of continuing with their large-scale offensive operations planned for New England in 1775. As one British officer, Sir Henry Clinton, stated it was, “a dear bought victory, another such would have ruined us.”

In the weeks following the battle, the British strengthened fortifications on Bunker and Breeds Hills while a stalemate lingered. British occupation resulted in a poorly documented redesign and reconstruction of the American redoubt on Breeds Hill. Recent archeological research indicates that there is little consistency in descriptions of the redoubt in any historical sources prior to 1849. Estimates for the redoubt dimensions suggest it was about 8 rods square, and that the features generally consisted of “curtains” and piled wooden posts and rails. Around 1824, fifty years after the battle, Mr. J. Finch, visited the battle site in his survey of Revolutionary War period fortifications and found:

At Breed’s Hill, that blood-stained field, the redoubt thrown up by the Americans is nearly effaced; scarcely the slightest trace of it remains; but the entrenchment, which extended from the redoubt to the marsh, is still marked by a slight elevation of the ground. The redoubt thrown up by the British on the summit of the hill may be easily distinguished.

British troops controlled the fort until March 17, 1776 when all British troops evacuated Boston Harbor as a result of General Washington’s strategic entrenchment at Dorchester Heights. In September of 1783, Britain signed the Treaty of Paris officially ending the war, and signaling a transition of the nation’s battlefields to sites of remembrance and commemoration.

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32 The source of ignition was described as a carcass, which was probably a flaming canvas powder bag with a weight in it. Bunker Hill Monument Association Proceedings (1907) 67 and Carl Zellner, correspondence to authors, December 2000.
33 Frothingham, 334, 344, 368.
34 Stevens, 6.
35 Pendery and Griswold, iv.
36 The British suffered 1,054 casualties with 828 wounded and 226 men killed, including 25 percent of their officers, while Patriots lost 138 men with 276 wounded and 36 missing. Ketchum, 190, 193.
37 Ketchum, 183.
38 Pendery and Griswold, 4.
39 A rod is equal to 16 1/3 feet.
40 Finch, 1822, as cited in Pendery and Griswold, 4.
Figure 5: Diagram of the Battle of Bunker Hill on June 17, 1775 showing the fortification on Breed’s Hill and the approximate position of British forces during the attack. From *Decisive Day, The Battle for Bunker Hill*, R. Ketchum, 1974, 148-49.

Figure 6: Watercolor of British soldiers walking over the Breed’s Hill battleground. “Some weeks afterward, the field was quiet, with no evidence beyond the broken fences, scarred trees, and grass-covered remains of the rebel redoubt (at right center) that a bloody encounter had taken place here.” From *Decisive Day, The Battle for Bunker Hill*, R. Ketchum, 1974, 188-89.
When peace was declared, we burnt thirteen candles in every hut, one for each State.

*Veteran of the Battle of Bunker Hill*
*In Ketcham, Decisive Day, 1974, 226.*
POST-WAR USE OF THE SITE (1783-1825)

In the years following the battle, the Charlestown landscape transformed from a discordant battleground to an amicable patchwork of private landholdings. Shortly after the departure of British forces in March of 1776, few residents attempted to repair their ruined homes. Reconstruction did not gain momentum until Legislative acts in 1781 and 1790 enabled the area destroyed by fire to be rebuilt. Streets, lanes and squares were laid out, and the area around the Town Hill marketplace was cleared. Crooked lanes leading eastward from Town Hill toward Moulton’s Point were straightened, forming Water and Henley Streets. Between 1785 and 1800, Charlestown doubled in population, growing to include 349 buildings and 2,750 residents. A survey of 1818 shows the top of Breeds Hill enclosed by High, Elm, Adams, Morton and Bunker Hill Streets (Figure 7). This area of approximately 35 acres was divided into fifteen tracts, fourteen belonging to prominent locals, and one plot under Union Bank ownership. The six acres that would eventually become the Bunker Hill Monument site appear to be owned by Mrs. Sarah Russell, but may have included land owned by N. Austin, M. Beaman, T. Brooks, and A. Kettell.

Most of the land on Breed’s Hill returned to pasture, with the east slope used for hay and grazing and the west for orchards and gardens. Little evidence remained of the events that transpired on June 17, 1775. The position of the American breastwork was still marked by a slight elevation of the ground and portions of a redoubt raised by the British after the Battle of Bunker Hill, in a location just west of the future monument, were still distinguishable.

Early Commemorative Efforts and Formation of the Association

Commemoration of the Battle of Bunker Hill began in 1794, when King Solomon’s Lodge of Freemasons, established in Charlestown in 1783, placed a monument to Masonic brother, Major General Joseph Warren on Breeds Hill. The monument, a wooden Tuscan pillar terminated in a gilt urn (Figure 8), was placed on the presumed spot where General Joseph Warren fell. Prior to this, the Massachusetts grand lodge of Freemasons had intended to erect a monument to Warren but was unable to raise the funds. The Charlestown Artillery is credited for first celebrating the battle of Bunker Hill with a parade in 1794. A parade was held again in 1801 and sporadically thereafter until the 1820s, when it became an annual event. Paintings, such as John Trumbull’s circa 1786, The Death of General Warren at the Battle of Bunker’s Hill, poetry, and plays such as Bunker Hill; or, The Death of General Warren by John Burk in 1797 and 1808 kindled the spirit of remembrance.

As a new republic, America sought to define its collective identity. This broad movement, in combination with the approaching fiftieth anniversary of the War for Independence, fueled commemorative efforts to build a memorial on the site of the battle that initiated the nation’s fervent resistance and perseverance.

41 Survey of 1818 map and HSR, 26.
42 Meltsner et al., 8:1.
43 Finch, 1822, as cited in Pendery and Griswold, 4 and National Register of Historic Places Inventory-Nomination Form.
In April 1822, the Boston Patriot publicized the following notice:

**BUNKER HILL**

A lot of ground, including the monument to the memory of Gen. Warren, and the remains of the 'Breast Work', thrown up on the eve of the Battle of [sic] fought on that spot on the 17th of June 1775, is advertised to be sold at auction the 1st day of May. As a site so memorable should not be covered with buildings, it is hoped, that some patriotic gentleman of wealth in the town of Charlestown will purchase this American Marathon and have it enclosed with a stone or iron fence, to be held sacred, as the spot where the defenders of the Republic first met the shock of battle "in times which tried men's souls."

No stranger from other States visits this part of the Union who does not wish to stand where fought the Champions of Liberty. Future Generations will hold that blood-stained height in proud remembrance. There repose the ashes of the brave; there was planted the Tree of Liberty. Let not the glorious sepulchre of our Revolutionary warriors be profaned.48

In response to this notice, Dr. John Collins Warren, one of several people interested in preserving the battlefield site, subsequently purchased approximately two and three-quarters acres to ensure the property would not fall toward development. For the next two years, he hosted meetings in his home with other supporters, which resulted in general agreement that a national monument should be erected on Bunker Hill to commemorate the American Revolution, and that the surrounding land should "not be built upon."49

Subsequently, the first public meeting regarding the project was held at the Merchants Exchange in Boston in May 1823. Twenty-five men who attended this meeting formed the "Bunker Hill Monument Association" to oversee the construction of a suitable monument and on June 7, 1823, Governor William Eustis approved an act establishing the Association.50

The Association spent the first year electing officers and members, and adopting a code of by-laws. The Hon. Daniel Webster was the first President of the Association, and during 1824, they voted to have an annual celebration. A committee researched and organized battle memorials and documents. Association directors issued circulars describing the battle and the purpose of the monument, and solicited subscriptions to endorse their purpose. Raising funds through public subscription was an arduous task, but was the only plausible means of funding the ambitious endeavor in the relatively nascent republic. The perseverance of the Association gained support and generous donations from all over New England, and by the spring of 1825, the Association's commemorative effort was underway when it acquired ownership of approximately fifteen acres on the slope of Breeds Hill.51 While generous financial support solidified the Association's mission to construct a fitting memorial on Breeds Hill, the acquisition of a portion of the battleground lent an apparent permanency to their preservation efforts, which would later be compromised (Figure 9).

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49 Other key individuals included William Tudor, Daniel Webster, George Ticknor, Edward Everett, Thomas Perkins, and Dr. James Jackson. HSR, 22 and Meltsner et al., 81.
50 Frothingham, 341 and HSR, 22-23.
51 The land was acquired from Nathaniel Austin, Timothy Walker, Andrew Kettell, Ephraim Frost, Parnell Brooks, Benjamin Adams, Samuel Spring, William Austin, Heirs of Mary Beaman, and Dr. John C. Warren. HSR, 26.
Figure 7: Map of Charlestown by Peter Tufts, 1818, shows layout of Charlestown, property ownership, and location of monument. Courtesy of the Boston National Historical Park Archives.

Figure 8: Tuscan pillar of wood with gilt urn finial erected in 1794 on the presumed site where Joseph Warren fell. From History of the Siege of Boston, Frothingham, 1896, 359.

Figure 9: Engraving of the proposed Bunker Hill Monument, as depicted on the 1834 certificate of membership of the Bunker Hill Monument Association. Courtesy of the Bostonian Society.
Our object is, by this edifice, to show our own deep sense of the value and importance of the achievements of our ancestors; and, by presenting this work of gratitude to the eye, to keep alive similar sentiments, and to foster a constant regard for the principles of the Revolution. Human beings are composed not of reason only, but of imagination also, and sentiment.

Daniel Webster
“An Address delivered at the Laying of the Corner-stone of the Bunker Hill Monument, June 17th, 1825.”

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52 Kammen, 243.
BUNKER HILL MONUMENT ASSOCIATION AND CONSTRUCTION OF THE MONUMENT (1825-1919)

Beginning in 1825, the Bunker Hill Monument Association focused on the design and plan for the proposed monument. It was determined that a design competition should be held and that one hundred dollars would be awarded for the best design. About fifty plans were submitted, in either drawing or model format. Initially the Association’s Board of Artists selected the design of a 120-foot obelisk submitted by Horatio Greenough, then a twenty-two year old student who later became a noted sculptor. After settling on the form of the monument, Laommi Baldwin, an engineer as well as chairman of the committee, prepared written specifications for the dimensions and proportions of the monument, and developed the initial design of the Bunker Hill Monument. However, Baldwin resigned his post shortly thereafter and the physical design and supervision of construction was unanimously passed to Boston Architect Solomon Willard. Willard prepared working plans for the obelisk, laid out the surrounding landscape, and acted as the architect and superintendent of construction until July 23, 1842, when the monument was completed.

Once the Bunker Hill Monument Association established ownership of the fifteen acres of battleground on Breeds Hill, the Association issued circular letters to the general public and selectmen soliciting community cooperation to ensure the Monument project would be fully supported. The Association recognized the site as ideal for the placement of a monument: "Fortunately the scene of the battle of Bunker Hill possesses distinguished natural advantages for the site of a monument." Throughout design discussions and community meetings the landscape design was addressed in conceptual terms, but clearly determined. References to the land were primarily made in context to preserving it as an open battlefield, however few specifics of the modifications were discussed. The consensus was for the landscape to be "kept open and sacred forever", and its purpose was to serve primarily as setting for the monument. The Association envisioned the landscape to be reflective of the monument design, "distinguished by simplicity and grandeur, rather than by elaborate and elegant ornaments. Like the events which it is to commemorate, we would wish it to exhibit the character of natural, inherent, durable greatness."

As the momentum for the obelisk construction grew, it was increasingly apparent that the project was truly monumental. The technological innovations necessary to construct the monument would result in catapulting Boston into the forefront in the era of railroads, granite quarrying, masonry, infrastructure, steam engines and innovative derrick systems. The conspicuous memorial was envisioned to be "As substantial as the great pyramids of Egypt."

The cornerstone of the monument was laid on June 17, 1825, on the fiftieth anniversary celebration of the Battle of Bunker Hill, as part of a celebration that was "unequaled in magnificence by anything of the kind that had been seen in New England." Out of respect for the King Solomon’s Lodge, the grand master of the Grand Lodge of Massachusetts performed the ceremony, with General Lafayette and the Honorable Daniel Webster assisting. A procession comprised of the military, veterans of the revolution, a patriot band, and Masonic fraternity, a myriad of societies, the Bunker Hill Monument Association, and spirited thousands paraded...
from the State House towards Breeds Hill to observe the placement of the first stone. "The procession then moved to a spacious amphitheater on the northern declivity of the hill, where Hon. Daniel Webster delivered an address. It was at the close of a dedicatory passage on the monument that he uttered the words, "Let it rise till it meet the sun in its coming; let the earliest light of the morning gild it, and parting day linger and play on its summit."60"

Siting the Monument and Earthmoving

Shortly after the dedication of the cornerstone, the Association finalized the specifications of the monument. The design of the monument was to be an obelisk, with a square base of 30 feet per side, and rise 220 feet from the ground. The position of the structure, as envisioned by Laonmi Baldwin, "shall be such that its four faces shall be respectively opposite the four cardinal points of the compass, and the north and south faces shall intersect at right angles, the plane of meridian passing through the axis of the monument." However, when Solomon Willard prepared the construction drawings he altered the siting based on research conducted by Dr. John C. Warren. The monument was sited on what was believed to be the center of the American redoubt and parallel with the sides of the redoubt. However, subsequent engineering surveys conducted in 1847 and 1875, and more recent archeological surveys in 1980 and 1996, indicate that the monument stands on the southeast corner of the original redoubt rather than in the center.61 Below ground, the foundation of the structure was to be a square base of fifty feet per side.62

The Association's intent with respect to the surrounding landform was to:

...ascertain at what level, in relation to the surface of the hill about it, the platform should be fixed; so that in forming the terre-plein, or suitable and convenient area round the monument, an economical disposition of the earth shall be obtained...Upon this point the Committee consider it very essential to preserve as high a level for the platform as the nature of the land will admit, consistent with that easy approach to, and promenade round, a public monument of so much grandeur and importance."63

Directly around the base of the monument, Baldwin and the design committee specified "a firm platform of broad, well-hammered stones, resting on foundation walls, and extending to the distance of twenty feet from each face of the building, having at the exterior boundary three steps of not more than eight inches rise each, running round the whole platform..."64 This design intent was also later modified by Willard. Earthmoving began on the site in November of 1825 and the foundation of the monument was dug in the following year. When completed the monument foundation was twelve feet deep and fifty feet square.65 Although it was their intent to set the base of the monument at the top of the hill, it appears there was little discussion of preserving the extant battlefield earthworks. The commentary of an observer suggests that most remaining surface evidence was destroyed during the course of the project.66

In looking for the best material source for construction of the obelisk, Solomon Willard chose a granite quarry in Quincy, which the Association purchased to produce all the granite necessary for the monument. The selection of granite revolutionized the use of the material in building and fort construction, and led to its widespread use both in Boston and all over the country.67 Furthermore, Willard specified large blocks to reduce the total number of stones and the number of courses to complete the monument. To move the enormous and heavy stone blocks, the first in a series of technological innovations associated with the project, was the construction and use of a railway to transport granite from the Quincy Quarry to the shore of the Neponset River. Begun in January of 1826, this was one of the

60 Ibid., 43-45.
61 HSR, 52-53.
62 Ibid., 42.
63 Ibid., 43.
64 Ibid.
65 Ibid., 55, 66.
66 Ellis, 1875 in Pendery and Griswold, 4.
67 HSR, 50.
earliest railways built in the United States. The railway, designed by Gridley Bryant, was powered by horses on a short incline and by a stationary steam engine. It consisted of granite sleepers, wood tracks, which were later replaced with granite, and iron plates. Though innovative, the railway delayed construction of the monument, increased the damage of stones during transfer, and was happily abandoned by Willard in 1828. “The repeated transfer of the stones, necessary in this mode of conveyance, being attended with delay, liability to accident, and a defacing of the blocks, was abandoned after the fortieth foot was laid, and the materials were transport by teams [of horses] directly from the quarry to the hill” (Figure 10). By 1829 the Association’s financial burdens, combined with numerous logistical obstacles, suspended construction until funding issues could be resolved.

Sale of the Battlefield to Fund Monument Construction

With its funds exhausted in 1828, the Association mortgaged about eleven acres of the battlefield to generate funds for construction of the monument. By January of 1829, all of the Association’s land, with the exception of a 600 by 400-foot parcel surrounding the monument, was mortgaged for more than $25,000. In June of 1829, the Association voted to sell all of the mortgaged land, though the actual sale did not occur until 1839. Willard was hired by the Association to subdivide the parcel into streets and lots, with the reserved parcel surrounding the monument. By 1833, the sale of land to complete the raising of the obelisk appeared absolute, but the communities’ attachment to safeguard it was fervent, as Willard wrote,

The whole Bunker Hill field is perhaps the most beautiful open space in Charlestown; and besides the interest in it, growing out of its connection with a new era in the history of man, it will have the charm of adding directly to the comfort of the people who reside in its neighborhood, or who use it for a promenade. This beautiful field, (except a space of six hundred by four hundred feet,) is mortgaged and must be sold unless the means can be raised to save it. The Bunker Hill Monument Association owes about twenty-five thousand dollars. It may be said perhaps that six hundred by four hundred feet is space enough for a Monument Square. It would be enough, if you had no more, and could get no more; but would one forth part of Boston Common be enough to pay the city debt, and save two millions of dollars besides? The Bunker Hill field is above price; the time will come if it is left open, when it will be the most interesting spot in this country, perhaps the most interesting in any country, and will exert a high moral and political influence upon posterity…

Despite the pleas of Willard and others, the Association acknowledged the need to sell the land to finance the monument. By 1834, the Association stated that

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68 An earlier railroad was used by B. Henry Latrobe in a canal project of 1804 in Maryland and Delaware.

69 In 1971, the Commonwealth of Massachusetts approved the acquisition by the Metropolitan District Commission of the Bunker Hill Quarry site and a portion of the Granite Railway to be protected as part of the Blue Hill Reservation. MDC Archives.

70 Solomon Willard, Boston NHP Archives.

71 Frothingham, 347.

The only obstacle to going on with the work immediately, and finishing the Monument as soon as the work can be done, is the debt incurred for buying the battleground, in the hope that this ground might be kept open and sacred for ever. The Board of Directors have reluctantly come to the conclusion that the ground must be sold, reserving a square of four hundred feet, with streets of fifty feet wide on the sides thereof. It was hoped that the land around the square, and the 127,000 feet not on the square, divided into shares of five hundred dollars, would sell for the sum of twenty-five thousand dollars. Such sale has not yet been effected, but it is hoped it will be.73

On September 25, 1839, nine of the fifteen acres were sold at public auction. In the same year a free bridge was completed that connected Charlestown with Boston. This boosted Charlestown’s real estate potential and contributed to the town’s transition from a rural area to an urban neighborhood. Willard’s proposed subdivision contributed to this transition, with lot configurations and deed restrictions that would emulate the neighborhoods in Boston’s Beacon Hill.74

Willard’s plan reserved four acres, an area of 417 by 400 feet around the monument and an additional two acres for fifty-foot wide streets surrounding the square. The remaining nine acres were divided into 115 building lots. The north-south streets extending north from the site were named Concord and Lexington in reference to the battles during the War for Independence, while the east-west streets on the east and west sides of the site were named Chestnut and Laurel, respectively for local plant species.75 The ground east and west of the Square, was reduced in elevation. The amount of material removed ranged from eight feet of grade in some locations to twelve feet in others. This cut material was used to fill the depression on the north side of the square. 76 This work would forever alter the physical integrity of the battleground. As described in the 1982 Historic Structures Report (HSR):

Thus ended in failure on September 25, 1839, what was probably the first effort at historic preservation in the United States – the plan to preserve the fifteen acre Bunker Hill battlefield as open land for future generations. The would-be preservers of the battlefield necessarily subdivided and sold “the American Marathon,” covered it with buildings, disturbed the “repos of the ashes of the brave,” and “profaned” the glorious sepulchre of our revolutionary warriors.” The land was sacrificed in order to erect a gigantic granite obelisk, which perhaps appropriately enough, reflected more on the ambitions and dreams of the Bunker Hill Monument Association than on those of the “Revolutionary Warriors.”77

The regrading unearthed and destroyed many archeological resources associated with the fortification. In 1875, George Ellis stated that “no vestige of the redoubt now remains, but a portion of the breastwork is distinctly visible. When a square was cut around the monument grounds for house lots…the remains of the works raised by the British after the battle, lying west of the monument, which had previously been plain to the eye, all disappeared.” Ellis also noted that he “watched diligently the spades and picks of the laborers as they removed the earth from the sides of the hill…Many cannonballs, the missiles of the British ships and battery, came to light, of which the writer picked up two.”78

The sale of the nine acres cancelled the Association’s debt associated with the mortgage of the property and resulted in a profit of $1,767.57. Although at the time of the sale, the Association envisioned repurchasing the parcels, the sale was ultimately irreversible and the remaining battlefield landscape was lost. Ironically, the first home built on a parcel facing Monument Square, completed in 1847, was that of George Washington Warren, a descendant of

74 Meltsner ct. al., 8:2.
75 Ibid.
76 HSR, 11, 77.

77 Ibid., 77-78, with quotes from Henry Alexander Scammel Dearborn’s advertisement of April 1822 with reasons to save the battlefield.
78 Ellis, 1875, 25, 62 in Pendery and Griswold, 4.
General Joseph Warren, President of the Bunker Hill Monument Association from 1847 to 1875, and Mayor of Charlestown from 1847 to 1850.79

**Fundraising Efforts by Sarah Hale and Amos Lawrence**

Construction of the monument resumed due in large part to the fundraising efforts of Sarah J. Hale of Boston, editor and publisher of the Ladies Magazine and Amos Lawrence, an active fundraiser for the Massachusetts Charitable Mechanics Association. Hale’s efforts resulted in the 1840 “Ladies Fair” and “Ladies Fund,” which were inspired by the prospect of a completed monument and the grounds surrounding the monument. Hale eloquently wrote,

> Were the Monument completed, and the ground beautified, as might easily be done, would it not be a privilege to go from the dust and din of the city, and breathe the free air of that glorious elevation, and look abroad on the sublime and lovely prospect?80

The Ladies Fair, held in September of 1840 was extremely successful and raised $30,035.53 for the monument. Amos Lawrence, Esq., of the Mechanics Association submitted a $10,000 donation on the condition “being to have the monument completed according to the original plan, and to keep the whole of the battle-field open to posterity.”81 Judah Touro, a millionaire merchant, matched the Amos Lawrence donation with another $10,000. By 1841, sufficient funds were donated, enabling completion of the monument (Figures 11 & 12).82

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79 Meltzer et al., 83.
80 "Extract from Mrs. Sarah J. Hale’s Last Article on the Results of the Ladies’ Fund Drive in 1830, from History of the Bunker Hill Monument Association," as cited in HSR documents, II-103 and Cameron, 18-19.
82 Cameron, 18-19.
Completion of the Monument & Site Work

Completion of the monument accelerated in the 1840s when James Sullivan Savage was contracted to place the remaining stones. In 1841, Savage introduced a steam engine to replace the horses previously used to hoist stones. He also introduced an improved boom derrick of his own invention to raise stones to the top of the nearly completed structure. On Saturday, July 23, 1842, seventeen years after the first cornerstone was laid, the capstone of the monument was set, officially completing construction of the monument.

Most of the site improvements to the Square occurred between 1842 and 1847. A grand procession took place on June 17, 1843 to celebrate the completion of the monument, but the landscape work was still in progress. Land was graded and seeded, obliterating most of the earthworks that may have remained from the battle. However, in his 1847 description of the site, Historian Richard Frothingham notes a “small mound in the northeast corner of the square is supposed to be the remains of the breastwork.” As part of his contract with the Association, James Savage laid a ten-foot wide granite walk at the base of the monument and a brick sidewalk along the streets surrounding the square. Two iron fences were installed, one at the base of the obelisk, and the other around the whole of Monument Square, just inside the brick sidewalk. The fences were designed by Isaiah Rogers and erected by Charles M. Cumming. Entrances to the square, defined by openings in the perimeter fence, were centered in each of the four sides and at each of the four corners with granite steps leading up to the monument. Within the square, two additional walkways provided circulation around the monument grounds, one at the base of the slope just inside the perimeter fence and the other near the top of the slope. A double row of trees and a hedge were set out around Monument Square (Figures 13 - 18). One row and the hedge were planted inside the perimeter fence. The second row was planted within the public sidewalk outside the fence.

83 Frothingham, Bunker Hill, 355-56 in HSR, 89-90.
84 HSR, 88-90, 95.

Figure 13: Plate from which badges were printed for the grand procession on June 17, 1843, showing the completed monument and an artist's vision of the landscape, prior to completion. Trees were not installed as depicted. Courtesy of The Bostonian Society.

Figure 14: Engraving of the Bunker Hill Monument and surrounding dwellings and open fields, as viewed from the south, June 1843. Courtesy of the Charlestown Branch Library.
Figure 15: Depiction of Daniel Webster giving an oration on June 17, 1843, the 68th anniversary of the Battle of Bunker Hill, less than one year after monument construction was completed. Flags are hung from the monument windows. Courtesy of The Bostonian Society.
Figure 16: View of Bunker Hill Monument, circa 1849, showing the completed landscape with the fences, perimeter trees, sidewalk, corner and side entrances, steps and walkways. From History of the Siege of Boston, R. Frothingham, 120.

Figure 17: Small engraving of the monument, corner gate, fences, and perimeter trees, circa 1861. A flag is attached to the obelisk to fly above its apex. From the cover of Annual Proceedings of the Bunker Hill Monument Association, 1861.

Figure 18: Drawing of Bunker Hill Monument from Memoir of Solomon Willard, 1865, showing the double row of trees inside and outside of the fence. A hedge is possibly shown behind the fence. From Historic Structure Report, 300.
Site Additions by the Bunker Hill Monument Association, 1840s to 1860s

Once the monument was enclosed within the park-like square, the Association collected visitor fees and solicited donations to support maintenance of the facility. In 1849, the directors of the Bunker Hill Monument Association voted that no records of the names, dates, or events should be placed on the monument structure. This decision was challenged in 1889 when Boston city government officials attempted to place memorial tablets with the names of the slain American soldiers at one of the main entrances to the site. The list of names had been hastily compiled and the Association questioned its accuracy. One of the plaques also contained the names of the city officials responsible for creating the plaques. The Association successfully thwarted the plan, having made a conscious, concerted effort to “abstain from placing the names of its benefactors or donors upon the field.” Ultimately, the City of Boston placed the memorial tablets at the entrance to the Old Training Field, which is now known as Winthrop Square. The Association’s policies were observed until 1919 when the organization no longer owned the property. During the Association’s period of ownership, however, there were several other additions to the site, some temporary and some permanent.

In 1850 work began on a statue of General Joseph Warren, which was sculpted by Henry Dexter of Cambridgeport and enclosed in a Greek Revival building in 1857 designed by George A. Parker, a consulting engineer and architect (Figure 19). The building included a one-story office and museum. Although considered temporary, the wooden lodge remained on the site from 1857 until 1901, when a permanent granite lodge was built. In the 1840s through 60s site furnishings were minimal. Two benches were placed on the north side of the lodge (Figure 20). There were no lights on the site.

Ceremonial flags were installed on the site in several different configurations. An engraving of 1843 shows flags flown out of the monument upper windows (refer back to Figure 15). In 1861, at the outset of the Civil War, a seventy-foot long wooden mast topped by a gilt ball and American flag was bolted to the upper courses of the monument, but removed in 1866 (refer back to Figure 17, 19, & 20). A flag flown above the monument was intended as a symbol of the strength of the Union. The following year, in the spring of 1867, a liberty-pole “that stood 140 feet high and about sixty feet distant from the north-easterly corner of the monument” was installed on Monument Square. On the cross arm was the motto “Liberty and Union: 1775 17th of June 1867.” The placement of the flag beside rather than on top of the monument was an “experimental arrangement” to avoid the “disparaging effect from an artistic point of view” of affixing the flag on the monument. In 1874 the liberty-pole was removed and on special occasions thereafter, two American flags were hung from poles put out from the two side windows at the top of the monument.

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83 Ibid., 107.
84 Ibid., 90.
85 Ibid., 13, 90.
86 Ibid., 91.
87 Ibid., 91.
88 Ibid., 91.
89 Ibid., 91.
90 This configuration of flags is seen in Figure 23. Ibid., 91.
Figure 19: An engraving looking south of the monument, temporary lodge, and surrounding grounds by Edwin Abbey, circa 1865. A pole extends from the top of the monument. The light standards and walkway locations may be artistic depictions. From *Historic Structure Report*, Evans et al., 304.
Figure 20: Photograph of the post bolted to the upper courses of the monument, circa 1865. Also visible are the corner steps and walks, a gutter along the walkway on the left, benches near the lodge, the walk just inside the perimeter fence, the double row of trees, and possibly the hedge. Photo retouched by NPS. Courtesy of the Bostonian Society.
Preparing for the Centennial: Development of Surrounding Streets and Improvements to Lighting, Fences, Drainage, Walks, Steps, and Grounds

In the 1840s, as the surrounding neighborhood developed, the Bunker Hill Monument Association sought control over the location and width of the adjacent streets as well as an approach from City Square. During the period of monument construction, fifty-foot wide streets led to the gates on three sides of the monument. On the south side there was no street leading to the site at the gate. Begun in 1847 and completed in 1852, the Association worked with the City of Charlestown to lay out Monument Avenue from Main Street up the hill to intersect High Street in front of the monument. However, the street was forty feet wide rather than the desired width of sixty feet, resulting in a constricted and asymmetrical view of the monument. Between 1847 and the 1870s, most of the lots surrounding monument square were built upon with elegant homes built in the Greek Revival, Italianate and Mansard or Second Empire style. In 1877, George Washington Warren, owner of one of these homes, wrote “There are now very few points from which this majestic obelisk can be seen entirely and consequently, as consummate work of art, its effect is to a great degree lost.”

Beginning in 1870 and in preparation for the 100th anniversary and celebration of the 1775 Battle of Bunker Hill, the monument underwent major site rehabilitation. Though tended for almost thirty years, the landscape still presented problems. Many challenges were associated with the steep embankments surrounding the site (Figure 21). Erosion and drainage of the site had evidently been a problem. A stone-lined gutter may have lined the outer edge of the walkways at the top of the slope (refer back to Figure 20). In the 1870s a new drainage system for the monument grounds was installed that consisted of new or additional stone lined gutters at the foot of the slope. The gutter, consisting of laid beach stones, replaced the hedge of an unspecified plant species, installed in the 1840s. The gutter carried water to drain inlets constructed at each corner of the square. In 1870 the City of Charlestown installed four gas lamp posts in front of each of the four sides of the monument and repaired the lodge. The perimeter fence was rebuilt with new stone posts, iron posts and rails. Only the 1844 fence pales were reused. The outer sidewalk was widened by three feet with the brick paving materials supplied by the city.

In 1871, two fountains were purchased and installed at a cost of $800.00 (Figures 22 & 23). The rationale for adding the decorative fountains to the lawn panels to the south and west of the monument is not well documented. Five years later, in 1876, the Association’s committee on the monument grounds, comprised of Richard Frothingham, Rank Darracott, and J. Collins Warren, removed the original stone markers set in 1844 that marked the location of the American redoubt, fence, and other positions involved in the battle (Figure 24). They set new markers in locations that they believed were more accurate. Messrs. Gilman and Cheney of Charlestown engraved the markers of Maine granite. In 1876, the monument grounds were described in the Association Proceedings: "The grounds never were arrayed in the beauty they presented on this…anniversary. The trees around them are in full foliage. The walls are clean and neat. The main avenues covered with concrete, after four years of summer's heat and winter's frost, answer all reasonable expectations. Along these are the beautiful tablets which designate the points of the battlefield”.

Repair work continued into 1871, including extensive sod repair, particularly at the base of the square, which was necessary as a result of the hedge removal. The four main walks around the monument were paved with stone and asphalt, replacing the gravel and sand surface previously surrounding the obelisk. The walk at the base of the slope, presumably inside

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91 Meltzner et. al., 8:3.
92 HSR, 94
Figure 21: Drawing of Bunker Hill Monument, circa 1850-70, from the corner of High Street showing steep embankments, corner steps, side entrance steps, and walkways. From Bunker Hill Museum, Charlestown Historical Society, in *Historic Structure Report*, 305.

Figure 22: Circa 1871 stereo photograph showing the diagonal paths and a fountain in the southwest lawn panel (at far right in photograph). The diagonal paths were removed shortly after installation of the fountains. Courtesy of the Stephen Pendery Family Collection.
the fence, was regraded and surfaced with Medford gravel. All four flights of steps were reset; three entirely, and closure of the entrances and walkways at the corners of the site began. Further, the city cooperated by surfacing with concrete the main streets around Monument Square. In regard to the reconfiguration of the walkways, the president of the Association noted that

(T)he closing of the four entrances at the corners of Monument Square has served as an additional protection to the green sward of the banks, and to the grounds; while the four central entrances have been found sufficient for the public accommodation. An opportunity is now presented to remove the straight diagonal paths leading from the Monument to these corners, and to substitute graceful, winding paths which would add beauty to the enclosure and relieve the appearance of its irregular sides.

Later, the committee further recommended that “…the grounds would be more attractive by a moderate supply of iron seats…” These visions for beautifying the grounds by softening the lines with curves and embellishing them with appropriate ornaments was aligned with the ideas promulgated by contemporary landscape architect Andrew Jackson Downing. Downing brought modern influence to landscape designs in the mid-19th century. However, there is no evidence that winding paths were ever designed or constructed, and it appears that iron seats were not added until the 1880s.

On June 17, 1881, twenty-four years after the June 17, 1857 installation of the Warren Statue, a bronze statue of Colonel William Prescott was dedicated. American Sculptor William W. Story cast the statue in Rome. The statue was placed about sixty feet to the south of the obelisk and set on a base of Quincy granite and pedestal of polished Jonesborough granite with “Colonel William Prescott, June 17, 1775” in raised letters on the front panel (Figure 25).

For the next twenty years, the Association took various repair and rehabilitation measures at the site. The care and maintenance of the site was funded by fees collected from visitors ascending the Monument, and the president would note that “every visitor is impressed, not only with its historic interest, but with the care with which it is protected from injury and abuse.” The walks within the Monument Square enclosure were renovated and resurfaced with new concrete, new iron rails were added to each side of the steps at the four entrances, and the iron fence that enclosed the grounds was repaired and repainted (Figure 26).

Figure 23: Photograph of the Monument with a tent in 1875 shows the walkways and the flags hanging from the obelisk windows. From the American Antiquarian Society Collection, part of the Wolcutt Cutler Collection, courtesy of the Charlestown Branch Library.

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98 Ibid., 13-14; 96-98.
99 Ibid., 97.
100 Ibid., 98.
102 Proceedings, 1897, 22.
Figure 24: Map prepared by Frothingham in 1876 showing 1775 American redoubt in relation to existing features. This map was used as a reference for placement of granite markers. From *Historic Structure Report*, 167.

Figure 25: Monument Square looking north circa 1881-1900 showing the Prescott statue installed 1881, the original “temporary” lodge, and a fountain in southeast lawn in foreground. Courtesy of the Boston National Historical Park Archives.

Figure 26: Circa 1890 photograph of the entry from Monument Avenue with bollards and granite steps with an iron railing. Courtesy of Anthony Mitchell Sammarco.
Gas Lights, Iron Chairs and Benches, and Granite Lodge

In 1888, the city placed four “electric” street lights near the steps on each side of the Square, while the Association added an “electric” light at each corner of the site to accommodate evening visitors and to discourage late evening loitering (Figure 27 & 28).

The Association also finally provided iron chairs and benches, as recommended ten years earlier, with a seating capacity on the grounds for about 100 visitors (Figure 29). In 1889, a wire fence was erected to “protect the parks.” A later description in 1907 and historic postcards suggest that this fence was located on the outer edge of the upper walkway on the top of the embankment around the monument (Figures 30 & 31).

Construction of a granite lodge to complement the obelisk was considered in 1843, but not completed until 1902. In 1843 George M. Dexter prepared sketches of the structure but died before preparing construction drawings. William S. Park, a young architect, completed the drawings. However, lodge construction was delayed as funds were directed to other site and monument improvements. In the 1870s a building fund was established and in 1901, with the grounds in “good condition,” the Association endeavored to construct the granite lodge to replace the “temporary” wooden lodge adjacent to the monument. A new one-story granite lodge, designed in the classical revival style, was constructed between 1901 and 1902 (Figure 32). This was the last addition undertaken by the Bunker Hill Monument Association during its period of ownership.

In the early 1900s two public buildings were added to Monument Square. In 1907, the Charlestown High School was rebuilt on the northwest corner of Monument Square. The Neo-Classical granite-block building adhered to the four-story height restriction on its front façade, and was designed by Stickney and Austin, a Boston architectural firm, to harmonize with the classical Greek design of the lodge and monument. In 1913 the last building was added to Monument Square on the corner of High Street and Monument Ave. The Charlestown Public Library was built, also in the Neo-Classical style and designed by Fox and Gale, supervising architects for the Boston Public Library system. Postcards dating to this period show the old and new high school structures, and possibly show that both fountains are gone by the early 1900s (Figures 33 & 34). A 1906 postcard shows a possible wood plank surface for the walkway around the top of the embankment (Figure 35).

By 1903 the Association’s treasurer reported that admission fee receipts were insufficient to cover annual expenses. Coincidentally, the State of Massachusetts indicated interest in gaining control of the monument. The Association was unwilling to surrender, as they believed their management of the site was in the best interest of the community, and consequently asked the state to withdraw their proposal unless the time came that caring for the monument became a “burden.”

Figure 27: Undated photograph of Monument Square from Winthrop Street showing gas lights at the corner of the site, one of the fountains, and the Prescott Statue, circa 1880s. Courtesy of The Bostonian Society.

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103 These “electric” lights may have been gas lights. From the 1888 & 1889 Proceedings as described in HSR, 106.
104 No clear description of the problem that necessitated protecting the park could be found. It could be presumed that nighttime entry, use, vandalism and loitering may have contributed to an increasing demand for maintenance and policing.
105 HSR, 14-15, 104-106.
106 Ibid., 92.
107 Ibid., 15, 109.
108 Meltzer et. al., 7:6-9.
109 Proceedings, 1903, 16-17.
Figure 28: Photograph showing lights on upper terrace, one near Prescott statue and one on west side, circa 1890. Also visible are flagpoles hanging from windows of obelisk. Courtesy of Anthony Mitchell Sammarco.

Figure 29: Undated photograph of the Prescott statue, south of obelisk, erected in 1881, showing benches installed in circa 1888. Courtesy of the Boston National Historical Park Archives.

Figure 30: Postcard showing linden and elm trees surrounding site, upper fence, wooden lodge, Prescott statue, fountain and lights, circa 1890. Courtesy of Boston National Historical Park Archives.
Figure 31: Postcard of the new granite lodge, upper walkway fencing, and stairs with railing, circa 1903. Courtesy of the Boston National Historical Park Archives.

Figure 32: Postcard of the granite lodge, a one-story Classical Revival building, circa 1903. Courtesy of the Boston National Historical Park Archives.

Figure 33: Postcard showing gathering, flags hung from obelisk, new granite lodge and old high school in the background, 1905. Courtesy of the Boston National Historical Park Archives.

Figure 34 (right): Postcard showing benches around the base of the obelisk, circa 1902-1906 as evidenced by the presence of the old high school and the new granite lodge. Courtesy of the Boston National Historical Park Archives.
Figure 35: Postcard by the Rubber Shoe Company, 1906, showing both the new granite lodge and new high school in the background (possibly under construction). The fountains are gone and the walkway appears to be surfaced with wood planks. Courtesy of the Boston National Historical Park Archives.
Critique of Landscape Deficiencies and Sale of the Property

Construction of the new granite lodge helped improve visitor comfort; however, expenses increased as well. In the following years, monument receipts barely covered expenses and the Association was unable to create a permanent fund to keep the structures and site in good condition. The president of the Association summoned “the public spirit” and generosity of members and continued to address management issues regarding the monument and grounds. In 1907 the Association received a critique of the grounds by Charles Allerton Coolidge, of the firm of Shepley, Rutan, & Coolidge.\(^{110}\) Coolidge pointed to the poor condition of the walkway surfaces, the unnecessary duplication of walkways inside and outside the perimeter fence, the unattractive fence installed in 1889 at the top of the embankment, and other failing site conditions.\(^{111}\)

Despite their allegiance to the property, the Association accepted state government support to address monument management needs. From 1910 to 1919, they generally operated with an increasing deficit, due to reduced admission receipts and changes in visitor use patterns. Mounting operational losses prevented the Association from making repairs and improvements to the grounds and lodge, resulting in criticism from their constituents. The Board of Directors no longer found it acceptable to rely on the generous donations of Association members and finally determined it more prudent to formally request the State of Massachusetts to relieve the Association of the responsibility of maintaining the obelisk and Monument Square. At their annual meeting in June 17, 1919 the Association approved the title transfer and after nearly a century of overseeing stewardship of the site, the Bunker Hill Monument Association deeded the structures and six-acre site to the state on July 9, 1919.\(^{112}\)

During ninety-seven years of Bunker Hill Monument Association management, the landscape changed from a collection of agricultural parcels to a simple and grand memorial to the soldiers of the Battle of Bunker Hill. The character of the landscape near the end of the period of Bunker Hill Monument Association ownership was well described in 1907 by the president of the Association (Figure 36).

Finally, I should like to say a word about the grass. I do not believe that it would be wise to propose any radical change. The old hill is still there to speak for itself. The treatment of the lawn surrounding the Monument is simple and appropriate. The outline of the redoubts and its relation to the Monument is indicated by the landmarks placed there by the accurate historian Richard Frothingham in 1876. There are no shrubs or plants to disturb the dignified simplicity of the battlefield.\(^{113}\)

At the same time the president of the Association recognized the ongoing need for site improvements. He continued,

> The paths, are however, in need of repair, some of them, notably those at the base of the hill and inside the iron fence, are superfluous as there is a brick sidewalk running parallel and in close proximity with it around the square. The asphalt pavement is badly cracked and crumbled. I should recommend that the lower path be removed, and the asphalt be replaced by grass, grading the slope slightly so that it would lose its present abruptness. The other asphalt walks should be repaired with granolithic pavement. This would enable us to do away with the unsightly temporary fence now placed there to protect the embankment.

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\(^{110}\) Coolidge’s Accounts Receivable log shows payment of $26.66 from the Bunker Hill Monument Association for “plans of monument grounds and surroundings at Charlestown.” Coolidge worked in the office of H. H. Richardson, Architect from 1882 – 86, then became a partner of Shepley, Rutan and Coolidge, which in 1924 became Shepley, Bulfinch and Abbot. Coolidge also served as president of the Bunker Hill Monument Association. From the archives of Shepley, Bulfinch, Richardson and Abbott Architects in Boston and HSR, 109.

\(^{111}\) HSR, 114.

\(^{112}\) Ibid., 15, 109-117.

\(^{113}\) Ibid., 108.
The site was passed to the state, with recognized site deficiencies in the landscape setting – the superfluous walks, abrupt slopes, and poor condition of features. However, it stood to reflect the Association's ambitious and ultimately successful campaign to construct a fitting memorial to the Americans who fought at the Battle of Bunker Hill. A period plan illustrates the appearance of the site at this time (Figure 37). Key structural features on the site included the obelisk, granite lodge, the Colonel Prescott statue, the Warren Memorial fence spike and Frothingham's markers. Key landscape features included Monument Square bounded by four streets, the sidewalks, and iron fence, and shade trees. Within the grounds four staircases and walkways directed visitors up the grassy slopes to the monument and iron benches and seating. Two surrounding walkways, one just inside the perimeter fence and the other near the top of the bank allowed for strolling around the monument grounds. By 1919 Monument Square was completely enclosed with three and four-story single and multifamily dwellings and two public buildings. The quality and character of these buildings influenced the design and layout of subsequent neighborhood development of the area. Thus, despite the loss of nine acres of battlefield, the Association was able to endow the remaining six acres with an enduring commemorative landscape and establish a strong residential community infrastructure.

Figure 36: Photograph on the front of the *Annual Proceedings of the Association*, 1907, the double row of trees of mixed sizes and species, the Prescott Statue, benches and walkways. Courtesy of the Boston National Historical Park Archives.
Figure 37: Period plan depicting Monument Square in 1919 when transferred from the Bunker Hill Monument Association to the Metropolitan District Commission. Sources for the period plan are as follows. The boundaries of the site and location of features are from the existing conditions map prepared by DesLauriers & Associates in July, 2000. The configuration of steps and walkways and the location of trees are taken from a 1920 plan by the MDC titled “Bunker Hill Reservation, Construction Plan for the Grading, Surfacing and Other Work, May 20, 1920, Plan No. 12984.” Walkway configuration is also shown on a 1930 plan by Arthur Shurtleff, City of Boston Parks Department, titled “Compiled Survey in Vicinity of Bunker Hill.” Courtesy of the Boston National Historical Park Archives.
"Crowded populations, if they would live in health and happiness, must have space for air, for light, for exercise, for rest, and for the enjoyment of that peaceful beauty of nature, which, because it is opposite of the noisy ugliness of towns, is so wonderfully refreshing to the tired souls of townspeople."
METROPOLITAN DISTRICT COMMISSION (1919-1974)

When construction of the Bunker Hill Monument began in 1825, it was the first of its kind. By the early twentieth century, monuments and memorials had become an integral part of the American’s patriotic landscape. Plymouth Rock, Lexington Green, the Liberty Bell, Statue of Liberty, Washington Monument, and many more birthplaces and burial sites of the “nations saints” marked the “enduring power of the Promised Land.” Many of these monuments were either part of a broader urban plan, such as in Washington, D.C., or integrated into the existing urban settings, and enhanced with connections to “memorial” roadways, parks and cemeteries. In Boston, the Metropolitan Park Commission laid a network of memorial roadways, recreational parks, and commemorative sites over the existing city and surrounding metropolitan area. It was this state agency that would acquire the Bunker Hill Monument and grounds.

Landscape Architect Charles Eliot established the Metropolitan Park Commission of Boston, later merged into the Metropolitan District Commission (MDC), in 1893 as part of a vision that would provide for aesthetically pleasing, recreational open space within the city’s urban environment. Aware of the topographical advantages and shortcomings of the area defined as the Boston Basin, Eliot and his contemporaries, Sylvester Baxter and Frederick Law Olmsted, Sr. crafted a scheme that would offer water and sewage infrastructure solutions as well as “natural scenery” or recreation opportunities for a growing metropolitan population. Eliot’s rationale for a metropolitan park system drew upon the ideas of Olmsted, Sr. and others:

Crowded populations, if they would live in health and happiness, must have space for air, for light, for exercise, for rest, and for the enjoyment of that peaceful beauty of nature, which, because it is opposite of the noisy ugliness of towns, is so wonderfully refreshing to the tired souls of townspeople.

The proposed park system would be bounded by the hills of the Boston Basin, where three large reservations would be created to the north, west, and south and linked by river and parkways that would also protect areas of natural and scenic beauty. Land was acquired rapidly and was heavily used by urban residents. By 1896 there were almost 7,000 acres in the system. After the death of Charles Eliot in 1897 and Olmsted, Sr. in 1903, John Charles Olin and Frederick Law Olmsted, Jr. carried on their vision. In 1914, the Commission’s annual report noted the increasing demand for playgrounds and active reservations, stating “Whenever there is an open field, even along the parkways, it is greatly used.” Throughout the 1910s the Commission continued to acquire contiguous parcels of land to develop parkways.

Other than the need to relieve the Bunker Hill Monument Association from the financial burden of maintaining the site, documentation clearly stating the rationale for including the Bunker Hill Monument and Monument Square in the Metropolitan Park system was not found by the authors. However, at the time of acquisition in 1919, the park system was still expanding to meet the growing demand for recreational space and improve links between parcels. Cars were overwhelming many of the reservations; thus there may have been an effort...

to improve greenspace within the urban core. Bunker Hill was the second historic site to be included in the reservation system, the first being the Dorothy Quincy homestead, which was acquired in 1906. Unlike the Dorothy Quincy Homestead that bordered the larger Furnace Brook Reservation, the Bunker Hill site was not adjacent to a larger park or riverway, but was considered a reservation itself and titled “Bunker Hill Reservation.” In the 1920s, MDC acquisitions shifted to parkway corridors and it was not until the late 1950s and early 1960s that additional historic sites were acquired by the MDC on Georges, Castle and Peddocks Islands in Boston Harbor. Acquisition of properties with historic sites continued after this time and in 1971 the MDC acquired the site of the Bunker Hill Quarry and the adjacent portion of the railroad in Quincy, which became part of the Blue Hills Reservation.119

Consult with Frederick Law Olmsted, Jr.

Despite Bunker Hill Monument’s apparent isolation from the metropolitan park system, within its first year of ownership the Commission embarked on an ambitious program of site improvements. Coincidentally, the Metropolitan Park Commission merged with the Metropolitan Water and Sewer Board to become the Metropolitan District Commission, though they were still referred to as the Park Commission for several years. In 1919 and 1920, Frederick Law Olmsted, Jr. and other staff members from the Olmsted Brothers firm consulted with the Metropolitan Park Commission “in regard to the improvement of Bunker Hill Monument Grounds.”120 On 21 May, 1919 Frederick Law Olmsted, Jr. visited the Bunker Hill site and critiqued the site conditions. His field notes follow.

I thought the walk along the top of the bank on the north half of the east side ought to be regraded and there ought to be some regrading just east of the walk running north from the monument to the top of the steps. There ought to be a strong fence and hedge along the top of the bank all the way around. There should be a new tight iron fence and hand rails in place of the open handrail on the steps. Additional pickets should be introduced to the cast iron fence to stop children from getting through a space between the slanting side posts and the pickets next to them and there probably should be a piece of fence connecting the rail at the bottom and top of the steps with the outside fence, leaving the gate for access to the space just back of the gates. The more or less disintegrated dark concrete walks on the upper level should be replaced with cement concrete with very little change in layout or grades but with some rather carefully [sic] study as to details, including the detail jointing in the curbing and irregular areas. The row of lindens at the foot of the bank, of which a few remain, should be replaced with young trees.

Mr. de las Casas [Chairman of the Metropolitan Park Commission] was inclined to advocate sloping the new concrete walks away from the edge of the bank contrary to the general slope of the ground as a means of more safely taking care of the rain water. I was strongly opposed to this because it would look ugly and is entirely unnecessary.

Shortly after Olmsted’s visit, John R. Rablin, Chief Engineer for the Metropolitan District Commission, surveyed the site and prepared a plan and section of each of the four main flights of steps, detail drawings of the fence sections, and an overall site plan.121 This topography plan drawn on 11 August, 1919 and four drawings of plans and sections of entrances, stairways, and fence details, dated 3 August 1919, were sent to the Olmsted Brothers firm. Olmsted, Jr. returned to the site in September to record additional field notes. A grading study was completed by the Olmsted

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119 House Record No. 3538, Commonwealth of Massachusetts, 1971, MDC Archives. The petition for this purchase was prepared by Charles W. Eliot, the nephew of Charles Eliot.

120 “Commonwealth of Massachusetts, Metropolitan Park Commission, Landscape Architects Department, Order No. 477,” May 23, 1919 (with notes on billing until account closed on December, 1920). Library of Congress, Manuscript Division, Job #1555.
firm on 11 September of 1919 and a drawing of profiles of paths was completed by 16 September 1919. On October 4, 1919, Rablin sent a letter to George Lyman Rogers, Secretary of the Metropolitan Park Commission with specifications and costs for site improvements (Appendix III). Detail studies were completed by April 1920. A letter sent on 20 June, 1920 was sent accompanying detail drawings for drain inlets on the Bunker Hill Monument walkways (Appendix III).123

Regrading, New Steps, Walkways, and Lighting

A site plan prepared by Rablin dated May 20th of 1920 illustrates major changes to the site, including regrading of most of the slopes, reconfiguration of the walkways, and redesign of the steps (Figure 38). These proposed modifications reflect some of the recommendations of Olmsted. The plan also reflects issues raised by C. A. Coolidge of the firm of Shepley, Rutan, and Coolidge and by the president of the Bunker Hill Monument Association in his 1907 annual report, which is described at the end of the previous chapter. The 1920 plan also shows existing trees, most of which were either American elms, noted as “E” or lindens (synonymous with Basswood and noted as “B”) as described by Olmsted in the quote above. Many trees appear to be gone, as illustrated by the gaps in the tree rows.

Additional plans prepared in 1920 called for repairs to the catch basins and iron fence (Figures 39 and 40). In 1922 these improvements were authorized.124 Poles, wires, and cables for flood lighting the monument were installed at the north and south corners of the site and water service pipes were upgraded.125 The extensive alterations were symbolic of upgrades throughout the MDC system in the 1920s, as the nation entered a decade of affluence and greater leisure.126

Reports and drawings indicate that between 1928 and 1930 site improvements continued (Figure 41). In April of 1928 the MDC prepared a “Special Report” on improving the grounds and walks. This was to address the “repairing of damage caused by the washing of the soil on the embankments and of preventing, so far as possible, the recurrence of such damage, and of improving the grounds and walks surrounding said monument consistently with the character of the monument and the historic significance of the grounds.”127 The specific problem was described.

The monument grounds are surrounded by streets with sidewalks on all four sides. The grounds slope gradually from the monument on each side to within 25 to 40 feet of the streets, where a steep slope or terrace carries the grade to the level of the streets. This steep slope or terrace is difficult to maintain; it is too steep to keep the grass cut with a lawn mower; it is subject to erosion and invites rough use from children and dogs. A walk runs along each side of the grounds at the top of the terrace. It is recommended that an experiment be made of regrading the slope of the terrace on the southerly side of the grounds to secure a gentler inclination, and reconstructing the present marginal path on this side to a parallel location a little nearer the monument. This change of grade should improve the looks of the grounds and be easier to maintain than the present terraces. If this change proves successful, then the same grading should be made on the other three sides of the grounds.128

Other improvements proposed in the report included the relocation of some catchbasins, the replacement of the fence curbing with brick sidewalks, the replacement of the wire guard

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122 Olmsted Plans index cards, Job #1555, Bunker Hill Monument Grounds (actual drawing not found), National Park Service, Frederick Law Olmsted National Historic Site Archives.
123 Correspondence files, Library of Congress, Manuscript Division, Job #1555.
124 MPS/BHM Minutes Card Index, MDC Archives.
125 The pipes were upgraded from one to two-inch pipes. Ibid.
128 The cost identified was $3,000 to regrade each side. Ibid.
fences at the head of the steps at each entrance with iron picket fence, planting of shrubs at the corners of the terrace to prevent "misuse and tearing down of the slopes," repair of the gullies in the other three slopes, and replacement of dead or missing trees. In conjunction with the redesign shown in Figure 41 and described in the quote above, Boston City Landscape Architect, Arthur Shurtleff (later known as Arthur Shurcliff) prepared in 1929 a rough design of the steps as three runs of steps with two landings. This design scheme for the southerly steps was finalized and implemented in the 1930s.

Figure 38: Construction Plan showing proposed grading, surfacing and other work, May 20, 1920, Plan No. 12984. The plan also shows tree sizes and locations. Courtesy of the Boston National Historical Park Archives.

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129 The cost of additional work was estimated at $7,000. 
Ibid.

130 Arthur Asahe Shurtleff "changed his name to Shurcliff in 1930 in order, he wrote, to conform to the ancient family spelling." Charles Birnbaum and Robin Karson, Pioneers of American Landscape Design (New York: McGraw-Hill, 2000) 351. (To facilitate reference to drawings, this document will continue to use the name Arthur Shurtleff).

131 Plan for proposed steps at Bunker Hill, November 18, 1929, December 26, 1929, Plan No. 18726. Boston NHP Archives.
Figure 39: Plan of Iron Fence, northwest entrance, opposite Laurel Street, May 20, 1920, Plan No. 13020 (one of several drawings). Courtesy of the Boston National Historical Park Archives.

Figure 40: Details of granite steps, catch basins, May 20, 1920, Plan No. 13055. Courtesy of the Boston National Historical Park Archives.
Figure 41: Plan of Grading, Southwesterly side, September 24, 1929, Plan No. 18424; 457/61906. The MDC first regraded this side of the site and reconfigured the steps and walkways as a precedent for the other three sides of the site. Courtesy of the Boston National Historical Park Archives.
Recommendations by Arthur Shurtleff

In 1930 a “Compiled Survey in the Vicinity of Bunker Hill” and a “Sketch Plan for Approach to Bunker Hill” were also prepared by Arthur Shurtleff (Shurcliff), Landscape Architect for the City of Boston. The survey illustrates the existing conditions of the site, particularly the steps and walkway configuration (Figure 42). The sketch plan presents a site development plan that would link the Bunker Hill site to the core of Charlestown via a grand promenade that would encompass the old training field (Figure 43). Though visionary, the plan was apparently overzealous, as it implied land acquisition and demolition of numerous buildings, and for the most part was never constructed. Specific modifications and prudent upgrades for the Bunker Hill Monument site, however, were also part of the grand scheme, and some of these proposals were eventually undertaken. This plan proposes a formalized plaza with a semi-circle form layout around the monument and lodge. Symmetrical paths and stairways on each side of the lodge would be extended so that both would end at the perimeter path at each side of the northeastern stairs. Additionally, the plan specifies a mass of vegetation to visually screen the lodge service area from the paths, and extension of the iron fence around the monument to connect to the granite lodge. Shurtleff’s plan also depicts a widened southwesterly entrance that would link to the monument by two parallel paths that flanked a rectangular planting bed surrounding the Prescott statue. The sketch plan also punctuates the perimeter tree planting surrounding the square along the exterior fence surrounding the site. Construction detailing subsequent site changes and photographs taken during the 1930s and extending into the 1950s reflect that portions of this design intent were built (Figures 44 & 45). Although the semi-circle configuration of the plaza, the symmetrical stairs on the northeastern side, and the mass of vegetation were not installed, virtually all other details were designed and eventually built.
During the 1930s depression, many properties owned by the MDC received substantial site work by the Civilian Conservation Corps, a federal work relief program for young unemployed men. However, there are no records of Corps work at Bunker Hill. Instead, it appears that the MDC completed the work sporadically over a twenty-year period.\textsuperscript{132} Ongoing work included regrading of all slopes and reconstruction of the granite steps on all sides of the monument (Figures 46 - 50). By 1947 it appears that all four sides were regraded, the steps rebuilt, and the walkway was relocated to the edge of the new upper terrace (Figure 51). The floodlights were repaired and brought into good condition, all iron fences, including those around the obelisk and around Monument Square were painted, and it appears that new concrete walks were installed to all walkway surfaces on the upper terrace.\textsuperscript{133} A period plan illustrates the appearance of the site at this time (Figure 52).

\textsuperscript{132} Discussion with Sean Fisher, MDC Archivist, 3/1/00. Historically, all records went through the Secretary's Office who maintained a master file. In 1985, while eliminating unnecessary files, the MDC's master files from the 1930s through 1972, which included Bunker Hill documentation, were unintentionally destroyed.

\textsuperscript{133} M18/B11M Minutes Card Index, MDC Archives. Property records indicate that in 1939, the northerly side light post was damaged. The cause, extent and repair of the damage are not specified.

Figure 43: Sketch Plan for Approach to Bunker Hill prepared by Arthur Shurtleff, Landscape Architect, City of Boston Park Department, January 1930. Courtesy of the Boston National Historical Park Archives.
Figure 44: Construction Plan for Southerly Steps by Arthur Shurtleff, Landscape Architect, January 17, 1930. Courtesy of the Boston National Historical Park Archives.

Figure 45: Reconstruction of Walks and Steps, Southwesterly Approach. March 15, 1930, Plan No. 18885. Courtesy of the Boston National Historical Park Archives.
Figure 46: Reconstruction of Slope, Walk, and Steps, Northeasterly Approach. September 8, 1931, Plan No. 20344, 1 of 3. The plan shows regrading of the northerly side of the site, addition of steps at the northeast corner of the lodge (faint dashed lines), and the existing trees. Courtesy of the Boston National Historical Park Archives.

Figure 47: Reconstruction of Slope, Walk, and Steps, Northwesterly Approach, Sections, September 8, 1931, Plan No. 20345, 2 of 3. Courtesy of the Boston National Historical Park Archives.
Figure 48: Reconstruction of Slope, Walk, and Steps, Northwesterly Approach, Details, September 8, 1931, Plan No. 20346, 3 of 3. Courtesy of the Boston National Historical Park Archives.

Figure 49: Regrading, Northwesterly Slope, Reconstructing Walks, Curbs and Drains, August 17, 1938, Plan No. 24696. The plan shows the proposed surface treatment around the base of the Prescott statue, tree sizes, locations and some species. Courtesy of the Boston National Historical Park Archives.
Figure 50: Proposed Bituminous Concrete Walk, September 6, 1945, Plan No. 27075 shows the locations of trees and the elimination of the lower walkways inside the perimeter fence. Courtesy of the Boston National Historical Park Archives.

Figure 51: Northwesterly and Southeasterly Approaches, July 28, 1947, Plan No. 27620. This plan shows the final stages of the regrading of slopes, redesign of steps and relocation of walkways around the upper terrace. Courtesy of the Boston National Historical Park Archives.
Figure 52: Period plan depicting Monument Square in circa 1947 when the Metropolitan District Commission completed the regrading of embankments, construction of wider steps with landings, and a new walkway around the upper terrace. Sources include "Northwesterly and Southeasterly Approaches," July 28, 1947, Plan No. 27620 and "Proposed steel hand railing," April 2, 1958, Plan No. 36674 from the Boston National Historical Park Archives.
“Deplorable Condition”

Maintenance of the monument grounds began to falter in the 1950s, a period when the MDC was focused on developing its 1956 General Plan and acquiring new recreational facilities and open space. In a memo dated May 10 of 1956, Mark Bortman, Chairman of the Boston National Historic Sites Commission, sent the Chairman of the MDC a site survey card assessing the condition of the site. As determined by a Historic Sites Commission historian, Edwin W. Small, the condition and care of the Monument was poor, the granite building was in “deplorable condition,” the grounds were “overused” as a play area, and the “maintenance and protection inadequate.” It was further stated that much rehabilitation was needed and that it should be “followed by drastic improvements in operation, maintenance and interpretation.”

Moreover, newspaper articles began calling attention to the condition of the monument and grounds, which motivated the president of Charlestown Savings Bank to implore the MDC Commissioner to keep the grounds “in a condition of which we in Massachusetts will not be ashamed.” He continued to suggest that the “Please Keep off the Grass” signs should be replaced and “enforced as they were a number of years ago.”

The combination of the Historic Sites Commission evaluation and the public outcry apparently compelled the MDC to take action, and by 1958 maintenance and rehabilitation projects once again began in earnest. In August of 1958, the MDC was amidst completing three contracts on the restoration of the grounds. These included steam cleaning the Monument to remove vandalism, lipstick and chalk marks, and placing new steel hand railings (Figure 53). Work also included repair of the ornamental cast iron fence by replacing missing fence sections and pickets, and painting.

Ongoing Role of the Bunker Hill Monument Association

Despite the improvements in the late 1950s, the need for major repairs persisted, and the public continued to write and petition the MDC to take better care of the property. The MDC, well aware of the degraded condition of the property, substantiated the site needs and acknowledged the need for financial assistance. The Commission noted that holes in the lawn needed filling, erosion was rampant alongside the staircases, and short concrete walls were needed to retain fill. The Commission further stated that virtually all the concrete work at the site needed replacement as well. In December of 1960, the condition of the site inspired a letter from Bunker Hill Monument Association President Charles W. Eliot (the nephew of Charles Eliot described earlier), who was also a landscape architect, to MDC Commissioner Hon. Robert F. Murphy offering cooperation in carrying forward improvement of the grounds.

Murphy acknowledged the “sad condition of the property,” and reiterated that the grass areas, walls, plantings and banks needed upgrading. He suggested “that the essential first step is a study and long-range plan by a competent landscape architect” and that the plan would determine which projects were best suited for an expenditure of $25,000.

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135 Letter to the MDC Chairman, May 10, 1956, with attached Survey No. 10 card. General Subject (YT) file: Bunker Hill Monument, MDC Archives.
136 Additional plans and photos of damaged posts include photos no. 01506, 01508, 01509 from MPS/BHM Minutes Card Index, MDC Archives, and “Proposed Steel Hand Railing,” April 2, 1958, Plan No. 36675, Boston NHP Archives.
137 MPS/BHM Minutes Card Index and General Subject (YT) BCH, and Contract #1072 in 1958, with Providence Wire Works, Inc. of Rhode Island, MDC Archives.
138 General Subject (YT) BCH, MDC Archives. Summarized from a letter from the MDC Captain to the Superintendent of Police, 1959, in response to a letter from Wolcott Currier, who addressed the condition of the grounds at Bunker Hill.
139 Charles W. Eliot II (1899-1993) was the nephew of Charles Eliot (1859-1897), who envisioned the Metropolitan Park System and the grandson of Charles W. Eliot I (1834-1926), who served as president of Harvard University. Eliot II was a landscape architect and planner and served on the National Park and Planning Commission. Information provided in letter from Lauren Meier, Olmsted Center for Landscape Preservation, September 18, 2000.
140 General Subject (YT) Bunker Hill Monument, MDC Archives.
Landmark Designation and Heavy Use as a Play Area

On January 20th of 1961, Bunker Hill Monument was designated a National Historic Landmark. Ironically, at the same time the site was plagued with maintenance issues, many of which were related to its intensive use as a play area. Soon after the site was endowed with Landmark status, the MDC began a concerted effort to attain funding for improvements. The MDC requested a $70,000 appropriation from the Massachusetts Ways and Means Committee, citing degradation of the grass and plantings, erosion of slopes caused by children’s play, and the MDC’s inability to provide sufficient maintenance. As Charles W. Eliot reported, “The banks are washed and worn, particularly at the steps where children enjoy sliding down the cheek-stones and inevitably get off onto the banks.”

Benjamin W. Fink, Engineer for the MDC followed up with a letter to the Commissioner, supporting Charles W. Eliot’s solicitation to develop a master plan, and advised the Commissioner to employ Eliot to carry out the task. Fink was concerned that due to the historical significance of the property, that if the “wrong type of fence or work is done,” “much criticism can ensue.” Subsequently, Fink recommended that the first priority should be to construct a fence alongside the stairs and to sod the ravines abutting the granite stairs as requested by Representative Doherty and with the approval of Charles W. Eliot. In response, the Commissioner stated that insufficient funds would prevent a complete rehabilitation and that, with a budget of $25,000, fence construction would be the first priority.

By May 1961, the funds were applied to grounds improvement, including regrading, reseeding, sidewalk repairs, construction of bitumen concrete paved gutter (presumably along the stairs), and relighting of the Bunker Hill Monument (Figure 54). The addition of new steel picket fences along the stairs put an end to children’s play on the cheek-stones (Figure 55). By 1962, planning documents suggest that most work items were addressed. In 1966, New England Sales and Manufacturing Corporation was hired to furnish and install lighting standards, fixtures, conduits, cables, and control centers, as well as to complete work on sidewalks, roadway surfaces, and incidentals. Mercury vapor lamps, also referred to as “cobra lights”, were installed to illuminate the stairs and upper walkways.

In 1965, MDC Commissioner Whitmore sought estimates and recommendations for the following work:
1. Connect the lodge with the tower by an enclosed entrance or passageway.
2. Install a turnstile at entrance to lodge…for a ten-cent piece
3. A high iron fence to run around the grounds, probably 8 feet high.
4. Replace missing posts surrounding the monument only to be reinstalled.

Subsequent documentation for this proposed work was not located. However, photographs taken in 1974 and 1977 show a chain-link-enclosed passageway between the lodge and monument and chain-link entry gates at the base of the walkways (Figures 56 & 57).

113 Memorandum from Robert Murphy, MDC Commissioner to John Toomey, Chairman, House Committee on Ways and Means, February 3, 1961. General Subject (YT) BHM, MDC Archives.
114 Ibid.
115 Letter from Charles Eliot, President of Bunker Hill Monument Association to Robert Murphy, MDC Commissioner, December 23, 1960. General Subject (YT) BHM, MDC Archives.
116 February 14 Letter from B. W. Fink to Commissioner, February 14, General Subject (YT) BHM, MDC Archives.
145 Letter from Commissioner in response to B. W. Fink’s letter, General Subject (YT) BHM, MDC Archives.
147 General Subject (YT) BHM, MDC Archives.
Figure 53: Proposed steel hand railing to be added on the centerline of the steps, April 2, 1958, Plan No. 36674. Courtesy of the Boston National Historical Park Archives.

Figure 54: Plan of Improvements to Bunker Hill Grounds, May 8, 1961, Plan No. 39755. Courtesy of the Boston National Historical Park Archives.
Figure 55: Details for improvements to Bunker Hill grounds, details for fences along cheek stones of steps to prevent children’s plan, May 8, 1961, Plan No. 3976. Courtesy of the Boston National Historical Park Archives.

Figure 56: Bunker Hill Monument and Lodge, chain link passageway, June 1974. Photograph by Jack Maley. The fence was installed circa 1965. Courtesy of the Metropolitan District Commission Archives.

Figure 57: Chain link gates at four entrances to monument square, installed by the MDC in circa 1965. Photograph taken in 1977 shortly before removal. From Evans et al., *Historic Structure Report*, 278.
Transfer to the National Park Service

On March 7, 1968 the Commission voted to approve the transfer of all the Commission’s rights, title and interest in Bunker Hill Monument to the United States Government, to become a National Historic Site. On August 16, 1972 the commissioner wrote to Senator Edward Kennedy in response to his proposal to transfer Bunker Hill to the National Park Service, indicating that the MDC would have no objection to the transfer. This was followed two years later by a Commission meeting on October 23, 1974 whereby it was proposed "to donate Bunker Hill Battlefield to the United States of America." The Commission discussed the desirability of transferring the Bunker Hill Battlefield to the United States, pursuant to recent Federal legislation. He further expressed that the transfer be completed to the National Park Service as quickly as possible, so that the National Park Service have complete control by March 1, 1975 in order to adequately prepare for Bunker Hill Day and the Bicentennial Season.

Improvements by the MDC in Preparation for the Bicentennial

The pending title transfer to the NPS stimulated the MDC to initiate more site improvements. In August of 1969 the Commission approved an expenditure of $22,000 to repair the stairs and platform, construct a reinforced concrete wall under the fence, repair and replace portions of the ornamental fence, and to install metal grills. No documentation was found regarding implementation of this work. In 1971, Captain Albert A. Swanson of the MDC outlined to the Commissioner, John W. Sears, the site improvements needed in preparation for Bunker Hill Day of that year. He indicated that two sections of fence were missing, litter was a problem, benches were broken or missing slats, and the granite steps needed to be repointed. In a second letter, Captain Swanson recommended that the MDC take action on three projects: Lighting the area around the monument and walkways with early colonial type lighting (gas or facsimile), surfacing the sidewalks bounding the square with brick with granite curbstones, and resurfacing the walkways within the square with a "material more compatible with the buildings and the Monument." It appears that some site work and improvements were carried out in 1972 when "a concerted effort was made...to improve conditions and establish a continuing preventative maintenance program." Specific tasks accomplished prior to the June 17th celebration, included repair of deteriorated sidewalks, resetting and grouting of granite steps, repair and painting of stairway railings, replacement of all signs as necessary, and repair and painting of all outdoor benches. The site, however, was still in poor condition. A report prepared in March of 1973 identified "The Six Disappointments of Bunker Hill" and proposed a total restoration of the grounds. Further, MDC vehicles regularly drove on the site, creating rutted and compacted areas. A letter of complaint dated August 6, 1973 to Commissioner Sears from David L. Donavan "For the Committee to improve the Bunker Hill Monument" cited ongoing problems and once again described the site as in "deplorable condition." The Commissioner responded the same day that the 1973-74 budget request of $300,000 for Bunker Hill was "cut to zero."
Despite the numerous site improvements by the MDC, their sporadic maintenance and unreliable budget for the site led to the concerted efforts of the people of Charlestown, the Charlestown Historical Society, and the Bunker Hill Monument Association to lobby for its transfer to the National Park Service. In October 1974, the U.S. Congress approved the establishment of Boston National Historical Park. As stated in a December 1974 newspaper article, a “long arduous struggle over the last fifteen years” led to the transfer to the National Park Service so that there would be “necessary funds to make the Bunker Hill Monument what it truly should be -- one of the foremost historic shrines in the nation.”

Ramps, Commemorative Tablets, Trees and Other Site Improvements 1974 – 76

Although National Park Service ownership was imminent, the MDC was committed to transferring a property in good condition. Between 1974 and 1976, in preparation for the 1975-76 bicentennial celebrations, improvements were made by the MDC to the Monument lodge and grounds. Beginning in September 1974, improvements at Bunker Hill were carried out collaboratively by the MDC, who set aside $50,000 for improvements, the U.S. Army Corps of Engineers, who offered $135,000, and the U. S. Historic Preservation Grants Program, who provided a grant of $25,000. Priorities identified for grounds improvements included: resurfacing of the concrete walkways and installation of a ramp, replacement of the concrete sidewalks with brick, fence repair, four commemorative gates, additional trees, and a third pole on the façade of the lodge for the Bunker Hill Flag. The proposed work also included building and exhibit improvements, thus not all funds were allocated to the grounds.

The first project was completed in 1974, when the Corps replaced the concrete walks and curbs (but not with brick) and constructed two ramps to improve handicapped accessibility (Figure 58). A long ramp was installed from the Monument Avenue gate up to the southeast monument lawn quadrant. A short ramp was installed at the entrance of the Lodge.

In December 1974, the MDC Project Analysis Board voted to fund the repair of the cast-iron perimeter fence. In 1975, the MDC developed fence restoration drawings in consultation with the Massachusetts Historical Commission (Figure 59). This included the reconfiguration of the fence at the Monument Avenue gate to accommodate the new ramp. The fence restoration work was funded by a matching grant from the Massachusetts Historical Commission.

Design work on the commemorative gates began in 1974. Ideas and advocacy were garnered by Charlestown resident, Douglas P. Adams, who felt strongly that the roles of Major General Isaac Putnam from Connecticut, Major General Stark from New Hampshire, the soldiers from these two states, and Colonel Gridley of the yet-to-be-formed Corps of Engineers were unrecognized. Adams proposed “that Connecticut and New Hampshire should each erect a memorial in one of the malls.” The MDC Parks and Planning Division incorporated these ideas into a scheme of commemorative tablets.

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101 Legislation was introduced to create Bunker Hill National Historic Site and NPS prepared a proposed master plan, but the bill was dropped in favor of a more comprehensive national historical park.
102 Colorphotograph article of unknown source, entitled “National Park Service Takes Title to Bunker Hill Monument.”
104 MDC Archives.
105 Commissioner Sears also envisioned a reconstructed redoubt. MDC Landscape Architect, Jim Falck, prepared rendered design drawings. The location of the drawings is unknown. Interview with Jim Falck, April 5, 2000.
106 The National Park Service modified the ramp in 1979.
107 A drawing dated March 6, 1975 shows the fence design at the base of the ramp, entitled "Restoration of Fences, New Gate at Ramp," File Cont. E-456, Drawing #A-1.
After extended discussion, Parks and Planning personnel chose the design incorporating stone tablets to replace fencing on first stair landings. It was felt that the scale of this design...was appropriate to the site and left visitor's view of the Monument undistracted by additional tall structures. Tablets will have State seal in effect in 1775 and would mention leader of each state's militia. The site's present tree planning would be supplemented with informal groves of state trees mixed with other appropriate vegetation.\footnote{Inter Office Correspondence from Parks Division/Land Planning Office to Commissioner John W. Sears, titled "Program for Bunker Hill Improvements," August 9, 1974. MDC Archives.}

The MDC Engineering Division designed the text, seals and mottos for the tablets.\footnote{The MDC sought to recognize the states and certain individuals that participated in the battle. For the Massachusetts Gate, Warren, Bridge and Gardner (originally envisioned to be the west entrance), for the Connecticut Gate, Knolton and Putnam, for the New Hampshire Gate, Stark, and for the Main South Gate, Prescott and Gridley. Letter from John W. Leslie, Chief, Engineering Division, Department of the Army, Corps of Engineers to Robert Williams, Director, Parks and Recreation Division, Metropolitan District Commission, July 8, 1974, MDC Archives. According to post-project description by A. Dix Leeon, Jr. of the MDC Planning Office, the design and materials were done by the MDC with assistance by the Corps of Engineers, the states of Connecticut and New Hampshire, Whitney Smith of the Flag Heritage Foundation. Inter Office Correspondence from A. Dix Leeon, Jr. to Commissioner William J. Byrne, June 6, 1975. According to Jim Falck, Frank DeLacce with MDC Engineering prepared the specifications and construction documents for the tablets. Interview with Jim Falck, April 5, 2000.}

The tablets acknowledged and honored the United States as an independent nation, as well as the troops from three states that participated in the Battle of Bunker Hill, including Massachusetts, Connecticut, and New Hampshire.\footnote{A report prepared in 1972, "Suggestions for Boston's Bicentennial Program" by Professor Douglas P. Adams at the Massachusetts Institute of Technology, who also served for a period as Vice President of the Bunker Hill Monument Association, President of the Bay State Historical League, and President of the Charlestown Preservation Society, offers some insight on the design of the commemorative tablets. Adams felt that the rolls of Major General Isaac Putnam from Connecticut and Major General Stark from New Hampshire were unrecognized. He further indicated that the New Hampshire Bicentennial Commission and the Putnam family were enthusiastic about commemorative monuments that would recognize their role in the battle. Adams also alluded to the significance of these additions as "symbolic of the growth and solidarity of this country since that time" and that the setting of the monument should reinforce the "current emphasis on parks in the Federal, Metropolitan and Municipal environment" as a key link in a chain of historic sites, MDC Archives.}

As described above by the MDC Parks and Planning Division, "informal groves of state trees mixed with other appropriate vegetation" were to be part of the Bicentennial improvements. The "state" trees were to be symbolic of the states of the Union. Jim Falck, Chief Landscape Architect for the Union, led the project. Falck chose pin and red oaks because of their ability to withstand urban pressure.\footnote{Telephone conversation with A. Monti Granite Company, P. Q. Brouillante, 2000 and MDC Secretary's office, YT files, 1975, MDC Archives. The MDC's commitment to providing timely improvements was such that in at least one case, the contract agreement stipulated for the stonework "...that Federal reimbursements will not be forthcoming on this project in order that work may be completed by Bunker Hill Day. Order No. 39228, an extract from the records of the Commission meeting held on March 26, 1975, awarding contract for fence restoration to Gear Bros., Inc., MDC Secretary's office, YT files, 1975, MDC Archives.}

\footnote{MDC Secretary's office, YT files, 1975, MDC Archives.}
conditions, as well as their “beautiful structure and pyramidal form like the obelisk” (Figure 61). The placement of trees was intended to be in a “random order, like soldiers,” and as a secondary design element to the formal rows of trees at the perimeter of Monument Square.\textsuperscript{173}

Additional site improvements completed prior to the bicentennial included walk improvements, described as a provision for a "mineral surface;" lighting improvements, grading for drainage, removal of the chain link cage between the monument and lodge, and rehabilitation of landscape features including the turf, and a pole to hang the Bunker Hill Flag.\textsuperscript{174} The flag pole was affixed to the front of the lodge so that three flags, the national and state flags, and the Bunker Hill Flag, could be hung over the entrance to the lodge.\textsuperscript{175}

By the completion of the MDC improvements in 1975, the monument grounds were substantially different than their appearance at the time of the previous transfer in 1919. The first major alteration by the MDC was the regrading of the eroded embankments, elimination of the perimeter walkway just inside the iron fence, and relocation of the upper perimeter walkway to the top of the slope. The MDC completed this work by the late 1940s, including resurfacing all of the walkways and rebuilding the steps. In the later years of MDC management, additional features were added to the site. In response to children’s play and damage to the turf, fences were placed on the cheek walls and signs were placed on the site. In preparation for the Bicentennial, the steps were punctuated with granite commemorative tablets and pin oak trees added to the upper slopes and upper walkway in random plantings.

The double row of shade trees ringing the property were substantially replanted, subsequently declined, and replanted again, resulting in many young trees on the site. Ornamental plantings were tried but later abandoned as the more basic needs of erosion and turf management took precedent. Drainage problems along the steps were solved with asphalt runnels and catch basins. Floodlights added to the corner of the site to light the monument and cobra lights added around the monument for visitor safety. In summary, most of the site features added to the MDC after circa 1950 were in response to the increasingly urban character of the surrounding area and in anticipation of the Bicentennial of the site’s turbid past.

\textsuperscript{173} Interview with Jim Falck, April 5, 2000. During his tenure as Chief Landscape Architect for the MDC, Falck added many new tree and shrub plantings to MDC parks and parkways including Wollaston Beach, Chestnut Hill Reservoir, Mystic Valley Parkway, Belle Isle Marsh, and the Charles River Esplanade.\textsuperscript{174} General Subject (VT) file: Bunker Hill Monument, MDC Archives.\textsuperscript{175} No documentation was found to determine the installation date of the first two flagpoles. Inter Office Correspondence from Captain Albert A. Swanson to Martin Weiss, titled “Flag Pole for Bunker Hill,” December 26, 1973 (with illustration), MDC Archives.
Figure 58: Improvements to Monument and Lodge, October 1974. 457/61900A. As-Builts illustrate the accessibility ramp from the Monument Avenue gate and the ramp into the lodge. Courtesy of the Boston National Historical Park Archives.

Figure 59: Restoration of Fences, Details. E456; 62636, Drawing #2 of 2. Courtesy of the Boston National Historical Park Archives.
Figure 60: Bunker Hill Commemorative Tablets, March 1975, Drawing A-1, Courtesy Boston National Historical Park Archives.

Figure 61: Bunker Hill Monument, July 24, 1974. Photograph by Jack Maley. Recently planted pin oak trees on the upper slopes of Monument Square. Courtesy of the Metropolitan District Commission Archives.
The National Park Service will undertake a program of building conservation to arrest any deterioration in the fabric of these various structures. Each element will then be treated to best serve its original purpose in a safe, contemporary manner...While each of these three elements [grounds, obelisk, and lodge] date from different periods and have evolved with time, the essential character of an austere neoclassical memorial has been retained.

Boston National Historical Park, General Management Plan, 1980
On October 1st of 1974, the Bunker Hill Monument was designated one of several historic sites to be incorporated into the Boston National Historical Park (Figure 62). As described in the previous chapter, the MDC actively managed and maintained the site for two additional years. The title of the property was actually transferred from the MDC to the U.S. Department of the Interior, National Park Service (NPS) in November of 1976 (Figure 63). The Bunker Hill Monument was linked to other sites in the historical park by the 2.5-mile Freedom Trail in 1977.

Landscape Assessment, Historic Structure Report and General Management Plan

At the time of the transfer, only one record was found of a meeting in 1976 to discuss the condition of Bunker Hill. References to the site included an observation that there was no vehicular access to the monument, further noting that one section of the cast iron fence may be removed, but that it was a heavy, fragile, bolt-on unit. An indication was made that the MDC used a payloader to move it. However, there was no clarification of precisely how the section was dismantled, or for what purposes and with what kind of regularity. It was further noted that the Corps of Engineers might have the castings for the perimeter fence and that the

MDC had castings for the interior fence in the basement of monument.

In 1977, the park and NPS Denver Service Center conducted an existing conditions survey and initiated a Historic Structure Report (HSR), which was completed in 1982. At the same time, the park completed its General Management Plan (GMP) in 1980. In the HSR, the condition of the grounds are described as heavily used, particularly as an urban residential greenspace, with little reverence for the memorial. "The high use of the square by neighborhood residents has led to the creation of a well-worn baseball diamond on the southwest corner of the green, a regular dog run for local pets, abuse of the plantings on the square, and the ever present threat of vandalism (Figure 64)." Despite improvements at the time of transfer, the site was described to be in poor condition, including site features, which suffered from years of neglect and abuse. Granite slabs at the base of the monument had heaved, masonry joints no longer held steps on the site and concrete and macadam paths were severely cracked. The fence, an enduring historic feature on the site, was described as in need of repair.

The HSR describes many features that were deemed inappropriate for the site, including tree plantings added by the MDC in the 1970s as diverging from the historic "orderly plan" to "abstract groups" with many trees in need of maintenance. Tree wells in the sidewalk on Monument Square Avenue had been covered with asphalt. Chain link gates had been added to each of the gates that were inappropriate and ineffective. A chain link cage between the obelisk and lodge was also an eyesore on the historic site. Two types of benches surrounded the monument, dating to different periods. The cobra style mercury vapor lamps "typical of street lamps found anywhere in the U.S.A." illuminated the historic site. A utility box at the northeast gate was an intrusive element. The Warren spike implanted in the southwest

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170 Public Law 93-431. This differed from a proposal in 1968 to designate the site as an independent National Historic Site. A historical park was a logical alternative considering the acquisition of the Charlestown Navy Yard, management partnerships with seven other historic sites in Boston, and that the Boston National Historic Sites Commission had recommended this as a viable management strategy. Boston National Historical Park, General Management Plan, 1980 (hereafter General Management Plan), 6-7.

171 In 1977, at the request of the Boston National Historical Park superintendent Hugh Gunney, the MDC transferred archival records, including blueprints and architectural drawings to the NPS MDC Correspondence file, MDC Archives.

172 The Freedom Trail was created in 1951 and designated a National Recreation Trail in 1976 and a National Millennium Trail in 1999.

173 Bunker Hill file, Maintenance Division, Boston National Historical Park.

180 HSR, 240-42.
quadrant of the square is described as an “obvious safety hazard...almost beyond comprehension (visible in Figure 64 & 65).”\textsuperscript{181} Known as the “Warren Spike,” it was subsequently removed and stored in the lodge.

A more detailed assessment of the trees was documented in 1978 with a site plan (Figure 66). Most trees were in need of pruning to remove diseased or dead wood. Many of the trees along the street were vandalized with trunk scars and broken branches. Recommendations included the replacement in-kind of three trees, a red maple, red oak and basswood, and the replacement of two American elms with Katsura trees. The plan recommends the thinning rather than removal of the pin oaks along the upper walkways. These site improvements were documented the following year on a 1979 tree plan (Figure 67).\textsuperscript{182}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{image62.png}
\caption{Figure 62: Boston National Historical Park sites. Note Bunker Hill Monument site to the north (at top). Courtesy Boston National Historical Park.}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{image63.png}
\caption{Figure 63: Boston National Historical Park, Bunker Hill Monument Land Status Map, Authorized October 1, 1974, dated March 1979. Courtesy of the Boston National Historical Park Archives.}
\end{figure}

\textsuperscript{181} Ibid., 240-43.
\textsuperscript{182} Another plan prepared in 1979 also shows existing conditions and is stored in the Boston National Historical Park Archives.
Figure 64: Circa 1976 photograph of ball game on the southwest quadrant of Monument Square, with sign on post “no ball play…” The Warren Memorial fence spike, visible in the right foreground, purported to show where Major General Joseph Warren fell during the Battle of Bunker Hill. The Bunker Hill Museum building is in the background. Courtesy of the Boston National Historical Park Archives.

Figure 65 (left): Photograph taken in 1977 of the Warren Memorial fence spike, since removed, from *Historic Structure Report*, 284.
Figure 66: Plan of plant species and configuration, July 5, 1978. Plan No. 457/61007. Courtesy of the Boston National Historical Park Archives.

Figure 67: Plan of planting configuration and species, 1979. Notes compare with plan of 1962 to determine trees lost. Courtesy of the Boston National Historical Park Archives.
Landscape Treatment Recommendations in the Historic Structure Report

The HSR included a conjectural restored site plan (Figure 68). Treatment recommendations in the HSR were based on the "selective restoration" of the landscape to the Bunker Hill Monument Association period, recognizing that a complete restoration would eliminate some of the beneficial site work carried out by the MDC, including the regrading of slopes and accessibility ramp. The conjectural plan suggests the reintroduction of corner walkways and the placement of two fountains.\(^{183}\)

In 1979, the NPS issued a work directive for monument rehabilitation drawings by an Architectural/Engineering firm, Still Associates. Site items contracted included: a provision for plans for designing and installing entry gate bollards at all four gates; redesigning the access ramp to be compliant with ANSI A117-1; and preparing record measured drawings of the site. Details and specifications were provided for: resetting of the stone steps at each of the four gates; replacing broken concrete sidewalks; resetting stone pavers at the base of the obelisk; repairing and replacing broken or missing pickets on perimeter east iron fence; and replacing the obelisk floodlighting with metal halide light source.\(^{184}\)

During 1979-1981, Boston National Historical Park contracted the Bunker Hill Monument Restoration project.\(^{185}\) Work mobilized on December 17, 1979 with the disassembly of one section of the existing perimeter iron fence at the southeast corner to prepare for constructing a temporary access road. The work included site improvements, as well as repointing of the obelisk. Field inspection notes describe that the concrete subcontractor placed all new plaza walkways, the handicap ramps, and cheek walls for steps with broom finish in alternating directions providing a checker board pattern on the plaza walkways (Figure 69). New granite curbs and granite pavers at the four entrance gates were also installed and the bollards and other granite pavers and curbs were reinstalled. Approach steps at all four gates were also raked out and repointed. Further, the existing iron fencing around the obelisk and two sections at the street were reinstalled. The subcontractor also modified the existing cheek wall handrail, installed a new handicap ramp handrail, and two new iron gates. Final site grading was performed, benches were furnished and bituminous paving work was performed. A landscape subcontractor installed new grass sod.\(^{186}\) In 1985, drawings for additional fence work were completed but the actual work was not funded.\(^{187}\)

An exploratory excavation at the base of the obelisk and installation of a new storm drainage system were also completed. Excavation work uncovered previously unknown rubble walls, which were deemed historic and were fully excavated and documented, and caused several changes in the new drainage system. The new system consisted of new drain piping, backfilling and installation of a concrete swale. While the obelisk foundations were exposed, they were cleaned and repointed, and the lightning protection system was repaired. At the completion of the work the rubble walls were again covered up and left in their original condition.

\(^{183}\) Specific recommendations in the HSR include: resetting of granite pavers and steps, resurfacing of walks, removal of trees not part of the perimeter plantings, replacement of cobra lights with fixtures that related to the nineteenth century, replacement of chain link entry gates with historic bollards, redesign of the obelisk and lodge connection and removal of the chain link cage, repair of the cast iron fences, and redesign of the memorial spike to create a "less perilous" monument. Ibid., 240-50.


\(^{186}\) NPS memorandum dated Sep 25, 1981, Boston National Historical Park Maintenance Division.

\(^{187}\) Construction documents were prepared in April 1985 (Drawing #457/61012) and are stored in the Boston NHP Archives.
Figure 68: Plan prepared in December 1977 by the Historic Architecture Branch of the NPS Denver Service Center shows a simplified existing site plan and a conjectural restored site plan. From Historic Structure Report, 309.
Pin Oak Shadows

By 1992, the pin oaks planted in 1974 had grown to a height where they interfered with the monument floodlights and site lighting. In response to this problem, the NPS Olmsted Center for Landscape Preservation developed a Landscape Preservation Maintenance Program for the site. This included an inventory and inspection of all trees on the site (Figure 70). Without the research and analysis provided by a CLR, the short-term study provided two preservation recommendations. These were to either thin the pin oaks so that light could pass through them, or replace them in-kind with smaller trees. The pin oaks had also grown large enough to provide shade to visitors who trekked along the Freedom Trail from Boston, and climbed wearily up to the monument. Interpretive staff also began to take advantage of the shade trees as gathering points for their summer tours. Over the next two years, the pin oaks were thinned to allow greater penetration of the floodlights but none were removed.

Site Improvements, Irrigation and Archeology

By the 1990s, the fences and stone steps required additional repair work. Between 1994 and 1996 the fences were repaired.188 Work included sandblasting and painting of both the perimeter and monument iron fences, and the replacement and repair of missing and broken elements. A gate in the fence was added in conjunction with this work because the accessibility ramp was not wide enough for vehicles.189 The steps were also repointed, however, failure of the repointing on several steps resulted from larger structural problems relating to the footings of the steps.

The steep slopes and poor soil of Monument Square, combined with high use, resulted in weak turf, compaction, erosion, and bare spots. To improve the condition of turf, the maintenance staff proposed an irrigation system. The proposal prompted an

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188 Working drawings prepared in July of 1994 for fence repairs utilized the same details in the 1975 drawing shown in Figure 59.
189 Note from Steve Carlson, June 23, 2000 to the authors.

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introduction of flowers. The Monument Square Neighborhood Association led efforts to obtain daffodil bulbs from the City of Boston Parks and Recreation Department and a daffodil bed was established in the lawn area in front of the Prescott statue. In the late 1990s the Monument Square Neighborhood Association contributed eight square box planters to be placed at the top of each set of steps. These were planted with seasonal flowers, including geraniums, hardy mums and kale, and maintained by the NPS.\(^\text{193}\)

The most recent addition to the monument landscape, in September 2000, was the reinstallation of the Warren memorial iron fence spike, which was purportedly installed on the grounds in 1876 to mark the approximate location that Joseph Warren was killed at the Battle of Bunker Hill. In 1997, the historic base was found, but was damaged beyond repair. A new base was made from Quincy Granite, with an inscription to Warren. The work was done by Quincy Memorials, Inc. of Quincy and installed by the NPS. The spike was subsequently removed due to renewed safety concerns.

With twenty-five years of NPS management and maintenance, many site conditions improved dramatically, however future work is needed to both protect historic features and remove or mitigate non-historic features. Current conditions include: some missing or dying perimeter trees, non-ADA compliant accessibility ramps, some poorly set or heaving steps and heaving granite pavers. The upper asphalt walkway is cracked, rough, and heaving in several places, pine oak trees continue to block the monument floodlights and site lighting, and the mercury cobra lights installed by the MDC have not yet been replaced. In 1999, the NPS funded a major construction project scheduled for 2002 to rehabilitate the monument, lodge and landscape. The project also includes reuse of the adjacent Bunker Hill Museum as a NPS interpretive facility and community museum for the Battle of Bunker Hill. This cultural landscape report was initiated in preparation for this major construction project.

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\(^\text{193}\) Correspondence from Diane Valc, Monument Square Neighborhood Association to authors, December 15, 2000.

Figure 69: Construction photos included in memorandum dated Sep 25, 1981. Courtesy of the Boston National Historical Park, Maintenance Division.
Figure 70: Plan of existing trees in 1992 from the “Landscape Preservation Maintenance Plan for Bunker Hill Monument.” The species, size, and condition of each tree is described in the document. From the Olmsted Center for Landscape Preservation.
II. EXISTING CONDITIONS
II. EXISTING CONDITIONS (2000)

This section provides a reference plan and detailed descriptions and photographs of landscape characteristics or extant site features as documented between June and September 2000 unless otherwise noted (Figure 71). All photographs in this section were taken by the authors. More detailed discussion of feature elements and character are provided in Chapter III, Analysis of Significance and Integrity. Design, function, use and recommended treatment levels are addressed in the Chapter IV, Treatment.

Bunker Hill Monument is enclosed within Monument Square in an axial, slightly asymmetrical arrangement and is bounded by an iron fence. Access into the site is through stout granite entry bollards at each of four entrance staircases (Figure 72). The perimeter fence has gates on either side of each entry, but all gates, except those at the Massachusetts Gate appear to have been permanently welded closed. The entry stairs lead to concrete walkways that bisect the site into quadrants, and lead to an upper terrace plaza surrounding the centrally located obelisk and the adjacent granite lodge. An interior fence surrounds the obelisk on three sides and encloses the monument with the lodge. A lawn covers the upper terrace from the plaza to the edge of the asphalt pathway, which is laid parallel to the public sidewalk surrounding the monument site, and encircles the top of the slopes. From the outer edge of the path, the lawn continues down slope to blanket the rest of the site. A row of trees along the inside edges of the site flank the iron fence, and continue to be part of a double row of trees in union with street trees planted in the public sidewalk. Other trees are scattered near the double tree row and along the asphalt and accessible pathways.

The four original entrances built in 1847 and modified between the 1920s and 40s continue to serve as the monument gateways. The northwesterly approach called the Massachusetts Gate, bears the widest, steeps, and grandest staircase, and faces the Monument and Prescott statue at entry, setting the hierarchy as the primary entrance (Figure 73). The New Hampshire Gate, directly opposite the Massachusetts Gate, has an equally wide entry, but faces the backside of the lodge. Upon entering from this gate, at the northeast corner of the concrete walkway, a short run of steps catches grade to the upper plaza. The Connecticut and United States Gate approach the site from the southwest and northeast sides.

All entry stair and railing systems conform to the topography, with unique widths and heights. A flat iron railing stabilized by plain, square cast iron balusters and posts flank each side of the steps. Each post terminates with a simple spear finial. Square, hollow iron rail posts capped with a decorative urn finial anchor the beginning and end of the balustrades (Figure 74). A simple, contemporary steel railing with plain, widely spaced, square iron posts and balusters, and four evenly spaced iron rails runs up the center of the steps. Each stairway has two runs of granite steps divided by a landing. Commemorative granite tablets decorate each of the lowest landings on the same plane as the side hand railings. The Massachusetts Gate, the United States Gate and the Connecticut Gate center railings have a break at the landing, providing access to two granite tablets. The New Hampshire Gate central railing is unbroken (Figure 75). In addition to the stairways, a concrete accessibility ramp built in the 1970s provides barrier-free access to the upper plaza, but does not entirely meet accessibility codes. Slopes meet code, however the railing and edge treatments do not. Beginning on the eastern side of the Massachusetts Gate, it cuts diagonally across and up the southeastern lawn panel, terminating at the asphalt path near the top of the Connecticut Gate stairs. It has a black, steel pipe handrail composed of two rails and widely spaced posts on the downhill slope side and concrete curbing on the upslope side (Figure 76).

From the top of the steps, a concrete walk leads visitors to a concrete plaza that surrounds the monument and lodge. From the Massachusetts Gate walkway, the path is divided into two by the Colonel Prescott statue, which rises out of a granite cobble base, from within a grass island (Figure 77). The remaining gate walkways are single, yet wide, direct paths to the plaza area.
The plaza is a large, relatively flat quad that is primarily used for congregation, interpretive programs and seating. At the plaza, nine benches provide seating. Five natural stained, wood slat benches with heavy, rectangular, concrete bases are placed along the lawn edges, facing toward the monument. Four green, wood slat benches with wide, flat curlicue iron pediments are placed at regular intervals along the perimeter of the monument interior fence (Figure 78). Visitors also use the stairs, curbing, the lawn, and even the stair and ramp railings for seating.

The monument and the adjacent granite lodge to the north are jointly enclosed in the center of the site by an iron fence and granite platform. Currently, entrance into the monument area is through the lodge. The original lodge stairs and a modern concrete ramp extend from the plaza up to the lodge finish floor. The ramp path of travel passes between two wide columns that have a clearance width of less than 30 inches, resulting in a non-compliant route per Americans with Disabilities Act (ADA) standards. From inside the lodge, entrance down to the monument platform area is over a short, wooden ramp. From the platform area, visitors exit the fenced enclosure through a gate on the eastern side, and reach the upper plaza via another short, wooden ramp (Figures 79 and 80). The fence enclosure has five gates; however the remaining four are not used, and appear to be permanently closed.

The perimeter iron fence enclosing the monument grounds and the iron fence surrounding the monument and lodge are similar in design, but have small detail differences. Both have alternating arrow pickets and tapered pickets, with ornamental bottom railings and heavy, decorative posts at regular intervals. However, the posts differ in design and spacing (Figures 81 and 82).

From the square, relatively flat upper terrace, the site steeply slopes to the street on all four sides (Figure 83). Site slopes vary from 1:3 to 1:4. Above the handicap ramp, slopes are 1:3, and below they level out to 1:4. The remainder of the site is generally at approximately 1:3.5, being steepest next to the stairs. The asphalt walkway bordering the flat part of the site is dilapidated, and heaving at several locations. Asphalt runnels border each side of the stairway, and appear to carry water from the upper plaza and walkways (Figure 84). Most terminate with crude, splash beds. Only the New Hampshire Gate runnels terminate with drop inlets (Figure 85). The slopes are covered primarily with a mixed fescue lawn that extends from all pavement edges to the public sidewalk. The Colonel Prescott statue island is planted with tulips, however, lawn mowing practices stunt blooms. Bare spots, hummocks and soil erosion is evident throughout the site, particularly on the northwest-facing bank, where a coarsely constructed rock water bar was installed to keep soil from washing out over the public sidewalk.

In addition to lawn, the site contains seasonally changing annuals, usually geraniums and ornamental kale, and six species of trees. The annuals are planted in two contemporary, square, concrete planter boxes that are cracked and broken. They are placed at the top corners of each entry stairway, with the exception of Massachusetts Gate entry, where they are placed on the south end of the Colonel Prescott statue island (Figure 86). Trees, including those in the public sidewalk, consist of Quercus alba (white oak), Quercus rubra (red oak), Quercus palustris (pin oak), Tilia americana (basswood), Aesculus hippocastanum (common horse chestnut), Gleditsia triacanthos (honeylocust), Fraxinus pennsylvanica (green ash), Fraxinus pennsylvanica 'Patmore' (Patmore green ash), and Fraxinus pennsylvanica 'Summit' (Summit green ash). The historic double-row of trees flanking both sides of the perimeter iron fence includes the entire spectrum, while trees not part of this alley are limited to pin oaks and red oaks. Generally, the pin oaks are the healthiest specimens on site; however, these species are also showing signs of decline.

Wayside exhibits, commemorative markers, signs, benches and trash receptacles are small-scale site features that dot the landscape, and as an aggregate are conspicuous. In front of the monument fence on the eastside, a NPS wayside exhibit provides minimal interpretive information, and bleeds patina along its front face and onto the surrounding concrete pavement. The Freedom Trail sign is located
within the Massachusetts Gate entry platform area, and though tasteful, is large and draws attention away from the monument site. A combination of red brick and red paint marks the route from the sign, all the way up the stairs, along the walkway and to the lodge. Markers include the commemorative tablets and the "Frothingham markers." The commemorative tablets are large, thick granite slabs located at the lowest entry stair landing of each entry stairway, and are on the same plane as the stair railings. The Frothingham markers are five small, low-lying, rectangular granite monuments set in the lawn at locations that indicate various points of the redoubt outline as determined by Richard Frothingham (Figure 87).\(^{194}\) Additional signs are the NPS signs that identify the site as the Bunker Hill Monument site, and regulatory signs, which mostly address leashing and curbing pets. One large, NPS sign is located at each entrance. Set approximately halfway up the granite steps, several feet into the lawn area, they are out of scale, and overpower the landscape. Regulatory signs are posted on lampposts or on separate posts.

The remaining site features include lighting elements, an irrigation system, utility boxes and trash receptacles. Three types of light standards provide site illumination, including floodlights, overhead lamps, and street lamps. First, two metal halide floodlights, one located at the southeast and another on the northwest corner of the site, highlight the monument at night (Figure 88). Second, seven cobra-style mercury vapor lamps placed at regular, but asymmetrical locations along the perimeter asphalt path light the monument grounds. One double head cobra style lamp at the top of the Massachusetts Gate stairs accentuates the entry (Figure 89). Third, historic gas street lamps in the public sidewalk along Monument Square light up the Bunker Hill site surroundings (Figure 90). An irrigation system installed in 1997 covers the entire turf area, and is in good condition, but requires regular head maintenance. MDC utility boxes with brown metal cover plates embossed with "MDC" are in various locations throughout the landscape. Two trash receptacle styles, including concrete hexagonal barrels and basic aluminum cans are used at the site. A trash receptacle is placed at each entrance gate, and another is located at the top of each of the entry stairs, except at the Massachusetts gate. One is located at the front, northeast corner of the lodge. All are in poor condition and detract from the sites aesthetic value.

There are two major distant views into the site. One is from Monument Avenue and the other is from Winthrop Square. The view from looking towards the Massachusetts Gate and up the obelisk shaft from Monument Avenue may be considered primary, since it faces the primary entrance of the site. However, this view is constricted by the surrounding development and further blocked by the street trees on both sides of Monument Avenue (Figure 91). The foreground view of the monument from the Monument Square proper includes the brick path indicating the Freedom Trail, the granite bollards at the entry, the Freedom Trail sign, a trash receptacle, the granite steps, the concrete planters, the bulb bed and the Prescott statue. The view up Winthrop Street from Monument Square is much more open than from Monument Avenue. There are no street trees or small-scale elements cluttering the scene (Figure 92). Additional views looking up to the Monument can also be captured looking up surrounding streets, including Laurel Street and Chestnut Street. Views outward encompass the grounds and extend only to the development surrounding the square and the tops of buildings in downtown Boston. A 360-degree view of the Boston metropolitan area is visible from within the top of the monument.

The site primarily functions as an area of reflection and interpretation for visitors of all ages, as intended at the time of monument construction, and continues to be a popular gathering place for surrounding residents of all ages and among dog walkers as well (Figures 93 and 94). The lawn and hilly topography of the site, with its associated surfaced walkways and railings attract inappropriate activities such as pick up field games, bicycling, rollerblading, skateboarding, and snow sledding. Also popular among sunbathers, the site has become locally

\(^{194}\) There are actually six Frothingham markers, but only five are within the Bunker Hill Monument site. One marker locating the rail fence is off site, just inside the Bunker Hill cemetery facing Bunker Hill Street.
known as "Bunker Hill Beach." These recreational uses often conflict with other, more suitable traditions.

Figure 71: Existing Conditions Map, 2000 based in survey conducted in 2000.
Figure 72: Bollards at gate entrance.

Figure 73: Massachusetts Gate entry.

Figure 74: Urn finial on stair post, with concrete planter in foreground and gas street lamp at base of stairs.

Figure 75: Commemorative tablets at New Hampshire Gate. (Note railing at landing blocking access between tablets.)

Figure 76: Access ramp at site entrance, cutting diagonally through the southeastern quadrant of the site.
Figure 77: Colonel Prescott statue on granite cobble foundation.

Figure 78: Two wood slat style benches at upper plaza. Bench in foreground has flat, iron curlicue pediments; bench in background has a concrete base.

Figure 79: Access ramp between lodge and monument.

Figure 80: Access ramp exiting monument area onto the upper plaza.

Figure 81: Perimeter fence surrounding the Bunker Hill Monument grounds.
Figure 82: Interior fence enclosing monument and lodge. (Note concrete patch at base of post and graffiti on obelisk.)

Figure 84: Terraced, asphalt drainage runnels flank each side of the steps at all entrances.

Figure 83: Slope from upper terrace to street.

Figure 85: Drop inlet at base of asphalt runnel at New Hampshire Gate. Note crude asphalt splash bed.
Figure 86: Concrete planters at Massachusetts Gate entry, at edge of Colonel Prescott planting island.

Figure 88: Floodlights at the northwest corner of the site. Trees block another set located on the southeast corner of the site.

Figure 87: One of five Frothingham markers placed in the lawn, outlining the redoubt configuration as surveyed in 1876.

Figure 89: Double-headed cobra lamp at Massachusetts Gate entry. (Note Bunker Hill Museum in background.)
Figure 90: Historic gas street lamp within public sidewalk encircling the site.

Figure 91: View of monument looking up Monument Avenue into the southeast entry.

Figure 92: View of Monument looking north from Winthrop Square, February 2001.

Figure 93: Casual visitor and group use

Figure 94: Dog walking.
III. **Analysis of Significance & Integrity**

**National Register & National Historic Landmark Status and Areas of Significance**

**Summary of Themes & Contexts for the Landscape**

**Period of Landscape Significance**

**Evaluation of Landscape Integrity**

**Evaluation of Landscape Characteristics**
III. **ANALYSIS OF SIGNIFICANCE AND INTEGRITY**

This chapter provides an analysis of the historical significance of the Bunker Hill Monument and an evaluation of the integrity of the physical character of the landscape. The analysis is based on criteria developed by the National Register of Historic Places, which lists properties significant to our country's history and prehistory. The analysis reviews the current National Register status, identifies inconsistencies and potential new areas of significance, and reviews them in accordance with National Register criteria and related historical contexts. The evaluation portion of the chapter examines the physical integrity of extant landscape characteristics with respect to the site's historical appearance and materials. Landscape characteristics and features are identified, such as views, circulation, and vegetation that contribute or do not contribute to the site's historical significance.195

195 The National Register of Historic Places Program determines a historic property's significance in American history through a process of identification and evaluation. Historic significance may be present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling or association and which meet at least one of the following National Register criteria: (A) That are associated with events that have made a significant contribution to the broad patterns of history; or (B) that are associated with the lives of persons significant in our past; or (C) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity who's components may lack individual distinction; or (D) that has yielded or may be likely to yield information in prehistory or history. In addition, the National Register identifies several criteria considerations. Ordinarily properties that are primarily commemorative in nature and properties that have achieved significance with in the past fifty years are not considered eligible for the National Register. However, a consideration is made, which is relevant to Bunker Hill, for properties "primarily commemorative in intent if the design, age, tradition, or symbolic value has invested it with its own exceptional significance." National Register Bulletin, *How to Apply the National Register Criteria for Evaluation*, 1997 edition.

**NATIONAL REGISTER & NATIONAL HISTORIC LANDMARK STATUS AND AREAS OF SIGNIFICANCE**

The Bunker Hill Monument property is currently included in three separate National Register listings: as “Bunker Hill Monument” listed in 1966; as part of the “Boston National Historical Park” in 1974; and as part of the “Monument Square Historic District” in 1987. The Bunker Hill Monument property was also designated a National Historic Landmark on January 20, 1961. Documentation for the National Landmark designation and boundary certification was completed on April 3, 1978. Additionally, a draft format of a “Metropolitan District Commission Multiple Property Nomination,” relates in context only to the Bunker Hill Monument property. This section describes in greater detail the rationale for each of these National Register listings and proposes an extension to the period of significance of the property from 1902 to circa 1947, the date that major site regrading was completed, in order to carry out major landscape improvements to the monument setting.

1. **Bunker Hill Monument**

(listed in 1966; documented 1978)

The Bunker Hill Monument, Lodge, and the surrounding grounds were listed on the National Register on October 15, 1966. The boundary of the listed parcel is described as the curb line of the monument grounds, excluding the streets.196 The property

196 The National Register Nomination Form documentation describes the boundary of Monument Square as follows: “Beginning at the intersection of the southern curbline of Bartlett Street and the western curbline of Lexington Street; thence, southerly along said western curbline to its
is recognized under Criteria A, for its association with events that have made a significant contribution to the broad patterns of our history and under consideration “F” for being a property primarily commemorative in intent with its own historical significance.197 The documentation lists the period of significance as 1700 - 1899, and specific dates as 1775 for events associated with the War for Independence and 1825 to 1842 for the period of monument construction. The only area of significance indicated is "Military" for the War for Independence, under Criterion A as associated with an event. Although significance for "Architecture" and "Community Planning" are not checked, the statement of significance alludes to the significance of the structure, the role of Solomon Willard and the Bunker Hill Monument Association and includes the period of monument construction.

The Monument itself, erected by the Bunker Hill Monument Association, has considerable interest as an early example of historic monumentation; the most grandiose such enterprise of its day, it was not surpassed in size until the construction of Washington National Monument four decades later.198

In the original nomination, the period of significance did not include the completion of the granite lodge in 1902. However, correspondence between the National Park Service and Massachusetts Historical Commission in 1994 - 95, in conjunction with the List of Classified Structures (LCS) survey, resulted in concurrence that the period of significance should be extended to 1902 to include the construction of the granite lodge.199 The original nomination also does not include the period of management by the Metropolitan Parks Commission. However, the Commission carried out major improvements to the landscape between 1919 and circa 1947 (the date of drawings for the final stages of site work) that enhanced the site’s monumental character. These modifications addressed changes envisioned by the Bunker Hill Monument Association in the early 1900s and incorporated some of the recommendations made by Frederick Law Olmsted, Jr. and the Olmsted Brothers firm, as well as recommendations by the City of Boston Landscape Architect, Arthur Shurtleff. Site improvements included the regrading of most slopes, installation of new, broader steps, and the relocation of most walkways. Extending the period of significance to 1947, recognizes the protected but ultimately successful efforts to create an attractive and harmonious setting for the Bunker Hill Monument.

2. Boston National Historical Park
(listed in 1974)

All of the historic sites within the Boston National Historical Park were automatically listed on the National Register when the park was established in 1974. Documentation for these listings has not been completed, and

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197 Bunker Hill Monument, National Register Nomination Form, June 10, 1975.
198 Ibid.
199 The List of Classified Structures (LCS) is a comprehensive inventory of significant structures with the national park system. In 1994, as part of the LCS inventory, a memorandum was prepared to the Massachusetts Historical Commission relating the National Register status of the Bunker Hill Monument. The following contributing resources were identified: Buildings: Lodge; Structures: Monument, monument fence, perimeter fence and gates; Objects: Col. William Prescott statue, General Warren monument, and markers. In a memorandum dated January 30, 1995, the Massachusetts Historical Commission concurred with the list of contributing resources identified by the LCS team, however, they noted that the period of significance needed to be extended to 1902 to include the construction of the granite Lodge.
therefore the park and property boundaries are presumed coterminous.

3. **Monument Square Historic District**
   (listed in 1987)

The Monument Square Historic district was listed on June 2, 1987. The boundary of the district as shown on the National Register, extends around all the buildings that surround and face Monument Square. (Figure 99).

Described as approximately 8.25 acres, it does not include, but rather contains, the bunker Hill Monument property within its boundaries. The district is recognized for its significance under Criteria A, B, and C in the areas of architecture, landscape architecture (site planning), community planning (and development) and military, with a period of significance of 1839 to 1912. This period encapsulates the construction of the high school, public library, and 45 single and multifamily dwellings within the historic district. The significance of the district relates to its being

an early, and successful, planned residential development; its introduction of an urban residential pattern into a previously rural built environment; its interesting combination of monumental square and surrounding residential background; and finally, the strength and integrity of its architectural groupings, with both high style and vernacular examples in a variety of mid-nineteenth century to early twentieth century styles.

Factors that contributed to its significance included the role of the Bunker Hill Monument Association and their consulting architect, Solomon Willard, who laid out the parcels with deed restrictions relating to the style, character of the structures as well as a consistent ten-foot setback from the street.

Other Considerations

The Metropolitan District Commission prepared a draft Multiple Property Nomination in 1991 proposing to nominate 41 of the commission’s currently owned reservations and park parkways to the National Register, under Criteria A and C on the local, state and possible national levels. The proposed period of significance is from 1893 to 1941, using the fifty-year rule as the end of the period of significance at the time of the draft. The Bunker Hill Monument property was owned by the Metropolitan District Commission from 1919 until 1974, and managed as part of Boston’s Metropolitan Park System. Since it is no longer owned by the MDC, the Bunker Hill property is not included in the draft nomination.

The draft MDC nomination, however, has components of the statement of significance that relate to the early 20th century significance of the Bunker Hill site, including its acquisition and protection as part of a public park system and the role of landscape architects in carrying forth a vision for the property, specifically those of Frederick Law Olmsted, Jr. and Arthur Shurtleff.

Widely recognized as the first metropolitan park system in the United States, and among America’s first successful efforts in regional planning, The Metropolitan Park Commission of Boston was established in 1893, and since 1920 has been known as the Metropolitan District Commission (MDC). It is significant for its nationally recognized contribution to the American Park movement of the nineteenth and early twentieth century. Landscape architect and historian Norman Newton called it: "the first of its kind, a source of inspiration and encouragement to other metropolitan communities everywhere." It was also renowned in a recent history of American City government as "the most notable scheme of

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201 Monument Square Historic District, National Register Nomination Form, October 1985.
202 Military is indicated as an area of significance, but the period of significance does not include 1775. Ibid.
203 Ibid.
204 Ibid.
comprehensive Metropolitan Park planning” in the United States.207

The park system represented the most significant accomplishment of Landscape Architect Charles Eliot and Writer Sylvester Baxter in planning and directing the acquisition of almost seven thousand acres of reservations, parkways, and waterfront lands in the commission’s first two years.208 Members of the Olmsted firm, specifically John Charles Olmsted and Frederick Law Olmsted, Jr, continued the scheme after Eliot’s death.

After its inception in 1893, the park system continued to add properties, to become the steward of historic landmarks of local and national prominence as well.209 Bunker Hill Monument was inherited by the MDC due to the Bunker Hill Monument Association’s financial inability to care for the property, and became known as Bunker Hill Reservation. It was the second historic site acquisition, the first being the Dorothy Quincy Homestead in 1906, which bordered the larger Furnace Brook Reservation. Additional historic sites were acquired much later, in the 1950s and 60s, including Georges, Castle and Peddocks islands in Boston Harbor.

The Bunker Hill Reservation was an anomaly in the MDC system, in that it was not linked to a larger reservation or parkway. To correct this, Arthur Shurtleff, Landscape Architect for the City of Boston Parks Department, proposed in 1930 to transform a portion of Winthrop Street at the south corner of Monument Square into a short boulevard that included a linkage to the nearby Winthrop Square. While many of his design recommendations were carried out, the grander scheme could not be realized. After a period of intensive site alterations to Monument Square in the 1920s through 1940s, the MDC carried out sporadic repairs. In the 1950s, the site was poorly maintained, and through community and government actions, the site was eventually transferred to the National Park Service. At the time of transfer, the MDC launched a broad range of site rehabilitation projects and additions associated with the 1975 Bicentennial of the War for Independence.

The significance of the Bunker Hill Monument site as part of the Metropolitan Park System is tenuous. Thus it is appropriate that it not be included in this nomination should that nomination be processed. However, the context presented in this nomination illuminates the role of landscape architects in the enhancement of Boston’s public spaces in the early 1900s. In this respect, the National Register listing for the Bunker Hill Monument should be extended to included physical improvements carried out by the Commission between 1919 and circa 1947. The significance and integrity of these improvements will be examined in greater detail in the remainder of this chapter.


Figure 95: Boundaries of the Monument Square Historic District listed on the National Register. From "Monument Square Historic District, National Register of Historic Places Nomination Form."
SUMMARY OF THEMES AND CONTEXTS FOR THE LANDSCAPE

Criteria A & B: Association with Events and Persons

Fortification and Battleground: The Bunker Hill Monument property, contains a portion of the original American redoubt constructed on the eve of June 17, 1775 and is a fragment of the battleground area that covered much of the original Charlestown peninsula. The site also contains components of the innovative engineering system associated with the erection of the obelisk. The archaeological resources associated with the battlefield are significant, but beyond the scope of this study.

Community Development and Planning: The construction of the Bunker Hill Monument and the residential development surrounding Monument Square are significant examples of community planning and development. The early and ambitious efforts of the Bunker Hill Monument Association figuratively paved the road for other commemorative organizations throughout the country. Funds were raised by public subscription, special events, entrance fees, membership dues, sale of the surrounding land, special funds such as the “Ladies Fund” initiated by Sarah Hale, and benefactors such as Dr. John Collins Warren and Amos Lawrence.\(^\text{201}\) The early and successful attempts of the Bunker Hill Monument Association to regulate the height, set-back and style of buildings around Monument Square established a precedent for residential planning.

Commemorative Landscape: The Bunker Hill Monument property, as a commemorative site, is significant for its architectural and design qualities, and as an early example of a successful commemorative movement.\(^\text{211}\) In addition it has a long and consistent history of commemorative traditions and symbolic values. These relate to both its significance as a portion of the 1775 battleground and the preservation movement by the Bunker Hill Monument Association and the Charlestown community that led to the creation of Monument Square and the surrounding neighborhood.\(^\text{212}\) In subsequent years, the consultations and design work performed by notable landscape architects that resulted in physical changes to the site up until 1947 continued to reflect the commemorative significance of the site.

Criterion C:

Architecture and Landscape Architecture: The design and layout of the obelisk, lodge, monuments, markers, fences, steps, walkways and the resulting landform and spatial organization cannot be attributed to one individual or period of time. Instead they are the work of several designers, and a sequence of ideas that were implemented over a hundred-year period. The idea of an obelisk is attributed to Horatio Greenough, winner of the monument design competition, who later became a noted American sculptor. Engineer Laommi Baldwin developed Greenough’s concept into a working model in 1825. Architect Solomon Willard directed the implementation of the construction drawings from 1825 to 1842. The definition of Monument Square and subdivision of the surrounding land, the initial reggrading, layout of gates, steps, and walkways are also attributed to Solomon Willard. The perimeter fence was designed by Isaiah Rogers and Historian Richard Frothingham placed historical markers on the site, which were engraved by Gilman and Cheney of Charlestown. Henry Dexter of Cambridgeport designed the statue of General Joseph Warren and American Sculptor William W. Story cast the statue of Colonel William Prescott. The Bunker Hill Monument was a significant precursor to the Washington Monument, built in Washington, D. C. beginning in 1848 and completed in 1885.

\(^{201}\) Ironically, the sale of the land for a historically significant community development also resulted in the loss of battlefield land that had acquired significance for military history.

\(^{211}\) Technically, the Bunker Hill Monument was not originally listed, and has not been documented under Consideration F. The National Register, however recognizes Bunker Hill Monument as an early and significant commemorative site that is eligible under Consideration F. Patrick Andrus, National Register, to Paul Weinbaum, December 18, 2000.

\(^{212}\) National Register Bulletin 13, 39-40.
In the 1870s, many improvements were made to the landscape in preparation for the 1875 centennial of the Battle of Bunker Hill. The four corner gates, steps and walks were removed, the perimeter hedge was removed, and walkways were paved. Fountains were placed on the site.\textsuperscript{213} After 1876 major changes were made to the landscape to correct or enhance site conditions. The granite lodge was completed in 1902. A 1907 critique of the landscape setting eventually led to the redesign of the walkway system within the perimeter fence. However, diminishing funds of the Bunker Hill Monument Association deferred these site improvements, which were eventually carried out by the MDC in consultation with Frederick Law Olmsted, Jr. and the Olmsted Bros landscape architectural firm in the 1920s through 1940s. During the early years of ownership and management by the MDC, site improvements resulted in new entry gates, steps and walkways of a grander scale. Regrading and relocation of the surrounding walkway to the top of the slope altered views and spatial relationships of the site and the monument. These design changes and site improvements reflected the aesthetics of the commemorative site up until 1947.

After a period of relative inactivity during the 1950s, the MDC implemented a series of site alterations that conflicted with the earlier design intentions. Chain link fencing was added to the entry gates, replacing earlier bollards. Mercury cobra lamps were added to the monument grounds, which were not in character with previous nineteen century lighting. Pairs of granite tablets were placed on each of the entrance steps, which contradicted the Bunker Hill Monument Association’s original desire to keep the site devoid of memorial tablets. Pin oak trees were added to the upper slopes of the site in random plantings, contrasting with the original planting scheme of two rows of trees around the square’s perimeter. An accessibility ramp added to the southeastern quadrant of the site altered the previous symmetry of the four entry steps and walkways. The addition of granite tablets, pin oaks, accessibility ramp, and a bronze wayside at the base of the monument were installed in preparation for the 1975 bicentennial celebration of the War for Independence.

Consideration F:

Commemorative Landscape: Although Bunker Hill Monument is significant as a commemorative site, according to the National Register guidance (Bulletin 15), it does not technically need to meet criteria “Consideration F”.\textsuperscript{214}

PERIOD OF LANDSCAPE SIGNIFICANCE

Based on the research and analysis conducted for this study, the period of significance for the Bunker Hill Monument property should extend from 1775 until 1947. This encompasses three periods of significance, including the War for Independence, Battle of Bunker Hill (1775), Bunker Hill Monument Association Ownership (1825-1919), and early MDC ownership (1919-1947). Key dates within these periods include:

- June 17, 1775: Battle of Bunker Hill
- 1825 – 1842: Construction of the Bunker Hill Monument by the Bunker Hill Monument Association
- 1842 – 1847: Completion of the landscape for the monument setting
- 1919: End of the ownership period by the Bunker Hill Monument Association and transfer to the MDC.
- 1947: Completion of site alterations proposed by the MDC, Frederick Law Olmsted, Jr. and the Olmsted Brothers landscape architectural firm, and City of Boston Landscape Architect Arthur Shurtleff.

\textsuperscript{213} The Historic Structure Report identifies 1876 as end of the most productive period of the Bunker Hill Monument Association. By this time "the revolutionary memorial grew from a obelisk standing on a vacant four-acre lot to a fully developed urban park… the square was fully landscaped to include perimeter fencing, plantings, walks, flag poles, lighting, and park furniture." 1 FACR, 245-46.

\textsuperscript{214} The use of criteria consideration F in any future amendments to the nomination form, however, will enable the property to e listed in computerized searches of the NRIS database for commemorative properties. Paul Weinbaum, NPS to Patricia Brouillette in e-mail correspondence, February 28, 2001.
Based on this 172-year period of significance, the integrity of the overall site is examined for these three periods.

**EVALUATION OF LANDSCAPE INTEGRITY**

Integrity is the ability of a property to convey its historic identity or the extent to which a property evokes its appearance during a particular historic period, usually the period of significance. While evaluation of integrity is often a subjective judgement, particularly for a landscape, it must be grounded in an understanding of a property's physical features and how they relate to its significance. The National Register identifies seven aspects of integrity.\(^{215}\) Retention of these qualities is essential for a property to convey its significance, though all seven qualities of integrity need not be present to convey a sense of past time and place.

Using these seven aspects of integrity, the site does not retain integrity of the 18th century battleground landscape but does retain integrity of the 19th and early 20th century landscapes shaped by the Bunker Hill Monument Association and the MDC. For the battleground era landscape, the integrity of the location with the event remains, but evidence of the association, design, setting, materials, workmanship, and feeling have been lost to subsequent development of the site and surrounding area. The integrity of archeological resources should be considered, but is beyond the scope of this report.

For the period of Bunker Hill Monument Association ownership, the site retains integrity with respect to location, design, setting, materials, workmanship, and association. The one aspect of integrity that is slightly compromised is that of feeling since there are subsequent 20th century additions by the MDC and National Park Service. These additions include pin and red oak trees to the upper terrace, the accessibility ramp, broader stairs and railings, commemorative granite plaques, many signs and additional site furnishings such as trash receptacles and planters. These additions give the site the feeling of an urban park, rather than "the dignified simplicity of the battlefield."\(^{216}\)

For the period of early MDC ownership and management from 1919 to 1947, the site retains integrity of location, design, setting, materials, workmanship, and association. Similar to the Bunker Hill Monument Association period, the feeling of the site is compromised by the addition of site features and furnishings described above, which have heightened the feeling of an urban park and diminished the simplicity of the commemorative landscape.

The table that follows summarizes the aspects of integrity for these three periods.

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\(^{215}\) Location is the place where the historic property was constructed or the historic event occurred. Design is the combination of elements that create the form, plan, space, structure and style of a property. Setting is the physical environment of a historic property. Materials are the physical elements of a particular period, which include plant materials, paving and other landscape features. Workmanship includes the physical evidence of the crafts of a particular period. Feeling is a property's expression of the aesthetic or historic sense of a particular period. Association is the direct link between an important historic event or person and a historic property. *National Register Bulletin* 18, 44.

\(^{216}\) HSR, 108
### SUMMARY OF LANDSCAPE INTEGRITY FOR BUNKER HILL MONUMENT

<table>
<thead>
<tr>
<th>Aspects of Integrity</th>
<th>War for Independence, 1775</th>
<th>Bunker Hill Monument Association, 1825–1919</th>
<th>MDC Early Ownership, 1919 – 1947</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>No, Landscape has lost integrity of a Revolutionary War era battleground.</td>
<td>Yes, Landscape retains partial integrity of a mid-nineteenth century commemorative landscape.</td>
<td>Yes, Landscape retains integrity of early twentieth century commemorative landscape.</td>
</tr>
<tr>
<td>Location</td>
<td>Yes, Breeds Hill location unchanged.</td>
<td>Yes, Breeds Hill location unchanged.</td>
<td>Yes, Breeds Hill location unchanged.</td>
</tr>
<tr>
<td>Design</td>
<td>No, nucleus of defense strategy at summit of hill preserved, earthworks and battlefield lost.</td>
<td>Yes, design of a formal, axial commemorative site retained except for randomly planted trees.</td>
<td>Yes, design of a formal, axial commemorative site retained except for randomly planted trees.</td>
</tr>
<tr>
<td>Setting</td>
<td>No, setting for battle lost due to urban development of area. Scale of surrounding landscape dramatically reduced by Monument Square enclosure. Views out towards greater Boston and bays lost.</td>
<td>Yes, retains neighborhood setting as part of Monument Square.</td>
<td>Yes, retains neighborhood setting as part of Monument Square.</td>
</tr>
<tr>
<td>Materials</td>
<td>No, archeological surveys have located some physical evidence of earthworks but most materials lost.</td>
<td>Yes, obelisk, lodge, iron fences, turf, perimeter trees, statues and markers remain but larger granite steps, steel railings, additional trees, and non-historic furnishings added.</td>
<td>Yes, obelisk, lodge, iron fences, turf, perimeter trees, statues and markers, large granite steps are extant, but steel railings, additional trees, and non-historic furnishings added during late MDC period.</td>
</tr>
<tr>
<td>Workmanship</td>
<td>No, construction of earthworks lost</td>
<td>Yes, granite work associated with obelisk, lodge and fence intact, ironwork intact but site grading later altered.</td>
<td>Yes, grading, granite and iron work intact.</td>
</tr>
<tr>
<td>Feeling</td>
<td>No, earthworks and surrounding battlefield lost</td>
<td>Yes, but trees on embankments and upper terrace, cobra lights and urban park furnishings detract.</td>
<td>Yes, but trees on embankments and upper terrace, cobra lights and urban park furnishings detract.</td>
</tr>
<tr>
<td>Association</td>
<td>No, all physical features of battle event lost.</td>
<td>Yes, retains association with commemorative monument.</td>
<td>Yes, retains association with commemorative monument.</td>
</tr>
</tbody>
</table>
EVALUATION OF LANDSCAPE CHARACTERISTICS

This section provides an analysis and evaluation of the physical characteristics of the landscape in order to identify characteristics and features that contribute or do not contribute to the historical significance and integrity of the property. Landscape characteristics, including processes and physical forms, are the tangible evidence of the activities of the people who shaped the landscape. The evaluation includes a brief description of the characteristic’s historic and existing condition, as well as a determination regarding the contribution of each existing characteristic or feature to the significance of the landscape as a whole. Characteristics or features defined as “contributing” are those that were present in the historic landscape that survive or are those which are replacements of historic features. Because the site retains a high level of integrity for both the Bunker Hill Monument Association period (1825-1919) and the early period of MDC ownership (1919-1947), many of the extant landscape characteristics and features are considered contributing resources. Some features have been reconfigured or added to since the 1950s. These may or may not detract or alter the historical significance and integrity of the landscape. The treatment chapter will address measures to be taken to remove or replace features to more appropriately reflect or complement the historic setting. Landscape characteristics addressed include spatial organization, views, land use, cultural traditions, topography and drainage, vegetation, circulation, lighting and irrigation, buildings and structures, objects, and small-scale features.217

Spatial organization

At the crest of a drumlin overlooking Boston’s inner harbor, the Bunker Hill Monument site was a strategic location at the time of the War for Independence. Fortifications built by American troops on the eve of the Battle of Bunker Hill that were overtaken and expanded by British troops, amplified the importance of this prominent location. After the war, the hilltop site was also viewed as a fitting location for a memorial to “hold that blood-stained height in proud remembrance.” In the 1820s, as the design of the monument progressed, the appearance of the surrounding landscape was also conceived—“to be kept “open and sacred forever” and “distinguished by simplicity and grandeur, rather than by elaborate and elegant ornaments.” However, financial difficulty associated with the construction of the monument ultimately altered the overall spatial organization of the open hilltop when, in the 1840s, the surrounding lands were subdivided and sold, and four streets and rows of townhouses hemmed the site into an urban square. Although the height of the hill was substantially retained, its slopes and outward views were altered. The subsequent design and construction of the Monument Square landscape was adapted to the site’s altered character, with the construction of steps up the steep embankments to the crest of the hill. These embankments are shown on engravings done in the 1840s, which depict a sharp transition between embankment and flat hilltop. In 1889 a rail was placed along the edge and a 1907 report by the Bunker Hill Monument Association cited the need for change. In the 1920s through 40s these changes were finally made under the direction of the MDC. These changes resulted in the reconfiguration of the slopes, steps, and walkways to convey visitors to the centrally located monument and lodge. The spatial organization of the site, with four entry gates, a walkway around the upper terrace, and the centrally located obelisk and lodge greatly contributes to its historical character.

Views

As described above, the open hilltop views from the Bunker Hill site to the surrounding areas, including Boston’s Inner Harbor, were lost when the surrounding land was subdivided and townhouses built. Only framed views remain down the street corridors that radiate from Monument Square. These corridors were established when Solomon Willard designed the subdivision in the 1830s. He laid out the

217 These terms are defined in the glossary.
approaching streets on axis with the monument to capture views of the obelisk. These streets include Laurel, Chestnut and Winthrop Streets, and most importantly, the slightly askew Monument Avenue—begun in 1847 and completed in 1852—to extend from Main Street up the hill to High Street. Monument Avenue was envisioned as the primary corridor to the site, however, the street was laid out at forty feet wide rather than the desired width of sixty feet, resulting in a constricted and asymmetrical view of the monument. In the 1930s, Boston City Landscape Architect Arthur Shurtleff proposed a more ceremonial axis to the site from the Winthrop Street corner, which would enhance the visual connection to Winthrop Square and the intersecting streets. However, this scheme was never realized. Despite their shortcomings, Monument Avenue and Winthrop Street offer important views to the monument. Once on the site, the views of the monument from the four stairs were intended to be obstructed. However, cobra light standards, trash receptacles and flower planters currently clutter these views. In addition, cars parked in front of the steps detract from the view of the monument, particularly at the Massachusetts Gate, which is at the terminus of Monument Avenue. Views from Laurel Street, Chestnut Street, Winthrop Street and Monument Avenue contribute to the significance of the landscape. Non-historic elements, such as the cobra light standards, trash receptacles, and planters detract from the significant views.

Land Use

Prior to the War for Independence the site was likely used as farmland. After the battle, the hilltop was used for commemoration as early as 1795, when King Solomon’s Lodge erected a wooden Tuscan pillar terminated in a gilt urn. This was replaced by the obelisk, which was constructed by the Bunker Hill Monument Association between 1825 and 1842. The site continues to function primarily as a place of commemoration, reflection and interpretation for visitors. The site has also served as a neighborhood park since the 1840s, when the surrounding neighborhood was developed. Commemorative site and neighborhood park use contribute to the significance of the property. However recreational uses associated with its use as a neighborhood park, including “halfball” games, sledding, rollerblading, dog-walking, and sunbathing do not contribute to the significance of the property.

Cultural Traditions

Nineteen years after the Battle of Bunker Hill on June 17, 1775, the Charlestown Artillery is credited for first celebrating the battle of Bunker Hill with a parade in 1794. The tradition resumed sporadically in the early 1800s and became an annual tradition in the 1820s. On June 17th a parade to celebrate Bunker Hill Day starts in Charlestown’s Hayes Square, passes through Monument Square, and ends in Winthrop Square. Organizations that participate in the event include the Bunker Hill Monument Association, the Monument Square Neighborhood Association, the Charlestown Historical Society, the Charlestown Preservation Society, King Solomon’s Lodge of Masons, The Bunker Hill Day Commemorative Committee, Bunker Hill Post 26 of the American Legion, and the Charlestown Parent’s Association. The commemorative activities associated with this day contribute to the significance of the property. As early as 1843, flags were hung out of the windows at the top of the obelisk on Bunker Hill Day. An 1843 engraving shows three flags, and presumably a forth on the side not visible, hanging from the windows. A circa 1861 engraving shows one flag flying from the apex of the obelisk. A circa 1865 photograph shows a flag pole bolted to the north (lodge) side of the monument. An 1875 photograph shows only two flags hanging from opposite windows, one above the lodge and the other on the opposite side (Massachusetts Gate side). A circa 1890s photograph shows two flag poles extending from the east and west windows. A 1905 postcard shows two sides of the monument (Massachusetts and Connecticut Gate sides) and two flags, suggesting that four were mounted. The parade and the hanging of two or four flags from the upper windows are longstanding cultural traditions that contribute to the significance of the site.
Numerous community events are also held on the site. Prior to Halloween, the community decorates the bottom of each of the four gates with potted chrysanthemums and corn stalks tied to the fence. Hay bales were also previously added to the displays. For two hours on Halloween night, skeletons, fake jack-o-lanterns and some ghosts were put up. Christmas-time decorations are minimal at the site and are usually limited to garlands on the rails provided by the community and a wreath on the front and inside of the lodge provided by the park. The community also decorates the street lamps on the square. No documentation was found regarding historical holiday decorations, thus it is presumed that the seasonal holiday decorations do not contribute to the significant cultural traditions associated with the site. Due their short duration, the decorations do not impact the historic cultural traditions associated with the site.

**Topography and Drainage**

As described above in “Spatial Organization” the topography of the drumlin, known during the Colonial Period as Breed’s Hill, was altered during the construction of the Bunker Hill Monument. At this time the ground east and west of Monument Square was reduced in elevation by between eight and twelve feet to construct the streets. The removed material was used to fill the depression on the north side of the square. From completion of the monument in the 1840s until the early 1900s, the steep banks of the square created difficulties. In 1870, the president of the Bunker Hill Monument Association described the removal of the four corner walkways and steps to serve as “additional protection to the green sward of the banks.” He also suggested winding paths to “relieve the appearance” of the irregular dimensions of the site. In about 1889 a wire fence was added at the top of the embankment, as shown in early 1900s photographs, presumably to keep pedestrians from walking on the slopes. In 1907, the Association’s president recommended, “grading the slope slightly so that it would lose its present abruptness. This would enable us to do away with the unsightly temporary fence now placed there to protect the embankment.”

Despite these concerns, the Association did not take further actions to regrade the slopes. In 1919, the year the property was transferred to the Metropolitan Park Commission, Frederick Law Olmsted, Jr. reiterated the need to regrade the slopes. A site plan prepared by the Commission in 1920 illustrates a preliminary scheme for regrading the slopes. Subsequent plans produced between 1929 and 1938 illustrate more detailed schemes for regrading the slopes and installing new granite steps and walkways. By circa 1947 this site work was completed resulting in the configuration that is extant today. The current configuration contributes to the historical significance of the property and the general topography of the site continues to be a primary site characteristic; however, erosion on the northwest slopes detracts from the historical setting.

One exception is the regrading necessary to install an accessible ramp on the southeast slope. This ramp was installed by MDC and US Army Corps of Engineers in 1974 and modified by the National Park Service in 1979. The area regraded for the accessible ramp does not contribute, but does not substantially diminish the overall integrity of the site’s topographic character. The concrete ramp into the front door of the lodge does not greatly detract from the lodge but is ineffective and does not comply with ADA standards. The wooden ramps, though functional, do not complement the historic setting and in fact call attention to the apparently temporary construction.

Drainage was not actively addressed on the site until the 1870s when a stone lined gutter was installed around the site, in the place of a removed hedge along the inner edge of the interior perimeter walkway. This gutter was removed when the MDC regraded the property in the 1920s - 40s. In the 1960s, the MDC installed asphalt runnels down the sides of the steps with catch basins surrounded by asphalt curtains. Historic drainage features are no longer present and existing asphalt runnels do not complement the historical setting.
Vegetation

Drawings and engravings dating to the time of the War for Independence depict Breeds Hill as predominantly open pasture with dispersed trees. It appears that the site remained an open field until the 1820s when much of the land was disturbed by the construction of the monument. Upon completion of the monument in 1842, the Association began improvements to the grounds. The land was graded and seeded, and walkways were constructed, breaking the site into lawn panels. Trees and a hedge were planted around Monument Square. A circa 1849 engraving shows one row of trees planted outside the perimeter fence, on the outer edge of the sidewalk. A 1943 engraving depicts trees in the upper terrace surrounding the monument’s upper plaza. This appears to be artistic license, however, as there are no other images of this planting configuration. Beginning in 1865, numerous photographs, mostly postcards, show more reliably a double row of trees surrounding the site, with one row outside and the other inside the perimeter fence. In an 1890 photograph, the trees appear to be about fifty years old. Some have the form of elms. By 1909 the trees are large enough to provide a leafy screen between the monument grounds and the surrounding buildings. Several circa 1900 postcards show trees on all four sides of the property with some in decline. A 1920 plan appears to show all trees on the site just after the transfer from the Bunker Hill Monument Association to the MDC in 1919. The plan shows 45 trees on the site, with 17 on the outer perimeter sidewalk and 28 just inside the fence. Of the 45, 16 are on the south (High Street) side, 6 on the east side, 12 on the north side, and 11 on the west side. Plans from the 1920s up until 1974 indicate that the MDC attempted to maintain the double row of trees, replacing those that died or as necessary during the regrading of the embankments. Since the NPS acquired the site in the 1970s, they have also tried to maintain the double row of trees, in cooperation with the City of Boston Parks and Recreation and the Monument Square Neighborhood Association. The double row of trees contributes to the historical significance of the property. As highlighted in their history, however, they are a dynamic resource and a challenge to maintain. Thus a double row of trees of mixed species and sizes is acceptable, with the replacement of individual trees as needed.

In 1974, as part of the MDC’s bicentennial improvements about 25 pin and red oaks were added to slopes and along the upper walkway in a random configuration. These trees do not contribute to the historical significance of the property.

For about thirty years, a hedge bounded the property, just inside the perimeter iron fence. The hedge was planted in the 1840s shortly after completion of the monument. The hedge is not visible in most engravings during this period. An 1849 engraving shows two shrubs at a corner entrance. An 1865 photograph and an engraving possibly show the hedge inside the fence. Annual proceedings of the Bunker Hill Monument Association indicate that the hedge was removed in about 1871 and a stone-lined gutter was installed in the location of the hedge to direct water to inlets at each corner of the square. After this time, no shrubs were planted. In 1907, the president of the Association wrote, “There are no shrubs or plants to disturb the dignified simplicity of the battlefield.” In 1919, Frederick Law Olmsted, Jr. proposed a “strong fence or hedge” along the top of the bank all the way around” and specifications prepared by the MDC’s engineer, John R. Rablin in consultation with Olmsted, specified barberry along the step railings -- ideas that were never carried out. Site documents indicate that no shrubs have been on the site since their removal in about 1870. For this reason, shrubs are considered a non-contributing feature.

As a result of community involvement in the 1990s, a perennial flower bed and several planters filled with spring, summer and fall flower displays were added to the site to provide color and visual interest. Although these features are not in keeping with the unadorned simplicity of the site, with careful placement, their impact on the historic character can be minimized.
Circulation

When laid out in the 1840s, the site had eight gates and walkways leading towards the monument, four centered on the sides and four at the corners of the almost square site. The surface material of the outer sidewalk was brick. Another walkway was located just inside the perimeter fence. Gravel walks led towards the monument, each with a flight of granite steps. A ten-foot wide granite walk was laid at the base of the monument. Between 1871 and 1875, the four corner entries and the diagonal steps and walkways were removed. The outer sidewalk was widened with brick. After acquisition by the MDC, during the 1920s to circa 1947, the brick sidewalk was changed to concrete, the embankments were regraded and new, broader steps with landings were installed. The walkways along the upper edge of the embankment were moved closer to the monument and the walkway inside the fence was eliminated. All walks were surfaced with concrete, except for the walks along the upper embankment, which were surfaced with asphalt. Accessible ramps were added in 1974 and modified in 1979-81. The current configuration of walkways and steps contributes to the historical character of the site. The four gates and sets of steps, their location, scale and composition of iron, granite, and concrete, contribute to the historical character of the site. Specifically, granite was used as the primary material, for the monument, lodge, the platform around the monument, the approach steps, and for curbing. Concrete was used secondarily as the walkway material. The ramps do not contribute to the historical appearance but with an appropriate railing would not detract from the historic setting.

Lighting & Irrigation

A circa 1890 photograph depicts historic lighting features. In 1889 the city put in “electric” street lights, which were likely gas, near the steps on each side of the square. The Association also added lights at each corner to accommodate evening visitors and discourage loitering. In 1922, the MDC stated the need for floodlighting the monument. Between 1929 and 1950 the floodlights were repaired and were in good condition. In 1961 plans were made for relighting the monument and details were prepared for the proposed floodlight mountings. In 1966, the cobra-style lights were installed. In 1974 there were unspecified lighting improvements and in 1979 the NPS proposed replacing the obelisk floodlights with metal halide lights. By the late 1980s, the pin oaks planted in the 1970s had grown high enough to prevent the floodlights from lighting the monument, casting shadows. In the early 1990s, the trees were pruned but since grown again, blocking both the light cast by the floodlights on the monument and lights above the walkways. The cobra lights do not contribute to the historical significance of the property, nor do the trees obstructing the site and floodlights.

The National Park Service installed an irrigation system in 1996. Archeologists investigated subsurface historic resources prior to installation of the irrigation system and monitored the installation. The irrigation system is non-contributing but does not detract from the historic setting. Any alteration of the irrigation system in archeologically sensitive areas without monitoring could affect historic subsurface resources.

Buildings, Structures, Objects and Small-Scale Features

The List of Classified Structures (LCS) Inventory identified in 1994 one building, three structures and several objects as contributing resources. The building, the granite lodge, was completed in 1902 and is a small classical one-story building with a basement. The front façade on the southeast side is dressed with six fluted ionic columns, a plain pediment, acroteria at small flanking wings, and pilasters at the corners. The building has a gable roof and bronze panels on the entry door. It originally functioned as a fraternal meeting hall. The MDC converted the facility to a visitor center and NPS further adapted the structure to serve this function. The building contributes to the historical significance of the site.

The three structures include the monument, the monument fence, and perimeter fence with
gates. The monument was completed in 1842 and remains virtually unaltered. The monument fence and perimeter fence were designed by Isaiah Rogers and erected in 1844 by Charles M. Cumming. In 1870 the perimeter fence was rebuilt with new stone posts, iron posts and rails. Only the original fence pales were reused. In the 1880s, new iron rails were added to each side of the steps at the four entrances. The fences consisted of spear and sword pailings and crossed-fleur pattern base rail. In 1961 steel picket fences were added to the cheek walls on four sets of steps leading up towards the monument. In 1976, alterations were made to the fences on the sides of the steps in order to insert commemorative tablets at the landings for each set of steps. Also in the 1970s a railing was added in conjunction with the accessibility ramp on the southeast side of the site. While the monument fence and perimeter fences are contributing, the fences on the cheek walls of the steps and along the ramp are non-contributing.

Objects identified by the LCS team as contributing include the General Warren monument inside the lodge, Colonel William Prescott statue, and the Frothingham markers. The Warren statue was sculpted by Henry Dexter and dedicated in 1850. The nine-foot tall bronze sculpture of Prescott was designed by William W. Story and installed on its seven-foot tall pink granite base in 1880-81, with a gray granite plinth beneath the base. The Frothingham markers, placed in 1876 were engraved by Gilman and Cheney of Charlestown. These are all contributing resources.

Several additional markers are placed on the site. The Joseph Warren Memorial spike was purportedly placed on the site where Warren fell in 1876 and likely removed in the early 1980s as recommended by the authors of the 1982 Historic Structure Report. In 2000, as part of the 225th anniversary celebration the spike was rededicated and placed on a new Quincy Granite base with an inscription about Warren. Although this small monument, or object, is considered a contributing resource, it was once again removed due to safety concerns. Four sets of commemorative tablets were installed by the MDC in 1976, which resulted in the dedication of the four gates as the Massachusetts, Connecticut, New Hampshire and United States gates. These tablets (and the fences adjacent to them) are considered non-contributing but do not greatly detract from the historic setting.

For the Bunker Hill Monument site, small-scale features include benches, trash receptacles, signs and interpretive exhibits. A circa 1865 photo shows two benches north of the lodge. A circa 1880s photo, shows several benches placed beside the monument enclosure fence, also along the outer edge of the plaza to face the monument, and along the east side of the temporary lodge. Written documentation indicates that the benches were added in 1888 to seat 100 visitors. There are at least nine benches, some about four feet long and some about eight feet long. In a later photo, four benches are placed on the south side of the monument enclosure fence, facing the Prescott statue. A circa 1903 postcard of the new granite lodge captures the style of benches on the site, which were wooden-slat, rolled-back style benches. In all early twentieth-century postcards, the benches are actively used. The MDC introduced a park bench to the site that was designed by Arthur Shurtleff, and was referred to as the “esplanade bench”. It consisted of double planks for the seat and back, and rested on wide, flat iron, curlicue pedestals. A 1979 plan shows the locations of the benches. These were often vandalized or in decay. The National Park Service installed new benches, and there are presently eight benches on the site. Only the three remaining esplanade benches may be considered contributing historical features, however, since there is no physical evidence supporting their origin or design, this should be further investigated.

Trash receptacles are not shown in any historic photographs or plans. All existing trash receptacles are not historic and do not contribute to the historical character of the site.

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218 Written correspondence from Jim Falk to Margie Coffin Brown, January 4, 2001. Though Mr. Falk identified the bench as an "Arthur Shurtleff MDC esplanade bench", no supporting documentation was provided.
Similarly, all signs, other than the monuments and markers that are described in this report as structures, are not historic and do not contribute to the historical character of the site. If placed appropriately, trash receptacles and signs should not detract from the historic setting.
<table>
<thead>
<tr>
<th>CHARACTERISTIC/FEATURE</th>
<th>STATUS</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Setting</strong></td>
<td>Contributing</td>
<td>Monument Square largely unchanged since surrounding structures completed in 1912</td>
</tr>
<tr>
<td><strong>Processes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spatial Organization</td>
<td>Contributing</td>
<td>Minor alterations since 1947</td>
</tr>
<tr>
<td>Views</td>
<td>Contributing</td>
<td>Largely unchanged since 1912</td>
</tr>
<tr>
<td>Land Use</td>
<td>Contributing</td>
<td>Commemorative since 1783, park since 1840s</td>
</tr>
<tr>
<td>Cultural Traditions</td>
<td>Contributing</td>
<td>Commemorative since 1783</td>
</tr>
<tr>
<td><strong>Topography</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slopes</td>
<td>Contributing</td>
<td>Graded 1840s, regraded 1920-30s</td>
</tr>
<tr>
<td>Drainage (location of runnels)</td>
<td>Contributing</td>
<td>Runnel locations unchanged since 1870's</td>
</tr>
<tr>
<td>Drainage (treatment of runnels)</td>
<td>Non-contributing</td>
<td>Altered by repairs in late 1900s</td>
</tr>
<tr>
<td><strong>Vegetation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lawn panels</td>
<td>Contributing</td>
<td>Largely unchanged since 1870s</td>
</tr>
<tr>
<td>Perimeter Trees</td>
<td>Contributing</td>
<td>Some historic trees missing or replaced with other species</td>
</tr>
<tr>
<td>Pin Oak and other interior trees</td>
<td>Non-contributing</td>
<td>Planted in the 1970s; some in deteriorating health</td>
</tr>
<tr>
<td>Bulb garden</td>
<td>Non-contributing</td>
<td>Introduced in c. 1990s, unproductive</td>
</tr>
<tr>
<td>Concrete container planters</td>
<td>Non-contributing</td>
<td>Introduced in 1990s</td>
</tr>
<tr>
<td><strong>Circulation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Granite stairs (all entries)</td>
<td>Contributing</td>
<td>Minor repairs since 1947</td>
</tr>
<tr>
<td>Concrete walkways</td>
<td>Contributing</td>
<td>Concrete replacement in 1970s; location unchanged</td>
</tr>
<tr>
<td>Asphalt pathway</td>
<td>Contributing</td>
<td>Location generally unchanged since 1940s</td>
</tr>
<tr>
<td>Concrete ramp &amp; handrail</td>
<td>Non-contributing</td>
<td>Installed in 1974 then modified</td>
</tr>
<tr>
<td><strong>Lighting and Irrigation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cobra style light fixtures</td>
<td>Non-contributing</td>
<td>Installed in 1960s</td>
</tr>
<tr>
<td>Spotlight fixtures</td>
<td>Contributing</td>
<td>Base original to 1920s; lamps replaced in 1980s</td>
</tr>
<tr>
<td>Irrigation boxes</td>
<td>Non-contributing</td>
<td>Installed in 1996</td>
</tr>
<tr>
<td>MDC utility boxes</td>
<td>Non-contributing</td>
<td>Date unknown</td>
</tr>
<tr>
<td><strong>Buildings and Structures</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bunker Hill Monument</td>
<td>Contributing</td>
<td>Minor repairs since 1842</td>
</tr>
<tr>
<td>Lodge</td>
<td>Contributing</td>
<td>Minor repairs since 1903</td>
</tr>
<tr>
<td>Colonel Prescott statue</td>
<td>Contributing</td>
<td>Largely unchanged since 1880</td>
</tr>
<tr>
<td><strong>Objects &amp; Small Scale Features</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr. Warren marker</td>
<td>Contributing</td>
<td>Restored in 2000, and removed</td>
</tr>
<tr>
<td>Frothingham plaques</td>
<td>Contributing</td>
<td>Largely unchanged since 1876</td>
</tr>
<tr>
<td>Iron Fence enclosure</td>
<td>Contributing</td>
<td>Minor repairs since 1947</td>
</tr>
<tr>
<td>Granite tablets on stairs</td>
<td>Non-contributing</td>
<td>Installed in 1970s</td>
</tr>
<tr>
<td>Esplanade seat benches</td>
<td>Contributing</td>
<td>Designed in 1930's (as stated in oral history; construction and installation dates unknown)</td>
</tr>
<tr>
<td>Other seat benches</td>
<td>Non-contributing</td>
<td>Replaced by MDC in c. 1970s</td>
</tr>
<tr>
<td>Trash receptacles</td>
<td>Non-contributing</td>
<td>Installed in c. 1980s - 90s</td>
</tr>
<tr>
<td>NPS and Freedom Trail signs</td>
<td>Non-contributing</td>
<td>Installed in c. 1990s</td>
</tr>
<tr>
<td>Regulation and Pet signs</td>
<td>Non-contributing</td>
<td>Installed in c. 1990s</td>
</tr>
<tr>
<td>Wayside Exhibit</td>
<td>Non-contributing</td>
<td>Installed in c. 1970s</td>
</tr>
</tbody>
</table>
IV. Treatment

Treatment Alternatives and Implications

History of Landscape Treatment Approaches

Preferred Treatment Alternative — Rehabilitation

Treatment Framework and Site Principles

Guidelines for Areas Within the Landscape

Treatment Guidelines and Recommendations

Conclusions and Recommendations for Further Work
IV. TREATMENT

According to National Park Service policy, the Cultural Landscape Report (CLR) serves as the primary supporting document guiding the treatment of a cultural landscape, and is required before a major intervention. The treatment goal for the Bunker Hill Monument site is to ensure that the simplicity of the sites' historic character and its commemorative purpose are retained while allowing for visitor access, educational opportunities, and comfortable, contemplative use. This chapter describes treatment alternatives and implications, the history of treatment approaches, and provides guidelines and recommendations for site rehabilitation, the preferred alternative. The overall goal is to reinforce the National Park Service’s tradition and philosophical basis for the sound stewardship of cultural landscapes as outlined in National Park Service Cultural Resource Management Guideline (1997) and The Secretary of the Interior’s Standards for the Treatment of Historic Properties (Rev. 1992).

TREATMENT ALTERNATIVES AND IMPLICATIONS

The Secretary of the Interior has specified standards for four distinct, but interrelated, approaches to the treatment of historic properties. These alternative treatment approaches and their implications at Bunker Hill Monument are described below.

Restoration is undertaken to depict a property at a particular time in its history, while removing evidence of other periods. This approach would require depiction of the site at a certain date or period of time. The "period of significance" of 1775-1902, as defined by the National Register Nomination and recent correspondence generated by the List of Classified Structures survey, would imply restoration of the site to its circa 1902 appearance. A restoration strategy would require removal of the handicap accessibility ramp, removal and relocation of the perimeter walkway, reconstruction of the stairs, removal of the Prescott statue planting area, and removal of structures and small scale features such as the memorial tablets, bollards, railings, and site furnishings.

Reconstruction recreates vanished or non-surviving portions of a property for historic purposes. This approach would only be appropriate if the site had been destroyed or if the Revolutionary War battlefield landscape that predated the monument was determined so significant that its re-creation was critical to the parks' interpretive mission. To capture the full physical extent of the battlefield, this could also infer some change to the surrounding developed landscape. Rarely selected, reconstruction is not considered a feasible option for this site.

Rehabilitation acknowledges the need to meet continuing or changing uses through alterations or new additions while retaining the property’s historic character. It allows for repairs or alterations of the cultural landscape, and for improving the utility and/or function of landscape features. It is used to make an efficient, compatible use while preserving those portions or features of the site that contribute to defining its historical significance. These changes would best serve management goals for continued visitor use. Therefore, the most sound
treatment approach for the Bunker Hill Monument site is rehabilitation.

HISTORY OF LANDSCAPE TREATMENT APPROACHES

The 1980 General Management Plan (GMP) for the Bunker Hill Monument and the 1982 Historic Structures Report (HSR) were developed concurrently. Both documents cited poor site conditions and the need for monument and grounds improvements. The recommended treatment, “selective restoration” of the landscape to the Bunker Hill Monument Association period, recognized that a complete restoration would eliminate some of the beneficial site work carried out by the Metropolitan District Commission (MDC), including regraded slopes and the accessibility ramp. Current treatment terminology for GMP and HSR recommendations would be “rehabilitation”; however, the plans do emphasize restoring non-extant features, which is not advised under current rehabilitation standards.

GMP goals specifically addressed resource management actions and areas of visitor use and interpretation, and outlined recommended actions. The HSR included a conjectural restored site plan to communicate the concept (refer back to Figure 68).

The plan included a general directive that “the grounds will be improved to reflect their mid-19th to early 20th century design.”

The nineteenth century character of the site will be recreated by selective restoration of the grounds, obelisk, and lodge. While evolved with time, the essential character of an austere neoclassical memorial has been retained.

In contrast, the GMP also supported recreational use and active community use of the grounds for special events, encouraged casual enjoyment, and allowed organized activities under special use permits.

...provide recreational opportunities important to the immediate community and, since planting has always been sparse on the site, there is no foreseeable conflict between site development and community use...

The exact nature of recreational activities that was considered permissible was not identified.

Several site improvements based in the GMP and HSR recommendations have been accomplished. These include maintenance of the perimeter fence and street tree plantings, replacement of the wire gates at the four park entrances with bollards (restoring the late 1870 design), resetting and caulking the granite steps, leveling and grouting the paving stones and making the lodge accessible to the mobility impaired. Problems were to be studied and conservation treatment effected for the bronze statue of Col. William Prescott located in front of the monument.

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219 General Management Plan, 46-55.
220 The Historic Structures Report conjectural plan suggests the reintroduction of corner walkways and the placement of two fountains. Specific recommendations in the HSR include: resetting granite pavers and steps, resurfacing walks, removing trees not part of the perimeter plantings, replacing cobra lights with fixtures that related to the nineteenth century, replacing chain link entry gates with historic bollards, redesigning the obelisk and lodge connections and removing the chain link cage, repairing the cast iron fences, and redesigning the memorial spike to create a “less perilous” monument. HSR, 240-250.
221 Ibid. 53.
222 Ibid. 51-52.
223 Ibid. 52-53.
224 Baseball, or “half ball”, a local variant played with half a hollow ball and broomstick, continued on the site until the early 1990s. Sunbathing, dog walking and jogging are ongoing residential uses. Interview with John Goggan, Boston National Historical Park by Margaret Coffin, July 24, 2000. Half ball definition provided by Carl Zellner, December, 2000.
Recommendations not yet undertaken include relocating the asphalt loop path to its earlier place and designing and installing park benches and lighting appropriate to the turn of the century. Additionally, the plans recommended conducting a feasibility study for restoring the iron fountains to the site, designing “a respectfully austere landscape plan” and formulating “maintenance procedures...to ensure perpetual care of the site.” The specific approach for these improvements fall under “restoration” and are modified within this CLR to reflect rehabilitation standards.

GMP provisions for interpretive and informational services on the monument grounds, including installation of “unobtrusive waysides” to provide limited interpretation or the opportunity for a self-guided experience is appropriate under rehabilitation standards, continues to be necessary, and is addressed in this report. A draft wayside plan and a draft long-range interpretive plan are currently in progress in the park.

PREFERRED TREATMENT

ALTERNATIVE - REHABILITATION

The CLR recommends rehabilitation as the treatment approach and actions aligned with standards for rehabilitation and management goals are prescribed. First, the GMP provision for recreational opportunities based on the conclusion that sparse plantings may allow community use does not categorically define how different site uses may or may not be aligned with the central purpose of the memorial grounds. A fundamental “feeling” associated with the site history and purpose is to evoke serenity and reflection. The encouragement of active use, whether it be a special event or casual enjoyment can be interpreted to embrace participatory sports as appropriate for the site, which would be in direct conflict with the intentions of the memorial’s original creators. Therefore, appropriate recreational use types should be clarified and limited to more tranquil practices so that the spirit of place at Bunker Hill Monument can be recaptured and maintained. It is recommended that management goals be modified to encourage passive, rather than “active” visitor use.

Second, major site improvements were completed by the MDC from inheritance of the property in 1919 until 1947. These actions were desired by the Bunker Hill Monument Association and in accordance with recommendations by the MDC, the Olmsted firm, and Arthur Shurtleff. They included replacement of the steps, relocation of the perimeter walkways and regrading of the slopes. Though historic fabric was removed, altered and relocated, the general character of the original design was relatively maintained. The last major construction activity was circa 1947, based on a plan dated July 28 1947 (refer back to Figure 51). This noteworthy effort culminated in a

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226 Ibid., 53-54. Relocating the asphalt loop to its earlier location would require substantial site regrading, removal of a new irrigation system, and associated soil and sod treatments. Insufficient documentation was found to enable accurate replacement of the earlier perimeter loop, which is the advisable approach for restoration standards. A feasibility study for restoring the iron fountains would still need to be conducted. The location of the iron fountains was not determined during the CLR research, therefore their location would need to be determined, and if they were not found, replacement of the fountains would need consideration. A true restoration approach would further require partial removal and replacement of the sidewalks and granite stairways, removal of the stairway check walls, and replacement of unknown quantities of iron fence and railing.

227 Active use has proven to cause notable physical damage to site features, including the walks, rails, soils and turf. Passive use would better serve site resource protection, and would facilitate and reduce maintenance requirements and demands.

228 MDC site improvements post 1947 were limited to general maintenance activities.
considerable physical effect on the historic site and serves as the basis for recommending that the period of significance be extended to 1947.

Treatment guidelines and recommendations set forth are therefore based in preserving the overall character of the commemorative landscape as completed by 1947. A treatment plan illustrates the rehabilitation measures recommended in this chapter (Figure 95).229

TREATMENT FRAMEWORK & SITE PRINCIPLES FOR LANDSCAPE TREATMENT

The treatment framework sets the stage for a cohesive rehabilitation approach for recapturing the landscape character that reflects the historic Bunker Hill Monument setting circa 1947. Three levels of guidance are provided, beginning with overall Site Principles for Landscape Treatment, which help ensure changes do not threaten the historic site character. Next, Guidelines for Areas within the Landscape, focuses on four identified landscape zones that encompass common features within the area. Treatment Guidelines and Recommendations presents design and functional issues, and provide guiding principles by landscape characteristic, then specifies needs and considerations or appropriate courses of actions for features.231

The Bunker Hill Monument landscape is dramatically different than the colonial landscape in which the “Battle of Bunker Hill” occurred. Yet, its character has remained relatively unchanged since completion of the monument landscape in 1847 and subsequent improvements up until 1947. This is due in large part to the vision and design principles that guided construction of the monument and surrounding landscape. Principles summarized below reflect those evident to the historic landscape, and help ensure careful evaluation of proposed modifications and impacts prior to making any physical change. These principles are based on the Secretary of the Interior’s Standards for the Treatment of Historic Properties, and apply to a rehabilitation strategy.231

♦ Retain spatial organization established by the July 28, 1947 plan.
♦ Maintain site design symmetry and form.
♦ Retain arrival sequences.
♦ Maintain the Massachusetts Gate as the primary entrance for all visitors.
♦ Recapture and maintain the sense of open space.
♦ Preserve major vistas into the site and unobstructed views of the monument.
♦ Provide universal access and ensure visitor safety.
♦ Preserve simplicity, clarity and consistency of design and materials.

229 When a Treatment Plan is implemented, all actions or landscape alterations should be documented in the existing Landscape Preservation Maintenance Plan and the Maintenance Plan should be updated to correlate with post-treatment conditions. See Appendix III.

231 According to The Secretary of the Interior’s Standards for the Treatment of Historic Properties, the following principles apply to a rehabilitation strategy. 1) The cultural landscape is used as it was historically or is given a new or adaptive use that maximizes the retention of historic materials, features, spaces, and spatial relationships. 2) Each cultural landscape is 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 from other landscapes, are not undertaken. Work needed to stabilize, consolidate, and conserve historic materials use physically and visually compatible materials, identifiable upon close inspection, and properly documented for future research. 3) Deteriorated historic features are repaired rather than replaced. Where the severity of deterioration requires repair or replacement of a historic feature, the new feature matches the old in design, color, texture, and where possible materials. Repair or replacement of missing features is substantiated by archeological, documentary, or physical evidence. 4) Additions, alterations, or related construction do not destroy historic materials, features, and spatial relationships that characterize the cultural landscape. New work is differentiated from the old and is compatible with the historic materials, features, size, scale and proportion, and massing of the landscape.
* Maintain all landscape features as subordinate to the monument.
* Avoid new construction or undertaking alterations not central to the design. Make compatible, easily reversible, and short-term if necessary.
* Minimize numbers of new, additional features. Essential features should be simple and unobtrusive in design and placement.
* Maintain a consistent palette (plants, furnishings, paving, signs, etc.) throughout the monument site, using materials, forms and colors that complement historic features, and that are durable and easy to maintain.
* Avoid introducing restoration styles that give false impression of features as historic. New elements should be compatible with historic elements, yet distinguishable.
* Discourage additions, such as seasonal displays of color. If allowed, then make easily reversible, and/or temporary. Remove whenever possible.
* Comply with cultural resource requirements prior to any construction. Conduct remote sensing survey prior to construction to address archeology concerns.232
* Collaborate with Interpretive staff to determine functional opportunities and constraints and to integrate interpretive elements into the landscape.

The development of rehabilitation guidelines for the Bunker Hill Monument, consistent with the Secretary of the Interior’s Standards, is aided by several historic documents:

* The Annual Proceedings of the Bunker Hill Monument Association

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232 Any future work should abstain from digging a depth of no more than twelve inches to protect archeological resources. Ground disturbance deeper than one foot below the park surface is discouraged. However, if ground disturbance at this level is proposed, in the higher, sensitive areas of the park, archeological testing should precede construction. In the lower, less sensitive areas of the park, construction should be monitored. (Pendery and Griswold, iv.)

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**GUIDELINES FOR AREAS WITHIN THE LANDSCAPE**

To facilitate application of the guidelines, the landscape is divided into four different zones. 1) The Area of Enclosure encompasses the exterior sidewalk with gaslights, the surrounding iron fence, and the double row of trees consisting of one row just inside and another row outside the iron fence. 2) The Four Entrance Gates include the Massachusetts, New Hampshire, United States, and Connecticut Gates. These areas contain the entry gates, the stairways and walkways to the upper plaza, including the Colonel Prescott statue. 3) The Monument Lawn and Perimeter Walkway includes the entire grassy area, the pathway that runs around the edge of the upper terrace, and the handicap accessible ramp on the southeastern quadrant of the lawn. 4) The Monument and Lodge Entrance and Plaza Area incorporates the area within the interior fence enclosure housing the lodge and obelisk, and the surrounding plaza area that connects with the entry walkways and is delineated by the lawn edges.

**AREA OF ENCLOSURE**

The features that have historically delineated the Monument Square site include the iron fence that surrounds and encloses the site, the public sidewalk surrounding Monument Square with gaslights and street tree plantings, and regularly spaced trees immediately inside the surrounding iron fence. The street trees and site trees create a “double-row” effect around the perimeter of the site.
THE FOUR ENTRANCE GATES

The Massachusetts Gate, the southwestern entry on High Street, across from the Bunker Hill Museum is the primary entrance to the site, and includes the entry gate, the stairway, the entry walk up to the upper plaza, and all features within. Looking from the base of Monument Avenue, the wide steps serve as a grand approach to the rising obelisk, the primary focal point of the grounds. The Colonel Prescott statue, located within an island in the walkway, actually greets the visitor before entering. Of all gates, this view of the Monument site from the Massachusetts Gate provides the visitor with a powerful sense of arrival. The New Hampshire Gate at the northeastern entry on Bartlett Street, the United States Gate at the northwestern entry on Pleasant Street and the Connecticut Gate at the southeastern entry on Lexington Street all serve as secondary entrances into Bunker Hill Monument. They are almost identical to each other, including the entry stairs and walkways up to the upper plaza, and all features within. Like the Massachusetts Gate, these gates frame the obelisk view from outside Monument Square, but as back and side views of the monument, they are either obstructed by or shared with views of the lodge. The New Hampshire gate stairs are not as wide as the Massachusetts gate, but are wider than the United States and the Connecticut gates. This arrangement provides bilateral symmetry to the site layout.

THE MONUMENT LAWN AND PERIMETER WALKWAYS

The existing character of the lawn and perimeter walkways generally reflects the historic nature of the site surrounding the monument and lodge plaza. The lawn provides an unadorned, serene setting for the monument, while the walkways encircle the monument, accessing several of the Frothingham historic markers along the course. This design simplicity was maintained until two fountains were placed within the lawn panels in 1871. When they were removed at the turn of the century, the site regained its unadorned character until trees, flowers, signs, and the ramp were added to the site post 1947.

- Maintain open viewshe from the base of Monument Avenue, across High Street, into Monument Square at Colonel Prescott and to the monument.
- Keep area within viewed free of additional small-scale features.
- Retain configuration and materials of entrances.

THE MONUMENT LAWN AND PERIMETER WALKWAYS

- Retain configuration and materials of entrances.

- Maintain iron fence enclosure and repair fence features as required.
- Retain the public sidewalk surrounding Monument Square.
- Maintain historic gaslight operation and standard style along public sidewalk.
- Retain and maintain historic allee (double row) of trees along the interior and exterior of the site perimeter iron fence.

- Retain configuration and materials of entrances.

- Maintain open viewshe from the base of Monument Avenue, across High Street, into Monument Square at Colonel Prescott and to the monument.
- Keep area within viewed free of additional small-scale features.

THE FOUR ENTRANCE GATES

The Massachusetts Gate, the southwestern entry on High Street, across from the Bunker Hill Museum is the primary entrance to the site, and includes the entry gate, the stairway, the entry walk up to the upper plaza, and all features within. Looking from the base of Monument Avenue, the wide steps serve as a grand approach to the rising obelisk, the primary focal point of the grounds. The Colonel Prescott statue, located within an island in the walkway, actually greets the visitor before entering. Of all gates, this view of the Monument site from the Massachusetts Gate provides the visitor with a powerful sense of arrival. The New Hampshire Gate at the northeastern entry on Bartlett Street, the United States Gate at the northwestern entry on Pleasant Street and the Connecticut Gate at the southeastern entry on Lexington Street all serve as secondary entrances into Bunker Hill Monument. They are almost identical to each other, including the entry stairs and walkways up to the upper plaza, and all features within. Like the Massachusetts Gate, these gates frame the obelisk view from outside Monument Square, but as back and side views of the monument, they are either obstructed by or shared with views of the lodge. The New Hampshire gate stairs are not as wide as the Massachusetts gate, but are wider than the United States and the Connecticut gates. This arrangement provides bilateral symmetry to the site layout.

- Maintain well-graded and manicured lawn zones.
- Retain path that encircles site.
- Avoid or minimize installation of signs or other vertical elements.
- Keep lawn area uncluttered.
- Keep new ramp design as non-intrusive as possible.

THE MONUMENT LAWN AND PERIMETER WALKWAYS

- Retain configuration and materials of entrances.

- Maintain iron fence enclosure.
- Keep additional site features to a minimum in platform and plaza area.
- Ensure that compatible materials are used for additional site features.

THE MONUMENT LAWN AND PERIMETER WALKWAYS

- Retain configuration and materials of entrances.

- Maintain iron fence enclosure.
- Keep additional site features to a minimum in platform and plaza area.
- Ensure that compatible materials are used for additional site features.
TREATMENT GUIDELINES AND RECOMMENDATIONS

This section is organized by landscape characteristic and features related to the characteristic. Relevant conditions and issues are described, and then guidelines serving as design parameters are provided to ensure future actions are sensitive to the historic character. Problems unique to each feature are described and followed with specific treatment recommendations. These solutions or actions to consider respond to management goals as identified in the currently planned construction project, and include improving feature conditions and responding to adaptive use needs. Some treatment options were considered but not recommended. Rejected actions are presented and discussed at the end of this section.

CIRCULATION

Treatments affecting site circulation encompass Site Accessibility, Lodge Accessibility, and Pavements. Maintenance access issues also fall under the circulation category, but are addressed within guidelines and recommendations for these three issues.

Historically, site circulation was via the four entrance gates, up the staircases, along the paths encircling the monument and lodge area and either up the lodge stairs and into the lodge or up one step onto the obelisk platform, then another step into the lodge. Since rehabilitation projects should provide equal site and building access, then site treatment provisions for barrier free access are necessary. A comprehensive solution for wheelchair accessibility within Monument Square and the Bunker Hill Museum may be dependent on redesign solutions for the interiors of the lodge and museum.

CIRCULATION GUIDELINES

- In consultation with an American with Disabilities Act (ADA) cooperating consultant, develop preservation objectives and guidelines to meet ADA goals.
- Establish a comprehensive ADA compliant plan for handicap accessibility that incorporates historic buildings and site circulation.
- Maintain hierarchy of walkway treatments, e.g., granite and granite-lined concrete surfaces as primary, asphalt or alternative surface treatment as secondary.
- All new concrete surface treatments, including accessibility ramps, should match concrete specifications for extant plaza walkways. Use granite for curbing and edges.

SITE ACCESSIBILITY

The park is in the process of coming to agreement with the city on a revised parking plan. (As of June 2000, the NPS was granted public parking allowances along the interior curb of Monument Square; parking along the exterior curb is limited to residential permits. The NPS submitted a plan to the city requesting two handicap accessible spaces east of the Massachusetts Gate entry and a no parking zone at the southeastern corner of the fence. The NPS is currently waiting for a response).

The concrete accessibility ramp does not fully meet ADA compliance requirements. It appears that the ramp meets code; however, there is only one railing along the downhill side. Slope conditions are greater than 5%, and therefore require one handrail with a continuous gripping surface on each side of the ramp. This may be the only aspect that requires redesign and construction, but the existing ramp design does not provide “equal access” to the site. It fails to provide the visitor with the same entry access experience as the visitor using the primary, Massachusetts Gate entry. Visitors entering the site via the stairway enjoy the grandeur of the rising obelisk shaft before them as they walk nearer the monument structure, while the visitor
using the ramp approach must immediately turn away from the obelisk and view it from a diagonal, until reaching the top of the ramp. Additionally, the ramp provides access for inappropriate recreational use, including bicyclists, skateboarders, and rollerbladers. Some of the more opportunistic, thrill-seekers use the railing to ride on. This causes vandalism and increases safety hazards.

It is unknown what precise maintenance methods were historically practiced. Given time and budget constraints, and resource concerns, it is prudent to provide access for maintenance vehicles. Currently, both the southwest corner and Massachusetts entrance gates are used for maintenance access. Pick-ups, mowers, bobcats and dump trucks use the access points to deliver heavy materials and to conduct grounds maintenance, including mowing, site regrading and snow plowing. In wet and/or snowy weather, vehicles and large equipment cause turf damage, soil erosion and compaction. A modified accessible ramp that would accommodate a low level of maintenance vehicle use would greatly assist staff as well as help protect the lawn. However, it is critical to minimize maintenance activities and vehicular use to the degree possible while the site is open to the public.

Recommendations for Site Accessibility

- Prioritize effort to provide experiential, visual connection with obelisk as focal point upon entrance for all visitors, including ramp users.
- Provide design solutions that deter inappropriate use, e.g., rollerbladers, etc. to degree possible.
- Minimize scale of ramp. Manipulate slope to lay path “as lightly” as possible.
- Design ramp entry at the Massachusetts Gate and terminus at the monument plaza entry.
- Design layout to complement geometric, formal axial site design to degree possible.
- Redesign ramps in southeastern (existing) quadrant of lawn, i.e., use disturbed zone.
- Consider designing an accessibility ramp that terminates at the corner of the upper perimeter path, allowing the user an entrance choice. The “accessible” path heading north to enter the plaza area at the top of the Connecticut Gate stairs would be ADA complaint, whereas the path entering at the top of the Massachusetts Gate stairs may not be, but gives the user “equal access” (via the primary entrance), with no barriers. (Note: This condition may require signing to inform user of differing conditions.)
- Design the handicap ramp to provide for limited maintenance vehicle use, keeping path width to 5 feet maximum, which would accommodate regular use by a mower without vacuum, small bobcat and Cushman dump vehicle.
- Coordinate design criteria and requirements necessary to best provide handicap accessibility first, then consider if path could maintain low level site impacts by an increased width six and one-half feet. This would allow for larger vehicular use, i.e., mower with vacuum, pick-up, large bobcat loader and small dump truck.
- Ensure pavement design and specifications are designed to carry determined design vehicle weights plus loads, and turning radius requirements. Refer to Maintenance Vehicle information for specifications. See Appendix III.
- Permanently close maintenance access at Massachusetts Gate. Maintain area as elegant entry. Limit maintenance access to gate at southeastern corner of site and designed ramp.
- Consult with arborist when design decision may affect vegetation. Comply with Vegetation guidelines and recommendations.

Lodge Accessibility

The historic entrance to the lodge was via the wide stairs at the front entry. This staircase remains intact. In 1975, the state modified the front stair entry and landing to include a handicapped accessible, concrete ramp alongside the face of the lodge up to the entry platform. This modification, however, is ineffective, as the width between the building facade and the entrance columns is insufficient. The front step is an additional barrier. As a result of this inadequacy, the NPS built a wooden ramp from the
surrounding concrete walkway into the monument base area and another from the monument base area into the south side door of the Lodge (the secondary entrance) to make it more accessible. This quick fix functions, however, it does not meet ADA goals, which is to produce an equal access situation. Further, the materials used do not complement the materials and construction of the historic design features. A design solution that simultaneously meets accessibility requirements and instills consistency into the historic setting by use of the proper design elements would improve the current condition.

**Recommendations for Lodge Accessibility**

- Recapture historic front elevation of lodge by removing concrete ramp section at the face of the lodge. Restore entry to original design. Check state plans and HSR to ensure appropriate removal and restoration measures are taken.

- Design permanent ramps to replace both wooden ramps and to reflect existing pavement character. Concrete and/or granite would be appropriate.

- Consider new routes into and out of lodge and monument area that improves visitor movements and barrier-free circulation. (Note: Any permanent opening of the gates under the current configuration compromises regulating traffic and giving safety messages. (Coordinate closely with NPS staff regarding program needs).

- Consider providing additional access point through the existing gate on the northwestern side of the interior fence. This would improve symmetry of access points, as well as create an “entrance” (southeast side) and an “exit” (northwest side) for all users, employing universal design philosophy. Consideration could then be given to conducting interpretive programs on the northwestern side of the site, which is currently the most underused portion of Monument Square. This would help alleviate congestion at the lodge entrance due to conflicts associated with groups enjoying NPS programs and visitors entering the site, lodge and monument.

- Site solutions as provided in this document are based on the assumption that (an) accessible restroom(s) will be provided on the main floor of the lodge, and that accessible restrooms at the Museum will be incorporated into the building rehabilitation project.

- If future architectural solutions maintain accessible restrooms at the lodge via the basement access, site access to the bathrooms should continue through the north basement access door of the lodge.

- Consider making both upstairs and downstairs restrooms fully accessible, private, single-use, unisex facilities. This would be done as part of a building improvements package.

- Any necessary site regrading or reconstruction would need to be addressed as a separate project in conjunction with the building rehabilitation project, and should comply with the guidelines set forth in this document.

**Pavements**

The site walkway systems have historically been comprised of several surface materials, including granite, concrete, and asphalt. The lodge platform is granite, as well as the gate entrance stairs and the walkway curbing. The granite steps ascending from the four gates need repointing, and the masonry support piers that the steps rest on need resetting. Voids under the stairs also need to be filled. The steps were repointed in 1995; however, the caulking is already wearing away in many places and will continue to deteriorate quickly. The Bunker Hill Monument Association repointed the steps on a ten-year cycle, but if repair is delayed for another five years, the degraded conditions will create safety hazards and increased future repair costs. The granite curbing along the walkways is in varying condition, settling and heaving throughout the site. One granite bollard is missing at the New Hampshire gate entry.

The concrete walkways have been replaced over time, but their character is reflective of the historic walkways. Portions of the walkway are
cracking, heaving and settling throughout the site, possibly exacerbated by the slope erosion.

The hierarchy, configuration and placement of the asphalt walk maintain the historic path character; however, it is in extremely poor condition, with roots heaving the walks in almost all tree locations. Almost the entire pathway is settling and breaking away, due to combined factors and stresses, including age, steep slope conditions and invading tree roots.

The concrete handicap accessible ramp is not historic, but the concrete is a material compatible with the surrounding historic features and should continue to be used for replacement purposes.

There was likely no historic physical connection of the Bunker Hill Monument grounds to the Bunker Hill Museum across the street, since it was previously a library, and managed separately. However, since the NPS will be using the Bunker Hill Museum in the future as an interpretive center, it would be desirable to provide a visual link or communicate the interpretive relationship between the two sites.

**Recommendations for Pavements**

- Replace broken concrete, using same specifications as that of existing surface.
- Replace full sections only, from joint to joint.
- Conduct concrete patch tests to ensure color, texture and finishing match existing concrete.
- Inventory, reset and repoint steps, curbs and masonry support piers as necessary.
- Conduct an engineering design analysis for condition of stairs. Consider safety and integrity. Provide recommendations to management outlining efficient maintenance actions and cycles.
- Replace concrete steps and curbing as necessary.
- Develop a cyclic maintenance action plan for repointing and resetting the granite steps, with specifications to ensure future replacement material and installations conform to design guidelines.
- Replace missing granite bollard to match existing bollards per detail drawings. See Appendix II.
- Remove and replace asphalt walk entirely. This should improve it functionally and visually, as well as reduce maintenance demands.
- Explore new surface treatment that has a different appearance and texture than concrete, but is more attractive and structurally sound than asphalt. Consider concrete with gravel and stone dust rolled into the surface.
- Replace asphalt walkway location in-kind. If a tree along the new walkway cannot be retained, remove tree according to guidelines in Vegetation section of Treatment chapter.
- Design and install pedestrian crosswalks linking Monument Square to the Bunker Hill Museum across High Street. Material composition should include concrete and/or granite and may include brick. Reflect local pedestrian crosswalk designs and/or custom design a crosswalk using surrounding materials found within Monument Square. Final design and surface treatments should be ADA compliant.

**VEGETATION**

Vegetation on site has historically been a simple and elegant palette composed only of a green sloping carpet of lawn, enclosed by a double row of trees flanking the exterior fence. Trees were planted on the slopes and upper terrace in the 1970’s, introducing vertical elements to the site interior, while bulb plantings and potted ornamentals were later added for color. These features were established to beautify the site, and have somewhat minimally changed the character. In recent years, the trees have provided shade on hot days for visitors and interpretive staff, and some community members foster a tradition to adorn the memorial site with flowers and ornamentals.

**GUIDELINES FOR VEGETATION**

- Coordinate treatment recommendations with the City of Boston as necessary. The NPS should formally request the city to manage the trees as part of a historic double-row. It is strongly recommended that the NPS
consider taking over responsibility for maintenance of the sidewalk and trees to reestablish and to more easily manage the allee feature in the future.

- Consult with an arborist when determining necessary actions for tree pruning or removal considerations. (In order to remove and construct a new perimeter path on the upper portion of the site, some trees along the path will need to be root pruned or removed).
- Minimize soil disturbance during tree removal.
- Remove stumps in accordance with OCLP's Preservation Maintenance Considerations for Stump Removal and Tree Replacement. See Appendix II.
- Maintain vegetation as set forth in Landscape Preservation Maintenance Program, 1992. See Appendix III.
- For further site-specific recommendations, consult with OCLP staff.

**TREES**

The historic allee, or double-row of trees, consists of the trees along the interior and exterior of the Monument Square fence, and contribute to the historic character of the site. The trees outside of the fence are maintained by the city. The NPS does not currently have a cooperative management agreement for the overlapping areas of historic interest. The Monument Square Neighborhood Association maintains contact with the city to ensure that dead or dying trees are replaced.

The pin oak trees and others that are not part of the double row of trees are not historically significant; however, they provide shade in the upper terrace, which is largely welcomed by visitors and provide a comfortable environment for holding outdoor interpretive programs. A few of the trees on the northwest and southeast corners block the monument floodlights, casting eerie shadows on the faces of the monument which interrupt the serene accent the lights may otherwise provide. Additionally, the older, flat-topped character of the pin oaks has greatly decreased their beauty, minimizing their aesthetic value, while low-lying branches require maintenance.

**Recommendations for Trees**

- Replace missing trees and remove and replace unhealthy and severely leaning trees that contribute to the double tree line as necessary. Rejuvenate, replace-in-kind, or replace with appropriate substitute as required.
- Consider disease resistant elm cultivars as replacement species as necessary.
- Remove pin oak tree that blocks floodlight.
- Remove pin oaks and other trees not part of the lower, historic double-row as health declines, or as part of the asphalt replacement project. Document their location and time of removal, but do not replace in kind (Figure 96: Alternative A, Phase I, Interim Tree Layout).
- As pin oak trees become flat-topped, assess overall health. If failing and in poor condition, remove and do not replace, unless part of the historic double-row.
- Design a long-range planting plan that ultimately provides “anchor” plantings, approximately 3 trees at each of the four corners of the upper terrace perimeter path. In the interim, retain tree plantings on upper terrace, but remove and do not replace those not considered “anchors” as their health declines, or as new construction requires removal. This arrangement is not historic, however, it maintains the openness of the site interior while being responsive to neighborhood and programmatic values (Figure 97: Alternative A, Phase II, Final Tree Layout).
- Maintain according to the guidelines set forth in the Vegetation section.
- Establish a replacement and maintenance program for the long-range vegetation plan.

**BULBS AND ANNUALS**

Historically, flowers, or “color” were not part of the site; however in recent years, parties and organizations outside the NPS have donated bulbs and annuals. The NPS plants the daffodils in front of the Prescott statue, and maintains the
annuals in concrete planter boxes. Some community members continue to demonstrate a strong interest in having color on the site, and donations persist on an unsolicited basis. The argument that flowers serve as a memorial function while beautifying the site could be made; however, historic precedence of not planting ornamentals and maintenance impacts should be primarily considered. Bulbs planted in the lawn area in front of the Prescott statue have experienced problems due to difficult soil conditions, resulting in weak flowering ability. They are replanted annually, and the continual digging results in damage to the irrigation system. The planter boxes are placed at the top of the stairways; however, as annuals, they are only maintained on a seasonal basis.

**Recommendations for Bulbs and Annuals**

- Consider completely eliminating planter boxes.
- If planter boxes are retained, replace with new planter boxes with lower, flatter, profile “dish-type” containers. See Appendix I.
- If planter boxes are retained, maintain annual plantings as strong, abundant displays. If unable to be highly maintained, they should be permanently removed from the site.
- Retain planter boxes on seasonal basis only. Remove during the fall/winter and store off-site.
- Develop a manageable plan that ensures timely seasonal installation and meticulous cyclic maintenance of ornamental plantings.
- Remove bulb beds. Do not replant. Reseed lawn or place sod. Maintain as lawn area.

**Lawn**

Due to the direct relationship between lawn and topography treatment issues, lawn is covered under the Topography and Drainage section.

**Lighting**

Lighting is the most obvious mechanical feature on site, with the greatest number of issues. The three types of lighting on the property, including metal halide floodlights, mercury vapor lamps and gas streetlights all serve different purposes; however, all are inadequate and are visually incompatible with each other. Effective lighting will help to enhance visitor awareness of the key historical elements on the property, ensure visitor safety, deter loitering and vandalism during the evening hours, and increase visitor comfort during nighttime use.

**Guidelines for Lighting**

- Enlist a lighting designer/consultant to ensure appropriate lighting functions are met.
- Develop an integrated light plan in accordance with the following objectives and guidelines.
- Ensure light levels support safe use by strollers, neighbors, and visitors to the monument, lodge and museum.
- New light styles, materials and colors shall complement not copy, the historic street lamps and the floodlight posts. See Appendix I.
- Reduce scale of lamps to minimize their presence. Consider in-ground lighting as alternative.
- Consider feasibility for and appropriateness of integrating light functions, thereby reducing total number of fixtures necessary (e.g., double lamps, combination of path and street lights).
- Consider vandalism resistance and maintenance feasibility.

**Floodlights**

Two floodlight fixtures consisting of a pole with several lamps each light up the monument at night. One is located at the southeast corner and the other is at the northwest corner of the site. Dating circa 1930, there is no evidence to suggest that fixtures were ever placed on the southwest or northeast corners. In the 1970s, pin oaks were planted next to the lights, and the mature branches obstruct the lights, creating a silhouette effect on the monument, and dramatically changing the night view of the obelisk. They transmit a low level of light, undermining the grand effect that could be attained with proper casting. It is unknown to
what extent the distance between the floodlights and the monument has on the overall effect. It is believed that the lamp posts are original standards, while the lights have been changed over time. One guy wire is missing from the southwest floodlight pole. The character of the poles reflects the overall character of the site.

**Recommendations for Floodlights**

- Retain extant floodlight locations and standards if possible. Determine if adequate lighting can be provided from these locations in consultation with lighting designer.
- Use floodlights to make architectural statement of obelisk.
- Improve floodlighting capacity. Replace with effective, energy efficient model.
- Keep light beam clear between floodlight and obelisk if floodlights are retained. Remove perimeter tree that blocks light, replace in nearest location within tree row.
- Provide lighting for the Prescott statue and the lodge. Ensure that this light does not compete with lighting of the obelisk.
- Consider feasibility of raising floodlight pole to clear treetops.
- Consider supplementing floodlights with in-ground lighting as a possible option.

**LIGHTING OF GROUNDS**

Cobra-head style mercury vapor lamps located at regular, but asymmetrical locations along the upper perimeter path provide light for the monument grounds to facilitate visitor use and for safety purposes. They cast uneven and insufficient light to adequately deter loitering and vandalism. Active nighttime use of the site includes post-sunset visitor center hours, occasional evening meetings in the lodge, as well as casual use by the visitor nearing the end of the Freedom Trail. With large looming heads and a silver aluminum finish, they are incompatible with surrounding features. Combined with their freeway scale and industrial style, the grounds lighting creates visual discordance, detrimentally impacting and detracting from the site character.

**Recommendations for Lighting of Grounds**

- Remove cobra style lights; replace with contemporary style that reflects design elements found in gas street lamps and floodlight posts.
- Relocate new lights along perimeter path at regular intervals for efficient and effective pedestrian illumination. Maintain rhythmic, symmetrical layout to degree possible.
- Provide sufficient casting for accessible ramp from lights along perimeter path to maintain symmetry. Refrain from providing additional overhead light standards over accessible ramp if possible. Consider ground level path lighting for ramp if necessary.
- Consider bullet lighting from within anchor trees to keep light feature numbers to a minimum.
- Prevent glare from intruding into surrounding development.

**STREETLIGHTS**

The streetlights are historic gas lamps and are placed throughout the surrounding Charlestown area. They are a unifying element that contributes to the town’s historic character, and links the site with the entire square area. This design style is not reflected in the other lighting styles within the monument grounds, but is complemented by the floodlight poles.

**Recommendations for Streetlights**

- Maintain an active partnership with the City of Boston to coordinate design and/or development actions.
- Ensure existing street lamp style is retained and that good condition is maintained.

**IRRIGATION AND OTHER UTILITIES**

Other mechanical features on site besides lighting include the irrigation system and utility boxes, and have few concerns. Installed between 1996 and 1998, the irrigation system is in good condition. Past bulb planting activities in front of the Prescott statue damaged irrigation lines when drilling planting holes; however this
problem has been reduced by temporary elimination of the bulb bed. The only other identified issue is the effect that watering has on the water pressure in the building. When activated, the system draws pressure almost completely away from the building, resulting in excessively low water pressure for the drinking fountain and toilets. As a result, maintenance for the system is conducted when the site is not open to the public. Utility boxes with MDC cover plates and irrigation boxes throughout site are necessary, but they visually interrupt the lawn surface, albeit minimally. There are currently no public phones on site. Introduction of these elements would conflict with the visitor experience, necessitate major infrastructure improvements and invite vandalism.

GUIDELINES FOR IRRIGATION AND OTHER UTILITIES

♦ New elements should retain a horizontal profile and not protrude vertically into the landscape.
♦ Keep utilitarian elements as small as possible.

Recommendations for Irrigation and Other Utilities

♦ Investigate source of water pressure problems and ways to mitigate or improve situation.
♦ Continue to have a “no irrigation” policy during visitation hours. Monitoring or testing during visitation hours as necessary would be appropriate.
♦ Retain existing utility features only as necessary.
♦ Site new utility features so that they are hidden to the degree possible.
♦ Use cover plates that minimize visual impacts, i.e., concrete covers in concrete walks.
♦ Avoid introducing telephones to the site.
♦ If determined to be a necessary provision, consider providing public telephones inside the Bunker Hill Museum as part of the Museum rehabilitation scope.

TOPOGRAPHY AND DRAINAGE

The interior of the Bunker Hill Monument site has historically been a sloping, open space, with turf being the most visually apparent aspect of the landscape. Since the lawn is a critical landscape characteristic, then turf management is a high priority. Unfortunately, the steepness of the slopes has created a maintenance challenge that has culminated in a number of impacts to historic features over the years. Soil compaction and erosion has resulted in a lawn with bumpy character, exposed tree roots and drainage problems. The drainage problems have resulted in washouts and maintenance attempts to install temporary solutions. Historic runnels have been resurfaced over the years, changing their character to a degree that detracts from the stately character of the site.

SLOPES AND TURF

Soil compaction occurs across the plaza at the lodge exit along the grass border and paved edge, where visitors congregate before and after visiting the museum, or as part of an interpretive presentation. It is also evident in front of the Colonel Prescott statue, where visitors frequently take pictures, and at the southwestern base of Massachusetts Gate entry, apparently caused by maintenance vehicle access. Other visible areas are at the base of some trees, where roots are exposed and turf retention is problematic.

Soil erosion problems occur along the toe of the northern slope, mostly on the northwestern side. Soil washes underneath the fence and over and along the sidewalk, and into the roadway. Park maintenance built a rustic rubble wall to reduce washout levels, but it is temporary in nature and does not appropriate reflect site detailing. Erosion in this area is likely due to the combination of a steep slope, insufficient turf cover due to limited sunlight on the northern exposure and dense shade trees. Uneven, hummocky surfaces are apparent in the lawn throughout the property.

Recommendations for Slopes and Turf

♦ Consider using a dense shade turf in areas with low solar exposure.
Reconstruct slopes as appropriate to help stabilize the soils, reduce erosion potential and to establish visually pleasing, functional drainage system.

Explore turf stabilization measures (grids, fabrics, etc.) and applicability at site.

Consider and weigh site impacts if removal and replacement of trees is necessary. Refer to Vegetation guidelines.

Reseed bare or regraded areas with turf species as specified. See Appendix II.

Investigate soil improvement options. Consider amending soils with diatomaceous earth products to improve soil porosity.

Consider providing seating in high traffic zones to prevent trampling and wear.

Design and install a continuous granite edge (or other drainage feature) and associated drainage improvements along the base of the northern bank, below the fence line. Consider installing continuously around the entire site.

Consider preparing a comprehensive turf rehabilitation plan to address specific turf issues including compaction, erosion and runoff. Integrate ways to reduce active recreation impacts and to accommodate passive visitor use, such as participation in interpretive programs, while minimizing ground disturbances.

**ASPHALT RUNNELS**

These drainage features flank both sides of the four entry stairways. Once narrower lawn swales, then later paved, their form followed the surrounding slope gradient. Their character, albeit simple, was somewhat elegant, and tastefully connected to the stair and pathway system. Over recent years they have been transformed into terraced and crude asphalt swathes, with splashbeds alongside each of the stairs’ platforms. Their form now reflects the stepping nature of the entrance stairs rather than the sloping character of the lawn. They have grown in width by possibly an additional foot, and at the bottom of the stairs/slopes terminate in overly generous, makeshift splash zones. They are functionally disconnected to the overall drainage system, except in one case, and are physically and visually inconsistent with the pathway system.

**Recommendations for Asphalt Runnels**

- Recapture appropriate physical and functional nature of the runnel drainage system.
- Remove and replace asphalt runnels in their entirety.
- Recapture historic form, function and relationship to other site features.
- Reestablish shape to reflect the sloping lawns, rather than stepped terrace.
- Resurface to recapture historic grace. Physically and visually tie to pathway treatments. Consider same treatment as determined for perimeter path replacement.
- Provide drop inlets at the base of each swale and connect to storm drainage system if necessary.

**BUILDINGS AND STRUCTURES**

The Monument structure and the Lodge building are the two most prominent features on site. The Bunker Hill Museum is a related building, though it is outside of the Bunker Hill Monument site, across High Street to the south. This report does not address these buildings, except to the degree that they physically relate to the landscape features surrounding or attached to them, and are addressed as necessary in those sections of the report. Following are the structures that are covered as part of this effort.

Historically, two ornamental fountains were placed on the site in 1871 and removed at the turn of the century. One each was centrally located within the southeastern and southwestern lawn panels, providing additional focal points on the site. These are no longer on the site, and it was not determined through the efforts of this project why they were removed, or what happened to them. These are further discussed at the end of the Treatment chapter, under Alternatives Considered but not Recommended.

Other dominant landscape structures include the Colonel Prescott statue, located within the
planted island on the southern entrance walkway and the railing used throughout the fencing, stairway and ramp systems.

GUIDELINES FOR STRUCTURES

- Coordinate treatment recommendations in consultation with curator.
- Retain, maintain and preserve interior and exterior fence details.
- Complement historic fence railing details as necessary. Avoid copying historic detailing.
- Ensure that new rail treatments blend into the landscape, secondary to the surrounding scene and subordinate to the fences to the degree possible.
- If necessary, temporary structures may be considered for short-term, limited, special park uses; however, the structure should be assembled just prior to and disassembled immediately after each activity.
- Avoid reintroduction of the two ornamental fountains.
- Consider incorporating information about the fountains past existence into an interpretive program or display.

COLONEL PRESCOTT STATUE

The Colonel Prescott statue is in good condition, and is a popular feature among visitors. It is often used as a backdrop for photographic opportunities and is likely the reason that previous lawn surrounding the statue was replaced with the existing granite cobble platform. However, this surface treatment is not historic and is rough in appearance and texture. The statue is currently difficult to see at night, due to insufficient lighting. It was not historically illuminated.

Recommendations for Colonel Prescott Statue

- Retain, maintain and preserve Colonel Prescott statue and location.
- Consider replacing the granite cobble platform with a more elegant and smooth granite surface treatment.
- Provide uplighting of Prescott statue. (See Lighting Recommendations).

FENCES AND RAILINGS

The two fences within the site, including the interior iron fence enclosing the monument and the perimeter fence, enclosing the Bunker Hill Monument site are composed of different steel post and railing styles. Some of the historic posts and railings are missing pickets, finials, and quatrefoils. Some of the fence post granite footings are damaged, although none appear to be major concerns. Each entry has an iron gate on either side, which is permanently welded shut. Their historic use or past function is unknown. The gate welds on the southeastern side of the Connecticut Gate are crude and rusting. The other weld joints appear to be in good condition. The exterior fence has white paint graffiti along portions of each side, particularly on the fence posts. The park has patterns for all elements of the cast steel fence. The entry stair railing design and those associated with the handicap ramp are not entirely consistent with or compatible with the historic materials on the fences.

Recommendations for Fences and Railings

- Replace features in poor condition or that are missing, i.e., posts, railings, pickets, finials and quatrefoils. Match existing features, using park detail drawings. See Appendix II.
- Remove all graffiti per NPS curatorial standards.
- Repaint all features to match existing paint as necessary.
- Repair rusted weld joints.
- Remove central balustrade section at the middle platform of the New Hampshire Gate to allow for cross access to granite tablets. (See Pavements Recommendations).
- Provide a contemporary, black iron or steel handrail system where new handrails or replacements are necessary, e.g., for handicap ramp. Square, flat or angular profiles are more consistent with historic detailing than round, tube types, but tube types would be acceptable if considered more universal.
- Inventory and evaluate feature conditions to specify level of work required.
- Develop maintenance guidelines for features.
SAAL SCALE FEATURES

Small-scale features of the site include features that contribute and complement the site's noble character and others that are necessary site appurtenances, but as an assemblage, provide discordance. Complementary features include wayside exhibits and commemorative markers, and seating, but some of the less attractive and ubiquitous features include signs and trash receptacles. The annual planter boxes do not contribute to the site, but they also do not detract from the site character. (Planter boxes are more fully covered under Vegetation).

GUIDELINES FOR SMALL SCALE FEATURES

- Coordinate design and siting of all small-scale features with other site elements to ensure consistency, to retain open space character and to prevent visual disorder.
- Repair, preserve and protect historic markers per preservation treatment standards.
- Avoid introducing features that break up the undisturbed lawn terrace.
- Maintain regular, formal arrangement among all features to reflect and enhance character of square.

SIGNS

Signs are located throughout the site, which are necessary for communicating information to visitors. However, signs can overwhelm the intended contemplative scene. Generally, the signs are unconsolidated, of different sizes and scale, and placed throughout the site. The NPS Bunker Hill Monument sign is extremely large and overwhelms the site entry, detracting from the grand monument entrance. They are unnecessarily tall, obtrusive, and out of scale. The Freedom Trail sign located at the Massachusetts Gate entry was installed as part of the Freedom Trail network system, and imposes on the historic viewshed up the Massachusetts Gate entry, creating a distraction on the approach. However, this feature helps link the Bunker Hill Monument site to the Freedom Trail, providing NPS interpretive information and necessary visitor guidance.

As one of Charlestown's three open green spaces, the site is attractive for many traditional open space activities. Inappropriate uses include loafing at night, active recreation, such as Frisbee, ball playing, skateboarding up and down the ramps (as well as on the handrails), snow sledding, etc., and off-leash dog walking. These activities pose safety hazards for users and visitors and create maintenance problems as well. The site is highly attractive to dog owners and dog friends, for both general recreational walking and for exercising dogs. There continues to be an associated problem with dog litter and disposal problems, digging and off-leash use.

Signs addressing use policies are currently located on the upper terrace, on lampposts or individually posted on tall poles. These do not provide notice immediately upon entering the site, contribute to site clutter, are difficult to read, and ineffective. The Code of Federal Regulations (CFR) states laws as applicable to the site, but some of these activities are not listed as prohibited. In any case, enforcement of inappropriate activities is difficult.

Recommendations for Signs

- Develop a comprehensive sign and wayside plan that addresses all sign types, sign designs and sign messages.
- Integrate sign designs to appear as a unified information system.
- Consider site design details that may help discourage inappropriate recreational use.
- Remove all NPS identity signs replace with smaller ones designed by the Park. Incorporate with simple, consolidated messages on small-scale, readable sign at entry. Locate on fence. See Appendices I and III.
- Remove all non-interpretive signage from grounds.
- Determine and incorporate necessary signage for linking Museum to site.
Consider feasibility of removing the Freedom Trail sign out of a primary view, and relocating it nearby, in conjunction with signage linking the Museum and the Monument. Assess pros and cons of relocating it by incorporating it into the sidewalk zone, or within the Museum area as part of the Museum rehabilitation project and/or the Long-Range Interpretive Plan.

Post CFR regulation signs stating dog laws at entry fence as part of comprehensive signing. See Appendix III.

Address inappropriate activities such as ball playing in the Superintendent’s Compendium.

Increase enforcement of regulations. Consider fines as applicable per the Compendium.

WAYSIDE EXHIBITS AND COMMEMORATIVE MARKERS

The existing wayside exhibit, installed during the bicentennial in front of the monument fence on the east side, has small text, making it difficult to read, and is in poor condition. It is corroding, with bleeding patina oozing over the exhibit and onto the walkway. However, this small sign is the only interpretive information available to visitors when the lodge is closed.

Frothingham’s markers installed in 1876 are still on the site. One additional marker previously located on Bunker Hill Street is now in Bunker Hill cemetery. These provide specific information about the redoubt location and battlefield boundaries. Recent archeological findings question the accuracy of these locations, due to inconclusive findings and the potential for postwar survey inaccuracies. Questions regarding the accuracy of the redoubt configuration as historically documented actually defines the resource remain unresolved.

Though contemporary features, the granite memorial tablets located at each entry gate on each side of a stair landing are composed of a material found in the historic landscape. The use of granite combined with their form and placement, respect the historic setting and views, and complements the site layout and character.

In July 2000, the park reinstalled the Warren spike marker on a new granite base in the southwestern panel of the lawn, where it was historically located. Sufficient conflicting information exists regarding the actual location of Warren’s fall, so this location is therefore considered anecdotal. By the end of August 2000, the park removed the spear-like, protruding marker and placed it in storage due to visitor safety concerns. The park is currently in the process of determining how to appropriately manage the recently rehabilitated feature.234

Recommendations for Waysides and Commemorative Markers

- Develop and update a wayside plan as part of a comprehensive sign plan that is aligned with the recommendations in this report.
- Consider new wayside for after hour visitor.
- Replace wayside on eastside of monument.
- Provide historic marker plan as part of interpretive resources that articulates history of marker placement and clarifies per updated archeological findings.
- Include wayside exhibits that more effectively convey the site and surrounding landscape’s evolution from a battlefield to a commemorative monument in an urban neighborhood. Reflect recommendations in this report.
- Retain and maintain memorial tablets at stairs.
- Consider displaying the Warren spike in the Bunker Hill Museum as part of the rehabilitation project. Consider replacing with a new “interpretive marker” in the original location in the southwestern lawn. Describe historic spike and why it was relocated. Direct visitor to its new location for viewing and/or further interpretation.

SEATING

Seating was historically only provided within the Monument plaza area. The benches were rather simple, apparently constructed of wood slats. There are currently two styles of benches.

234 The HSR inaccurately states that the Warren spike marker locates where Colonel Prescott fell.
ranging from fair to poor condition. Seating continues to be necessary in the general vicinity of the Monument and Lodge, so that people may rest either after walking up and down the Monument stairs, while waiting for others, or during formal, outdoor interpretive programs. Visitors sit on steps and curbing around the monument site, as well; however, one bench facing the front door of the lodge interferes with interpretive activities.

**Recommendations for Seating**

- Select one simple bench seat of contemporary design style that complements historic site materials, i.e., iron, concrete or granite. Wood may be considered, as wood benches were used historically.
- Provide two variations of the one design, i.e., one with a back and one with no seat back.
- Of the existing benches, retain only the three esplanade benches. Maintain as a grouping, preferably in a location separate from the new benches.
- Arrange seats without backs along pathway curbs to reflect and heighten the flat plane character of the upper terrace and plaza area.
- Limit the seat benches with backs to locations around the interior fence, looking outward.
- Provide benches centrally located on each side of the inner fence surrounding the obelisk.
- Place seating in functional locations that will also serve to protect lawn edges as necessary.
- Arrange seating that faces both inward and outward.
- Design a seating plan that retains symmetry to degree possible.
- Site seating in response to needs associated with monument entrance and exit.
- Work with interpretation to determine useful locations. Consider how interpretive programs can be conducted in different locations if necessary.
- Consider how monument and lodge access entry/exit plan will ultimately affect seating arrangement.
- Avoid placing seating along perimeter path on the upper terrace. If considered necessary, limit seating to corners of path only, in association with recommended, “anchor tree plantings”.

**TRASH RECEPTACLES**

There is currently no design or siting consistency with the two types of trash receptacles. Basic aluminum corrugated types are old, bent, ugly and entirely inappropriate. Concrete hexagon types are old, broken, ugly and somewhat more compatible with historic materials; however, they appear to be easily vandalized. Both get waterlogged easily, creating further sanitary problems, and increase the weight of debris, making them heavy and difficult to dispose. They are in extremely poor condition and often overflow. Some are located at the bottom of the entry stairs, and more are at the top of the stairs, centered between the annual planter boxes. Though not entirely intrusive by location, they negatively impact both the upward views towards the monument when climbing the entry stairs and the general stateliness desired for the scene. The site experiences 24-hour use, combined with bus tours and visits by large groups. This visitation level necessitates retaining trash receptacles on site to some degree.

Additionally, there are no separate dog trash receptacles, which results in maintenance personnel dealing with dog waste as regular trash, as well as a regular grounds problem. These cumulative effects associated with accepting the dog population as part of the visitor population disturb the dignity of the historic scene, and create an array of additional maintenance tasks.

**Recommendations for Trash Receptacles**

- Establish a "pack litter out” policy for bus tours, large groups and organized use.
- Relocate trash receptacles to an area that does not visually compromise the view as a primary focal point.
- Consider feasibility of moving trash receptacles to sidewalk locations outside the monument fence. In this case, one at the northeast corner of the lodge should be the only trash receptacle on site.
Reduce numbers and limit locations to as few as possible. Locate no more than one receptacle per site entry.
Avoid placing at the monument plaza area, or at the top of stairs, as it detracts from the base view of the obelisk.
Limit trash receptacles to one style only, consistent with design that complements historic character and overall site furnishings palette.
Investigate and procure trash receptacles with features that help keep contents dry.
Provide appropriately designed and sited dog stations with bag provisions.
Consider working with local volunteers to stock bags and “watchdog” the site to instill accountability within the neighborhood.
Consider lobbying neighborhood groups and dog owners to provide support and peer pressure to keep the park dog litter in check.
Hold community meetings to educate, involve citizens and to gather ideas for enforcing waste pick-up and for maintaining stations.
Determine enforceable course of action for violations.
Provide increased maintenance as needed to prevent trash overflow.

The view looking down and out into the city and bay from the Monument Square grounds has been almost entirely enclosed, eliminating the historic views of the battleground and the surrounding battle zone. However, looking out from atop the obelisk, the surrounding views of Boston provide the visitor with a lasting, relative impression.

GUIDELINES FOR VIEWS

Preserve views from Monument Avenue and from Winthrop Square looking up towards the Monument at the obelisk.
Discourage future considerations to construct taller buildings in the Charlestown area that might further enclose the view from Bunker Hill Monument looking outward.
Preserve views of the Bunker Hill Monument from the surrounding vicinity to the extent possible by reducing the possibility of infringement by roads, major highways and tall buildings in the future.

Recommendations for Views

Maintain involvement with Charlestown and the City of Boston development proposals to ensure that the above guidelines are considered.
Retain the unobstructed visual connection between the Monument grounds and the training field, located at Winthrop Square.
Maintain unadulterated views up towards the obelisk from all gate entries.
Maintain uncluttered Monument plaza and upper terrace character.

VIEWS

Distant views into and out of the Monument Square landscape have changed tremendously over time, as the surrounding urban neighborhood developed. The best, most distant framed views of the entire obelisk is achieved by looking up Monument Avenue and up Winthrop Avenue from the “Old Training Field”, now referred to as Winthrop Square. Other external views of the Bunker Hill Monument site can be captured from Monument Street, Laurel Street and portions of Chestnut Street. Remaining views are limited to within Monument Square, as the site is entirely closed by surrounding development. Primary views are from the Massachusetts Gate entry, and then secondarily from the remaining gate entries. From the upper plaza looking out, the open, serene, historic landscape character is generally intact.
**ALTERNATIVES CONSIDERED BUT NOT RECOMMENDED**

This section presents alternative solutions that were considered as possible treatment recommendations, but not recommended. It was determined they would 1) have unacceptable impacts to the historic character of the Bunker Hill Monument site, 2) imply unfeasible costs and logistics, or 3) be non-responsive to adaptive and contemporary use requirements. Other rejected considerations may not be addressed in this report due to their inconsequential nature.

**CIRCULATION**

**ACCESSIBILITY ALTERNATIVES**

1. Remove the entry ramp and regrade and reseed to reestablish sloping lawn. Provide a mechanical lift at the entry stairs for alternative means of access. This option would not provide for universal accessibility as a ramp does, as it would provide primarily for chair access, rather than for people with differing abilities, such as the elderly or people using strollers. A lift would create unknown impacts on the stairs, stair railings, and on the overall scene. The range of preservation, management and mechanical concerns anticipated outweigh the possible benefits.

2. Removal of the ramp to reestablish the historic scene, with no handicap provisions. Per ADA regulations, since the site has previously been altered, consideration of this option would not be acceptable.

3. Design and build two entry ramps (one from the west and another from the east of Massachusetts Gate entry) to reestablish design symmetry. Though there is historic precedence for having had walkways diagonally cut through the site, new ramps could not reflect the historic design. The slopes at the site are steep enough such that any redesign will require major regrading to accommodate ADA requirements, and parts of the western side are in an archeologically sensitive zone, which would require closer monitoring of site disturbance activities. This option would bear substantially on the project scope, while not necessarily improving the site function, or restoring historic site character.

4. Retaining the non-historic, non-compliant ramp at the lodge entry to provide for stroller and limited mobility access. This is not acceptable, as site accessibility would continue to be limited and out of compliance, and access would continue to require staff assistance.

**PAVEMENT ALTERNATIVES**

1. Removing and replacing the concrete pathway entirely. The majority of the concrete walks are in good condition. Complete replacement is unnecessary and would be costly.

2. Replacing only sections of the asphalt walkway that are in poor condition. The asphalt walkway is in sufficiently dilapidated condition throughout, constituting safety hazards along its entire length. It would be economically imprudent, impolitic and graceless to replace sections only. Complete replacement allows for design and construction of a more durable surface treatment that enhances visitor safety while providing a more aesthetically pleasing, befitting esplanade.

3. Retaining existing concrete curbing in good condition and continuing to replace granite curving with concrete. This option would continue to wear away at the historic character and would diminish the quality of the historic scene.

4. Striping crosswalks to Bunker Hill Museum. This is a functional option; however, the visual relationship linking the two sites would not be as comprehensive for the visitor or aesthetic as a physical material solution.
MAINTENANCE ACCESS ALTERNATIVES

1. Eliminate all maintenance vehicle use. Time and costs associated with manually performing routine maintenance tasks are unrealistic.

2. Designing a handicap accessible ramp that accommodates all maintenance vehicles. Construction of an 8-foot wide ramp to accommodate larger vehicles that are only occasionally used would be required. This benefit is not worth the adverse affects to the site character. The southeast corner gate can be used for these larger vehicles as necessary.

3. Use snow blower instead of snow plowing equipment. The benefits are offset by cost, time and noise impacts.

4. Consider closing park on snow days. Park anticipates visitor use would continue, and safety issues associated with snow hazards are not acceptable management tradeoffs.

VEGETATION

TREE ALTERNATIVES

1. Eliminate all trees from the upper terrace. Mitigate by providing new plantings to infill where historic trees are missing along fence perimeter, and along public sidewalk. This option would provide the most historically accurate view of the upper terrace, while reestablishing the double row of tree plantings along the lower fence (Figure 98: Alternative B: Remove All Trees on the Upper Terrace). Since the existing trees on the upper terrace provides shade for visitor comfort independent of and during NPS outdoor interpretive programs, completely removing trees on the upper terrace would create less comfortable conditions for visitors. Therefore, retaining upper terrace trees is considered an acceptable change for adaptive use.

2. Remove all trees on upper terrace and those on the lower terrace that are not part of the historic allee. Replant 3-4 trees at each corner and establish as anchor plantings. This alternative is similar to the recommended alternative; however, this would immediately eliminate all of the existing mature trees on the upper terrace, rather than remove them permanently only when their health declines. New, younger, replacement species would be planted at the corners, but would take several years to mature. Shade would be minimal in the interim. This alternative should be considered a viable option, however, park and public use concerns would need to be evaluated further prior to adopting this solution.

3. Create a tree-lined path along the crest of the hill. This option is not acceptable, as it would block the monument views, and enclose the sense of open space, further limiting the historic viewshed out towards the greater Boston area. This single action would largely alter the historic site character.

ORNAMENTALS ALTERNATIVE

1. Retain the bulb bed. This feature creates a major, permanent change to the historic lawn carpet that blankets the monument site. It would constitute an undesirable, adverse effect to the site, and perpetuate maintenance difficulties.

2. Introduce more ornamentals. Since the site was purposefully undecorated historically, then it would be inappropriate to attempt to beautify it further.

3. Entirely remove all flowers and colorful displays. This option is viable and would be appropriate to adopt if park management determines it necessary. (The recommended alternative to keep the existing shrine adornments was based in weighing the associated community values with the fact that they are temporary (moveable) features. They were determined to have an acceptable level of impact, given the recommended actions to modify the size and scale of the planters).
SMALL-SCALE FEATURES
ALTERNATIVES

SEATING

Creating a seatwall along the lawn curbing in front of the lodge. This option was rejected because it would change the site character and introduces a permanent change to the historic edge, while moveable benches were historically used, and are a more appropriate solution.

FOUNTAINS

1. Recreating the historic fountains and restoring their presence on the grounds. It was not determined during this effort whether the original water fountains still exist, or where they may be stored. Additionally, reconstruction of the features is not appropriate within the context of the overall recommendation for rehabilitation. Further, their historic location is in conflict with the recommended location of the new accessible ramp.

2. Providing drinking fountains on site. Drinking fountains are available within the lodge and should not be installed on the grounds. In addition to having no historic precedence, this provision would pose many infrastructure implications and maintenance requirements that outweigh the benefits associated with providing this amenity. Possibly consider providing an indoor drinking fountain as part of the museum rehabilitation project.

TRASH RECEPTACLES

Permanently removing all trash receptacles from the site and adopting a “pack litter out” policy. Conducting a trial removal to determine feasibility and presenting this option as a community issue was discussed, but the logistics associated with managing the large numbers of visitors combined with the 24-hour use of the site made this option undesirable. Though rejected at this time, this option should be reconsidered in the future, as it would greatly improve the aesthetics associated with the historic site character.

CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER WORK

It is recommended that the project design team continue to collaborate with the OCLP staff to affect an efficient transition from planning into the design and construction process. Community outreach and public involvement beginning early in the design phase, and continuing throughout the design process is also recommended. An implementation plan that identifies project priorities, necessary phasing and cost estimates that balances and meets both landscape preservation goals with line item construction project goals should be developed and reviewed before physical changes are made to the site. Once rehabilitation is complete, treatment actions should be documented as an update to the Park’s Landscape Preservation Maintenance Plan. Thereafter, maintenance activities affecting landscape treatment should continue to be documented as work is performed to maintain an ongoing record of physical changes made to the site.
1. Remove graffiti in various locations along perimeter fence. Repaint as necessary.

2. Repair granite bases of fence posts as necessary.

3. Develop erosion solutions in coordination with OCLP.

4. Regrading and/or resurfacing may require tree removal. Consult long range vegetation treatment plan, replace as necessary.

5. Remove all signs. Replace with one sign at each entry. Locate on fence. (4 total)

6. Replace floodlights and cobra lamps with effective energy efficient lights.

7. Refer to Figures 96 and 97 for Vegetation treatment.

8. See Treatment Guidelines and Recommendations section, and Specifications and Products Appendices for further details.

- Replace missing tree.
- Regrade, Stabilize eroded areas per notes 3&4.

- Trash Receptacle – Remove and replace with one durable style.

- Concrete Planter – Remove all. Replace with flatter profile style. See Products Appendix.

- Bench – Remove all existing benches. Replace with one style.

- Cobra Lamp

- Floodlight

- Streetlight

FIGURE 96

BUNKER HILL MONUMENT TREATMENT PLAN
EXISTING TREES
- Retain and maintain as necessary

NEW TREE PLANTINGS
- Restore perimeter tree line.
- Replace unhealthy specimens in kind or with appropriate substitute species.
- Infill with same species within the treeline.
- Consider disease resistant elm cultivar as replacement species.

TREES TO BE REMOVED
- Remove as health declines or as necessary for path construction.
- Do not replace.
EXISTING TREES
- Retain and maintain as necessary

NEW TREE PLANTINGS
- Restore perimeter treeline.
- Replace unhealthy specimens in kind or with appropriate substitute species.
- Infill with same species within the treeline.
- Consider disease resistant elm cultivar as replacement species.

NOTE: Final site layout reflects a tree plan consisting only of anchor plantings at the corners of the upper perimeter path and the historic double row of trees.
EXISTING TREES
- Retain and maintain as necessary

NEW TREE PLANTINGS
- Restore perimeter treeline.
- Replace unhealthy specimens in kind or with appropriate substitute species.
- Infill with same species within the treeline.
- Consider disease resistant elm cultivar as replacement species.

NOTE: This plan removes all trees in the upper terrace.
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VI. GLOSSARY

**ANALYSIS AND EVALUATION**
The study of a cultural landscape in terms of its individual landscape characteristics and associated features, and the determination of the landscape’s integrity and significance based on a comparison of its site history and existing conditions.

**ARCHEOLOGICAL RESOURCE**
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.

**BUILDINGS AND STRUCTURES**
Elements constructed primarily for sheltering any form of human activities are considered buildings. Elements constructed for functional purposes other than sheltering human activity are considered structures. Engineering systems are also structures, and mechanical engineering systems may be distinguished from structural engineering systems. Mechanical engineering systems conduct utilities within a landscape (power lines, hydrants, culverts). Structural engineering systems provide physical stabilization in the landscape (retaining walls, dikes, foundations). In certain instances the word “structure” is used generally to refer to buildings and structures as in the List of Classified Structures. In the National Register program, “structure” is limited to functional constructions other than buildings.

**CIRCULATION**
The spaces, features, and applied material finishes that constitute the systems of movement in a landscape. Examples of features associated with circulation include paths, sidewalks, roads, and canals.

**CONSTRUCTED WATER FEATURES**
The built features and elements that use water for aesthetic or utilitarian functions in the landscape. Examples of features associated with constructed water features include fountains, canals, cascades, pools, and reservoirs.

**CONTRIBUTING FEATURE**
A biotic or abiotic feature associated with a landscape characteristic that contributes to the significance of the cultural landscape.

**CONTRIBUTING RESOURCE**
A building, site, structure, or object that adds to the historic significance of a property. A contributing building, site, structure, or object adds to the historic associations, historical architectural qualities, or archeological values for which a property is significant because of the following: it was present during the period of significance; it relates to the documented significance of the property; it possesses historic integrity or is capable of revealing information about the period; or it independently meets the National Register criteria.

**CULTURAL LANDSCAPE**
A geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person, or that exhibits other cultural or aesthetic values. The four general kinds of cultural landscapes are ethnographic, historic designed, historic vernacular, and historic site.

**CULTURAL LANDSCAPES INVENTORY (CLI)**
A computerized, evaluated inventory of all cultural landscapes for which the National Park Service has or plans to acquire any legal interest. The CLI includes a description of the location, historical development, landscape characteristics and associated features, and management of cultural landscapes in the national park system.
CULTURAL LANDSCAPE REPORT (CLR)
A report that serves as the primary guide to treatment and use of a cultural landscape, and that prescribes treatment and management of the physical attributes and biotic systems of a landscape, and use when use contributes to historical significance. The report includes an introduction, site history, existing conditions analysis and evaluation, treatment, and record of treatment.

CULTURAL RESOURCE
A tangible entity or a cultural practice of a cultural system that is valued by or significantly representative of a culture or that contains significant information about a culture. Tangible cultural resources are categorized as districts, sites, buildings, structures, and objects for the National Register of Historic Places and as archeological resources, cultural landscapes, structures, museum objects, and ethnographic resources for National Park Service management purposes.

CULTURAL TRADITIONS
The practices that have influenced the development of the landscape in terms of land use, patterns of land division, building forms, stylistic preferences, and the use of materials. Examples of features associated with cultural traditions include land use practices, buildings, patterns of land division, and use of vegetation.

EVALUATION
Process by which the significance of a cultural landscape is judged and eligibility for the National Register of Historic Places is determined.

EXISTING CONDITIONS
The present physical state of a cultural landscape.

FEELING
A cultural landscape’s expression of the aesthetic or historic sense of a particular period.

GENERAL MANAGEMENT PLAN (GMP)
A planning document that sets forth the basic management philosophy for a park and provides strategies for addressing issues and identifying management objectives over a 5- to 10- year period. Two types of strategies are presented in the GMP: those required to properly manage the park’s resources, and those required to provide for appropriate visitor use and interpretation of the resources. Based on these strategies, programs, actions, and support facilities necessary for efficient park operation and visitor use are identified.

HISTORIC AMERICAN BUILDINGS SURVEY (HABS)/ HISTORIC AMERICAN ENGINEERING RECORD (HAER)/ HISTORIC AMERICAN LANDSCAPE SURVEY (HALS)
Architectural, engineering and landscape documentation programs that produce a thorough archival record of buildings, engineering structures, and cultural landscapes significant in American history and the growth and development of the built environment.

HISTORIC CHARACTER
The sum of visual aspects, features, materials, and spaces associated with a cultural landscape’s history.

HISTORIC DISTRICT
A geographically definable area, urban or rural, possessing a significant concentration, linkage, or continuity of sites, landscapes, structures, or objects, united by past events or aesthetically by plan or physical developments. A district may also be composed of individual elements separated geographically but linked by association or history.

HISTORIC LANDSCAPE
A cultural landscape associated with events, persons, design styles, or ways of life that are significant in American history, landscape architecture, archeology, engineering, and culture. A landscape listed in or eligible for the National Register of Historic Places.

HISTORIC RESOURCE STUDY (HRS)
A historical overview of a park or region that identifies and evaluates the cultural resources within historic contexts. The study is a synthesis of all available cultural resource information from all disciplines in a narrative designed to serve managers, planners,
interpreters, cultural resource specialists, and interested public as a reference for the history of the region and the resources within a park. It includes preparation of National Register nominations for all qualifying resources and is the principal tool for completing the Cultural Landscapes Inventory and the List of Classified Structures. The HRS identifies needs for special history studies, cultural landscape reports, and other detailed studies and may make recommendations for resource management and interpretation.

**HISTORIC PROPERTY**
A district, site, structure, or landscape significant in American history, architecture, engineering, archeology, or culture. Or, an umbrella term for all entries in the National Register of Historic Places.

**HISTORIC SITE**
A landscape significant for its association with a historic event, activity, or person.

**HISTORIC STRUCTURE REPORT (HSR)**
A report that serves as the primary guide to treatment and use of a historic structure and may be also used in managing a prehistoric structure. The report includes a management summary, developmental history of the structure and current condition, treatment and use, and record of treatment.

**HISTORICAL CONTEXT**
An organizing structure created for planning purposes that groups information about historic properties based on common themes, time periods, and geographical areas.

**HISTORICAL INTEGRITY**
The authenticity of a cultural landscape’s historic identity, evidenced by the survival of physical characteristics that existed during its historic or prehistoric period. The extent to which a cultural landscape retains its historic appearance.

**HISTORICAL SIGNIFICANCE**
The meaning or value ascribed to a structure, landscape, object, or site based on the National Register criteria for evaluation, typically from its association and integrity.

**INTEGRITY**
See Historical Integrity.

**LANDSCAPE CHARACTERISTIC**
The tangible and intangible characteristics of a landscape that define and characterize the landscape and that, individually and collectively give a landscape character and aid in understanding its cultural value. The term is applied to either culturally derived or naturally occurring processes or to cultural and natural physical forms that have influenced the historical developments of a landscape or are the products of its development. Landscape characteristics include the following: natural systems and features, spatial organization, land use, cultural traditions, cluster arrangement, circulation, topography, vegetation, buildings and structures, views and vistas, constructed water features, small-scale features, archeological sites.

**LANDSCAPE FEATURE**
A prominent or distinctive quality or characteristic of a cultural landscape. In a cultural landscape, individual features are grouped under broader categories of landscape characteristics. For example, features such as tree and lawn are grouped under the landscape characteristic, vegetation. A landscape feature is the smallest physical unit that can be managed as an individual element.

**LIST OF CLASSIFIED STRUCTURES (LCS)**
A computerized, evaluated inventory of all historic and prehistoric structures having historical, architectural, or engineering significance for which the National Park Service has or plans to acquire any legal interest. Included in the LCS are structures that individually meet the criteria of the National Register of Historic Places and contributing elements of sites and districts that meet the Register criteria. Also included are moved, reconstructed, and commemorative structures and structures achieving significance within the last 50 years that are managed as cultural resources because of decisions made in the planning process.
| **LOCATION** | The place where a cultural landscape was constructed or the place where the historic event(s) occurred. |
| **MATERIAL** | The physical elements that were combined or deposited to form a cultural landscape. Historic material or historic fabric is that from a historically significant period, as opposed to material used to maintain or restore a cultural landscape following its historic period(s). |
| **NATIONAL HISTORIC LANDMARK** | A district, site, building, structure, or object of national historical significance, designated by the Secretary of the Interior under authority of the Historic Sites Act of 1935. |
| **NATIONAL REGISTER OF HISTORIC PLACES** | The comprehensive list of districts, sites, buildings, structures, and objects of national, regional, state, and local significance in American history, architecture, archeology, engineering, and culture kept by the National Park Service under authority of the National Historic Preservation Act of 1966. |
| **NON-CONTRIBUTING FEATURE** | A biotic or abiotic feature associated with a landscape characteristic that does not contribute to the significance of the cultural landscape. |
| **NON-CONTRIBUTING RESOURCE** | A non-contributing building, site, structure, or object that does not add to the historic architectural qualities, historic associations, or archeological values for which a property is significant, because: it was not present during the period of significance or does not relate to the documented period of significance of the property; due to alterations, disturbances, additions or other changes, it no longer possesses historic integrity or is capable of yielding important information about the period; or it does not independently meet the National Register criteria. |
| **PERIOD OF SIGNIFICANCE** | The span of time for which a cultural landscape attains historical significance and for which the landscape meets National Register criteria. |
| **PRESERVATION** | The act or process of applying measures to sustain the existing form, integrity, and material of a cultural landscape. Work may include preliminary measures to protect and stabilize the landscape, but generally focuses on the ongoing preservation, maintenance, and repair of historic materials and features rather than extensive replacement and new work. |
| **PRESERVATION MAINTENANCE** | Action to mitigate wear and deterioration of a cultural landscape without altering its historic character by protecting its condition, repairing when its condition warrants with the least degree of intervention including limited replacement in-kind. Replacing an entire feature in-kind is appropriate when the level of deterioration or damage of materials precludes repair, and stabilization to protect damaged materials or features from additional damage. For archeological sites it includes work to moderate, prevent or arrest erosion. |
| **RECONSTRUCTION** | The act or process of depicting, by means of new work, the form, features, and detailing of a non-surviving cultural landscape, or any part thereof, for the purpose of replicating its appearance at a specific time and in its historic location. |
| **RECORD OF TREATMENT** | A compilation of information documenting actual treatment, including accounting data, photographs, sketches, and narratives outlining the course of work, conditions encountered, and materials used. |
| **REHABILITATION** | The act or process of making possible an efficient compatible use for a cultural landscape through repair, alterations, and additions while preserving those portions or features that convey its historical, cultural and architectural values. |
| **RESOURCE MANAGEMENT PLAN (RMP)** | A specific plan of action for cultural and natural resource management objectives, which is used to prioritize requests for funding and to guide the expenditure of funds allocated for resource management. |
management. The cultural resource component of the plan summarizes the cultural resource values and related mission and purposes of the park, and defines and programs the activities required to perpetuate and provide for the public enjoyment of resources.

**RESTORATION**
The act or process of accurately depicting the form, features, and character of a cultural landscape as it appeared at a particular period by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period.

**SECTION 106**
Section 106 of the National Historic Preservation Act of 1966 requires federal agencies to take into account the effects of their proposed undertakings on properties included or eligible for inclusion in the National Register of Historic Places. The Act ensures that the Advisory Council on Historic Preservation has an opportunity to comment on proposed undertakings.

**SETTING**
The physical environment of a cultural landscape or the character of the place in which a property played its historical role.

**SIGNIFICANCE**
see historical significance

**SMALL-SCALE FEATURES**
The elements proving detail and diversity for both functional needs and aesthetic concerns in the landscape. Examples of features associated with small-scale features include fences, benches, signs, and road markers.

**SPATIAL ORGANIZATION**
The three-dimensional organization of physical forms and visual associations in the landscape that define and create spaces, including the articulation of ground, vertical, and overhead planes. Examples of features associated with spatial organization include circulation systems, views and vistas, divisions of property, and topography.

**STRUCTURE**
See Buildings and structures

**THEME**
A trend or pattern in history or prehistory relating to a particular aspect of cultural development, such as farming or mining.

**TOPOGRAPHY**
The three-dimensional configuration of the landscape surface characterized by features, such as slope, orientation, elevation and solar aspect. Examples of features associated with topography include earthworks, drainage ditches, knolls, and terraces.

**TREATMENT PLAN**
A plan that graphically depicts a strategy and actions for treatment of a cultural landscape including preservation, rehabilitation, restoration and reconstruction.

**UNDERTAKING**
As referred to in Section 106 of the National Historic Preservation Act, any federal, federally assisted, federally licensed, or federally sanctioned project, activity, or program that can result in changes in the character or use of historic properties. Undertakings include new and continuing projects, programs, and activities that are directly undertaken by federal agencies, supported in whole or in part, directly or indirectly, by federal agencies, carried out pursuant to a federal lease, permit, license, approval, or other form of permission, or proposed by a federal agency for congressional authorization or appropriation. Undertakings may or may not be site-specific.

**VEGETATION**
The individual or aggregate plant features of deciduous and evergreen trees, shrubs, vines, ground covers and herbaceous plants, and plant communities, whether indigenous or introduced. Examples of features associated with vegetation include specimen trees, allees, woodlots, orchards, and perennial gardens.

**VIEWS AND VISTAS**
The prospect created by a range of vision in the cultural landscape, conferred by the composition of other landscape characteristics.
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.

WORKMANSHIP
The physical evidence of the crafts of a particular culture or people. The techniques and skills necessary to execute or construct a particular detail or feature.
VII. APPENDICES
APPENDIX I – PRODUCT INFORMATION AND/OR SPECIFICATIONS

DOG STATIONS

BENCHES

LIGHTING

PLANTERS

TRASH RECEPTACLES

BUNKER HILL ENTRANCE SIGN
(See Appendix III, Referenced Material: Bunker Hill Signs- 106 compliance)
DOGIPOT Junior Bag Dispenser

- 400 bag capacity
- .08 gauge aluminum
- Powder coated, forest green
- 15.5" x 9.4" x 3.25"
- Ship weight 5 lbs.
- Locking front access panel
- Clear instructions posted
- Easy & versatile installation
- Article #1002

DOGIPOT Biodegradable Litter Bags

The Most Economical Tool To Pick Up After Pets

DOGIPOT Dog-dirt litter bags are dispensed out of an eye-appealing dispenser box on rolls available as 100 bag / roll and 200 bag / roll.

Our opaque brown 200 bag / roll fits in both the DOGIPOT JR. dispenser and the DOGIPOT Dispenser / Disposal waste container.

HOW TO USE DOGIPOT LITTER BAGS

1. Cut the bag off the roll
2. Pull the bag from the box
3. Tuck the bag into the dispenser or bag trash, or DOGIPOT container

DOGIPOT Dispenser / Disposal Waste Container

Basically, DOGIPOT is a forest green, very durable, aluminum container for one purpose - disposal of dog dirt in an odorless, clean fashion while helping to "Keep America Beautiful".

DOGIPOT makes it convenient to the dog owner by providing both the tool (litter bags) and the waste station for dog dirt. DOGIPOT eliminates the excuses for not being a responsible dog owner.

Unlike the time consuming cleaning of dog walk areas, DOGIPOT containers can be conveniently emptied at the same time as the scheduled trash collection.

DOGIPOT JR's low price and high bag capacity makes it the ideal tool for public parks, apartment communities, recreation areas, H.O.A.s, condo complexes, hotels / motels, manufactured housing communities, campgrounds / R.V. resorts, etc., to encourage residents, visitors and guests to clean up after their dog.

The visible existence of DOGIPOT JR dispensers in your area will be thought provoking and an educational reminder to everyone to be environmentally conscious even with their pets.
DOGIPOT
Specifications

- 400 bag capacity
- .09 gauge aluminum
- Powder coated, forest green
- 40.4" x 17" x 10.6"
- Locking front access lid
- Aluminum Mounting Pillar included
- Clear instructions posted
- Ship weight 38 lbs.
- Article #1001

Your Distributor:

RWE Distributing
409 W. Crystal Drive • Sanford, FL 32773-4709
E-mail rwedisnld@aol.com
Toll-Free (800) 926-0033
Facsimile (407) 302-2039

DOGIPOT
Pet Station

Check These ALL INCLUSIVE Features

- DOGIPOT Junior .08 Gauge Aluminum Bag Dispenser, Powder coated, forest green, 15.5" x 9.4" x 3.25". Locking front access panel with clear instructions, and Please Clean up After Your Dog sign posted.
- 400 Biodegradable opaque brown pick up filter bags installed (2 rolls at 200 bags)
- B Steel channel post
- 10 gallon steel trash receptacle
- Pet sign, 18" x 12" aluminum
- 100 Heavy duty receptacle liner bags
- Assembly material
- Ship weight 52 lbs.
- Article #1003

Here's Why...

- Because it's the responsible thing to do
- Because it's the law in most areas
- Because unpicked dog dirt can transmit disease to children and other pets

DOGIPOT has the products to keep public parks, private communities, campgrounds, hotel yards, dog walk areas, everywhere your dog goes, free from unsightly, smelly and harmful dog dirt.

DOGIPOT supplies the most economical and practical concept to let pet owners, not maintenance staff, assume the responsibility for dog pollution.

Please Clean Up after Your Dog!
The popular term “PLASTIC” no longer specifically means “ecologically harmful.” Not only environmentalists, but also scientists, have been concerned about the traditional, non-biodegradable “Plastic” materials, and famous chemists searched for a new, non-polluting substitute material to traditional plastic. The answer was “POLYETHYLENE!”

Our DOGIPOT™ Litter Bags are NOT made from the traditional, oily, and polluting plastic, but made of high-density Polyethylene foil. The term is still plastic, but:

♦ Plastic-foil from Polyethylene (PE) contains the organic raw materials carbon and water, the same as you find in wood and vegetable fiber.

♦ Polyethylene foils are burning residue-free to carbon dioxide and water. No toxic gases or cinder!

♦ Polyethylene foils do NOT contain any softeners and NO metal. They are therefore physiologically harmless.

♦ Polyethylene foils are 100% recyclable.

♦ PE-foils are ground water neutral in landfills and a welcome energy supply for incinerators.

Sum Up: If someone wants to talk you out of Polyethylene foils (or DOGIPOT™ Litter Bags) they do not understand ecological coherence - or have other interests. The term “biodegradable” can be used for all products made out of pure natural resources, like Polyethylene. A Dogipot™ Litter Bag needs about the same amount of time to biodegrade in a landfill as a small piece of firewood.
**RWE Distributing**

*Distributor for Dogipot Products*

**1-800-926-0033**

*Price List*

*Prices Effective August 1, 2000*

<table>
<thead>
<tr>
<th>Article No.</th>
<th>Description</th>
<th>Price Per Unit</th>
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<tbody>
<tr>
<td>1001</td>
<td>DOGIPOT container for ground base mounting including mounting pillar*</td>
<td>$459.00</td>
</tr>
<tr>
<td></td>
<td>* Specify: Article 1101 for in ground pillar</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Article 1102 for solid ground pillar</td>
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</tr>
<tr>
<td>1002</td>
<td>DOGIPOT JR litter bag Dispenser</td>
<td>$79.00</td>
</tr>
<tr>
<td>1003</td>
<td>DOGIPOT Pet Waste Station</td>
<td>$319.00</td>
</tr>
<tr>
<td></td>
<td>Discounts:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 10 - 19 units: 5%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 20 - 49 units: 7.5%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 50 - up units: 10%</td>
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</tr>
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**Maintenance Materials**

<table>
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<tr>
<th>Article No.</th>
<th>Description</th>
<th>Price Per Unit</th>
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</thead>
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<tr>
<td>1401</td>
<td>DOGIPOT liner trash bags – For articles 1001 &amp; 1003</td>
<td>100/ $14.95</td>
</tr>
<tr>
<td>1402</td>
<td>DOGIPOT bag rolls (200 bags per roll)</td>
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</tr>
<tr>
<td></td>
<td>1402-10 10 rolls/case 4.7 cents per bag</td>
<td>$94.50</td>
</tr>
<tr>
<td></td>
<td>1402-20 20 rolls/case 4.2 cents per bag</td>
<td>$169.00</td>
</tr>
<tr>
<td></td>
<td>1402-30 30 rolls/case 4.0 cents per bag</td>
<td>$239.00</td>
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<tr>
<td></td>
<td>Quantity discounts available on 1402-30</td>
<td></td>
</tr>
</tbody>
</table>

**Conditions:**

- Unit price includes fastening screws
- Prices exclude sales tax (Florida only 6%)
- Shipping . . . FOB Orlando, FL
- Payment by credit card, COD or 30 days with approved credit
- Prices subject to change without notice
HAGS 057 333 Rosen Litter bin

The same intelligent design as HAGS 057 334 but here with an attractive hexagonal front.

Supplied fully assembled for fitting to an existing post or HAGS foundation post 157 308.

Maintenance: D.

Volume: 40 litres.

Materials: Hot-galvanised, powder-lacquered steel plate.

HAGS 057 333

HAGS Kärnan Litter bin

A robust, new litter bin in hard-wearing aluminium, paying equal regard to design, practical considerations and the rational use of materials. A fully hinged, locking front opens to give easy access to the plastic liner for quick, simple, hygienic emptying. A cowl across the top of the bin protects the contents from scavenging birds and wind.

Supplied fully assembled for fitting to an existing post or HAGS foundation post 157 308.

Maintenance: E.

Volume: 35 litres.

Materials: Impact-resistant aluminium, chromatised and powder-lacquered in black.

Order no. Description
HAGS 057 350 Litter bin for fitting to existing post.

HAGS Litter bin

This is one litter bin that is equally at home in any surroundings. The lid has been designed to keep the contents in place. The fixing plate included can be fitted to a wall or post using a steel strap or screws, while the bin can be locked in place with a key and lifted off for emptying.

Supplied fully assembled for fitting to existing posts or HAGS foundation post 157 308.

Maintenance: E.

Volume: 40 or 60 litres.


Order no. Description
60 litres 40 litres
HAGS 157 331 Grey/green
HAGS 157 332 Red/orange
HAGS 157 333 157 353 Avocado
HAGS 157 339 Liner sack
HAGS 157 308 Post

HAGS 157 331

HAGS 157 333/353

Due spoon

itt bin 6st fittino exisnnm post
HAGS Litter bin

An intelligently designed litter bin with a protective lid and clip fitting to hold the plastic liner in place. To remove the liner, open the clip and the bin tilts forward 45°.

HAGS 057 334 Litter bin

HAGS 057 324 Litter bin

Supplied fully assembled for fitting to existing posts or HAGS foundation post 157 308.

Volume: 40 litres.

Materials: 1.0 mm gauge hot-galvanised steel plate.

Order no.  Description       Maintenance
HAGS 057 324  Hot-galvanised E
HAGS 057 334  Hot-galvanised and powder-lacquered D  HAGS 057 324/334

HAGS 057 585 Litter bin

Practical model for wall-mounting.

Supplied fully assembled for fitting to wall.

Maintenance: D.

Volume: 25 litres.

HAGS Bases for litter bins

Order no.  Description
HAGS 057 304  Concrete foot, 33 mm dia. post. Weight 24 kg
HAGS 157 307  Foundation post 33 mm dia. hot-galv. 0.5 m high
HAGS 157 306  Foundation post 45 mm dia. hot-galv. 1.2 m high
FOR DETAILS ON CUSTOM LETTERING ON SIDE SUPPORT PANELS, CONSULT YOUR DUMOR REPRESENTATIVE.

BENCH 58
- SEAT PORTION WELDED INTO ONE UNIT
- CUSTOM LETTERING AVAILABLE ON SIDE PANELS
- AVAILABLE IN EXTENDED LENGTHS IN MULTIPLES OF 6' & 8'

MATERIALS
Seating Surface: 1/4" x 1-1/2" steel bar and 2-3/8" O.D. steel pipe
Supports: Cast iron
Bracing: 1-1/16" O.D. steel pipe
Fasteners: Stainless steel
Finish: See page 48 for choice of polyester powder finish (shown in Black).

58-60 6' long, 48 supports, 206 lbs. $866
58-80 8' long, 48 supports, 358 lbs. $959

*ADD $59 TO UNIT PRICE FOR CENTER ARMREST.

BENCH 92
- SEAT PORTION WELDED INTO ONE UNIT
- SUPPORTS FEATURE PROVISIONS FOR ANCHORING

MATERIALS
Seating Surface: 1/4" x 1-1/2" steel bar and 2-3/8" O.D. steel pipe
Supports: Cast iron
Bracing: 1-1/16" O.D. steel pipe
Fasteners: Stainless steel
Finish: See page 48 for choice of polyester powder finish (shown in Blue).

92-60 6' long, 2 supports, 218 lbs. $685
92-80 8' long, 2 supports, 266 lbs. $754
BENCH 95

- ONE PIECE SEAT SURFACE CONSTRUCTION
- BACKLESS COMPANION TO BENCH 93

MATERIALS
Seating Surface: 1/4" x 1-1/2" steel bar and 2-3/8" O.D. steel pipe
Supports: 1-1/8" square steel bar
Fasteners: Stainless steel
Finish: See page 48 for choice of polyester powder finish (shown in Black).

95-60 6' long, 2 supports, 200 lbs. $515
95-80 8' long, 2 supports, 272 lbs. $620

BENCH 93

- SHIPPED KNOCKED DOWN
- 1-1/8" SQUARE SOLID STEEL SUPPORTS
- ONE PIECE SEAT SURFACE CONSTRUCTION

MATERIALS
Seating Surface: 1/4" x 1-1/2" steel bar and 2-3/8" O.D. steel pipe
Supports: 1-1/8" square steel bar
Fasteners: Stainless steel
Finish: See page 48 for choice of polyester powder finish (shown in Deep Red).

93-60 6' long, 2 supports, 239 lbs. $785
93-80 8' long, 2 supports, 301 lbs. $963

*ADD $56 TO UNIT PRICE FOR CENTER ARMREST.
BENCH 88
- SLATS PROFILED FOR EXTRA COMFORT
- HEAVY-DUTY SUPPORT FRAME
- ALSO AVAILABLE WITH RECYCLED PLASTIC (SEE PAGE 18)

MATERIALS
Slats: 3" x 4" nom. in choice of Clear All Heart, Free of Heart Center Redwood; Clear Douglas Fir; or Western Red Cedar (all with clear preservative treatment)
Supports: 3/8" x 4-1/2" steel bar and 3" square x 1/4" wall steel tube
Fasteners: Stainless steel
Finish: See page 48 for choice of polyester powder finish (shown in Bronze).

Redwood Bench
- 88-60R 6' long, 2 supports, 208 lbs. $451
- 88-80R 8' long, 2 supports, 238 lbs. $518

Douglas Fir Bench
- 88-60D 6' long, 2 supports, 208 lbs. $470
- 88-80D 8' long, 2 supports, 238 lbs. $544

Western Red Cedar Bench
- 88-60C 6' long, 2 supports, 208 lbs. $470
- 88-80C 8' long, 2 supports, 238 lbs. $544

SUPPORT OPTIONS:
- S-1 EMBEDMENT
- S-2 SURFACE PLATE
- S-3 GULLWING
- S-4 SUB-FOUR

BENCH 35
- 1/2'-THICK X 3'-WIDE ARMRESTS
- PROFILED WOOD MEMBERS

MATERIALS
Slats: 3" x 3" and 3" x 4" nom. in choice of Clear All Heart, Free of Heart Center Redwood; Clear Douglas Fir; or Western Red Cedar (all with clear preservative treatment)
Supports and End Straps: 1/2" x 3" steel bar
Center Contour Strap: 3/8" x 2" steel bar
Fasteners: Stainless steel
Finish: See page 48 for choice of polyester powder finish (shown in Bronze).

Redwood Bench
- 35-60R 6' long, 2 supports, 210 lbs.
- 35-80R 8' long, 2 supports, 245 lbs.

Douglas Fir Bench
- 35-60D 6' long, 2 supports, 210 lbs. $553
- 35-80D 8' long, 2 supports, 245 lbs. $646

Western Red Cedar Bench
- 35-60C 6' long, 2 supports, 210 lbs. $584
- 35-80C 8' long, 2 supports, 245 lbs. $686

SUPPORT OPTIONS:
- S-1 EMBEDMENT
- S-2 SURFACE PLATE
- S-3 GULLWING
- S-4 SUB-FOUR

NOTE: PLEASE CONTACT YOUR LOCAL DUMOR REPRESENTATIVE FOR PRICE QUOTE AND AVAILABILITY OF REDWOOD.
R B - S E R I E S
Steelsites™
Furniture Quality Finish Joints and our heralded PUBLICOTE™ II Coating System... Enormous Comfort and Durability

Steelsites™ Elegant,
Tasteful Designs for
Every Application...

Extraordinary Value...

Superb Attention to Detail...

The Victor Stanley, Inc. product line provides a visible, long lasting, value-adding enhancement to your property.

Call 1-800-368-2573 toll free for complete color catalogs, specifications and the name of our representative in your area.
STEEL SITES™
All steel construction.

CUSTOM CURVED SECTIONS OF BACKLESS FRB-SERIES BENCHES

CUSTOM ZIG-ZAG BENCH WITH OPTIONAL ARMRESTS

GULL-WING LEGS

FRB-2

NRS-24 SEATS (PERMANENT MOUNT)

FRS-19 SEATS

FRB-6

NRB-1
CLASSIC SERIES

Bench frames cast from ductile iron with a five year warranty against breakage. Available with wood slats, solid steel rods, formed steel scrolls or 2nd Site Systems® 100% Recycled Plastic Slats.
### TimberForm Restoration

#### Seat

<table>
<thead>
<tr>
<th>Model</th>
<th>Length [mm]</th>
<th>Width [mm]</th>
<th>Height [mm]</th>
<th>Seat Height [mm]</th>
<th>Mounting</th>
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</thead>
<tbody>
<tr>
<td>2122-4</td>
<td>4' 0&quot; [1220]</td>
<td>2' 1&quot; [635]</td>
<td>1' 5&quot; [430]</td>
<td>1' 4&quot; [405]</td>
<td>Surface*</td>
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<tr>
<td>2122-6</td>
<td>6' 0&quot; [1830]</td>
<td>2' 1&quot; [635]</td>
<td>1' 5&quot; [430]</td>
<td>1' 4&quot; [405]</td>
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<tr>
<td>2122-8</td>
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<td>2' 1&quot; [635]</td>
<td>1' 5&quot; [430]</td>
<td>1' 4&quot; [405]</td>
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<td>9' 11&quot; [3025]</td>
<td>2' 1&quot; [635]</td>
<td>1' 5&quot; [430]</td>
<td>1' 4&quot; [405]</td>
<td>Surface*</td>
</tr>
<tr>
<td>2122-12</td>
<td>11' 11&quot; [3630]</td>
<td>2' 1&quot; [635]</td>
<td>1' 5&quot; [430]</td>
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</tr>
<tr>
<td>2122-14</td>
<td>13' 11&quot; [4240]</td>
<td>2' 1&quot; [635]</td>
<td>1' 5&quot; [430]</td>
<td>1' 4&quot; [405]</td>
<td>Surface*</td>
</tr>
<tr>
<td>2122-16</td>
<td>15' 11&quot; [4850]</td>
<td>2' 1&quot; [635]</td>
<td>1' 5&quot; [430]</td>
<td>1' 4&quot; [405]</td>
<td>Surface*</td>
</tr>
</tbody>
</table>

**Material Options:** Frames of black powder-coated cast iron with kiln-dried 6/4 patterned Alaska yellow cedar wood slats. Frame color and Marine Teak or Purpleheart wood slats. Can be special ordered with customer’s name and/or logo cast in seat ends.

**Suggestions:** Specify matching litter container 2125 or 2126 and ash receptacle 2127. Matching planters are available.

**Notes:**
- For permanent or movable applications only (anchor bolts by others).
- Includes one intermediate frame.
- Includes two intermediate frames.

#### Bench

<table>
<thead>
<tr>
<th>Model</th>
<th>Length [mm]</th>
<th>Width [mm]</th>
<th>Height [mm]</th>
<th>Seat Height [mm]</th>
<th>Mounting</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001-6</td>
<td>5' 10&quot; [1780]</td>
<td>1' 8&quot; [510]</td>
<td>2' 5&quot; [735]</td>
<td>1' 4&quot; [405]</td>
<td>Surface*</td>
</tr>
<tr>
<td>2001-8</td>
<td>7' 10&quot; [2390]</td>
<td>1' 8&quot; [510]</td>
<td>2' 5&quot; [735]</td>
<td>1' 4&quot; [405]</td>
<td>Surface*</td>
</tr>
</tbody>
</table>

**Material Options:** Frames of black powder-coated cast iron with kiln-dried 6/4 patterned Alaska yellow cedar wood slats. Frame color and Marine Teak or Purpleheart wood slats.

**Suggestions:** Specify matching litter container 2107 and ash receptacle 2108 (see page 15). Also see complementary litter container 2136 and ash receptacle 2137 (see page 60). Matching planters are available.

**Notes:**
- For permanent applications only (anchor bolts by others).
- Includes one intermediate frame.
public seating
TOP: Scarborough Backed Bench. horizontal strap seal, Ivy powdercoat.
BOTTOM RIGHT: Litter Receptacle: each pan option.
BELOW (TOP TO BOTTOM): Scarborough Barkless Bench, woven seal, Frost powdercoat.
Litter Receptacle: vertical strap panel.
Litter Receptacle: square bar panel.

Scarborough® Collection protected by the following design patent: U.S. Patent No. D366,773.
Designed in the style of a wooden garden bench, this patented sturdy metal bench is equally at home in a train station or an exclusive mall.

- Bench available with back or flat in any length, mounting, or standard color
- Litter receptacle includes plastic liner, flat lid, anti-theft lanyard in either 22- or 32-gallon capacity with any mounting or standard color; optional lids and liners (see page 19)
- Exclusive KEYSHIELD™ polyester powder coating finish—our stamp of armored excellence that is foremost in the industry

RE3-22  Reading litter 22 gal. $540  RE3-32  Reading litter 32 gal. $580
RE3SQ-32 Reading square litter 32 gal. $800  RE4SQ  Reading square planter $800
RE22    Reading chair $730
Pullman Series

The workhorse of commercial benches, this versatile metal bench delivers the required stability needed for any project and an appearance that blends with any decor. The Pullman is a popular satisfying choice for any setting.

Bringing site furniture into the 21st century, the Pullenium fits the mold for futuristic seating systems. Sleek and stylish, yet fully assembled for ease of installation and optimum stability, the Pullenium makes tomorrow’s visions a reality today.

- Lumbar support for supreme comfort
- Fully assembled
- Center arm option
- Modular seating perfect for public waiting areas
- Straight or curved
- Bench available with back or flat in any length, mounting, or standard color
- Exclusive KEYSHIELD™ polyester powder coating finish—our stamp of armored excellence that is foremost in the industry

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>P24</td>
<td>Pullman bench w/back 4'</td>
<td>$720</td>
</tr>
<tr>
<td>P26</td>
<td>Pullman bench w/back 6'</td>
<td>$785</td>
</tr>
<tr>
<td>P28</td>
<td>Pullman bench w/back 8'</td>
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<td>P2CU3</td>
<td>Curved Pullman w/back 3'</td>
<td>$650</td>
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<tr>
<td>P2CU6</td>
<td>Curved Pullman w/back 6'</td>
<td>$1200</td>
</tr>
<tr>
<td>P2CU8</td>
<td>Curved Pullman w/back 8'</td>
<td>$1600</td>
</tr>
<tr>
<td>PL2M3</td>
<td>Pullenium 3 seat modular w/back straight</td>
<td>$875</td>
</tr>
<tr>
<td>PL2MCU3</td>
<td>Pullenium 3 seat modular w/back curved</td>
<td>$915</td>
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<tr>
<td>PL1M3</td>
<td>Pullenium 3 seat modular flat straight</td>
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<td>PL1MCU3</td>
<td>Pullenium 3 seat modular flat curved</td>
<td>$765</td>
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<tr>
<td>P14</td>
<td>Pullman flat bench 4'</td>
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<tr>
<td>P16</td>
<td>Pullman flat bench 6'</td>
<td>$550</td>
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<tr>
<td>P18</td>
<td>Pullman flat bench 8'</td>
<td>$645</td>
</tr>
</tbody>
</table>
Lumière Architectural and Landscape Lighting fixtures add a unique flavor to the night in both commercial and residential settings.

PRODUCT SELECTION GUIDE
### Metal Halide

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Volts</th>
<th>Watts</th>
<th>Lamp Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>710</td>
<td>120V</td>
<td>35W</td>
<td>PAR20MH</td>
<td>Side Swivel</td>
</tr>
<tr>
<td>711</td>
<td>120V</td>
<td>35/70W</td>
<td>PAR30MH</td>
<td>Side Swivel</td>
</tr>
<tr>
<td>712</td>
<td>120V</td>
<td>70/100W</td>
<td>PAR30BH</td>
<td>Side Swivel</td>
</tr>
<tr>
<td>720</td>
<td>120V</td>
<td>35W</td>
<td>PAR20MH</td>
<td>Clutch Lock-patented</td>
</tr>
<tr>
<td>730</td>
<td>120V</td>
<td>35/70W</td>
<td>PAR30MH</td>
<td>Clutch Lock-patented</td>
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<tr>
<td>740</td>
<td>120V</td>
<td>70/100W</td>
<td>PAR30BH</td>
<td>Clutch Lock-patented</td>
</tr>
</tbody>
</table>

### Projectors

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Volts</th>
<th>Watts</th>
<th>Lamp Type</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>1701</td>
<td>120V</td>
<td>35W</td>
<td>PAR20 MH</td>
<td>Imaging Projector - Wet/Dry Patent Pending</td>
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<tr>
<td>1702</td>
<td>12V</td>
<td>75W</td>
<td>MR16 Bi-Pin</td>
<td>Imaging Projector - Wet/Dry Patent Pending</td>
</tr>
<tr>
<td>Cat. No.</td>
<td>Volts</td>
<td>Watts</td>
<td>Lamp Type</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------</td>
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<td>--------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>1501</td>
<td>12V</td>
<td>18W</td>
<td>DC Bayonet</td>
<td>Post Mount</td>
</tr>
<tr>
<td>1502</td>
<td>12V</td>
<td>18W</td>
<td>DC Bayonet</td>
<td>Louvered - Post Mount</td>
</tr>
<tr>
<td>1503</td>
<td>120V</td>
<td>5W</td>
<td>Compact Fluor</td>
<td>Path / Area - Post Mount</td>
</tr>
<tr>
<td>1504</td>
<td>12V</td>
<td>18W</td>
<td>DC Bayonet</td>
<td>Path / Area - Post Mount</td>
</tr>
<tr>
<td>1505</td>
<td>12V</td>
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<td>DC Bayonet</td>
<td>Shaded Eyelid</td>
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<td>1506</td>
<td>12V</td>
<td>18W</td>
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<td>Post Mount</td>
</tr>
<tr>
<td>1507</td>
<td>12V</td>
<td>35W</td>
<td>Halogen</td>
<td>Adjustable Post Mount</td>
</tr>
<tr>
<td>1508</td>
<td>12V</td>
<td>35W</td>
<td>Halogen</td>
<td>Adjustable Post Mount</td>
</tr>
<tr>
<td>1509</td>
<td>12V</td>
<td>35W</td>
<td>Halogen</td>
<td>Multi Head (2 adjustable heads)</td>
</tr>
<tr>
<td>1510</td>
<td>12V</td>
<td>50W</td>
<td>Halogen Bi-Pin</td>
<td>Multi Head (4 adjustable heads)</td>
</tr>
<tr>
<td>1511</td>
<td>12V</td>
<td>35W</td>
<td>Halogen</td>
<td>Adjustable Post Mount</td>
</tr>
<tr>
<td>1512</td>
<td>12V</td>
<td>35W</td>
<td>MR16 Bi-pin</td>
<td>Adjustable Post Mount</td>
</tr>
<tr>
<td>1513-2</td>
<td>12V</td>
<td>50W</td>
<td>MR16 Bi-pin</td>
<td>Multi Head (2 adjustable heads)</td>
</tr>
<tr>
<td>1513-4</td>
<td>12V</td>
<td>50W</td>
<td>MR16 Bi-pin</td>
<td>Multi Head (4 adjustable heads)</td>
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**CAMBRIA SERIES**

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Volts</th>
<th>Watts</th>
<th>Lamp Type</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>205</td>
<td>12V</td>
<td>35W</td>
<td>MR11 Bi-Pin</td>
<td>Adjustable, Post Mount</td>
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<tr>
<td>206</td>
<td>12V</td>
<td>50W</td>
<td>MR16 Bi-Pin</td>
<td>Adjustable, Post Mount</td>
</tr>
<tr>
<td>215</td>
<td>12V</td>
<td>35W</td>
<td>MR11 DC Bay</td>
<td>Adjustable Post Mount</td>
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</table>

**TAHOM SERIES MINI BOLLARDS**

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Volts</th>
<th>Watts</th>
<th>Lamp Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>501</td>
<td>12V</td>
<td>20W</td>
<td>MR16 Bi-pin</td>
<td>Mini Bollard</td>
</tr>
<tr>
<td>502</td>
<td>12V</td>
<td>20W</td>
<td>MR16 Bi-Pin</td>
<td>Concentric Rings</td>
</tr>
<tr>
<td>503</td>
<td>12V</td>
<td>20W</td>
<td>MR16 Bi-Pin</td>
<td>Concentric Steps</td>
</tr>
<tr>
<td>504</td>
<td>12V</td>
<td>20W</td>
<td>MR16 Bi-Pin</td>
<td>Bias cut</td>
</tr>
<tr>
<td>507</td>
<td>12V</td>
<td>20W</td>
<td>MR16 Bi-Pin</td>
<td>Grooved Rings</td>
</tr>
<tr>
<td>510</td>
<td>12V</td>
<td>20W</td>
<td>MR16 Bi-Pin</td>
<td>Flat Cap</td>
</tr>
</tbody>
</table>

**LUMIERE FIXTURE FINISHES**

Standard powder painted fixtures in five colors:
- Black
- White
- Bronze
- City Silver
- Verde Green

Special finishes are available, including powder coatings in a rainbow of standard and custom colors, along with anodized and plated...
**MOUNTING HARDWARE**

**GS01** Standard Ground Spike with feed-through hole for wiring. Cast from high grade aluminum. H: 6-3/4".

**GS03** An industry standard. Fixture threads into top of 1-1/2" x 1-1/2" junction box. Wiring connections can be placed within for a clean and easy installation. Cast from high grade aluminum and finished with a polyester powder paint. H: 8-5/8".

**GS04** 12 inch ground spike equipped with conduit box for wiring connection. Extra strength ensures stability in sand, or dry or unstable soil. Constructed from aluminum and finished with a polyester powder paint. H: 16-1/2".

**GS05** 13 inch vertical adjustment ability enables fixture to be raised as the foliage grows. Accepts standard Lumière fixtures #205, 215, and 206. Fixture post mounts into spike tube. With spike mounted at ground level, 2" to 13" height adjustment is available. Body is constructed from polycarbonate, H: 17-1/4".

**GS06** The Chardonail - Spiral ground spike designed to provide exceptional hold in unstable ground, easily turns into ground with open end of pipe wrench. Mounting configuration acts as a deterrent against theft and vandalism. Spike is crafted from plated steel and mount is solid brass. H: 10-1/2".

**GS08** Economy Mount - holds fixture firmly in dirt, sand or gravel. Equipped with a self contained wiring compartment for clear and easy installation. Wire can be fed through side or up from bottom. Fixture can sit at ground level accepts all fixtures with 1/2" threaded hub. Constructed from 2-inch ABS pipe. H: 8".

**GS09** 6-inch spike with cord and plug for 120 volt fixtures. Factory attached when ordered with the fixture. For Catalog numbers 301, 304, 305, 802B, 806, 811, and 813. Not sold separately. H: 8-5/8".

**TM01** Round tree mount for mounting in tree or other wooden sur-

**TM04** Tree strap with self adjusting tension release for use with a single standard fixture. Up to three additional fixture bracket available - consult factory. H: 2-1/2" W: 4-1/4".

**TM05** Rectangular cast tree/ surface mount. Designed with wiring compartment and several passage holes for thru-wiring. H: 1-1/2" W: 2" L: 3-7/8".

**FS1** Rectangular wall plate and box cover for use with standard junction boxes and wall boxes. FS2 - with dual mounting holes for use with standard junction boxes and wall boxes. H: 4-5/8" W: 2-7/8".

**RS1** Round wall plate and box cover for use with standard junction boxes and wall boxes. RS2 - with dual mounting holes for use with standard junction boxes and wall boxes. Dia.: 4-1/2" H: 1/4".

**DBY** In ground water-proof wiring kit. H: 2-5/8" D: 1-7/16" W: 2".

---

**UNDERWATER FIXTURES**

**ATLANTIS SERIES**

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Volts</th>
<th>Watts</th>
<th>Lamp Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1407</td>
<td>12V</td>
<td>75W</td>
<td>MR16 Bi-pin</td>
<td>Adjustable, With Cord</td>
</tr>
<tr>
<td>1408</td>
<td>12V</td>
<td>60W</td>
<td>Wedge Base</td>
<td>With Cord</td>
</tr>
<tr>
<td>1409</td>
<td>12V</td>
<td>50W</td>
<td>MR16 Bi-pin</td>
<td>With Cord</td>
</tr>
</tbody>
</table>

---

**DBY** In ground water-proof wiring kit. H: 2-5/8" D: 1-7/16" W: 2".
**Accessories**

- FH203 Angled glare shield for 203, 206, 230 and 903
  Dia.: 2-1/2" L: 4"
- FH204 Straight glare shield for 203, 206, 230 and 903
  Dia.: 2-1/2" L: 4"
- FH211 Angled glare shield for 211, 215, 231 and 911
  Dia.: 2" L: 3-1/2"
- FH212 Straight glare shield for 211, 215, 231 and 911
  Dia.: 2" L: 3-1/2"
- PGR6 Protective grate for use with 602
  Dia.: 7-3/8" H: 1-3/8"

Other glare shields available for PAR20, PAR30, PAR36 and PAR56 fixtures. Consult your Representative.

**Louvres and Lenses for MR16 Fixtures**

- Dia.: 2.00" W: 125"
  - LVR Hex Cell Louver
  - LSL Linear Spread Lens
  - OSL Overall Spread Lens
  - DIF Diffused Lens
  - R22 Red Color Filter
  - R33 Blue Color Filter
  - R44 Green Color Filter
  - R55 Yellow Color Filter
  - R66 Mercury Vapor Color Filter

**Louvres and Lenses for MR11 Fixtures**

- Dia.: 1.35" W: 125"
  - LVR-1 Hex Cell Louver
  - LSL-1 Linear Spread Lens
  - OSL-1 Overall Spread Lens
  - DIF-1 Diffused Lens
  - R22 Red Color Filter
  - R33 Blue Color Filter
  - R44 Green Color Filter
  - R55 Yellow Color Filter
  - R66 Mercury Vapor Color Filter

**Transformers**

Lumière transformers include a wide variety of alternatives for transforming line to low voltage. These include units for hard wiring, 277 to 12 volt, in-ground installation, electronic transformers and transformers with cords, plugs, and/or timers. Other transformers may be available (i.e., 240 volt to 12 volt), please consult your Lumière representative.

**Transformers for Hard Wire Installation (120 to 12 Volt)**

- T50 50VA wet listed low voltage lighting transformer for hard wire installation
- T100 100VA wet listed low voltage lighting transformer for hard wire installation
- T150 150VA wet listed low voltage lighting transformer for hard wire installation
- T250 250VA wet listed low voltage lighting transformer for hard wire installation
- T300 Approved for use with underwater lighting fixtures 3000VA wet listed low voltage lighting transformer for hard wire installation
- T750 750VA wet listed low voltage lighting transformer for hard wire installation
- T1000 1000VA wet listed low voltage lighting transformer for hard wire installation

**Transformers for Hard Wire Installation (277 to 12 Volt)**

- TC300 300VA Low voltage lighting transformer for hard wire installation
- TC500 500VA Low voltage lighting transformer for hard wire installation
- TC750 750VA Low voltage lighting transformer for hard wire installation

**In-Ground Transformers (120 to 12 Volt)**

- T56 300VA wet listed low voltage transformer housed in composite container for in-ground installation

**Solid-State Transformers (120 to 12 Volt)**

- T60 75VA solid state transformer
- T61 60VA solid state transformer with 8' cord and plug
- T65 150VA solid state transformer (electric housing/box not included)

**Transformers with Cords, Plugs and Timers (120 to 12 Volt)**

- TR150 150VA wet listed outdoor transformer with 8' cord and plug
- TR150T 150VA wet listed outdoor transformer with timer and 8' cord and plug
- TR300 300VA wet listed outdoor transformer with 8' cord and plug
- TR300T 300VA wet listed outdoor transformer with timer and 8' cord and plug
- TR600 600VA wet listed outdoor transformer with 8' cord and plug
- TR600T 600VA wet listed outdoor transformer with timer and 8' cord and plug
- TR900 900VA wet listed outdoor transformer with 8' cord and plug
- TR900T 900VA wet listed outdoor transformer with timer and 8' cord and plug
- TRPC Photo cell to energize fixtures as darkness falls. For use with TR300, TR300T, TR600, TR600T, TR900, TR900T
Landscape and Architectural Feature Lighting
Installing The RDB Is A Snap!

Install PVC conduit fittings using a water-tight sealant or Teflon tape. Flexible conduit is recommended for ease of installation, handling, and adjustment. Two 3/4" conduit entries are standard and two additional entries are available.

Install the ballast barrier/desiccant canister assembly using the two screws provided. The desiccant will absorb humidity trapped in the RDB during installation and subsequent relampings.

For convenience and to ensure a quality installation, Greenlee provides a Seal Pack with each RDB along with an innovative Debris Guard as standard equipment.

Connect the high performance optics to the matching quick connector on the Power Pack. Depending upon the assembly chosen, adjust beam spread, reflector tilt, and rotation until the desired orientation is achieved and lock all adjustments into position.

With the Debris Guard in place, use components in the Seal Pack to: Connect wires with water proof wire nuts, seal conduit entries with mastic, and seal the junction box with reenterable encapsulating compound.

The clean RDB housing is ready to accept the Power Pack and optics.

Remove the protective lens cover from the lens assembly and install the remaining captive screws. Make sure the gasket seating surface is clean and put the lens assembly in position. Using an alternating torque sequence to tighten the lens door/fixture cover until it seats against the housing.

Rough-in installation is finished and other jobsite tasks can be completed.

To complete the installation remove the fixture cover and brush any dirt or debris which has accumulated on the flange into the Debris Guard. Carefully lift the debris guard full of unwanted jobsite contaminants out of the RDB.

The clean RDB housing is ready to accept the Power Pack and optics.

Connect the high performance optics to the matching quick connector on the Power Pack. Depending upon the assembly chosen, adjust beam spread, reflector tilt, and rotation until the desired orientation is achieved and lock all adjustments into position.

With the Debris Guard in place, use components in the Seal Pack to: Connect wires with water proof wire nuts, seal conduit entries with mastic, and seal the junction box with reenterable encapsulating compound.

The clean RDB housing is ready to accept the Power Pack and optics.

Reinstall the RDB cover with the lens protector in place. Use sand to backfill around the fixture to improve stability.

Slip the Power Pack into position and attach it to the fixture wires with the quick connector. Secure with the two screws provided.

No special tools or frames are required to install the RDB in concrete. Lens assembly with its protective cover must be in place during the concrete pour. Optional stainless steel trim is shown. Properly installed in concrete the RDB withstands the rigors of pedestrian traffic and has "Drive Over Capability."
The RDB has been very successful due to its adjustable, high performance optics. It's rugged, corrosion proof construction and drive-over capability have added to its popularity. The RDS continues Greenlee's tradition of designing and supplying products that yield the highest performance with the lowest cost of ownership through the life of the product. The compact size of the RDS combined with its large working aperture ensures the RDS will find a way into your fixture schedule. Simply choose the optics and accessories that are right for your application.

The RDB and RDS will accommodate recently introduced ceramic metal halide lamps (Philips-Master Color or GE-CMH) in PAR, E-17 or T6/G12 styles. And they will accommodate standard metal halide, mercury vapor and high pressure sodium lamps as well as triple tube compact fluorescent lamps, and a variety of halogen sources.

A wide variety of accessories is available for either fixture type, including a full range of louvers, color filters, spread lenses (linear and prismatic), rock guards and shields. Due to Greenlee's experience with and confidence in composite materials, the standard lens retainer on both products is composite. However, cast brass or aluminum lens retainers with clear or black powder coat finish are available.

Installing either fixture is a snap thanks to their intelligent design. All components within each series are interchangeable so job changes are never a problem. The RDB and RDS do not require a grout mask or trim kit for installation in concrete. Rough-in housings can be shipped in advance of concrete pours on time critical projects. Optics and Power Packs can be shipped and installed later. And Greenlee provides a Seal Pack and waterproof wire nuts with each fixture.

When the composite scores are in, no other company can match Greenlee's capabilities or success with its composite product offerings.
Uplighting Rules

Uplighting Rules of Thumb

Uplighting creates very dramatic effects and can be accomplished with bullets, floods, well lights, or direct burial fixtures. Although each fixture type can be used to generate equivalent effects there are advantages to each type.

Choosing Fixtures:
• Bullets are the least expensive types of uplights. Because they are mounted above grade they offer more aiming flexibility. Whenever dense ground cover is planned, choose bullet fixtures so that they will stick up out of the foliage. On the down side, bullets are more susceptible to damage by mowers or vandals than inground uplights.

• Floodlights can be used to uplight very large trees. However, their large size can be obtrusive. Barn doors or glare shields should be used on floodlights to prevent unwanted glare.

• Well lights offer the most unobtrusive form of uplight. The source is shielded from direct view because it is recessed in the “well sleeve” and shielded by the louvered grill. Well lights are often used on the residential projects where glare is the primary concern. If soft and subtle uplight is what you seek, pick well lights. However, be prepared to follow a formal maintenance program. Leaves, insects, and debris have a habit of falling into the opening of the fixture and they must be removed and the fixture cleaned regularly.

• Direct burial fixtures require less upkeep than well lights and should be used on commercial projects where maintenance is a concern. Choosing between the 300 Series, MDB, CDB, RDB, won’t be confusing if you know how harsh the environment is, what wattage is required, as well as beam spread requirements, and the preferred fixture shape.

Techniques:
• Using two uplights per tree will add depth and texture to the scene. With a properly spaced row of trees placing a fixture between each tree and at both ends of the row will create the effect of having two lights per tree.

• Fixtures located behind a tree will cause a backlit effect if they are aimed toward the tree and the viewer.

• Fixtures placed behind a tree will cause a silhouette effect if they are aimed at a reflective surface behind the tree. The location of the primary viewing area or direction of travel should be considered when locating fixtures. Uplights should be located 1/3 to 1/2 distance from the trunk of tree to the outside edge of the canopy or “drip-line”. Placing uplights less than three feet from the trunk will cause a hot spot at the base of the tree.

1. Using two uplights per tree adds texture and drama.

2. Placing lights at each end and between each tree in a row creates the effect of having two lights per tree.

3. Fixtures placed behind a tree and aimed toward the tree create a backlit effect.

4. Fixtures behind a tree aimed at a wall or other reflective surface will produce a silhouette.
**SLM Series**

**Housing:** One-piece cast aluminum in a multi-radiused rectangular shape with integral cooling ribs over the back and .188” minimum wall thickness. Internal concealed hinges permit full access to reflector area and housing interior. One-piece extruded EPDM gasket between housing and door frame.

**Door Frame:** One-piece cast aluminum .200” minimum wall thickness mates with housing to create multi-radiused shape. Secures to housing by two internal (concealed) hinge brackets. Internal hinges allow removal from housing without tools. .3/16” thick clear tempered glass lens seals to door frame by one-piece butyl rubber gasket and eight stainless-steel clips. Secures to housing by four captive stainless-steel recessed allen-head screws. Four holes provided for attachment of Glare Shield, Polycarbonate Shield and Louver Shield.

**Adjustable Swivel Mounting Arm:** Two-piece cast aluminum ratcheting swivel design with external splice compartment supplied with aluminum access cover. Access cover permits field wiring while fixture is in position on pole or bracket. Internal toothed ratcheting system provides positive locking in a range of 192° with adjustment in increments of 5°. Swivel mounting arm accepts standard 2-3/8” O.D. x 4-3/4” minimum long tenon and is secured by four recessed allen set screws (through-bolt optional by others). Swivel adjustment is made by concealed hex-head pivot bolt. Mounting arm is internally and externally sealed by concealed neoprene gasketing. Optional photocell is factory-mounted in wiring access cover.

**Reflector Assemblies:** Four interchangeable reflector types are available. Horizontal and Vertical flood reflectors offered with specular and hammertone optical components mounted to a satin anodized aluminum frame. Medium flood and Spot reflectors are offered with multi-faceted specular aluminum optical components mounted in a satin anodized aluminum frame. Reflector assembly mounts into housing with four quarter-turn fasteners and quick-connect wiring for removal without tools. HPS and MH mogul-base sockets are porcelain rated 4KV. Photometric data is certified by an independent testing facility.

**Light Sources:** The SLM is designed to operate with High Pressure Sodium, Metal Halide or Metal Halide reduced envelope lamps, all with mogul-base sockets. Clear lamps are supplied as standard.

**Electrical Components:** Factory mounted in housing and pre-wired with leads extending through gasketing and into swivel mounting arm. UL listed components with high-power factor ballasts rated for -20° F starting. Optional photocell internally mounted in swivel mounting arm wiring access cover.

**Finishes:** Housing, door frame and swivel mounting arm feature baked-on polyester powder finish. Standard finish colors available are bronze, black, white, satin verde green and verde green.

**Brackets:** Stanchion Mount or Pad/Wall Mount may be ordered with SLM fixtures.

**Testing:** UL Listed and CSA certified for wet locations.

**EXTRA VALUE FEATURES:**
- Choice of four interchangeable reflectors.
- Mounting arm fits standard 2-3/8” tenons.
- Rugged die cast housing.
- Captive hardware.

SLM Series floodlights offer the extra value features you expect from Greenlee: High performance optics, flexible aiming, sturdy mounts, and rugged good looks.
### TO ORDER FIXTURE:
Select appropriate choice from each column as in example below.

<table>
<thead>
<tr>
<th>Series</th>
<th>Wattage/Lamp Type</th>
<th>Voltage</th>
<th>Optics</th>
<th>Finish</th>
<th>Options</th>
<th>Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLM</td>
<td>250, 400 MH*</td>
<td>MT</td>
<td>HF – Horizontal</td>
<td>BRZ – Bronze</td>
<td>PC – Photo Cell **</td>
<td></td>
</tr>
<tr>
<td></td>
<td>350, 400 HPS</td>
<td></td>
<td>HT – Trip Tip</td>
<td>BLK – Black</td>
<td>LL – Less Lamp (Lamp Standard)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MF – Medium Flood</td>
<td>VDG – Verde Green</td>
<td>GS – Glare Shield</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SP – Spot</td>
<td>SVG – Satin Verde Green</td>
<td>PS – Polycarbonate Shield</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>WHT – White</td>
<td>LS – Louver Shield</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>BD – Barn Doors</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CFX – Color Filters</td>
<td></td>
</tr>
</tbody>
</table>

*400 Watt Metal Halide is an ED-2B reduced envelope lamp.
** Specify single line voltage when a photo cell is required; 480V not available.
† Louver Shield available on medium flood and spot distributions only.

### LAMPS INCLUDED:
(Mercury Vapor lamp is coated.) See Lamp guide for additional information.

### TO ORDER MOUNTING:
Select appropriate choice from each column as in example below.

<table>
<thead>
<tr>
<th>Series</th>
<th>Mounting Option</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLM</td>
<td>SMC – Stanchion Mount</td>
<td>BRZ – Bronze</td>
</tr>
<tr>
<td></td>
<td>PWVM – Wall Mount</td>
<td>BLK – Black</td>
</tr>
<tr>
<td></td>
<td>BKS – PTB – 12</td>
<td>VDG – Verde Green</td>
</tr>
<tr>
<td></td>
<td>BKS – PTB – 13</td>
<td>SVG – Satin Verde Green</td>
</tr>
<tr>
<td></td>
<td>BKS – PTB – 14</td>
<td>WHT – White</td>
</tr>
<tr>
<td></td>
<td>FBO-5 – Flood Bolt On 5&quot;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FBO-1B – Flood Bolt On 18&quot;</td>
<td></td>
</tr>
</tbody>
</table>

### Accessories/Options

**GLARE SHIELD (GS):**
Formed 1/16" thick aluminum. Mounts to cast door frame holes and may be used with Polycarbonate Shield option.

**POLYCARBONATE SHIELD (PS):**
1/8" clear convex, U.V. stabilized, formed polycarbonate. Mounts to cast door frame holes. May be used with Glare Shield option. Caution: Use only when vandalism is anticipated. Useful life is limited by U.V. discoloration from sunlight HPS or MH lamps.

**LOUVER SHIELD (LS):**
Formed 1/16" thick aluminum with black finish. Mounts to cast door frame holes. Provides glare control. Available on medium flood and spot distribution only.

**BARN DOORS (BD):**
Extruded aluminum doors with anti-reflection baffles. Each door hinged with a stainless-steel clip – locks by a mounting screw. Doors are individually removable. Assembly mounts to die-cast door frame holes and may be used with Polycarbonate Shield option. Caution: Not recommended for ground-mounted fixtures in vandal-prone areas. Available in standard finishes.
SLM Mounting

STANCHION MOUNT (SMC):
3" OD x 250" x 18" cast aluminum with 2" pipe tenon (2-3/8" OD x 4-3/4" min. length). Wiring and internal ground lug accessible through hand hole.

PAD / WALL MOUNT (PWM):
(Pad Mount shown): 2" pipe size aluminum tenon welded to a cast aluminum plate. Plate has four 1/2" dia. mounting holes, and plate has two 1/2" N.P.T. for conduit entry. Powder finish. Wall mount is single fixture only. Pad mount may be multiple mounting.

FLOODLIGHTING BRACKETS

FBO-5:
For installations not requiring horizontal fixture adjustment. Horizontally mounted 2" x 4-3/4" pipe size tenon welded to a steel plate and secured by two bolts.

FBO-18:
For installations requiring horizontal fixture adjustment. Vertically mounted 2" x 17-1/2" pipe size tenon welded to a steel plate and secured by two bolts.

POLE PREPARATION "SF":
Pole preparation "SF" required when ordering FBO-5 and FBO-18 brackets.

Note: FBO-5 and FBO-18 brackets can be ordered for round or square steel poles.

TENON MOUNT BRACKET (PTB):
For installations requiring full horizontal fixture adjustment. Vertically mounted 2" pipe size steel tenons welded to 2"x4" steel arms, with removable endcaps for wiring access. Arms are welded to a round slipfitter, compatible with stanchions or poles with 2" pipe size tenons (2-3/8" O.D. x 4-3/4" min. length). Slipfitters are secured by six stainless-steel set screws and one zinc plated through bolt.
400W Metal Halide
Type HF – Horizontal Flood
NEMA Type 7H x 7V
Field Angle - 147.9°H x 137.5°V

35° Angle
Lumen Rating 36,000
Levels shown are in footcandles.

50° Angle
Lumen Rating 32,000
Levels shown are in footcandles.

400W Metal Halide
Type MF – Medium Flood
NEMA Type 4H x 4V
Field Angle - 65.6°H x 52.4°V

35° Angle
Lumen Rating 36,000
Levels shown are in footcandles.

400W Metal Halide
Type VF – Vertical Flood
NEMA Type 6H x 6V
Field Angle - 128.3°H x 129.0°V

5° Angle
Lumen Rating 36,000
Levels shown are in footcandles.

400W Metal Halide
Type SP – Spot
NEMA Type 4H x 3V
Field Angle - 49.6°H x 44.7°V

5° Angle
Lumen Rating 36,000
Levels shown are in footcandles.

Greenlee Lighting L.P.
**TECHNIQUES: Art + Science**

**Downlighting** involves lighting areas, objects or plant materials from above. “Moonlight” is created by aiming downlights through a tree’s leaves and branches to produce soft, subtle shadow patterns on the ground. Shielded bullet fixtures are the proper tool. Floodlights and other unshielded fixtures create unwanted glare. Statues and sculptures can be accented with bullets. Mounting bullets too low in trees causes undesirable effects. As a rule of thumb, “High” is good, “Higher” is better, and “Ten Feet Higher” is best. Place multiple bullets at various locations within the tree. Clumping luminaires together is unattractive during the day and creates a hot spot at night. Aiming bullets above 45° from horizontal produces glare. Bullets should be attached to the tree with a mount which accommodates tree growth.

---

**Recommendations for downlighting from trees in residential settings with moderate ambient light are shown in the following chart. Remember bullets are also excellent uplighting tools.**

<table>
<thead>
<tr>
<th>Bullet Height</th>
<th>Quartz/Halogen</th>
<th>Mercury Vapor</th>
<th>Metal Halide</th>
</tr>
</thead>
<tbody>
<tr>
<td>18' - 22'</td>
<td>90W PAR38</td>
<td>50W R20</td>
<td>35W - 50W</td>
</tr>
<tr>
<td>23' - 28'</td>
<td>150W PAR38</td>
<td>100W R40</td>
<td>70W</td>
</tr>
<tr>
<td>28' - 35'</td>
<td>250W PAR38</td>
<td>175W R40</td>
<td>100W</td>
</tr>
<tr>
<td>35' +</td>
<td>175W R40</td>
<td>175W</td>
<td></td>
</tr>
</tbody>
</table>

Primarily PAR and R type lamps have been indicated. However, “E” type lamps in combination with a reflector, built into some Greenlee bullets, will produce excellent results.

**Uplighting** is simply illuminating a tree or object from below. Since bright areas and shadows are the opposite of natural patterns generated by the sun and moon, uplighting is quite dramatic.

---

**Light from bullets placed high in a tree, close to the center, will be filtered by several layers of leaves, softening light levels and creating interesting shadow patterns.**

**Placing bullets at the canopy’s edge or aiming them through gaps in foliage increases light levels and will accent sculpture or other special features.**

**To add depth and texture to the canopy itself, cross-aim bullets through the tree.**

**Aiming fixtures down from tall trees onto lower landscape and architectural features will create a true “Moonlight” effect.**

---

**Bullet Height**
- **Quartz/Halogen:** 90W PAR38
- **Mercury Vapor:** 50W R20
- **Metal Halide:** 35W - 50W
- **23' - 28':** 150W PAR38
- **28' - 35':** 250W PAR38
- **35' +:** 175W R40

---

**Aiming bullets high in tree close to the center will be filtered by several layers of leaves, softening light levels and creating interesting shadow patterns.**

**Placing bullets at the canopy’s edge or aiming them through gaps in foliage increases light levels and will accent sculpture or other special features.**

**To add depth and texture to the canopy itself, cross-aim bullets through the tree.**

**Aiming fixtures down from tall trees onto lower landscape and architectural features will create a true “Moonlight” effect.**

---

**Fair Park - Dallas, Texas**
Tree mounted bullet fixtures with 175R40MV lamps provide lighting for pedestrian traffic at Fair Park in Dallas, TX. Uplight floods with 175MV lamps balance the downlights and make the tree canopies glow.

Lighting Designer and Photography: Lloyd R. Reeder
Bullet Installation

All wiring to meet local, state, and national electric codes.
Downlighting Rules of Thumb

To create spectacular moonlight effects fixtures should be placed as high in the tree as possible (generally ten feet higher than anyone is willing to climb). Aiming down through leaves and branches produces soft subtle shadow patterns on the ground. Placing fixtures higher in a tree lowers the light level on the ground. However, the coverage of each fixture is increased. Lights located deeper in a tree, toward its center produce softer effects (the light travels through more foliage). Moving fixtures to the outside of a tree creates fewer shadows and higher light levels (the light travels through less foliage). Fixtures placed lower in tree cause higher light levels (the light travels through less foliage). Fixtures placed lower in tree have a smaller area of coverage. Aiming down through holes in foliage increases light levels and produces fewer shadows. Some designers place fixtures in the top of trees at the center and aim straight down while others aim down at an angle. Beams can be criss crossed within trees to bring out texture. Fixtures aimed down out of tall trees onto shorter trees, shrubs, and flowers create wonderful patterns and simulate true “Moonlight”.

Aiming a fixture out the back of a tree will pull viewer’s eyes past the tree and make the space seem larger.

When using multiple fixtures in a tree, placement is critical. Do no place fixtures too close together. This is unattractive during the day and is a source of unwanted glare at night. Spread Fixtures out in the canopy. Do not aim fixtures above 45° from vertical or glare may result. In general, shields should be placed between the source and the viewer. Greenlee’s long shields are designed for downlighting and do an excellent job of hiding the lamp from the viewing audience. Shields can be rotated to achieve precise cut-off and light control. It is always a good policy to check the aim of each fixture. To save time on the job fixtures can be energized and aimed during the day. However, fine tuning should always take place at night.
CBM/ CBM175 Series

Lamp Types: Mercury Vapor, Metal Halide, High Pressure Sodium, and Incandescent.

Housing/Shield: Injection molded, glass fiber reinforced polymer, providing high strength and U-V stability. CBM175 is molded from a high-performance resin that is suitable for use with 175-watt HID lamps. All CBM's are warranted for five years against corrosion. Optional composite or metallic shield is available for precise light control.

Finish: Available in either textured bronze or black.

Fasteners: All exposed fasteners are black oxide coated stainless steel.

Lampholder: Glazed porcelain, Medium base, 4KV pulse rated with spring center contact.

Lens: Flat or convex, tempered, heat resistant clear glass. Lens seals against a silicone o-ring. Lens/Shield retaining ring has captive fasteners. Aqueducts in the retaining ring prevent water accumulation on the lens.

Mounting: 1/2" NPSM mounting arm with jam nut is standard. Fixture arm may be screwed into threaded hubs in junction boxes, spikes, grade mounted ballast enclosures, or tree mounts.

Optics/Aiming: PAR38, R30, or PAR30 type reflector lamps can be accommodated. E-17 lamps may be used with FCB flood or SCB spot reflectors. The FCB is mechanically peened with diffuse clear anodized finish. The SCB has a polished semi-specular anodized finish. Fixture adjusts easily in three axes. Optional shield may be rotated 360° to provide precise light control.

Wiring: Pre-wired with 200°C rated wire.

EXTRA VALUE FEATURES:
- High performance resin in CBM175 Series provides higher wattage capabilities.
- Composite housing is warranted for 5 years against corrosion.
- No paint to chip, peel, or fade.
- Non-conductive construction.
- Shield and louver may be field installed at any time.
- Two lens types for extra versatility.

CBM Series Bullets are constructed from the same high-performance resin as the CBL Series they replace and can accommodate up to 175-watt HID lamps. Standard CBM Series can be used with up to 100-watt HID lamps. Other than the use of different resins in the housing, CBM175 and CBM Series bullets are identical.

CBM Series bullets are highly engineered. "Aqueducts" ensure rapid water runoff to help keep lens surface clean. Lamp position minimizes glare without a shield. Available internal louver and external shield provide maximum light control. Raised ribs are attractive and functional. Corrosion and water proof, the CBM is the choice when you need a medium sized bullet with unequalled performance.
## CBM Order Specifications

**TO ORDER FIXTURE:** Select appropriate choice from each column as in example below.

### EXAMPLE:

<table>
<thead>
<tr>
<th></th>
<th>CBM</th>
<th>FCB</th>
<th>BRZ</th>
<th>FL</th>
<th>GST</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBM</td>
<td>FCB – Flood/E-17 Medium Base Lamps</td>
<td>MV, MH, and HPS up to 100 watts</td>
<td>BRZ – Bronze</td>
<td>FL – Flat</td>
<td>GST – Composite Glare Shield</td>
</tr>
<tr>
<td></td>
<td>FCB – Spot/E-17 Medium Base Lamps</td>
<td>MV, MH, and HPS up to 100 watts</td>
<td>BLK – Black</td>
<td>CMS – Convex</td>
<td>GS10 – Metallic Downlight Shield</td>
</tr>
<tr>
<td></td>
<td>FCB – For Self ReflectORIZED R30, PAR30/30L, PAR38 Lamps</td>
<td>MV up to 100 watts – R30</td>
<td>FL – Flat</td>
<td>FL – Flat</td>
<td>INL – Internal Non-Directional Louver</td>
</tr>
<tr>
<td></td>
<td>MV up to 100 watts – PAR38</td>
<td>MH up to 100 watts – PAR38</td>
<td>BRZ – Bronze</td>
<td>BRZ – Bronze</td>
<td>T – Tree Mount J-Box (Aluminum)</td>
</tr>
<tr>
<td></td>
<td>INC up to 150 watts – PAR38</td>
<td></td>
<td>BLK – Black</td>
<td>BLK – Black</td>
<td>SCI – Spike J-Box w/6’ Cordset (Iron)</td>
</tr>
<tr>
<td>CBM175</td>
<td>FCB – Flood/E-17 Medium Base Lamps</td>
<td>MV, MH up to 175 watts, HPS up to 150 watts</td>
<td>BRZ – Bronze</td>
<td>FL – Flat</td>
<td>GST – Composite Glare Shield</td>
</tr>
<tr>
<td></td>
<td>FCB – Spot/E-17 Medium Base Lamps</td>
<td>MV, MH up to 175 watts, HPS up to 150 watts</td>
<td>BLK – Black</td>
<td>CMS – Convex</td>
<td>GS10 – Metallic Downlight Shield</td>
</tr>
<tr>
<td></td>
<td>FCB – For Self ReflectORIZED R30, PAR30/30L, PAR38 Lamps</td>
<td>MV up to 100 watts – R30</td>
<td>FL – Flat</td>
<td>FL – Flat</td>
<td>INL – Internal Non-Directional Louver</td>
</tr>
<tr>
<td></td>
<td>MV up to 100 watts – PAR38</td>
<td>MH up to 100 watts – PAR38</td>
<td>BRZ – Bronze</td>
<td>BRZ – Bronze</td>
<td>T – Tree Mount J-Box (Aluminum)</td>
</tr>
<tr>
<td></td>
<td>INC up to 150 watts – PAR38</td>
<td></td>
<td>BLK – Black</td>
<td>BLK – Black</td>
<td>SCI – Spike J-Box w/6’ Cordset (Iron)</td>
</tr>
</tbody>
</table>

*Internal Non-Directional Louver can not be used with 175 watt lamps in CBM 175 fixture. HID Fixtures require a ballast. Extreme caution should be used when selecting and installing CBM Series bullets to ensure maximum wattage restrictions are followed. The use of 175 watt HID Lamps in standard CBM bullets will result in product failure. Both CBM175 and CBM Series bullets have a maximum wattage label molded into the housing.

**TO ORDER BALLAST:** Select appropriate choice from each column as in example below.

### EXAMPLE:

<table>
<thead>
<tr>
<th></th>
<th>AG</th>
<th>39</th>
<th>MH</th>
<th>120</th>
<th>BRZ</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ballast</strong></td>
<td>AG – Above Grade</td>
<td>MH</td>
<td>120</td>
<td>BRZ – Bronze</td>
<td>TR – Tamper Resistant Fasteners</td>
</tr>
<tr>
<td></td>
<td>CH – Composite Buried Box with Hub Lid (use with upright only)</td>
<td>MV</td>
<td>208</td>
<td>BLK – Black</td>
<td>(CH &amp; CF enclosures only)</td>
</tr>
<tr>
<td></td>
<td>CF – Composite Buried Box with Flat Lid (specify fixture mounting)</td>
<td>HPS</td>
<td>277</td>
<td>_TR Key – Key for TR Fasteners</td>
<td></td>
</tr>
</tbody>
</table>

LAMP NOT INCLUDED WITH FIXTURE. ORDER SEPARATELY. See Lamp guide for additional information.

* Remote ballasts with igniters have limited starting distances. See page 64 for further information.

† 50 Watt MV ballast as well as 39 and 50 watt MH ballast available in 120/277 only.

CH/CF Ballast enclosure includes Seal Pack and waterproof wire-nuts as standard equipment.

### Accessories/Options

- **Louver (INL):**
- **Composite Glare Shield (GS):**
- **Tree Mount (T):**
- **Metallic Downlight Shield (GS10):**
- **CBM-100-MH-FCB:**
- **CBM-100-MH-SCB:**

*Lamp guide for additional information.*
CBS Series bullets are highly engineered. “Aqueducts” ensure rapid water runoff to help keep lens surface clean. Lamp position minimizes glare without a shield. Available internal louver and external shield provide maximum light control. Raised ribs are attractive and functional. Corrosion and water proof, the CBS is the choice when you need a small, precise bullet with unequaled performance.
**TO ORDER FIXTURE:** Select appropriate choice from each column as in example below.

### EXAMPLE:

<table>
<thead>
<tr>
<th>CBS</th>
<th>RFL</th>
<th>BRZ</th>
<th>CL</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Series</strong></td>
<td><strong>Optics</strong></td>
<td><strong>Finish</strong></td>
<td><strong>Lens</strong></td>
<td><strong>Accessories</strong></td>
</tr>
<tr>
<td>CBS</td>
<td>RFL - For Self Reflectorized PAR20 Lamps. May be used for incandescent lamps up to 50 watts. May be used for MH lamps up to 39 watts.</td>
<td>BRZ - Bronze</td>
<td>FL - Flat</td>
<td>GS - Full Shield</td>
</tr>
<tr>
<td></td>
<td>MVR20 - For Self Reflectorized R20 Lamps. May be used for R20 MV lamps operated at 40 watts.</td>
<td>BRZ - Bronze</td>
<td>CL - Convex</td>
<td>INL - Internal Non-Directional Louver†</td>
</tr>
</tbody>
</table>

* HID fixtures require a ballast.
† INL will not work with the MV lamp.
‡ Caution: MV Lamp will NOT fit in CBS-RFL.

**TO ORDER BALLAST:** Select appropriate choice from each column as in example below. Ballasts require a fixture for a complete unit.

### EXAMPLE:

<table>
<thead>
<tr>
<th>AG</th>
<th>39</th>
<th>MH</th>
<th>120</th>
<th>BRZ</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ballast</strong></td>
<td><strong>Wattage</strong></td>
<td><strong>Lamp</strong></td>
<td><strong>Voltage</strong></td>
<td><strong>Finish</strong></td>
</tr>
<tr>
<td>AG - Above Grade</td>
<td>39</td>
<td>MH</td>
<td>120</td>
<td>BRZ - Bronze</td>
</tr>
<tr>
<td>CH - Composite Buried Box with Hub Lid (use with upright only)</td>
<td>40†</td>
<td>MV</td>
<td>277</td>
<td>BLK - Black</td>
</tr>
<tr>
<td>CF - Composite Buried Box with Flat Lid (specify fixture mounting)</td>
<td>75</td>
<td>INC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*LAMP NOT INCLUDED WITH FIXTURE. ORDER SEPARATELY.* See Lamp guide for additional information.

† Remote ballasts with igniters have limited starting distances. See page 64 for further information.
‡ 40Watt MV ballast available in 120/277 volt only.
CH/CF Ballast enclosure includes Seal Pack and waterproof wire-nuts as standard equipment.
Specifications

The Bell offers outstanding lighting performance in a classic form. Six reflector systems for effective lighting of the site. The two vertical and four horizontal reflector modules are interchangeable and can be rotated on ninety degree centers for field adjustment.

These fixtures feature a cast aluminum ballast housing, an optical chamber sealed from the elements, and a sag glass lens.

The Bell can be configured with one of the many standard arms available, or AAL can supply a custom design to your specifications.
### Catalog Numbers

#### For Top or Side Mounted Arms

<table>
<thead>
<tr>
<th>SL BB18V3</th>
<th>Type 3 Vertical Lamp Reflector, SAG Glass Lens</th>
<th>70 100 175 250</th>
<th>70 100 150 250</th>
<th>WT. EPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL BB18V5</td>
<td>Type 5 Vertical Lamp Reflector, SAG Glass Lens</td>
<td>• • • •</td>
<td>• • • •</td>
<td>31 1.50</td>
</tr>
<tr>
<td>SL BB18H2</td>
<td>Type 2 Horizontal Cutoff Reflector, SAG Glass Lens</td>
<td>• • •</td>
<td>• • •</td>
<td>30 1.50</td>
</tr>
<tr>
<td>SL BB18H3</td>
<td>Type 3 Horizontal Cutoff Reflector, SAG Glass Lens</td>
<td>• • •</td>
<td>• • •</td>
<td>30 1.50</td>
</tr>
<tr>
<td>SL BB18H4</td>
<td>Type 4 Horizontal Cutoff Reflector, SAG Glass Lens</td>
<td>• • •</td>
<td>• • •</td>
<td>30 1.50</td>
</tr>
<tr>
<td>SL BB18H5</td>
<td>Type 5 Horizontal Cutoff Reflector, SAG Glass Lens</td>
<td>• • •</td>
<td>• • •</td>
<td>30 1.50</td>
</tr>
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</table>

*Remote Ballast Required*

<table>
<thead>
<tr>
<th>SL BB22V3</th>
<th>Type 3 Vertical Lamp Reflector, SAG Glass Lens</th>
<th>70 100 175 250</th>
<th>70 100 150 250</th>
<th>WT. EPA</th>
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</thead>
<tbody>
<tr>
<td>SL BB22V5</td>
<td>Type 5 Vertical Lamp Reflector, SAG Glass Lens</td>
<td>• • • •</td>
<td>• • • •</td>
<td>33 1.60</td>
</tr>
<tr>
<td>SL BB22H2</td>
<td>Type 2 Horizontal Cutoff Reflector, SAG Glass Lens</td>
<td>• • •</td>
<td>• • •</td>
<td>32 1.60</td>
</tr>
<tr>
<td>SL BB22H3</td>
<td>Type 3 Horizontal Cutoff Reflector, SAG Glass Lens</td>
<td>• • •</td>
<td>• • •</td>
<td>32 1.60</td>
</tr>
<tr>
<td>SL BB22H4</td>
<td>Type 4 Horizontal Cutoff Reflector, SAG Glass Lens</td>
<td>• • •</td>
<td>• • •</td>
<td>32 1.60</td>
</tr>
<tr>
<td>SL BB22H5</td>
<td>Type 5 Horizontal Cutoff Reflector, SAG Glass Lens</td>
<td>• • •</td>
<td>• • •</td>
<td>32 1.60</td>
</tr>
</tbody>
</table>

*Remote Ballast Required*

#### Examples

| SL BB18V5 | 150HPS-240 | SLA9 | DB3-4R12-125 | DGN | • |
| 2-SL BB18H2 | 100MH-277 | SLA20B-2 | DB6-4R14-226 | WRZ | • |
| SL BB18H3 | 70MH-120 | WMA12 | • | BLK | • |
| SL BB18V5 | 250HPS-277 | • | DB9-4R16-226 | DBZ | BC4-4 |

#### Options

- **HSS** House side shield
- **SSA** Side mounted arm welded to fixture for pole mounting
-Typical Configurations

- silicone compression gasket
- pre-wired ballast module
- factory installed and tested
- segmented reflector system
- rotates for field orientation
- rigid cast door frame
- hinged for easy access
- molded silicone compression gasket seals the optical chamber
- cast fitter welded to arm
- fitter bolts to fixture for easy installation and a secure connection
- optional arm "SSA" for side mounting
- segmented reflector system
- rotatec for field orientation
- rigid cast door frame
- hinged for easy access
- molded silicone compression gasket seals the optical chamber
- cast fitter welded to arm
- fitter bolts to fixture for easy installation and a secure connection
- optional arm "SSA" for side mounting

<table>
<thead>
<tr>
<th>HEAD</th>
<th>SL BBL22</th>
<th>SL BB18</th>
<th>2-SL BBL22</th>
<th>SL BB18</th>
<th>2-SL BB18</th>
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<tbody>
<tr>
<td>ARM</td>
<td>WMA18</td>
<td>SLA20</td>
<td>SLA18-2</td>
<td>SLA16</td>
<td>SLA20D-2</td>
</tr>
<tr>
<td>POLE</td>
<td>•</td>
<td>PR4-4R14</td>
<td>DB6-4R15</td>
<td>PR4-4R12</td>
<td>PR4-4R18</td>
</tr>
<tr>
<td>OPTIONS</td>
<td>•</td>
<td>BBS4-24 BC2-4</td>
<td>•</td>
<td>•</td>
<td>BC5-4</td>
</tr>
</tbody>
</table>

SCALE: 3/4"=1'
Specifications

HOUSING
The fixture shall be cast aluminum. The aluminum shall be certified as pure #356 alloy, free of any porosity, foreign materials or cosmetic fillers. Castings shall be of uniform wall thickness with no warping or mold shifting. Minimum wall thickness shall be 3/16". The hood shall be spun of heavy gage aluminum with a beaded rim for added strength. An inner rolled flange accepts the reflector housing and door frame. The door frame shall be cast aluminum, hinged with one captive fastener. The sag glass lens shall be tempered and held in a silicone gasket within the door frame. All hardware is stainless steel.

REFLECTOR MODULE
The optical assembly shall consist of die formed panels of specular and semi specular Alzak® precisely positioned with the module. The reflector module shall be rotatable on ninety degree centers for proper field positioning. Reflectors shall meet ANSI-IES standard for full cutoff reflectors. Reflectors are designed for medium base, E-17 lamps except the 250 watt versions that accept E23.5 or E28 lamps. The reflector module shall be sealed with a molded silicone gasket. A hinged, cast lens frame with one captive fastener is opened for relamping.

ELECTRICAL
Electrical components shall be mounted and wired to a mounting plate within the fixture. The ballast compartment shall be sealed with an aluminum cover. All electrical components and materials shall be U.L. recognized. Ballasts are high power factor rated for -30° starting. Medium base porcelain sockets are 4KV rated. Mogul base porcelain sockets are 4KV rated.

MOUNTING
SLA 20 arm mounting: The fitter shall bolt to the arm from the top, with one 3/8-16 stainless steel bolt. The arm slips a four inch diameter pole and is secured with three stainless steel set screws.
Top arm mounting: A cast fitter shall be welded to the arm. The fitter shall attach to the top of the fixture with three stainless steel screws. A silicone gasket shall be used to seal between the fixture-fitter connection.

FINISH
Fixture finish shall consist of cleaning, etching, and rinsing followed by a protective chromate primer, deionized water rinse, oven dry off and top coated with a thermoset TGIC super polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance.

CERTIFICATION
Fixtures shall be listed with ETL Laboratories for wet location use.

WARRANTY
Fixture shall be warranted to be free of defects for three years. Ballast components shall carry the balast manufacturer's limited warranty.

Photometrics
Complete photometric data for all reflector configurations is available in IES formatted files on 3.5" disks. Call your local AAL representative for a copy. All testing is performed by a certified independent laboratory.
To substitute another lamp in the isocandle charts, multiply the chart values by the conversion factor. Mounting height is to the lamp center.

<table>
<thead>
<tr>
<th>LAMP TYPE</th>
<th>LUMENS</th>
<th>°CONVERSION FACTOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>70w MH, clear E-17</td>
<td>5200</td>
<td>.33</td>
</tr>
<tr>
<td>100w MH, clear E-17</td>
<td>8500</td>
<td>.53</td>
</tr>
<tr>
<td>175w MH, clear E-17</td>
<td>14000</td>
<td>.88</td>
</tr>
<tr>
<td>250w MH, clear E-28</td>
<td>22200</td>
<td>1.38 V3 &amp; V5 reflectors only</td>
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<tr>
<td>70w HPS, clear E-17</td>
<td>6400</td>
<td>.40</td>
</tr>
<tr>
<td>100w HPS, clear E-17</td>
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<td>150w HPS, clear E-17</td>
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<td>1.00</td>
</tr>
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<td>250w HPS, clear E-28</td>
<td>27500</td>
<td>1.52 V3 &amp; V5 reflectors only</td>
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</table>

SL BB18H3-150 HPS
Horizontal footcandles
150w HPS 16,000 lumens 14° mounting height

<table>
<thead>
<tr>
<th>STREET SIDE</th>
<th>12'</th>
<th>14'</th>
<th>16'</th>
<th>18'</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.80</td>
<td>5.00</td>
<td>3.85</td>
<td>3.00</td>
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</tr>
<tr>
<td>2.72</td>
<td>2.00</td>
<td>1.54</td>
<td>1.20</td>
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<td>1.36</td>
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<td>.77</td>
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</tr>
<tr>
<td>.68</td>
<td>.50</td>
<td>.39</td>
<td>.30</td>
<td></td>
</tr>
<tr>
<td>.27</td>
<td>.20</td>
<td>.15</td>
<td>.12</td>
<td></td>
</tr>
</tbody>
</table>

LONGITUDINAL DISTANCE IN MOUNTING HEIGHTS

SL BB18H2-150HPS
Horizontal footcandles
150w HPS 16,000 lumens 14° mounting height

<table>
<thead>
<tr>
<th>STREET SIDE</th>
<th>12'</th>
<th>14'</th>
<th>16'</th>
<th>18'</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.80</td>
<td>5.00</td>
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<td>3.00</td>
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<tr>
<td>2.72</td>
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<td>1.54</td>
<td>1.20</td>
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<td>1.36</td>
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<tr>
<td>.68</td>
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<tr>
<td>.27</td>
<td>.20</td>
<td>.15</td>
<td>.12</td>
<td></td>
</tr>
</tbody>
</table>

LONGITUDINAL DISTANCE IN MOUNTING HEIGHTS

Architectural Area Lighting - 12/0/4/8/12/16/20/28/32/40/50/60/80/100/120/150/180/200/240/300/400/500/600/700/800 lumens
ORLANDO Cast Aluminum Lighting Post with Two Fixtures

ORLANDO Cast Aluminum Lighting Post with Four Fixtures

RENO Cast Aluminum Lighting Post
Charleston

Distinctive, classical beauty

- Maintenance-free, durable fiberglass
- One-piece construction
- Smooth or fluted shafts
- Standard or custom finishes and colors
- Seven standard colors available
- Gloss, flat, semi-gloss, or concrete finishes standard
- Mounting heights of 9.5 or 12.5 feet (custom heights available)
- Superior wind loading and environmental tolerance
- Non-conductive for safety
- Molded-in color, weather resistant polyurethane coating
- Aluminum tenon 3" x 3" dia. for luminaire mounting

APPLICATIONS

Shakespeare Charleston Style poles have been installed in Malls, Shopping Districts, Historical Areas, and used for street lighting around the world.

See Charleston Style BCH9 for direct burial base.
**ACH9**
9" Anchor base

**Suggested Anchorage Detail**

<table>
<thead>
<tr>
<th>Base Diameter (in.)</th>
<th>Base Dia. (in.)</th>
<th>Mounting Height (ft.)</th>
<th>Finish</th>
<th>Direct Burial Conduit Entrance</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 inches</td>
<td>9.5</td>
<td>12.5</td>
<td>G=Gloss</td>
<td>N/A for Anchor base, use 1</td>
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</table>

**Color**
- 1 = Black
- 2 = Gray
- 3 = Brown
- 4 = Dk Green
- 5 = Dk Bronze
- 6 = Silver
- 7 = White
- 9 = Special

**Options (See "OPTIONS" above)**

- **3-Bolt Base** or **Optional Bolt Circle** configurations are available. Contact factory.
- **Decorative Twin Fixture** cross arm (catalog number A-30)
- **Banner Arms, Flag Brackets** and other attachments are available. Contact factory.

**Catalog Numbers for Charleston 9" Anchor base**

<table>
<thead>
<tr>
<th>Base Type</th>
<th>Shaft Type</th>
<th>Color</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>A=Anchor base</td>
<td>F=Fluted</td>
<td>S=Smooth</td>
<td>See &quot;OPTIONS&quot; above</td>
</tr>
<tr>
<td>CH=Charleston</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

**EPA RATING**

Charleston style poles are engineered to withstand at least 100 mph wind forces (calculated per AASHO standards and including a 30% gust factor), with luminaires up to 6.2 EPA (sq. ft.) weighing up to 150 pounds. For other loading require-
THE HISTORICAL SERIES

Jefferson

Distinctive, classical beauty

- Maintenance-free, durable fiberglass
- One-piece construction
- Smooth or fluted, tapered shafts
- Standard or custom finishes and colors
- Seven standard colors available
- Gloss, flat, semi-gloss, or concrete finishes standard
- Mounting heights of 9.5, 12, or 14.5 feet (custom heights to 20 feet)
- Superior wind loading, and environmental tolerance
- Non-conductive for safety
- Molded-in color, weather resistant polyurethane coating
- Standard 3" x 3" dia. aluminum tenon for luminaire mounting

See Jefferson Style BJ20 for direct burial base.

APPLICATIONS

Shakespeare Jefferson Style poles have been installed in Malls, Shopping Districts, Historical Areas, and used for street lighting around the world.
Suggested Anchorage Detail

Optional Direct Burial Foot permits direct burial of the foot prior to mounting the post.

Dimensions:
- **Base Dia. (in.):** 20 inches
- **Height (ft.):** 9.5, 12, 14.5 up to 20'

Finish:
- **G=Gloss**
- **F=Flat**
- **S=Semigloss**
- **C=Concrete**

Direct Burial Conduit Entrance
- **Location from bottom of pole:** 2' x 12' or 2' x 12' (180°)
- **None:** 1
- **12':** 2
- **18':** 3
- **24':** 4
- **Not specified:** 5

EPA RATING
Jefferson style poles are engineered to withstand at least 100 mph wind forces (calculated per AASHO standards and including a 30% gust factor), with luminaires up to 6.2 EPA (sq. ft.) weighing up to 150 pounds. For other loading requirements, contact factory.
Outoor Architectural Lighting

Jerry McManus
Sales Representative

Holophane Corporation
20 Zeller Street
(617) 323-8102
Fax: (617) 323-8349
NEW YORK Series
Cast Iron Posts
Selection Guide

For Specifications, see page numbers located behind corresponding tabs: "Cast Iron Posts", "Crossarms" or "Luminaires".

Recommended Luminaire Bases

<table>
<thead>
<tr>
<th>Series</th>
<th>Example</th>
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<tbody>
<tr>
<td>A</td>
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<tr>
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<td>![E Series Example]</td>
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<tr>
<td>X</td>
<td>![X Series Example]</td>
</tr>
<tr>
<td>R</td>
<td>![R Series Example]</td>
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<tr>
<td>M</td>
<td>![M Series Example]</td>
</tr>
<tr>
<td>L</td>
<td>![L Series Example]</td>
</tr>
<tr>
<td>P</td>
<td>![P Series Example]</td>
</tr>
</tbody>
</table>

(A, E, X, & R Series Bases are for NY11A/17 & NY14A/20 Posts)

Other Suggested Luminaire Tops

<table>
<thead>
<tr>
<th>Part #</th>
<th>Example</th>
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<tr>
<td>S18</td>
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<td>![A820 Example]</td>
</tr>
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<td>![A25 Example]</td>
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<tr>
<td>TL26</td>
<td>![TL26 Example]</td>
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</tr>
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Other Suggested Luminaire:

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© 1996
Cast Iron Posts

- Chesapeake with Washington Postlite
- Barrington Style with 20" dia. base with Prismatic Prismsphere
- Chesapeake Style 18" dia base with GranVille
- Chesapeake Style 20" dia. base with Washington Postlite

3.7m (12')
LONGSHADOW® PLANTERS will develop mosses and lichens naturally.

You can also use Charlotte’s Formulas to hasten the development of mosses and lichens:

Prepare a slurry of dehydrated manure, mosses, hummingbird water and beer. Apply with large brush. Allow to dry for 30 minutes. Use a mister, filled with water, to spray where lighter effect is desired and to develop drip patterns. Keep planters moist and in a shady location.

Apply liquid fertilizers to plants in containers regularly when watering. The fertilizer will gradually seep through the porous walls of Longshadow® Planters and nourish mosses growing on the surface.

Dribble and drip old coffee, beer, tea, vegetable cooking water, etc., on the surface of Longshadow® Planters. Because the planters are made of porous material, they will absorb these liquids. The muted colors of these liquids will blend and overlap, creating the effect of old weathering, while acting as nutrients for mosses and lichens.

Mosses need consistent moisture and shade to develop. In dry sunny locations, planters will develop patinas much slower. In such locations, consider permanent and natural Longshadow® Stains...

<table>
<thead>
<tr>
<th>STAIN</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTIQUE</td>
<td>shows the slate-green weathering of the ages</td>
</tr>
<tr>
<td>NEW MOSS</td>
<td>fresh moss green, lightly washed over natural limestone</td>
</tr>
<tr>
<td>MINOAN</td>
<td>wash of evening maroons over tan terracotta</td>
</tr>
<tr>
<td>OLD TERRACOTTA</td>
<td>heavy antique wash over aged rust terracotta</td>
</tr>
<tr>
<td>TUSCANY</td>
<td>weathered stone with a hint of early morning gold</td>
</tr>
</tbody>
</table>

The limestone planters shown on these pages will develop mosses and lichens naturally in their woodland locations. We will photograph the developing patina for future catalogs.

Lake Bluff Planter
LS 9044
15.5 x 32 x 17 - 305 lb.
Newly planted with shade loving perennials along a moss and lichen encrusted path.
LONGSHADOW® PLANTERS

The Hollyhock Trough was designed for the Village of West Dundee. Its Hollyhock design compliments all styles of architecture. We display it at the entry to our vegetable garden, filled with Fennel, Sedum, Columbine and Pincushion Flower.

Note our Cobblestones
LS 1049 - 2.5 x 8.25 x 6.75 - 9 lb.

The Pienza Planter has traditional grape vines and fluting.
LS 906 - 30 x 21 x 10 - 125 lb.

The Lake Bluff Planter in its third summer, August 1998, showing a natural mossy patina and brimming with the same Astilbes and Ferns we had planted in June 1996. The planter is older and more beautiful, just right for those who love the feeling of old gardens.

Lake Bluff Planter, LS 9044 - 15.5 x 32 x 17 - 305 lb.

Some of our Planters can be used to hold water and reflect surrounding foliage, sky, and patterns.

Birds will come to sit on the edge and take a sip.

Glencoe Bowl with Round Base
LS 9086R - 21.5 x 42 x 10 - 510 lb.

The Florentine Finial & Florentine Pedestal combine dramatically to form a destination focal point along one of our meadow paths.

The Florentine Finial - LS 9099 - 42 x 21 x 10.5 - 340 lb.
The Florentine Pedestal - LS 1069 - 32 x 16 x 22 - 700 lb.

For those who love the feeling of old gardens...

Dimensions given are for height, width and size of base in inches.
All Planters and Pedestals have drain holes.

CLASSIC GARDEN ORNAMENTS, LTD.® • Longshadow Gardens • Pomona, Illinois 62975 • 618 893 4831
Visit us at www.LONGSHADOW.com or e-mail us at查询：http://www.Longshadow.com
LONGSHADOW® PLANTERS

Our Prairie Planters are inspired by the Chicago School of Architecture, which included Louis H. Sullivan, Marion Mahoney Griffin, Walter Burley Griffin, George W. Maher, William G. Purcell, Frank Lloyd Wright and many others. We also interpret the work of contemporary Architects and Landscape Architects, evoking uniquely American style, clean lines and practical beauty.

Shown left, defining our meadow, with prairie plants and rolling hillsides in the background, is the
Prairie Planter 36 - LS 9052 - 17 x 36 x 26 - 460 lb.
Prairie Pedestal - LS 1070 - 24 x 27 x 27 - 700 lb.
Prairie Planter 24 - LS 9043 - is also available.

The Sullivan Planter - LS 9075 - 10 x 20 x 14 - 120 lb.
This planter was designed by Louis H. Sullivan, who looked to Nature for inspiration. Stylized berries and vines create the egg & dart motif around the rim.

Prairie Plant 24 - sold separately

The Glencoe Planter with Square Base
is designed to be substantial, impressive, low and stable.
Valuable as presence on the ground or on top of Gate Piers.
Glencoe Bowl with Square Base, LS 9086S - 10 x 42 x 36 - 835 lb.

The Carbondale Planter and Base are substantial planters for urban settings. They were designed for use around the new Prairie Style Civic Center in Carbondale, Illinois.
The Carbondale Planter - LS 9087 - 26 x 60 x 34 - 1480 lb.
The Carbondale Base - LS 1087B - 5 x 38 x 42 - 685 lb.

Beautiful simplicity influenced by local color, atmosphere and surrounding flora...

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Visit us at www.LONGSHADOW.com or e-mail us at longshade@mideast.net
LONGSHADOW PLANTERS

LONGSHADOW is named after the dramatic morning and evening shadows cast by mature trees across the hill top meadow where we live and work. We are located in lovely Southern Illinois, surrounded by woods, farms & orchards.

We are building a destination garden with distant vistas, woodland paths, waterfalls and comfortable benches. Those who love gardens are invited to visit...

Oak Acorn Finial is ideal on gate piers, in rows to direct traffic and as a splendid focal point. LS 1062 - 25 x 15 x 15 - 190 lb.

The 24" Prairie Planter, filled with Red Fountain Grass, Ipies and Verbena, adds color and interest to the entrance of this home. LS 9043 - 11.5 x 24 x 18 - 160 lb.

Photograph by Tami Anderson ©1996
To create an elegant 24" Prairie Finial, order the Sullivan Planter Ltd.

The magnificent Pomona Oak Planter, with tremendous detail and thick, cooling walls allows lush summer plantings. LS 9070 - 15 x 24 x 18 - 240 lb.

Our 36" Prairie Planter adds the finishing touch to Modern, Contemporary and Arts & Crafts homes and buildings. LS 9059 - 17 x 36 x 26 - 460 lb. Available without base. Width of supports is 17.25 x 17.25. Makes an ideal fountain.

The Beauty of Pomona Stone

Dimensions given are for height, width and size of base in inches.

Achieving anything beyond the ordinary in a Garden requires years of observation, trial and patience.

CLASSIC GARDEN ORNAMENTS, LTD® - Longshadow Gardens - Pomona, Illinois 62075 - 618-893-4831
SPECIFICATION SHEET I
LONGSHADOW® PLANTERS

SCALE: 3/4" = 1'
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Dimensions given are height x width x base in inches.
CLASSIC GARDEN ORNAMENTS LTD
618 893 4831 www.longshadow.com

SPECIFICATION SHEET 4
LONGSHADOW® PLANTERS

SCALE: 3/4" = 1'
COPYRIGHT 2000

LS 9075
SULLIVAN PLANTER
10 x 20 DIA. x 14 SQ.
LS 9074
SULLIVAN FINIAL LID
1.5 x 20 DIA.

LS 9070
POMONA OAK PLANTER
15 x 24 x 24

LS 9098
WABASH PLANTER 26
10.5 x 26 x 17.5 CROSS

LS 9101
WABASH PLANTER 36
16 x 36 x 24 CROSS

LS 9085
Glencoe 42 Square Base
21 tall x 42 dia x 36 sq base

LS 9086
Glencoe 42 Round Base
22 tall x 42 dia x 19 dia base

LS 9093
INTERNATIONAL 36
24.5 x 36 x 16 DIA.

LS 9043
PRAIRIE PLANTER 24
11.5 x 24 x 18 SQ.

LS 9052
PRAIRIE PLANTER 36
15 x 36 x 26 SQ.

LS 9105
PRAIRIE PLANTER 48
22 x 48 x 36 SQ.

LS 9301
RIVERSIDE BOWL
15.5 x 45 x 16

LS 9095
INTERNATIONAL 60
18.5 x 60 x 18 DIA.

LS 9087
CARBONDALE PLANTER
26 x 60 x 34 CROSS

LS 8087
CARBONDALE BASE
5 x 38 x 42 SQ.

Dimensions given are height x width x depth.
Dimensions given are height x width x base in inches.
INTERLOCK
CONCRETE PRODUCTS INC.
SITE FURNISHINGS

CLASSIC PRECAST
GLASS FIBRE REINFORCED CONCRETE
SQUARE 41-9 AND RECTANGULAR 41-1 PLANTERS

TAPERED PLANTER 41-20

CROCUS PLANTERS 41-24

STACKABLE PLANTERS 41-7
Product Information

CUBES
Grey & Pink 4"x4"x4"
(Approximately 8 Per sq ft.)
Grey, Approximately 408 per ton
Pink, Approximately 408 per ton
420 per pallet

LANDSCAPE REGULATION
Grey 4"x4"x8"
(Approximately 4.1 Per sq ft.)
Approximately 173 per ton
250 per pallet

REGULATION
Grey & Pink 4"x5"x9"
(Approximately 2.9 Per sq ft.)
Grey, Approximately 105 pieces per ton
Pink, Approximately 110 pieces per ton
146 per pallet

JUMBO
Grey & Pink 4"x7"x10"
(Approximately 2 Per sq ft.)
Grey, Approximately 68 pieces per ton
Pink, Approximately 75 pieces per ton
105 per pallet

Distributed by:
Fletcher Granite Co., Inc.
275 Groton Rd.
No. Chelmsford, MA 01863-1299
## TimberForm® Craftsmen

<table>
<thead>
<tr>
<th>Style</th>
<th>Model</th>
<th>Length</th>
<th>Width</th>
<th>Height</th>
<th>Mounting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Litter Container</td>
<td>Open Top</td>
<td>2667-OT</td>
<td>2' 1&quot; [635mm]</td>
<td>2' 10&quot; [665mm]</td>
<td>Surface*</td>
</tr>
<tr>
<td></td>
<td>Flat Top</td>
<td>2667-FT</td>
<td>2' 1&quot; [635mm]</td>
<td>2' 10&quot; [665mm]</td>
<td>Surface*</td>
</tr>
<tr>
<td></td>
<td>Dome Top</td>
<td>2667-DT</td>
<td>2' 1&quot; [635mm]</td>
<td>3' 7&quot; [1090mm]</td>
<td>Surface*</td>
</tr>
<tr>
<td></td>
<td>Ash/Dome Top</td>
<td>2667-AT</td>
<td>2' 1&quot; [635mm]</td>
<td>3' 7&quot; [1090mm]</td>
<td>Surface*</td>
</tr>
<tr>
<td></td>
<td>Hamper Top</td>
<td>2667-HT</td>
<td>2' 1&quot; [635mm]</td>
<td>3' 5&quot; [1040mm]</td>
<td>Surface*</td>
</tr>
</tbody>
</table>

**Material:** Frame of black powder-coated cast iron. Supplied as standard with chrysanthemum graphic in frames.

**Options:** Frame and top color. Can be special ordered with rhododendron or custom graphic and/or lettering in frames.

**Notes:** Includes black powder-coated 36-gallon steel liner. Top matches frame unless otherwise specified except the hamper top which is brushed stainless steel. Key-locking tops are standard on -FT, -DT and -AT models.

* For permanent or movable applications only (anchor bolts by others).
Ironsites™ U.S. patents D304, 253 & D310, 636

From the classics to Post-Modern...a design to transcend the limits of period styling...massive, delicate...always elegant. Full 3/8"-thick solid steel bars...

The New Economy Series

Lighter Weight designs in this popular series... 1/4"-thick steel bars...slightly smaller scale...

P.O. Drawer 330 Dunkirk, Maryland, 20754 USA
Toll-Free in The USA, CANADA & MEXICO
Victor Stanley, Inc.
- Manufacturers of Quality Site Amenities since 1962 -

IRONSITES™
U.S. PATENTS D304,253 & D310,632

THE PRODUCT THAT BECAME A FAMILY...

Now available with side opening doors...
The SD-42 (36-gallon) and the SD-35 (24-gallon) both look just like the S-42 and S-35 respectively, but include massive hinged doors with stainless hinge pins and oilite bronze bearings... choose lock or latch... all lid options are available...

Model SD-35 or SD-42
with S-1 or S-2 dome top.

Model SD-42 - 36-gallon litter receptacle.

Model S-20 - Stand-alone ash urn, with stainless steel ash tray.

Model SD-35 or SD-42
with standard tapered lid.

Model S-35 - 24-gallon litter receptacle.

Model S-45 - the BIG one... 45-gallon capacity but as graceful as all the rest.

Model PS-535 - A center-post mounted 24-gallon alternative with inground or surface-mount options... a new variation on the S-35.

P.O. Drawer 330, Dunkirk, Maryland 20754 U.S.A. Tel: 301-855-8300 • Fax: 410-257-7579
THE PRODUCT THAT BECAME A FAMILY...

Model S-45 - the BIG one... 45-gallon capacity but as graceful as all the rest.

Model S-535 - a center-post mounted 24-gallon alternative with inground or surface-mount options... a new variation on the S-33.

Model S-20 - Stand-alone ash urn, with stainless steel ash tray.

Now available with side opening doors...
The SD-42 (36-gallon) and the SD-35 (24-gallon) both look just like the S-42 and S-35 respectively, but include massive hinged doors with stainless hinge pins and oilite bronze bearings... choose lock or latch... all lid options are available...

Model SD-35 or SD-42 with S-1 or S-2 dome top.

Model SD-35 or SD-42 with standard tapered lid.

Model S-35 - 24-gallon litter receptacle.

P.O. Drawer 330, Dunkirk, Maryland 20754 U.S.A. Tel: 301-855-8300 • Fax: 410-257-7579
Radial Receptacles combine distinctive design with durable materials to provide a unique solution for active places.

Formed of linear medium density polyethylene (LMDPE), they are resistant to UV rays, moisture, corrosive substances, and extreme temperatures.

The textured surfaces make units less susceptible to scratches and graffiti. The receptacle base is ballasted and may be mounted to hard surfacing.

A cable is included with each unit to attach the lid to the base for security and easy maintenance.

A polyethylene liner included with each unit. Offered in 30- or 45-gallon capacities, and side or top opening options available.

Six standard colors are offered. Choose from solid colors Ivy, Dove, Grotto or aggregate colors Millstone, Patina or Cobblestone. Appearance of aggregate finish may vary. Orders of 50 or more may be specified in a custom color for an upcharge.

**TOP** Radial Receptacle, 45-gallon, side opening, and Radial Receptacle, 30-gallon, side opening in Ivy.

**BOTTOM LEFT** Texture detail, Millstone.

**BOTTOM CENTER** Radial Receptacle, 30-gallon, top opening and Radial Receptacle, 45-gallon, top opening in Cobblestone.

**BOTTOM RIGHT** Texture detail, Grotto.

Call for Radial literature.

| Radial Receptacle, 30-gallon, top-opening | 22" x 33" |
| Radial Receptacle, 30-gallon, side-opening | 22" x 41" |
| Radial Receptacle, 45-gallon, top-opening | 26" x 35" |
| Radial Receptacle, 45-gallon, side-opening | 26" x 44" |


LARGE 32 GALLON CAPACITY
EXTRA HEAVY OUTY
Top Edy 5/8 diameter steel bar
Vertical Straps: 1/4" x 1-1/2" steel bar
Reveal Strip: 1/4" x 3" steel bar
Liner: 22- or 32-gallon plastic
Cover: Spun 14-gauge steel with vinyl-coated cable
Finish: See page 48 for choice of polyester powder finish (shown in Black and Hunter Green).

84-22 22-gallon all-steel Receptacle, 150 lbs. $536
84-32 32-gallon all-steel Receptacle, 175 lbs. $599

MATCHES ASH URN 80
AVAILABLE IN 22- & 32-GALLON CAPACITY

MATERIALS
Top Edge: 5/8"-diameter steel bar
Vertical Straps: 1/4" x 1-1/2" steel bar
Reveal Strip: 1/4" x 3" steel bar
Liner: 22- or 32-gallon plastic
Cover: Spun 14-gauge steel with vinyl-coated cable
Finish: See page 48 for choice of polyester powder finish (shown in Bronze).

80-00 All-steel Ash Urn, 65 lbs. $283

RECEPTACLE 107
• LARGE 32-GALLON CAPACITY
• EXTRA HEAVY DUTY

MATERIALS
Top Edge: 5/8"-diameter steel bar
Vertical Straps: 3/8" x 3/4" steel bar and 3/8" x 1-1/4" steel bar
Reveal Strip: 1/4" x 3" steel bar
Liner: 32-gallon plastic
Cover: 14-gauge spun steel with 10"-diameter opening secured with vinyl-coated cable
Finish: See page 48 for choice of polyester powder finish (shown in Bronze).

107-32 32-gallon all-steel Receptacle, 221 lbs. $657
APPENDIX II – PLANS, SECTIONS, DETAILS AND SPECIFICATIONS

RECONSTRUCTION OF WALK AND STEPS, 1930
SOUTHERLY STEPS AND LANDING, 1930
STEPS AND LANDING; SLOPE AND WALK, 1931
TOPOGRAPHIC SECTIONS, CIRCA 1931
FENCING AND CURB DETAILS, 1961
CONCRETE CURB DETAIL, 1962
COMMEMORATIVE TABLETS, 1975
RESTORATION OF FENCES, 1975
GRANITE BOLLARD AND PAVERS DETAILS, 1979
GRANITE CURBS AND FENCE POSTS, 1979
VARIOUS SITE DETAILS, 1979
TURF MIX
STUMP REMOVAL
## LANDSCAPE SUPPLIES

**NORTHEAST NURSERY**

**PROFESSIONAL GRASS SEED MIXTURES**

### NORTHEAST PREMIUM SUNNY

Our best sun loving mix! Contains top quality Famous Kentucky Bluegrass for color, Rodeo II Perennial Ryegrass for quick germination and Creeping Red Fescue for hardiness.

<table>
<thead>
<tr>
<th>Item No</th>
<th>Size</th>
<th>Wholesale</th>
<th>Retail</th>
</tr>
</thead>
<tbody>
<tr>
<td>34-1505</td>
<td>25 lbs. 10,000 sq.ft.</td>
<td>50.00</td>
<td>69.99</td>
</tr>
<tr>
<td>1-9 bags</td>
<td>45.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10+ bags</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item No</th>
<th>Size</th>
<th>Wholesale</th>
<th>Retail</th>
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</thead>
<tbody>
<tr>
<td>34-1504</td>
<td>10 lbs. 4000 sq.ft.</td>
<td>22.00</td>
<td>29.99</td>
</tr>
<tr>
<td>1-9 bags</td>
<td>20.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10+ bags</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### NORTHEAST PREMIUM SHADY

Our best shade loving mix! Contains 70% fescue for shade tolerance and durability and 30% Perennial Ryegrass for fast germination.

<table>
<thead>
<tr>
<th>Item No</th>
<th>Size</th>
<th>Wholesale</th>
<th>Retail</th>
</tr>
</thead>
<tbody>
<tr>
<td>34-2005</td>
<td>25 lbs. 5000 sq.ft.</td>
<td>42.50</td>
<td>54.99</td>
</tr>
<tr>
<td>1-9 bags</td>
<td>38.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10+ bags</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item No</th>
<th>Size</th>
<th>Wholesale</th>
<th>Retail</th>
</tr>
</thead>
<tbody>
<tr>
<td>34-2004</td>
<td>10 lbs. 2000 sq.ft.</td>
<td>18.25</td>
<td>24.99</td>
</tr>
<tr>
<td>1-9 bags</td>
<td>15.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10+ bags</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### NORTHEAST SUN-SHADE MIX

Contains Affinity Perennial Ryegrass, a new variety of ryegrass that is durable and quick germinating. This seed mix is excellent for the part sun and shade area.

<table>
<thead>
<tr>
<th>Item No</th>
<th>Size</th>
<th>Wholesale</th>
<th>Retail</th>
</tr>
</thead>
<tbody>
<tr>
<td>34-2102</td>
<td>25 lbs. 7500 sq.ft.</td>
<td>45.00</td>
<td>59.99</td>
</tr>
<tr>
<td>1-9 bags</td>
<td>41.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10+ bags</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item No</th>
<th>Size</th>
<th>Wholesale</th>
<th>Retail</th>
</tr>
</thead>
<tbody>
<tr>
<td>34-2101</td>
<td>10 lbs. 3000 sq.ft.</td>
<td>20.00</td>
<td>27.99</td>
</tr>
<tr>
<td>1-9 bags</td>
<td>18.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10+ bags</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### NORTHEAST TRI-RYE

A blend of three permanent turf-type ryegrasses that show quick growth, good color and winter hardiness.

<table>
<thead>
<tr>
<th>Item No</th>
<th>Size</th>
<th>Wholesale</th>
<th>Retail</th>
</tr>
</thead>
<tbody>
<tr>
<td>34-4002</td>
<td>25 lbs. 3750 sq.ft.</td>
<td>42.50</td>
<td>59.99</td>
</tr>
<tr>
<td>1-9 bags</td>
<td>39.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10+ bags</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item No</th>
<th>Size</th>
<th>Wholesale</th>
<th>Retail</th>
</tr>
</thead>
<tbody>
<tr>
<td>34-4001</td>
<td>10 lbs. 1500 sq.ft.</td>
<td>19.00</td>
<td>24.99</td>
</tr>
<tr>
<td>1-9 bags</td>
<td>16.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10+ bags</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SEED MIXTURE RECOMMENDATIONS

General Purpose Mixture

20% Palmer, Pennant, Prelude, or Premier Perennial Ryegrass
25% Adelphi Kentucky Bluegrass
25% Merit Kentucky Bluegrass
30% Eclipse Kentucky Bluegrass

Seed rate: 2 - 2 1/2 lbs/1000 sq. ft.

Drought Tolerant Mixture

70% Fine Fescue (two of the following: Enziva, Checker, Reliant, Tornament, Spartan)
20% Perennial Rye (one of the following: All Star, Dasher, Gator, Palmer, Pennant, Prelude, Yorktown II)
10% Kentucky Bluegrass (one of the following: Adelphi, America, Ranff, Bristol, Challenger, Eclipse, Fylking, Merit, Nassau, P-104, Rugby)

Seed rate: 3-4 lbs/1000 sq. ft.

Wear Tolerant Mixture (same as General Purpose Mixture)

20% Palmer, Pennant, Prelude, or Premier Perennial Ryegrass
25% Adelphi Kentucky Bluegrass
25% Merit Kentucky Bluegrass
30% Eclipse Kentucky Bluegrass

Seed rate: 2 - 2 1/2 lbs/1000 sq. ft.

Shade Tolerant Mixture

60% Boreal Creeping Red Fescue
20% Yorktown II Perennial Ryegrass
20% Jamestown II Chewings Fescue

Seed Rate: 3-4 lbs/1000 sq. ft.
# Turf Preservation Maintenance Program
Boston National Historical Park

## Alternative Choices to Use Within Seed Mixes

### Kentucky Bluegrass Cultivars

**Leaf spot resistance**
- Merion
- Bonnieblue
- Bristol
- Challenger
- Chateau
- Eclipse
- Adelphi
- Midnight

### Fine Fescue Cultivars

**Drought**
- Ensylva
- Checker
- Reliant
- Tournament
- Spartan

### Shade Tolerance

- Glade
- Bristol
- Chateau
- Eclipse

### Perennial Rye Cultivars

**Drought**
- All Star
- Dasher
- Gator
- Palmer
- Pennant
- Prelude
- Yorktown II

### Drought Tolerance

- Adelphi
- America
- Banff
- Bristol
- Challenger
- Eclipse
- Fylking
- Merit
- Nassau
- P-104
- Rugby
Prior to stump removal, contractors or employees performing the work should be made aware of the site's commitment to the preservation and protection of significant landscape and archeological features.

The stumps resulting from tree removal should be treated in one of the following ways:

1. **Natural Decomposition**
   Wherever possible, stumps will be cut flush to the ground and left to decompose to minimize additional damage to the landscape. For species prone to re-sprouting, swipe the cambium with a herbicide labeled for cut stump treatment. Consult the Regional IPM Coordinator prior to use of any pesticide.

2. **Accelerated Decomposition**
   In this case, decomposition may be enhanced by drilling 1-1/2” diameter holes to a 6” depth into the stump, spaced every 2-3” in a grid-like pattern. The holes should be filled with a mixture of 1 part finely screened compost, 1 part sand to enhance drainage, and 1 part high-nitrogen fertilizer such as a slow-release synthetic fertilizer or a 100% organic fertilizer such as fried blood. When treating stumps around stone, concrete or metal, extreme care must be taken to avoid using nitrogen products with a high salt index (greater than 60). High nitrates = high salt index = stone and metal deterioration. As noted above, for species prone to re-sprouting, swipe the cambium with a herbicide labeled for cut stump treatment. Consult the Regional IPM Coordinator prior to use of any pesticide.

3. **Stump Grinding**
   In some cases, stump grinding will be necessary to provide sufficient planting space for the replacement of missing historic vegetation. In this case, a stump grinder should be used to remove the base to a depth of 12-24” depending on the size of the existing stump and the anticipated size of new plantings. The depression will be backfilled and leveled using parent soil found on-site or a new mix to match the existing soil composition. If no replanting is planned to occur, simply grind stump to a depth of 2-4”, cover with topsoil and re-seed, if necessary.

4. **Roots Cut at Trunk Flare**
   In some cases, tree stumps need to be removed mechanically to allow for planting. They should be removed by a) washing the soil from the tree base to expose lateral roots at the trunk flare; b) cut lateral/anchoring roots as close to the trunk flare as possible; c) remove trunk at a depth of 6-8”; d) backfill hole with parent soil found on-site or with a new mix to match the existing soil composition.
APPENDIX III – REFERENCED MATERIAL

CORRESPONDENCE WITH THE OLMSTED FIRM, 1919-1920

MAINTENANCE VEHICLE INFORMATION

BUNKER HILL PARKING CORRESPONDENCE

BUNKER HILL SIGNS – 106 COMPLIANCE FORMS

1992 LANDSCAPE PRESERVATION MAINTENANCE PROGRAM
FOR BOSTON NATIONAL HISTORICAL PARK
(Annotated version)
Bunker Hill Monument

F. L. Olmsted May 21, 1919

Went there between 5 and 6 o'clock. I thought the walk along the top of the bank on the north half of the east side ought to be regraded and there ought to be some regrading just east of the [regrade] walk running north from monument to the top of the steps. There ought to be a strong fence and hedge along the top of the bank all the way around. There should be new tight iron fence and hand rails in place of the open handrail on the steps. Additional pickets should be introduced in the cast iron fence to stop children from getting through a space between the slanting sided posts and the pickets next to them and there probably should be a piece of fence connecting with the rail at the bottom and top of the steps with the outside fence, leaving the gate for access to the space just back of the gate. The more or less disintegrated dark concrete walks on the upper level should be replaced with wihreament concrete with very little change in layout or grades but with some rather carefully study as to details, including the detail of jointing in the curbing and irregular areas. The row of lindens at the foot of the bank, of which a few remain, should be replaced with young trees.

We discussed all these things and I understood that Olmsted Brothers would be called upon for more detailed and definite advise. Mr. de las Casas was inclined to advocate sloping the new concrete walks away from the edge of the bank contrary to the general slope of the ground as a means of more safely taking care of the rain water. I was strongly opposed to this because it would look ugly and is entirely unnecessary.
22nd May, 1919

Mr. W. D. de las Casas, Chairman,
Metropolitan Park Commission,
18 Tremont Street,

Dear Sir:

As a basis for plans for the work at Bunker Hill which you discussed with me the other day, I assume that Mr. Rablin is having made surveys and measurements made, and it occurred to me that it would be well for me to send you a memorandum of the data of that sort which seemed to me necessary, viz:

1. A plan and section of each one of the four main flights of steps, the plan to extend from the first post of the picket fence on each side of the opening in front of the steps to the top of the steps, at a scale of say 3 inch to the foot, as a basis for construction drawings for new hand rail and fence, etc.

2. Measured detailed drawing of one of principal posts of outside fence with the rails and pickets on one side of it for a distance of three pickets, with special attention to the detail of the cast iron rails at and near their junction with the base and top of the main post; the scale say three inches to the foot as a basis for supplementary picket. The man who makes this measured
Mr. de las Casas - 3

Drawing had better also make a sketch suggestion of his idea for the most economical and feasible method of inserting and attaching the supplementary picket between the main post and the picket next to it. This supplementary picket would not rise above the top rail or go below the bottom rail.

3. General map, on scale of say 20 feet to the inch, showing outside property line as marked by fence, with figures of elevation on the fence curb at intervals; location of foot of bank and gutter along same, with figures of elevation; locations of catch basins with elevation of present grating and elevation and size of overflow; locations of trees; locations of existing walks on the upper level, with figures of elevation at frequent intervals; outline of enclosure of monument with elevations of curb of enclosing fence, and of line of building adjacent to the monument with elevations at present finished grade and at steps; one foot contours, showing the present surface in the northeast quadrant only, extending only a short distance over the edge of the bank and extending also a few feet to the west of the north and south walk.

Very truly yours,
George Lyman Rogers, Esq.,
Secretary, Metropolitan Park Commission.

Dear Sir:

Mr. F. L. Olmsted has prepared study and suggested the work necessary for the proper restoration of the grounds surrounding Bunker Hill Monument. We have conferred on these matters and I approve his suggestions and transmit them herewith with estimates of cost.

1. 198 special pickets to make old outside fence boy-tight, $500.00

2. Steel picket fences connecting old outside fence with foot of steps and running up ramp of steps, about 5' 6" high, pickets 7/8" square, 6" o. c. double bottom rails, all panels special as to size and slope, 8 gates 4' wide, for access to foot of bank with wheelbarrows, etc. 8 panels curved in plan, 314 lin. ft. @ $4.00 per lin. ft.,
   Plus $24.00 extra per gate, 1,256.00

3. 8 short pieces of chain link fence at top of bank next to steps, 120 ft. @ $1.50 per ft., 180.00

4. Removal of old tar walk at foot of bank (inside of fence), smoothing up surface, topsoiling and seeding, 500 cu. yds. removed and replaced by loam @ $4.00, 2,000.00

5. Pointing steps, resetting a few, and removing 5 steps at top of north flight and recutting ends of ramps of north flight, 500.00

6. Reconstructing main cross walks and paving around monument as per plan, brick on concrete base preferred, granolithic as alternative. Includes extension of brick sidewalk pavement to base of steps, 1400 sq. yds. @ $6.50, 9,100.00
   100 lin. ft. step risers concrete, 100.00
   2030 lin. ft. 3" curbing concrete, integral with concrete base of walks, 2,030.00
MARCY

1) Type of equipment used, stating purpose, including what kind and how much material is hauled

(a) Pick-up trucks are used to bring heavy supplies up to the Lodge. This is done on an irregular basis depending upon the jobs being done. Among the items brought up top with the trucks are pallets of fertilizer and lime for the turf a couple of times a year. Regular deliveries of items such as custodial supplies are walked up from the street.

(b) A Hustler tractor mower cuts the top of the Monument grounds at least once per week during the growing season, sometimes twice a week in late spring or for special events. It is also used in the fall with a vacuum attachment for leaf pick-up. The slopes are mowed with walk behind mowers.

(c) A small Bobcat loader plows the snow on top in the winter. See no. 4 below.

(d) A rented lift is brought up 1 to 2 times a year to replace lamps in the cobra street lights.

2) Size (width and weight) of equipment, stating the frequency used for each

(a) Hustler tractor mower: width: 74 inches w/vacuum, 60 inches without weight: 1425 lbs w/vacuum, 1030 lbs without use: 1X weekly for 7-8 months

(b) Small Bobcat: width: 55 inches weight: 4830 lbs. use: 10-20X yearly

(c) Typical pick-up: width: 76 inches loaded weight 7200 lbs. use: 20-30X yearly

For reference, here are data for other vehicles which occasionally access the site for certain jobs.

(d) Large Bobcat loader: width: 70 inches weight: 12,185 lbs.

(e) Small dump truck: width: 76 inches loaded weight: 11,000 lbs

(f) Large dump truck: width: 90 inches loaded weight: 35,000 lbs.

(g) Small bucket truck: width: 95 inches weight: 23,900 lbs.

(h) Cushman dump vehicle: width: 54 inches weight: 1000 lbs. Not used at Bunker Hill now but with a wider ramp it could be used for trash barrel pick-up. A wider ramp also might accommodate an ambulance if needed although I don't have any figures for that.

3) How often is site regraded?

Dog holes are filled whenever necessary which can be several times a month in the warm weather. Attempts to level humps and dips are done generally in the spring. Soil is brought up in the small dump truck and then spread in the low spots with the small Bobcat and hand finished. The high spots are not altered only the low spots are brought up to grade. Tire tracks are regraded in the spring by hand.

4) What are current snow removal procedures? How often is snow removed? Is it removed throughout the entire site? If not, please specify areas maintained.

Snow is removed from all concrete walkways on top of the Monument grounds as well as the entire street sidewalk around the perimeter of the site. These are generally done with the small Bobcat although the large Bobcat may be used if the small Bobcat is not working or occupied elsewhere. Snow is not removed from the asphalt walk around the top of the hill except where it connects to the handicap ramp. Snow on the ramp is removed by snowblower or by hand depending upon conditions. All of the stairs are shoveled by hand. Snow is removed during and immediately after every snow
storm. The walks may be done several times during a larger storm to prevent heavy build-up of snow. Ice control also may occur for several days after a storm if there is melting during the day and refreezing at night. This is done by spreading ice melt with a walk behind spreader. The bags of ice melt are brought up to the top by the small Bobcat or a 2-wheel hand truck.
To: Jim Mansfield  
Fax: 635-4785  

From: Ruth Raphael  
Date: 06/16/00  

Re: Bunker Hill Parking  
Pages: 2 (including cover sheet)  

CC:  

☐ Urgent  ☐ For Review  ☐ Please Comment  ☐ Please Reply  ☐ Please Recycle  

Jim: Attached is a site plan showing our parking needs around Bunker Hill Monument. They are as follows:

1. We would like to designate two handicapped parking spaces close to the handicapped ramp on the Monument Ave. Side (Massachusetts Gate).

2. We'd also like to have a bus drop off area that would accommodate two buses. Either the bus drop off can be in front and to the east of the gate or they should be to the east of the gate and the area in front of the gate should be no parking.

3. There should be No Parking on the corner across from the intersection of High and Pleasant Street, in front of the removable fence section (for vehicle access to the site for maintenance and special events).

4. The area directly in front of the Bunker Hill Museum should be signed as visitor parking. Although the museum is not currently open on a regular basis we are planning to rehabilitate the building to use as the primary interpretation for Bunker Hill in partnership with the Charlestown Historical Society. We are just beginning planning for that project and should have a better sense of any additional needs as the planning progresses.

Thanks for all your help. Give me a call at 242-5691 if you have any questions.
Jim: A few weeks ago, I sent you a fax with a sketch showing the addition of a few handicapped spaces, bus drop off and no parking areas around Bunker Hill Monument. For the bus drop off area, we had requested that it be either in front of and to the east of the Massachusetts Gate (facing Monument Ave) or both spaces should be to the east of the gate and the area in front of the gate should be no parking. We would like to do the latter—keep the area in front of the Massachusetts Gate a no parking area since this is where the handicapped ramp is and where the Freedom Trail enters the site. The bus spaces would then be to the east of the gate. Please call if you have any questions (242-5691).

Thanks for all your help,
ASSESSMENT OF ACTIONS HAVING AN EFFECT ON CULTURAL RESOURCES
BOSTON NATIONAL HISTORICAL PARK

A. DESCRIPTION OF UNDERTAKING

1. Project Name: Bunker Hill

2. Work/Project Description:

Work will include placement of four signs, 24" x 30", one at each of four entrances to the site. Signs would be black background with white lettering and color NPS arrowhead (see attached graphic for colors, text and layout). The signs are both to identify the site and to convey regulatory information. Black was chosen as the background color to work with the newly refurbished iron fence that surrounds the site. The placement of the signs is to provide information to all visitors as they enter the site. Placing the signs on the fence eliminates the need for the addition of new sign posts that would add clutter to the site. The current regulatory signs are mounted on site light posts well above eye level to protect them from vandalism. While placement on the fence makes them easily reachable, by placing them at a more visible street level location, in full view of neighboring residents, it is hoped that vandalism will be minimized. This placement also makes them more visible to site visitors.

3. Affected Resources (See below for National Register status):

Name: Bunker Hill IDCSI: _______
Name: ___________________________ IDLCS: _______
Name: ___________________________ IDLCS: _______

4. Ground Disturbing Activities:

____ Repair/replacement of existing underground utilities (IV-B-8)
____ Removal of trees, stumps, etc.
____ Archeological monitoring and testing (IV-B-4)
____ Disturb, destroy, or make archeological resources inaccessible

Archeological Survey ______ Yes ______ No (If no, an archeological assessment may be required)

5. Type of Undertaking -- Programmatic Exclusions

____ Preservation maintenance (housekeeping, routine and cyclic maintenance, and stabilization) (IV-B-1)
____ Routine grounds maintenance (IV-B-2)
____ Installation of environmental monitoring units (IV-B-3)
____ Investigations of historic structures involving intrusion into historic fabric (IV-B-4)
____ Rehabilitation and widening of existing walks, paths, and sidewalks (IV-B-6)
____ Repaving of existing roads or existing parking areas (IV-B-7)
____ Repair/replacement of utility lines, transmission lines, and fences (IV-B-8)
____ Rehabilitation work involving retaining and preserving, protecting and maintaining, and repairing and replacing in kind materials and features of historic structures (IV-B-9)
____ Health and safety activities such as radon mitigation and removal of asbestos, lead paint, and buried oil tanks (IV-B-10)
____ Installation of fire detection/suppression systems and security alarm systems (IV-B-11)
____ Upgrading of HVAC systems (IV-B-11)
X Erection of signs, wayside exhibits, and memorial plaques (IV-B-12)
6. Type of Undertaking – Other

- Destroy, remove, or alter features/elements from a historic structure
- Add nonhistoric features/elements to a historic structure
- Alter or remove features/elements of a cultural landscape
- Add nonhistoric features/elements to a cultural landscape
- Begin or contribute to deterioration of historic fabric, terrain, setting, landscape elements, or archeological or ethnographic resources
- Other (please specify):

7. Mitigation Measures:

The signs are removable.

8. Project Data:

- Identified in GMP
- Identified in RMP (#___)
- Identified in IP
- Identified in HSR
- Identified in CLR
- Identified in CMP
- Plans/Specifications
- Scope of Work/Project Directive
- X Drawings
- Photographs
- Samples
- Lists of Materials

9. A. Originator: Ruth Raphael   Title: Planner
B. Prepared By: Ruth Raphael    Date: March 20, 1997    Title: Planner

National Register Status (* Denotes MHC Preservation Restriction):

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B. REVIEWS BY CULTURAL RESOURCE SPECIALISTS

The park 106 coordinator requested review by the park's cultural resource specialist/advisers as indicated by check-off boxes or described below:

[] ARCHEOLOGIST
Comments:

Check if project does not involve ground disturbance [X]
Assessment of Effect: X No Effect ___ No Adverse Effect ___ Adverse Effect ___ PA Exclusion
Recommendations for conditions or stipulations:

Name: ____________________________ Date: ____________

[] CURATOR
Comments:

Assessment of Effect: ___ No Effect ___ No Adverse Effect ___ Adverse Effect ___ PA Exclusion
Recommendations for conditions or stipulations:

Name: ____________________________ Date: ____________

[] ETHNOGRAPHER
Comments:

Assessment of Effect: ___ No Effect ___ No Adverse Effect ___ Adverse Effect ___ PA Exclusion
Recommendations for conditions or stipulations:

Name: ____________________________ Date: ____________

[] HISTORIAN
Comments:

Assessment of Effect: X No Effect ___ No Adverse Effect ___ Adverse Effect ___ PA Exclusion
Recommendations for conditions or stipulations:

Name: ____________________________ Date: ____________

Martin Blatt

3/27/97
FROM

HISTORICAL ARCHITECT

Comments:

Check if project meets Secretary's Standards [ ]
Assessment of Effect: ____ No Effect X No Adverse Effect ____ Adverse Effect ____ PA Exclusion
Recommendations for conditions or stipulations:
I WOULD RECOMMEND THE REMOVAL OF CURRENT SIGNAGE SO AS NOT TO CREATE ANY VISUAL CONFUSION OR ADVERSE EFFECT ON THE HISTORIC SCENE.
Name: __________________________ Date: 2 April 97

HISTORICAL LANDSCAPE ARCHITECT

Comments:

Check if project meets Secretary's Standards [ ]
Assessment of Effect: ____ No Effect ____ No Adverse Effect ____ Adverse Effect ____ PA Exclusion
Recommendations for conditions or stipulations:

Name: __________________________ Date: __________________

OTHER ADVISERS
Title or area of specialty: Preservation Specialist/Sign Coordinator
Comments: Signs are required to convey necessary information and have no effect on the historic scene. Standard NPS entrance signs & regulatory signs are an inappropriate intrusion to the scene.
Assessment of Effect: X No Effect ____ No Adverse Effect ____ Adverse Effect X PA Exclusion
Recommendations for conditions or stipulations:

Name: __________________________ Date: 3/27/97

* It is recommended that the existing NPS entrance sign not be removed until it requires removal because of poor condition.
HISTORICAL ARCHITECT
Comments:

Check if project meets Secretary's Standards [ ]
Assessment of Effect: No Effect No Adverse Effect Adverse Effect PA Exclusion
Recommendations for conditions or stipulations:

Name: _____________________________ Date: ________________

HISTORICAL LANDSCAPE ARCHITECT
Comments: These signs will provide site identification & regulatory information that is appropriate to the historic character of the site. The current regulatory signs are meant to replace an inadvisable & poorly sited.

Check if project meets Secretary's Standards [ ]
Assessment of Effect: No Effect No Adverse Effect Adverse Effect PA Exclusion
Recommendations for conditions or stipulations:

Name: _____________________________ Date: ________________

OTHER ADVISERS
Title or area of specialty: Preservation Specialist/Sign Coordinator
Comments: Signs are required to convey necessary information and have no effect on the historic scene. Standard NPS entrance signs & regulatory signs are an inappropriate intrusion to the scene.

Assessment of Effect: No Effect No Adverse Effect Adverse Effect PA Exclusion
Recommendations for conditions or stipulations:

Name: _____________________________ Date: ________________

* It is recommended that the existing NPS entrance sign not be removed until it requires removal because of poor condition.
C. PARK 106 COORDINATOR REVIEW AND RECOMMENDATIONS

1. Undertaking: X Yes ___ No Prior Compliance: ___ Serial # BOST _____

2. Assessment of Effect:
   X No Effect ___ No Adverse Effect ___ Adverse Effect

3. Compliance Requirements:

   A. STANDARD 36 CFR PART 800 CONSULTATION
      1. No Effect or No Adverse Effect:
         Submitted to SHPO _________ Comments Received: _________ Concur: _________
         Submitted to BLC _________ Comments Received: _________ Concur: _________
         Submitted to ACHP _________ Comments Received: _________ Concur: _________

   2. Adverse Effect: Memorandum of Agreement Attached

   B. PROGRAMMATIC EXCLUSION UNDER 1995 SERVICEWIDE PROGRAMMATIC AGREEMENT
      The above action meets all conditions for a programmatic exclusion under Stipulation IV of the 1995 Servicewide Programmatic Agreement for Section 106 compliance.
      APPLICABLE EXCLUSION(S): Exclusion IV.B 12

   C. PLAN-RELATED UNDERTAKING
      Consultation and review of the proposed undertaking were completed in the context of a plan review process, in accordance with the 1995 Servicewide PA and 36 CFR Part 800.
      Specify plan/EA/EIS: ___________________ Date: ___________

   D. UNDERTAKING RELATED TO ANOTHER AGREEMENT
      The proposed undertaking is covered for Section 106 purposes under another document such as statewide agreement established in accord with 36 CFR Part 800.7 or counterpart regulations. Specify: ________

   E. STIPULATIONS/CONDITIONS
      Following are listed any stipulations or conditions necessary to ensure that the assessment of effect above is consistent with 36 CFR Part 800 criteria of effect or to avoid or reduce potential adverse effects.

Recommended by Park Section 106 Coordinator:

[Signature] Date: 4/16/97

Preservation Specialist

D. SUPERINTENDENT'S APPROVAL

The proposed work conforms to NPS Management Policies and NPS-28 and I have reviewed and approve the recommendations, stipulations, or conditions noted in Section C of this form.

[Signature] Date: _________

Superintendent
Boston National Historical Park

Bunker Hill

Please respect this historic site. For the enjoyment of all:

*Dogs must be leashed at all times*

*Clean up after your dog*

*Use trash receptacles*

*No rollerblading, skateboarding or bicycling*

---

Violators are subject to fine.
Bunker Hill Monument
Boston National Historical Park

LANDSCAPE PRESERVATION

MAINTENANCE PROGRAM

prepared for Boston National Historical Park
by the Olmsted Center for Landscape Preservation

in partnership with the
North Atlantic Region, Cultural Landscape Program
Boston National Historical Park
Bunker Hill Monument

Landscape Preservation Maintenance Program

Preface

This notebook identifies immediate work needed and guides long-term preservation maintenance in the landscape. Maintenance managers and historic preservationists developed the format with the primary objective of retaining the health and character of the existing landscape features.

The program developed for the Bunker Hill property includes eight sections. The first section provides background information on the site. The second section divides the property into areas. The third section inventories the trees within each area and designates individual numerical codes. The fourth section is a targeted reference calendar which recommends the best time to inspect conditions, monitor pests, and perform routine maintenance.

The first four sections set the framework for carrying out the fifth section, a detailed inspection of each landscape feature. An inspection of the trees was conducted in early August with the assistance of Tom O'Neil, Maintenance Foreman. The results of the inspection were summarized and used in the sixth section to specify field work needed to retain the health and character of the landscape features. The seventh section includes a record keeping sheet so that information can be routinely documented through time. This is followed by feature data sheets for tree species on the property which describe historical significance, propagation information, likely pests, and work procedures. The final section is a format for generating annual preservation maintenance reports.

Questions may arise regarding the significance of landscape features and, if removed, whether they should be replaced. We recommend that all features be retained until a thorough cultural landscape study is completed. Specimen plants should be maintained as long as possible and, when necessary, replaced in-kind by clonal propagation. All major pests, problems, treatments, removals, and replacements are an important part of the history and evolution of the property and should be recorded in the Record Keeping Section of this notebook.

Margie Coffin, Landscape Architect
Charlie Pepper, Supervisory Horticulturist

Olmsted Center for Landscape Preservation
Brookline, Massachusetts
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All areas defined above are based on maintenance practices as described by Tom O'Neil.
Map and inventory compiled using 'Existing Conditions Map' dated July 5, 1979 prepared by L. Zimble.
# Bunker Hill Landscape Inventory

## Category: Specimen Trees

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<td></td>
<td><strong>Quercus palustris</strong></td>
<td>3-0-13</td>
</tr>
<tr>
<td></td>
<td><strong>Tilia sp.</strong></td>
<td>3-0-14</td>
</tr>
<tr>
<td></td>
<td><strong>Tilia sp.</strong></td>
<td>3-0-15</td>
</tr>
<tr>
<td></td>
<td><strong>Tilia sp.</strong></td>
<td>3-0-16</td>
</tr>
<tr>
<td></td>
<td><strong>Tilia sp.</strong></td>
<td>3-0-17</td>
</tr>
<tr>
<td></td>
<td><strong>Acer rubrum</strong></td>
<td>3-0-18</td>
</tr>
<tr>
<td></td>
<td><strong>Platanus x acerifolia</strong></td>
<td>3-0-19</td>
</tr>
<tr>
<td>Between</td>
<td><strong>Quercus palustris</strong></td>
<td>4-0-01</td>
</tr>
<tr>
<td></td>
<td><strong>Quercus palustris</strong></td>
<td>4-0-02</td>
</tr>
<tr>
<td></td>
<td><strong>Quercus palustris</strong></td>
<td>4-0-03</td>
</tr>
<tr>
<td></td>
<td><strong>Quercus palustris</strong></td>
<td>4-0-04</td>
</tr>
<tr>
<td></td>
<td><strong>Tilia sp.</strong></td>
<td>4-0-05</td>
</tr>
<tr>
<td></td>
<td><strong>Quercus rubra</strong></td>
<td>4-0-06</td>
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<td></td>
<td><strong>Quercus palustris</strong></td>
<td>4-0-07</td>
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<td></td>
<td><strong>Quercus rubra</strong></td>
<td>4-0-08</td>
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<tr>
<td></td>
<td><strong>Quercus palustris</strong></td>
<td>4-0-09</td>
</tr>
<tr>
<td></td>
<td><strong>Ulmus americana</strong></td>
<td>4-0-10</td>
</tr>
<tr>
<td></td>
<td><strong>Quercus rubra</strong></td>
<td>4-0-11</td>
</tr>
<tr>
<td></td>
<td><strong>Tilia sp.</strong></td>
<td>4-0-12</td>
</tr>
<tr>
<td></td>
<td><strong>Quercus rubra</strong></td>
<td>4-0-13</td>
</tr>
<tr>
<td></td>
<td><strong>Tilia sp.</strong></td>
<td>4-0-14</td>
</tr>
<tr>
<td></td>
<td><strong>Tilia sp.</strong></td>
<td>4-0-15</td>
</tr>
<tr>
<td></td>
<td><strong>Tilia sp.</strong></td>
<td>4-0-16</td>
</tr>
<tr>
<td></td>
<td><strong>Tilia sp.</strong></td>
<td>4-0-17</td>
</tr>
</tbody>
</table>
### Bunker Hill

**CALENDAR FOR INSPECTION AND WORK**

<table>
<thead>
<tr>
<th>CATEGORY, AREA and/or FEATURE(S)</th>
<th>INSPECT/ MONITOR or WORK REQUIRED</th>
<th>REFERENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NPS - IPM</strong></td>
<td>National Park Service - Integrated Pest Management Notebook</td>
<td></td>
</tr>
<tr>
<td><strong>PMR</strong></td>
<td>1992 Pest Management Recommendations for Commercial Production and Maintenance of Trees and Shrubs, By New York Cooperative Extension, Cornell University</td>
<td></td>
</tr>
<tr>
<td><strong>S, J &amp; L</strong></td>
<td>Diseases of Trees and Shrubs, By Sinclair, Lyon, &amp; Johnson, Cornell University Press, 1987</td>
<td></td>
</tr>
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</table>
### CALENDAR FOR INSPECTION AND WORK

**Bunker Hill**

**MONTH:** J A N U A R Y

<table>
<thead>
<tr>
<th>CATEGORY, AREA and/or FEATURE(S)</th>
<th>INSPECT/MONITOR or WORK REQUIRED</th>
<th>REFERENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimen Trees</td>
<td>Monitor for winter damage, especially after ice and wind storms.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prune out dead, diseased, damaged wood and watersprouts. Prune for structural form and stability. Remove pruned and fallen branches, inspect for interior decay or pest damage.</td>
<td></td>
</tr>
<tr>
<td>Sidewalks and Walkways</td>
<td>After ice and snow storms, shovel or blow away ice and snow, then apply non-salt abrasive such as sand or ‘snow-melt’.</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** For treatment of pest and disease problems, consult site IPM Coordinator.
### Bunker Hill

#### CALENDAR FOR INSPECTION AND WORK

<table>
<thead>
<tr>
<th>MONTH:</th>
<th>F E B R U A R Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>CATEGORY, AREA and/or FEATURE(S)</td>
<td>SPECIMEN TREES</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SIDEWALKS AND WALKWAYS</td>
</tr>
<tr>
<td>REFERENCES</td>
<td></td>
</tr>
<tr>
<td>MONTH: MARCH</td>
<td>CATEGORY, AREA and/or FEATURE(S)</td>
</tr>
<tr>
<td>-------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Specimen Trees</td>
<td>Prune out dead, diseased, damaged wood and watersprouts. Prune for structural form and stability. Remove pruned and fallen branches, inspect for interior decay or pest damage.</td>
</tr>
<tr>
<td></td>
<td>Inspect twigs, branches, and trunk for SCALE</td>
</tr>
<tr>
<td></td>
<td>Best time of year to treat infestations of SCALE, MEALY BUGS, and MITES with dormant horticultural oil.</td>
</tr>
<tr>
<td>Lawns</td>
<td>Conduct soil analysis. Apply lime or gypsum as needed to adjust pH.</td>
</tr>
<tr>
<td>Category/Area and/or Feature(s)</td>
<td>Inspect/Monitor or Work Required</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Specimen Trees</td>
<td>Inspect all twigs, branches and bases for SCALE.</td>
</tr>
<tr>
<td></td>
<td>Treatment of SCALE, MEALY BUG, and APHID should be completed before buds break and when phototoxicity is not a problem.</td>
</tr>
<tr>
<td></td>
<td>Fertilize trees and shrubs, if needed, as determined by soil analysis. (A fall fertilization is preferable.) A fertilizer with slow release, organic nitrogen (2-3 year release) is recommended. Apply at a rate of 1 pound of nitrogen per 1,000 square feet of surface root area.</td>
</tr>
<tr>
<td></td>
<td>Best time for replacement in-kind of trees.</td>
</tr>
<tr>
<td>Specimen Trees</td>
<td>Monitor weather and inspect trees for level of infestation of pests and diseases, in particular, anthracnose on plane tree.</td>
</tr>
<tr>
<td></td>
<td>When trees are leafing out, best time to treat anthracnose.</td>
</tr>
<tr>
<td>Specimen Trees</td>
<td>Mulch around bases of street trees to conserve water and reduce compaction.</td>
</tr>
<tr>
<td>Lawns</td>
<td>Conduct soil analysis. Apply lime or gypsum as needed to adjust pH.</td>
</tr>
</tbody>
</table>
**Bunker Hill**

**CALENDAR FOR INSPECTION AND WORK**

<table>
<thead>
<tr>
<th>CATEGORY, AREA and/or FEATURE(S)</th>
<th>MAY</th>
<th>REFERENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Specimen Trees</strong></td>
<td>Best time for replacement-in-kind of trees removed, transplanting of trees into and from nursery.</td>
<td></td>
</tr>
<tr>
<td>-plane tree</td>
<td>Monitor weather and inspect trees for level of infestation of pests and diseases, in particular anthracnose on plane tree.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When trees are leafing out, best time to treat anthracnose.</td>
<td></td>
</tr>
<tr>
<td>-lindens and other street trees</td>
<td>Mulch around bases of street trees to conserve water and reduce compaction.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fertilizer injection for street trees as needed</td>
<td></td>
</tr>
</tbody>
</table>

*Note: For treatment of pest and disease problems, consult site IPM Coordinator.*
# Bunker Hill

## CALENDAR FOR INSPECTION AND WORK

### JUNE

<table>
<thead>
<tr>
<th>Category, Area</th>
<th>Inspect/Monitor or Work Required</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimen trees</td>
<td><strong>Rake all leaves, twigs and fruits throughout site, compost off site to remove overwintering pests and diseases.</strong></td>
<td></td>
</tr>
<tr>
<td>Water trees showing signs of water stress, particularly street trees.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plane tree</td>
<td><strong>Remove all fallen leaves to reduce reinfection of anthracnose.</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** For treatment of pest and disease problems, consult site IPM Coordinator.
<table>
<thead>
<tr>
<th>CATEGORY/AREA and/or FEATURE(S)</th>
<th>INSPECT/MONITOR or WORK REQUIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimen Trees</td>
<td>Prune out all dead, damaged, or diseased wood.</td>
</tr>
<tr>
<td></td>
<td><strong>Rake all leaves, twigs and fruits throughout site, compost off site to remove overwintering pests and diseases.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Water trees showing signs of water stress, particularly street trees</strong></td>
</tr>
</tbody>
</table>

**Note:** For treatment of pest and disease problems, consult site IPM Coordinator.
### Bunker Hill

#### CALENDAR FOR INSPECTION AND WORK

<table>
<thead>
<tr>
<th>MONTH: AUGUST</th>
</tr>
</thead>
<tbody>
<tr>
<td>CATEGORY, AREA and/or FEATURE(S)</td>
</tr>
<tr>
<td>Specimen Trees</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

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Note: For treatment of pest and disease problems, consult site IPM Coordinator.
<table>
<thead>
<tr>
<th>CATEGORY, AREA and/or FEATURE(S)</th>
<th>INSPECT/MONITOR or WORK REQUIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td>All trees and shrubs</td>
<td><strong>Adjust pH as determined by soil analysis results.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Good time of year to plant, but not transplant replacement trees and shrubs (deciduous only).</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Prune trees which bleed in the spring (maples).</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Remove dead, diseased, and damaged wood, suckers, watersprouts, and crossing branches.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Prune for structural form, open canopy, and stability. Remove pruned branches and inspect for interior decay and pest damage.</strong></td>
</tr>
</tbody>
</table>

**Note:** For treatment of pest and disease problems, consult site IPM Coordinator.
### CALENDAR FOR INSPECTION AND WORK

**MONTH:** October  
**CATEGORY, AREA and/or FEATURE(S):** Specimen Trees  
**INSPECT/MONITOR or WORK REQUIRED:** After first heavy frost, fertilize trees and shrubs, if needed, as determined by soil analysis. A fertilizer such as 18-7-11 with a slow release organic nitrogen (2-3 year release) is recommended. Apply at a rate of 1 lb. of nitrogen per 1,000 square feet of surface root area. Rake and remove fallen leaves and fruit before they rot to disrupt pest and disease life cycles, and to reduce overwintering inoculum. Compost in an enclosed area off-site.

**REFERENCES:** NEAPMG p45-57  

---

**Note:** For treatment of pest and disease problems, consult site IPM Coordinator.
| All trees and shrubs | **Rake and remove fallen leaves and fruit before they rot to disrupt pest and disease life cycles and to reduce overwintering inoculum. Compost off site.** |

**Note:** For treatment of pest and disease problems, consult site IPM Coordinator.
### Specimen Trees

**Monitor for winter damage, especially after ice and wind storms.**

**Inspect branches, trunks and cavities for insect egg cases, such as gypsy moth. Remove by scraping into container.**

**Inspect trees for dead, diseased and damaged wood. Prune for structural form and stability. Remove pruned and fallen branches, inspect for interior decay or pest damage.**

---

**Note:** For treatment of pest and disease problems, consult site IPM Coordinator.
From the field inspection conducted in August, the following were the key landscape issues which require further attention by the park:

**HAZARDOUS LIMB REMOVAL, STRUCTURAL PRUNING AND CABLEING:** Specimen trees with dead wood, internal decay or other hazardous conditions need cyclic in-the-tree cable inspection and pruning. A semi-annual mature tree pruning program is needed. Late winter (February - March) in the best time to carry out structural pruning to lighten tree canopies and remove leaning branches which threaten structures and/or visitor safety. Late summer (August - September) is the best time to prune trees which bleed in the spring and to remove dead or weak wood which could drop in heavy winds or winter storms.

**SALT DAMAGE TO SIDEWALK TREES:** Most of the trees located in the sidewalks area severely damaged by salt applied for ice control. Evidence of the damage appears as scorched leaves, dieback throughout the canopy and early leaf drop. Many trees have become so weakened that they are hazards and should be replaced. Replacement will eliminate the safety hazards but will not the cause of the problem. A salt reduction program should be implemented which includes increased snowblowing or shoveling and the alternative use of sand or ‘no-salt snow-melt’ for snow and ice control.

**SOIL COMPACTION:** Many trees, particularly those in the sidewalks, are located in areas of concentrated foot traffic. The soil surface should be aerated regularly and amended with organic matter or mulch to improve circulation of air and water around tree roots.

**VEHICLE DAMAGE:** Trees in the sidewalks have received substantial damage from parking cars and trucks. Many trees have large cavities or scars. Most of the younger trees are significantly damaged and would benefit from replacement and trunk protection. Cyclic pruning of branches growing into the streets will further reduce damage. In contrast, the trees inside the fence are in good condition with no evidence of recent mower damage - a credit to the maintenance staff on these steep slopes!

**LIGHTING:** There is currently a mixture of light standards. More historical research is needed to evaluate the style and location of lights on the property. This is discussed in the ‘Background Information’ section of the notebook.

**HANDICAPPED RAMP:** The ramp needs to be widened and upgraded to meet accessibility needs.

Recommendations for future OCLP requests are listed in the FY 92 ‘Completion Report’. Further details on these issues as well as other conditions and field work needed are listed in the ‘Inspection’ and ‘Work Needed’ sections of the Landscape Preservation Maintenance Program notebook.
## Bunker Hill

### INSPECTION FIELD SHEET

**Date** | **Inspectors** | Tom O'Neil, Margie Coffin
---|---|---

<table>
<thead>
<tr>
<th>Category: Specimen Trees</th>
<th>Overall Form</th>
<th>Leaf</th>
<th>Twigs</th>
<th>Branches</th>
<th>Trunk</th>
<th>Roots</th>
<th>Soil and pH</th>
<th>Fruit</th>
<th>Pest/Diseases</th>
<th>Size &amp; Unit &amp; Type Measure</th>
<th>Comment on Condition, Field Diagnosis, &amp; Work Needed</th>
<th>Further Diagnosis Needed (Y/N)</th>
<th>Critical Work (Y/N)</th>
<th>Replacement Plan (Y/N)</th>
<th>Action Completed (date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feature Name and Field Id. #</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Quercus palustris 1-0-01</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15 1/2&quot; dbh needs pruning of deadwood and for light clearance, reduce soil compaction</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Quercus palustris 1-0-02</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14&quot; dbh poor overall form due to early cut, needs pruning of deadwood and for light clearance, reduce soil compaction, girdling roots</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quercus palustris 1-0-03</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14 1/2&quot; dbh needs pruning of deadwood and for light clearance, reduce soil compaction</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Quercus palustris 1-0-04</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9 1/2&quot; dbh needs pruning throughout, early girdling scar</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Tilia sp. 1-0-05</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td>19&quot; dbh HAZARD, to be removed and replaced</td>
<td></td>
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<tr>
<td>Aesculus hippocastanum 1-0-06</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>33 1/2&quot; dbh old cavity, covered with tin 6' in length, 1/2 to 3&quot; in width, needs cabling of tree has internal decay, HAZARD tree</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ulmus americana 1-0-07</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7 trunks multistem 3 1/2&quot; to 8&quot; dbh, dead leaves</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quercus rubra 1-0-08</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7 1/2&quot; dbh structurally weak, old scar at base</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Tilia sp. 1-0-09</td>
<td>3</td>
<td>3</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16&quot; dbh poor condition, HAZARD tree, undersized leaves, in decline, hollow, remove and replace</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quercus palustris 1-0-10</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10 1/2&quot; dbh double leader, soil compaction, remove deadwood throughout, remove crossing branch, remove lower branch over sidewalk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Recommended Equipment for Inspection

**Codes:**
- **Y** = yes
- **N** = no
- **0** = can not assess
- **1** = satisfactory condition
- **2** = fair, needs some work
- **3** = poor, needs work
- **P** = critical

Transfer information on measurements, significant conditions and diagnosis of problems to RECORD KEEPING Section.