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CULTURAL LANDSCAPE REPORT FOR ARMORY SQUARE

SPRINGFIELD ARMORY NATIONAL HISTORIC SITE



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SPRINGFIELD ARMORY NATIONAL HISTORIC SITE

SPRINGFIELD, MASSACHUSETTS

“Can it be possible, he asks, that such a scene of tranquility and loveliness can be the outward form and embodiment of a vast machinery incessantly employed in the production of engines of carnage and death?”

Jacob Abbott,
Harpers New Monthly Magazine, 1852

INTRODUCTION

HISTORY

EXISTING CONDITIONS

ANALYSIS

TREATMENT

By Allison A. Crosbie, ASLA
Historical Landscape Architect

Contributor
Rumika Chaudhry
Conservation Associate

Olmsted Center for Landscape Preservation
National Park Service, Boston, Massachusetts, 2010

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Olmsted Center for Landscape Preservation
Boston National Historical Park
Charlestown Navy Yard, Quarters C
Boston, MA 02129
www.nps.gov/oclp/

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National Park Service, Denver Technical Information Center report NPS 458/104220

Library of Congress Cataloging-in-Publication Data

Crosbie, Allison A.

Cultural landscape report for Armory Square : Springfield Armory National Historic Site, Springfield, Massachusetts : introduction, history, existing conditions, analysis, treatment / Allison A. Crosbie, Rumika Chaudhry.

p. cm. -- (National Park Service, Denver Technical Information Center report ; NPS 458/104220)

"Olmsted Center for Landscape Preservation" --T.p. verso.

Includes bibliographical references.

1. Armory Square (Springfield, Mass.) 2. Springfield Armory National Historic Site (Springfield, Mass.) 3. Historic sites--Conservation and restoration--Massachusetts--Springfield. 4. Landscape protection--Massachusetts--Springfield. 5. Springfield (Mass.)--Buildings, structures, etc. I. Chaudhry, Rumika. II. Olmsted Center for Landscape Preservation (U.S.) III. Title.

UF543.S7C76 2010

355.7'50974426--dc22

2010032653

Cover Photo: Aerial photograph by Don Couture, East Windsor, CT, 2007

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ACKNOWLEDGMENTS

This report was a collaborative effort between the staff at Springfield Armory National Historic Site, Springfield Technical Community, and the Olmsted Center for Landscape Preservation. Superintendent Michael Quijano-West provided guidance and oversight throughout the project. The site history section of the report utilized invaluable archival information and images provided by James Roberts, Chief of Cultural Resources, and Alex MacKenzie, Park Ranger. Input on draft reports was provided by JoAnne Gangi-Wellman, Chief of Visitor Services, and Richard Colton, Historian. Joseph Brady, Facility Manager at the park, also contributed to the report. On-site discussions included a meeting with both the National Park Service and Springfield Technical Community College to present the Cultural Landscape Report and garner input on the analysis and treatment of the site. Meeting participants from Springfield Technical Community College included Dr. Ira H. Rubenzahl, President, Eric R. Ness, Vice President of Facilities and Police Services, Setta McCabe, Director of Public Relations, Steve Keller, Vice President for Academic Affairs, Mike Suzor, Assistant to the President, Patrick Tigue, Vice President for Enrollment Management/Student Affairs, Myra D. Smith, Vice President of Human Resources/Multicultural Affairs, and Jen Werner, Assistant Professor, Landscape Design and Management Technology. An additional meeting with Setta McCabe and Barbara Wurtzel, Reference Librarian, yielded background information regarding the history of the college's physical development.

At the Olmsted Center for Landscape Preservation, Allison A. Crosbie, Historical Landscape Architect, prepared historic period maps and conceptual drawings based on the initial research and GIS information prepared by Rumika Chaudhry, Conservation Associate, as well as the site history, the existing conditions, analysis section, and the treatment narrative. In addition, tree assessment studies conducted by Jamie McGuane of the Olmsted Center contributed to the existing conditions and treatment sections. Eliot Foulds, Historical Landscape Architect, revised the site maps, conceptual drawings, analysis and treatment narratives, and edited all sections of the report. Bob Page, Director of the Olmsted Center, provided project oversight.

FOREWORD

Springfield Armory was the site of Shays' Rebellion in 1787, which outraged George Washington, an episode often considered as one of the events that helped to move our nation toward a constitutional form of government. In 1795, President Washington established our nation's first armory at Springfield and from that point forward, history was made in industrialization, accounting, firearms manufacturing and social impacts on the local area until the Armory was closed in 1968. For many who carried Springfield firearms during their military service, and for those who are enthusiasts of American, military and firearms history, the Springfield Armory is much like a national shrine.

As an urban park surrounded by the city of Springfield, and one of the few National Park Service sites that is co-owned and managed together with an institution of higher education through the Commonwealth of Massachusetts, Springfield Technical Community College, we are faced with daily challenges to protect and preserve this significant landscape. The *Cultural Landscape Report for Armory Square* reminds us of the many layers of history embedded in the grounds, plantings and placement of buildings and features on the site. As both a National Historic Site and National Historic Landmark, it is critical to have accurate information about the landscape to help us manage, interpret and protect this site for the benefit of future generations.

The Olmsted Center for Landscape Preservation has worked diligently with us and our partner Springfield Technical Community College to create a document that will help us to both understand the historic landscape and prepare us for long term planning. As we move forward to revise the General Management Plan for the site, the *Cultural Landscape Report for Armory Square* will provide critical baseline information for the landscape, along with specific treatment recommendations to improve its historic character. The report also includes important topics for discussion in planning meetings with our staff, partners and the general public. Ultimately, this report will serve us as valuable reference to guide management decisions that allow us to continue our missions while preserving and protecting the resources of this jewel in the crown of our history as a nation.

We thank all who have helped to produce this collaborative and informative document. I know it will help us move forward as we plan for the future of this site by providing an understanding of the significant features that reveal the past and guidance to preserve them for generations to come.

Michael Quijano-West
Superintendent
Springfield Armory National Historic Site and National Historic Landmark

INTRODUCTION

PURPOSE OF THIS REPORT

A Cultural Landscape Report serves the National Park Service as both the primary treatment document for cultural landscapes and as a tool to inform day-to-day management decisions and long-term landscape preservation strategies. This Cultural Landscape Report for Armory Square at Springfield Armory National Historic Site is being prepared in support of an upcoming General Management Planning effort, providing information on landscape resources and supporting several of the park's Government Performance and Results Act (GPRA) goals. This work is in response to a general lack of information regarding the historic Armory landscape. This lack of information bears with it the risk of inadvertently implementing changes to the landscape that may adversely affect the characteristics and features which convey the property's historic significance. In addition to identifying the characteristics and features that contribute to the property's historic significance, the report will provide documentation to support park consultation responsibilities under Section 106 of the National Historic Preservation Act.

Located in the city of Springfield, overlooking the Connecticut River in western Massachusetts, the Springfield Armory was established as a strategic arsenal under the authority of General George Washington during the Revolutionary War (Figure 1.1). From 1794 to 1968, Springfield Armory was a center for the manufacture of military small arms and the scene of important technological advances. Pioneering small arms manufacturing and mass production techniques, the Springfield Armory helped shaped the course of the Industrial Revolution in the United States. In 1960, the Armory Square area was designated a National Historic Landmark District, and in 1966 the property was listed on the National Register of Historic Places with the adoption of the National Historic Preservation Act. On March 21, 1978, Springfield Armory National Historic Site was established, and the National Park Service was charged with the mission “preserve, protect and interpret the military, social, and industrial history of Springfield Armory, the first national armory.”ⁱ

SCOPE OF WORK AND METHODOLOGY

This report focuses on Armory Square, historically known as the Hill Shops when the Armory included multiple properties throughout Springfield. The 55-acre Armory Square property includes the twenty-acre National Historic Site and the core of Springfield Technical Community College. Through this report, as well as through the forthcoming park planning effort, the National Park Service and Springfield Technical Community College intend to chart a course for the next

twenty years of cooperative management in order to both evaluate development proposals and preservation measures for the entire National Historic Landmark site using consistent and mutually agreed upon goals and objectives. By working together, the National Park Service, Springfield Technical Community College, the Commonwealth of Massachusetts, and the City of Springfield hope to reestablish Armory Square's historic role as a community anchor, providing a foundation for the revitalization and economic renaissance of the city.

Following the general format as outlined in the National Park Service publication, *A Guide to Cultural Landscape Reports: Contents, Process and Techniques* (1998), the report comprises four chapters. The first is a narrative of the landscape history with a focus on Armory Square. Narrative text, historic maps, and photographs describe and illustrate the evolution of the Armory from its establishment in the 1700s through its closure and decommissioning in the 1960s, and the subsequent physical changes to the property up to the present. The second is an inventory and assessment of existing conditions. The third chapter reviews the National Register status for the property and presents an analytical examination of the Armory Square landscape in order to provide a more concise and detailed list of the characteristics and features that contribute or do not contribute to the historic character of the site. The final section provides a treatment plan developed within the context of park and college management goals and articulates a strategy for the long-term management of the cultural landscape.

STUDY BOUNDARIES

The geographic study area of this Cultural Landscape Report project is the entirety of Armory Square, which is bounded by Pearl Street to the north, Federal Street to the east, Byers Street to the west and State Street to the south, which was originally called Boston Road (Figure 1.2). The park boundary encompasses a total of 54.93 acres, approximately twenty of which are owned and operated by the National Park Service, the remainder comprising the campus of Springfield Technical Community College, a state institution of higher education. The National Park Service and the Commonwealth of Massachusetts are parties to a Memorandum of Understanding, outlining a collaborative approach toward mutual responsibility for managing and preserving the historical property.

Historically, Springfield Armory consisted of several discrete properties. In addition to Armory Square, Federal Square was located to the east across Federal Street. Taken together, these two squares were referred to as the Hill Shops. Further east of the Hill Shops was the magazine, one of the original structures from the 1780s. In order to utilize water power for manufacturing, sites were also established along the Mill River, southeast of the Hill Shops. These sites were collectively known as the Watershops. In addition, the Railhead Area Testing

Facility was located on Page Boulevard, northeast of the Hill Shops (see Figure 1.1). All of these other properties are in private ownership and not managed as cultural resources.

TERMINOLOGY

The terminology used in the Cultural Landscape Report is in keeping with references found in historical records and current usage by the Springfield Armory National Historic Site, including their website.

Arms – The term arms refers to any hand held weapon.

Arsenal and Armory - Both terms are defined in Merriam-Webster’s Dictionary as establishments for the manufacture or storage of arms and military equipment. In common usage, arsenals are referred to as places where arms are stored and armories as places of manufacturing. At Springfield Armory, several buildings that store arms are referred to as arsenals.

Hill Shops - The Hill Shops comprised two sites, Armory Square and Federal Square. Armory Square was bounded by State, Byers, Pearl, and Federal Streets and included the Green. Federal Square comprised the hill shop east of Armory Square and was bounded by State, Federal, Lincoln, and Magazine Streets.

Magazine - A magazine is also a storage structure for munitions. In the Cultural Landscape Report, the term is used to refer to the storage of gun powder.

Master Armorer - Along with the superintendent, the master armorer was tasked with overseeing the operation of the Armory.

Musket - A musket is a shoulder firearm used until the mid-nineteenth century when it was replaced by the rifle.

Ordnance Department - The Ordnance Department evolved from the Ordnance Corps established in 1775 by the Continental Congress to study the procurement and storage of ammunition and methods of arms. It was reorganized in 1812 and became responsible for arms and ammunition production, acquisition, distribution, and storage. The Ordnance Department therefore oversaw the operation of the Springfield Armory and gave final approval of new construction and site improvements.

Paymaster – The paymaster tended to the safe-keeping and distribution of the military stores at the arsenals (storehouses at the Armory).

Storehouse - The term is used in the Cultural Landscape Report to clarify the nature of the referred building where arms are stored.

Superintendent - The superintendent of Springfield Armory was responsible for maintaining an efficient and cost effective arms production facility for the United

States Government. This goal was furthered by the replacement of civilian administration with military administrators in the mid-nineteenth century, in order to remove political influence and control.

The position of superintendent of the Armory was established in 1794 without definite parameters of authority. The original legislation that created the position also named two additional appointments, the paymaster and master armorer, creating a system of checks and balances of authority. After the War of 1812, the superintendent became the single chief officer responsible for managing the National Armory.

Watershops - Three other portions of the Springfield Armory included the Upper, Middle, and Lower Watershops. They were located south of the Hill Shops along the Mill River.

SUMMARY OF FINDINGS

The historic significance of the Springfield Armory National Historic Site spans almost two hundred years, beginning with the late eighteenth century establishment of the federal arsenal, through the mid-twentieth century as a manufacturer of military small arms and developer of innovative assembling methods and machinery. During the Revolutionary War the site was a key storage facility and supply depot for the northeastern region. After the war, the arsenal remained as a federal repository of military supplies. In 1794, under the recommendation of the Secretary of War Henry Knox, President George Washington authorized Springfield as a location for one of two national armories. Armory Square was also the site of an uprising known as Shays' Rebellion, which attempted to raid the arsenal as part of a plan to instigate an insurgence to prevent the state's court system from further condemning those unable to pay what they considered to be unfairly high taxes. The rebellion was swiftly suppressed by the defending militia who had arrived earlier and well armed. The event galvanized support for a stronger national government and eventually led to the establishment of the Federal Constitution.

Springfield Armory manufactured small arms for the military until the 1960s, garnering a reputation for accuracy and dependability. During the early nineteenth century, Springfield Armory contributed to the development of interchangeable parts, forming the basis of modern assembly line methods of American industry. In 1822, Thomas Blanchard, an Armory worker, devised a machine for turning gun stocks which led to the subsequent development of machinery for making other standardized parts. Beginning in 1892, the Armory was involved with a number of advancements in arms technology from the Krag-Jorgensen rifle during the Spanish American War to the Springfield Model 1903 used in World War I. Innovations continued with the semi-automatic M1, or

Garand rifle, used extensively in World War II, and the fully automatic M14. The Springfield Armory was officially decommissioned on April 30, 1968.

Armory Square also expresses the design intent, most notably of Superintendents James Ripley and Roswell Lee, to create a military campus that reflected the grandeur and dignity of the federal facility. The overall design was focused around a central Green which had been a prominent landscape feature dating back to the late 1700s. The complex was developed as a traditional military campus with the central Green as the organizational and spatial framework of the site. The expansion of manufacturing and storage facilities along with living quarters would respect the orientation, architectural character, and open space of the Green. The grounds of Armory Square mirrored contemporary landscape design styles of the early nineteenth century through the mid-twentieth century. Trees were initially planted in straight, regular lines, framing circulation routes and connecting buildings. As landscape design styles changed in the mid to late nineteenth century, gently curving walks and drives were added. Ornamental gardens were installed in the early 1850s around the Commanding Officer's Quarters. Trees on the campus began to be arranged more informally on the gradually terraced western slope. On the Green, trees were also planted more irregularly, suggesting a pastoral landscape which was a popular design motif at the time. During the late nineteenth century, fountains, greenhouses, and additional gardens were constructed, further enhancing the ornamental quality of the landscape. These landscape features remained until their removal in the 1940s and 1950s.

Today, Springfield Armory National Historic Landmark is operated by three separate entities. The National Park Service manages the twenty-acre western portion of the site as a park and museum. The remaining thirty-five acres is operated by Springfield Technical Community College, a state institution of higher education serving western Massachusetts. The City of Springfield owns and maintains the perimeter sidewalks outside the fence.

Significant changes to the Armory Square landscape since 1968 include the demolition of several buildings for the construction of three new academic buildings on the northern edge of the Green. The tree canopy on the Green was reduced to accommodate a collegiate soccer field, and the City of Springfield installed playfields at the western portion of the site, resulting in the removal of trees along with a roadway and a pedestrian pathway. The operation of the college has also necessitated altered circulation patterns, expanded surface parking, and new site furnishings, lighting, and signage. The National Park Service has also had to make modifications in order to accommodate visitor needs such as accessibility and parking, in addition to routine maintenance, storage, and overall management of the site. Security concerns also impact the landscape, such as the removal of trees located too close to the museum.

The treatment section of this report discusses the overall vision for the site and identifies rehabilitation as the appropriate approach. The goal is to preserve and enhance the characteristics associated with the entire National Historic Landmark, while accommodating the needs of both current institutional uses of the site. Visitors can then perceive the landscape as one composition and recognize the scope of the federal industrial complex that once occupied the site. The recommended treatment will inform the development of the park's General Management Plan that includes long-term management goals related to the preservation of the cultural landscape. Treatment tasks will also support the planning objectives of the college as they pertain to the campus landscape.

NOTES

¹ <http://inside.nps.gov/index.cfm?handler=parkdetails&alphacode=spar>



Figure 1.1. The image to the left shows the city of Springfield within New England and the image to the right depicts the Springfield Armory National Historic Site within Springfield, Massachusetts. Maps created and enhanced by SUNY-ESF, the left image was digitally enhanced from the Draft Master Plan of 1970.

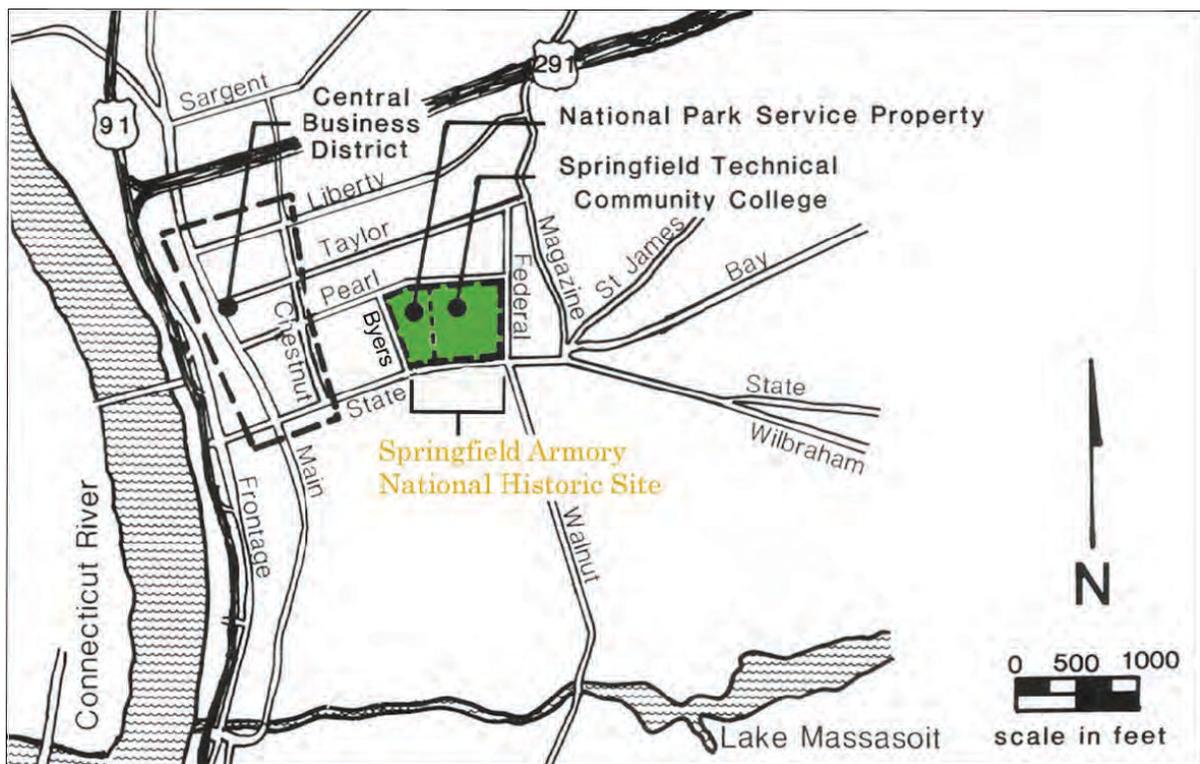


Figure 1.2. Map of the Springfield Armory National Historic Site divided into National Park Service and Springfield Technical Community College properties. DeCesare, 1990, digitally enhanced by SUNY-ESF.

SITE HISTORY

Springfield Armory has played a multi-faceted role in American history at both the regional and national scales. As a military institution, the Armory pioneered and advanced the research, development, and manufacturing of small arms. The Armory initially functioned as a magazine and powder house during the Revolutionary War and it was also the site of Shay's Rebellion, an event that galvanized support for the creation of the country's Constitution. During the Civil War, production increased to arm the Union forces. The Armory's importance as a manufacturer culminated with the M1 rifle for service in World War II. Regionally, Springfield Armory spurred further development and settlement of Springfield and became part of the social makeup of the city. In the mid to late 1800s, the Armory's stately setting on the hill amidst trees, gardens, and impressive architecture enticed the city's prosperous residents to build neighboring homes. The Armory was indeed an institution "woven of the fabric of American life."¹

Since its beginnings in 1794, the evolution of the Armory landscape reflects responses to environmental opportunities such as topography and access to water power; changes in manufacturing and technology; and by specific personalities who sought to shape the site as a symbol of military strength and order. The most significant changes in property holdings and construction were concluded by the onset of World War II. The Armory continued to operate and update its facilities until 1968 when it was decommissioned. Today, Springfield Armory National Historic Site preserves one of the world's largest collections of historic American military small arms. The National Park Service owns and operates twenty acres of the approximately 55-acre National Historic Site, including the Main Arsenal, Commanding Officer's Quarters and garage and, surrounding grounds. The remainder of the property is owned and operated by Springfield Technical Community College which includes fifteen former Armory structures and the Green, an eight-acre quadrangle of open space in the center of Armory Square.

The site history portion of this report is divided into six sections coinciding with significant historical events. The first period includes the initial development of the magazine and workshops during the Revolutionary War and the establishment of the National Armory. The second period chronicles the major expansion of facilities and grounds under Superintendent Roswell Lee, followed by the next key period under the leadership and vision of Major James Ripley. The Civil War, World War II, and the post-decommission era to the present comprise the last three major time periods. Each section ends with images from that particular period, along with a fold-out site plan graphically depicting the physical conditions documented at that time. Landscape features include site

boundaries, building locations and footprints, spatial organization, pedestrian and vehicular circulation, topography, vegetation, water features, and surrounding context when known.

PRE-HISTORY

Archeological studies on Springfield Armory's hill site have yielded little prehistoric evidence. The site was originally a pine barren, composed of mainly sandy soils, swamps, streams, and stands of pine trees. Pine barrens usually occur in large areas of sandy glacial deposits, including outwash plains, lakebeds, and outwash terraces along rivers. Archeologists have not found any evidence of Paleo-Indian sites (15,000 – 8,000 BCE) on the upland terrain. The sandy bluff may have been a good site for Native American habitation because it was well watered by springs, provided strategic views, and offered proximity to waterways and large game migration routes. Archaic (8,000 – 1,000 BCE) settlements have been found nearby and were also likely to have occurred on the site. The sandy soil made the use of this area by Woodland Indians (ca. 1000 BCE – 1600 CE) unlikely due to their dependence on agriculture and use of clay pottery. State Street (formerly Stone Pit Road, Boston Road and Route 20), running along the southernmost perimeter of Armory Square, was part of the overland transportation network during the Contact Period (1500 – 1630 CE).

EARLY SPRINGFIELD, 1636 – 1801

Springfield was initially founded in 1636 by a group of English immigrants including eight families, led by William Pynchon, as a trading and fur collecting post. The first settlers had to move because of conflicts with the original native residents who resented their occupation.² The final settlement site was a low sandy ridge in the midst of the river floodplain. The site was separated from the river by a strip of marsh, and from a river terrace thirty to forty feet above them, by another marsh. This steep terrace, a narrow remnant of a former floodplain, was full of springs and rivulets having their source in the steep side of the sandy upland rising 110 feet above the Connecticut River.³ Originally known as Agawam, the settlement's name was changed in 1640 to Springfield, after Pynchon's hometown in England.⁴ Pynchon and his group envisioned a community with forty to fifty families. Each family had a house lot of ten acres and a share of planting ground, cow pasture, and meadow. The house lots were on the eastern side of the river and the planting ground was on the western side.⁵

By the early 1700s, the fur trade declined in Massachusetts and moved further west into the Hudson River area in New York. Farming became the chief activity of the region around Springfield. The top of the steep terrace, referred to as "the hill," comprised a long stretch of sand, interspersed with clumps of pines,

swamps and ponds. This area was rejected for farming while more fertile land was still available in central and northern Massachusetts. The steep geography also hampered growth in Springfield, confining its boundaries between the river and “the hill”⁶ (Figure 1.3).

The main route east from Springfield was along Stone Pit Road later known as Boston Road and then State Street. Near the present location of the Armory, Stone Pit Road diverged into three roads running north, east, and south. During a blizzard in 1762, Captain Joseph Wait lost his way looking for Boston Road at this juncture and took the wrong road. A year later, he erected a large marker, carved out of East Longmeadow sandstone, with an inscription alerting travelers of the correct direction. The marker was located at the corner of State and Federal Streets on what is now Federal Square (Figure 1.4).

Springfield had some advantages that would propel it into economic prosperity by the end of the nineteenth century. The swift streams proved valuable for power machinery and Springfield’s location at the eventual junction of the first east-west and north-south railroad lines of western New England solidified the town as an important economic center.⁷

REVOLUTIONARY WAR ERA, 1775 – 1781

As noted by Ralph Waldo Emerson in his *Concord Hymn*, “the shot heard round the world” occurred on April 19, 1775 in Concord, Massachusetts, touching off the Revolutionary War when the British attempted to seize the arms of rebels. The following day in Springfield, people gathered at the court house to hear the news. Sixty-two local men volunteered to aid the Minutemen against the British.⁸ Within two weeks, 20,000 men throughout New England assembled near Boston. Two days prior to the battle at Bunker Hill in 1775, George Washington was appointed Commander-in-Chief of the American army, stopping in Springfield on his way to Cambridge to take command.⁹ A year later, the Continental Congress created the Board of War and Ordnance, responsible for issuing supplies to soldiers.

As the conflict escalated, the procurement of weapons became strategically important. Several gunsmiths already lived in the Springfield area as did other associated artisans.¹⁰ In 1776, Colonel Henry Knox addressed the Continental Congress regarding the need to set up laboratories to produce munitions in secure locations.¹¹ With Washington’s endorsement, Springfield was chosen due to the availability of raw materials, proximity to the Connecticut River, and its defensible position against enemies, “being twenty miles above Hartford where [the] river is narrow and too shoal.”¹² The Springfield site was also close to inland trade routes, water power, and labor. Existing facilities were rented during the period of planning and construction. One rented workshop consisted of a barn located close to the business center of town, for processing cartridges.¹³

Springfield also became a storage and supply center serving colonial forces throughout coastal New England.¹⁴

In 1778, Congress resolved to erect a magazine and equip it with 10,000 stands of arms, 200 tons of gunpowder and a laboratory in Springfield.¹⁵ Colonel Thomas Dawes was contracted to draw up plans for the magazine and laboratory. The land was leased from the town, and a magazine, barracks and accommodations for operations of a laboratory were constructed. The magazine was located on the low land north of the hillcrest tract on which barracks and laboratories were placed¹⁶ (Figure 1.5). The only access to the laboratories lay across the higher parts of the training field where a crude road had been worn into the ground. The remaining buildings were erected close to Boston Road, now known as State Street. The Massachusetts Council, acting upon a resolution of the General Court, acquired additional sites “in every procurable cranny of the town.”¹⁷

In 1781, months before the conclusion of the war, production ceased and Springfield was no longer connected with the federal War Office. This untimely separation was likely brought on by complaints about mismanagement of the Armory. As a result, rapid demobilization of the Armory occurred several months before peace terms were signed.¹⁸ The laboratory was closed, officers were discharged, and magazines were established to store unused materials.

POST-REVOLUTIONARY WAR DEVELOPMENT, 1782 - 1801

In April of 1782, the Secretary of War, Benjamin Lincoln, directed General Henry Knox to establish a permanent magazine in Springfield, as well as West Point, New York, Yellow Springs, Pennsylvania and New London, Virginia. These facilities were intended to preserve the remaining stores of powder for future use. In Springfield, Knox selected a site on Boston Road east of the other United States buildings, at the easternmost point of the training field on the edge of a brook called Squaw Tree Dingle. It was out of town and yet accessible to other government buildings by way of Boston Road. The existing magazine designed by Hawes was relocated on the training field east of the buildings on the hill - thus the powder would be stored within view of the buildings constructed during the war.¹⁹ The powder was stored in this location for sixty years (Figure 1.6). The magazine was eventually torn down in 1842 because it was too close to residences and public buildings for comfort.²⁰ Cannons were also stored adjacent to the magazine. The barracks and workshops were located west of the powder magazine on the hill site of the future Armory Square. A line of barracks were located north of the workshops within easy access for workers. Workshops were laid out in close proximity in parallel rows or perpendicular to each other. Additional storehouses and two residences for the master of orders and the master armorer lined Boston Road south of the workshops. The main access to the site was on Boston Road, most likely occurring east of the buildings passing near the Paymaster’s Office. According to a contemporary observation, “The

road from Wilbraham to Springfield is . . . a continued pine plain, without fence. Pass the magazine, a long brick building. Further, are two large public stores for arms and a number of barracks.”²¹

After the Revolutionary War, a large number of small farmers, many of whom were veterans, found themselves in default of taxes and debt, which at the time was a punishable offense leading to prison sentences and loss of property. The veterans wanted the states to issue a circulating paper currency that would pay for their wartime services which they could in turn use to pay their taxes. The government feared that such an issuance of currency by each state independently would cause fiscal chaos. Because the farmers could not pay the state taxes, the states had no funds to repay the merchants who had lent large sums of money for the war effort. With the threat of imprisonment and loss of their farms, the veterans rebelled and tried to disrupt court proceedings to impede further foreclosures. In January 1787, Daniel Shays, a former captain during the Revolutionary War, organized a group of rebels to raid the powder stored at the Armory as part of their insurrection. Shays and 1,200 men approached the magazine from the east along Boston Road. A militia of the same number of men under the command of General William Shepard moved in from the northwest off of Town Street, through woods and up the hill, passing close to the barracks (see Figure 1.5). Shepard had constructed two stockades to protect the stored arms. The exact location of these stockades is not exactly known, but it was from these positions that the militia fired artillery, killing four of the offensive forces and wounding others. Shepard’s successful defense of the magazine demoralized the rebel contingent and helped to undermine their cause.²² Shays escaped to Vermont and returned to Massachusetts after being pardoned in 1788. Several men were convicted and two were executed prior to the general pardon. This unrest and its successful repression helped motivate the government to draft a formal Constitution, and led the way to the establishment of a National Armory at Springfield.²³

In 1794, the federal government decided to manufacture its own muskets so that the Nation would not be dependent on foreign arms. Congress enabled President Washington to establish two national armories, one in Springfield, and one at Harpers Ferry, Virginia. David Ames, a veteran of the Revolutionary War and an iron worker and gunsmith, became Springfield Armory’s first superintendent.

The organization of Springfield Armory’s production was likely influenced by the French approach to arms manufacturing.²⁴ France had established a national Armory in 1669 where arms were fabricated in three or four centralized shops following the specifications and direction of the government. When production commenced in Springfield, the French Charleville arm of 1763, utilized in the Revolutionary War, served as the model for manufacturing.²⁵

In 1795, the United States government purchased one and a half acres on the north side of Mill River, roughly a mile south of the Armory's hill site, to provide water power for arms manufacturing. This purchase included the right to build a five foot-high dam. Three years later an acre was purchased on the south side to construct the dam and allow for river overflow. This site was later referred to as the Lower Watershops, one of three water power sites that were added to the Armory's complex of arms manufacturing. Operations at the Watershops included heavy metal forging.

The Commonwealth of Massachusetts passed an act in 1798 authorizing the United States to purchase land from the town of Springfield, not to exceed 640 acres.²⁶ On June 25 of that year the Springfield Town Council approved the establishment of the federal arsenal, not to exceed sixty acres. Around 1800, the federal government's ownership or compensation for ten acres of land was called into question by the Town, including the buildings on the hill, because of inaccurate records of ownership.²⁷ In order to settle the dispute, thirty and a half acres were deeded to the United States in 1801, including land already occupied by the Armory. This land on the hill became the nucleus of Armory Square, including the site of the existing federal buildings, a tract along Boston Road at the brow of the hill, and thirty "rods" (495 feet) eastward to the magazine.²⁸

By 1801, the Armory encompassed an irregular group of framed structures strung along Boston Road a mile eastward beyond Springfield village. A two-story red brick storehouse was located uphill, alongside the road on its northerly side. Further north were two one-story frame houses and behind this row were two one-story barracks comprised of four and six rooms. Structures at the rear of the federal tract included a two-story house, one or two smaller dwellings occupied by workmen, a boarding house for employees, and a house built by Colonel Mason for his use during the Revolutionary War and later as the home of the superintendent. The brick magazine built by order of Congress in 1782 was still considered at a safe distance from the other buildings in case of an explosion.²⁹ Adjacent to the Armory along State Street was the location of a hanging tree that supposedly served as the gallows for the town dating back to the 1770s.

LANDSCAPE DESCRIPTION SUMMARY, 1801

By the close of the eighteenth century, the physical framework of Springfield Armory was composed of thirteen mostly wooden structures on the hill property with a powder magazine located to the east away from the buildings (Drawing 1). Property boundaries formed an irregular shape, extending along the edge of Boston Road and the upper edges of the hill top. Off-site water power facilities, known as the Watershops, were established to the south along Mill River.

Buildings on the hill appeared to be organized for practical purposes for working proximity and a safe distance from the magazine to the east and away from the

ravine to the northwest. Structures were placed at right angles to each other, creating a regular geometry. Two storehouses as well as the Master Armorer's House and Master of Orders' House were the most publicly accessible, fronting Boston Road. Housing for the workers was located furthest north on the site and workshops were in the middle of the compound.

Little is known about initial efforts to develop the site in terms of circulation, vegetation, or grading. The open area to the west of the buildings and the layout of the buildings suggest a possible access route off of State Street, as indicated in the period plan for 1801. The area that later would become the central open space of Armory Square is not yet evident. The adjacent land remained in agricultural use with pastures and seasonal crops. Stands of trees occurred on the slopes of the hillside.

The layout of the grounds would start to be defined in the early part of the nineteenth century under the leadership and vision of Superintendent Roswell Lee.

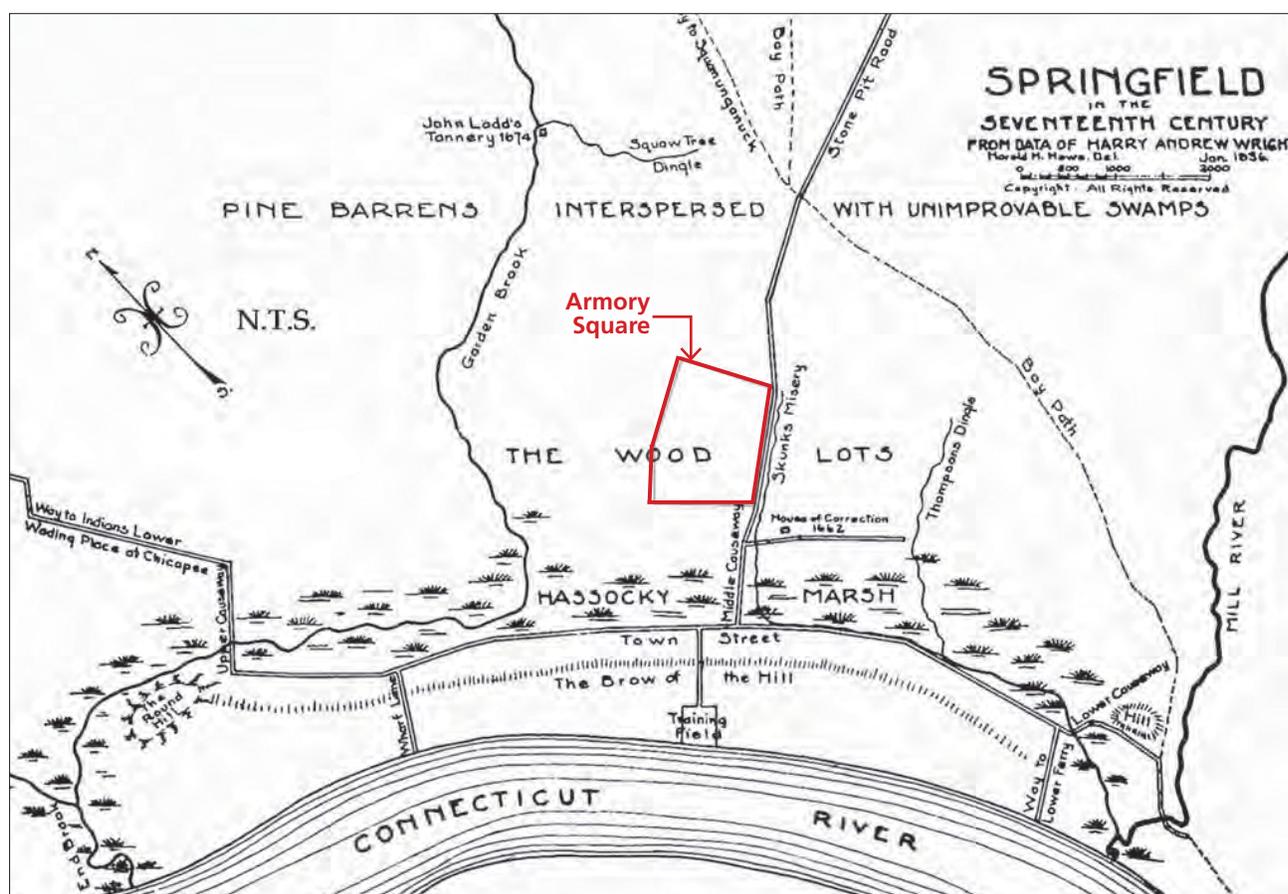


Figure 1.3. Map depicting Springfield in the seventeenth century. Armory Square was built east of the Hassocky Marsh. Town Street and Stone Pit Road were later called Main Street and State Street respectively. Illustration from *At the Crossroads, Springfield, Massachusetts, 1636 - 1975*, Frank Bauer.



Figure 1.4. Captain Joseph Wait installed this road marker in 1763 to clarify the direction of Boston Road. Carved out of East Longmeadow redstone, the marker was originally placed facing south at the southeast corner of Armory Square. When the ornamental fence was installed in the mid-1800s, the marker was moved further east across Federal Street. A replica is now being constructed to be installed in the original location. SPAR Museum Archives, Box 012, Folder 01, NEG 674-SA.

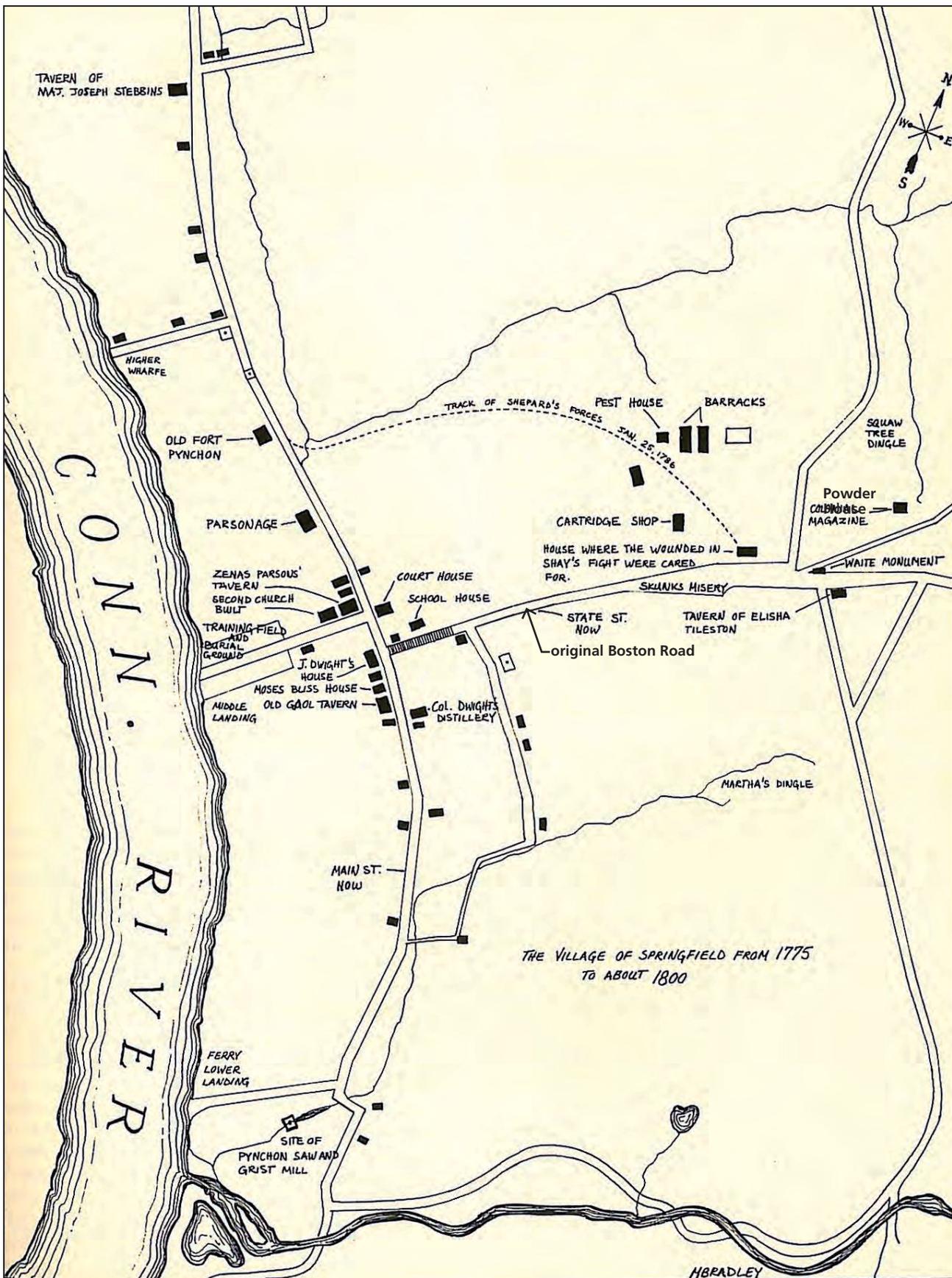


Figure 1.5. "The Village of Springfield from 1775 to about 1800." This map illustrates the layout of the earliest structures associated with Springfield Armory and it also depicts the route taken by Colonel Shepard's troops to thwart the attempted raid by Shays and his men. Illustration from *At the Crossroads, Springfield, Massachusetts, 1636 - 1975*, Frank Bauer.



Figure 1.6. Sketch of the magazine built in 1782 on the former training field outside of Springfield. Powder was stored here for sixty years until it was taken down because of encroaching residences and public buildings. SPAR Museum Archives, Box 011, Folder 06, NEG 4514-SA.

Cultural Landscape Report

Armory Square: Springfield Armory National Historic Site Springfield, MA

1801 Period Plan



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

SOURCES

1. Springfield Armory Plan of Land Sold to U.S., 1801
2. Springfield Armory Site Plan, 1810
3. Springfield Armory Topographic Data, 1830

DRAWN BY

R. Chaudhry/A. Crosbie, Arc GIS 9.1, Adobe Illustrator

LEGEND

- +—+— 2010 National Historic Landmark Boundary Line
- - - - Property Line
- Building
- Contour Line
- - - - Non-pedestrian Circulation (approximate)

NOTES

1. All features shown in approximate scale and location.
2. Plan represents landscape conditions as interpreted from sources listed above.



0 200 400 Feet

Drawing 1



EARLY NINETEENTH CENTURY, 1802 – 1833

At the start of the nineteenth century, Washington D.C. became the capital of the United States, Thomas Jefferson succeeded John Adams as President, and Meriwether Lewis and William Clark began their famous expedition through the Northwest Territory. The United States would also find itself in another war against Britain, which would lead to the creation of a standing peace-time army. The Board of War and Ordnance was also reorganized into the Ordnance Department responsible for arms and ammunition production, acquisition, distribution and storage.

With the patenting of Eli Whitney's cotton gin, the cotton industry exploded as a cash crop. Textile mills opened all over New England as the region became the textile center for the nation. Whitney also helped develop the idea of interchangeable parts for the manufacturing of firearms, revolutionizing the small arms industry. He demonstrated that machine tools, manned by workers who didn't need specialized skills, could produce standardized parts that could be used as a component of any musket. Whitney's method broke down the traditional division of labor into discrete and separate steps accomplished by a worker who only performed that single job.³⁰

At the beginning of the nineteenth century, the town of Springfield had a population of 2,500 inhabitants. The War of 1812 attracted skilled and unskilled workmen to work at the Armory. After the war, layoffs at the Armory provided labor for manufacturers in the area. Other employers included a paper mill and an iron-works.³¹ By 1820, Springfield's population had grown to 6,784. In 1821, Court Square was created on Main Street, a half mile from Armory Square, through donations of many leading citizens to provide a county court house. Development ensued around Court Square, securing this area as the commercial center.³²

During this period, technical advancements at Springfield Armory included the introduction of a milling machine in 1816 for cutting metal parts, operable by unskilled laborers. Two years later, the Armory developed a system for gauging musket components. In addition, Thomas Blanchard created a lathe in 1825 that could also be operated by unskilled workers. This lathe was used for uniformly cutting the exterior surface of musket barrels. The final three inches of the breech was automatically formed partly flat-sided as in hand-made barrels, saving a great deal of labor. These advancements provided a more streamlined and standardized system of production. In 1815, a major period of site development was ushered in by the appointment of Lieutenant Colonel Roswell Lee as superintendent. During this time, the Armory grounds on the hill expanded, the Green evolved from an open square into a permanent, key feature of the site, and new construction at the Armory utilized more durable materials.

STRUCTURAL IMPROVEMENTS AND WATER POWER, 1802 – 1815

During the early 1800s, the Armory's physical growth and development was in direct response to concerns such as fire hazards and the need for more adequate water power. These issues necessitated the construction of buildings and structures of brick and stone and the acquisition of additional riverfront property.

Springfield Armory was beset periodically with fires, starting in 1801 when the filing and stocking shop on the hill site burned down. This was followed by a fire in 1805, destroying the principal Watershop to the south. In the same year, Benjamin Prescott became superintendent and began replacing structures at the Armory in stone and brick.³³ As a result, walls about the forges were built of stone ten feet high. A new two-story, brick storehouse used for storing and packing arms was built on the southwest portion of the hill in 1808. It later became the West Arsenal and then the Barracks.³⁴

By 1809, new buildings fronted the Green, arranged to face inward with their rear facades located close to the property line at that time (Figure 1.7). New masonry shops, called the Hill Shops, on the northeast corner of the hill site included a two-story brick stocking and filing shop, and a one-and-a-half story brick forging shop. Prescott also constructed an ordnance yard further east of the site, used for the storage of cannon, cannon balls and other materials which could withstand exposure to the weather.³⁵ A new road off of Boston Road, called Walnut Street, served as the main artery between the Armory on the hill and the factories along the Mill River. Walnut Street was directly opposite the eastern edge of the Hill Shops where manufacturing occurred. Direct transportation to the ocean was provided in 1829 when the Enfield Canal was constructed around the shallows on the Connecticut River just below Springfield.³⁶

At the Lower Watershops along the Mill River, Prescott oversaw the construction of a brick workshop on the north side of the river. Polishing and welding shops were also constructed on either side of the stream as well as housing for the workers. The water power at the Lower Watershops proved inadequate because the river was too narrow to impound enough water to operate machinery sufficiently. The Revolutionary War era powder mill also blew up at this time and was destroyed. This incident provided Prescott the opportunity to purchase the powder mill site along the river including the rights to build a ten-foot high dam and control of the land subject to overflow. This area became the Upper Watershops, but it still did not provide enough power due to a deficient supply of water.

In 1812, further acquisition of land included the existing magazine tract and buildings east of the deeded land from 1801. In June, the United States declared war against England, putting a halt to site improvements in order to increase production of arms.³⁷ Henry Lechler, a gunsmith from Pennsylvania, was

appointed superintendent at Springfield Armory after his predecessor, Benjamin Prescott, was dismissed for insubordination. During the war, Prescott had refused to put the Armory's efforts into repairing arms under the order of the Secretary of War. Prescott's reluctance may have been a reflection of the mood of most New Englanders who did not support the war to the point where secession was publicly debated.³⁸ During the war, the Armory produced 10,000 muskets a year. Although a treaty was signed in Ghent, Belgium in December 1814, the war continued into 1815. By this point, the Armory had evolved into a collection of buildings on fifty acres including brick workshops, and wood and brick dwellings around an open square with a flagpole prominently located near its center.

ROSWELL LEE'S ADMINISTRATION, 1815 - 1833

In 1815, Lieutenant Colonel Roswell Lee became superintendent of Springfield Armory and served for the next eighteen years (Figure 1.8). Although Lee was an officer in the army, he served under a civil appointment as did his predecessors. Lee envisioned the Armory as a symbol of the country's on-going evolution into a great nation. In a letter to Colonel Wadsworth, Chief of the Ordnance Department, Lee emphatically declared that Springfield Armory had the potential to become a "grand national Armory."³⁹ Although Lee believed that Springfield Armory should be the premier facility in the country, he did develop a working relationship with the second United States Armory at Harpers Ferry. He sent partially finished rifles to the Armory at Harpers Ferry for completion because they had specific fabrication skills not available at Springfield. In turn, Harpers Ferry sent rifle components to Springfield for assembly.⁴⁰

Among the challenges facing Lee upon assuming command was the ongoing friction among personnel and careless work practices. Drinking took place in the workshops as well as fistfights. Lee set about to instill discipline and order by discharging the worst offenders and instituting regulations governing behavior.⁴¹ As a result, forty workers were let go. This did not endear Lee to the Springfield community who depended on the Armory as a steady source of employment. He did engage with the community by hosting Independence Day celebrations on the grounds, which had been an ongoing custom. Lee viewed the Armory as a metaphor for America's growing military strength and developed the site to appear strong, organized, and imposing.⁴² Lee also believed that physical improvements would enhance working conditions and efficiency.⁴³ Consequently, Lee oversaw the construction of a new administration building, containing offices for the superintendent, paymaster, and master armorer, as well as a chapel for religious services, on the east side of the Green.

In 1817, Lee acquired another site on Mill River, called the Middle Watershops, for additional water power (Figure 1.9). He then built a forge at this location for reclaiming scrap iron and steel. Lee also purchased a mill seat, or mill site, just above the Lower Watershops in order to raise the dam level there.⁴⁴

Lee contended with major fires and continued the construction of brick and stone structures as well as adding firefighting equipment.⁴⁵ In 1819, fire destroyed one of the coal storehouses at the Middle Watershops. Lee requested the Ordnance Department to purchase an adjoining half-acre of land along with a fire fighting equipment. Another fire in 1824 destroyed the brick two-story stocking and filing shop on the hill (Figure 1.10).

In 1823, an inspection report was completed by the Committee on Military Affairs in Congress and described the Armory at the time.

The original site of this manufactory has also a military post, which is a perfectly level elevated plat, situated about half a mile east of the village (of Springfield), from which there is a gradual ascent, flanked on the north by a deep ravine, and to the south by a less considerable one, just south of the Main Arsenal with an extensive plain spreading in the rear, the adjacent parts being uncovered, fronting on the brow of the declivity, and commanding an extensive and beautifully variegated landscape.

The aforesaid buildings are arranged northerly of the great State road leading to Boston, bordering on a large flat square piece of ground, fenced [not the current fence] and set out with trees, around which is a road about 60 feet wide, leading to several dwelling houses occupied by the officers and workmen; the whole assuming a handsome and regular appearance.⁴⁶

A plan from around 1824 (Figure 1.11) showed a schoolhouse at the northwest corner of the Hill Shops site. Given that the location of the Armory was still remote from the center of Springfield, children of employees were educated on the grounds.

In 1826, Lee was requested by the Ordnance Department to take temporary command at the Armory at Harpers Ferry where the superintendent, James Stubblefield, had been charged with mismanagement. After a few months, the matter was resolved and Lee resumed his position at Springfield. Two years later, Lee was again dispatched to Harpers Ferry to help keep order after Stubblefield resigned and a new superintendent was appointed.

Lee disliked that operations at Springfield Armory were divided into five separate areas - the Hill Shops and the four Watershops including the newly purchased mill seat (Figure 1.12).⁴⁷ The physical division of the work areas proved inconvenient to manage and also resulted in transportation costs and delays. After considering several alternatives for improving efficiency, Lee decided to leave the plant as it was, but to construct new brick workshops and warehouses on the hill that would adequately meet storage and manufacturing needs of the next several years.⁴⁸ This solution was the most expedient and was supported by the War Office. The addition of these facilities provided the site plan of Armory Square with a layout that would endure for years to come.⁴⁹

Lee's new workshops on the hill, the North and South Shops, supported lighter operations connected with fabrication. The two structures flanked the administrative office building on the eastern side of the Green. Lee constructed a new brick two-story storehouse facing Boston Road at the southeastern corner of the Green, later called the East Arsenal. Lee also erected the Superintendent's Residence directly across the Green from the administrative office building. This arrangement of buildings around the Green, with residences to the west and northwest and manufacturing to the east, would remain fairly intact throughout the rest of the Armory's operation.

In 1830, Lee completed construction of the Middle Arsenal at the southern edge of the Green (Figure 1.13). This storehouse was the first three-story structure on the site with an elaborate main doorway with a columned Georgian portico on the side away from Boston Road, as the buildings about the square were originally planned to face the center.⁵⁰ Georgian designs were noted for incorporating classical orders of architecture in simple and balanced proportions, using brick or stone materials. It was most likely at the Middle Arsenal where Henry Wadsworth Longfellow and his new wife visited the vast display of gun racks inspiring his poem "The Arsenal at Springfield." Lee had also initiated the construction of the Paymaster's and Master Armorer's residences, but did not live long enough to see their completion.

Lee integrated the landscape with the overall layout of the Armory through extensive grading and planting. He oversaw the first large-scale attempt to drain the area around the bluff, especially along the top and bottom, where it stayed wet all year long and gullies tended to form. He also directed a major program of tree planting in straight, regular lines, enhancing the sense of formality in the Armory's layout. Within Armory Square, four parallel rows of trees on an east-west axis intersected with a row of trees on a north-south axis. Regularly spaced rows of trees also lined State Street. Lee's arrangement of structures and trees defined the Green as a permanent central open space and organizing feature of the Armory (Figure 1.14). A woodcut from the 1830s highlights the Green as a public amenity where people strolled, cows grazed and a liberty pole was placed in the center (Figure 1.15).

By the time Lee died in 1833, he had successfully designed the framework for the future evolution and embellishment of the site. His efforts in grading, planting, and layout of buildings began to establish the character of the site as a campus where structures, landscapes, and open spaces are organized in support of a common purpose. At Springfield Armory, that purpose was to become the country's principal military arms manufacturing institution. His rules governing behavior and his institution of regular work hours and a wage scale helped to bring order among the personnel. He was also successful in consolidating authority under the superintendent, helping to further streamline operations at the Armory.⁵¹

LANDSCAPE DESCRIPTION SUMMARY, 1833

For the first time in the Amory's history, Lee used the landscape as an organizing device to bring buildings and open spaces together into a coherent whole (Drawing 2). Lee developed the Armory hill site into an assemblage of buildings ordered around a square or green, typical of many New England towns at that time. Lee's vision of an organized and imposing site led to the planting of trees in orderly rows on axis with the surrounding architecture, framing main circulation routes and connecting buildings. The layout of the Green emerged, bounded by a wooden rail fence, and bordered by buildings with their facades facing inward toward the Green. Irregular paths traverse the Green with most of them leading to the paymaster's office. Cows grazed on the Green, and in the middle of the space a liberty pole stood as a symbol of resistance to the British during the Revolutionary era. The Green served as a focal point with buildings positioned to visually balance with each other. Lee concentrated manufacturing at the northeastern portion of the hill site and storehouses to the southeastern edge of the Green. Most of the housing occurred just north of the Green, except for the superintendent and master armorer which was located to the west. New buildings included the administration office building, the Superintendent's Residence, and the North and South shops on the eastern side of the Green.

The ordnance yard was further east of the hill complex on the property later referred to as Federal Square. Surrounding vegetation included adjacent agricultural fields and stands of trees along the ravines at the north and northwest of the hill. Although the surrounding area was still fairly rural, a boulevard with a planted median appeared at Boston Road, south of the ordnance yard and the old magazine.

Dependence on water power continued to necessitate acquiring multiple sites along the Mill River in order to harness enough energy for machinery use. A new street, Walnut Street, provided a direct route from the Hill Shops to the Watershops.

The mid-nineteenth century would see another distinctive personality take command of the Armory and continue to shape the Armory's appearance into an impressive and integrated complex of buildings and grounds.

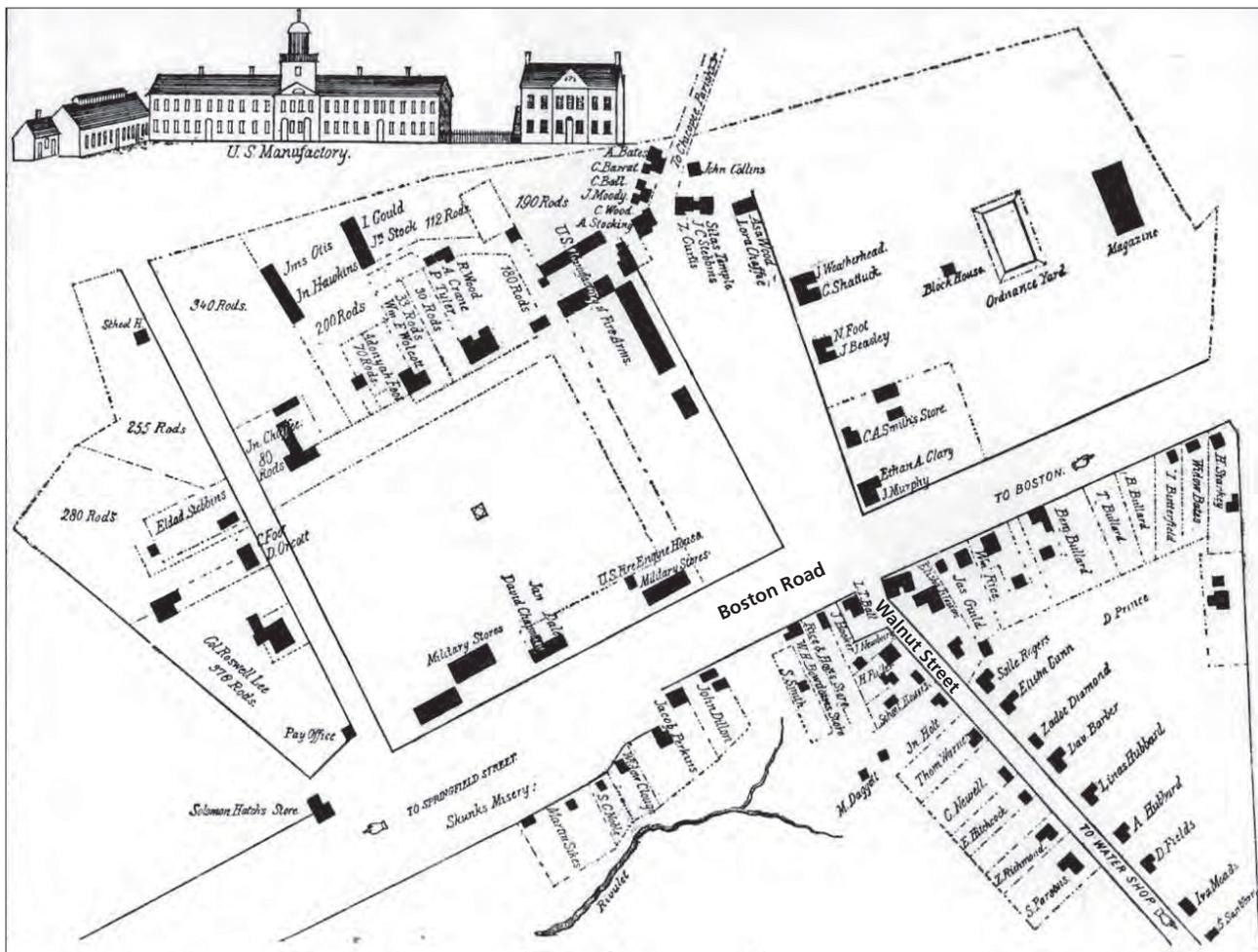


Figure 1.7. Plan of Army Square, referred to as Army Hill, circa 1810. The arrangement of buildings began to define what would become the Green. SPAR Museum Archives, Box 020, Folder 02, NEG 6570-SA.

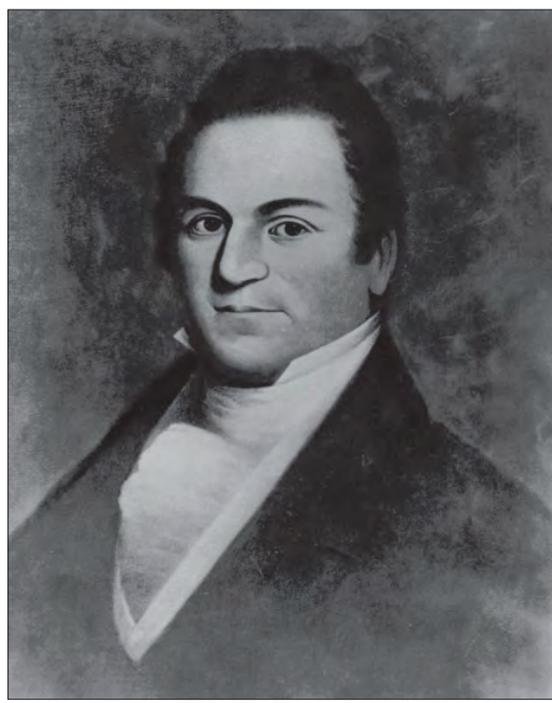


Figure 1.8. Lieutenant Colonel Roswell Lee was superintendent at Springfield Armory from 1815 until his death in 1833. Lee established the design foundation for the continuing evolution of the Armory into a grand and stately national institution. SPAR Museum Archives, Box 022, Folder 02, NEG 5581-SA.

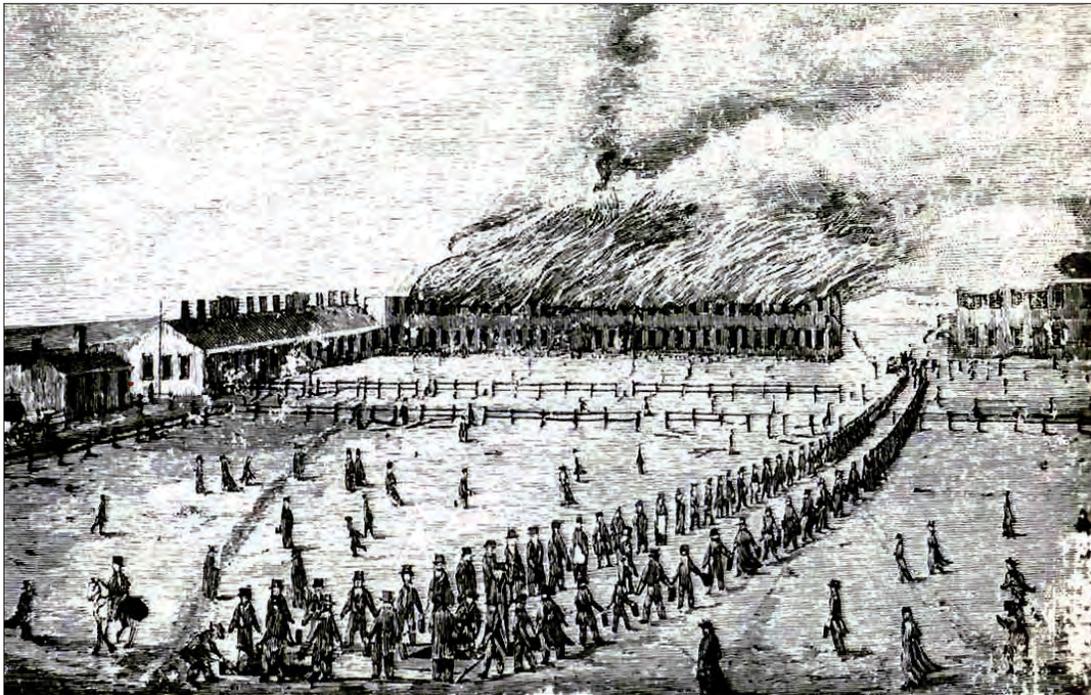


Figure 1.10. Sketch of a fire at the Hill Shops, from 1824. Note the low fencing and informal pathways. SPAR Museum Archives, Box 065, Folder 05, NEG 6569.

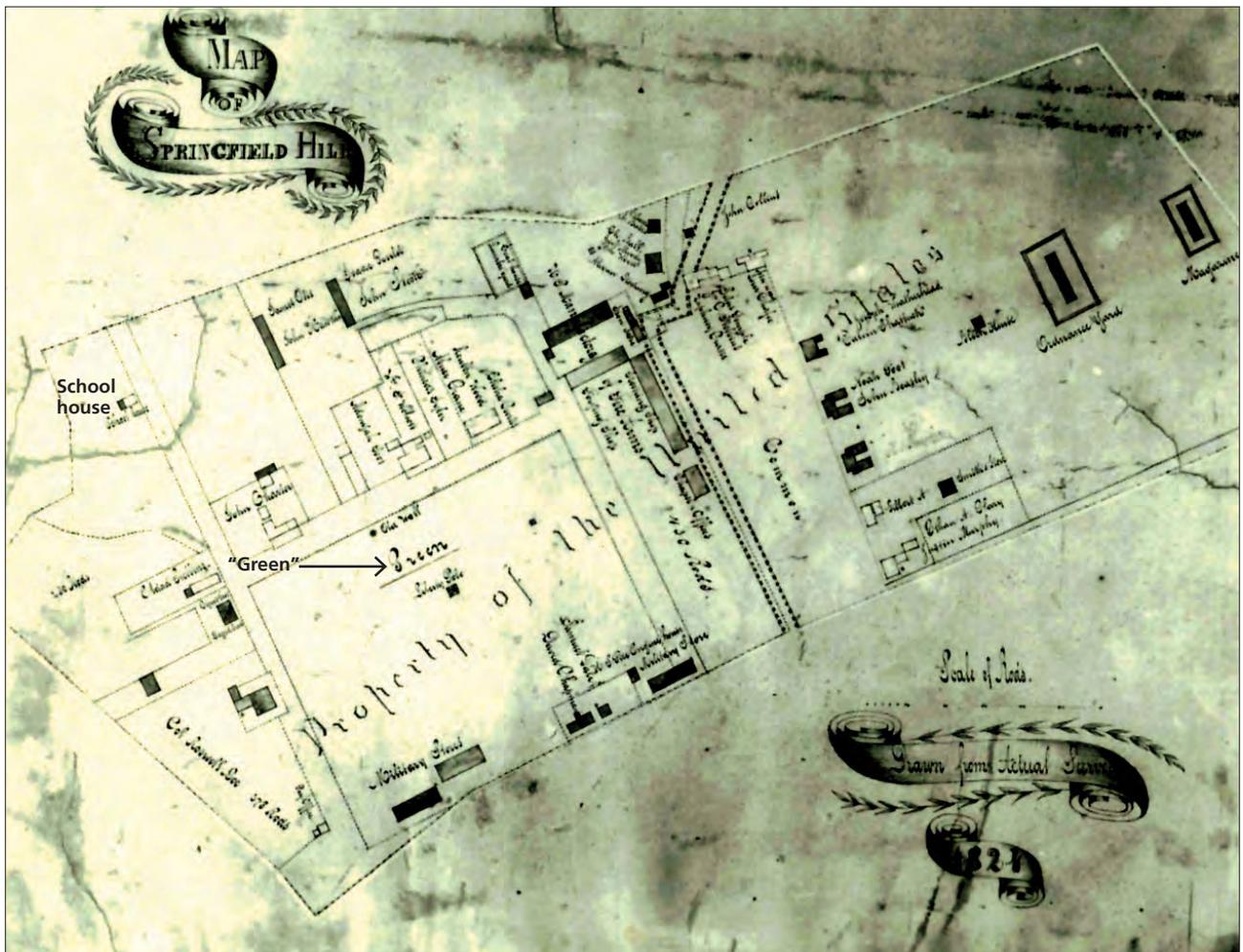


Figure 1.11. Map of Springfield Armory from 1824. Note that the Green is called out on the map. SPAR Museum Archives, Box 020, Folder 02, NEG X1465-SA.

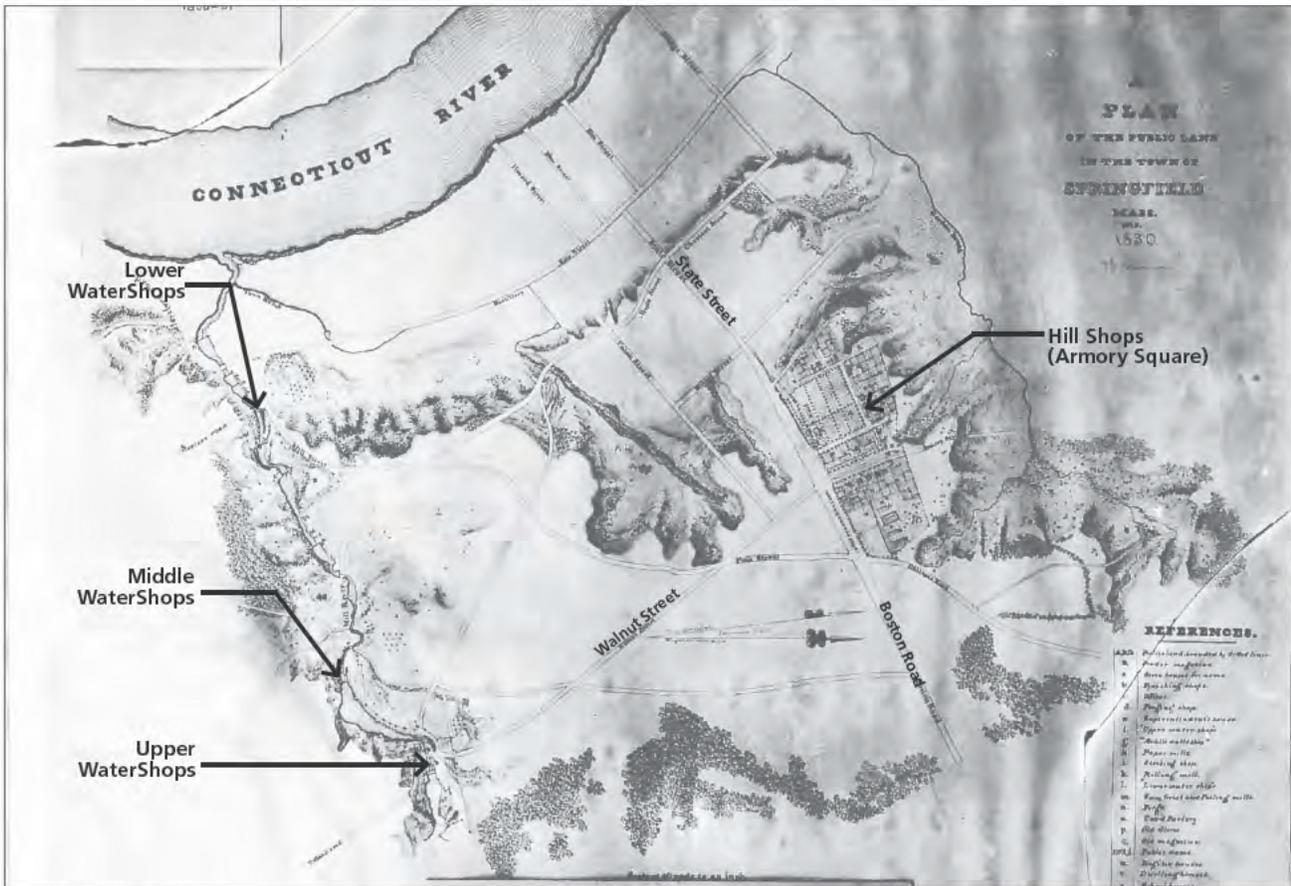


Figure 1.12. Map of the Armory including the Hill Shops and the WaterShops, circa 1830. The physical separation of the workshops increased production and transportation costs. SPAR Museum Archives, Box, 020, Folder 03, Neg X1466-SA.



Figure 1.13. Middle Arsenal, completed by Superintendent Roswell Lee in 1830 and photographed here in 1925. Visitors, including Henry Wadsworth Longfellow, were able to view the stored stacks of guns in this Georgian style building. SPAR Museum Archives, Box 004, Folder 05, NEG X1319.

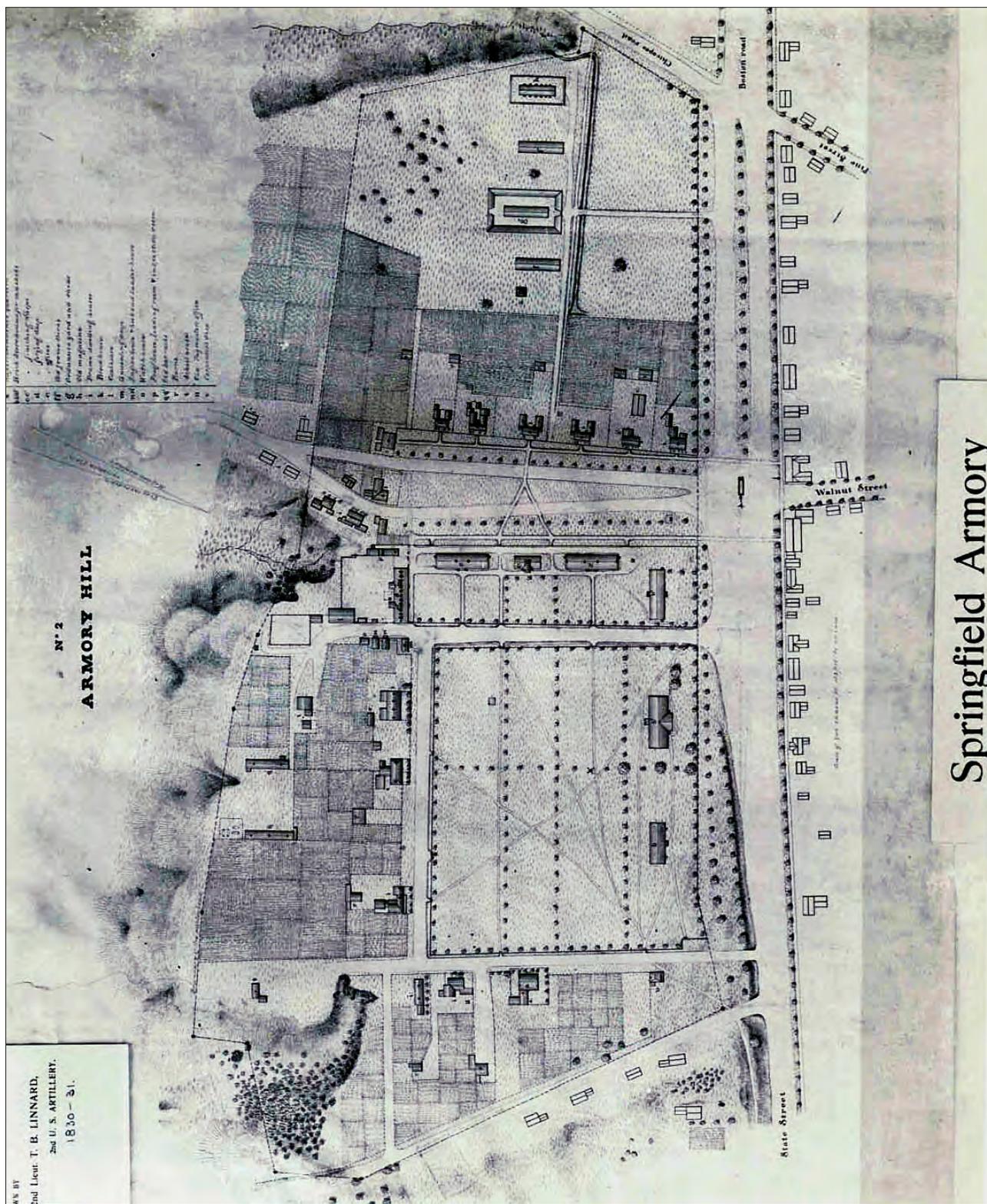


Figure 1.14. Plan of Armory Hill from 1830 illustrating the linear planting of trees on the Green as well as street trees and a planted median on State Street. Note the main road has two names, State Street and Boston Road. Walnut Street provided access to the Workshops. SPAR Museum Archives, Box 020, Folder 03, NEG X1464-SA.

Springfield Armory

Cultural Landscape Report

Armory Square
Springfield Armory
National Historic Site

Springfield, MA

1833 Period Plan



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

SOURCES

1. Plan of Public Land, Springfield, 1830
2. Springfield Armory Site Map, 21830
3. Springfield Armory Tree Inventory, 1830
4. Property Atlas, Springfield, 1851

DRAWN BY

R. Chaudhry/A. Crosbie, ArcGIS 9.1, Adobe Illustrator, 2009

LEGEND

- Tree Planting
- Agriculture
- Contour Line
- Building
- Wooden Fence
- Pedestrian Circulation
- Vehicular Circulation
- Wall
- 2010 National Historic Landmark Boundary Line

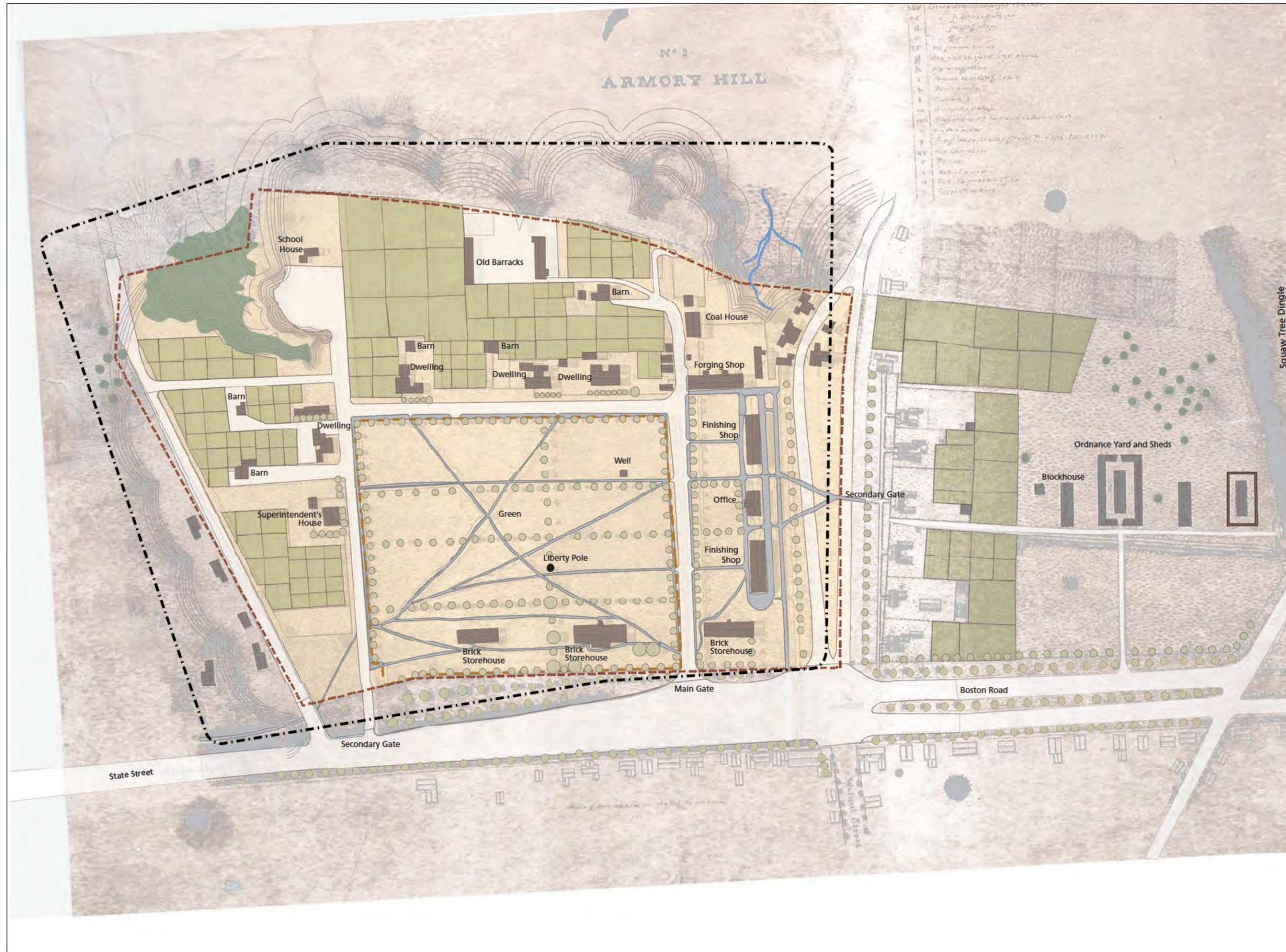
NOTES

1. All features shown in approximate scale and location.
2. Plan represents landscape conditions as interpreted from sources listed above.



0 200 400 Feet

Drawing 2



MID NINETEENTH CENTURY, 1834 – 1865

In the 1830s, immigration in the United States increased significantly, especially from Ireland, Britain, and Germany. Under President Andrew Jackson, the Indian Removal Act forced Native Americans to relocate in Oklahoma, resulting in the Trail of Tears. Labor unrest due to bad working conditions began to manifest in protests around the country. Irish laborers working on the Chesapeake and Ohio Canal rioted over their horrible conditions, resulting in Army troops being sent in to quell the uprising. In 1836, female textile workers went on strike in Lowell, Massachusetts, in order to remonstrate against a cut in their wages.

Springfield Armory focused efforts at this time on developing interchangeable firearms, and progress was made by the late 1830s. In 1834, Simeon North used gauges developed by John Hall at the Armory at Harpers Ferry to produce rifles that were practically interchangeable with those made at Harpers Ferry. These continuing innovations made repairs as well as production more efficient. It also decreased the need for expensive skilled labor. John Robb succeeded Lieutenant Colonel Roswell Lee as Superintendent of Springfield Armory in November 1833. Robb had served as Chief Clerk of the War Department under President Jackson, and his tenure at the Armory did not affect any significant changes in the landscape.⁵² In 1834, four new brick buildings for workers' residences were constructed according to Lee's earlier proposals.⁵³

In 1852, the Town of Springfield was granted a city charter after exceeding a population of 12,000. The growth in population included immigrants from Ireland, Germany and the French Canadian provinces. With improved transportation and increased trade, Springfield became a leading economic force in western Massachusetts. Increased commerce and industry also generated a sizeable middle class. In the downtown area, old wooden stores and homes gave way to multi-story brick buildings. Vacant lots were filled where possible with housing, creating a denser urban fabric.⁵⁴ The commercial and cultural core of the city concentrated around Court Square, a mile directly west of the Hill Shops. Large, single-family homes also developed around the Armory's Hill Shops, especially along Pearl Street.

On April 11, 1861, the Civil War began at Fort Sumter, South Carolina. Abraham Lincoln issued his Emancipation Proclamation in 1863 and promoted the passage of the thirteenth amendment in 1865, abolishing slavery. During the Civil War, the Armory at Harpers Ferry was destroyed, leaving Springfield Armory as the only federal facility manufacturing small arms until 1904 when the government established Rock Island Arsenal in Illinois.

THE ARMORY UNDER MAJOR JAMES W. RIPLEY, 1841 – 1854

In 1841, Major James W. Ripley, a veteran of the War of 1812 and the Seminole Wars, replaced Robb as Superintendent of the Armory (Figure 1.16). Ripley had previously been the Commander at the Kennebec Arsenal in Maine for seven years where his performance was lauded by the War Department.⁵⁵ At Kennebec, he was responsible for the expansion of the officers' quarters and commandant's residence, construction of two new magazines, an office building, and a cast iron and granite perimeter fence. His resourcefulness became apparent in his ability to complete site improvements with limited funds. For instance, he oversaw the construction of a new office building using stone salvaged from a demolished stable. For a new perimeter fence at Kennebec, Ripley was able to secure a pattern for a simple picket fence from a foundry at another arsenal in New York instead of using an elaborate design from a private enterprise.⁵⁶ The design for the fence also incorporated locally quarried granite. Ripley's personality was viewed as practical, assertive, and ambitious, embodying the quintessence of military precision and discipline.⁵⁷ He was also apparently a respected figure among his employees at Kennebec as many followed him to work at Springfield.

At Springfield Armory, Ripley promptly set to work and requested funds to enclose the grounds with a fence and to plant trees. In a letter to the Ordnance Department, Ripley requested money for improving the grounds noting that "little has been done for many years in the way of improving the grounds about the Armory, and their appearance is anything but creditable to the establishment. They require to be extensively renewed, shade trees planted, gullies and holes filled in."⁵⁸ Ripley's plans for improving the Armory entailed the purchase of land on the north and west of the government holdings on the hill and the construction of several new buildings. His plans also included substantial site grading and planting, laying out roads and fencing the remaining grounds.⁵⁹ Ripley's extensive construction program completed much of the layout and aesthetic design of the Armory and its grounds that survive today.

Throughout his term, Ripley found himself entangled in disputes with local politicians and developers over land he wished to acquire for the Armory's expansion. His detractors saw no merit in his site improvements: "...his (Ripley's) contemporaries, embittered by years of strife, and outraged by the stubborn continuation of projects, such as grading, fencing, and tree-planting, which served admirably as points of attack because they were not necessary."⁶⁰

Ripley's construction program began in 1845 and included the replacement and improvement of buildings, machinery, and grounds. Ripley's plan also included grading newly purchased land, planting shade trees, installing gaslight lamps around the perimeter of Armory Square, and laying stone flagging for sidewalks (Figures 1.17, 1.18). Brick and cement gutters were also installed on the newly paved sidewalks bordering the west and north sides of the Green. For the new

gaslight lamps, tapered cast iron light poles were modeled after cannon tubes. The original light fixtures were urn-shaped glass lanterns and were replaced with globes possibly in the early 1900s when gas lighting was changed to electricity.

The 1782 magazine was demolished and the materials were used in new construction.⁶¹ The Superintendent's Quarters were also razed and several dwellings were moved and altered. New Commanding Officer's Quarters were built in the Greek Revival style featuring a Doric columned entrance and porches (Figure 1.19). These were removed later and replaced with cast-iron porches. The new Commanding Officer's Quarters were sited at the top of the bluff, overlooking the city of Springfield. Flagstone walkways encircled the new quarters and a circular drive, seventy-three feet in diameter, was installed in front of the quarters. A new sidewalk traversed the west side of the Green from north of the Master Armorer's Quarters directly south to the entrance at State Street. Another new walkway, five feet wide, was also installed at the southern edge of the Green. Ripley's site improvements around his new residence required purchasing additional property currently owned by a local railroad company. This property included the ravine and slopes around the Commanding Officer's Quarters and also a fountain below the ravine. The fountain may have been a means of collecting storm water and water from the springs that occurred on the site. It was later removed during site grading operations.

Ornamental gardens were laid out in a formal pattern around the Commanding Officer's Quarters and extended out to the main road entry and in the middle of a circular service drive. Little is known about specific plants grown in these gardens. Large, rectilinear garden plots to the north of the Commanding Officer's Quarters and the row of Officers' Quarters suggested a utilitarian function. The areas in front of the Officers' Quarters were landscaped with trees and hedges. Evergreen hedges, roughly three feet in height, also defined the yards of the Master Armorer's and the Paymaster's Quarters and on either side of the Main Arsenal. A gardener's quarters surrounded by an orchard were also located near the Officers' Quarters.

Ripley constructed a new three-story building in 1850, the Main Arsenal, between the Master Armorer's and Paymaster's Quarters. Its thirty-foot tower provided sweeping views of the city and beyond to the Berkshires, and became a popular attraction for tourists. This imposing building also provided a visual terminus at the west end of the Green. In response to this new landmark, the Green began to be referred to as Tower Hill (Figure 1.20). Soon thereafter, the City of Springfield adopted the image of the Main Arsenal for the official city seal. Maps from this period reveal an off-center alignment of the Main Arsenal on the Green with the main east-west walkway (see Figure 1.20). This path had been established prior to the construction of the Main Arsenal and aligned with the existing structure at the eastern end. The design intent of the Main Arsenal was to balance with the Paymaster's Quarters and the Master Armorer's Quarters. This

required that the Main Arsenal be positioned equidistant to these buildings, resulting in its off-center alignment with the central Green walkway. The planting of trees would have made the asymmetrical alignment less apparent.⁶² Ripley then added a tower to the administration office building across the Green to balance with the Main Arsenal.

Ripley also constructed a new building for storing gunstocks and lumber in 1850, named the Long Storehouse, along the northern edge of Armory Square (Figure 1.21). The building was designed in the cavalry caserne style, featuring a gabled slate roof and segmental arched openings with louvers on the first floor. Ripley also installed nine thousand yards of sod around the new arsenal and on the embankments north of the new storehouse.

Ripley also wished to consolidate as many manufacturing operations as possible on the hilltop site.⁶³ Steam replaced water power for certain operations, transferring more manufacturing to the Hill Shops. The Lower Watershops were discontinued as a result. At the Upper Watershops, a permanent bridge was made across Mill River, and easier routes were opened to several converging streets leading to the bridge. Ripley had the dam at Upper Watershops raised five feet, expanding the supply of water as a source of power (Figure 1.22).

Three fires in 1843, two of which were deliberately set, intensified Ripley's desire to enclose the property.⁶⁴ Prospect Street, located west of the Green and used as a through street, was closed. Ripley had the grounds fenced in with pickets and high boards for the practical purpose of protecting property. The fence shut off access via public roadways except for the land adjacent to Boston Road. But Ripley preferred ornamental iron fencing that reflected the grandeur of the site and the institution.⁶⁵ Due to the high cost of constructing such an elaborate fence, he utilized scrap iron for nine-foot high pickets consisting of alternating spear heads and pikes beads⁶⁶ (Figure 1.23). For the foundation and posts, he used red Longmeadow sandstone, native bedrock quarried just a few miles away. The ornamental fence along the whole length of Armory Square's frontage on State Street, formerly Boston Road, was completed in 1853, along with a brick walk up the hill to the main entrance. For additional fire protection, Ripley had two brick cisterns excavated. An iron-capped brick cistern of 30,000 gallon capacity was located a few yards north of the northeast corner of the Main Arsenal. Another brick cistern of 70,000 gallon capacity was located near the workshops at Armory Square.

Ripley's construction projects and site improvements necessitated extensive reshaping of the Armory's hilltop topography. Grading adjustments also helped to mitigate erosion problems. The area north and south of the Long Storehouse and Main Arsenal were manipulated by moving 106,000 cubic yards of cut and fill. The result provided a flatter, terraced hilltop on the north side with an engineered, stabilized slope. The grading around the Main Arsenal and

Commanding Officer's Quarters on the edge of the bluff was undertaken to protect against erosion caused by the flow of water from the existing springs.⁶⁷ Other grading improvements included a new eleven-foot wide gravel road from the new steam shop northeast of the Green to the East Arsenal at the southeastern corner of the Green. A walk was completed across the south side of the square, parallel with, and north of the arsenals along that edge. The Town of Springfield widened and realigned State Street, considerably reducing the grade. The slope of the Armory grounds then had to be modified to accommodate construction of the new iron fence. Ripley acquired additional land, completing the State Street frontage of Armory Square.

By 1851, Armory Square had become an impressive and cohesive complex of buildings and grounds. Ripley's vision was not one building or an isolated piece of landscape, but a system of improvements. Ripley reinforced Lee's military layout in the formality and orderliness of the parallel rows of trees, manicured lawns, and hedges. The installation of custom lamp posts around the Green and stone flagging for the sidewalks around the perimeter of Armory Square improved pedestrian use and enhanced the impression of the Armory as a formal institution. The organization of buildings was reinforced with manufacturing at the northeastern portion and housing to the west. But in the naturalistic arrangements to the west and northwest, Ripley reflected the more fashionable landscape gardening ideas of his time.⁶⁸ A mix of deciduous and evergreen trees was planted informally on the gradually terraced slope. These were primarily silver maple (*Acer saccharinum*), American elm (*Ulmus americana*), and spruce (*Picea* sp.).⁶⁹ This arrangement of trees contrasted with the lines of trees on the engineered and regular slope north of the Green. The layout of trees on the Green itself was also devolving into to a more irregular arrangement. Landscape design at this time was influenced by the English landscape-gardening tradition promoted most notably in the United States by Andrew Jackson Downing. Gardens and public parks were designed with groupings of trees and single trees dotting a field in a seemingly random pattern, evoking a pastoral landscape appearing to have evolved without effort. The intention was to improve a landscape by relying on its natural existing features and using subtle massings of plants.

THE ARMORY AS URBAN RETREAT

As Armory Square became transformed into a pleasant campus, mansions were built by Springfield's elite along State Street and the south side of the square. The surrounding neighborhood expanded to serve middle class families.⁷⁰ Churches were built in the area as well as schools. An illustration from 1850 shows the Green containing a lawn dotted with trees and wooden fencing along the perimeter (Figure 1.24).

In 1852, an article in *Harper's New Monthly Magazine* described the bucolic charm of the Armory grounds (Figures 1.25 and 1.26).

On reaching the summit of the ascent, the visitor finds himself upon an extended plain, with streets of beautiful rural residences on every hand, and in the centre a vast public square occupied and surrounded by the buildings of the Armory. These buildings are spacious and elegant in their construction, and are arranged in a very picturesque and symmetrical manner within the square, and along the streets that surround it. The grounds are shaded with trees; the dwellings are adorned with gardens and shrubbery. Broad and neatly-kept walks, some graveled, others paved, extend across the green or along the line of the buildings, opening charming vistas in every direction. All is quiet and still...

The Arsenal has another charm for visitors... and that is the magnificent panorama of the surrounding country, which is seen from the summit of the tower. This tower, which occupies the centre of the building, is about ninety feet high-and is about thirty feet square, the deck at the top furnishes space for a large party of visitors to stand and survey the surrounding country. Nothing can be imagined more enchanting than the view presented from this position in the month of June.⁷¹

BACK TO CIVIL COMMAND, 1854 – 1861

In 1854, President Franklin Pierce approved an act repealing laws authorizing “the appointment of Military Officers to superintend the operations at the National Armories (Springfield and Harpers Ferry).”⁷² This measure was in large part the result of political maneuvering by citizens in Springfield who opposed Ripley’s leadership of the Armory. Although supporters of military rule made their voices heard, a Commission set up by the President determined that “civil control was more in keeping with American institutions.”⁷³ Ripley was then required to relinquish his post. The Secretary of War, Jefferson Davis, then appointed Ripley Inspector of all the armories, requiring his moving to Washington. His new role would bring him back to Springfield for periodic visits. General James S. Whitney, a politician in Washington, applied for the position and was granted the appointment in October 1854. Whitney continued to implement Ripley’s plans, such as the installation of additional ornamental fencing along the Federal Street side of the Armory in 1856.⁷⁴ Whitney also continued acquiring land and grading the property, consistent with the aims of his predecessors.

In order to complete the grading along Byers Street west of Armory Square, Whitney purchased a 21-foot wide strip of land to provide the required embankment. Pearl Street, on the north side of the Armory, was then extended to Federal Street, completing this edge of Armory Square. The terrace below the Main Arsenal, which was unstable due to the existing springs and the effects of winter freezing and thawing, was replaced by a more even and gradual slope. This change also enabled brick culverts to carry off surplus waters into State Street.⁷⁵ The Lower Watershops property, no longer in use, was sold. The Middle and

Upper Watershops were consolidated and the Watershops Pond was created, flooding eighty-three acres between the two complexes. In addition, Whitney acquired land east of the Armory, completing the property later called Federal Square. He then installed a wooden fence, four feet high with iron posts, around the newly acquired acreage and removed the existing buildings. Thus, Whitney established the ultimate boundaries of Armory Square including State Street along the south, Federal Street to the east, Pearl Street to the north and Byers Street on the western side.

Prior to the outbreak of the Civil War, Secretary of War John B. Floyd ordered that arms from Springfield be shipped to several southern locations. He also sent two military men to visit Springfield Armory and estimate the cost of erecting an Armory in Georgia.⁷⁶ This questionable activity was halted by the Chief of Ordnance who also directed the Armory to manufacture only the latest arms model and to increase production.⁷⁷ Floyd later resigned and became a general in the Confederate Army.

CIVIL WAR, 1861 - 1865

In April 1861, Confederates attacked Fort Sumter, North Carolina, signaling the beginning of the American Civil War. Former Commandant James Ripley was appointed Chief of Ordnance and he immediately reinstated military command over the Armory.⁷⁸ Captain A. B. Dyer, a former officer in the Ordnance Department assumed command in August. With military rule came strict directives including the swearing of an oath to “support, protect, and defend the Constitution and Government of the United States against all enemies.”⁷⁹ Dyer organized two shifts of ten and a half hours, doubling the output of arms. Focused, strenuous efforts on the job were adamantly enforced. Rifle muskets with completely interchangeable parts were to be manufactured at both Springfield and Harpers Ferry. By 1864, Springfield Armory employed over 3,000 workers and was able to produce 1,000 muskets in one day.⁸⁰

As production intensified, Dyer installed a steam engine at the combined Watershops to pump water night and day. The Middle Arsenal was fitted for manufacturing to increase production. The Administration Building along the east side of the Green was created by connecting the North and South shops with the office building between them. The Long Storehouse was also extended. Additionally, temporary sheds were located on Federal Square. In 1864, two octagonal ice houses were constructed northwest of the Main Arsenal and northeast of the Commanding Officer’s Quarters.⁸¹ The Armory’s hill site location was referred to as Union Square during this time. The earliest reference to Union Square was discovered in the Springfield City Directory in 1854 and continued through the 1870s.⁸²

By the end of the war in 1865, the Armory's relationship to the City of Springfield solidified. As the city outgrew its economic dependence on the Armory, any leftover tension from the past was eliminated. In contrast to most mills in and around New England, Springfield Armory set a standard for working hours, conditions, and pay, making it a very desirable place to work.⁸³ During the later part of the nineteenth century, Springfield Armory continued to innovate in arms manufacturing, expand its campus and modify the land to better suit its needs.

LANDSCAPE DESCRIPTION SUMMARY, 1865

Between 1834 and 1865, the Armory had evolved from a functional group of buildings into an impressive campus, leading to the development of the surrounding area into a fashionable residential neighborhood (Drawing 3). During his thirteen-year charge of the Armory, Ripley was responsible for shaping and defining the essential character of the Armory Square landscape, much of which still exists today. The Main Arsenal was the focal point of the campus with its broad, mowed front lawn, tower, and prominent location on the edge of the bluff. The grounds at the western and northern areas had been extensively reshaped to mitigate erosion, enhance drainage, and provide water storage for fire safety. The boundaries of Armory Square were clearly defined by State, Byers, and Pearl Streets, and further emphasized by rows of trees and the ornamental iron security fencing along the perimeter (Figure 1.27). Due to its verdant landscape, brick architecture, and views from the Main Arsenal tower, Armory Square became a destination for visitors to Springfield.

The spatial organization of the Armory consisted of a cluster of manufacturing buildings at the northeastern portion of the site and less labor intensive activities occurring along the State Street side of the campus. Housing continued to be concentrated in the northwestern area of the site. Ripley followed military architectural trends of the time, and symmetry dictated building locations, such as the Main Arsenal between the Paymaster's Quarters and Master Armorer's Quarters. Ripley also added a tower to the Administration Building, facing the Green, to visually balance the Main Arsenal tower. The installation of lamp posts designed to evoke cannon tubes further reinforced a sense of unity and military organization in the landscape.

Vehicular circulation consisted of roads entering Armory Square at four locations. The main entrance gate and guardhouse were on State Street. Two gates stood on Federal Street including one in front of the Administration Building and one near the manufacturing operations. The fourth gate was at the corner of Byers and Pearl Streets. This gate was the exit/entrance of a road that began at a large circle to the south and in front of the Commanding Officer's Quarters. A smaller circular drive serviced the back entrance to the Commanding Officer's Quarters from the Green.

Pedestrian circulation across the Green evolved into formal, axial walks dividing the space into four quadrants of unequal sizes. At the intersection of these paths was an oval shaped area with a flagpole in the center. The walk from the Administration Building to the Main Arsenal followed the main axis. Flagstone walkways lined the north, south, and west sides of the Green. Mortared brick gutters were installed along the edges of the sidewalks bordering the north and west sides of the Green. Brick sidewalks were also laid outside the perimeter fence of Armory Square.

Vegetation continued to mature, and hundreds of new trees were planted. Trees were planted between sidewalks and streets evenly spaced in straight lines, echoing and softening the fence's fortified character. Regularly spaced trees also lined some of the interior roads. New informal plantings on the Green and the western slope contrasted with the previous linear arrangement, providing a denser canopy. Trees were also arranged informally on the more gradual slopes around the perimeter to the south and west and on the Green. The circular island in the service drive north of the Commanding Officer's Quarters and plots northeast of this circle were planted with climbing flowering vines and ornamental shrubs. The lower portion of the road leading from the circle to the gate at Byers and Pearl Streets served as a hay field.



Figure 1.15. Wood engraving of the Armory in 1839, showing, from left to right, a portion of the North Shops, office and chapel, the South Shops, the East Arsenal and the Middle Arsenal. The Green is fenced in with cattle grazing to the left. A liberty pole also appears on the Green to the right. SPAR Museum Archives, Box 011, Folder 05, NEG.

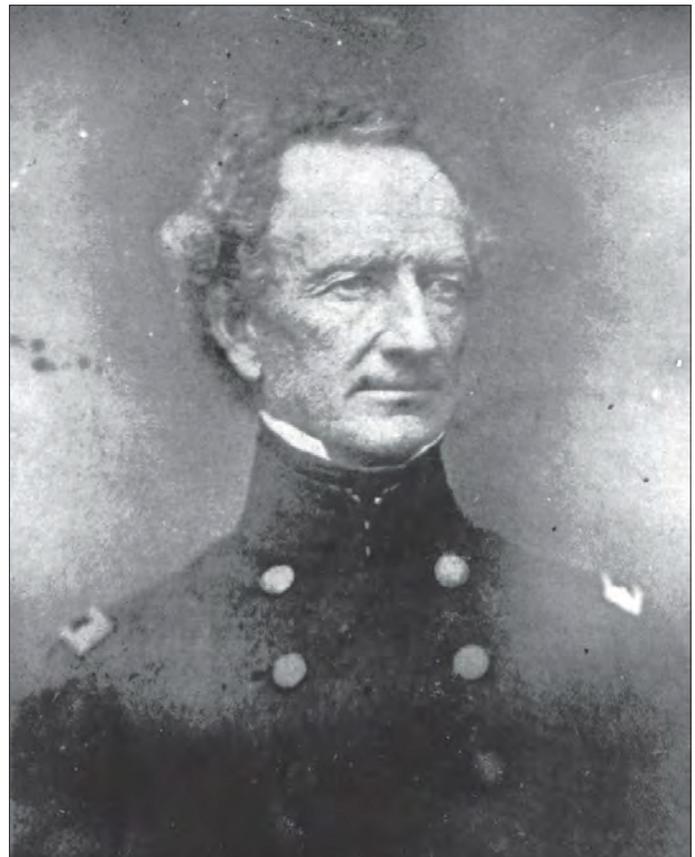


Figure 1.16. Major James W. Ripley took command of Springfield Armory in 1841 until 1854. He succeeded in reinforcing and enhancing the Armory's military and orderly appearance. SPAR Museum Archives, Box 002, Folder 13, NEG 5583-SA.

Figures 1.17, 1.18. Recalling cannon tubes, custom made iron lamp posts were installed in the mid 1840s under Ripley's administration. The image to the left appears to show the original glass urn-shaped lantern. The photograph to the right shows the replacement globe fixtures that were installed in the late nineteenth or early twentieth century. SPAR Museum Archives, Box 002, Folder 05, NEG and Box 002, Folder 07, NEG. 699-SA.



Figure 1.19. View of the Commanding Officer's Quarters in 1871. The building site took advantage of views out to Springfield and the Berkshire mountains beyond (to the left). Note the original Doric columned porches that were later replaced with iron porches. Also note the unpaved circular drive and the number of deciduous trees around the house and drive. SPAR Museum Archives, Box 001, Folder 06, NEG 700-SA.



Figure 1.21. View of the Long Storehouse, completed in 1850. The fire house and reservoir in the foreground were constructed later in the 1870s. New trees were planted along the Long Storehouse and around the reservoir. The Main Arsenal tower is barely visible in the background. SPAR Museum Archives, Box 005, Folder 05, NEG 4856-SA.

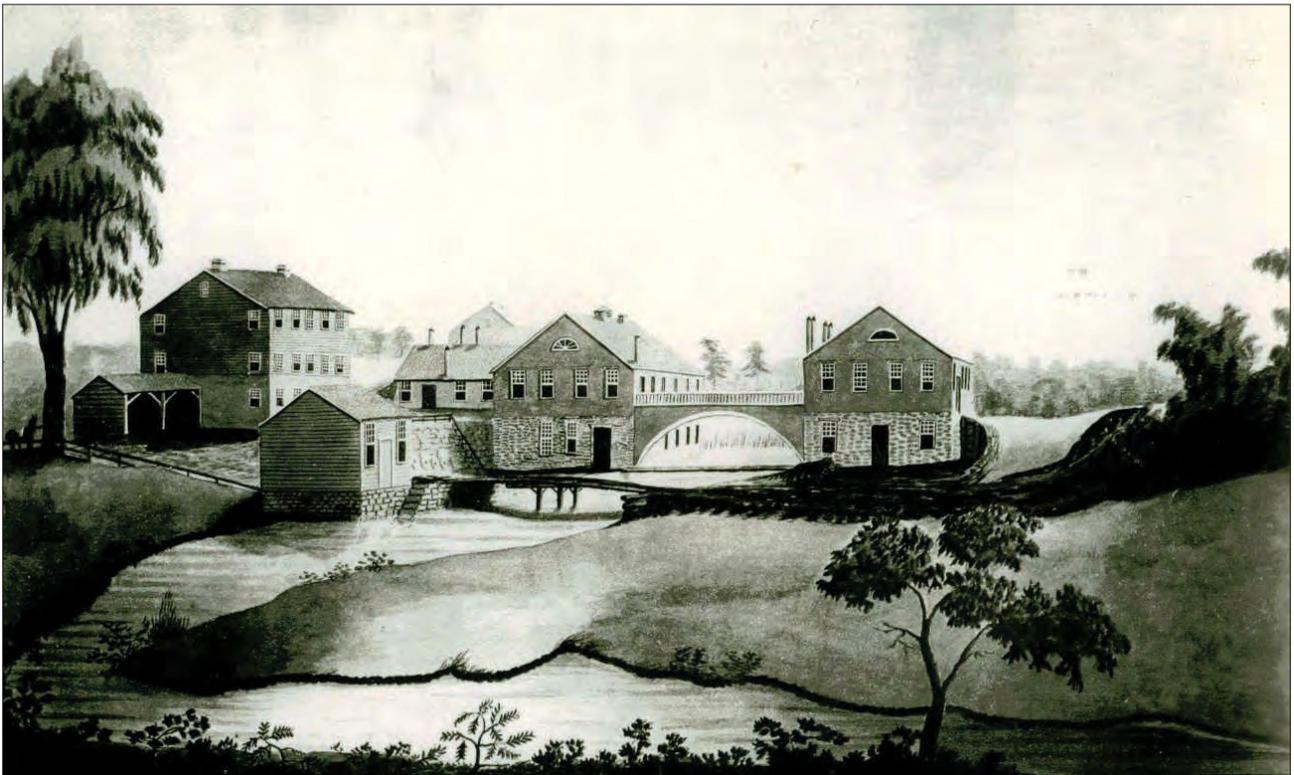


Figure 1.22. Rendering of the Upper Watershops in the 1830s. In 1850, Superintendent Ripley raised the dam level to provide more power. SPAR Museum Archives, Box 016, Folder 10, NEG X1324-SA.

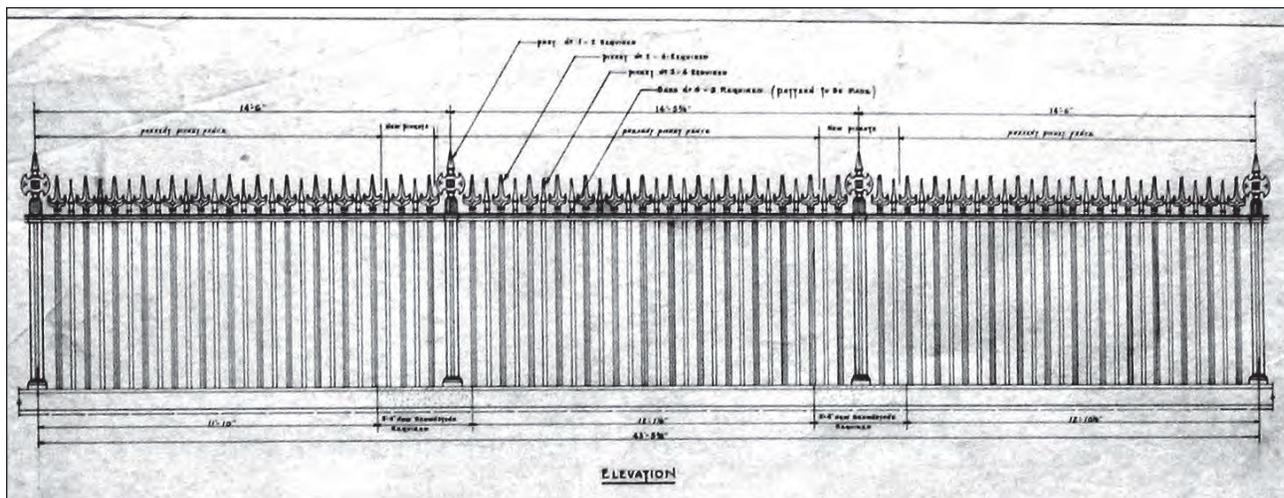


Figure 1.23. Drawing elevation of ornamental iron fence installed around the perimeter of Armory Square in the late 1840s and early 1850s. The fence pickets consisted of nine-foot long pales of alternating spear heads and pikes beads. SPAR Museum Archives.

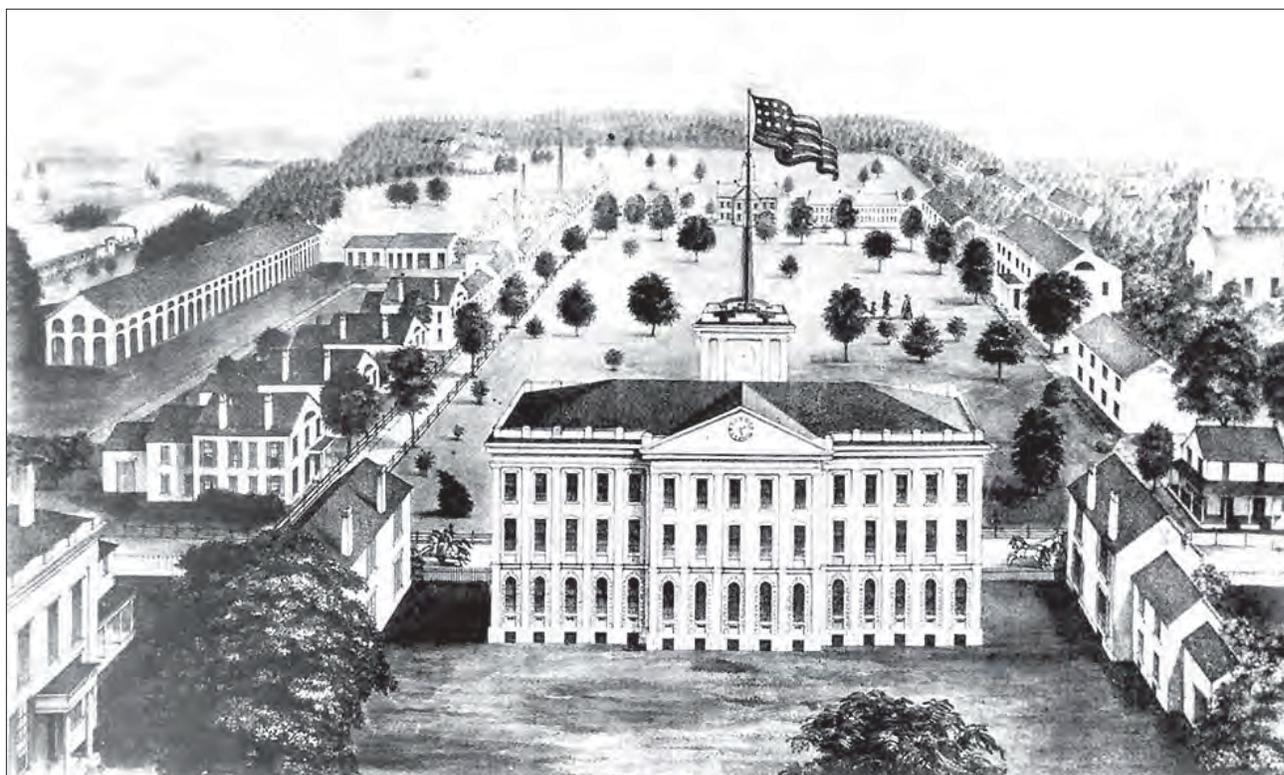


Figure 1.24. Drawing of the Main Arsenal in 1850 with a flagpole on top of the tower. Note the fence along the Green, as well as the open lawn with plantings of trees. The Paymaster's Quarters are to the right, and the Commanding Officer's Quarters and Master Armorer's Quarters are to the left. Further to the left are the Officers' Quarters and the Long Storehouse beyond. SPAR Museum Archives, Box 011, Folder 05, NEG.

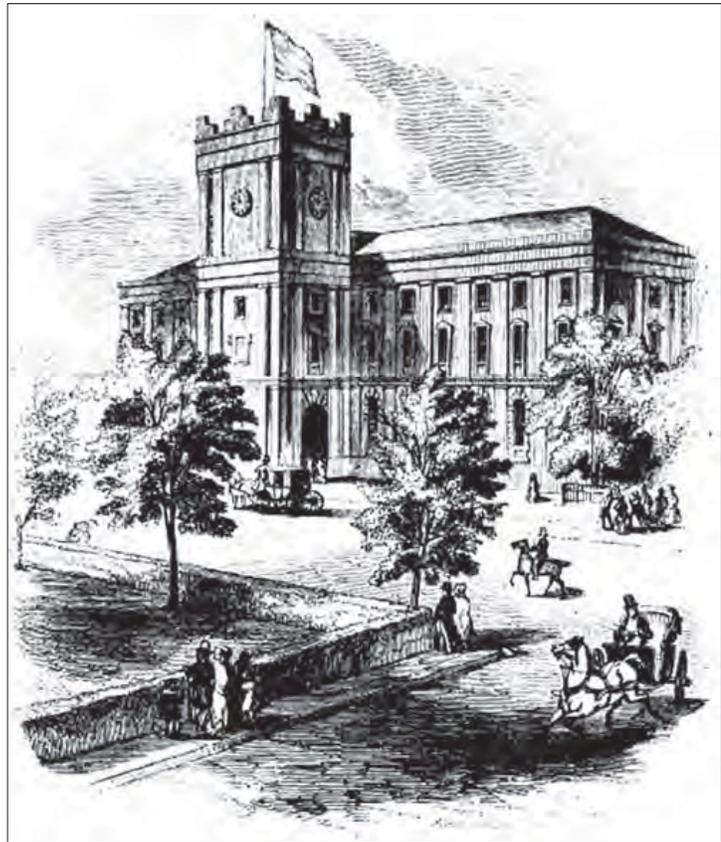


Figure 1.25. Illustration from 1852 shows a hedge lining the perimeter of the Green opposite the Main Arsenal. SPAR Museum Archives, Box 004, Folder 01, NEG 6566-SA.



Figure 1.26. Rendering from 1852 of the Commanding Officer's Quarters. The Doric columns were later removed in 1870. Note the wooden picket fence and the sidewalk paved with flagstones. SPAR Museum Archives, Box 05, NEG 6570-SA.

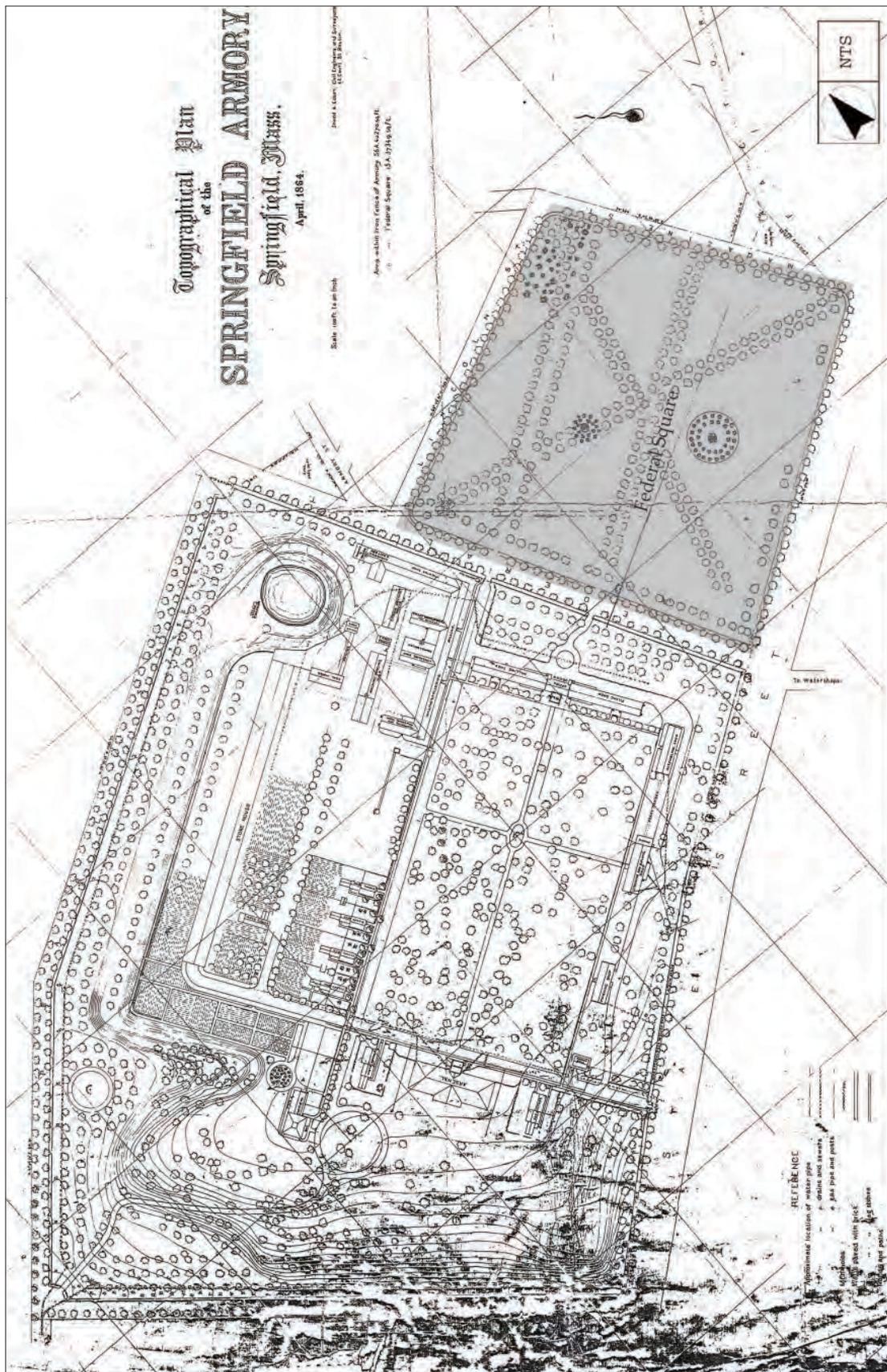


Figure 1.27. Topographic map of Armory Square from 1864, by Shedd & Edson, showing drainage layout including pipes, drain lines and manholes. Evenly spaced contour lines at the northern edge of the campus by Pearl Street illustrate ongoing grading efforts. SPAR Museum Archives, 11086-SA.

Cultural Landscape Report

Armory Square Springfield Armory National Historic Site

Springfield, MA

1865 Period Plan



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

SOURCES

1. Property Atlas, Springfield, 1870
2. Springfield Armory Site Map, 1864
3. Springfield Armory Tree Inventory, 1864

DRAWN BY

R. Chaudhry/A. Crosbie, ArcMap GIS 9.1, Adobe Illustrator

LEGEND

- Hedge
- Tree Planting
- Orchard Tree
- Agriculture
- Gardens
- Contour Line
- Building
- Pedestrian Circulation
- Vehicular Circulation
- Brick Sidewalk
- Ornamental Fence
- 2010 National Historic Landmark Boundary Line

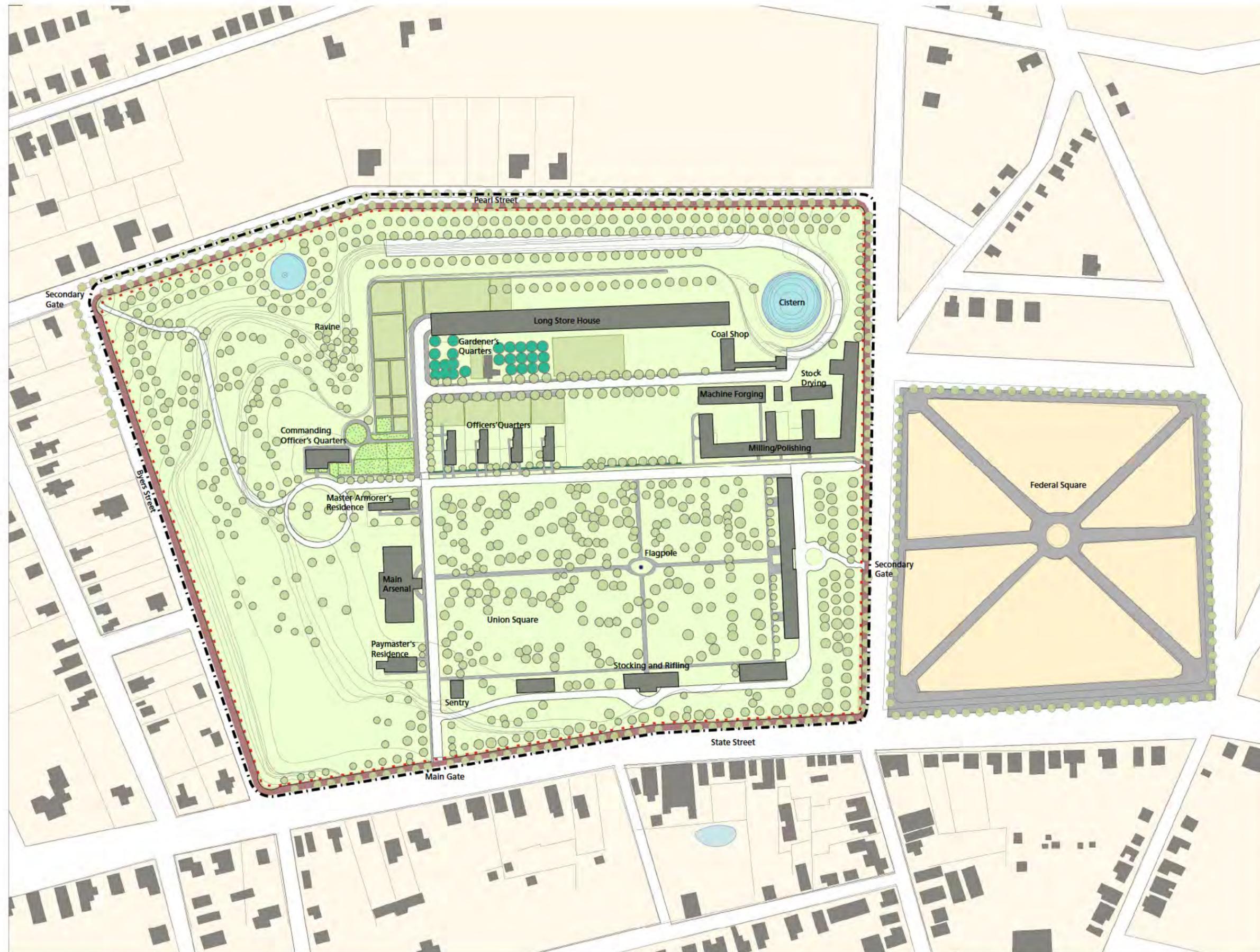
NOTES

1. All features shown in approximate scale and location.
2. Plan represents landscape conditions as interpreted from sources listed above.



0 200 400 Feet

Drawing 3



RECONSTRUCTION AND THE GILDED AGE, 1866 – 1939

The Civil War came to a close on April 9, 1865. The following Reconstruction period would see the passage of three amendments to the Constitution. Slavery was abolished and citizenship was granted to those born or naturalized in the United States, except for Native Americans. In addition, the right to vote could not be denied because of race, color, or previous condition of servitude. The United States entered a period known as the Gilded Age. This term was coined by Mark Twain describing the extravagant displays of wealth and excess by America's upper class. It was also an era noted for major population growth, rapid industrialization, and technological advances such as the telephone, phonograph, and cable car.

After the Civil War, the term “armory” was used to describe new fortified bases for local militias. The United States government became concerned with civil unrest and class conflicts as labor unions became more powerful, riots occurred in urban areas, and a surge of immigration touched off a wave of intolerance.⁸⁴ In order to maintain peace, the government authorized the construction of these fortified bases in 1877. The new facilities were overseen by local Armory Boards that were established in many cities and towns. The buildings were often designed as ornate, fortress-like structures with crenellations, turrets, and portcullis gates. They usually contained storage for weapons, drill halls, offices, classrooms, and dining rooms. Some armories had outdoor space for drills, but many were located in the center of urban areas with very little or no adjoining open space. In 1903, militias were organized into the National Guard system that exists today.

Springfield's industries and manufacturing contributed to the Union's victory and continued to prosper after the war. The City built new schools, developed public parks, and expanded municipal services including water supply, sewers, and street construction. The population of Springfield grew from 26,000 in 1870 to 62,000 in 1900.⁸⁵ In 1891, while working at the YMCA Training School in Springfield, Dr. James Naismith invented a game that could be played inside during the winter time and in a limited amount of space. Basketball would quickly gain widespread popularity. In 1904, Theodor Geisel was born in Springfield and would later become famous as the children's author Dr. Seuss.

Springfield Armory manufactured the Krag-Jorgensen rifle from 1894 until 1903 when it was replaced with the Springfield U. S. Model 1903 rifle. Organized in 1891, the Experimental Department of the Armory conducted experiments with small arms and ammunition. After 1865, three new departments were established at the Armory including the Small Arms Museum, Small Arms Proving Ground, and Metallurgical Department. By the turn of the century, the Armory employed 1,400 men working an eight-hour shift.⁸⁶

LATE NINETEENTH CENTURY, 1866 – 1899

The city of Springfield continued to expand right up to the Armory's western edges and fill in north of Federal Square (Figure 1.28). The Armory formed a very desirable area given the architectural unity of buildings, perimeter ornamental iron fence, and maturing landscape.⁸⁷ Adjacent residential developments followed the Armory's example of coordinated architectural styles, tree plantings, sidewalks, and drains, creating an ordered and unified neighborhood.⁸⁸

During this period, Springfield Armory was under the command of four different superintendents, beginning with Major J. G. Benton who is credited with instituting a weapons collection as a technical reference for Armory personnel. The Armory continued to expand with the acquisition of land between Federal Square and St. James Avenue to the east. Benton directed the construction of new Officers' Quarters near the original State Street entrance and a guardhouse between the East and West arsenals, conforming to the boundaries already established about Armory Square.⁸⁹

Adjustments to the campus occurred in the early 1870s in response to changing street conditions as well as negotiations with the City over public access. The City regraded State Street in 1875, rendering the Armory Square entrance on that street too steep for vehicles. Steps were built on the slope at this entrance and a smaller pedestrian gate replaced the larger one. As a result, the Armory relocated the main gate to the Byers and State Street corner and a gatehouse was added. A bird's eye view drawing from 1875 shows the terracing along the eastern bluff, the regrading of State Street and the relocated gate entrance (Figure 1.29). A few years later, the fence on the State Street side of Federal Square was set back on the condition that the City assumed the upkeep of the plot, thus creating public open space.⁹⁰ This elm-studded strip of land became known as Benton Park.

By the mid 1870s, the Armory hill site had expanded to seventy-five acres (Figure 1.30). Photographs from this period reveal groups of trees, including newly planted spruce and deciduous trees, on the main lawn fronting the Main Arsenal (Figures 1.31 and 1.32). Benton added several new landscape features to the grounds including a memorial in 1876, located along the north side of the curving entrance drive from the Byers and State Streets gate (Figure 1.33). This ivy covered stone monument with cannon and cannon balls is briefly mentioned in several reports as either commemorating the American Revolution or the Civil War.⁹¹ In addition, cannons, most likely from the Civil War, lined the Green and around the Commanding Officer's Quarters (Figures 1.34, 1.35 and 1.36). These cannons possibly served as a commemoration of past battles or general gun display. They remained a prominent landscape feature until World War II when the need for scrap metal became acute. A pool and fountain were also added between the Main Arsenal and the Commanding Officer's Quarters. Benton also built a 1,500 square-foot greenhouse at the northwest corner of the Armory near

the Long Storehouse, providing plants for the gardens around the Officers' Quarters and the Commanding Officer's Quarters (Figure 1.37). Sometime between 1877 and 1882, the Master Armorer's Quarters were moved northeast of its original location, near the Long Storehouse.

Lieutenant Colonel A. R. Buffington assumed command of the Armory in 1881 and became very concerned with the Armory's susceptibility to fire.⁹² As a result, he oversaw the construction of new shops on neighboring Federal Square between 1882 and 1892. This new federal plant included two-story, brick structures with cast iron columns and floor joists and brick-arch floors. An experimental building that was built in Federal Square during the 1870s was razed to accommodate a new manufacturing facility on top of the same site.

During the 1880s, Buffington also oversaw improvements to vehicular and pedestrian circulation. A new drive was built to curve around the south and west sides of the Main Arsenal and connect the road along the western side of the Green and east of the Main Arsenal to the circular drive in front of the Commanding Officer's Quarters. Around the same time, Buffington built a flagstone sidewalk from the Byers and State Streets gatehouse, along the north side of the entrance road to the Green (Figure 1.38).

Lieutenant Colonel Buffington's administration ended in 1892 and he was succeeded by Colonel Alfred Mordecai. In order to gain more control of operations at the workshops, Mordecai eliminated the position of master armorer, with the Secretary of War's concurrence. He also introduced new manufacturing methods for producing the Krag-Jorgensen rifle. In 1894, Mordecai built an Officers' Quarters, known as Quarters 2, at the northwest corner of the Green across from the Commanding Officer's Quarters. A year later, he moved the Paymaster's Quarters to the northeast area of the Green across from the principal hillshop. In 1898, he moved four officers' quarters that were built by John Robb to the east and northeast. Mordecai was then followed by Lieutenant Colonel Isaac Arnold, Jr. who served for only a year.

At the close of the nineteenth century, Springfield Armory's landscape continued to reinforce the dignity and grandeur of America's oldest arms manufacturer and arsenal. The memorial and cannon displays on the Green evoked the stateliness and power of the Armory. New tree plantings and the placement of new buildings reinforced the existing spatial organization. And the construction of a greenhouse suggested an increasing interest in ornamental plants to enhance the grounds as well.

EARLY TWENTIETH CENTURY, 1900 - 1917

By the 1900s, the American industrial revolution was in full swing, the Wright Brothers made their first flight at Kitty Hawk, and Henry Ford introduced the Model-T automobile. In Springfield, the population exceeded 62,000 and electric

trolley cars traveled to the burgeoning suburbs. There were roughly 500 manufacturing plants located within the city, including other gun factories such as Smith and Wesson, train car manufacturers and iron foundries.

At the turn of the century, Springfield Armory expanded its efforts in the development of small arms. The Armory had always been involved in testing small arms, but developing new arms designs had been minimal.⁹³ Semi-automatic, or self-loading, weapons were becoming increasingly important and the advent of machine guns necessitated a new means of weaponry. Lieutenant Colonel Frank H. Phipps was appointed superintendent at Springfield Armory in 1899. During his tenure, the Armory devised a new Springfield rifle in 1903, based heavily on the German Mauser rifle. The 1903 model was replaced by the M1 thirty-three years later, but remained in service for sniper applications through the Vietnam War.

Prior to World War I, railroad spur tracks improved the transportation of materials and arms between the Armory Square stock storehouse and Federal Square manufacturing facilities. This rail line extended to the Watershops as well, and a connection was also made to the New York, New Haven, and Hartford Railroad via the Springfield city street railway.⁹⁴

Gardens at the Armory continued to expand in 1900 when a vegetable cellar was built behind the northwest corner of the Long Storehouse. In 1905, a second greenhouse, 750 square feet in size, was built south of the existing greenhouse (Figure 1.39). Both greenhouses were referred to as “root and propagating houses.”⁹⁵ Adjacent to the new greenhouse was a wooden trellis or arbor structure. Its specific use is not known, but it most likely had flowering vines growing on it. One of the most prominent garden features at Armory Square was a large, cross-shaped rose arbor in the service driveway circle at the Commanding Officer’s Quarters, positioned perpendicular to the house. An image from 1900 shows the wooden arbor structure and an extensive collection of climbing roses (Figure 1.40). Rose gardens were a popular landscape feature in the late nineteenth century as a wide variety of new rose hybrids proliferated in the United States and Europe. Rose arbors were usually designed to provide some shade and allow one to walk under the climbing plants. The cross shape was likely utilized to provide multiple approaches from around the perimeter of the circular drive. Wooden rose arbor structures also appeared in a garden in Forest Park, a popular woodland park four miles south of the Armory, around the same time.⁹⁶ Lieutenant Colonel Phipps was succeeded by Colonel Stanhope E. Blunt in 1907. New structures at the Armory included a new brick gatehouse in 1908 that replaced the original octagonal structure at the Byers and State streets entrance, and another vegetable cellar located near the site of the old gardener’s quarters.⁹⁷

In 1912, Lieutenant Colonel William Pierce became the superintendent at the Armory. A year later, Pierce requested the services of the United States Department of Agriculture for a tree assessment of the Armory. In his examination of 250 trees, Louis S. Murphy, the Forest Examiner, indicated that the trees were already at a mature stage in their lifespan and would need more frequent care. He noted that a large number of “soft” maples, referring to silver maples, had reached or were past their prime and were also short-lived and susceptible to storm damage. He believed that these trees did not merit the effort or money to maintain. He also noted that some elms had been replaced with horse chestnuts, which have entirely different habits of form and growth, criticizing this haphazard method of replacement. He recommended that a thorough and detailed improvement and replacement plan be undertaken. According to Murphy,

There must be harmony and symmetry throughout a given unit as along a certain drive, or bordering the paths and roads of a quadrangle, or fronting certain buildings. It is not necessary to have all one species; but mixtures, where trees are planted in rows, are generally not conducive to the best harmony because of the variations of different species in habits of growth, form of crown and the like.⁹⁸

Murphy ended his report with his views on what he considered useless trees which are old, decrepit, storm-damaged, or disfigured,

Even a badly disfigured old tree, which marks early settlement or some other local historic event, may give far more pleasure to its owner or to the community which knows its history, than a young tree in its place. Everything should be done to improve the appearance of such trees and to prolong their lives.⁹⁹

Murphy’s comments regarding harmony and symmetry reinforced the original intent of the landscape development of Armory Square. Trees had always been incorporated as a means of defining areas at Armory Square, such as the Green or the edges of the campus. The placement of trees provided another layer of order in keeping with the organized, military aspect of the Armory. The report did not mention any specific trees of historical significance but it is interesting that Murphy made a point of promoting the value of trees that might have local significance. It is unknown whether his recommendations were implemented, including the execution of a detailed tree condition report. But it is clear that the health of the trees was enough of a concern that Pierce sought expert advice.

WORLD WAR I – 1939

In January 1917, as Europe was embroiled in war, Germany announced that it would resort to unrestricted submarine warfare against shipping to and from Great Britain. This forced President Woodrow Wilson to stop his peacemaking efforts since the United States, still a neutral party, would be in harm’s way with

this new policy. The United States broke off relations with Germany in February and entered the war in April that same year.

The Ordnance Department and Springfield Armory were apparently unprepared for the scale of World War I, and little plant expansion was possible during the crisis.¹⁰⁰ Under the direction of Lieutenant Colonel Lindley Hubbell, appointed in 1918, the Armory built metallurgical and chemical laboratories north of the Federal Square machine shop to better control the quality of manufacturing materials. Temporary storage structures were also erected to accommodate expanded production.

By the time the United States entered World War I in April 1917, the Armory had produced approximately 843,239 Springfield Model 1903 rifles. During the war, the Armory produced over 265,260 of these rifles. Additional arms were manufactured for the war effort at the Rock Island Arsenal in Illinois. Women also entered the workforce at Springfield Armory during the war, employed as filers, drillers, and inspectors.¹⁰¹

After the Armistice was signed on November 11, 1918, the Armory continued to make improvements and expand. The Armory's importance in manufacturing was minimized by the 1920s, but its role in experimental work continued to thrive as the scope of warfare expanded. A new power plant was built on the hill and by 1920 motorization of the machines in the Hill Shops was complete. The East Arsenal and the Administration Building were joined and the southeast corner of the Green became completely enclosed. A ballistics building was also constructed behind the Long Storehouse to the north. A trestle was built at the northeast corner of Armory Square for hauling coal to the workshops. The bulk of construction during the early years of the twentieth century took place at Federal Square, including facilities for a bolt and automatic building, heat treating, metal finishing and transformers.

During the 1920s, the grounds at Armory Square offered shady spaces, a water feature, flowering plants, and places to sit, providing opportunities for passive recreation. A winter photograph reveals the predominant character of the Green as a mature canopy of trees on an open ground plane (Figure 1.41). In another image, the wife of the Commanding Officer, Colonel Schull, is seated with a friend by a pond, referred to in the Armory archives as the "lily pond" (Figure 1.42). The pond was constructed of concrete and edged with annual plants and had a small fountain in the center. The Green's shady canopy and walkway, punctuated by stacks of cannon balls, afforded a pleasant backdrop as the ladies sat on a wooden bench. The potted plants on either side appear to be big leaf hydrangeas (*Hydrangea macrophylla*), most likely grown in the greenhouses on site. Flagstone paving was laid between the pond and the bench. Another photograph reveals a long hedge of lilacs, roughly four feet high, and one of the greenhouses beyond (Figure 1.43).

During the Great Depression in the 1930s, the Armory focused its efforts on reorganizing and updating existing facilities. Old machines were sold to accommodate improved equipment. A new welding shop was built in 1934, followed by twelve new furnaces in 1935. A storehouse for plant vehicles and a property and manufacturing facility were constructed on the site of the former cistern and coal trestle northeast of the Green.

The campus at this time was still characterized as an open expanse of lawn dotted with trees. Views out from the hill at Armory Square appeared to be preserved through deliberate planting choices. The perimeter of the grounds was planted with trees widely spaced, retaining views in and out of the campus. The ornamental fence was also kept free of any plant growth that would obstruct visibility, furthering the visual connection between the Armory and the surrounding neighborhoods (Figures 1.44, 1.45). The grounds between the Main Arsenal and the entrance had fewer trees, especially evergreens (Figure 1.46). Aerial photographs from the 1930s revealed how the overall layout and scale of Armory Square remained essentially the same since the 1850s (Figures 1.47 and 1.48). Manufacturing was still concentrated in the northeastern portion of the site and in Federal Square. The northwestern portion retained its residential character including the row of Officers' Quarters with foundation plantings and lawns (Figures 1.49 and 1.50). The area around the Commanding Officer's Quarters also remained formally landscaped with flower gardens and manicured lawns.

In 1937, as part of the New Deal initiatives to reinvigorate the economy and promote employment, the Armory undertook several Works Progress Administration (W.P.A.) projects. Men were hired to reconstruct the roads behind the Main Arsenal and along the edges of the Green (Figures 1.51, 1.52, and 1.53). The roads around the Green, previously crushed gravel or macadam, were constructed in concrete and widened for automobile use. The Armory also employed workers to build a new two-car garage to the east of the Commanding Officer's Quarters. A hurricane in 1938 uprooted many trees on the campus, creating large gaps in the tree canopy on the Green (Figures 1.54, 1.55). Street trees were also uprooted, severely damaging brick sidewalks (Figure 1.56). Another Works Progress Administration program was then adopted to remove debris and tree stumps and repair sidewalks. Additional projects included a new brick gatehouse at the Federal Street entrance, a tennis court on the Green at the southeast corner, and a swimming pool behind the Officers' Quarters.

In the mid 1930s, Germany began to remilitarize, breaking the agreed terms of the Treaty of Versailles that ended World War I. By 1938, Germany had annexed Austria and Czechoslovakia. As tension mounted in Europe as well as China and Japan, President Roosevelt authorized \$1,000,000 for the procurement of strategic materials. By the end of the 1930s, Europe was once again engulfed in

war and the United States would soon follow. Springfield Armory would soon step up to meet its greatest challenge in arms production.

LANDSCAPE DESCRIPTION SUMMARY, 1939

The overall layout and organization of buildings on Armory Square remained fairly intact from the late nineteenth century through the early twentieth century, preserving the appearance of the central Green (Drawing 4). Housing continued to be concentrated at the northwestern portion of Armory Square with the addition of four Officers' Quarters north of the Green. The East Arsenal and Administration Building were joined, closing off the southeastern corner of the Green. And a ballistics building was built north of the Long Storehouse. Most of the plant expansion occurred at the adjacent Federal Square.

Circulation patterns evolved to accommodate the increasing need for automobile use. Roads around the Green were widened. A road was built around the Main Arsenal to the circular drive by the Commanding Officer's Quarters, and parking was added at the southern edge of the Green. The construction of a garage at the Commanding Officer's Quarters also reflected the growing dependence on cars. The main gate was moved to the Byers and State Street corner and a flagstone walk lined the north side of the entrance road for pedestrian access.

Mature shade trees located throughout Armory Square continued to be one of the defining characteristics of the site, although a hurricane in 1938 destroyed many of them. Ornamental gardens were evident at the Commanding Officer's Quarters including a cross-shaped rose arbor, formal plantings by the driveway, the greenhouses and around the house. Other quarters were typically landscaped with foundation plantings of flowering shrubs and flower boxes. North of the Commanding Officer's Quarters, the landscape continued to be maintained as a field dotted with trees. Open expanses of lawn and the absence of understory plantings afforded views into the Armory grounds and out to adjacent streets.

Other landscape features included the original ornamental iron fence, the fountain, and the custom lamp posts from the 1840s with new globe light fixtures. Additional site lighting was installed atop the pillars at the main gates. Cannons and cannon balls were still displayed on the Green. Stacks of cannon balls also appeared at regular intervals along the north-south road adjacent to the Main Arsenal. Recreational site features were added, including a swimming pool north of the Green behind the Officers' Quarters and tennis courts west of the Main Arsenal and at the southeastern corner of the Green. These recreational facilities were for the officers and their families living in Armory Square.



Figure 1.28. Map from 1870 reflects the growing development around Army Square, including, residences, churches, and schools. Boston Public Library, Norman B. Leventhal Map Room, Ellis & Soule, published by F. W. Beers, Surveyors.

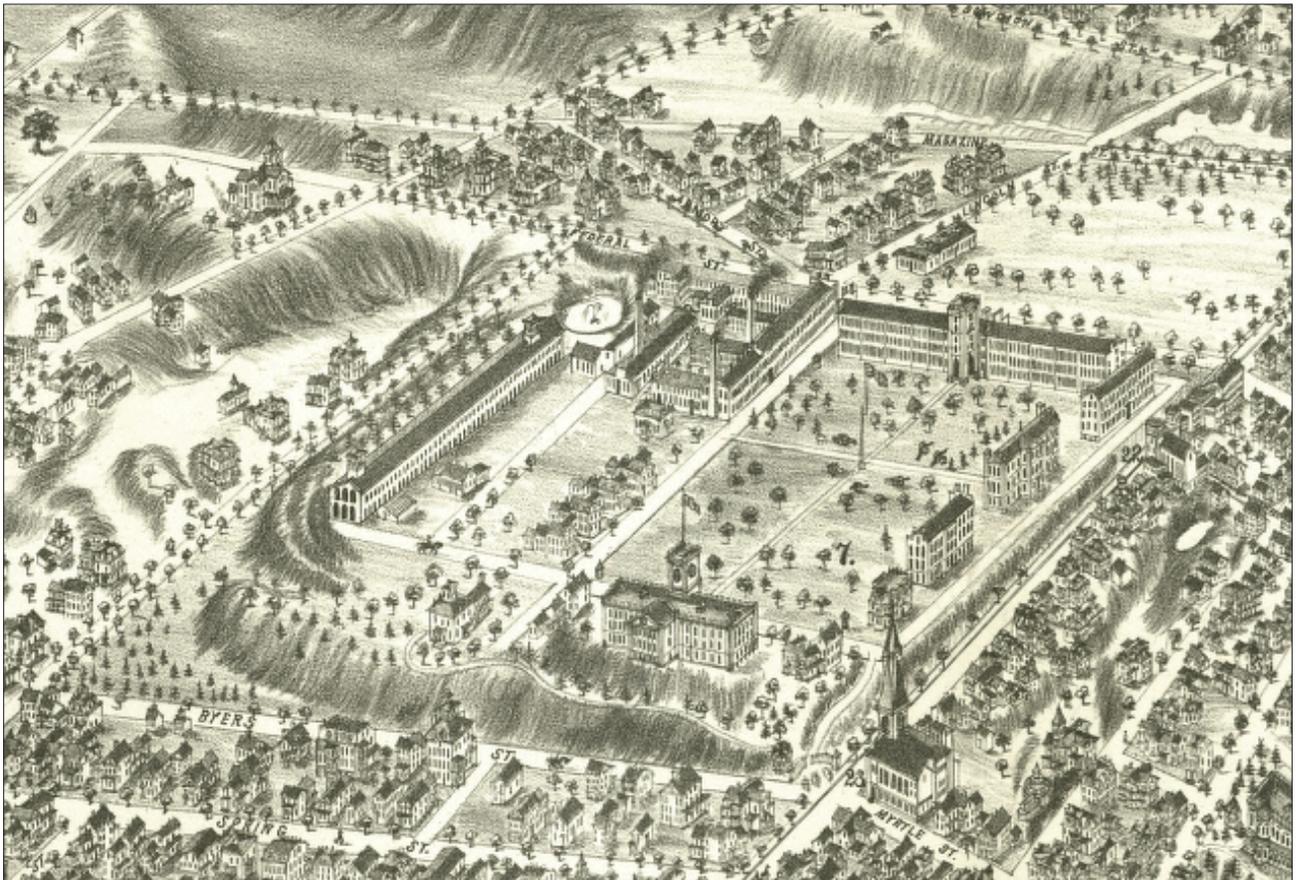


Figure 1.29. Bird's eye view of Army Square in 1875. The drawing depicts the new main entrance at the corner of Byers and State Streets with a guardhouse, as well as the terracing along the western part of the bluff. Boston Public Library, Norman B. Leventhal Map Room, O.H. Bailey & Co.

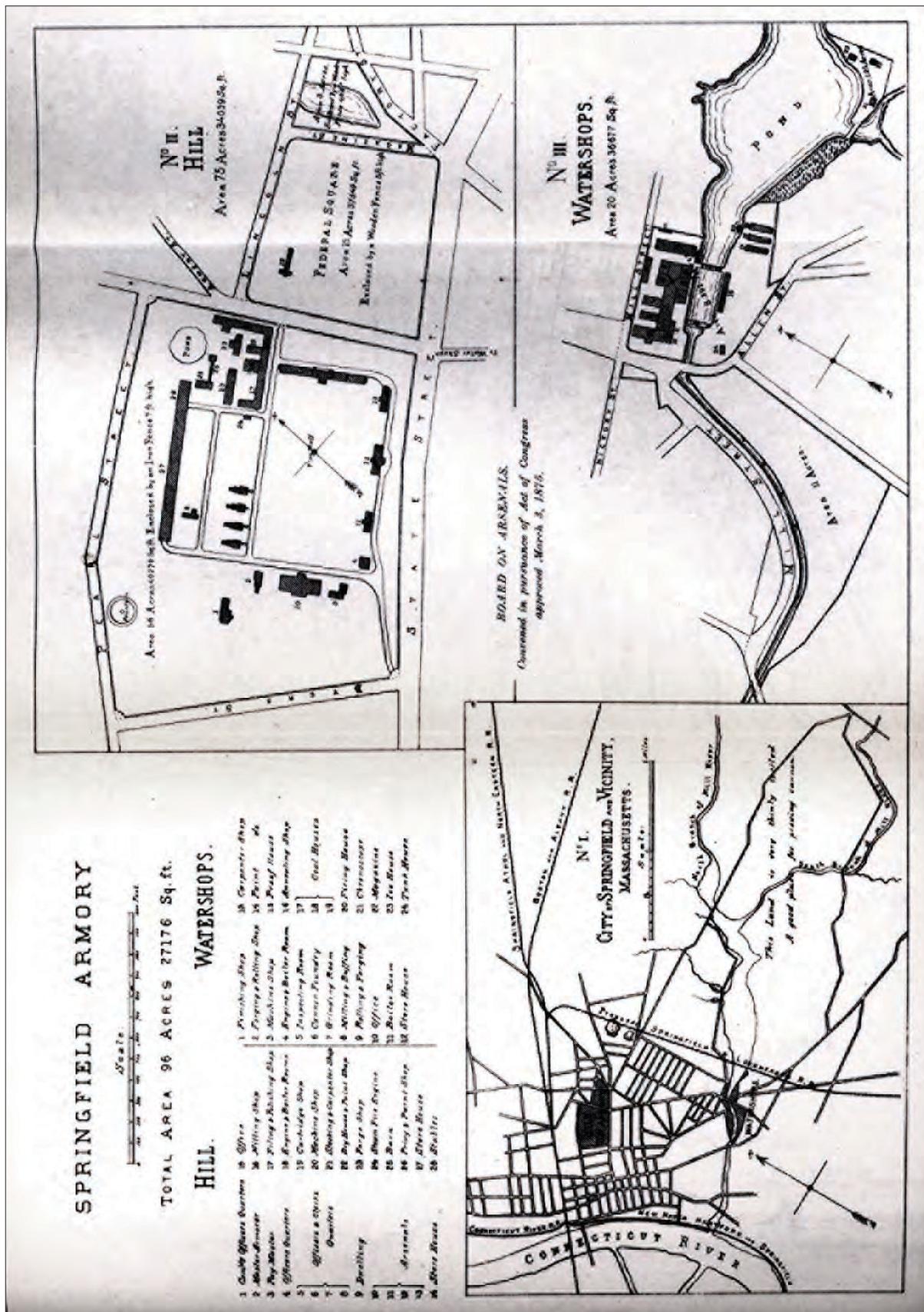


Figure 1.30. Maps of Armory Hill and Watershops from 1875. The map to the left shows the location of the Watershops in relation to Armory Hill. The Hill at this time comprised seventy-five acres. SPAR Museum Archives, United States Congress, "Report of the Chief of Ordnance," 1876, 37.

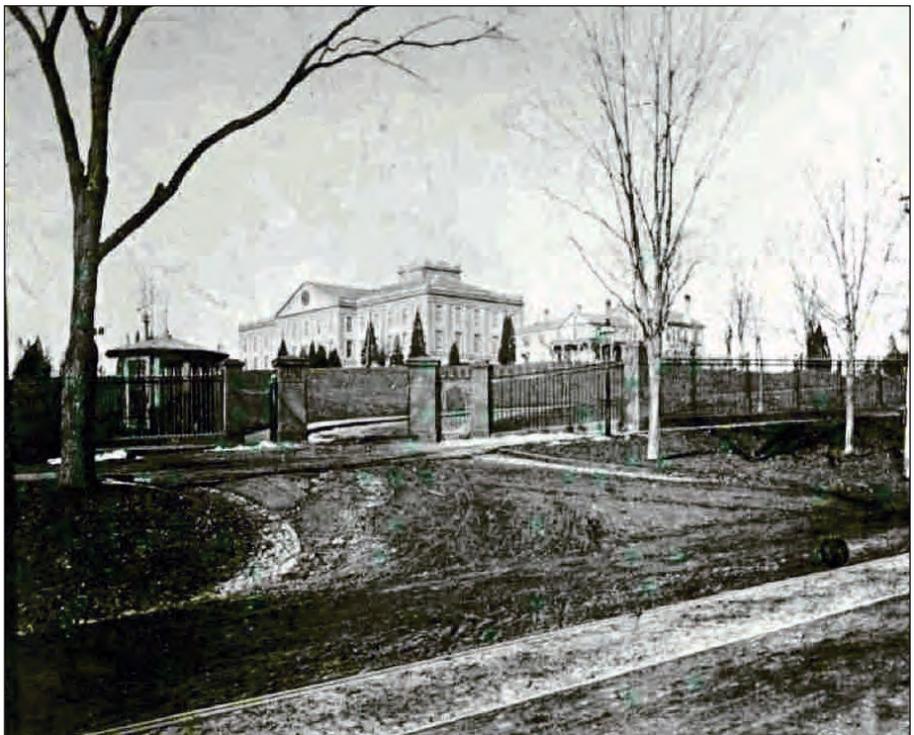


Figure 1.31. View of the Main Arsenal in the 1870s from State and Byers Street corner with gatehouse. Note the evergreen trees and walkway left of the entry drive, as well as the elm trees in the foreground. SPAR Museum Archives, Box 003, Folder 02, NEG 704-SA.

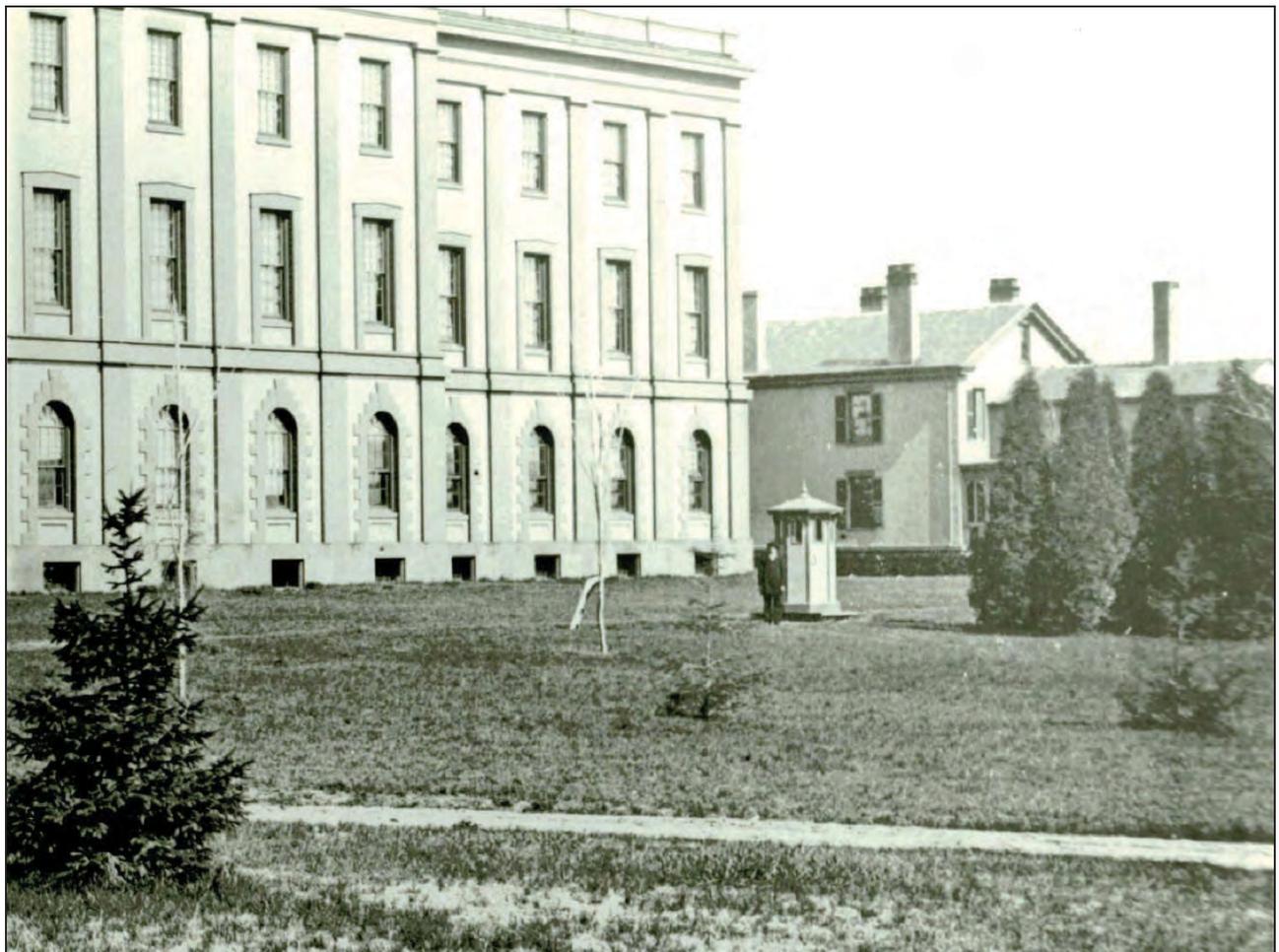


Figure 1.32. West facade of the Main Arsenal in 1877 with sentry or guard house to the right. Note the stand of arborvitae further to the right as well as newly planted spruce and deciduous trees. SPAR Museum Archives, Box 003, Folder 02.



Figure 1.33. Early 1900s postcard of the entrance road from Byers and State Streets gate. A memorial, installed in 1876, is located on the left side of the road and framed by mature elms and young trees and shrubs. SPAR Museum Archives.



Figure 1.34. View of cannons on display south of the Commanding Officer's Quarters in 1891. Image from 2004 CLI, citing Warner, 1891, 39.

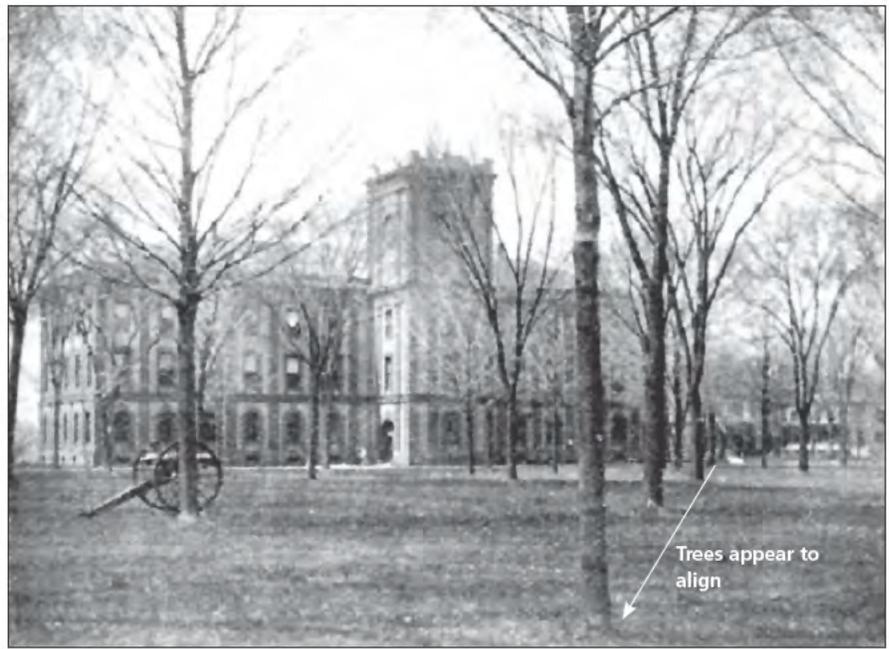


Figure 1.35. View to the Main Arsenal across the Green in 1891. Note the line of trees to the right and the cannon on display on the Green. CLI 2004 image from Warner, 1891, 9.



Figure 1.36. View of the Green in 1900 with line of cannons along the central walkway. A small structure appears beyond the line of cannon. The structure was referred to as a "Hose House" in 1910 and later as "Ammunition House" from 1918 until its removal in 1936. SPAR Museum Archives, Box 013, Folder 08.



Figure 1.37. View of greenhouse and vegetable cellar northeast of the Commanding Officer's Quarters, 1932. Note the mature trees beyond the greenhouse. SPAR Museum Archives, Box 006, Folder 01, NEG 781-SA.



Figure 1.38. View taken in 1907 of gated entrance at the corner of Byers and State streets. Note the walkway along the left side of the drive and the light fixtures on top of the entrance gate piers. SPAR Museum Archives.



Figure 1.39. View of second greenhouse constructed in 1905 south of the existing greenhouse. The plot of land between the greenhouses was cultivated, including fruit trees. Note the privet hedge-enclosed garden in the foreground and the wooden trellis structure to the left. SPAR Museum Archives, Box 006, Folder 01.



Figure 1.40. Located within the driveway circle north of the Commanding Officer's Quarters, this view from 1900 indicates a well tended, cross-shaped rose arbor and a lawn with mature shade trees in the background. SPAR Museum Archives, Box 001, Folder 10.



Figure 1.41. View of the Green from the Administration Building in the winter of 1920. The snowy scene highlights the Green's characteristic tree canopy and open ground plane. SPAR Museum Archives, Box 013, Folder 07, NEG X1310-SA.



Figure 1.42. Circa 1920s photograph of Mrs. Schull (Commanding Officer's wife) and Mrs. W. Meadows seated by the lily pond with the Green behind them. Note the flowering plants bordering the pond in the foreground and stacks of cannon balls along the walk beyond. SPAR Museum Archives, Box 038, Folder 02.



Figure 1.43. View of Mrs. Schull and Mrs. W. Meadows, circa 1920s, seated to the right of the lily pond. One of the greenhouses and Officers' Quarters are in the background behind a hedge of lilacs. A cannon is to the right in the background. Note the potted plants on either side of the bench, most likely from the greenhouses, and the flagstone pavers between the pool and the bench. SPAR Museum Archives, Box 038, Folder 02.



Figure 1.44. Panoramic view from 1932 looking north of the Commanding Officer's Quarters to Pearl Street. Note how views are maintained with trees spaced apart and the fence free of climbing plants. SPAR Museum Archives, Box 013, Folder 01.



Figure 1.45. Panoramic view in 1932 from the rear of the Commanding Officer's Quarters to the open field. Openings between trees allow for views to the buildings along Byers Street and beyond. SPAR Museum Archives, Box 013, Folder 01.

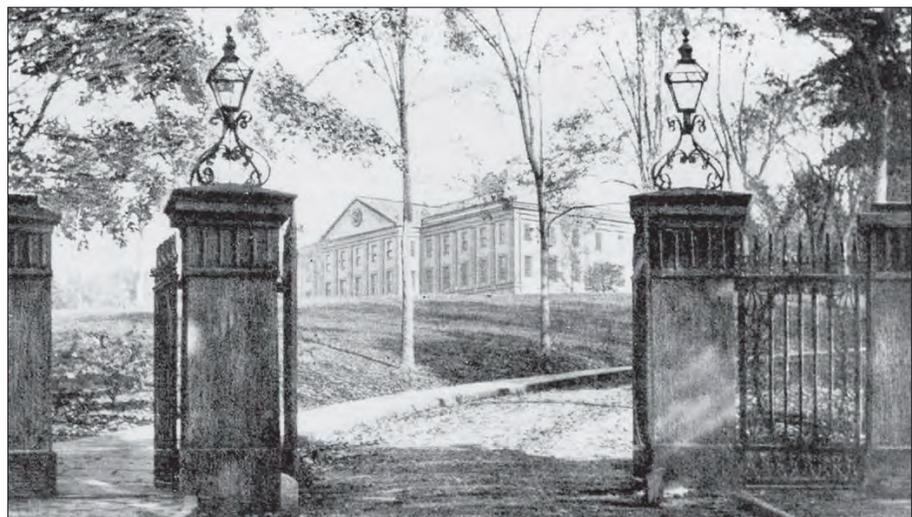


Figure 1.46. Byers and State Street entrance, circa 1932. The light fixtures remain the same from 1907, but the shrubs along the drive are no longer present. The evergreen trees on the lawn see in previous images are also absent at this time. SPAR Museum Archives, Box 019, Folder 06, NEG 29-62.

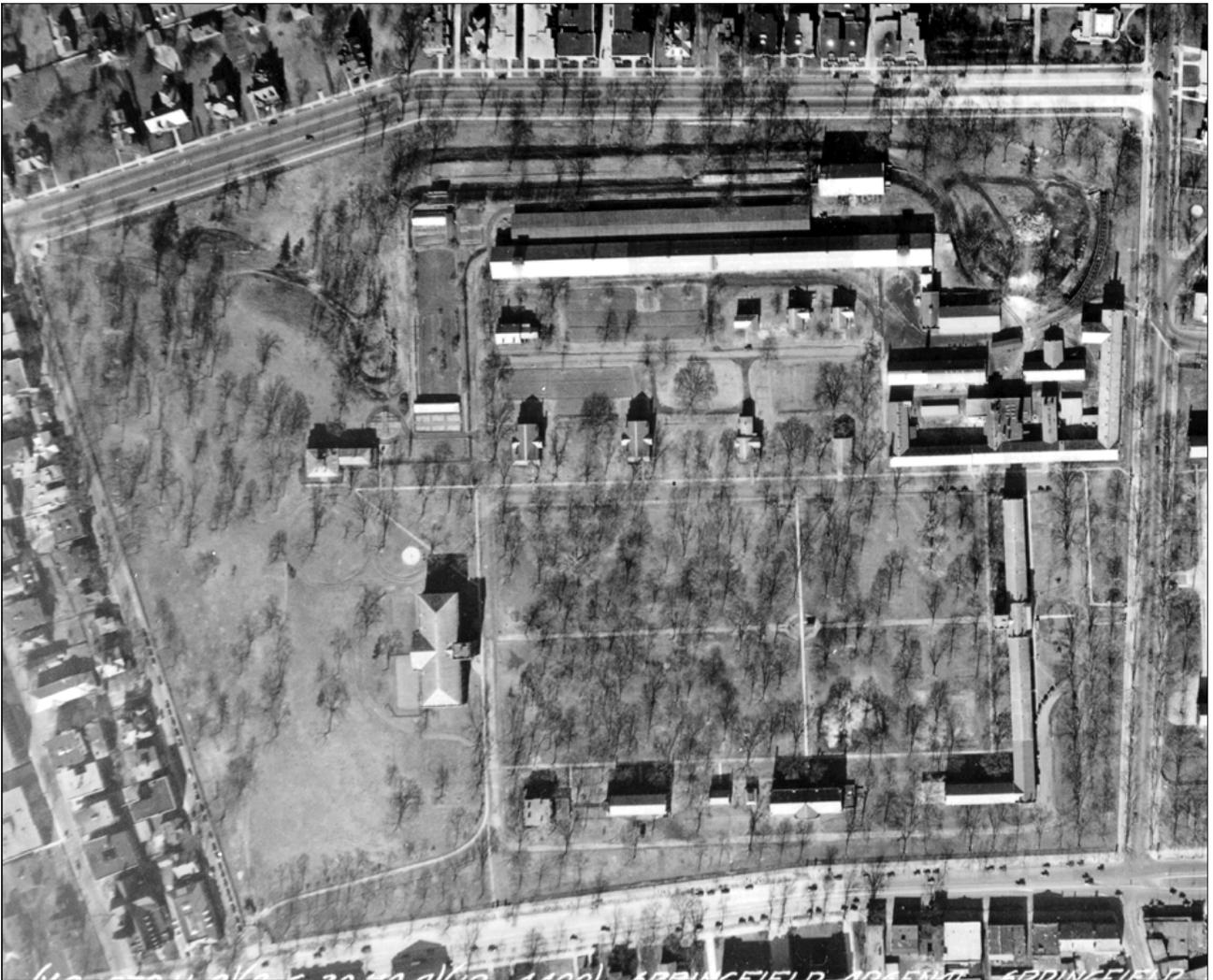


Figure 1.47. Aerial view of Armory Square in 1932. Manufacturing continued to be concentrated in the northeast portion of the site. A coal trestle was located on the former site of the cistern at the upper right of the image. SPAR Museum Archives, Box 011, Folder 02.



Figure 1.48. Aerial of the western portion of Armory Square in 1932, including the Main Arsenal, Commanding Officer's Quarters, greenhouses, and gardens. SPAR Museum Archives, Box 011, Folder 02, NEG.



Figure 1.49. View from 1931 of Officer's Quarters 3, built in 1898. Note the foundation plantings and flower boxes, along with the typical cannon tube style lamp post to the left. SPAR Museum Archives, Box 002, Folder 03, NEG 406-SA.



Figure 1.50. View of Officer's Quarters 4 in 1931. The Quarters were built in 1836. Note the foundation plantings and potted plant on the top of the front steps. SPAR Museum Archives, Box 002, Folder 05, NEG 407-SA.



Figure 1.51. New road construction in 1937 at the Armory as part of the Works Progress Administration (W.P.A.) projects. SPAR Museum Archives, Box 013, Folder 05, NEG 1569-SA.



Figure 1.52. Completed W.P.A. road construction from 1937 on the State Street side of the Armory Square campus. SPAR Museum Archives, Box 013, Folder 05, NEG 1570-SA.



Figure 1.53. W.P.A. road construction, 1937, west of the Main Arsenal. The adjacent tennis court is also considered to be a W.P.A. project. New trees were planted to the right of the new road. The Masonic Temple on State Street is in the background. SPAR Museum Archives, Box 013, Folder 05, NEG 1625-SA.

Figure 1.54. View from Main Arsenal of the Green, showing the damage from a major hurricane that devastated New England in September 1938. SPAR Museum Archives, Box 066, Folder 03, NEG 1931-SA.



Figure 1.55. View of hurricane damage on the Green, taken from the Administration Building in September 1938. SPAR Museum Archives, Box 066, Folder 03, NEG TEMP 1041.



Figure 1.56. View of perimeter sidewalks around Armory Square that were also damaged by uprooted trees from the hurricane of 1938. SPAR Museum Archives, Box 066, Folder 03, NEG 1905-SA.



Cultural Landscape Report

Armory Square Springfield Armory National Historic Site

Springfield, MA

1939 Period Plan



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

SOURCES

1. Springfield Armory Property Atlas, 1920
2. Springfield Armory Site Map, 1941
3. Infrastructure and Physical Resources Data, MassGIS

DRAWN BY

R. Chaudhry/A. Crosbie, ArcMap GIS 9.1, Adobe Illustrator

LEGEND

- Evergreen Tree
- Deciduous Tree
- Fruit Tree
- Garden plots
- Gardens
- Contour Line
- Structure
- Ornamental Perimeter Fence
- Pedestrian Circulation
- Vehicular Circulation
- Brick Sidewalk
- 2010 National Historic Landmark Boundary Line

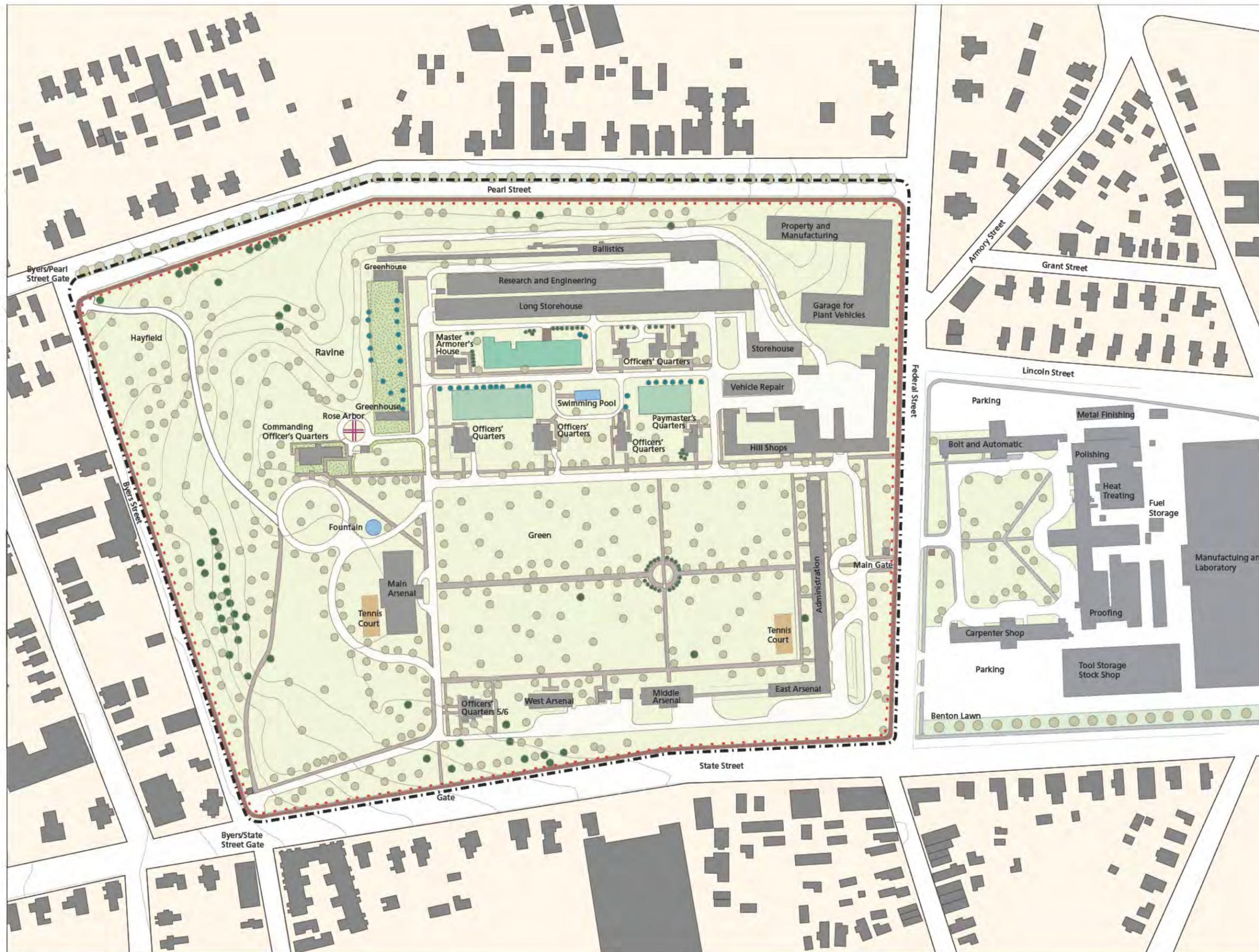
NOTES

1. All features shown in approximate scale and location.
2. Plan represents landscape conditions as interpreted from sources listed above.



0 200 400 Feet

Drawing 4



MID TWENTIETH CENTURY, 1940 – 1968

In September 1939, Germany invaded Poland causing Britain to deploy troops to the area. In November, the American Neutrality Act was amended to allow cash and carry purchases including arms and related goods by the Allies. The United States then implemented a series of embargos in 1940, including oil, iron, and steel, against Japan. Later that year, the United States agreed to transfer fifty destroyers in exchange for land rights on British possessions.

On December 7, 1941, Japan attacked Pearl Harbor, drawing the United States into World War II. By the end of the war, over twelve million American soldiers had joined or were drafted into the military. Over 450,000 American lives would be lost. Victory in 1945 transformed the United States into a world power and brought the country out of the Depression. Men returned to the workforce and the GI Bill of Rights entitled returning soldiers to a college education. The Marshall Plan, or Economic Recovery Program, was instituted in Europe to stabilize international order and encourage free market economies. Continuing into the 1950s and beyond, Americans contended with the Cold War and ongoing struggles with civil rights.

Like many American cities in the 1950s and 1960s, Springfield experienced suburban migration, the development of industrial parks, and urban renewal projects whereby old buildings were razed to make way for new structures. The construction of a new highway, Interstate I-91, severed neighborhoods in an area known as the South End from the rest of the city and displaced many residents. By the end of the 1960s, the city lost a significant portion of its industrial base, leading to decreasing employment opportunities and a six percent drop in population.

Springfield Armory would reach its height in arms manufacturing during World War II in the fabrication of the M1 Garand rifle. In the following two decades, production was increasingly contracted out to private firms. As a result, the Armory's role in manufacturing diminished, but research remained strong.

WORLD WAR II

World War II was the pinnacle of Springfield Armory's production efforts. For seven years prior to the attack on Pearl Harbor, the Armory had been preparing to manufacture the M1 Garand rifle, which became standard issue due its accuracy and durability. During the war, the Armory manufactured 3.1 million rifles. As men left to fight in the war, women joined the work force and by 1944 nearly half of Springfield Armory employees were female.¹⁰² To meet the demand of arming the forces, the Army relied on private contractors for additional small arms with Springfield Armory providing production and cost standards to maintain quality and reasonable prices.¹⁰³

From 1941 to 1945, over 13,000 men and women worked around the clock to increase production. To boost morale and encourage high productivity from the workers, the Armory instituted several new measures. A monthly employee newsletter helped keep people informed, since shift work was ongoing on a twenty-hour basis. An athletic club provided recreation opportunities including bowling, basketball, softball, and archery. The newly formed Office of Industrial Relations, under the Commanding Officer, gave employees a chance to air grievances and to discuss problems.

New construction had been completed in 1940 to house the M1 milling operations in Building 104 on Federal Square. The building was designed to house high-speed, motor-driven machinery. New shops for gunstocking and machining and for heat treating and filing/polishing soon followed at the northeastern edge of Armory Square. A loading dock was also built into the tower base of the Main Arsenal in 1940. A lack of adequate storage space resulted in steel bar stock for M1 components to be piled outdoors.¹⁰⁴ As scrap metal became scarce, cannons and piled cannon balls from the Civil War were melted down and reused for the war effort (Figure 1.57).

The Armory took steps to heighten security on the campus, including increasing the number of Armory guards and the addition of signal boxes for communication located around the campus. Fire alarm systems were rewired and extended, and floodlights were installed to illuminate parts of the grounds. At the same time, concerns over air raids meant that light reflecting surfaces of exposed ventilators, dust collectors, oil tanks, etc., were painted with flat dark colors. Air raid steam whistles were set up at the Hill plant and Watershops. And blackout facilities were provided for the boiler rooms, electric substations, first aid rooms, and Adjutant's (administrative staff officer) office. The Armory also conducted periodic air raid drills.

Agricultural use on the campus increased with the introduction of victory gardens planted on former garden and orchard plots from the 1860s, north of the Officers' Quarters. These gardens were typically planted with vegetables such as carrots and potatoes, fruit, and herbs in an attempt to reduce pressure on the public food supply (Figure 1.58). The greenhouses continued to be utilized for ornamental plants including tulips, daffodils, palms, and carnations (Figures 1.59 and 1.60).

Efforts to maintain the landscape during the war are revealed in memoranda sent out by the Armory in 1942 to employees. One memorandum issued by the Armory's Administrative Department, dated January 6, requested that employees "cooperate in the preservation of Armory grounds by using roads and walks which have been provided."¹⁰⁵ Another memorandum cautioned employees and Armory residents that tree spraying would be taking place. Maintenance equipment for the grounds was kept in good condition (Figure 1.61). The grass

was consistently mowed over most of Armory Square while the area to the west was allowed to grow taller (Figures 1.62-1.64). The perimeter ornamental fence was kept free of weeds and voluntary plant growth (Figures 1.65, 1.66). Maintaining visibility through an open lawn and an unobstructed fence also enhanced the security of the Armory facility.

POST WORLD WAR II, 1945 - 1968

Change came swiftly to Springfield Armory at the end of the war. After V-E Day on May 7, 1945, over 9,000 jobs were lost as the Armory returned to its pre-war level of production. By June of 1946, the Armory had a workforce of 2,500.¹⁰⁶ After the success of the M1 Garand rifle, work centered on the last service rifle developed by the Armory called the M14. By the time the United States became involved in the Vietnam conflict, the Armory developed machine guns for ground and air use, grenade launchers, and associated equipment. Many of these weapons were not manufactured at the Armory, but plans and specifications were drawn up for the use of private contractors to build elsewhere. As private industry proved capable of meeting production commitments to the Army, and as arms became more technologically complex, the function of the Armory as a manufacturer was becoming obsolete.

Up until the early 1950s, the grounds and landscape features on Armory Square remained intact. At the Commanding Officer's Quarters, herbaceous plants, such as irises, were laid out in formal lines along the asphalt drive. Privet (*Ligustrum sp.*) hedges were clipped into a crenellated form, evoking battlements. The rose arbor still thrived at the end of the drive, and mature trees studded the lawn around the house (Figures 1.67, 1.68). The entry drive was also marked by two light posts flanked by a hedge of lilacs, vestiges of which survive today. A fountain with a single water spout in the center was located near the front entrance between the circular drive and the sidewalk. It is not known exactly when this feature was added. Adjacent to the fountain was a bench with a large yew shrub (*Taxus sp.*) behind it (Figure 1.69). The landscape around the Commanding Officer's Quarters was also characterized by manicured lawns with shade trees, including elms and evergreen trees, and foundation shrubs at the back porch of the house. During Colonel Guion's administration from 1950 to 1953, the center of the circular drive south of the Commanding Officer's Quarters was manicured to accommodate a putting green for the Colonel. A scale model made circa 1950 illustrated the layout of some of these Armory Square landscape features along with two tennis courts and the swimming pool near the Officers' Quarters (Figure 1.70). The model also revealed a semi-circle of evergreen trees in the center of the Green. Later images show a complete circle of evergreen trees. Visitors to the Armory in the late 1940s and early 1950s recall seeing a stone barbecue in the center of the Green, most likely used for national holiday celebrations and other events (Figure 1.71).¹⁰⁷

In 1957, widespread alterations to the landscape began to take place. This was possibly due to reduced funds for maintenance. Mature shade trees were removed to accommodate new parking lots along the southern and southeastern edges of Armory Square. The following year, the two fountains and the rose arbor were also removed. The greenhouses were taken out in 1958. In 1959, the Armory reconstructed sidewalks around the Green. A plan from 1959 documented a hundred and forty-seven American elm (*Ulmus americana*) trees on the site in addition to seventy-two spruces (*Picea pungens*), thirty-six white pines (*Pinus strobus*), nineteen black walnut trees (*Juglans nigra*), fifteen ginkgos (*Ginkgo biloba*), and over two hundred sugar maples (*Acer saccharum*), among others (Figure 1.72). Around the same time, the formal gardens at the Commanding Officer's Quarters were replaced with "Bartlett," "Anjou" and "Russett" pear trees and a field of grass.¹⁰⁸ Throughout the 1950s, the Green was still the center of celebrations hosted by the Armory for the community, such as Armed Forces Day, with military arms demonstrations and ceremonies (Figures 1.73-1.75). Certain physical aspects of the Armory remained basically unchanged, such as the entrance at State and Byers Streets which retained its stately appearance (Figure 1.76).

The Fate of Springfield Armory

In the early 1960s, the Department of Defense, under President John F. Kennedy, began a major effort to reduce the country's military base structure that had been developed during World War II and the Korean War.¹⁰⁹ Kennedy directed the Secretary of Defense, Robert S. McNamara, to implement the program, known as Base Realignment and Closure (BRAC). The Department of Defense believed that private industry was more capable to meet the needs of the military due to its entrepreneurial expertise and ability to offer a more efficient and streamlined approach to manufacturing.¹¹⁰ McNamara hired the private firm Booz Allen Hamilton to prepare studies to determine which federal facilities should be closed.

It is interesting to note that the Office of the Secretary of Defense established the criteria to govern the selection of bases without consulting Congress or the military.¹¹¹ Under McNamara's guidance, the Department of Defense closed sixty bases early in the 1960s without Congress or other government agencies being involved. In light of the political and economic implications of the closures, Congress decided that it had to be involved in the process and passed legislation in 1965 that required the Department of Defense to report any base closure programs to it. However, President Lyndon B. Johnson vetoed the bill. This permitted the Department of Defense to continue realigning and closing bases without congressional oversight throughout the rest of the 1960s.

As the process of downsizing military facilities was initiated, Armory Square was designated as a National Historic Landmark in recognition of its historic

significance in political and military affairs, under Secretary of the Interior, Fred Seaton. The original boundaries of the landmark could not be found. The future preservation of the new landmark would soon come into question.

In 1964, the Department of Defense announced the closing of Springfield Armory, and its functions to be transferred to Rock Island Arsenal in Illinois. The decision to close the Armory stunned the Springfield community. The Armory had become not only a source of employment, but it was also a cultural icon in the city. Citizens and community leaders were irate, and public opinion demanded that this decision be challenged and overturned. The city's business and political leaders launched a campaign to persuade McNamara not to close the Armory. They were able to schedule a meeting to present their case in Washington on February 27, 1965, and their preparations were closely followed by the local media. The delegation included Mayor Charles Ryan of Springfield, Representatives Edward Boland and Silvio Conte, Governor John Volpe, and Senators Leverett Saltonstall and Edward Kennedy. The delegation argued that the northeast would bear the burden of the cuts disproportionately with the added closures of the Brooklyn Army Terminal and Brooklyn Navy Yard which alone would cost the region 12,900 jobs.¹¹² The delegates also emphasized the closure's impact on the city where manufacturing job opportunities were being lost while the population was growing. After the presentation, McNamara was quoted as saying that the presentation had been thorough and persuasive and that he would personally review the case.¹¹³ McNamara even toured the Armory a few weeks later, but he ultimately followed the recommendations of his consultants.

In October 1965, Booz Allen & Hamilton submitted their analysis to the Department of Defense. They endorsed the government's efforts to privatize the manufacturing of small weapons.¹¹⁴ The report stated that "as guns merged into larger weapons systems, this was an appropriate time to bring a fresh set of attitudes and approaches to the system task. Industry has demonstrated that it could do this."¹¹⁵ State and local political leaders continued to defend the Armory and tried to persuade President Lyndon B. Johnson to personally intervene. But Johnson refused to override his Secretary of Defense. The November 16, 1965 issue of the *Springfield Daily News* proclaimed the Armory's fate (Figure 1.77). The mayor of Springfield vowed to fight on, but the Armory's fate had been sealed. This ended the operation of the longest continuing industrial facility in the country.¹¹⁶ For the rest of the decade, the research, development, and manufacturing operations were gradually phased out.

The fate of the Armory grounds was now the task at hand. As the most prominent historical landmark in the city, community leaders were eager to see the site continue to serve a significant economic and cultural purpose. Mayor Ryan appointed a sixteen-member Armory Planning Committee in the spring of 1966 to develop ideas for the best use of the Armory complex. The most popular

solution was the continued use of the site for industrial purposes. A few possibilities emerged, including interest from an aircraft company, but no resolution emerged. A member of the Armory Planning Committee, Edmond P. Garvey, began a campaign to establish a state technical institute. Garvey had previously worked in manufacturing and was now a principal at Springfield Trade High School where he had already established a post graduate technical program. The idea of using the Armory for a technical college was strongly endorsed by the mayor who believed that training skilled workers and technicians would lure more industry into the area.¹¹⁷ Another element in the plan was the retention of the Benton Small Arms collection as an important link to Springfield's past that should be preserved and exhibited.

In the fall of 1966, the Springfield School Committee toured the Armory Square facilities to determine its suitability for conversion to an educational facility that can meet the specific needs of a technical curriculum. While many buildings offered structurally sound floors that could support heavy machinery, the committee was concerned that not all of the buildings would be compatible with new uses. In addition to the technical college and small arms museum, the Armory Planning Committee added another element to their scheme that entailed utilizing fourteen acres of the site for the public school system to use for physical education.

Concurrent to these various committee investigations, President Johnson signed the National Historic Preservation Act into law on October 15, 1966. By the following summer, the Department of the Interior determined that Section 106 of the new law applied to Springfield Armory. Section 106 required federal agencies to consider the effects of their actions or "undertakings" on properties listed on a newly created National Register of Historic Places, and to allow a new Advisory Council on Historic Preservation to comment on them.¹¹⁸ Under the new law, National Historic Landmarks were automatically listed on the National Register. Therefore, Section 106 applied to the impending disposition of Springfield Armory. The Armory was one of the first significant federal properties to be transferred out of federal ownership since passage of the Act, and its connection with George Washington and its contributions to the country's military efforts heightened its importance.¹¹⁹ It was not clear, however, whether all the buildings within the Armory Square site were considered historically significant.

In 1967, Senators Boland and Kennedy commissioned an economic development report for the Armory. The report recommended a "program of planned razing and new construction."¹²⁰ The report considered only three buildings to have any value, including the Main Arsenal (13), the Administration Building (16), and the Property and Manufacturing Building (20). The report proposed a master plan for over one million square feet to be built over fifteen years. Reaction to the report was surprisingly benign. The City was anxious to do something constructive and economically beneficial with the site, and razing buildings to

this end was not considered unreasonable. The City then discovered that it had to make three separate applications to the federal General Services Administration, including one for the school physical education site, one for the transfer of streets, and one for the Benton Small Arms collection.¹²¹ To establish the technical institute, it became evident that it would have to become a state-sponsored community college for which state legislation was required.¹²² In June 1967, the state hired the firm of Caolo and Bieniek to analyze the Armory buildings and their suitability for use by the technical institute. Meanwhile, the institute was preparing to open for the upcoming fall.

The National Park Service became more closely involved with the developments at Springfield Armory when the college made their plans known to demolish structures in order to build new facilities. On July 3, 1967, the Department of the Interior put the U.S. General Services Administration on notice that the Armory Square buildings dating to the nineteenth century were subject to the new National Historic Preservation Act, and asked the agency to impose conditions binding the recipients to preserve the historical and architectural integrity of the historic buildings.¹²³ The General Services Administration refused to apply these conditions to the portions of the Armory planned for industrial reuse as it would defeat the purpose of improving the community's economic resources.¹²⁴ The National Park Service then assembled a team of consultants to assess the Armory's historic architecture and determine the agency's responsibilities under the National Historic Preservation Act. The resulting report concluded that ten buildings on Armory Square, along with the Green and the perimeter fence, had "national historical significance."¹²⁵ Several other buildings were considered less significant, but should be retained if possible. All but two of these features were within the area reserved for college construction. The report recommended a substantial area for development north of the Green, requiring only that new construction should be kept in scale and design harmony with buildings on the other three sides. The report also recommended that a master plan be developed by an architectural firm.

Three weeks after the National Park Service report was finished, Springfield Community Technical College opened its doors with 800 enrolled students, occupying three former Armory buildings. The school property consisted of roughly thirty-five acres, including the main entrance on Federal Street, the Green, and surrounding structures, as well as other structures to the north and northeast. During the school's first year on the campus, the disposition process continued as the date of the Armory's official closure approached.

Efforts were also underway to establish a permanent museum to keep the extensive gun collection intact at Springfield Armory. The City of Springfield enthusiastically supported this endeavor in hopes of attracting tourists and retaining what it considered a significant symbol of its heritage.¹²⁶ The City formed a Museum Committee to pursue establishing the new institution and

investigate endowment requirements and funding opportunities. The Army also had to agree to relinquish the collection to the City. The Committee hired fundraising consultants, filed for non-profit organization status, and established a board of trustees. Storage and exhibit spaces had to be addressed as well. The guns were housed in Building 27, at the northeast corner of the Green, and there didn't appear to be enough space to accommodate the museum's needs. In keeping with the City's aim of preserving its heritage, the City Council promoted the idea of using the Main Arsenal as the logical location for the museum. In January 1968, the collection reopened in the Main Arsenal, in the care of the Army.

The End of an Era

Springfield Armory was officially decommissioned on April 30, 1968. Over the next few months, the property was subdivided and conveyed to the new owners. In May, five acres of Armory Square were conveyed by the Department of the Interior to the City of Springfield and leased to Springfield Armory Museum, including the Main Arsenal and the Commanding Officer's Quarters. The museum maintained the vast collection of arms which exceeded 10,000 guns, including the Benton Small Arms collection. There were proposals to furnish the first floor of the Commanding Officer's Quarters as a house museum and to offer the second floor to civic or community groups.¹²⁷ These ideas were never executed and the building remained unused, most likely due to insufficient funds.

Thirteen acres were also conveyed by the federal Department of Health, Education, and Welfare to the City of Springfield for educational use by the School Department.¹²⁸ The land was used as a recreational facility for the public schools. The remaining portion of Armory Square, about thirty-five acres, was conferred by the Department of Health, Education, and Welfare to the Commonwealth of Massachusetts for the establishment of a new community college. Springfield Technical Community College was opened at Armory Square in 1967 with 800 enrolled students. In the coming years, the college would make considerable changes to the campus in order to improve and update their educational facilities.

Of the remaining Armory properties, the City of Springfield bought Federal Square and leased it to General Electric Company.¹²⁹ The City also purchased Watershops Pond for recreational use. The Watershops buildings were sold to various private manufacturers.

LANDSCAPE DESCRIPTION SUMMARY, 1968

By 1968, the landscape at Armory Square changed significantly as it transitioned from military to new institutional uses (Drawing 5). A large number of landscape features were eliminated, including the flower gardens and fountains around the Commanding Officer's Quarters, which were replaced with lawns. The two

greenhouses were demolished, along with the adjacent privet hedges and the gardens between the two structures (Figure 1.78). Foundation shrub plantings continued to grow around the Officers' Quarters. But the open lawn and trees in other areas of the site were not maintained, resulting in the growth of self-sown trees and shrubs, obscuring views into and out of the former Armory.

Remaining landscape features included the Green with a diminished tree canopy (Figure 1.79). Other landscape elements from the nineteenth century included the original lamp posts, the ornamental fence, and flagstone and brick walkways. More recent additions that persisted by this time were the tennis court by the Main Arsenal and some of the fruit trees planted in the 1950s behind the Officers' Quarters.



Figure 1.57. View of cannon being removed in 1942 for scrap metal, east of the Administration Building. SPAR Museum Archives, Box 059, Folder 08, NEG 3566-SA.



Figure 1.58. View of Major Huth, taken in 1942, working on the victory garden adjacent to the workshops and garage. SPAR Museum Archives, Box 025, Folder 09, NEG 3960-SA.



Figures 1.59. View of greenhouse interior in the early 1940s. A model is surrounded by pots of daffodils, tulips, and palms. The photograph was taken for the Army employee newsletter. SPAR Museum Archives, Box 035, Folder 17, NEG.

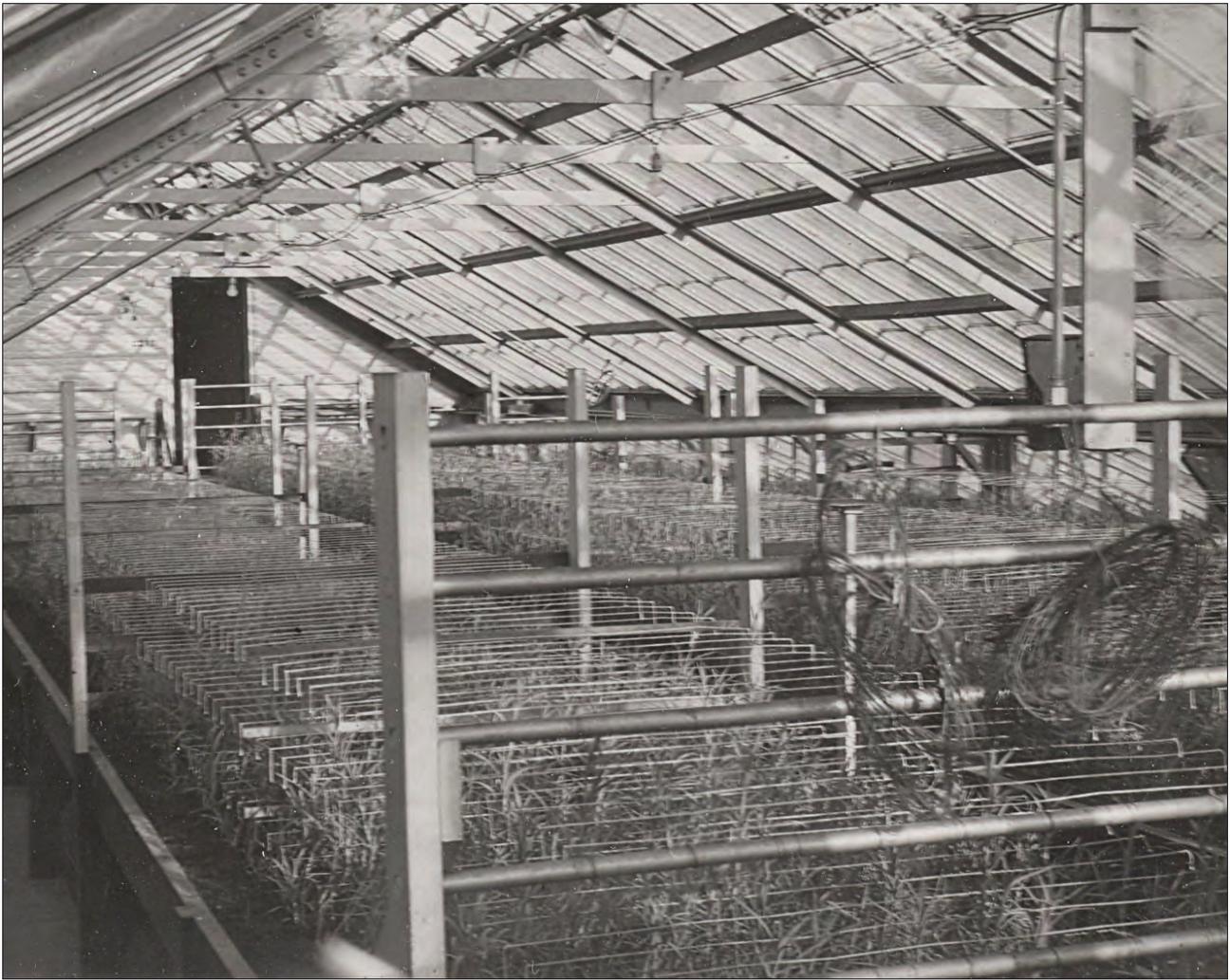


Figure 1.60. View of carnations growing in one of the greenhouses, 1945. SPAR Museum Archives, Box 006, Folder 01, NEG 6173-SA.



Figure 1.61. View of grounds maintenance equipment by the garage at the northeast corner of the Green, 1945. SPAR Museum Archives, Box 013, Folder 02, NEG 5523-SA.



Figure 1.62. Northwest portion of the Armory, the former hayfield, in 1945 with sloping open field and mature trees at the perimeter. SPAR Museum Archives, Box 013, Folder 32, NEG 5522-SA.



Figure 1.63. View from 1945 looking northwest from State Street. This is one of the few instances where shrubs are used, aside from foundation plantings. SPAR Museum Archives, Box 013, Folder 02, NEG 5447-SA.



Figure 1.64. View from 1945 looking east from the corner of Pearl and Byers Streets. SPAR Museum Archives, Box 013, Folder 02, NEG 5444-SA.



Figure 1.65. View taken in 1945 at the bottom of the western slope looking northeast along Pearl Street from Byers Street. The perimeter fence to the left appears to be kept free of plants, maintaining views in and out of the grounds. SPAR Museum Archives, Box 013, Folder 02, NEG 5443-SA.



Figure 1.66. View looking east along southern edge of Armory Square, 1945. The fence is to the right, with State Street beyond. Note the linear rows of trees. Someone appears to be inspecting or pruning a tree in the middle. SPAR Museum Archives, Box 013, Folder 02, NEG 5445-SA.



Figure 1.67. Driveway to Commanding Officer's Quarters and garage, circa late 1940s to early 1950s. Two stone piers with lights marked the entrance. The asphalt drive was lined with a privet hedge to the right and linear plantings on the left. Directly ahead was the rose arbor. SPAR Museum Archives, Box 001, Folder 07, NEG 9897-SA.



Figure 1.68. View of garden northeast of Commanding Officer's Quarters, circa late 1940s to early 1950s. Note the sheared privet hedge enclosing plantings of daylilies and irises and the greenhouse to the right. SPAR Museum Archives, Box 001, Folder 07, NEG.



Figure 1.69. View of south facade of Commanding Officer's Quarters with fountain in the foreground, circa late 1940s to early 1950s. The evergreen shrub to the right is obscuring a bench. SPAR Museum Archives, Box 001, Folder 08.

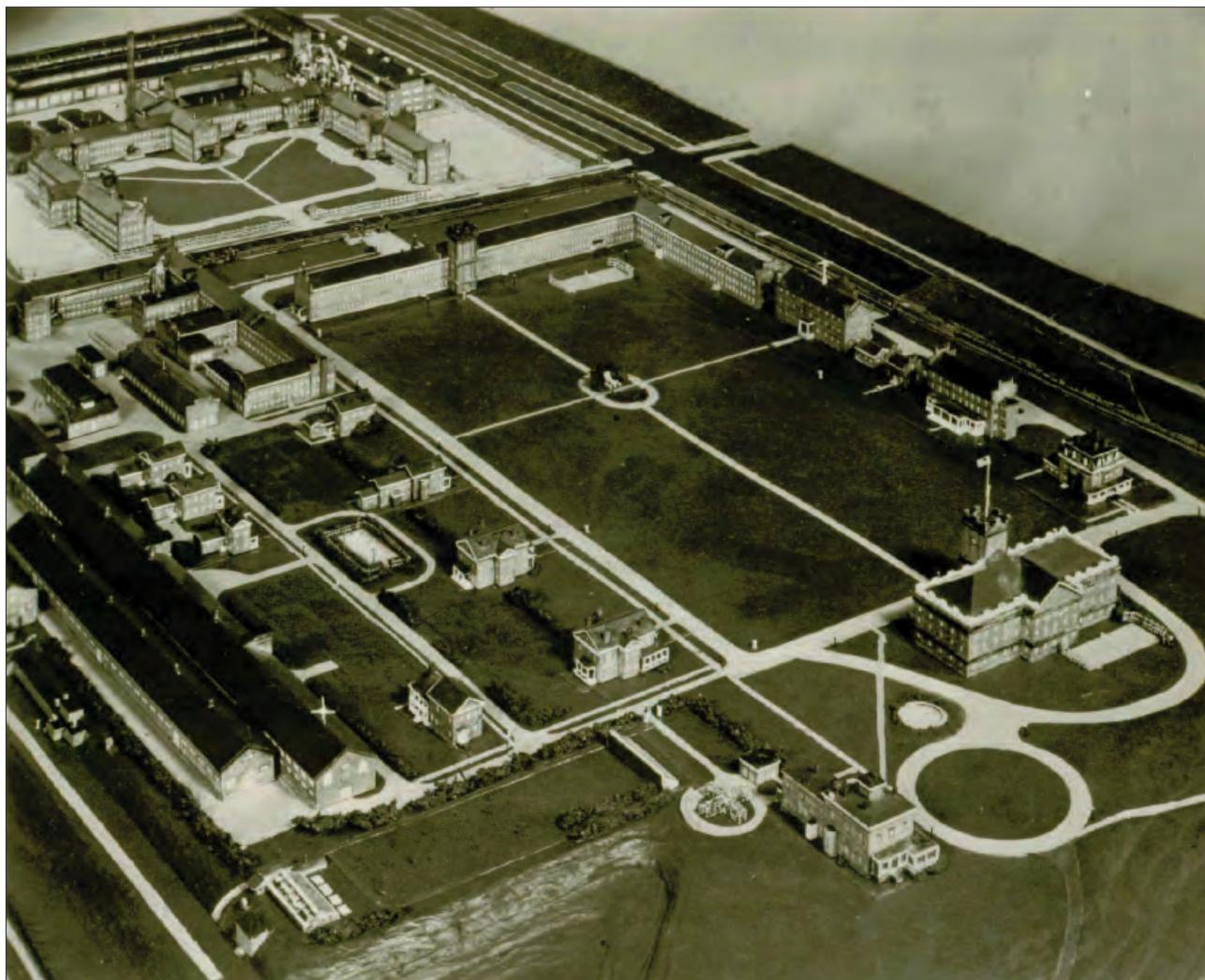


Figure 1.70. Circa 1950 model by Edward H. Rivard, of Armory Square showing landscape features, including the fountain, the cross-shaped rose arbor, and greenhouses. Note the trees in the middle of the Green surrounding what is believed to be a stone barbecue structure, most likely used for public holiday events. The model also shows how the Federal Square buildings were arranged on axis with the Main Arsenal and the Administration Building. SPAR Museum Archives, Box 080, Folder 04, NEG 7004-SA.



Figure 1.71. View of the Green taken in the early 1940s. Note the yew shrubs and outer ring of spruce trees, along with two stone blocks. Photo courtesy of Mrs. Pat Andringa, via Springfield Armory NHS.



Figure 1.73. View of the southwest area of Armory Square taken on Armed Forces Day, 1958. A gun salute was conducted to the right, facing west. Note the newly planted trees in the lawn. SPAR Museum Archives, Box 047, Folder 02, NEG 569-58.



Figure 1.74. View of helicopters displayed on the Green for Armed Forces Day, 1962. SPAR Museum Archives, Box 041, Folder 07, NEG 572-60.



Figure 1.75. The Springfield Armory engaged the community with events on campus, especially on holidays such as Armed Forces Day. This photograph from 1962 shows a demonstration for children on the Green. SPAR Museum Archives, Box 041, Folder 07, NEG 572-60.



Figure 1.76. View of Byers and State Street entrance in 1964. The sign attached to the fence was for one of the Armed Forces Week events. When compared to the image from 1907 (Figure 1.38), one can see how little has changed here, except for the change in light fixtures on top of the piers. SPAR Museum Archives, Box 019, Folder 06, NEG 659-SA.



Figure 1.77. Headline from November 16, 1965 issue of the *Springfield Daily News* declaring that the Armory will definitely be decommissioned. STCC Library Archives.



Figure 1.78. Aerial view of Armory Square in 1965. To the left, the greenhouses and other landscape features had been removed. Note the ring of evergreens on the central crosswalk on the Green. SPAR Museum Archives, Box 016, Folder 01.



Figure 1.79. Aerial view of Armory Square photographed from the east in 1966. On the Green, note the ring of evergreen trees in the center as well as the tennis court in the southeast corner, adjacent to the Administration Building. SPAR Museum Archives, Box 002, Folder 05, NEG 957-59.

Cultural Landscape Report

Armory Square Springfield Armory National Historic Site

Springfield, MA

1968 Period Plan



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

SOURCES

1. Springfield Armory Site Map, 1962, 1968
2. Springfield Armory Tree Inventory, 1958
3. Topographic Data, SPAR Site Map, 1968

DRAWN BY

R. Chaudhry/A. Crosbie, ArcMap GIS 9.1, Adobe Illustrator

LEGEND

- Evergreen Tree
- Deciduous Tree
- Fruit Tree
- Swimming Pool
- Contour Line
- Building
- Ornamental Fence
- Pedestrian Circulation
- Vehicular Circulation
- Brick Sidewalk
- 2010 National Historic Landmark Boundary Line

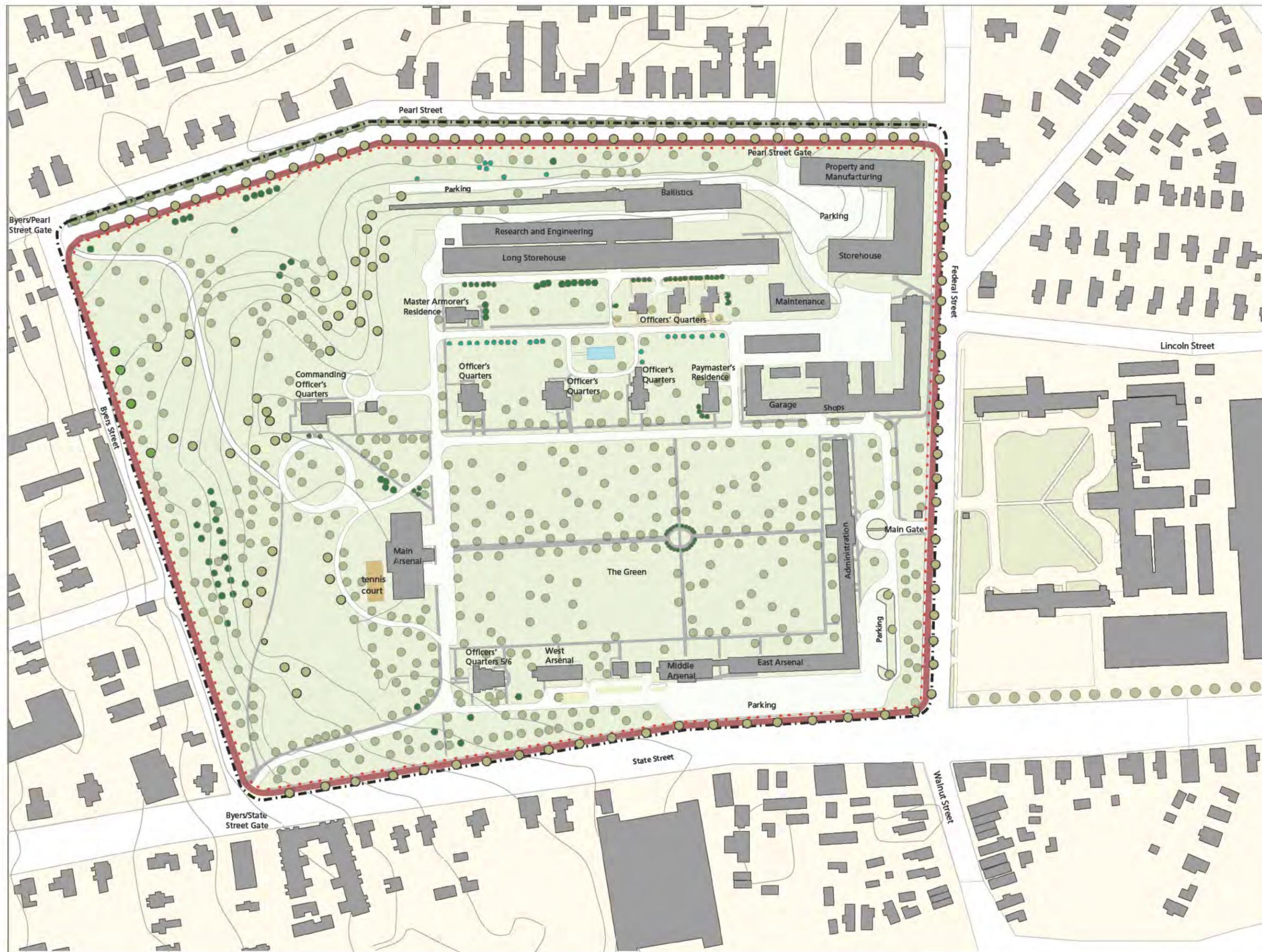
NOTES

1. All features shown in approximate scale and location.
2. Plan represents landscape conditions as interpreted from sources listed above.



0 200 400 feet

Drawing 5



NEW ROLES FOR THE ARMORY, 1969 – PRESENT

By the end of the 1960s, a major social revolution was in full swing in the United States with the so-called Baby Boomer generation and an ensuing counterculture bursting on the scene. Civil rights and women's rights came to the forefront of the public consciousness. Cold War tension and the Vietnam conflict dominated United States politics.

The city of Springfield at this time contended with problems facing many urban areas in the country. Tension over racial integration provoked strikes, sitdowns, and protest marches. The city was also plagued by energy shortages, unemployment, and deteriorating neighborhoods.¹³⁰ Springfield today is still trying to redefine itself and regain its once-robust economy.

At Armory Square, an ongoing effort was underway as to how to manage and preserve Springfield Armory National Historic Site as it transitioned into several new ownerships and functions. This effort was all the more complex since Springfield Technical Community College was already operating and initiating new construction to meet its goals of providing appropriate academic facilities and amenities. The City of Springfield installed several playfields on its thirteen-acre parcel which required adding fill to the west of the Main Arsenal and west and north of the Commanding Officer's Quarters. Consequently, two thirds of the walk that once connected the Byers and State Street gate to the circle in front of the Commanding Officer's Quarters was covered and the walk rendered non-functional. The upper section of the gravel road that connected the same circle to the Byers and Pearl Streets gate was also covered with fill. Regrading for the athletic fields also necessitated the removal of a significant number of specimen trees and it also destabilized a natural spring system that had been under control for decades.¹³¹ The resulting wet conditions rendered the lower playing field unusable. The City laid out a third football field on the former site of the gardens and greenhouses north of the Commanding Officer's Quarters.

In June 1971, a Draft Master Plan had been prepared by the Office of Environmental Planning and Design of the National Park Service for Armory Square. The plan proposed several zones of treatment (Figure 1.79). A Status Quo Zone included preservation of the Green and the perimeter fence as well as the relocation of the Paymaster's and Master Armorer's residences to their original locations south and north of the Main Arsenal, respectively. This zone would also control the exterior facades of the buildings to the west and south of the Green. In addition, a Design Control Zone comprised the facades facing the north edge of the Green, and the National Park Service would have the right to approve any new exterior design including height, composition, materials, and architectural character. The intent was to ensure that any new buildings would be compatible with the character of the existing structures on the other sides of the Green.

Another area was named the Fee Acquisition Zone that would include purchasing land at the western portion of Armory Square that was currently being utilized by the City as recreational fields. The plan also recommended that the original terraced contours be reestablished, as well as the historic road from the Pearl Street entrance. The plan also advocated eliminating the loop drive behind the Main Arsenal as well as the adjacent tennis court. It also called for restoring the 1864 entrance road to the parking loop at the Commanding Officer's Quarters.

The Draft Master Plan proposed restoring a portion of the Commanding Officer's Quarters and a complete exterior restoration of both the Master Armorer's and Paymaster's residences. The plan also proposed to restore the Doric portico at the Main Arsenal in addition to relocating the fire escapes to the interior and restoring the tower base to its original appearance. To accommodate visitors, the plan recommended creating parking space in the former garden area adjacent to the Commanding Officer's Quarters. The plan also promoted the idea of using the existing structures as visitor facilities. In the end, the Draft Master Plan was never reviewed or approved for reasons unknown at this time.

By 1971, the Armory Museum had not been able to secure enough funding for long term operation. The President of the Museum Board approached the National Park Service and State Representatives to discuss including Armory Square into the National Park system. All parties agreed that this was the best course of action. Two separate but similar bills were then introduced to the House of Representatives and Senate, followed by several years of hearings and reports to explore the ramifications of establishing Armory Square as a national historic site.

In 1973, Springfield Technical Community College started a new building program and demolished the former Officers' Quarters 2, 3, 4, and Paymaster's Quarters, as well as a garage and a significant portion of the Hill Shops. The college constructed two new buildings adjacent to the Green, Deliso Hall and Putnam Hall. The brick-clad buildings were constructed in a modern brutalist architectural style that was popular in the 1960s and 1970s. Deliso Hall occupies the site of one of the Officers' Quarters and the swimming pool (Figure 1.80). Putnam Hall was constructed on the site of the Paymaster's Quarters. Although the brick cladding appeared to attempt to blend the buildings with their context, these five to seven-story structures now visually dominate the north side of the Green and diminish the spatial quality of the Main Arsenal and other historic structures (Figure 1.81). These buildings, unmistakably of their own time, changed the overall scale of the Green and introduced modern, incongruous architectural elements into what had been a uniform, historic assemblage of buildings and open spaces.

Congress finally authorized the creation of Springfield Armory National Historic Site in 1974 with formal establishment occurring four years later in 1978. During this time, Congress asked the National Park Service to prepare a Development Concept Plan to serve as the basic planning document for the site. A new master planning process was launched in 1976 with public input sessions. The National Park Service's North Atlantic Regional Office studied alternatives and distributed a report outlining several options to the park and the Denver Service Center. Several meetings and site visits ensued. In 1978, the Regional Office asked the Denver Service Center to prepare a Development Concept Plan as the park's basic planning document.¹³² A preliminary draft was later distributed for internal review in December 1979, but never approved.

Once Springfield Armory National Historic Site was established, the City of Springfield transferred ownership of twenty acres to the National Park Service, including the perimeter fence, the Main Arsenal, the Commanding Officer's Quarters, and the terraced slope to the west of the Green. The City retained ownership of the tree belt and sidewalk surrounding the perimeter of the site. The Museum and Benton Small Arms collection were transferred from Springfield Armory Museum, Inc. to the National Park Service.

Central to the 1878 legislation was a requirement that a Cooperative Agreement between the National Park Service and the Commonwealth of Massachusetts be effected to ensure the environmental and historical integrity of the lands and historic structures that would remain under State control. Springfield Technical Community College serves as the primary representative for the Commonwealth.¹³³

The initial Cooperative Agreement between the National Park Service and Springfield Community Technical Community College divided the National Historic Site into two parts, one under the administrative jurisdiction of the National Park Service, and the other as a Preservation Control Area under Board of Regional Community Colleges.¹³⁴ The Agreement prohibited the college from undertaking construction, alteration or repair that would change the historical integrity of the Green or the structures within the Preservation Control Area, apart from what had already been condoned.¹³⁵

In 1983, work resumed for a new Development Concept Plan, renamed a General Management Plan/Development Concept Plan. The new draft was released for review in September 1984. In April 1986, the National Park Service notified the State Historic Preservation Office that a plan had been adopted using the "Minimum Development and Preservation" alternative. The General Management Plan designated the National Park Service portion of Armory Square as a Historic Zone (Figure 1.82). This classification emphasizes the restoration, preservation, protection, and interpretation of cultural resources.

Four subzones would be used to further define management emphasis and limit options for future park management and use, including an Adaptive Use Subzone, Landscape Modification Subzone, and a Historic Access and Circulation Subzone and a Landscape Management Subzone. The plan also stated that the existing landscape would be modified to more closely resemble its conditions in 1968, the year it was deactivated as a military installation.¹³⁶ The selection of this date precluded restoration of any of the formal ornamental gardens and structures that helped define the Armory's aesthetic appearance in the nineteenth and early twentieth centuries. It also prevented the relocation of the Master Armorer's Residence to its original location. The plan also described the landscape's significance,

The landscape of the historic site reflects design concepts and philosophies that have developed throughout the history of the site. The formal orientation of the mid 1800s is reflected by the classic tree plantings around the Green and the remains of the formal rose garden near the Commanding Officer's Quarters. More informal naturalistic layouts are characterized by recent unstructured tree plantings throughout the Green.¹³⁷

Unfortunately, whatever remained from the rose garden no longer survives. The General Management Plan also stated that the Main Arsenal and arms collection would constitute the core of interpretation and visitor use within the park.¹³⁸

In 1993, the Cooperative Agreement was amended in order to further refine preservation criteria which included a system of three levels of preservation control.¹³⁹ Level one provided the strictest controls and included the Green; Officers' Quarters 5/6 (duplex); the West, Middle, and East Arsenals; the Guardhouse; the Administration Building; and Shops in the northeastern portion of the Armory Square grounds. Level two provided latitude to make some exterior modifications for adaptive reuse and included the Officers' Quarters 7, 8, and 9, the Long Storehouse, and the Master Armorer's Quarters. Level three comprised everything remaining and would employ the least restrictive standards to facilitate adaptive reuse.¹⁴⁰ Level Three included Property and Manufacturing; Garage for Plant Vehicles' Ballistics Building; Research and Engineering Building; the gatehouse on Federal Street; and the Maintenance Building. The primary review responsibility was conferred to the Massachusetts Historical Commission ensuring that "all proposals would be subject to the concurrence of the Massachusetts State Historic Preservation Office following its review of the impact on the Green."¹⁴¹

Springfield Technical Community College continued to carry out changes to the campus to address student needs and update facilities. Additional classroom space was created by adding two floors to the Property and Manufacturing building (Building 20) at the northeastern corner of Armory Square. To accommodate commuting students, much of the northeastern grounds were converted into surface parking. The college removed trees that dotted the south

side of the Green for use as an athletic field, resulting in an expansive open lawn. Though the college recognized its campus as contributing to Springfield Armory National Historic Site, the landscape was and is managed for its contemporary use as a college campus. In 1996, the Commonwealth of Massachusetts established the STCC Assistance Corporation to own and operate Federal Square, now called STCC Technology Park, as a complex for technology-based and light manufacturing companies. The historic buildings on the site were renovated to accommodate new tenants, and its proximity to the college provides students with opportunities for practical experience.

Through the years, the National Park Service has worked to preserve the structures and landscape at the Armory Square park site. In 1987, the clock tower of the Main Arsenal was cleaned and restored. In the course of the restoration work, the backing board of the south clock face was removed, revealing the names and dates of the men who constructed the clock in 1849 and the men who repaired it in 1913, written on the surface. Workers also recovered names and dates written on a piece of sandpaper wrapped in a newspaper from 1849.¹⁴²

Site improvements included rehabilitating the ornamental iron fence along Byers and Pearl Streets and installing a new drainage system for the area surrounding the Main Arsenal. The park restored the Byers and State Street gate in 2003. A year later, the Massachusetts Department of Capital Asset Management completed the exterior renovation of the West Arsenal, currently being used as a state police cadet training facility.

In 2006, both college and National Park Service staff participated in a planning workshop to understand how the campus currently functions and to generate ideas for future improvements. Issues that emerged from the all-day charette included the need to preserve and restore historic buildings and respect the campus' status as a National Historic Site. In addition, planning proposals included defining the "heart" of the college campus with a new green space, improving existing green spaces to create a more appealing impression for first-time visitors, and improving security.

More recently, steps have been taken to manage the trees on the grounds, including tree pruning and the removal of dying or dead trees. A Condition Assessment Report was initiated in 2008 for approximately 368 trees on the site, including identifying problems and proposing recommendations for improving their health and stability. Another recent project involving both the National Park Service and the college is the development of a comprehensive wayfinding master plan for the site that will improve park and facility identity, visitor information, and regulatory signs. New designs will incorporate both institutional logos and create a visually cohesive range of sign types.

The following section will address existing conditions at Springfield Armory National Historic Site.

NOTES

¹ Derwent S. Whittlesley, *The Springfield Armory: A Study in Institutional Development* (Chicago, Illinois: University of Chicago, 1920), 8.

² *Ibid.*, 10.

³ *Ibid.*, 10.

⁴ Frank Bauer, *At the Crossroads, Springfield, Massachusetts* (Springfield, MA: Americana Archives Publishing, 1976), 7.

⁵ *Ibid.*, 7.

⁶ Whittlesley, 1920, 10.

⁷ *Ibid.*, 12.

⁸ Bauer, 1976, 19.

⁹ *Ibid.*, 19, 20.

¹⁰ Whittlesley, 1920, 12-13.

¹¹ *Ibid.*, 14.

¹² *Ibid.*, 16,17.

¹³ *Ibid.*, 18.

¹⁴ *Ibid.*, 19.

¹⁵ *Ibid.*, 20.

¹⁶ *Ibid.*, 22.

¹⁷ *Ibid.*, 32.

¹⁸ *Ibid.*, 33.

¹⁹ *Ibid.*, 34.

²⁰ *Ibid.*, 34, 35.

²¹ *Ibid.*, 35.

²² *Ibid.*, 37.

²³ *Ibid.*, 36.

²⁴ *Ibid.*, 41-43.

²⁵ *Ibid.*

²⁶ C. L. Dvarecka, *Springfield Armory, Pointless Sacrifice*, (Ludlow, MA: Prolitho Publishers, 1968), 18.

²⁷ Whittlesley, 1920, 49.

²⁸ *Ibid.*, 50.

²⁹ Ibid., 52.

³⁰ “Eli Whitney and the Roots of Interchangeability,”
www.cesd.umass.edu/Springfield_Armory/Themes/Technological_Development/Interchangeable_Parts/2_whitney_doc.html.

³¹ Bauer, 1975, 31-32.

³² Ibid., 32.

³³ Raber Associates, *Outline: Historic Resource Study, Springfield Armory National Historic Site, Springfield, Massachusetts* (1989), 182.

³⁴ Whittlesley, 1920, 52.

³⁵ Ibid., 53.

³⁶ Ibid., 102.

³⁷ Ibid., 71.

³⁸ Ibid., 72.

³⁹ Lee to Wadsworth, Dec. 24, 1816, Springfield Armory Correspondence File referenced by Whittlesley, 1920, 86.

⁴⁰ Whittlesley, 1920, 88.

⁴¹ Ibid., 83.

⁴² John Albright, *Historic Structure Report, Historical Data and Historical Base Map, Springfield Armory National Historic Site, Massachusetts*, (Denver, CO: U.S. Department of the Interior, National Park Service, 1978), 5.

⁴³ Whittlesley, 1920, 79.

⁴⁴ Ibid., 97.

⁴⁵ Raber Associates, 1989, 183.

⁴⁶ United States Congress, House, Committee on Military Affairs, *Armory at Springfield*, 17th Congress, Second Session, no. 246, March 23, 1823, cited in Albright, 1978, 7.

⁴⁷ Whittlesley, 1920, 100.

⁴⁸ Ibid., 101.

⁴⁹ Ibid., 101.

⁵⁰ Whittlesley, 1920, 101.

⁵¹ Ibid., 85.

⁵² Whittlesley, 1920, 115.

⁵³ Ibid., 120.

⁵⁴ Bauer, 1975, 55-56.

⁵⁵ Whittlesley, 1920, 122.

⁵⁶ Roger G. Reed, *National Historic Landmark Nomination, Kennebec Arsenal*, (United States Department of the Interior, National Park Service), 16.

⁵⁷ Charles Chapin, *Sketches of the Old Inhabitants... of Old Springfield*, (Springfield, MA: Springfield Printing and Binding Co., 1893), cited in Whittlesley, 1920, p.122.

⁵⁸ Ripley to Bomford, Springfield Armory Correspondence File, July 10, 1841, cited in Albright, 1978, 21.

⁵⁹Whittlesley, 1920, 129.

⁶⁰Ibid., 137.

⁶¹Ibid., 128.

⁶²Albright, 1978, 36.

⁶³Ripley to Col. H.K. Craig, Chief of Ordnance, October 8, 1852, Springfield Armory Correspondence File, cited in Whittlesley, 1920, 135.

⁶⁴Whittlesley, 1920, 126.

⁶⁵Albright, 1978, 28.

⁶⁶Ibid., 39.

⁶⁷Ibid., 28.

⁶⁸Ibid., 35.

⁶⁹Ibid., 55.

⁷⁰Ibid., 57-60.

⁷¹Jacob Abbott, "The Armory at Springfield." *Harper's New Monthly Magazine*, (July, 1852), 146, 159.

⁷²Whittlesley, 1920, 143.

⁷³Ibid., 141

⁷⁴Ibid., 146.

⁷⁵Report of Operations for the Year 1857, Springfield Armory Correspondence File, cited in Whittlesley, 1920, 148.

⁷⁶Whittlesley, 1920, 154.

⁷⁷Ibid., 155.

⁷⁸Raber Associates, 1989, 32.

⁷⁹Whittlesley, 1920, 158.

⁸⁰Eugene C. Gardner, et. al, *Springfield Present and Prospective*, (Springfield, MA: Pond & Campbell, Publishers, 1905), 113.

⁸¹Albright, 1978, 53-54.

⁸²Springfield Armory National Historic Site Staff, Cultural Resource Manager, Chief of Visitor Services, Historian

⁸³Gardner, 1905, 164.

⁸⁴Robert M. Fogelson, *America's Armories, Architecture, Society and Public Order*, (Cambridge, MA: Harvard University Press, 1989) 13, 165.

⁸⁵Bauer, 1976, 88.

⁸⁶Gardner, 1905, 113.

⁸⁷Ibid., 59.

⁸⁸Albright, 1978, 59.

⁸⁹Whittlesley, 1920, 163.

⁹⁰Ibid., 163.

- ⁹¹ Albright, 1978, 64.
- ⁹² Raber Associates, 1989, 194.
- ⁹³ Ibid., 42.
- ⁹⁴ Ibid., 198.
- ⁹⁵ Albright, 1978, 76.
- ⁹⁶ Postcard, "Rose Garden, Forest Park, Springfield, Massachusetts," circa 1900.
- ⁹⁷ Albright, 1978, ix.
- ⁹⁸ Louis S. Murphy, *A Report of Examination of the Trees at Springfield Armory*, (Washington, DC: U.S. Department of Agriculture, Forest Service, November 26, 1913), Albright, 1978.
- ⁹⁹ Ibid.
- ¹⁰⁰ Raber Associates, 1989, 199.
- ¹⁰¹ Bauer, 1976, 96.
- ¹⁰² Ibid., 121.
- ¹⁰³ Raber Associates, 1989, 482.
- ¹⁰⁴ Constance M. Green, (Armory Historian). *History of Springfield Armory*, circa 1940s, (Springfield Armory), 194.
- ¹⁰⁵ Springfield Armory Memoranda, Springfield Armory Administration Office Records, 1942, SPAR Archives.
- ¹⁰⁶ Raber Associates, 1989, 269.
- ¹⁰⁷ Mrs. Pat Andringa donated images of the Armory from her visit as a child and recalled seeing the stone barbecue in the center of the Green.
- ¹⁰⁸ Albright, 1978, 87.
- ¹⁰⁹ <http://www.globalsecurity.org/military/facility/brac.htm>
- ¹¹⁰ Ned Kaufman, *Springfield Armory National Historic Site, An Administrative History, 1964-2000*, (Boston, MA: National Park Service, Northeast Region, Resource Stewardship and Science, under Cooperative Agreement with the Organization of American Historians, 2007), 6.
- ¹¹¹ <http://www.globalsecurity.org/military/facility/brac.htm>
- ¹¹² Kaufman, 2007, 8.
- ¹¹³ Ibid., 8.
- ¹¹⁴ Ibid., 9.
- ¹¹⁵ Booz Allen Hamilton, Management Consultants, *Retention of the Springfield Armory: A Study for the Secretary of Defense*, Washington, DC, October 15, 1965, as cited in Kaufman, 9.
- ¹¹⁶ Raber Associates, 1989, 1.
- ¹¹⁷ Kaufman, 2007, 14.
- ¹¹⁸ P.L. 89-665, 89th Congress, S. 3035, October 15, 1966, as cited in Kaufman, 91..
- ¹¹⁹ Kaufman, 2007, 17.
- ¹²⁰ Institute program: *Springfield Daily News*, New 21, 1967, as cited in Kaufman, 15.
- ¹²¹ *Springfield Daily News*, April 24, 1967, as cited in Kaufman, 20.

¹²² Kaufman, 2007, 16.

¹²³ Summary of ‘Springfield Armory: Evaluation under Provision of Historic Preservation Act, 1966’ by Office of Archeology and Historic Preservation, August 17, (Washington Office, Park History Collection: folder of SPAR legislation), as cited in Kaufman, 18.

¹²⁴ Ibid., 18.

¹²⁵ NPS, Springfield Armory Evaluation, 1967, 19, 35, 31, as cited in Kaufman, 18.

¹²⁶ Ibid., 21.

¹²⁷ Ibid., 114.

¹²⁸ Ibid., 34.

¹²⁹ SPAR Draft Master Plan, United States Department of the Interior, National Park Service, Office of Environmental Planning and Design, Eastern Service Center, 1971, 2.

¹³⁰ Bauer, 1976, 141.

¹³¹ Ibid., 46.

¹³² Kaufman, 2007, 89.

¹³³ Superintendent, SPAR, Memorandum, “Record of Decision, Finding of No Significant Impact, General Management Plan, Springfield Armory National Historic Site,” June 6, 1986.

¹³⁴ Kaufman, 2007, 84.

¹³⁵ Ibid.

¹³⁶ United States Department of the Interior, National Park Service, “Springfield Armory General Management Plan,” Springfield, Massachusetts, National Park Service, 1986.

¹³⁷ Ibid., 18.

¹³⁸ Kaufman, 2007, 93.

¹³⁹ Ibid, 108.

¹⁴⁰ Memorandum of Understanding between the United States of America and the Commonwealth of Massachusetts, MU-1600-8-9001, 1998, 2.

¹⁴¹ Ibid., 109.

¹⁴² Bernard J. Weisgerber, Completion Report, “Springfield Armory Clockfaces,” Springfield, Massachusetts, National Park Service, 1987, NPS Denver Service Center, ID No. 46084, SPAR 458 D13.

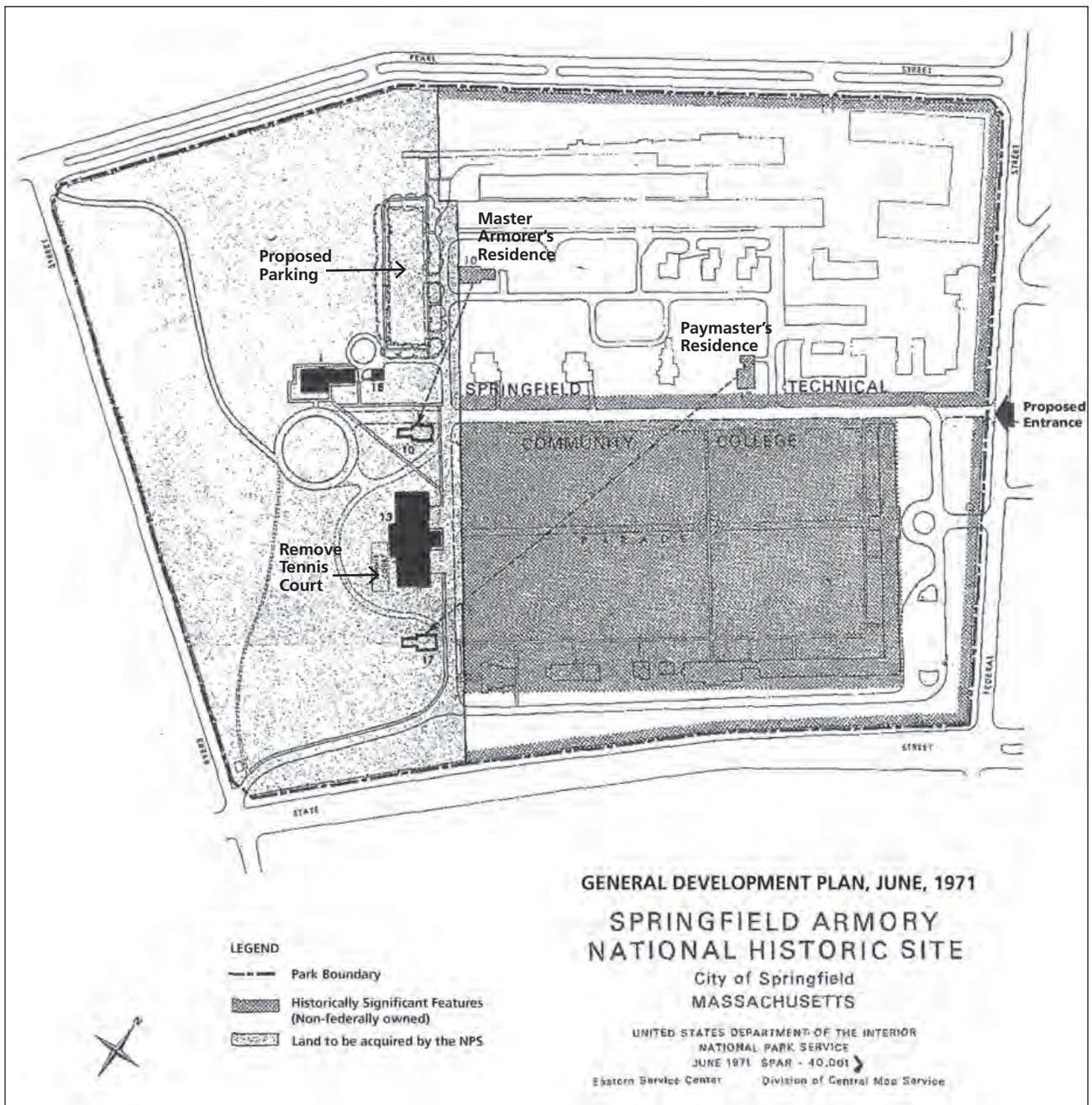


Figure 1.80. A Draft Master Plan was prepared for Armory Square in 1971. The plan, as seen above in the General Development Plan, proposed locating the Master Armorer's and Paymaster's residences to their original sites flanking the Main Arsenal. It also designated specific non-federally owned land as historically significant, including the perimeter fence, the Green, the building exteriors along the south and east sides of the Green and the edge just north of the Green. The plan also proposed to acquire the western portion of Armory Square for restoration and preservation by the National Park Service.



Figure 1.81. View of Deliso Hall, constructed in 1973. http://history.nematyc.info/NEMATYC_2008/PICS/index.html.



Figure 1.82. View of Putnam Hall along north edge of the Green. To the right is the north-south pathway leading to the college library housed in the former Hill Shops Building. OCLP, 2009.

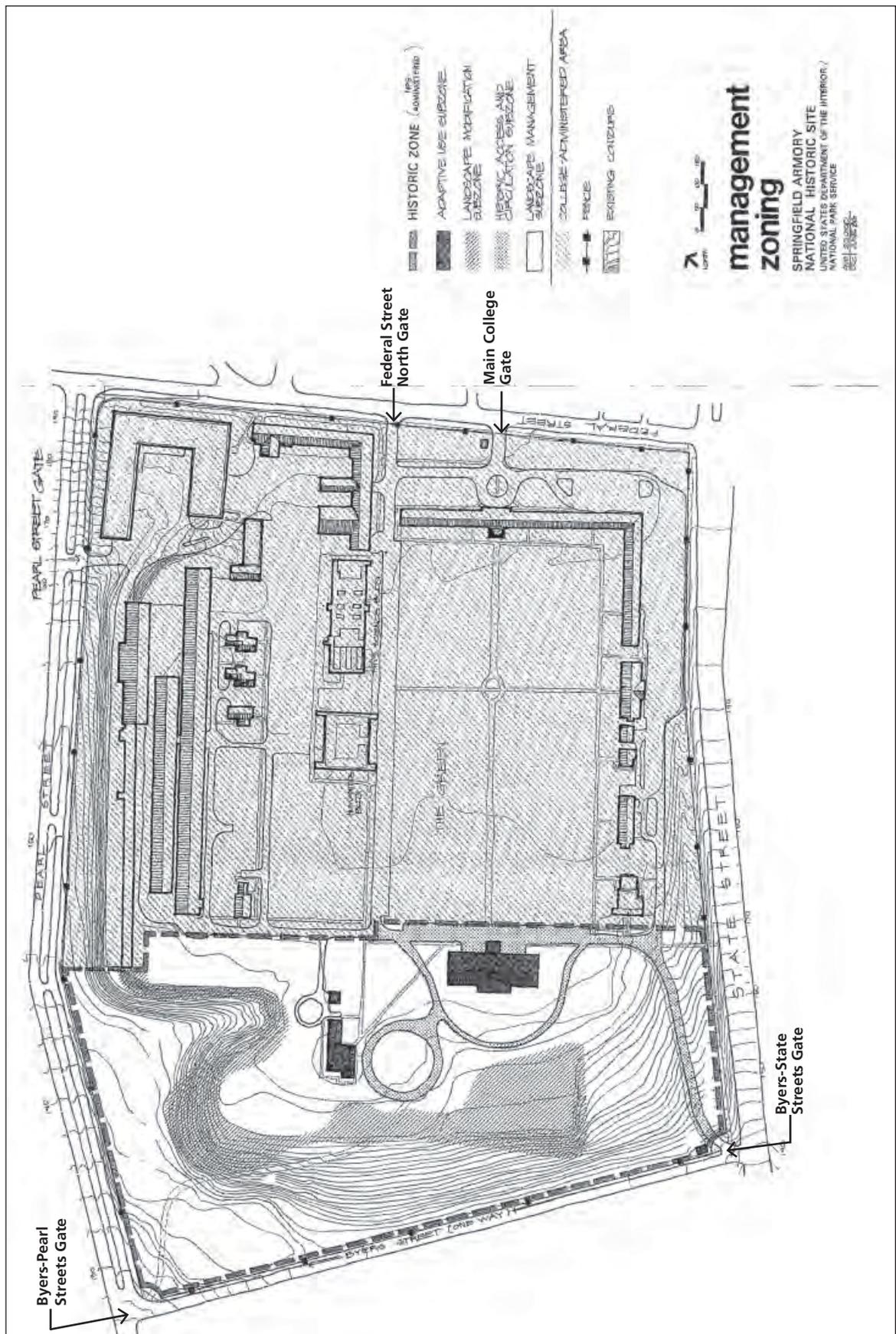


Figure 1.83. This Management Zoning Plan from 1986 addressed the National Historic Site and its two essential uses - a national park and an institution. The National Park Service site was designated as a historic zone with four subzones, including adaptive use, landscape modification, historic access and circulation, and landscape management.

Cultural Landscape Report

Armory Square Springfield Armory National Historic Site

Springfield, MA

Existing Conditions



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

SOURCES

1. Ortho Imagery, MassGis 2005.
2. Springfield Armory Site Map, 2004
3. Infrastructure and Physical Resources Data, MassGis

DRAWN BY

A. Crosbie, Adobe Illustrator, 2009

LEGEND

- 2010 National Historic Landmark Boundary Line
- - - Ornamental Perimeter Fence
- Brick sidewalk
- - - Existing 5-Foot Contour
- Tree
- Lawn
- Building
- Pedestrian Circulation
- Vehicular Circulation
- Existing Lamp Post
- - - Outline of Former Ballfield

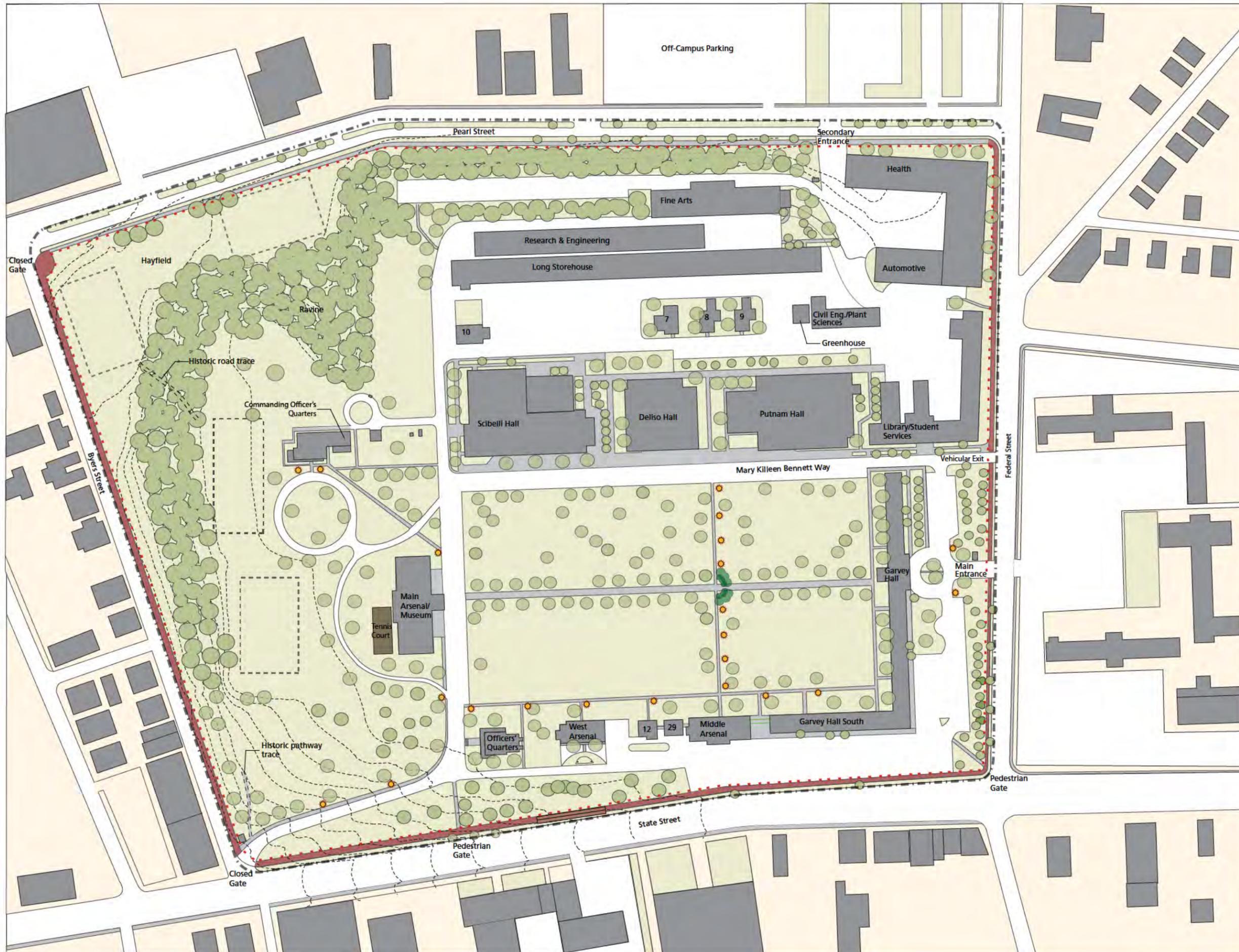
NOTES

1. All features shown in approximate scale and location.
2. Plan represents landscape conditions as interpreted from sources listed above.



0 200 400 Feet

Drawing 6



EXISTING CONDITIONS

This chapter provides a narrative overview of the landscape's existing condition, supported by photographs and a graphic plan. The narrative describes the current status of the landscape characteristics that represent the interaction between human culture and natural systems. A brief summary of the site's physical setting is followed by descriptions organized by landscape characteristics, including topography, spatial organization, land use, vegetation, circulation, buildings and structures, views and vistas, small scale features, and archeological sites. The following characteristics are essential components of the park's cultural landscape.

PHYSICAL SETTING

Springfield Armory National Historic Site is located in the city of Springfield, Hampden County, in western Massachusetts just east of the Berkshire Mountains. The city lies on a sandy delta known as Chicopee Sand Plain. Formerly a glacial lakebed, the delta was formed by the deposition of sediment from the Chicopee River emptying into the glacial lake. When the lake drained approximately 10,000 to 13,000 years ago, the Connecticut River cut into the empty lakebed, creating large flood plains along the banks. Sand dunes up to fifty-five feet high were created from windswept deposits, and eventually stabilized by vegetation. Springfield Armory National Historic Site is situated on one of these post-glacial sand dunes approximately three-fourths of a mile east of the Connecticut River.¹

The site, known historically as Armory Square, is located on a hill plateau immediately northeast of the Connecticut River and the center city area (Figure 2.1). The land use around Armory Square includes residential areas, office and commercial uses, and light industry. On the east side of Federal Street, adjacent to the site, Federal Square is an industrial zone area affiliated with the Springfield Technical Community College and operated as a technology park. Pearl and Byers Streets to the north and west are mainly residential streets. Pearl Street includes primarily large surface parking areas, apartment buildings, and a police station headquarters. Pearl Street is also divided by a median, approximately five feet wide, planted with shade trees and grass (Figure 2.2). Byers Street is lined with single family homes and a brick apartment building facing the Armory Square grounds (Figure 2.3). State Street, a former affluent residential street, is a four-lane local route south of the site comprised of offices, retail businesses, and municipal buildings. A Masonic temple, a Classical Revival building constructed in 1924 of limestone and brick, is also located prominently along State Street across from Armory Square (Figure 2.4).

The National Park Service owns and manages the western 20.32-acre portion of the site, which includes the Main Arsenal, the Commanding Officer's Quarters and garage, and the terraced slope. The remaining acreage is owned and managed by the Commonwealth of Massachusetts and operated by the Springfield Technical Community College. This area includes the main entrance to the site, the Central Green, most of the historic structures of the site defining the Green, as well as other historic and non-historic structures to the north and northeast.

SITE BOUNDARIES

The National Historic Site includes the Armory Square area of the original Springfield Armory, bounded by State Street, Federal Street, Pearl Street, and Byers Street. This is the same area designated for the National Historic Landmark. The boundary is consistent with the description in the original National Register of Historic Places nomination form described as:

Beginning at the intersection of the midlines of State and Federal Streets; thence northwesterly by the midline of Federal Street, 1270 feet more or less, to its intersection with the midline of Pearl Street; thence southwesterly by the midline of Pearl Street, in two sections 1,250 and 745 feet more or less, to its intersection with the midline of Byers Street; thence southeasterly by the midline of Byers Street, 1,345 feet more or less to its intersection with the midline of State Street; thence northeasterly by the midline of State Street, in two sections of 985 and 515 feet more or less, to the point of beginning.²

LANDSCAPE CHARACTER AREAS

Springfield Armory National Historic Site can be divided into four landscape character areas (Drawing 7). The delineation of these character areas is useful for clear and consistent description. These divisions within the landscape will be further used to organize subsequent inventory and analysis of landscape characteristics and features that will appear later in this report. The choices of boundaries between landscape character areas is based on observable differences in the general character of landscape in addition to a fundamental understanding of the property's history of development and subsequent use. The Perimeter Landscape area includes the historic iron ornamental fence and gates that enclose the entire site. It also includes the surrounding brick and concrete sidewalks and trees outside the fence. The Central Green character area comprises the main lawn and trees that have served as the historic core of the Armory Square grounds, and it also includes the building facades along the eastern and southern edges of the Green. The Western Slope consists of the Main Arsenal and adjacent parking along the western edge of the Green, and the terraced area west of the Main Arsenal to the iron fence. Additional components of this landscape area include the Hayfield in the northwestern corner, the

Commanding Officer's Quarters, and the ravine immediately northeast of it. The final landscape character area is the Institutional Landscape and consists of the property owned by the Commonwealth of Massachusetts and operated as the Springfield Technical Community College campus. This portion spans north and east and south of the Central Green, as well as the main entrance on Federal Street, and includes all the buildings and structures within this area.

LANDSCAPE CHARACTERISTICS

The following landscape characteristics represent the natural and cultural processes and features that define the significance of this unique cultural landscape. It is the collection of these characteristics that helps describe the significance of the property in American history. They may either individually or collectively aid in understanding the park's cultural value.

- **Topography/Hydrology:** Geologic and surface water features and patterns that influence the development and form of a landscape.
- **Spatial Organization:** Arrangement of elements creating the ground, vertical and overhead planes that define and create spaces.
- **Land Use:** Organization, form, and shape of the landscape.
- **Vegetation:** Indigenous or introduced trees, shrubs, vines, groundcovers and herbaceous materials.
- **Circulation:** Spaces, features, and materials that constitute systems of movement.
- **Buildings and Structures:** Three-dimensional constructs such as houses, barns, garages, stables, bridges and memorials.
- **Views and Vistas:** Features that create or allow a range of vision which can be natural or designed and controlled.
- **Small Scale Features:** Elements that provide detail and diversity combined with function and aesthetics.
- **Archeological Sites:** Sites containing surface and subsurface remnants related to historic or prehistoric land use.

TOPOGRAPHY

Armory Square can be characterized as a flat plain above a sandy bluff near the Connecticut River, with slopes and a ravine on its western portion. The sloped area was graded and terraced several times during the past two centuries in an

ongoing effort to overcome erosion problems originating from natural springs on the site (Figure 2.5). These underground springs are another primary feature as they continually influenced the manipulation of the land form. The ravine at the northwest corner of the site is another topographic feature of the site that impacted land use (Figure 2.6).

The elevation rises from a point 130 feet above mean sea level, at the Byers and Pearl Streets gate, to 196 feet above mean sea level on the Green, the highest level on Armory Square. The grade change on the National Park Service property is 130 to 194 feet above mean sea level. Walking around Armory Square, the varying topography becomes clear. The site transitions from street grade at the Federal and State Streets corner, to ten to twelve feet above the street heading west on State Street (Figures 2.7, 2.8).

SPATIAL ORGANIZATION

The site retains the broad spatial organization that defined the area when it functioned as an arms manufacturing and storage facility, particularly the arrangement present after the Civil War expansion that was still generally in place in 1968. Buildings are still concentrated at the northeastern corner of the site as well as north of the Green. The western National Park Service-managed portion of the site retains the architecture and open spaces existing in 1968.

Enclosed by a historic iron fence, the organization of the Armory Square complex is structured around a central rectangular green space known as the Green or Central Green (Figure 2.9). The sloping grounds around the perimeter are composed of a rolling lawn with trees, particularly along the steeply sloping western portion and along State Street. The Green has a more structured appearance, with a slightly offset walk extending along the main east-west axis, and cross axis walk extending north-south. These walks join at an offset central oval. Formal single rows of trees line the walks, and roughly line the perimeter of the Green. Informal plantings of trees dot the open space area on the north side of the Green, but its use by the college on the south side as recreational fields has resulted in an expansive lawn for that area of the Green (Figure 2.10).

The Green is bounded by three-story, historic brick buildings along the south and east sides, and by the Main Arsenal on the west side. Contemporary academic buildings overlook the north side of the Green, ranging from three to seven stories. These large brick-clad building masses tend to overwhelm the historic scale of the Green and its adjacent historic architecture (Figure 2.11).

The wooded bluff to the west of the Commanding Officer's Quarters and to either side of the ravine to the north of the Commanding Officer's Quarters are minimally maintained, retaining a more naturalistic character. The area at the base of the bluff was once known as the Hayfield (Figure 2.12).

LAND USE

In 1974, ownership of the city-owned parcel, with the exception of the perimeter brick sidewalk and street planting strip, was transferred to the National Park Service. The transfer also included the Benton Small Arms Collection owned by the Springfield Armory Museum Inc. The Main Arsenal houses the first floor public museum, archives, collection storage, park administrative offices, and conservation lab. The former garden area behind the Commanding Officer's Quarters is currently used as a park maintenance yard. Lawn equipment and miscellaneous items such as concrete parking bumpers are stored on the lawn and in an adjacent metal storage shed.

The college-managed portion of the site is maintained as an academic institution and commuter campus with surface parking, bus stops, and shelters. Academic spaces are concentrated on the northeast corner of the site and north of the Green. The buildings along the south side of the Green are used for college administrative offices. The former West Arsenal is used for municipal police training for western Massachusetts. A law enforcement memorial has been installed at the south side of the West Arsenal as well. Outdoor spaces are equipped with seating located between the new academic buildings facing the Green. Space for outdoor recreation is provided at the southern area of the Green.

VEGETATION

From the late eighteenth century through the nineteenth century, the Armory Square landscape transitioned from an open common area surrounded by homesteads, woodlots, pine barrens, and marshland to mowed lawns shaded by a canopy of trees. This tree canopy with an open ground plane is one of the most enduring character-defining features of the site's landscape.

The landscape around the Main Arsenal is an open lawn studded with trees, including maidenhair (*Ginkgo biloba*), elm (*Ulmus americana*), mulberry, (*Morus alba*) and spruce (*Picea abies*). The building is free of foundation shrub plantings in keeping with the historic character of the structure (Figure 2.13). Trees consist mainly of deciduous shade trees and a large spruce tree just north of the tower base. The closed entry drive leading from the corner of State and Byers streets maintains its historic character with deciduous shrubs lining both sides, spaced approximately five feet apart (Figure 2.14).

The Commanding Officer's Quarters is surrounded by foundation plantings consisting of alternating yews (*Taxus spp.*), rhododendrons and azaleas (*Rhododendron spp.*) along the southeast side of the porch, maintained at the elevation of the porch floor (Figure 2.15). On either side of the entrance are sheared yew hedges of varying height (Figure 2.16). In the center of the circular

entry drive is a lawn with two large sugar maple trees (*Acer saccharum*), a paper birch tree (*Betula papyrifera*), and a hawthorn tree (*Crataegus spp.*) (Figure 2.17). Mature shade trees also dot the lawn area immediately adjacent to the house, including an elm tree (*Ulmus americana*).

A significant historic landscape feature is the four to five-foot high lilac (*Syringa spp.*) hedge that begins at the garage, runs eastward, and turns north to the service driveway (Figures 2.18, 2.19). The hedge starts again across the driveway heading north and ends across from the former Master Armorer's Residence. Historic photographs from the 1920s show this hedge as six to seven feet tall and much wider. Another historic landscape feature is the Hayfield at the northwest area of the site (see Figure 2.12). This area remains an open meadow, but had been previously planted with trees in the nineteenth century.

Maintenance of the grounds, specifically the annual removal of pruned material and grass clippings has led to the creation of a mulch pile on the National Park Service property. The removal of trees to facilitate recreational uses and parking has diminished the quality of the canopy, but portions still survive, including the northern part of the Green, the western slope, and some of the edges of Armory Square.

Vegetation introduced by college management includes a variety of tagged specimen shade and ornamental flowering trees that serve as a learning tool for students enrolled in the horticulture program. These plantings occur throughout the campus including the Green and around the academic buildings along the north side of the Green (Figure 2.20). Other plantings include groundcovers, shrubs, and ornamental trees along the eastern edge of the campus on Federal Street and north of the Green. The historic building facades facing the Green along the south and east are kept free of plantings except for the grass lawn (Figure 2.21). The south side of buildings on the southern edge is landscaped with evergreen and deciduous trees as well as shrubs. The landscape around Garvey Hall is also planted with a variety of foundation shrubs including yews, junipers, rhododendrons, and flowering trees.

The Green continues to be characterized by its canopy of trees, although the college's use of the southern portion has reduced the number of trees. The two main paths, one paved with crushed stone and the other with concrete, are lined predominantly with mostly maple trees (Figure 2.22). At the intersection of the two paths a semicircular feature is composed of a double row of trees, including one row of blue spruces roughly ten feet apart and an inner row of yews spaced six feet apart (Figure 2.23). Some of these trees have recently been removed due to decline. Within the semi-circle, a rectangular block of granite sits on either side of the path paved with flagstones (Figures 2.24, 2.25). In the middle of the intersection is a large beech tree.

CIRCULATION

The main vehicular entrance to Springfield Armory National Historic Site is through a gate on Federal Street east of the former Administration Building, currently known as Garvey Hall (Figure 2.26). A secondary vehicular entrance is located on Pearl Street which is mainly for college staff use. Additional pedestrian access is provided on Federal Street near the corner of State Street, and on State Street further to the west. Garvey Hall is served by a circular drive at its east facing facade for pick-up and drop-off. The middle of the circle is a landscaped area bisected by a concrete sidewalk equipped with benches on either side as well as two ornamental trees. The space is further enclosed by a low hedge of yews. A bicycle rack is located next to the fence south of the main entrance and a guardhouse to the north. Visitors to the museum and park are directed to turn left and follow the signs to the National Park Service facilities. As one turns southward, an electronic sign with the college name and changing LED display is found to the right (Figure 2.27). The route turns west through a parking area with historic Armory buildings to the right (Figure 2.28). Beyond the parking area the road continues westward with a lawn on the south side dotted with large trees sloping down to the perimeter fence and sidewalk beyond on State Street (Figure 2.29). A sidewalk runs intermittently along the edge of the buildings, but there is no continuous pedestrian path along this route. To the south, overlooking State Street, is a large metal and wood sign, roughly sixteen feet tall and twenty feet wide, bearing the name of the college (Figure 2.30). Further west is a shuttle bus stop and shelter near the former guardhouse, Building 12 (Figure 2.31).

The route to the Main Arsenal/Museum continues past the closed entrance gate at State and Byers Streets where a concrete sidewalk begins, leading to the Main Arsenal (Figure 2.32). An interpretive wayside exhibit faces the closed entrance next to the sidewalk and explains the significance of the ornamental fencing (Figure 2.33). Across the roadway is Officers' Quarters 5/6. Approaching the Main Arsenal is a historic light fixture, followed by a sign announcing Springfield Armory. Bulletin boards and an area map with tourist attractions occupy the area in front of the museum's entrance (Figure 2.34). Opposite the Main Arsenal is a view to the Green and parking spaces along the edge (Figure 2.35).

North of the Main Arsenal/Museum and interpretive wayside exhibit is a three-foot wide concrete walkway leading diagonally to the Commanding Officer's Quarters (Figure 2.36). The walkway to the main entrance features a cannon tube light standard on either side. Walks surrounding the Quarters are flagstone (see Figure 2.16). An interpretive sign describes the house with the viewer facing the southern facade (see Figure 2.15). At the southwest corner of the building is another wayside exhibit describing the Hayfield. Three wooden picnic tables have been placed on the lawn south and west of the quarters (Figure 2.37). The area west of the Commanding Officer's Quarters provides views framed by trees out to the city of Springfield, and the ground has been graded into terraced lawns.

To the north of the Commanding Officer's Quarters are another circular drive and a two-car garage which is used for storing maintenance equipment. This area was formerly planted with lush gardens including flowering plants, hedges, and a rose arbor.

Across the road from the Commanding Officer's Quarters are Scibelli Hall, the Master Armorer's Residence, and the Long Storehouse (Figure 2.38). Surface parking is provided between the Long Storehouse and the former Officers' Quarters (Figure 2.39). Beyond the Master Armorer's Residence are a row of historic Officer's Quarters used by the college for campus police, professional development, and a facilities department. Three large, brick-clad academic buildings are fronted by a twenty-foot wide concrete sidewalk (Figure 2.40). The space is broken up by built-in seating, trees, and other plantings adjacent to the buildings, as well as light fixtures. Scibelli Hall, built in 1987, occupies the corner. Parking spaces are located across the road along the northern edge of the Green (Figure 2.41).

East of Scibelli Hall is an open green space separating the building from Deliso Hall. This area is paved with a variety of materials, including brick, concrete, and stone. Planted areas are edged with low stone walls and built-in seating areas. At the northern end of the green space is a bus stop and shelter (Figure 2.42). Beyond Deliso Hall is a pathway that aligns with the path that runs north-south through the Green (Figure 2.43). Benches on both sides of the brick buildings consist of concrete frames with slats made of recycled plastic.

On the Green, there are two main paths bisecting the space into four unequal quadrants. At the western end of the Green, the central west-east path is roughly ten feet wide and surfaced with crushed gravel (Figure 2.44). The north-south path is three feet wide and paved in concrete. Historic cannon tube light fixtures line the east edge of the path. Additional concrete sidewalks line the western and southern edges of the Green connecting to the buildings facing the Green (Figure 2.45).

Other than the Green, much of the eastern grounds operated by the Springfield Technical Community College have been converted to surface parking to accommodate faculty and staff. Students are required to park off-site. For park visitors, perpendicular parking has been added to the western edge of the Green across from the Main Arsenal/Museum.

Some of the original flagstone paving installed in the 1840s survives in areas such as around the Commanding Officer's Quarters. On the college managed site, flagstones appear at the intersection of the two paths on the Green and around some of the buildings on the Green's southern edge. In addition, remnant flagstone paving occurs around the parking area adjacent to Garvey Hall.

BUILDINGS AND STRUCTURES

On the National Park Service managed portion of the site are several historic buildings, including the Main Arsenal, Commanding Officer's Quarters and associated garage. A small gatehouse is located at the closed entrance at the corner of State and Byers Streets.

The Main Arsenal occupies a prominent position on the top of the bluff. Built between 1847 and 1850, the large three-story building features a massive twenty-four by thirty foot tower, with three clock faces, facing the Green. A twelve by sixty-nine foot pedimented pavilion comprises the west elevation. The building currently houses the first-floor public museum, archives, and park administrative offices. The entrance to the Main Arsenal is composed of built-in concrete steps at the base of the tower portion of the building, a wooden stair case, and a metal accessibility ramp (Figure 2.46).

A path adjacent to the Main Arsenal leads to the brick Greek Revival style Commanding Officer's Quarters, constructed in 1847 (Figure 2.47). The existing cast iron porches replaced the original style Doric entrance porch, west-side porch, and ell porch in 1870. Along the driveway near the garage are two very large transformers and a storage shed that detract from the historic setting of the house. Maintenance equipment is also stored outside in the driveway circle.

Twentieth century buildings include the gatehouse constructed in 1908 at the Byers and State Street entrance, which replaced a prior gatehouse that had stood since 1875 (Figure 2.48). The brick-clad Commanding Officer's garage, built in 1937 as a Depression era Works Progress Administration project, is now used for maintenance storage (Figure 2.49).

The college property encompasses seventeen historic buildings, many of which have been adaptively reused for classrooms, a library, and administrative offices. New buildings on the campus consist of three large, modern brick-clad structures along the northern side of the Green, constructed in 1973, 1974, and 1988.

VIEWS AND VISTAS

The panoramic view from the Main Arsenal tower was historically a well-known feature of Armory Square. Shortly after the Main Arsenal was built in 1850, an article in *Harper's New Monthly Magazine* stated that the tower deck "furnishes space for a large party of visitors to stand and survey the surrounding country. Nothing can be imagined more charming than the view presented. . . The Armory grounds upon one side, and the streets of the town upon the other. . . while in the distance the broad and luxuriant valley of the Connecticut is spread out to view. . ."³ Although the tower has been restored, it is no longer open to the public because of safety and accessibility issues. Although it is less panoramic and expansive, visitors can look out from behind the Main Arsenal as well the

Commanding Officer's Quarters, west and northwest, and take in views framed by trees of the city and beyond (Figure 2.50).

SMALL SCALE FEATURES

One of the most notable small scale features of Armory Square is the perimeter sandstone and cast iron fence and gates (Figure 2.51). Native bedrock, a fine-grained red Longmeadow sandstone, was used for the fence's foundation, low base wall, and nine-foot piers. The ironwork design features alternating forms of iron palings, including round with spearheads and slightly lobed with pike beads. The iron gates are more intricately patterned with oval center sections surrounded by lacy ironwork superimposed on the vertical palings.

Historic lamp posts are located around the Commanding Officer's Quarters, along the road that curves in front of and to the west of the Main Arsenal and the entrance road from Byers and State Streets. There are also historic lamp posts along the north-south path on the Green (Figure 2.52). In addition, the fence posts at the Byers and State Street entrance and the Federal Street entrance are adorned with historic luminaires (Figures 2.53, 2.54). Additional light pole styles were introduced in the mid-twentieth century (see Figure 2.45). More recently, large-scale contemporary light poles were installed for illuminating parking areas.

Additional small-scale features include a stone with a plaque marking the southwest corner of the original land purchase (Figure 2.55). A mounting stone is part of the curb structure in front of the Officers' Quarters 5/6 on the southwest corner of the Green (Figure 2.56). A circular drain inlet, a surviving fragment of the site's historic drainage system, is also located on the southwest corner of the Green (Figure 2.57). And a tennis court, built in the late 1930s, is situated on the west side of the Main Arsenal.

Contemporary additions to the landscape consist of benches, bleachers, picnic tables, and trashcans on the Green, as well as National Park Service identification and interpretive signs. Seating types range from concrete benches with recycled plastic slats to built-in seating made of stone or concrete. A variety of signs are located throughout the historic site, some related to interpretation on the National Park Service property, and others related to directions, accessibility, parking, or warning signs (Figures 2.58-2.61).

ARCHEOLOGICAL SITES

Another key component of the park's cultural landscape is the archeological sites that have been documented. Although they are not a visible aspect of the site, they are a part of the Armory's long history. The following locations of archeological resources on the National Park Service property have been identified: the Master Armorer's Quarters, built 1833 and moved 1880; and icehouse, circa 1864; an icehouse site near the Commanding Officer's Quarters;

the original site of the Paymaster's Quarters; a sentry box near the State Street pedestrian gate; an octagonal gatehouse, 1875-1905, at the site of the present Gatehouse; the entrance road that ran from State Street to the schoolhouse; the schoolhouse site; the pay office site; the site of Solomon Hoton's house; the site of a fountain in the circle between the Main Arsenal and Commanding Officer's Quarters, c.1851; the site of the monument, c. 1877-1905, on the north side of the road that enters from the corner of State and Byers Streets; the greenhouses sites, c. 1902-1958; the site of the pool and fountain near the northwest corner of the Main Arsenal; the site of the pool at the base of the ravine and the sewer and drain line the drained to it; and the site of the rose arbor in the circle at the end of the Commanding Officer's Quarters driveway. The "Springfield Armory, General Management Plan/Development Concept Plan" depicts the location of each site.

NOTES

¹ *Springfield Armory Cultural Landscape Inventory*, Part 1, 2004, 10 of 24.

² National Register of Historic Places, December 12, 1975.

³ Jacob Abbott, "The Armory at Springfield," *Harper's New Monthly Magazine*, (July, 1852), 159.

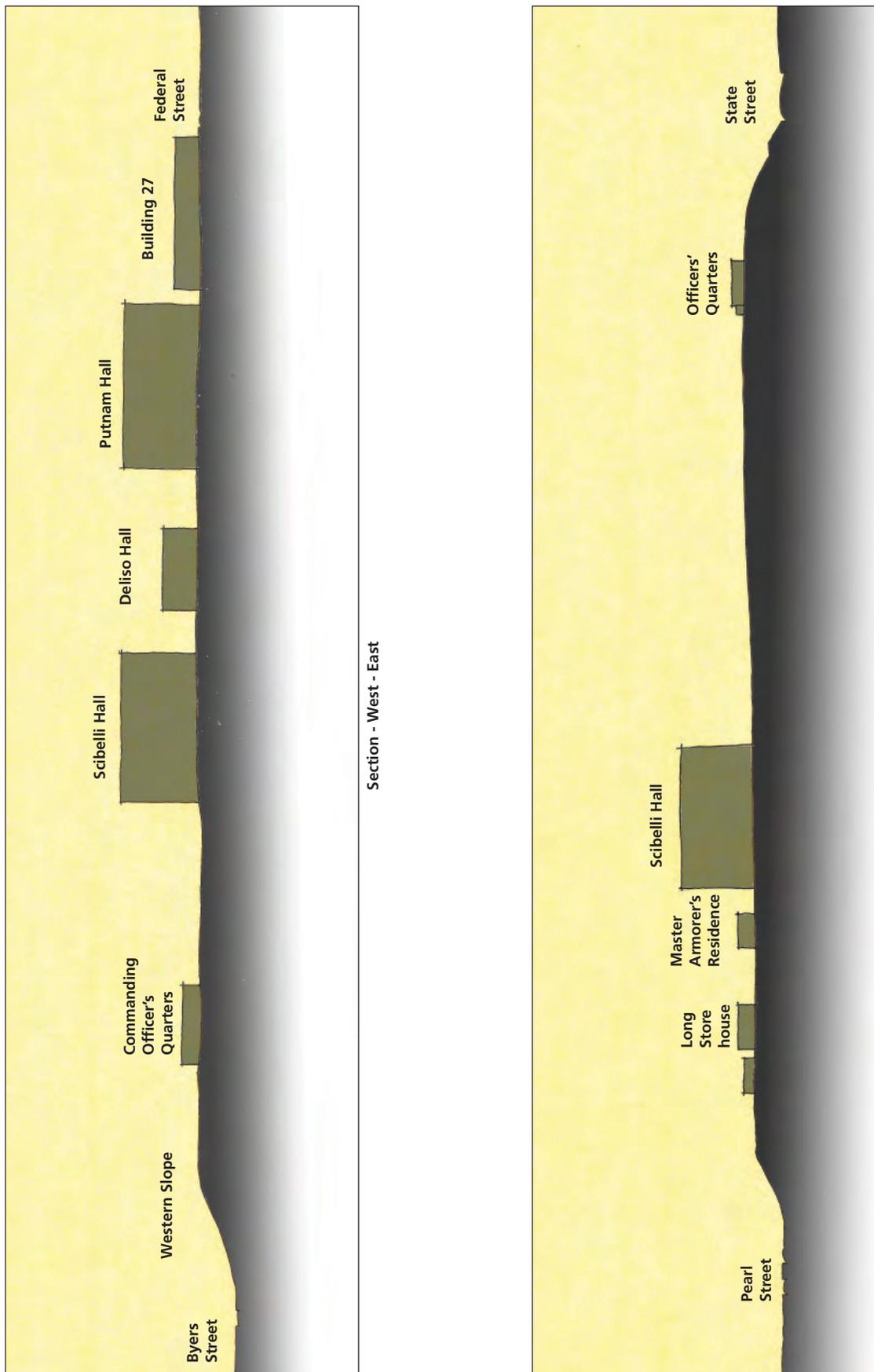


Figure 2.1. Topographic diagrams depicting Armory Square's location on a hill plateau. The left diagram is a cross section along the west-east orientation and the diagram to the right shows the north-south orientation.



Figure 2.2. View of Pearl Street north of Armory Square. Note the historic fence on the left and concrete sidewalk. The street is divided by a median planted with deciduous shade trees and grass, and public parking is allowed on both sides. OCLP, 2008.



Figure 2.3. View of Byers Street along the western edge of the site. Note the historic brick sidewalk along the edge of the Armory on the right. Apartment buildings and single family homes line the other side of the street facing the armory. OCLP, 2008.



Figure 2.4. A former Masonic temple, built in 1924, is located prominently on State Street across from the southwest corner of the site. OCLP, 2008.



Figure 2.5. View from the top of the Western Slope to the northwest reveals how the land has been terraced over the years. OCLP, 2008.

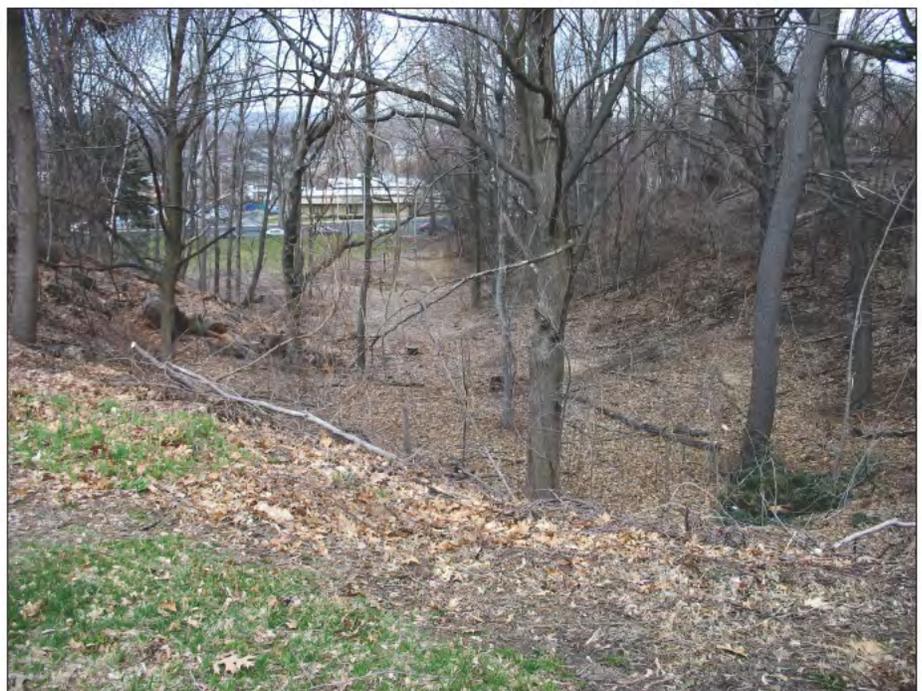


Figure 2.6. View from the top of the ravine to the north at the northwestern area of the site. OCLP, 2008.



Figure 2.7. View of the corner of Federal and State Streets where the site is at grade with the street. OCLP, 2008.



Figure 2.8. Heading west on State Street, the grade of the armory site rises ten to twelve feet above the street level. Note the historic brick paved sidewalk and concrete steps leading from the street to a pedestrian entrance to the site. OCLP, 2008.



Figure 2.9. Aerial view of the Green showing the tree lined pathways and the open southern portion that is used for recreation. Don Coutoure Aerial Photography, 2007.



Figure 2.10. Southwestern portion of the Green used for recreation by the college. To the left is the West Arsenal, built in 1808 and is now being used for municipal law enforcement training. To the right of the West Arsenal is the Officers' Quarters, built in 1870. OCLP, 2008.

Figure 2.11. Scibelli Hall, built in 1988, is the tallest of the new buildings on the Green with seven stories. It occupies the northwest corner of the Green, adjacent to Deliso Hall. OCLP, 2008.



Figure 2.12. View of lowland area at the bottom of the slope, historically known as the Hayfield. OCLP, 2008.



Figure 2.13. View of the west facade of the Main Arsenal. Note the open lawn area with shade trees and the absence of foundation plantings which are historic features of the site. OCLP, 2008.





Figure 2.14. Southwest entrance at the corner of State and Byers Street, which is now closed. This area retains its historic appearance in the layout of plants, driveway, sidewalk, and gatehouse beyond. OCLP, 2008.



Figure 2.15. Southern facade of the Commanding Officer's Quarters. Note the alternating yew and azalea shrubs maintained at the height of the porch floor level. An interpretive wayside exhibit in the foreground describes the history of the building. OCLP, 2008.



Figure 2.16. Flagstone walkways surround the Commanding Officer's Quarters. Note the sheared yew hedges of varying heights to the right and the lamp post to the left. OCLP, 2008.



Figure 2.17. Circular drive south of the main entrance to the Commanding Officer's Quarters. Within the circle are two maple trees, a birch tree, and a hawthorn tree. Note the views of the city to the west and beyond on the left. OCLP, 2008.



Figure 2.18. Adjacent to the garage at the Commanding Officer's Quarters is a four to five foot high lilac hedge. To the right are a storage shed and transformers, as well as regulatory signs. OCLP, 2008.



Figure 2.19. View of lilac hedge northeast of the Commanding Officer's Quarters, bordering the road and the site of the former greenhouses and gardens. OCLP, 2008.



Figure 2.20. View of the space between Deliso Hall and Putnam Hall. The trees are labeled with metal tags for the college horticultural program. Shrubs include yews, rhododendrons, and andromedas. Paving materials include concrete, brick, and stone. Note the low stone wall and built-in seating. OCLP, 2008.



Figure 2.21. View of the historic building facades along the southern edge of the Green. The building exteriors are free of foundation plantings, which is in keeping with the historic landscape character. OCLP, 2008.



Figure 2.22. View of the Green looking to the southeastern corner with metal benches in the foreground. The paths crossing the Green are lined with mostly maples trees. The east-west path to the left is paved with crushed gravel. Note the historic lamp posts lining the north-south pathway in the distance. OCLP, 2008.

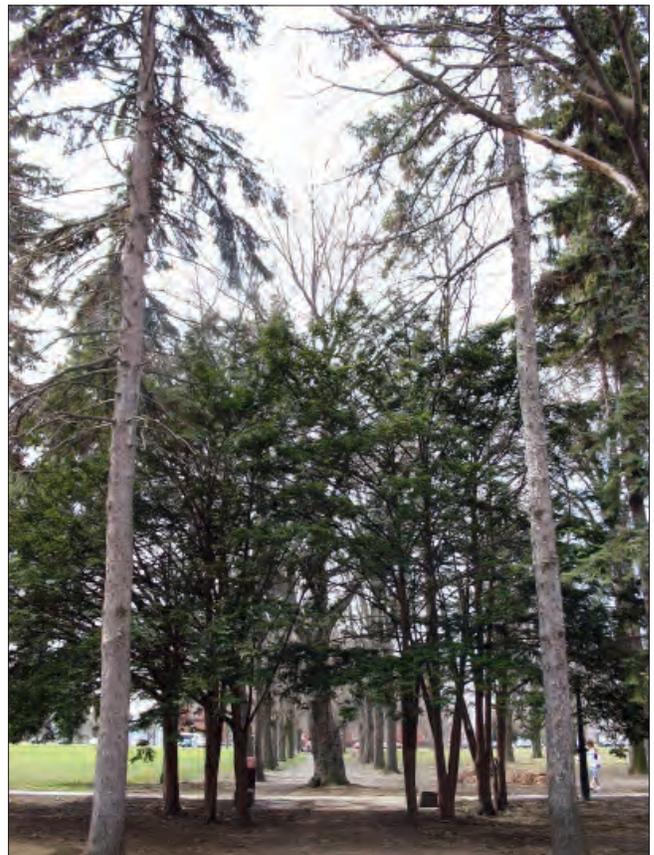


Figure 2.23. Originally planted as two full circles of trees, two half circles remain at the pathway intersection on the Green. An inner row of yews and an outer row of blue spruces surround a beech tree with two granite blocks to one side with flagstone paving. OCLP, 2008.



Figure 2.24. View of the main path intersection on the Green with granite blocks and flagstone paving to one side surrounding by two rings of trees. A stone barbecue was originally located between the two granite blocks circa 1940s and 1950s. OCLP, 2008.



Figure 2.25. Close-up view of one of the granite blocks and flagstone paving in the center of the Green. OCLP, 2008.



Figure 2.26. Garvey Hall, the former Administration Building at the main entrance to the site. Note the historic lamp post in the foreground. STCC website.



Figure 2.27. College sign south of the main entrance of Garvey Hall, with changing electronic LED display on brick foundation. OCLP, 2008.



Figure 2.28. View to the west through the parking area at the southeastern area of the site. OCLP, 2008.



Figure 2.29. Road to the Armory museum along the southern edge of the site. There is no continuous pedestrian path along this route. OCLP, 2008.



Figure 2.30 College sign facing State Street at the southeastern area of the site. OCLP, 2008.



Figure 2.31. Shuttle bus stop and shelter south of the Green. Beyond the stop is one the historic Armory buildings, a former guardhouse, built in 1880. OCLP, 2008.



Figure 2.32. Approaching the closed southwestern entrance at Byers and State Street. Note the National Park Service directional signage to the left of the road. OCLP, 2008.

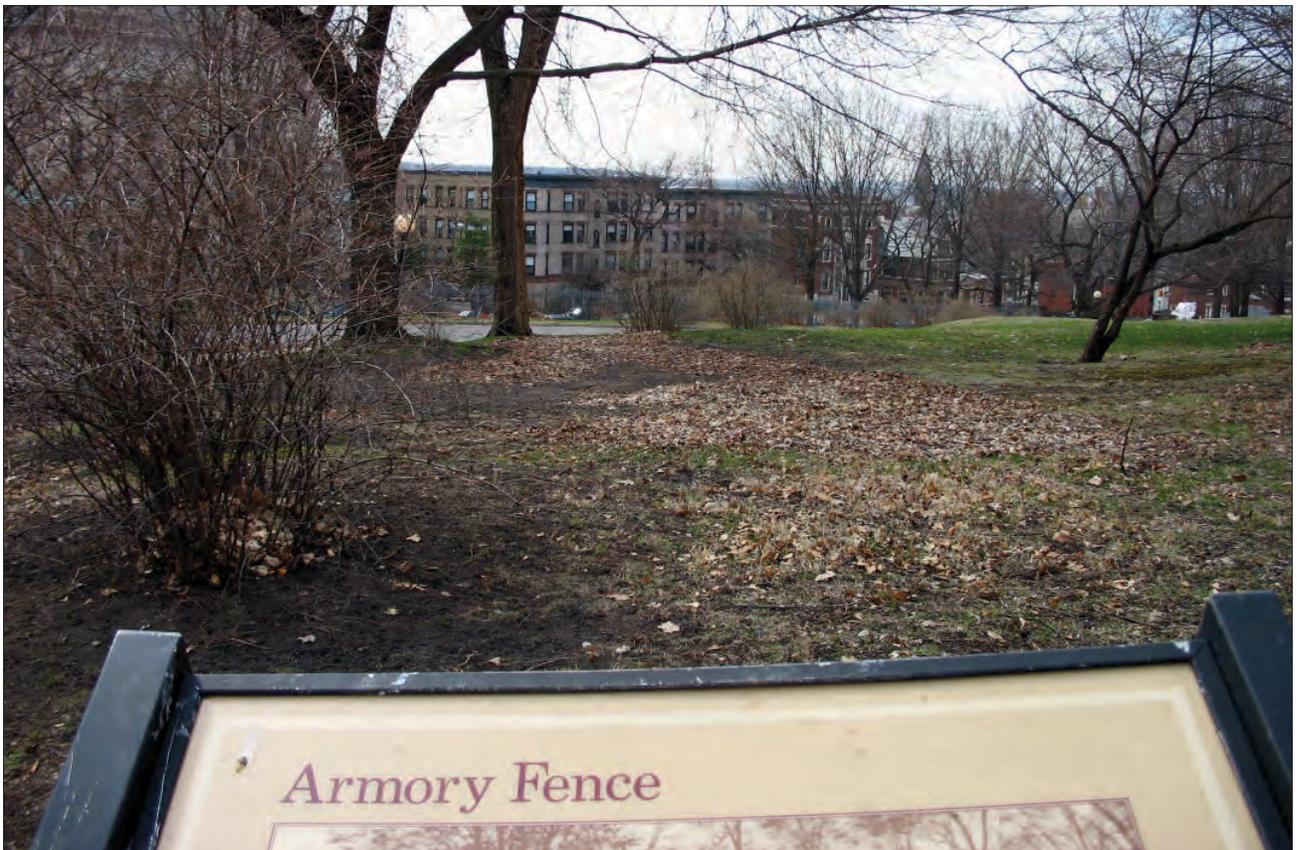


Figure 2.33 A National Park Service interpretive wayside exhibit, overlooking the southwest corner of the site, describes the history of the ornamental fence. OCLP, 2008.



Figure 2.34. Approaching the Main Arsenal on the National Park Service portion of the site. Note the historic cannon tube light fixture, open lawn area and shade trees. OCLP, 2008.



Figure 2.35. Parking for the museum at the western edge of the Green. Note the two different light fixtures and the interpretive wayside exhibit to the right. OCLP, 2008.



Figure 2.36. View from southeast of Commanding Officer's Quarters. A three-foot wide concrete sidewalk crosses the lawn and the driveway that curves around the Main Arsenal. Note the mature yews to the left of the sidewalk and maple trees to the right. OCLP, 2008.



Figure 2.37. Wooden picnic tables placed around the Commanding Officer's Quarters. OCLP, 2008.

Figure 2.38 Located west of the Commanding Officer's Quarters is the site of the former Greenhouses and gardens now maintained as an open green space. Located left to right in the background are the Long Storehouse, the Master Armorer's Residence, and Scibelli Hall. OCLP, 2008.



Figure 2.39. Surface parking south of the Long Storehouse. OCLP, 2008.



Figure 2.40. Sidewalk in front of Scibelli Hall facing the Green. Note the concrete benches and line of honey locust trees. OCLP, 2008.

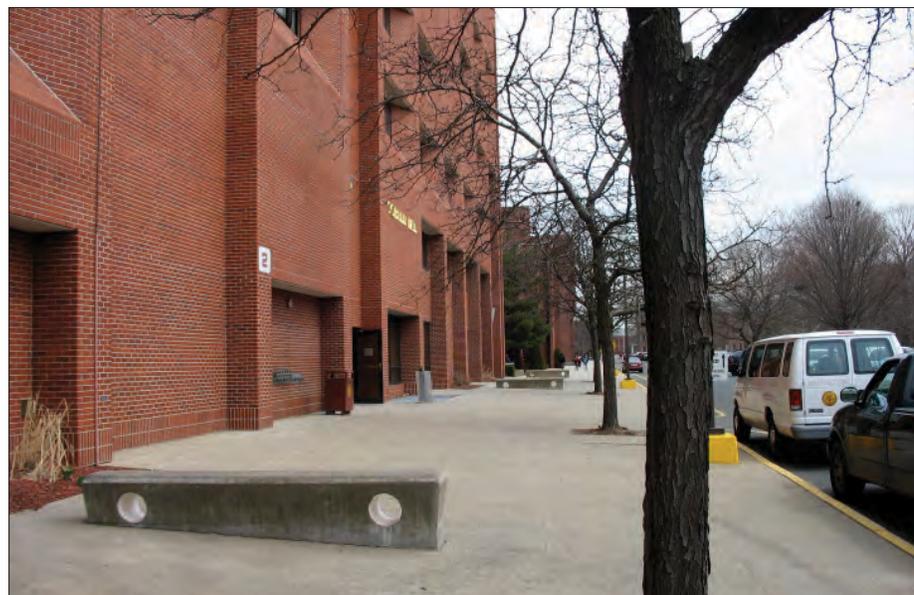


Figure 2.41 Parking spaces along the northern edge of the Green with tall light posts and various parking signs. OCLP, 2008.



Figure 2.42. Bus shelter and landscaped area north of Scibelli and Deliso Halls and across from the Long Storehouse. Note the concrete and brick paving and stone wall/seating to the right. OCLP, 2008.



Figure 2.43. Pathway between Deliso and Putnam Hall. This path aligns with the north-south path on the Green. To the left of the path is a bench with a concrete base and recycled plastic slats. Straight ahead is a former Officer's Quarters used today by the college as a professional development office. The Long Storehouse can be seen beyond. OCLP, 2008.





Figure 2.44. View of the west-east path through the Green, paved with crushed gravel and lined with maple trees. Note the interpretive wayside exhibit to the left of the path and the parking signs on either side. OCLP, 2008.



Figure 2.45. View of the concrete sidewalk along the southern edge of the Green. Note the concrete bench with recycled plastic slats and the metal bleachers in the distance to the right of the sidewalk. A trash receptacle is chained to the light post. OCLP, 2008.

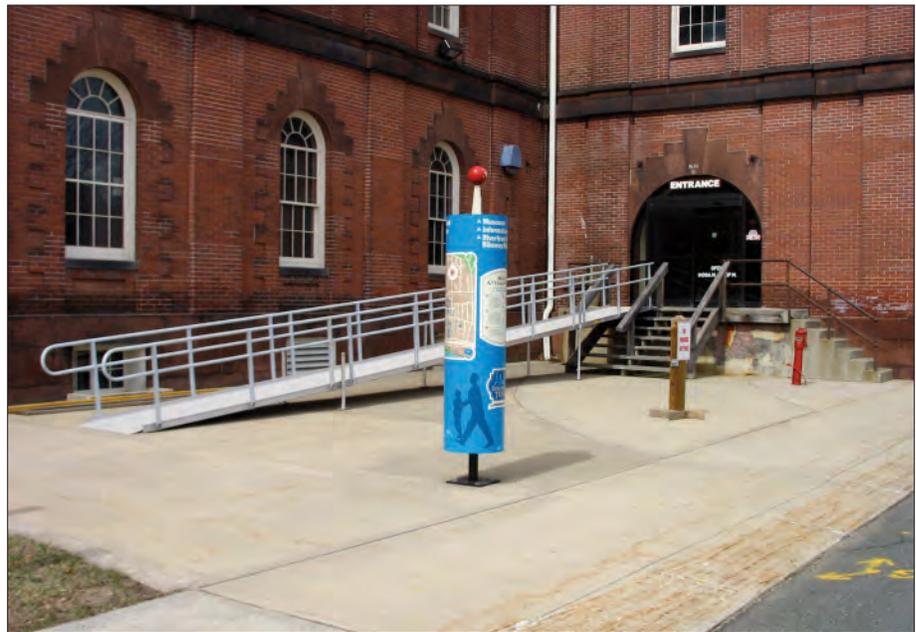


Figure 2.46. Entrance to the Main Arsenal with wooden steps and metal accessible ramp. Note the circular tourist informational sign in front. OCLP, 2008.



Figure 2.47. View of the western facade of the Commanding Officer's Quarters. Yew shrubs surround the base and a very mature maple tree is located to the left. Scibelli Hall can be seen beyond to the left of the building. OCLP, 2008.



Figure 2.48. Gatehouse and entrance at the corner of State and Byers streets at the southwestern corner of the site. OCLP, 2008.



Figure 2.49. Garage east of the Commanding Officer's Quarters, built in 1937, and used today for maintenance equipment storage. OCLP, 2008.



Figure 2.50. Views to the west of the city of Springfield and beyond from the bluff west of the Main Arsenal. OCLP, 2008.

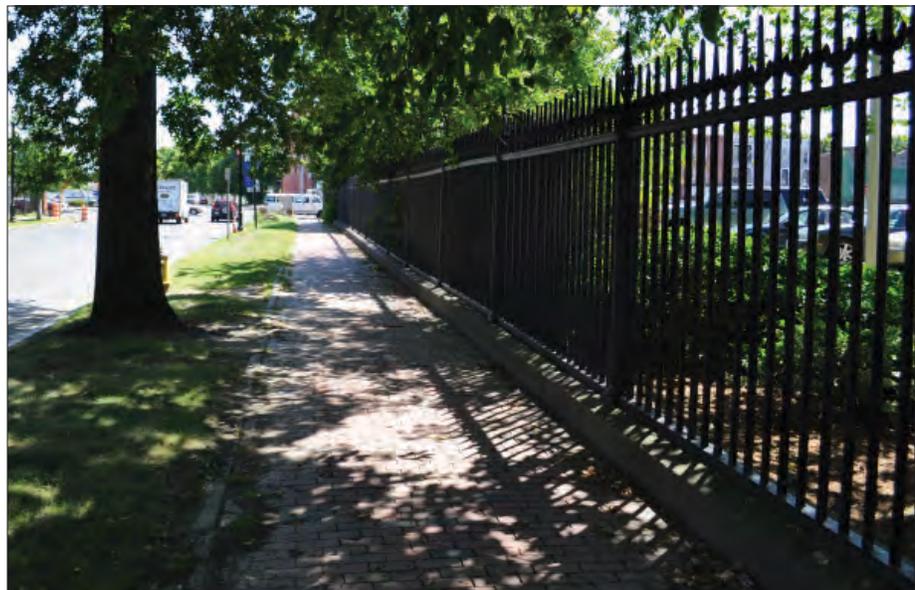
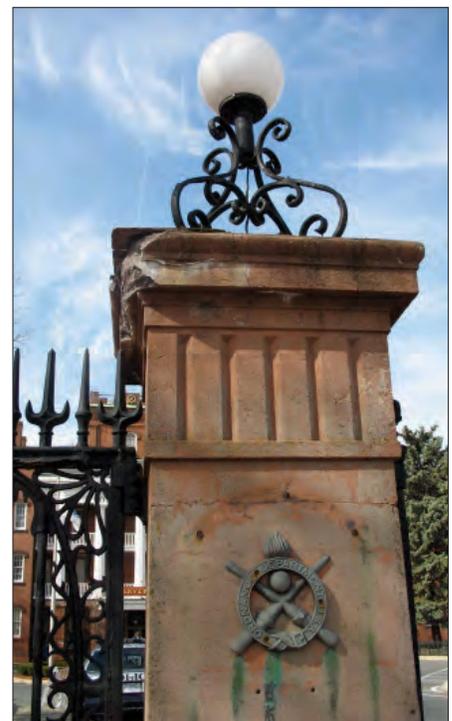


Figure 2.51. View of historic iron ornamental perimeter fence along Federal Street, constructed in the mid nineteenth century. OCLP, 2009.



Figure 2.52. View of typical historic lamp post that line the north-south pathway on the Green. OCLP, 2008.



Figures 2.53, 2.54. Historic light fixtures mounted on piers at the corner of Byers and State streets, left, and at the main entrance on Federal Street, right. Some of the sandstone piers have deteriorated and are in need of major repairs, such as the one to the right. OCLP, 2008.



Figures 2.55. Stone with plaque marks the southwest corner of the original land purchase in 1801. OCLP, 2006.



Figures 2.56. A step used for mounting horses and carriages was built into the steps of the Officer's Quarters 5/6 south of the Main Arsenal. OCLP, 2008.



Figures 2.57. At the southwest corner of the Green is a remnant of a turbine housing, most likely formerly used as part of a turbine or pump at the Armory. OCLP, 2008.



Figures 2.58, 2.59. A variety of metal signs throughout the site are mounted on wooden or metal posts, or directly on the ornamental fence. OCLP, 2008.



Figures 2.60. A National Park Service sign at the main vehicular entrance into the National Historic Site. Note the electronic sign to the left inside the campus. OCLP, 2008.



Figures 2.61. A bronze sign mounted to the corner fence post at Federal and State streets. OCLP, 2008.

Cultural Landscape Report

Armory Square
Springfield Armory
National Historic Site

Springfield, MA

Landscape Character Areas



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

SOURCES

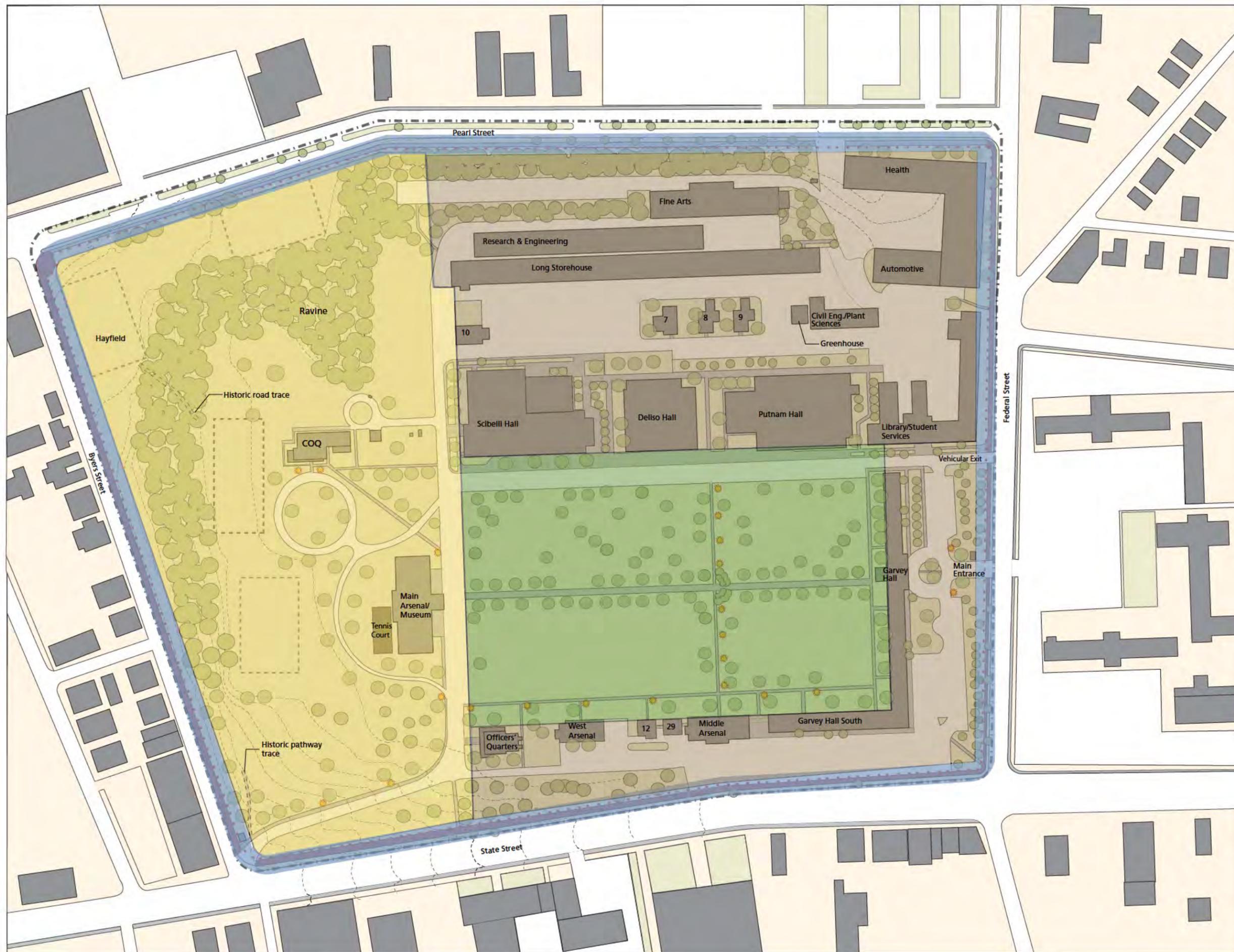
1. Ortho Imagery, MassGis 2005.
2. Springfield Armory Site Map, 2004
3. Infrastructure and Physical Resources Data, MassGis

DRAWN BY

A. Crosbie, Adobe Illustrator, 2009

LEGEND

- - - 2010 National Historic Landmark Boundary Line
- Perimeter Landscape
- Central Green
- Western Slope
- Institutional Landscape



Drawing 7

ANALYSIS AND EVALUATION

This chapter provides a summary of the historical significance of Armory Square and an evaluation of its historic integrity. The boundaries of this area include the 55-acre hilltop site bounded by State, Federal, Pearl, and Byers streets.

The chapter is divided into two main sections. The first summarizes the National Register status and significance of the Armory Square landscape according to National Register of Historic Places criteria. The second section of this chapter is an evaluation of the landscape's historic character according to the cultural landscape methodology outlined in *A Guide to Cultural Landscape Reports: Contents, Process and Techniques*, (National Park Service in 1998). This methodology examines general landscape characteristics, such as spatial organization, circulation and vegetation, comparing existing landscape conditions with what is documented or otherwise understood of the historic condition of these landscape characteristics during the period of historical significance. An evaluation of "contributing" or otherwise "non-contributing" is assigned to each landscape characteristic examined, based on the survival of tangible historic landscape features and also intangible landscape relationships that make it either possible or impossible for existing landscape conditions to convey the significance of the historic property. If not enough information is available regarding a specific landscape characteristic, an evaluation of "undetermined" is assigned.

A summary table of landscape features is provided at the end of the chapter specifically listing all documented landscape features and providing a convenient evaluation of that feature's historic significance, integrity, or lack thereof. One hundred and nine landscape features are listed on the chart with sixty-seven of those features being evaluated as contributing. The table offers a concise reference to inform cultural resource decision making through the identification of these contributing and non-contributing landscape features.

For the purposes of the following analysis and evaluation, the project area is divided geographically into four landscape character areas consistent with the earlier description of existing site conditions (Figure 3.0). The Perimeter Landscape includes the historic iron ornamental fence and gates that enclose the entire site, as well as the surrounding brick and concrete sidewalks and trees outside the fence which is now under the City's ownership. The Central Green Landscape comprises the main lawn and tree canopy, and the building facades along the east and southern edges of the Green. The Western Slope Landscape consists of the Main Arsenal and adjacent parking along the western edge of the Green and the terraced area west of the Main Arsenal. This area also includes the Hayfield in the northwestern corner, the Commanding Officer's Quarters, and garage, and the ravine immediately northeast. The Institutional Landscape

consists of the property owned by the Commonwealth of Massachusetts and operated as the Springfield Technical Community College campus. This area spans north and east and south of the Central Green as well as the main entrance on Federal Street.

NATIONAL REGISTER STATUS

This analysis and evaluation is based on criteria and aspects of integrity developed by the National Register of Historic Places Program, which lists properties that are significant to our nation's history and prehistory. According to the National Register, historic significance may be present in districts, sites, buildings, structures and objects that possess integrity of location, design, materials, workmanship, feeling, and association which meet at least one of the following criteria:

- A. Associated with events that have made a significant contribution to the broad patterns of history.
- B. Associated with the lives of persons significant in our past.
- C. Embodies 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 whose components may lack individual distinction.
- D. Have yielded, or may be likely to yield, information important in prehistory or history.

Springfield Armory National Historic Site was designated a National Historic Landmark on December 19, 1960. The site was then listed on the National Register of Historic Places in 1966 with the adoption of the National Historic Preservation Act. On October 26, 1974, Congress authorized Springfield Armory National Historic Site which was then established in 1978. Springfield Armory's other associated sites, Federal Square and the two Water Shops, were not included in the historic designation. In the same year, the City of Springfield transferred ownership of 20.32 acres to the National Park Service, including all its land within the fence, the perimeter fence itself, the Main Arsenal, the Commanding Officer's Quarters, and the terraced slope to the west of the Green. The City retained ownership of the tree belt and sidewalk surrounding the perimeter of the site

The National Register nomination identified the nineteenth century as the period of significance for Armory Square, in addition to the specific dates of 1794 when Springfield Armory was formally established as a federal arsenal, and 1778-1968, as the span of the Armory's research and manufacturing operation. The historic district is situated on a hilltop overlooking the city of Springfield. Bounded by

State, Federal, Pearl, and Byers Streets, the district contains approximately twenty-six historic buildings, mostly comprised of brick construction with white trim and slate roofing. Areas of historical significance expressed by the 1974 National Register documentation included political and military themes.

STATEMENT OF SIGNIFICANCE

Springfield Armory National Historic Site is significant in American history for association with historical events spanning almost two hundred years, beginning with the late eighteenth century establishment of the federal arsenal at this location, through the mid-twentieth century as a manufacturer of military small arms and developer of innovative assembling methods and machinery (1778-1968). The Armory was also the site of an uprising known as Shays' Rebellion, led by Captain Daniel Shays, which attempted to raid the arsenal as part of a plan to instigate a revolt in order to prevent the state's court system from further condemning the property of those unable to pay what they considered to be unfairly high taxes.

Springfield Armory National Historic Site is nationally significant under National Register Criteria A and C. Under Criterion A, the site is significant in the areas of military and political events, including the early formation of the United States' military organization and industrial capacity, as well as the Civil War, World War I, and World War II. Under Criterion C, the site is a representative example of nineteenth through early twentieth century military campus landscape design.¹

Politics/Government

The National Register recognizes Springfield Armory's significance during the Revolutionary War when the site was a key storage facility and supply depot for the northeastern theatre. Springfield was considered a strategic location due to its vicinity to Boston Road, a major route between Boston and New York, and the Connecticut River, a major waterway and shipping route. It was also far enough inland to be out of reach from enemy warships. After the war, the arsenal at Springfield remained as a federal repository of military supplies. In 1794, under the recommendation of the Secretary of War, Henry Knox, President George Washington authorized Springfield as a location for one of two national armories.

Springfield Armory was also the site of Shays' failed attempt to raid the arsenal in 1787 in order to arm an insurrection against the state government. At this time in central and western Massachusetts, many citizens were unable to pay high property taxes, resulting in the loss of their farms and in many cases, imprisonment. Attempts were made to disrupt and close court proceedings in order to prevent the foreclosure of property and prison sentences. These efforts culminated with an uprising on January 25, led by Revolutionary war veteran Daniel Shays. With over a thousand men, Shays advanced along what is now State

Street toward the arsenal. The defending militia had arrived earlier from the northwest and ensconced themselves on the grounds of Armory Square, ready to thwart Shays' campaign using cannons already stored on site.² A very short but decisive volley of artillery killed four of the rebels, and the rest of Shays' men made a hasty retreat. The event galvanized support for a stronger national government that could prevent future acts of rebellion and eventually led to the establishment of the Federal Constitution.

Military

Throughout the history of the United States until the late 1960s, Springfield Armory manufactured small arms for the military, garnering a reputation for accuracy and dependability. When the Armory at Harpers Ferry was destroyed at the beginning of the Civil War, Springfield Armory was the federal government's only supplier of small arms until 1904, when the Rock Island Arsenal in Illinois began manufacturing rifles. From 1892 to 1945, the Armory was involved with a number of advancements in arms technology from the Krag-Jorgensen rifle during the Spanish American War to the Springfield Model 1903 used in World War I, to the M1 Garand rifle used extensively in World War II and part of the Vietnam War.

National Register documentation also references the role that Springfield Armory played in the research and development of small arms manufacturing techniques for the United States military. During the early nineteenth century, Springfield Armory contributed to the development of interchangeable parts, forming the basis of modern assembly line methods of American industry. In 1822, Thomas Blanchard, an Armory worker, devised a machine for turning gun stocks which led to the subsequent development of machinery for making other standardized parts. In the twentieth century, the Armory was the principal small arms research and development center for the United States Army.

Landscape Architecture

As a military campus landscape, Armory Square developed around a central Green which had been a prominent landscape feature dating back to the late 1700s. By 1780, a barracks and cartridge shop were loosely organized around the public Green. As the site developed in the 1800s, it was envisioned as a "grand national armory" reflecting the country's national strength and solidarity.³ The complex was developed as a traditional military campus with the central Green as the organizational and spatial framework of the site. Over time, the addition of manufacturing and storage facilities along with living quarters would respect the orientation, architectural character, and open space of the Green. The grounds of Armory Square evolved according to contemporary landscape design styles of the early nineteenth century through the mid-twentieth century. Under Superintendent Roswell Lee's direction, trees were planted in straight, regular lines, framing circulation routes and connecting buildings. Drainage issues were

addressed through grading and terracing of the steep hillside on the western side of Armory Square. As landscape design styles changed in the mid to late nineteenth century, gently curving walks and drives were added along the slope and around the Commanding Officer's Quarters and the Main Arsenal. Ornamental gardens were introduced under Major James Ripley in the early 1850s, located around the Commanding Officer's Quarters. Trees on the campus began to be arranged more informally, including a mix of deciduous and evergreen trees planted on the gradually terraced slope. On the Green, trees were also planted more irregularly, suggesting a pastoral landscape as promoted by prominent contemporary designers such as Andrew Jackson Downing. In the late nineteenth century, fountains, greenhouses, and additional gardens were constructed, offering an impressive horticultural showcase for the Armory. These landscape features remained until the 1950s, when they were removed.

NATIONAL REGISTER INTEGRITY

Integrity is the ability of a property to convey its historic identity and significance. While evaluation of integrity is often a subjective judgment, it must be grounded in an understanding of a property's physical features and how these relate to its significance. The National Register identifies seven aspects of integrity comprising location, design, setting, materials, workmanship, feeling, and association. Retention of these qualities is essential for a property to convey its significance, though all seven qualities need not be present to convey a sense of past time and place.

Location is the place where the cultural landscape was constructed. Although several Armory buildings and shade trees have been removed, most of the landscape features have not been moved since the end of the period of significance. The site retains integrity of location.

Design is the combination of elements that create the form, plan, space, structure, and style of the cultural landscape. Extant design elements include the overall spatial organization, vehicular and pedestrian circulation, the remaining former Armory buildings, open spaces of mowed lawns with shade trees, and the cast-iron lamp posts. The primary change to the original design of Armory Square is the construction of three large multi-story buildings at the northern edge of the Green, which required the removal of several historic buildings. The tree canopy at the south side of the Green was also removed to accommodate playfields. Additional surface parking areas have also been added since the historic period as well, mostly in the area between the Long Storehouse and the new academic buildings north of the Green, and the southeastern part of the site. Overall, the site retains integrity of design.

Setting is the physical environment of the cultural landscape. The setting of Armory Square is defined by its natural features, including its topography consisting of a

fairly flat plain on a hilltop with slopes and a ravine at the western end of the site. The central Green and tree canopy, along with other open areas of mowed lawns dotted with specimen trees, are also character defining features of Armory Square's historic setting. The Green itself was the central organizing element around which the campus evolved through the nineteenth century. In addition, the perimeter ornamental fence enclosing the entire site is also a signature landscape feature dating to the mid-nineteenth century. Aside from the post-period buildings and removal of trees on the Green, Armory Square's setting is intact and conveys its historic campus character. The larger setting of Armory Square outside the project boundaries historically consisted of residential neighborhoods of mostly single family houses, and related institutions such as churches and schools. A Masonic temple was also located on State Street along with commercial enterprises. Today, commercial activity continues along State Street, but the residential areas have given way to a number of parking lots and multi-family housing. The City of Springfield recently constructed a planted median along the center of State Street which reestablishes a smaller scale to the street and enhances the overall experience of the area.

Materials are the physical elements that were combined or deposited during the period of significance in a particular pattern or configuration to form the cultural landscape. Historic materials at Armory Square include the cast-iron lamp posts, the iron and sandstone ornamental fence, flagstone walkways at the Commanding Officer's Quarters, and stone steps at Quarters 5/6. Brick was used for the majority of Armory buildings in the nineteenth and early twentieth centuries, including two of the gatehouses, one of which was constructed by Works Progress Administration workers in 1937. The presence of these features conveys the historic military campus design of Armory Square.

Workmanship is the physical evidence of the crafts of a particular culture or people during the period of significance. The construction of the perimeter fence and cast-iron lamp posts conveys the workmanship associated with the development of a military campus design style. The fence was constructed of nine-foot high iron pickets of alternating spearheads and pike's beads, and sandstone piers using locally quarried stone. The cast-iron lamp posts were designed to look like cannon tubes, further contributing to the martial character of the site.

Feeling is the cultural landscape's expression of the aesthetic or historic sense of the historic period. Armory Square's feeling is characterized by its natural setting and vegetation, including the open mowed lawns and specimen trees, and the tree canopy on the Green. The perimeter ornamental fence defining the edge of the site also contributes to the historic feeling. The setting at the Western Slope Landscape has changed little, except for modifications to the topography in the late 1960s. Some of the vegetation around the Commanding Officer's Quarters dates to the historic period, such as the mature shade trees, including an elm tree, oak trees, sugar maples, and black walnut trees. The construction of several

modern buildings overlooking the Green and the use of the Green as an athletic field have diminished the historic feeling in this area. Overall, the campus character remains, retaining the integrity of feeling

Association is the direct link between the important historic event or person and the cultural landscape. Armory Square retains its association with the original federal facility and military campus design that evolved during the historic period, through its spatial organization, circulation, and former Armory buildings and ornamental fence.

EVALUATION OF LANDSCAPE CHARACTERISTICS AND FEATURES

Landscape characteristics are the broad patterns, systems, and feature categories that compose the landscape and determine how people interact with it. The analysis of landscape characteristics and features serves to identify the components of the landscape that define the historic character of the landscape and contribute to its ability to convey the significance. The evaluation entails comparing existing conditions to what was present during the historic period and making an evaluation of whether the landscape characteristic or feature contributes to the landscape's historic character.

The landscape characteristics evaluated for Armory Square include topography, spatial organization, land use, vegetation, circulation, buildings and structures, views and vistas, and small scale features. The evaluation is organized and presented in the following components:

Historic Condition: A brief outline of the history of a particular landscape characteristic and associated features.

Existing Condition: A brief description of the current physical condition.

Evaluation: A determination of each landscape characteristic or feature's contribution to the significance of the landscape.

Contributing – Characteristics and features that contribute to the significance of the historic district were present during the period of significance, possess historic integrity and are related to the areas of historic significance.

Non-contributing – Characteristics and features that do not contribute to the significance of the historic district were not present during the period of significance, do not retain historic integrity or are unrelated to the area of historic significance.

Undetermined – Characteristics and features that require additional information to determine if they contribute to the significance of the historic district.

Contributing features generally date to the period of significance, 1968, and retain association with the operation of the federal Armory. Non-contributing features generally post-date the period of significance or have been so altered from the historic condition that they no longer help convey the site's significance.

TOPOGRAPHY AND NATURAL FEATURES

Historic Condition: Situated on a fairly flat plain on top of a sandy bluff overlooking the Connecticut River, Armory Square offered a secure location for a military arsenal and armory. Other prominent topographical features include a steep ravine north of the Commanding Officer's Quarters and several natural springs that caused erosion around the bluff. Under Ripley's command in the mid-nineteenth century, grading around the Main Arsenal and Commanding Officer's Quarters on the edge of the bluff was undertaken to protect against erosion caused by the existing springs.⁴ The area north and south of the Long Storehouse and Main Arsenal was also manipulated by moving 106,000 cubic yards of cut and fill in the late 1840s. The result provided a flatter, terraced hilltop on the north side with an engineered, stabilized slope. In the late 1850s, the terraces west of the Main Arsenal were regarded to create a more even and gradual slope. The graded hillside allowed culverts to carry excess water off into State Street. Since the period of significance, the City of Springfield regraded portions of the hillside west of the Main Arsenal and north of the Commanding Officer's Quarters to create athletic fields.

Existing Condition: The site is still characterized by a fairly level area on top of the bluff and ravine. The site's topography has continued to be modified in an ongoing effort to mitigate drainage problems and accommodate new uses, such as the playfields for the City of Springfield school system at the northwest portion of the site (Figure 3.1).

Evaluation: The topography of Armory Square contributes to the historic significance of the landscape.

SPATIAL ORGANIZATION

Historic Condition: Armory Square evolved into a military campus with the central Green providing the organizational framework for the layout of buildings and circulation. The manufacturing operations were primarily located at the east and northeast areas of the site. With the exception of the Main Arsenal west of the Green, storage facilities were sited on the south side of the Green and living quarters on the west, northwest, and north sides. The overall spatial organization of Armory Square remained relatively unchanged between the Civil War and the

end of the historic period in 1968. By the mid-nineteenth century, the city of Springfield had expanded around the borders of Armory Square with residences and churches constructed along State, Byers, Federal, and Pearl streets. The perimeter landscape, consisting of an ornamental fence, sidewalk and tree plantings, was in place along all four edges of the site, providing a physical interface with the surrounding neighborhood.

Existing Condition: Since 1968, much of the open space on campus has been converted into surface parking, including the south/southeast and north/northwest perimeter of the college property as well as most of the open space north and south of the Green. The site of the former greenhouses is maintained as an open lawn with a mulching area and materials storage to the north (Figures 3.2, 3.3). The lowland meadow at the northwest corner of the site, historically known as the Hayfield, is maintained as an open area that is periodically mowed. The Green itself has been retained, with trees on the southern portion removed to facilitate athletics. Several Armory buildings north of the Green were removed for the construction of three, large multi-storied academic buildings (Figures 3.4, 3.5).

Evaluation: The spatial organization contributes to the historic significance of Armory Square, although the expansion of parking facilities and new building construction in the 1970s and 1980s has diminished the historic character of the site.

LAND USE

Historic Condition: Prior to the establishment of the Arsenal and Armory, the site was used as a militia training field and common, located north of what is now State Street. Initial construction of the federal manufacturing plant consisted of a cartridge shop along Boston Road (State Street) and barracks at the northern portion of the site. By 1801, several workshops, storage facilities, and offices had been constructed within the Armory Square site. Most of the manufacturing was located at the northeast and east areas, and living quarters were built on the west and north sides of the Green. Associated with the living quarters were agricultural plots for food consumption. After 1830, a perimeter fence had been erected to enclose the Armory, and the Green was no longer used as a public common. In the late nineteenth and early twentieth centuries, a series of ornamental gardens, fountains, and greenhouses were installed at the western part of the site, mostly around the Commanding Officer's Quarters, but were removed by the 1950s (Figures 3.6, 3.7). During World War II, the Armory offered land north of the officers' quarters and south of the Long Storehouse for cultivation as victory gardens for Armory employees. In addition, recreational activities took place on the campus, including two tennis courts and a swimming pool. The Green has also been the site of national holiday celebrations, such as Armed Forces Day, when the Armory hosted ceremonies along with military

arms demonstrations for the public. Concerts were also held on the Green in the early and mid-twentieth century, including jazz clarinetist Benny Goodman in September 1943.

Existing Condition: After the Armory was deactivated in 1968, the site no longer functioned as a manufacturing and storage facility. The property was eventually divided into two parcels. Springfield Technical Community College opened in 1967 and continues to operate thirty-four acres as an academic institution. In order to accommodate commuting students and faculty, parking has expanded in the southeastern corner of the site and south of the Long Storehouse. The institute converted existing Armory buildings into classrooms and other related facilities and added three new academic buildings along the northern edge of the Green. Recreation on the Green now includes college soccer and football practice.

Roughly twenty acres of the Armory Square site were conveyed to the National Park Service who now operates a museum in the Main Arsenal and maintains the Commanding Officer's Quarters and associated garage. The former garden area adjacent to the Commanding Officer's Quarters is used as a maintenance yard. The remainder of the site was used by the City of Springfield school system for sports, but drainage issues continued to impede use of the land for recreational purposes.

Evaluation: In general, the adaptive reuse of the Main Arsenal and Commanding Officer's Quarters does not detract from the historic character of the landscape. While most of the uses associated with the college are compatible, existing educational land use does not contribute to the historic significance of Armory Square.

VEGETATION

Historic Condition: The landscape vegetation at Armory Square underwent a major transformation from an open common area surrounded by pine barrens and marshland, to a landscape defined by mowed lawns and a shady tree canopy. Trees were first planted in the 1830s, in rows on the Green and in front of Armory buildings facing State and Federal streets. Agricultural crops were also cultivated around the living quarters. By the mid-nineteenth century, a significant number of trees had been planted in linear and less formal formations throughout the site. Trees lined sidewalks and interior roads and dotted the Green and the hillside west of the Main Arsenal. Foundation plantings were installed at the Commanding Officer's Quarters as well as the Officers' Quarters. By the late 1800s, formal gardens and ornamental trees and shrubs were also planted around the Commanding Officer's Quarters, including a rose arbor, perennial beds, and sheared hedges. Two greenhouses were located north of the Commanding Officer's Quarters, flanking another garden that included fruit

trees. Bordering these landscape features was a hedge of lilacs that ran from the eastern side of the Commanding Officer's Quarters parallel to the driveway, then across the driveway along the interior road toward the north and turning west, essentially enclosing the greenhouses and gardens. Open areas were maintained as mowed lawns, and the meadow at the northwest corner of the campus was used as a hayfield. In the mid-twentieth century, a circle of evergreen trees was planted in the center of the Green, and later a beech tree was curiously planted within the pathway.

Existing Condition: Since the end of the period of significance, the greenhouses, rose garden, and perennial beds were removed. The lilac hedge at the Commanding Officer's Quarters is a surviving landscape feature from the period of significance, although some sections have died out (Figure 3.8). A number of shade trees have been removed from the hillside west of the Main Arsenal and north and west of the Commanding Officer's Quarter for the construction of athletic fields in the late 1960s. In addition, Springfield Technical Community College cleared trees from the southern portion of the Green for athletic fields as well. There are currently seventy-five specimen trees on the National Park Service managed site, some of which are over a hundred years old. There also appear to be two pear trees dating to the historic period located northeast of the Commanding Officer's Quarters on the site of the former greenhouses and gardens (Figure 3.9). On the college property, there are 268 specimen trees. The tree canopy throughout the site is a character defining feature that must be preserved. A condition assessment was recently completed for the trees within Armory Square, including evaluations and future recommendations for pruning and stabilization. Around the ravine and the northern edge of the campus, a number of volunteer trees have become established. As part of its curriculum, Springfield Technical Community College has been establishing an arboretum on the campus to introduce horticulture students to a variety of tree species. These labeled trees are located on the Green and along the pathways east and north of the Green.

Evaluation: The shade trees, located on the Green, around the Main Arsenal and Commanding Officer's Quarters, and along the perimeter of the campus contribute to the historic significance of Armory Square. In addition, the lilac hedge and surviving foundation plantings at the Commanding Officer's Quarters, along with the shrubs along the Byers and State Street driveway, contribute to the historic character of Armory Square.

CIRCULATION

Historic Condition: Since the earliest formation of Armory Square, access to the site was off of State Street, towards the southwest corner. This access road eventually cut north across the site to what is now Pearl Street, passing the pay office, the Superintendent's Quarters and several homesteads. In the 1820s,

another entrance on State Street was located further east. These two roads began to frame what would become the central Green. Another road formed perpendicular to the other two, forming the northern edge of the Green. A series of informal paths crossed throughout the site. By 1851, flagstone walkways had been installed on the north, south and west sides of the Green. Brick and cement gutters were also installed along the edges of the sidewalks bordering the north and west sides of the Green.

After the completion of the perimeter fence in the 1860s, the campus was served by four vehicular access points with two located on Federal Street, one at State Street, and one at the corner of Byers and Pearl Street. The road through the Byers and Pearl Street gate curved to the south and ascended the bluff, ending at a circular drive in front of the Commanding Officer's Quarters. Another interior road was added between the fence and the buildings on the east and south sides of the Green.

Pedestrian circulation patterns in the 1860s were linear and paved with flagstones. A brick sidewalk ran along the outside perimeter of the fence. A walkway ran along the northern edge of the roadway from the north Federal Street entrance across the site to the Commanding Officer's Quarters with shorter perpendicular walks leading to workshops and officers' quarters. Another walkway started at the State Street gate running north with access walks to the Paymaster's Quarters, Main Arsenal, and Master Armorer's Quarters. The Green was divided by two perpendicular walks that intersected somewhat off center, creating four unequal quadrants.

In 1875, the city of Springfield regraded State Street which reduced the State Street entrance to a pedestrian only access. A new vehicular entrance was constructed at the corner of State and Byers Streets, with a pedestrian walkway leading to the circle in front of the Commanding Officer's Quarters. After the construction of the Paymaster's Quarters, south of the Main Arsenal, a new interior road was constructed running diagonally from the Byers and State Street entrance, past the new Paymaster's Quarters, curving to the west around the Main Arsenal and ending at the northwest corner of the Green.

Existing Condition: The overall circulation system on the campus remained unchanged since 1968, except for some alterations in the late 1960s. The walkway leading from the Byers/State Street gate to the circular drive was partially covered with fill during grading operations for new athletic fields (Figure 3.10). The construction of the three new academic buildings required the removal of flagstone walkways along with four Armory residences. The gated entrances at the corners of Pearl/Byers Street and State/Byers Street are closed (Figures 3.11, 3.12). The main entrance to the site is on Federal Street and access to the National Park Service property is via the one-way southern interior loop road. The road loops around and exits north of the entrance on Federal Street. A

secondary vehicular entrance is located off of Pearl Street at the northeast corner of the campus.

Surface parking areas have been expanded on the campus for college faculty and personnel. Most of the parking is located at the southeastern portion of the site and north of the Green adjacent to the Long Storehouse and the new academic buildings. A row of spaces is also located along the northern edge of the Green. Providing sufficient parking has been an ongoing problem for the school and has required the need for acquiring additional offsite parking locations. Currently, parking on campus is provided only for faculty and employees. Parking for students is available off of Pearl Street across from the campus, and other areas further away which necessitate a shuttle bus service. Parking at the National Park Service site is located along the western edge of the Green, in front of the Main Arsenal.

Evaluation: Circulation contributes to the historic significance of Armory Square. Existing circulation patterns around the Green date back to the 1820s. The pathways within the Green, along with the curvilinear walks and roads associated with the Main Arsenal and Commanding Officer's Quarters, and south of the Green, date back to the mid to late nineteenth century. The sidewalks along State, Byers and Federal Street sides of the campus also contribute to the historic character of the campus.

BUILDINGS AND STRUCTURES

Prior to the formation of the Arsenal and Armory complex, the earliest buildings on the Armory Square site were homesteads consisting of houses, barns, and other associated buildings surrounding a common public area. After the establishment of the federal Armory, a magazine, barracks, and cartridge shop were constructed on the site. Armory Square evolved into the administrative and storage center of the arms manufacturing complex, along with residences and some manufacturing processes. Beginning in the early nineteenth century, the site was envisioned as a military campus that reflected its "grand national establishment."

Since the end of the period of significance in 1968, twenty-three of thirty-one historic buildings remain. Five Armory buildings have been removed, including Paymaster's Quarters, Officers' Quarters 2, 3, and 4, and a garage building. Three new multi-story academic buildings were constructed on the northern edge of the Green, including Deliso Hall in 1973, Putnam Hall in 1974, and Scibelli Hall in 1988. One-third of the former Hill Shop (Building 27) was removed, and two floors were added to the former Property and Manufacturing Building (Building 20).

Located within the Perimeter Landscape is the ornamental iron fence. Construction on the fence began in the 1840s under Superintendent Ripley to

enclose and protect the Armory Square complex. Using scrap iron and locally quarried red sandstone, the fence was designed with nine-foot high pickets of alternating spear heads and pikes beads. When finished, the fence created a uniform and continuous enclosure with three entrances, the main gate located at State Street, and two secondary gates, at Federal Street and the corner of Pearl and Byers streets.

Four historic buildings are located in the Western Slope, including the Main Arsenal (Building 13), Commanding Officer's Quarters (Building 1) and associated garage (Building 18), and gatehouse (Building 33). Ripley constructed the Commanding Officer's Quarters and Main Arsenal in 1847 and 1850, respectively. The three-story Main Arsenal was situated between the Master Armorer's and Paymaster's houses, providing a terminus for the west end of the Green. In the center of the front façade, a tower with a clock became a visual landmark on the site (Figures 3.13, 3.14). The Commanding Officer's Quarters were designed in the Greek Revival style, featuring a Doric style entrance portico and porch which were replaced in 1870 with cast iron porches (Figures 3.15, 3.16). The two-car garage at the Commanding Officer's Quarters was constructed by workers employed through the Works Progress Administration in 1937. The gatehouse was first constructed in 1875 as an octagonal structure located on the north side of the drive at the corner of the entrance at Byers and State Street. The building was then replaced in 1908 with a new rectangular brick-clad structure.

Within the Institutional Landscape are approximately twenty-five buildings. The oldest building on the campus is the West Arsenal (Building 11), constructed in 1808 on the southern edge of the Green as a storehouse. Over the years, the building was used as a barrel house, storehouse, barracks, and a recreation building. Along the east edge of the Green, the Administration Building (Building 16) was created by joining the North and South Shops, built in the 1824, with the middle office building on the east side of the Green in the early 1860s. A five-story tower facing the Green and a five-columned Doric portico on the east side were also added to the consolidated building. The East Arsenal (Building 15) was constructed under Superintendent Lee in the 1820s at the southeast corner of the Green. In the 1920s, the East Arsenal was joined to the Administration building. Lee constructed the Middle Arsenal (Building 14) in 1830, which was the most architecturally elaborate building at that time, consisting of three stories with a balustrade along the eaves (since removed) and a Georgian-style portico. The building was the first three-story structure on the site, located on the southern edge of the Green between West and East Arsenals. Several Officers' Quarters were also constructed in the 1830s, including Buildings 7, 8 and 9, located to the north of the Green.

Lee also initiated the construction of the Master Armorer's Quarters (Building 10) along with the Paymaster's Quarters, but did not live long enough to see their completion. The Greek Revival style building was located north of the original

Superintendent's Quarters (the current site of the Main Arsenal). The two-story residence included a three-bay pedimented front with Ionic entrance porticos, and slate-covered gabled roofs. In the late 1800s, the Master Armorer's Quarters was moved north of what is now Scibelli Hall.

Under Superintendent Ripley, the Armory constructed the two-story Long Storehouse (Building 19), north of the Green, for the storing of gunstocks and lumber in 1850. Designed in the cavalry caserne style, the building was later extended in 1863 to its present size of 764 linear feet. The building featured a gabled slate roof and segmental arched openings with louvers on the first floor. In 1864, an icehouse (Building 21) was built west of Officer's Quarters 9 and was later used for maintenance storage.

Under Major J. G. Benton, a duplex containing Officers' Quarters, 5 and 6, was constructed at the southwest corner of the Green in 1870. Designed in the Second Empire style, the three-story building had a slate roof and a balustraded porch with copper roof spanning the entrance façade facing west. Benton also constructed the Guardhouse (Building 12) in 1880 between the East and West Arsenals. By the early 1930s, the building was used as officers' quarters. The Hill Shops (Building 27), located west of Putnam Hall, is believed to have portions constructed in 1809 with later additions by 1864, but historic documentation has not been found to accurately date the building.

New buildings continued to be constructed in the early and mid-twentieth century. A Ballistics building (Building 28) was constructed north of the Long Storehouse in the 1920s. The long brick building was built into the slope with one floor facing south and two floors exposed on the north side. Situated west of the Ballistics building, a below-grade shooting range (Building 28A) was constructed, around 1928 and included a 200-yard range. Most of the structure was underground with an outdoor target area as well. Alterations were made employing Works Progress Administration labor in 1937.

Northeast of the Green, a Storehouse (Building 25), was constructed in the early 1930s for plant vehicles. In addition, a Property and Manufacturing (Building 20) facility was constructed on the site of the former cistern and coal trestle, also northeast of the Green in the early 1930s. Located north of the Long Storehouse, the Research and Engineering (Building 32) was constructed around 1940.

Since the end of the historic period in 1968, Springfield Technical Community College has constructed three new multi-story, brick clad academic buildings on the site. Deliso Hall was constructed in 1973 on the site of the former Officer's Quarters 4 and swimming pool at the north edge of the Green and houses the English, foreign languages, and music departments. Putnam Hall was built in 1974 and occupies the site of the former Officers' Quarters at the northeast corner of the Green. The building is the largest of the new construction and houses an array of science and technology departments. Scibelli Hall was

constructed in 1988 and contains a variety of departments, including biotechnology, business administration, among others as well as a theater, gymnasium and student services. These three buildings and their architectural massing and scale visually overwhelm the historic green landscape.

Evaluation: There are currently twenty-six buildings and structures that contribute to the significance of the historic period, and two structures listed as undetermined. The three academic buildings constructed in 1973, 1974, and 1988 are not contributing.

VIEWS AND VISTAS

Historic Condition: One of the reasons the site was initially chosen as the location for an arsenal and armory was its defensible position on a hilltop which made which made it possible to view approaching enemies. When the Main Arsenal was constructed in 1847, its new tower afforded sweeping vistas of the surrounding countryside, including the Berkshire Mountains.

Existing Condition: There are currently views from the area west of the Main Arsenal and Commanding Officer's Quarters, but these are partially obscured by trees and new buildings. The Main Arsenal Tower is no longer open to the public.

Evaluation: The views from the western bluff, although currently limited, contribute to the historic significance of Armory Square.

SMALL SCALE FEATURES

Historic Condition: The most notable small scale features on the Armory Square landscape during the historic period were cannons that were placed throughout the site, including along the east-west pathway on the Green and around the Commanding Officer's Quarters. They were believed to have been used in the Civil War and placed at the Armory, possibly as a commemoration or general gun display. Stacks of cannon balls also lined the walks around the Green. The cannons and cannon balls remained prominent features in the landscape until World War II when they were melted down as scrap metal.

Throughout the Armory site, cast-iron lampposts were installed along pathways. Constructed of an iron post based on the shape of a cannon tube, the light fixtures atop the posts were originally a lantern style. The lantern fixtures were replaced with globes, most likely when electricity was installed (Figures 3.17, 3.18). Other small scale features include a mounting stone on the west side of the former Officers' Quarters 5/6, built into the stone steps. A drain inlet at the southwest corner of the Green appears to date back to the historic period as well.

Other small scale features included a fountain with an adjacent bench southeast of the Commanding Officer's Quarters near the circular drive. Both were removed during the 1950s and replaced with grass (Figures 3.19, 3.20). A cross-

shaped wooden arbor in the center of the circular driveway northeast of the Commanding Officer's Quarters supported a number of climbing roses.

In 1875, a memorial was placed north of the drive from State and Byers streets, consisting of an ivy-covered stone monument with cannon and cannon balls. The monument is briefly mentioned in several reports as either commemorating the American Revolution or the Civil War.⁵ Another feature that appears in historic photographs was a wooden arbor or trellis located adjacent to the lower greenhouse closest to the Commanding Officer's Quarters. It is unknown whether it was used for supporting vines or a shade structure with seating. It was most likely removed along the greenhouses.

Existing Conditions: Historic lampposts are still located south of the Commanding Officer's Quarters, around the outer edge of the circular drive and along the road that curves in front of and to the west of the Main Arsenal, the entrance road from Byers and State Streets, and on the north-south pathway on the Green. Some of the historic light fixtures have been replaced with a different style not in keeping with the historic character of the fixture. Other light fixtures have been introduced into the landscape, including brown metal halide light posts on the west and east sides of the Green and the interior roadway.

Other small scale features that date to the historic period include two metal backstops with concrete bases at the north edge of the Ballistics Building, that were part of a test-firing range. Handmade stone splash blocks are also located along the eastern edge of Building 17, although their date of installation is unknown. Metal building number signs attached to most buildings also date to the period when the site still operated as an arms manufacturer.

Associated with the contemporary uses of the Armory site, a wide range of new small scale features have been introduced, such as picnic tables, bike racks, trash receptacles, and benches. As part of the National Park Service interpretive program, wayside exhibits have been installed at various locations on the site.

Evaluation: The cannon style lamp posts, steel backstops, stone splash blocks, metal building number signs do contribute to the historic character of Armory Square.

ARCHEOLOGICAL SITES

From the eighteenth century through the historic period, there are archeological resources associated with lost landscape features on the National Park Service and college property.

Three archeological surveys associated with the installation of utilities were conducted in 1981, 1984 and 2002. Investigations in the northeastern part of the site, from the Main Arsenal toward Pearl Street, yielded utility-related pipes and drains and a soil strata indicating a history of hillside grading and excavations.

References have also been made to a burial ground near the former greenhouse site.⁶ A second investigation around the Main Arsenal concluded that the condition of the site reflected the constant struggle during the historic period against nature and erosion.⁷ In 2002, another investigation took place prior to trenching operations along the southern edge of the Green.

In 2004, the University of Massachusetts prepared an archeological overview and assessment, including an inventory of archeological sites within the historic site. More than seventy historic archeological resources were recorded. The report concluded that Springfield Armory National Historic Site possesses “high sensitivity to contain additional, unrecorded historic archeological sites. Systematic subsurface testing is recommended, followed by monitoring during any construction involving disturbance or alteration of the ground surface.”⁸ A partial listing of these features appears in the summary table at the end of this section.

Evaluation: Further investigation is needed to determine if archeological sites in the project area contribute to the historic period.

EVALUATION OF LANDSCAPE FEATURES

The following evaluations address each site feature and are organized according to four landscape character areas, as well as property-wide features. The landscape character areas include the Perimeter Landscape, Central Green Landscape, Western Slope Landscape, and Institutional Landscape.

PROPERTY-WIDE LANDSCAPE

Natural Springs

Historic Condition: Located mostly at the northern portion of the site, natural springs produced wet areas and gullies due to erosion. Beginning with Lee, attempts were made to drain the area around the bluff and create more usable land. Through the years, the landscape continued to be manipulated to mitigate ongoing drainage issues.

Existing Condition: Changes to the grade have occurred since the end of the historic period of significance, most notably to the west for the construction of playfields for the city of Springfield school system, but change in grade only exasperated the drainage problems, making the new fields unusable.

Evaluation: Contributing

Plain Atop Bluff at Western Slope

Historic Condition: The flat plain above the sandy bluff and location near the Connecticut River were determining factors in the selection of the site for the Arsenal and Armory.

Existing Condition: The area was regraded in 1969 in order to install playfields for the City of Springfield school system.

Evaluation: Non-contributing

Organization of Buildings Around Central Green

Historic Condition: From the beginning of the development of Armory Square, the Green provided the spatial framework around which buildings, circulation systems, and vegetation were organized. Buildings were constructed to face toward the Green, instead of toward the city streets. The Administration Building (Garvey Hall) and the Main Arsenal were both designed to create a visual terminus at the east and west ends of the Green, creating a sense of formal symmetry.

Existing Condition: The overall spatial organization of the Central Green is extant.

Evaluation: Contributing

Tree Canopy

Historic Condition: Trees were first planted on a large scale under Lee's administration and continued through the development of the site during the period of significance. Initial designs called for laying out trees in linear rows along walkways and the campus perimeter. Later fashions dictated the installation of trees in a less formal, clustered arrangement, most notably on the Green and the Western Slope.

Existing Condition: The historic tree canopy has diminished on the Green to accommodate athletic fields. Trees were also removed at the Western Slope for the new city school playfields, but trees dating to the historic period remain, including elms, sugar maples, and oak trees. The college has planted trees around the new academic buildings and is developing a collection of labeled specimen trees as an educational tool for students.

Evaluation: Contributing

Lawns

Historic Condition: Mowed lawns have been maintained on the campus since the early nineteenth century, in keeping with the dignified and formal military landscape first imposed by Lee.

Existing Condition: Most of the campus open spaces are still maintained as mowed lawns, except for the area to the north along the perimeter fence. The Hayfield is allowed to grow somewhat taller but is mown periodically.

Evaluation: Contributing

Regraded Slopes

Historic Condition: The bluff has evolved into graded and terraced slopes, starting in the early nineteenth century.

Existing Condition: Fill was added in the late 1960s to create athletic fields, causing the loss of circulation features and vegetation.

Evaluation: Non-contributing

PERIMETER LANDSCAPE

Outside Perimeter Walk

Historic Condition: The perimeter sidewalks were first installed in the mid-nineteenth century and consisted of brick pavers with sandstone curbing.

Existing Condition: Most of the historic sidewalks remain, with significant sections of disrepair along Byers Street that extend to the base of the perimeter fence. The paving along Pearl Street was replaced at some point with concrete.

Evaluation: Contributing

Pedestrian Access off of State Street

Historic Condition: After the removal of the main vehicular entrance at State Street when the City lowered the street grade around 1875, a pedestrian entrance through the fence was retained.

Existing Condition: The pedestrian entrance is extant.

Evaluation: Contributing

Steps at State Street

Historic Condition: After the main vehicular entrance was removed from State Street in 1875, a set of concrete steps was built into the slope for pedestrian access to the campus.

Existing Condition: The steps are extant.

Evaluation: Contributing

Pedestrian Access Gate on Federal Street

Historic Condition: Undetermined

Existing Condition: A pedestrian access gate is located near the corner of Federal and State Streets.

Evaluation: Undetermined

Concrete Pedestrian Ramp at State Street

Historic Condition: Not applicable

Existing Condition: A concrete accessible ramp was recently constructed along State Street connecting the street level with the sidewalk.

Evaluation: Non-contributing

Ornamental Perimeter Fence

Historic Condition: The construction of the iron ornamental perimeter fence began in the early 1840s under Superintendent Ripley who was most likely responsible for much of its design. Due to the lack of funds, the fence was not completed until the early 1860s.

Existing Condition: The perimeter fence is extant but several piers have been repaired with colored concrete. Portions of the fence along Byers Street are in danger of destabilizing due to the continued deterioration of the adjacent sidewalk. Other sections of the fence are also exhibiting signs of spalling.

Evaluation: Contributing

Perimeter Street Trees

Historic Condition: By the mid nineteenth century, trees had been planted along the perimeter of Armory Square, reinforcing the site boundaries and creating a stately presence in the burgeoning neighborhood.

Existing Condition: Trees are extant along Federal Street and portions of Pearl and State Street.

Evaluation: Contributing

WESTERN SLOPE LANDSCAPE

Entrance Drive from Byers and State Street Gate

Historic Condition: A new vehicular entrance was constructed at the corner of State and Byers Street when the City lowered the grade of State Street in 1875. The corner entrance was in use until the end of the period of significance.

Existing Condition: The drive is currently closed.

Evaluation: Contributing

Circular Driveways North and South of Commanding Officer's Quarters

Historic Condition: A circular drive was constructed by the 1850s at the main entrance south of the Commanding Officer's Quarters. Another circular drive was added north of the building at a later unknown date.

Existing Condition: Both circular drives are in good condition.

Evaluation: Contributing

Flagstone Walkway at Commanding Officer's Quarters

Historic Condition: Flagstone walkways were installed around the Commanding Officer's Quarters during the building's construction in the late 1840s in the same style as the walkways around the Green.

Existing Condition: The flagstone walkways are extant and in good condition.

Evaluation: Contributing

Pathway from Byers and State Street Entrance Heading North

Historic Condition: In the late nineteenth century, a pathway was constructed leading from the Byers and State Street entrance to the main circular drive south of the Commanding Officer's Quarters.

Existing Condition: After the area was regraded in the late 1960s, only a segment of the pathway is extant.

Evaluation: Contributing

Road Trace at Northwestern Portion of the Site

Historic Condition: A road was constructed along with the entrance gate at the Pearl/Byers street corner that led to the main circular drive south of the Commanding Officer's Quarters.

Existing Condition: After the area was regraded in the late 1960s, only a trace of the road remains

Evaluation: Contributing

Concrete Sidewalk along Northern Edge of Drive from Byers and State Street Corner

Historic Condition: A sidewalk was constructed along with the vehicular drive from the Byers and State streets corner entrance in the late 1870s. Its original paving material is not known.

Existing Condition: The sidewalk is extant, but not in use since the Byers/State Street entrance has been closed.

Evaluation: Contributing

Accessible Ramp

Historic Condition: Not applicable

Existing Condition: A metal accessible ramp is located at the main entrance to the Main Arsenal.

Evaluation: Non-contributing

Surface Parking

Historic Condition: Not applicable

Existing Condition: A row of parking spaces was installed along the western edge of the Green for park visitors and personnel.

Evaluation: Non-contributing

Main Arsenal

Historic Condition: Built in 1850, the brick-clad Main Arsenal was one of the largest buildings on the campus, visually anchoring the west end of the Green. A clock tower on the east façade provided sweeping views of the surrounding area. A loading dock was added in 1941.

Existing Condition: The building is now a museum as well as archives, and offices for the National Park Service.

Evaluation: Contributing

Commanding Officer's Quarters

Historic Condition: Completed in 1847, the building was designed in the Greek Revival style, with alterations to the porches in 1870.

Existing Condition: The building is currently not in use.

Evaluation: Contributing

Garage at Commanding Officer's Quarters

Historic Condition: As a Works Progress Administration project in 1937, a two-car, brick-clad garage was constructed west of the Commanding Officer's Quarters.

Existing Condition: The building is currently used for maintenance storage.

Evaluation: Contributing

Gatehouse at Byers/State Street Entrance

Historic Condition: The gatehouse was constructed in 1908, replacing an octagonal structure. Alterations are believed to have occurred in 1937 as a Works Progress Administration project.

Existing Condition: The gatehouse is not in use and the brick cladding is in need of some repair.

Evaluation: Contributing

Lilac Hedge

Historic Condition: The lilac hedge was most likely installed in the 1870s along with ornamental gardens under Benton's administration. The hedge extended westward from the Garage and headed north along the access road.

Existing Condition: The hedge is not very vigorous and there are gaps that should be replanted.

Evaluation: Contributing

Foundation Plantings Around Commanding Officer's Quarters

Historic Condition: Some of the foundation plantings date to the historic period of significance, such as the yew shrubs and possibly the rhododendrons. The exact dates of installation are not known.

Existing Condition: The plantings are in keeping with the historic character of the landscape.

Evaluation: Contributing

Specimen Trees on Lawns

Historic Condition: Trees, including elms, pin oaks, sugar maples, black walnuts, and hawthorns, as well as evergreen trees, were planted throughout the Western Slope during the period of historic significance.

Existing Condition: Deciduous trees remain from the historic period and are in need of monitoring and continued care in order to maintain vigor.

Evaluation: Contributing

Hayfield

Historic Condition: The Hayfield was a meadow located at the northwest corner of the site in the mid-nineteenth century.

Existing Condition: The Hayfield has been regraded since the period of historic significance and is currently maintained as a mowed lawn.

Evaluation: Contributing

Wooded Slope

Historic Condition: The wooded slope at the northwestern portion of the site has been extant since the start of the period of significance.

Existing Condition: The slope is covered with mostly volunteer tree growth as well as vines.

Evaluation: Contributing

Shrubs along Entrance Drive at Byers/State Street Entrance

Historic Condition: Historic images of the site from 1907 show the drive lined with shrubs spaced fairly far apart along the north edge of the drive.

Existing Condition: Shrubs continue to line the drive.

Evaluation: Contributing

Views from Western Hillside

Historic Condition: Historic views from the hilltop out to the surrounding landscape and cityscape are obscured by new buildings and the growth of trees.

Existing Condition: Views today are obscured by the growth of vegetation and development adjacent to the site.

Evaluation: Contributing

View from Main Arsenal Clock Tower

Historic Condition: After the completion of the Main Arsenal clock tower, visitors were able to take in sweeping views of Springfield and the surrounding countryside. An article in Harpers New Monthly Magazine from 1852 mentioned the “enchanted view” from the tower in June.⁹

Existing Condition: Public access to the tower is no longer allowed.

Evaluation: Contributing

Cast Iron Lamp Posts

Historic Condition: Installed in the 1840s, cast iron lamp posts were created in a style reminiscent of cannon tubes. The lights were originally glass lanterns, but changed to globe fixtures in the early twentieth century.

Existing Condition: The lamp posts are in good condition, but some of the globe light fixtures have been replaced with a non-historic style fixture.

Evaluation: Contributing

Tennis Court

Historic Condition: In the 1930s, a tennis court was constructed west of the Main Arsenal. It may have been a Works Progress Administration project.

Existing Condition: The asphalt court pad is the only piece that remains.

Evaluation: Contributing

Asphalt Pad

Historic Condition: Undetermined

Existing Condition: A roughly 8'x8' square asphalt pad is located west of the Main Arsenal. It may possibly be used for supporting a cannon display during ceremonies and holidays.

Evaluation: Undetermined

Electrical Shed

Historic Condition: Not applicable

Existing Condition: The electrical shed is located on the north edge of the service drive at the Commanding Officer's Quarters.

Evaluation: Non-contributing

Maintenance Shed

Historic Condition: Not applicable

Existing Condition: The maintenance shed and electrical generator are located southeast of the service drive at the Commanding Officer's Quarters.

Evaluation: Non-contributing

Mulch Pile

Historic Condition: Not applicable

Existing Condition: Located northeast of the Commanding Officer's Quarters is a large mulch pile which detracts from the historic character of the landscape.

Evaluation: Non-contributing

Interpretive Wayside Exhibits

Historic Condition: Not applicable

Existing Condition: National Park Service interpretive waysides are located throughout the park.

Evaluation: Non-contributing

Picnic Tables

Historic Condition: Not applicable

Existing Condition: Several wooden and metal picnic tables are located near the Commanding Officer's Quarters.

Evaluation: Non-contributing

Directional Signage

Historic Condition: Not applicable

Existing Condition: A number of regulatory signs are located along the western edge of the Green and the west side of the interior access road.

Evaluation: Non-contributing

Informational Panels

Historic Condition: Not applicable

Existing Condition: Metal and wood information panels are located near the main entrance to the Main Arsenal.

Evaluation: Non-contributing

Trash Receptacles

Historic Condition: Not applicable

Existing Condition: A black metal trash receptacle is located near the main entrance at the Main Arsenal.

Evaluation: Non-contributing

CENTRAL GREEN LANDSCAPE**Athletic Field**

Historic Condition: Not applicable

Existing Condition: Trees were removed from the southern portion of the Green to accommodate playfields for the college. The addition of associated structures, such as barriers, bleachers, and goals, detract from the historic character of the Green.

Evaluation: Non-contributing

Interior Pedestrian Pathways

Historic Condition: The intersecting north-south and east-west pathways on the Green date to the mid-1850s.

Existing Condition: The pathways are extant, but the east-west pathway is currently undefined with gravel migrating out toward the lawn.

Evaluation: Contributing

Perimeter Walkways

Historic Condition: Walkways were installed around the Green in the mid-nineteenth century with entrance walks to each adjacent building. These walkways were originally paved with flagstones.

Existing Condition: The remaining walkways along the southern and eastern edge of the Green are now concrete and are in good condition.

Evaluation: Contributing

Mary Killeen Bennett Way

Historic Condition: The interior road, now known as Mary Killeen Bennett Way, has provided vehicular access through the site since the nineteenth century. The original paving material is not known, but most likely gravel.

Existing Condition: The road is currently asphalt-paved with concrete curbing along sections adjacent to the academic buildings and flush with the lawn along other sections.

Evaluation: Contributing

Surface Parking

Historic Condition: Not applicable

Existing Condition: In order to accommodate additional parking, the college installed a row of spaces along the northern edge of the Green, further reducing green space.

Evaluation: Non-contributing

Stone Blocks

Historic Condition: Located in the center of the Green, within the semicircular tree arrangement, are two stone blocks, possibly old mounting stones. The exact date of their installation is unknown, but most likely in the early to mid-twentieth century. The park has recently learned that a stone barbecue was located in the center of the Green with the two stone blocks on either side.

Existing Condition: The stones are extant.

Evaluation: Contributing

INSTITUTIONAL LANDSCAPE

Interior Road System

Historic Condition: The vehicular circulation system first developed in a linear fashion around the Green with the main entrance along State Street near the southwestern corner of the Green. Additional access roads were added north of the Green in the mid-nineteenth century, and later curvilinear drives were added at the Main Arsenal and Commanding Officer's Quarters. In 1875, the City of Springfield regraded State Street, rendering the main Armory entrance too steep for vehicles. As a result, the entrance was moved to the corner of Byers and State Street. By the mid-twentieth century, a secondary entrance was located at the northeastern portion of the campus to improve service and access to adjacent buildings.

Existing Condition: The vehicular circulation system remains intact from the historic period of significance with some modifications. The main entrance is now at Federal Street with traffic directed in a one-way direction around the campus and exiting back out to Federal Street, north of the entrance. The gated entrance at Byers and State Street is now closed.

Evaluation: Contributing

Sandstone Steps at Western Entrance to Quarters 5/6

Historic Condition: Sandstone steps, along with a mounting stone for mounting horses, were constructed at the main entrance at the western façade of Quarters 5/6 in 1870

Existing Condition: The sandstone steps and mounting stone are extant and in good condition.

Evaluation: Contributing

Surface Parking

Historic Condition: Not applicable

Existing Condition: Surface asphalt parking was expanded at the southeastern portion of the campus as well as the area between the Long Storehouse and new academic buildings.

Evaluation: Non-contributing

Concrete Wheelstops

Historic Condition: Not applicable

Existing Condition: Concrete wheelstops have been installed on the college campus at the southeastern parking area.

Evaluation: Non-contributing

Concrete Sidewalks between Scibelli, Putnam, and Deliso Halls

Historic Condition: Not applicable

Existing Condition: Concrete sidewalks were installed along with the construction of the three new academic buildings on the north edge of the Green.

Evaluation: Non-contributing

Officers' Quarters 5/6

Historic Condition: Built in 1870, the duplex containing officers' quarters was designed in the Second Empire style. The three-story building had a slate roof and a balustraded porch with a copper roof spanning the entrance façade facing west.

Existing Condition: The building is currently unused and in need of exterior repair and stabilization.

Evaluation: Contributing

West Arsenal (11)

Historic Condition: The West Arsenal is located on the southern edge of the Green, between Officers' Quarters 5/6 and the Guardhouse (12). Built of brick in 1808, the West Arsenal is the oldest building on the campus. Originally a two-story structure, a third store was added in 1863.

Existing Condition: The building has recently been renovated and is currently used for state police cadet training.

Evaluation: Contributing

Middle Arsenal (14)

Historic Condition: Built in 1830 under Lee's administration, the Middle Arsenal was the first three-story structure on Armory Square. The building, located adjacent to the West Arsenal, featured an elaborate main doorway with a columned Georgian portico facing the Green. It was most likely the Middle Arsenal where Longfellow was able to view the display of guns which inspired his poem "The Armory at Springfield."

Existing Condition: The building is in good condition and currently houses the college's child care and graphic arts department.

Evaluation: Contributing

Guardhouse (12)

Historic Condition: Constructed under Benton's administration in 1880, the brick building was located between the Middle and West Arsenals. By the early 1930s, the building was used as officers' quarters.

Existing Condition: The building is currently vacant.

Evaluation: Contributing

Long Storehouse (19)

Historic Condition: Ripley constructed a two-story building to store gunstocks and lumber in 1850. The building was designed in the cavalry caserne style, featuring a gabled slate roof and segmental arched openings with louvers on the first floor.

Existing Condition: The building is not currently in use and in need of major repairs.

Evaluation: Contributing

East Arsenal (15)

Historic Condition: Lee constructed a two-story brick storehouse at the southeastern corner of the Green in the 1820s. In the 1920s, the East Arsenal was joined to the Administration building.

Existing Condition: The building is part of what is now Garvey Hall, housing the college administrative offices.

Evaluation: Contributing

Garvey Hall (Administration Building 16)

Historic Condition: The building was constructed along the eastern edge of the Green by joining the North and South Shops, built in the 1824, with the middle office building on the east side of the Green in the early 1860s.

Existing Condition: The building continues to be used as administrative offices for the college.

Evaluation: Contributing

Officers' Quarters 7, 8, 9

Historic Condition: Three residential buildings for Army officers were constructed along the northern edge of the Green in the Greek Revival style.

Existing Condition: The exteriors of the buildings have remained unchanged and are currently used for the Facilities Department, Professional Development, and Campus Police, respectively.

Evaluation: Contributing

Master Armorer's Quarters (10)

Historic Condition: The building was originally constructed north of the Paymaster's Quarters on the western edge of the Green. In 1882, the building was moved to the area southwest of the Long Storehouse.

Existing Condition: The Master Armorer's Quarters is still located near the Long Storehouse and is not currently in use.

Evaluation: Contributing

Ballistics Building (28)

Historic Condition: In the 1920s, a brick building was constructed into the slope north of the Long Storehouse, with one floor facing south and two floors exposed on the north side.

Existing Condition: The building is currently used for the college's Fine Arts Department and gallery.

Evaluation: Contributing

Shooting Range (28a)

Historic Condition: In 1928, a below-grade shooting range was constructed west of the Ballistics building, including a 200-yard shooting range. Alterations were made in 1937 using Works Progress Administration labor.

Existing Condition: The building is currently not in use. The growth of vegetation over the structure, including mature trees, may potentially impact the structure's stability.

Evaluation: Contributing

Gatehouse (31)

Historic Condition: In the 1930s, Works Progress Administration laborers constructed a brick-clad gatehouse at the Federal Street entrance, replacing the original octagonal structure whose construction date is unknown.

Existing Condition: The gatehouse continues to be used for its original purpose.

Evaluation: Contributing

Hill Shops (27)

Historic Condition: The Hill Shops were located west of what is now Putnam Hall and are believed to have been constructed in 1809 with later additions in 1864, but historic documentation has not been found to determine the actual dates.

Existing Condition: The building currently houses the college library and a range of student services.

Evaluation: Contributing

Research and Engineering (32)

Historic Condition: The building was constructed in 1940 and located north of the Long Storehouse.

Existing Condition: The building currently houses the department of Energy Systems Technology.

Evaluation: Contributing

Storehouse (25)

Historic Condition: In the early 1930s, the Armory constructed the building to house plant vehicles northeast of the Green.

Existing Condition: The building is currently used for college's automotive technology program.

Evaluation: Contributing

Property and Manufacturing (20)

Historic Condition: The Armory constructed the Property and Manufacturing Building on the site of the former cistern and coal trestle northeast of the Green in the early 1930s.

Existing Condition: The building is currently being used by the college's Health Department.

Evaluation: Contributing

Maintenance (21)

Historic Condition: In 1864, an icehouse was constructed west of Officer's Quarters 9 and later used for the storage of maintenance equipment.

Existing Condition: The building is currently being used for the college's plant growth program.

Evaluation: Contributing

Greenhouse

Historic Condition: Not applicable

Existing Condition: The college constructed a greenhouse west of Building 21 as part of the horticulture academic program.

Evaluation: Non-contributing

Deliso Hall

Historic Condition: Not applicable

Existing Condition: Constructed in 1973, the building is situated on the former Officer's Quarters 4 and swimming pool on the northern edge of the Green. The multi-story brick clad building houses the English, foreign languages, and music departments.

Evaluation: Non-contributing

Putnam Hall

Historic Condition: Not applicable

Existing Condition: Springfield Technical Community College constructed Putnam Hall in 1974 and occupies the site of the former Officer's Quarters at the northeast corner of the Green. The building is now the largest on the campus and houses an array of science and technology departments.

Evaluation: Non-contributing

Scibelli Hall

Historic Condition: Not applicable

Existing Condition: Located at the northwest corner of the Green, Scibelli Hall is another multi-story, brick-clad building constructed in 1988.

Evaluation: Non-contributing

Bus shelters

Historic Condition: Not applicable

Existing Condition: Several glass and metal bus shelters are located south and north of the Green, for students waiting for the shuttle to transport them to off-site parking facilities.

Evaluation: Non-contributing

Gatehouse at Pearl Street entrance

Historic Condition: Undetermined

Existing Condition: A white wood sided structure with a door and windows is located near the entrance off of Pearl Street.

Evaluation: Undetermined

Drains on North Side of Interior Access Road at Northwest Corner of Site

Historic Condition: Undetermined

Existing Condition: The drains appear to be working.

Evaluation: Undetermined

Foundation Plantings at Garvey Hall

Historic Condition: Historic photographs reveal plantings maintained around Garvey Hall (Administration Building) in the mid-twentieth century. Specific plantings cannot be determined.

Existing Condition: It is not known if any existing plants match specific historic plants, but the overall character is consistent with the period of significance.

Evaluation: Contributing

Foundation Plantings around Officers' Quarters 7, 8, 9

Historic Condition: Foundation plantings were maintained at all of the officers' quarters throughout the history of the campus, although specific plants have not been determined.

Existing Condition: Foundation plantings around Officer's Quarters 7, 8, and 9 are consistent with the historic character of the site.

Evaluation: Contributing

Arboretum Trees

Historic Condition: Not applicable

Existing Condition: The college has installed a variety of labeled specimen trees on the campus, including the Green as well as north of the Green, as a teaching tool for horticulture students.

Evaluation: Non-contributing

Plantings Around Deliso, Putnam, and Scibelli Halls

Historic Condition: Not applicable

Existing Condition: A variety of shrubs and ornamental trees have been installed around the three college academic buildings.

Evaluation: Non-contributing

Plantings Adjacent to Ornamental Fence at Southeastern Corner of the Campus

Historic Condition: Not applicable

Existing Condition: Plants have been installed since the period of significance adjacent to the perimeter fence, obscuring views in and out of the campus

Evaluation: Non-contributing

Drain Inlet

Historic Condition: A metal drain inlet was installed at the southwest corner of the Green, most likely in the late nineteenth century as part of a larger drainage project for the campus.

Existing Condition: The drain appears to be in working condition.

Evaluation: Contributing

Steel Backstops

Historic Condition: steel backstops were installed along the north side of the structure as an outdoor shooting range, possibly as part of the construction of the underground shooting range in 1928. But the exact date of construction is not known.

Existing Condition: The concrete foundations of the backstops have spalled and deteriorated, and the metal backstops have rusted with continued exposure to the elements.

Evaluation: Contributing

Concrete Retaining Wall

Historic Condition: The retaining wall is the exposed northern portion of the shooting range structure built in 1928.

Existing Condition: The concrete retaining wall is in dire need of repair and stabilization.

Evaluation: Contributing

Metal Building Sign Numbers

Historic Condition: All Armory buildings displayed their assigned numbers on small metal signs, as was the practice of all military installations.

Existing Condition: The signs are extant on most buildings, with some showing signs of rusting.

Evaluation: Contributing

Concrete Splash blocks

Historic Condition: At an unknown date, stone splash blocks were installed along the base of Building 27.

Existing Condition: The splash blocks have been moved to the side or upended, negating their purpose to drain water from the building line. The splash blocks should be returned to their appropriate locations.

Evaluation: Contributing

Original Purchase Marker

Historic Condition: A stone with a metal plaque marked the southwest corner of the original land purchase. Specific information regarding the date of installation has not been found.

Existing Condition: The stone marker is extant.

Evaluation: Contributing

Drylaid Stone Retaining Wall

Historic Condition: Undetermined

Existing Condition: A drylaid stone retaining wall, approximately two and a half feet high, is located at the southeast corner of the Fine Arts Building (28).

Evaluation: Undetermined

Metal Arbor

Historic Condition: Undetermined

Existing Condition: A metal arbor structure is located along a walkway connecting the Property and Manufacturing building (20) and the Storehouse/Automotive building (25).

Evaluation: Undetermined

Light Posts

Historic Condition: Not applicable

Existing Condition: Several new contemporary light posts have been introduced on the site, including floodlights, around the Green and along the interior roads of the campus.

Evaluation: Non-contributing

Metal Guardrails

Historic Condition: Not applicable

Existing Condition: Low, corrugated metal guardrails are located along the southeastern edge of the campus adjacent to the ornamental iron fence, and along the interior roads of the campus.

Evaluation: Non-contributing

Recycled Plastic Benches

Historic Condition: Not applicable

Existing Condition: Throughout the college campus are benches made of recycled plastic slats and concrete bases.

Evaluation: Non-contributing

Concrete Backless Benches

Historic Condition: Not applicable

Existing Condition: Four concrete backless benches are located along the north side of Mary Killeen Bennett Way, adjacent to Building 27.

Evaluation: Non-contributing

Electric Sign

Historic Condition: Not applicable

Existing Condition: A rectangular electrical sign, roughly three feet high by four feet wide, is located at the southeast corner of Garvey Hall, set on an eighteen-inch high brick base, lined with shrubs.

Evaluation: Non-contributing

Wood Springfield Technical Community College Sign

Historic Condition: Not applicable

Existing Condition: A large wooden sign, painted white with red lettering and the school insignia, is located on the southern edge of the campus overlooking State Street.

Evaluation: Non-contributing

Playground

Historic Condition: Not applicable

Existing Condition: Located southeast of the Fine Arts Building (28) is an asphalt-paved playground with a play structure for young children, fenced with chain link.

Evaluation: Non-contributing

Metal Bollards

Historic Condition: Not applicable

Existing Condition: Painted metal bollards are located east of Putnam Hall.

Evaluation: Non-contributing

Bicycle Racks

Historic Condition: Not applicable

Existing Condition: Black, metal bicycle racks are located along the eastern edge of the campus, adjacent to the ornamental fence.

Evaluation: Non-contributing

Trash Receptacles and Compactors

Historic Condition: Not applicable

Existing Condition: Metal trash receptacles and solar-powered trash compactors are located throughout the college campus.

Evaluation: Non-contributing

Police Memorial

Historic Condition: Not applicable

Existing Condition: A state police memorial, consisting of a granite monument, paving, and flagpole, was recently installed south of the former West Arsenal, in conjunction with the renovation of the building for use as a state police training facility.

Evaluation: Non-contributing

SUMMARY TABLE OF LANDSCAPE FEATURES

The following table provides a summary of existing landscape features, along with a determination as to whether the feature contributes to the site's historic significance. The table is divided into the four main landscape character areas along with a property-wide category that encompasses features that relate to the overall site. The table indicates if the feature was extant during two key historical periods. The first significant period is 1794 when Congress formally established a federal Arsenal at Springfield under President George Washington. By that time, the Armory had already been a key ordnance manufacturing and storage facility during the American Revolutionary War. The Armory had also been the site of Shays' unsuccessful attack in 1787 of the Arsenal. The second key period is 1968 when the Armory was deactivated as a military installation, ending almost a hundred and ninety years of storage, development, and manufacturing of small arms. The table then identifies whether the feature is contributing and if so, the key historical themes are then identified, such as political, military, and landscape architecture. The next column lists the level of significance, including national, state, or local, providing a context within which to understand the particular theme. The final column furnishes additional information about the feature. Certain features are currently listed as "undetermined" due to a lack of information regarding its history.

NOTES

¹ Springfield Armory Cultural Landscape Inventory, National Park Service, 2004, Part 1, 22.

² Richard Colton, Historian, Springfield Armory NHS, <http://www.nps.gov/spar/historyculture/shays-rebellion.htm>.

³ Lee to Wadsworth, Dec. 24, 1816, Springfield Armory Correspondence File referenced by Whittlesley, 1920, 86.

⁴ John Albright, *Historic Structures Report, Springfield Armory National Historic Site*, (Denver, CO: U.S. Department of the Interior, National Park Service, 1978), 28.

⁵ *Ibid.*, 64.

⁶ Kathleen Fiero, "Archeological Survey of a Proposed Electrical Line Corridor, Springfield Armory National Historic Site, Springfield, Massachusetts," (U.S. Department of the Interior, NPS, Denver, CO, 1982), 37.

⁷ Cultural Landscape Inventory, Springfield Armory National Historic Site, (Olmsted Center for Landscape Preservation, Brookline, MA, 2004), Part 3b, 24.

⁸ Timothy Binzen, et. al., *Archeological Overview and Assessment of the Springfield Armory National Historic Site, Springfield, Massachusetts*, (University of Massachusetts, Amherst, 2004), v.

TABLE 3.1: SUMMARY OF LANDSCAPE FEATURES

Property-wide Landscape						
Feature	Extant 1794	Extant 1968	Contributing	Theme	Level	Notes
Natural Systems and Features						
Plain atop bluff overlooking Connecticut River	Yes	Yes	Yes	Military	National	The flat plain above the sandy bluff and location near the Connecticut River were determining factors in the selection of the site for the Arsenal and Armory.
Natural springs	Yes	Yes	Yes	Military	National	Much of the terracing and grading that occurred on the site was in response to the erosion caused by the existing natural springs on the site.
Spatial Organization						
Organization of buildings around central Green	Yes	Yes	Yes	Military	National	The Green provided the spatial framework around which buildings, circulation systems, and vegetation were organized.
Vegetation						
Tree canopy	Yes	Yes	Yes	Military	National	Beginning with Lee's administration, one of the defining landscape characteristics of Armory Square was the canopy of shade trees on the Green, lining walks and dotting open lawn areas.
Lawns	Yes	Yes	Yes	Military	National	Mowed lawns have been maintained on the campus since the nineteenth century.
Topography						
Regraded slopes	Yes	Yes	No	Military	National	The evolution of the site into graded and terraced slopes, mostly during the nineteenth century, contributes to the historic character of the landscape. Fill was added to the western side in the late 1960s to create ballfields, causing the loss of circulation features and vegetation.
Perimeter Landscape						
Feature	Extant 1794	Extant 1968	Contributing	Theme	Level	Notes
Circulation						
Outside perimeter sidewalk (Figures 3.21, 3.22)	No	Yes	Yes	Military	National	Originally, the entire perimeter was paved with brick, but now brick paving is only extant on the State and Federal street sides of the campus.
Pedestrian access off of State Street	No	Yes	Yes	Military Landscape Design	National	After the removal of the State Street entrance due to the regrading of the street, pedestrian access into the campus was maintained at the same location with the construction of steps leading from State Street.

Steps at State Street (Figure 3.23)	No	Yes	Yes	Military Landscape Design	National	In 1875, State Street was regraded, resulting in the loss of the main vehicular entrance. A set of steps was built into the slope at the same location for pedestrian access to the site.
Pedestrian access gate on Federal Street (Figure 3.24)	No	Undetermined	Undetermined	Undetermined	Undetermined	The pedestrian access gate is located near the corner of Federal and State streets.
Concrete pedestrian ramp at State Street (Figure 3.25)	No	No	No	n/a	n/a	A concrete ramp is under construction at State Street, leading from the street to the brick perimeter sidewalk.
Buildings and Structures						
Ornamental perimeter fence (LCS No. 022296)	No	Yes	Yes	Military Landscape Design	National	Construction of the ornamental fence began in the early 1840s, but was not completed until the early 1860s. Continued monitoring and stabilization efforts are needed to maintain the structural integrity of the fence.
Vegetation						
Perimeter street trees	No	Yes	Yes	Landscape Architecture	National	By the mid-nineteenth century, trees had been planted around the perimeter of Armory Square, reinforcing the site boundaries along the newly installed fence and creating a stately presence in the burgeoning neighborhood.
Western Slope Landscape						
Feature	Extant 1794	Extant 1968	Contributing	Theme	Level	Notes
Circulation						
Entrance drive from Byers and State gate (LCS No. 040456)	No	Yes	Yes	Military	National	After the regrading of State Street in 1875, the Armory constructed a new entrance and gate at the corner of Byers and State streets.
Circular driveways north and south of Commanding Officer's Quarters (LCS No. 040452)	No	Yes	Yes	Military	National	By the 1850s, a circular drive was added to the main entrance south of the Commanding Officer's Quarters. A smaller circular service drive was located north of the building.
Flagstone walkway at Commanding Officer's Quarters (LCS No. 040451) (Figure 3.26)	No	Yes	Yes	Military	National	Flagstone walkways were installed around the Commanding Officer's Quarters during the building's construction in the late 1840s, in the same style as the walkways around the central Green.
Pathway from Byers and State street entrance heading north (see Figure 3.10)	No	Yes	Yes	Military	National	In the late nineteenth century, a pathway was constructed leading from the Byers and State Street entrance to the main circular drive south of the Commanding Officer's Quarters. After the area was regraded in the late 1960s, only a segment of the pathway is extant.
Road trace at northwestern portion of site (Figure 3.27)	No	Yes	Yes	Military	National	A road was constructed along with the entrance gate at the Pearl/Byers street corner that led to the main circular drive south of the Commanding Officer's Quarters. Only a trace of the road can be seen today.

Concrete sidewalk along northern edge of drive from Byers and State street corner (LCS No. 040450)	No	Yes	Yes	Military	National	A sidewalk was constructed along with the vehicular drive from the Byers and State streets corner entrance in the late 1870s. Its original paving material is not known.
Accessible ramp (Figure 3.28)	No	No	No	n/a	n/a	A metal accessible ramp is located at the main entrance to the Main Arsenal.
Surface parking	No	No	No	n/a	n/a	A row of parking spaces was installed along the western edge of the Green for park visitors and personnel.
Buildings and Structures						
Main Arsenal (LCS No. 022287)	No	Yes	Yes	Military	National	Built in 1850, the Main Arsenal was one of the largest buildings on the campus with a clock tower on the east facade. A loading dock was added in 1941. The building is now a museum as well as archives, and offices for the NPS.
Commanding Officer's Quarters (LCS No. 022705)	No	Yes	Yes	Military	National	Completed in 1847, the building was designed in the Greek Revival style. The building is currently not in use.
Garage for Commanding Officer's Quarters (LCS No. 022288) (Figure 3.29)	No	Yes	Yes	Military	National	As a Works Progress Administration project in 1937, a two-car, brick-clad garage was constructed west of the Commanding Officer's Quarters. It is currently used for maintenance storage.
Gatehouse at Byers and State Street entrance (LCS No. 022289) (Figure 3.30)	No	Yes	Yes	Military	National	The gatehouse was constructed in 1908, replacing an octagonal structure. Alterations are believed to have occurred in 1937 as a Works Progress Administration project.
Vegetation						
Lilac hedge (see Figure 3.9)	No	Yes	Yes	Military Landscape Design	National	The lilac hedge was most likely installed in the 1870s along with ornamental gardens under Benton's administration.
Foundation plantings around Commanding Officer's Quarters (Figure 3.31)	No	Yes	Yes	Military Landscape Design	National	Some of the foundation plantings date to the historic period of significance, such as the yew shrubs and possibly the rhododendrons. The exact dates of installation are not known. The other plantings are in keeping with the historic character of the landscape.
Specimen trees on lawns (Figure 3.32)	No	Yes	Yes	Military Landscape Design	National	Trees, including elms, pin oaks, sugar maples, black walnuts, and hawthorns, date to the historic period.
Hayfield (Figure 3.33)	No	Yes	Yes	Military	National	The Hayfield is a meadow located at the northwest corner of the site in the mid-nineteenth century.
Lawn areas	No	Yes	Yes	Military Landscape Design	National	During the historic period of significance, open areas of the campus were maintained as mowed lawns.
Wooded slope	Yes	Yes	Yes	Military	National	The wooded slope at the northwestern portion of the site has been extant since the start of the period of significance. The slope is covered with mostly volunteer tree growth as well as vines.
Shrubs along entrance drive at Byers and State streets	No	Yes	Yes	Military	National	Historic images of the site from 1907 show the drive lined with shrubs spaced fairly far apart along the north edge of the drive.

Views and Vistas						
Views from western hillside (Figure 3.34)	Yes	Yes	Yes	Military	National	Views from the hilltop out to the surrounding landscape and cityscape are obscured by new buildings and the growth of trees.
View from Main Arsenal clock tower	No	Yes	Yes	Military	National	Public access to the tower is no longer allowed.
Small Scale Features						
Cast iron lamp posts (LCS No. 040454)	No	Yes	Yes	Military	National	Installed in the 1840s, cast iron lamp posts were created in a style reminiscent of cannon tubes. The lights were originally glass lanterns, but changed to globe fixtures in the early twentieth century.
Tennis court (LCS No. 022602) (Figure 3.35)	No	Yes	Yes	Military	National	In the 1930s, a tennis court was constructed west of the Main Arsenal. It may have been a Works Progress Administration project.
Asphalt pad (Figure 3.36)	No	Undetermined	Undetermined	Undetermined	Undetermined	A roughly 8'x8' square asphalt pad is located west of the Main Arsenal. It may possibly be used for supporting a cannon display during ceremonies and holidays.
Electrical shed, maintenance shed and generator (Figures 3.37, 3.38)	No	No	No	n/a	n/a	The electrical shed is located on the north edge of the service drive at the Commanding Officer's Quarters. The maintenance shed and electrical generator are located southeast of the service drive at the Commanding Officer's Quarters.
Mulch pile (Figure 3.39)	No	No	No	n/a	n/a	Located northeast of the Commanding Officer's Quarters is a large mulch pile.
Interpretive wayside exhibits	No	No	No	n/a	n/a	NPS interpretive waysides are located throughout the park.
Picnic tables (Figure 3.40)	No	No	No	n/a	n/a	Several picnic tables are located near the Commanding Officer's Quarters.
Directional signage	No	No	No	n/a	n/a	A number of regulatory signs are located along the western edge of the Green and the west side of the interior access road.
Information panels (Figure 3.41)	No	No	No	n/a	n/a	Metal and wood information panels are located near the main entrance to the Main Arsenal.
Trash receptacles	No	No	No	n/a	n/a	A black metal trash receptacle is located near the main entrance at the Main Arsenal.
Central Green Landscape						
Feature	Extant 1794	Extant 1968	Contributing	Theme	Level	Notes
Athletic field	No	No	No	n/a	n/a	Trees were removed from the southern portion of the Green to accommodate playfields for the college. The addition of associated structures, such as barriers, bleachers and goals, detract from the historic character of the Green.
Circulation						
Interior pedestrian pathways	No	Yes	Yes	Military Landscape Design	National	The intersecting north-south and east-west pathways on the Green date to the mid-1850s.

Perimeter walkways (Figure 3.42)	No	Yes	Yes	Military Landscape Design	National	Walkways were installed around the Green in the mid-nineteenth century with entrance walks to each adjacent building.
Mary Killeen Bennett Way	No	Yes	Yes	Military	National	The interior road, now known as Mary Killeen Bennett Way, has provided vehicular access through the site since the nineteenth century.
Surface parking	No	No	No	n/a	n/a	In order to accommodate parking, the college installed a row of spaces along the northern edge of the Green.
Vegetation						
Tree canopy	No	Yes	Yes	Military Landscape Design	National	Trees were first planted in the 1830s, and the layout and species evolved through the period of significance reflecting landscape styles of the times. Trees on the southern portion of the Green have been removed for athletic fields.
Lawn areas	Yes	Yes	Yes	Military Landscape Design	National	During the historic period of significance, open areas of the campus were maintained as mowed lawns.
Small Scale Features						
Iron lamp posts	No	Yes	Yes	Military Landscape Design	National	Installed in the 1840s, cast iron lamp posts were created in a style reminiscent of cannon tubes. The lights were originally glass lanterns, but changed to globe fixtures in the early twentieth century.
Stone blocks (Figure 3.43)	No	Yes	Yes	Military Landscape Design	National	Located in the center of the Green are two stone blocks, possibly old mounting stones.
Institutional Landscape						
Feature	Extant 1794	Extant 1968	Contributing	Theme	Level	Notes
Circulation						
Interior road system	No	Yes	Yes	Military	National	The vehicular circulation system remains intact from the historic period.
Stone steps at western entrance to Quarters 5/6	No	Yes	Yes	Military	National	Built along with the building in 1870.
Surface parking	No	No	No	n/a	n/a	Surface parking was added at the southeastern portion of the campus as well as the area between the Long Storehouse and the new academic buildings.
Concrete wheelstops	No	No	No	n/a	n/a	Concrete wheelstops are located at several college parking areas.
Concrete sidewalks between Scibelli, Putnam and Deliso Halls	No	No	No	n/a	n/a	The sidewalks are associated with the construction of the college academic buildings.
Buildings and Structures						
Officers' Quarters 5/6	No	Yes	Yes	Military	National	Originally built in 1870. Not currently in use.
West Arsenal (11)	No	Yes	Yes	Military	National	Built in 1808, a third story was added in 1863. The building is now used for state police cadet training.
Middle Arsenal (14)	No	Yes	Yes	Military	National	Current uses include child care and graphic arts department.
Guardhouse (12)	No	Yes	Yes	Military	National	Not currently in use.

Long Storehouse (19)	No	Yes	Yes	Military	National	Not currently in use.
East Arsenal (15)	No	Yes	Yes	Military	National	The East Arsenal was joined with Garvey Hall and used by the college administration, completely enclosing the southeastern corner of the Green.
Garvey Hall (Administration Building 16)	No	Yes	Yes	Military	National	The building houses most of the college administration offices.
Officer's Quarters 7,8,9	No	Yes	Yes	Military	National	Built in 1830s in the Greek Revival style, the buildings are now used as the Facilities Department, Professional Development, and Campus Police, respectively.
Master Armorer's Quarters (10) (LCS No. 022657)	No	Yes	Yes	Military	National	Not currently in use.
Ballistics Building (28)	No	Yes	Yes	Military	National	Fine Arts Department and gallery.
Shooting Range (28a)	No	Yes	Yes	Military	National	Below-grade shooting range, built 1928. Not currently in use. Trees growing on the slope above the structure pose a threat to its structural stability.
Gatehouse (31)	No	Yes	Yes	Military	National	The Works Progress Administration-constructed, brick-clad building replaced the original octagonal gatehouse structure. The building continues to function as a gatehouse.
Hill Shops (27)	No	Yes	Yes	Military	National	One-third of the building has been removed and two floors were added. The building houses the college library and a range of student services.
Research and Engineering (32)	No	Yes	Yes	Military	National	The building is used for the college's energy systems technology department.
Storehouse (25)	No	Yes	Yes	Military	National	The college's automotive technology department is housed in the building.
Property and Manufacturing (20)	No	Yes	Yes	Military	National	Built in the 1930s, two floors were later added. The Health Sciences Department is located in the building along with the college bookstore and food service.
Maintenance (21)	No	Yes	Yes	Military	National	Constructed in 1864, the building had been used as an ice house. Windows were added in the early 1940s. The building is now used for growing plants along with the adjacent greenhouse.
Greenhouse	No	No	No	n/a	n/a	The greenhouse was constructed by the college. The exact date of construction is not known.
Deliso Hall	No	No	No	n/a	n/a	The building was constructed in 1973 on the north edge of the Green.
Putnam Hall	No	No	No	n/a	n/a	Constructed in 1974, the building occupies the northeast corner of the Green.
Scibelli Hall	No	No	No	n/a	n/a	Scibelli Hall was constructed in 1988.
Bus shelters	No	No	No	n/a	n/a	Glass and metal frame bus shelters are located throughout the campus to transport student to off-site parking facilities.
Gatehouse at Pearl Street entrance	No	Undetermined	Undetermined	Undetermined	Undetermined	The date of construction is unknown.

Drains on north side of interior access road at the northwest area of the site	No	Undetermined	Undetermined	Undetermined	Undetermined	Dates of construction are not known.
Vegetation						
Shade Tree canopy	No	Yes	Yes	Military Landscape Design	National	The planting of shade trees began in the 1830s, with evolving styles, including species and layout, throughout the period of significance.
Foundation plantings at Garvey Hall	No	Yes	Yes	Military Landscape Design	National	Historic photos show foundation plantings around Garvey hall in the mid twentieth century.
Foundation plantings around former Officers' Quarters 7,8,9	No	Yes	Yes	Military Landscape Design	National	Foundation plantings were present at all three of the Officers' Quarters during the historic period of significance.
Arboretum trees	No	No	No	n/a	n/a	As part of its horticultural program, the college has been planting labeled specimen trees throughout the campus.
Plantings around Deliso, Putnam and Scibelli Halls	No	No	No	n/a	n/a	Plantings around the new academic buildings are contemporary.
Plantings adjacent to ornamental fence at southeastern corner of campus (Figure 3.44)	No	No	No	n/a	n/a	Historically, the perimeter area was kept clear of shrubs to maintain visibility in and out of the campus and prevent plantings from undermining the fence's structural stability.
Small Scale Features						
Iron lamp posts	No	Yes	Yes	Military	National	Installed in the 1840s, cast iron lamp posts were created in a style reminiscent of cannon tubes. The lights were originally glass lanterns, but changed to globe fixtures in the early twentieth century.
Drain inlet (Figure 3.45)	No	Yes	Yes	Military	National	A metal drain inlet is located at the southwest corner of the Green, possibly dating to the late nineteenth century.
Steel backstops (Figure 3.46)	No	Yes	Yes	Military	National	Built into the shooting range structure, on the north side, are two steel backstops, most likely used for outside shooting practice. Exact date of installation is unknown.
Concrete retaining wall (Figure 3.47)	No	Yes	Yes	Military	National	Located on the north slope of the campus, the retaining wall is part of the shooting range structure.
Metal building sign numbers (Figure 3.48)	No	Yes	Yes	Military	National	All of the former Armory buildings have a small, square metal sign mounted on the exterior, denoting building number. Exact date of installation is not known.
Mounting stone (Figure 3.49)	No	Yes	Yes	Military	National	A mounting stone is built into the steps at the western side of Officer's Quarters 5/6, used for mounting onto a horse.
Concrete splash blocks (Figure 3.50)	No	Yes	Yes	Military	National	Concrete splash blocks are located at the base of Buildings 20 and 27.
Original purchase marker (LCS No. 040455)	No	Yes	Yes	Military	National	A stone with a plaque marks the southwest corner of the original land purchase. Information regarding date of installation has not been found.

Drylaid stone retaining wall (Figure 3.51)	No	Undetermined	Undetermined	Undetermined	Undetermined	The retaining wall is located at the southeast corner of the Fine Arts Building (28). The date of construction is not known.
Metal arbor (Figure 3.52)	No	Undetermined	Undetermined	Undetermined	Undetermined	A metal arbor structure is located along a walkway between the Property and Manufacturing building (20) and the Storehouse (25)
Light posts (Figure 3.53)	No	No	No	n/a	n/a	Several new contemporary metal light posts with flood lights have been installed around the green and along the interior roads of the campus
Metal guardrail (Figure 3.54)	No	No	No	n/a	n/a	Low, corrugated metal guardrails are located along the southeastern edge of the campus adjacent to the ornamental fence, and along the interior road north of the Fine Arts building (28).
Benches	No	No	No	n/a	n/a	Throughout the site are concrete benches with recycled plastic slats
Concrete backless benches (Figure 3.55)	No	No	No	n/a	n/a	The benches are located along the north side of Mary Killeen Bennett Way leading to the Federal Street exit gate.
Electric sign	No	No	No	n/a	n/a	A rectangular electric sign, roughly three feet high, is located at the southeast corner of Garvey Hall, set on a brick base, and lined with shrubs.
Directional signage	No	No	No	n/a	n/a	Metal panel directional signs are located throughout the site.
Wood STCC sign	No	No	No	n/a	n/a	A large wooden sign is located on the southern edge of the campus facing State Street.
Playground	No	No	No	n/a	n/a	Located southeast of the Fine Arts Gallery is an asphalt-paved playground with play structures, enclosed by a chain link fence.
Metal bollards (Figure 3.56)	No	No	No	n/a	n/a	Metal bollards, painted yellow, are located east of Putnam Hall.
Bicycle racks	No	No	No	n/a	n/a	Metal bicycle racks are located along eastern edge of the campus, adjacent to the ornamental fence
Trash receptacles and compactors	No	No	No	n/a	n/a	Metal trash receptacles and solar-generated trash compactors are located throughout the campus.
Massachusetts Police Memorial	No	No	No	n/a	n/a	A memorial, consisting of a granite monument, paving and flagpoles, was recently installed south the former West Arsenal (11).



Figure 3.0. Plan illustrating the four landscape character areas, Perimeter Landscape, Western Slope, Central Green, and Institutional Landscape. OCLP, 2009.



Figure 3.1. View of the northwest corner of Army Square that was regraded for playfields in the late 1960s for the City of Springfield school system. OCLP, 2009.



Figure 3.2. View of greenhouse with gardens in 1932, northeast of the Commanding Officer's Quarters. Another greenhouse can be seen in the upper right hand side. SPAR Museum Archives, Box 006, Folder 01, NEG 782-SA.



Figure 3.3. View of the site of the former greenhouses and garden, now maintained as an open field with mulching pile further north. To the right, in the distance, are two pear trees that survive from the historic period. OCLP, 2009.



Figure 3.4. View of Officers' Quarters at the northwest corner of the Green in 1966. The Green is to the right. SPAR Museum Archives, Box 13, Folder 02, NEG 816-66.



Figure 3.5. Current view of northwest corner of the Green with STCC academic buildings and parking along the edge. OCLP, 2009.



Figure 3.6. View of Commanding Officer's Quarters and service drive with greenhouse to the right, early 1950s. SPAR Museum Archives, Box 001, Folder 07, NEG.



Figure 3.7. View of Commanding Officer's Quarters and service drive, August 2009. OCLP, 2009.



Figure 3.8. View of lilac hedge west of Commanding Officer's Quarters, with missing segments. OCLP, 2009. Extant 1968. Contributing.

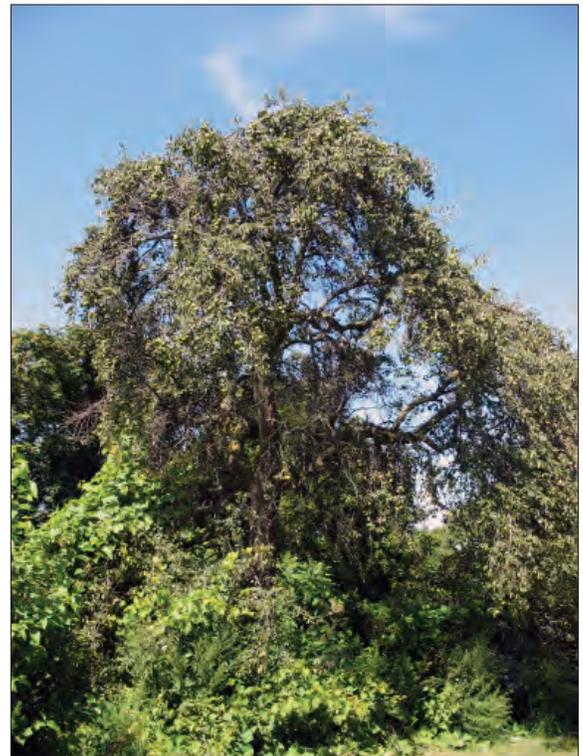


Figure 3.9. Views of pear trees, remnants of an orchard located by the former greenhouse site northeast of the Commanding Officer's Quarters. Extant 1968. Contributing.



Figure 3.10. View of pathway from Byers/State Street entrance, partially covered with fill from grading operations in the late 1960s by the City of Springfield for playfields. Extant 1968. Contributing.



Figure 3.11. View of entrance at the corner of Byers and State Streets and gatehouse to the left, taken in 1955. SPAR Museum Archives, Box 019, Folder 06, NEG 11245-SA.



Figure 3.12. View of closed entrance at the corner of Byers and State streets and gatehouse to the left. OCLP, 2008.



Figure 3.13. View of the Main Arsenal with main entrance, facing the Green, 1942. SPAR Museum Archives, Box 003, Folder 03, NEG 3293-SA.



Figure 3.14. View of the Main Arsenal with main entrance, facing the Green, 2009. A metal accessible ramp and wooden steps have been added to the entrance. OCLP, 2009.



Figure 3.15. View of the southern facade of Commanding Officer's Quarters with circular drive in the foreground, 1952. SPAR Museum Archives, Box 001, Folder 06, NEG 8925-SA.



Figure 3.16. View of the southern facade of Commanding Officer's Quarters with circular drive in the foreground, 2009. OCLP, 2009.



Figure 3.17. View of cast-iron lamp post by Officer's Quarters 4 in 1931. SPAR Museum Archives, Box 002, Folder 5.



Figure 3.18. View of cast-iron lamp post on the central Green, 2008. OCLP, 2008. Extant, 1968. Contributing.



Figure 3.19. View of Commanding Officer's Quarters with fountain in the foreground, circa late 1940s to early 1950s. SPAR Museum Archives, Box 001, Folder 8.



Figure 3.20. View of Commanding Officer's Quarters with location of former fountain in the foreground, 2009. OCLP, 2009.



Figure 3.21. View of brick perimeter sidewalk on Byers Street. OCLP, 2009. Extant 1968. Contributing.



Figure 3.22. View of perimeter sidewalk and street trees along State Street side of Armory Square, 2008. OCLP, 2008. Extant 1968. Contributing.



Figure 3.23. View of concrete steps from State Street to access gate at Armory Square. OCLP, 2009. Extant 1968. Contributing.



Figure 3.24. View of pedestrian access gate at Armory Square on State Street. OCLP, 2008. Extant 1968. Contributing.



Figure 3.25. View of concrete pedestrian access ramp under construction along State Street. OCLP, 2009. Non-extant 1968. Noncontributing.



Figure 3.26. View of flagstone walkways around the Commanding Officer's Quarters. OCLP, 2008. Extant 1968. Contributing.



Figure 3.27. View of road trace west of the Main Arsenal. OCLP, 2008. Extant 1968. Contributing.



Figure 3.28. View of accessible ramp at entrance to Main Arsenal. OCLP, 2009. Non-extant 1968. Noncontributing.



Figure 3.29. View of garage at Commanding Officer's Quarters, now used for storage of park maintenance equipment. OCLP, 2009. Extant 1968. Contributing.



Figure 3.30. View of gatehouse at Byers/State Street entrance. OCLP, 2009. Extant 1968. Contributing.



Figure 3.31. Foundation plantings along southern facade of Commanding Officer's Quarters. OCLP, 2009. Extant 1968. Contributing.



Figure 3.32. View of specimen trees dotting the lawn around the Commanding Officer's Quarters. OCLP, 2008. Extant 1968. Contributing.



Figure 3.33. View of former Hayfield at the northwest corner of Armory Square, 2009. OCLP, 2009. Extant 1968. Contributing.



Figure 3.34. View out from western hillside of Armory Square, obscured by growth of trees. OCLP, 2009. Extant 1968. Contributing.



Figure 3.35. View of tennis court adjacent to west facade of the Main Arsenal. OCLP, 2009. Extant 1968. Contributing.



Figure 3.36. View of asphalt pad set in the lawn west of the Main Arsenal. OCLP, 2009. Extant 1968. Undetermined.



Figure 3.37. View of electrical shed on north edge of service drive at Commanding Officer's Quarters. OCLP, 2008. Non-extant 1968. Noncontributing.



Figure 3.38. View of generator and maintenance shed south of service drive at Commanding Officer's Quarters. OCLP, 2008. Non-extant 1968. Noncontributing.



Figure 3.39. View of mulch pile northeast of Commanding Officer's Quarters. OCLP, 2008. Non-extant 1968. Noncontributing.



Figure 3.40. View of typical picnic table located at Western Slope. OCLP, 2009. Non-extant 1968. Noncontributing.



Figure 3.41. View of signage south of entrance to Main Arsenal. OCLP, 2009. Non-extant 1968. Noncontributing.



Figure 3.42. View of perimeter walkways around the Green. OCLP, 2008. Extant 1968. Contributing.



Figure 3.43. View of one of two stone blocks located in the center of the Green. OCLP, 2008. Extant 1968. Contributing.

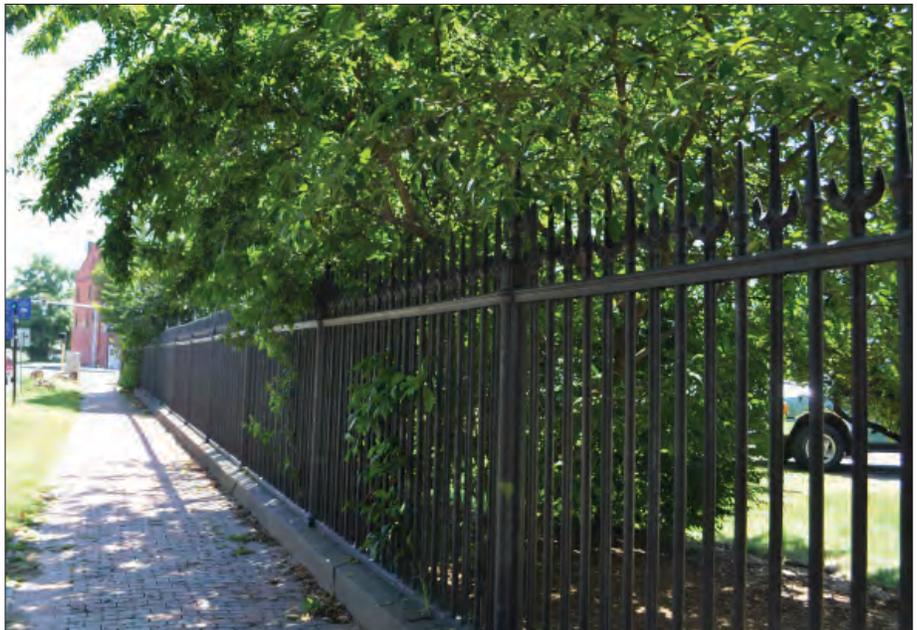


Figure 3.44. View of plantings adjacent to perimeter fence at the southeastern corner of the campus. OCLP, 2008. Non-extant 1968. Non-contributing.



Figure 3.45. Drain inlet located at the southwest corner of the Green. OCLP, 2008. Extant 1968. Contributing.



Figure 3.46. View of steel backstops located on the north side of the shooting range. OCLP, 2009. Extant 1968. Contributing.



Figure 3.47. View of concrete retaining wall, part of the underground shooting range, at north side of campus. OCLP, 2009. Extant 1968. Contributing.

Figure 3.48. Typical building number located on each Armory building on the campus. OCLP, 2009. Extant 1968. Contributing.



Figure 3.49. Mounting stone built into the steps on the west side of Officer's Quarters 5/6. OCLP, 2009. Extant 1968. Contributing.



Figure 3.50. Typical stone splashblock, located along east facade of Building 27. OCLP, 2009. Extant 1968. Contributing.





Figure 3.51. Drylaid stone retaining wall at the northeast corner of the Fine Arts Building. OCLP, 2009. Extant 1968. Undetermined.



Figure 3.52. View of metal arbor over walkway between Buildings 20 and 25. OCLP, 2009. Extant 1968. Undetermined.



Figure 3.53. View of light posts at the southwest corner of the Green, and a view of a typical light post located throughout the college campus. OCLP, 2009. Non-extant 1968. Noncontributing.



Figure 3.54. View of typical metal guardrail located along northern interior access road off of Pearl Street. A metal guardrail is also located at the southeastern edge of the college parking area, adjacent to the perimeter fence. OCLP, 2009. Non-extant 1968. Noncontributing.



Figure 3.55. View of concrete backless benches along the north side of Mary Killeen Bennett Way. OCLP, 2009. Non-extant 1968. Noncontributing.



Figure 3.56. View of metal bollards, filled with concrete and painted yellow, in the northeastern area of the college campus. OCLP, 2009. Non-extant 1968. Noncontributing.



TREATMENT

The landscape of Armory Square, with its historic campus setting, continues to evoke its role in the military history of the United States. Yet, the loss of several historic buildings, ornamental gardens, and trees, along with the changes to topography and circulation, has eroded some of the site's historic character. Today, Springfield Armory National Historic Site is operated by two separate entities, the National Park Service and the Commonwealth of Massachusetts. The National Park Service manages 20.32 acres and is charged with the mission to “preserve, protect and interpret the military, social, and industrial history of Springfield Armory, the first national armory.”¹ The remaining portion, comprising thirty-five acres, is operated by Springfield Technical Community College, a state institution of higher education serving western Massachusetts, with an enrollment of over 2,900 full-time and over 3,800 part-time students. The presence of two distinct institutional uses of the site presents a challenge as to how to provide a consistent approach to the management of the historic landscape. The treatment recommendations for the site address existing historic and non-historic landscape elements and propose reintroducing historic landscape patterns and site relationships in order to strengthen and unify the historic character of the landscape.

The National Park Service defines treatment as preservation measures intending to enhance the historic character of a cultural landscape while facilitating contemporary use.² This chapter recommends modifications to the cultural landscape to preserve and enhance the overall historic character within the context of park management goals, including maintenance, use, and interpretation. Treatment is also a strategy for the short- and long-term stewardship of a landscape, providing a framework to inform physical changes at the conceptual level. Treatment does not provide detailed drawings and specifications that can be used to contract construction work, nor does it prescribe actions necessary to maintain the landscape.³

The treatment recommendations in this chapter are based on the findings of the site history, existing conditions, and analysis and evaluation chapters of this report, as well as through discussion and collaboration with knowledgeable park and college staff. This includes input from a treatment workshop where general treatment issues, treatment philosophy, and tasks were discussed. These recommendations will also help inform the development of the upcoming General Management Plan that includes long-term management goals related to the preservation of the cultural landscape.

The chapter begins by presenting a framework that, based on applicable policies, standards, and regulations, establishes an overall treatment philosophy that describes the intended historic character of the landscape. Based on this

framework and a summary of general treatment issues, the body of this chapter provides narrative tasks to preserve and enhance the historic character of the landscape. The narrative recommendations are supported by graphics including a treatment plan (Drawing 8).

FRAMEWORK FOR TREATMENT

The purpose of this section is to articulate how the treatment of cultural landscapes is framed by the park's enabling legislation and mission, National Park Service policies, standards, and guidelines for the treatment of cultural resources, and the park's current planning efforts. The General Management Plan is the primary planning document in the National Park Service for determining a treatment approach. Based on the findings of this report, the treatment of the Armory Square landscape offers a reconsideration of the General Management Plan's objective of modifying the landscape to resemble conditions present in 1968 and proposes a broader perspective on the evolution of the site up to the mid-twentieth century.

ENABLING LEGISLATION

Armory Square was designated a National Historic Landmark in December 1960. With the establishment of the National Historic Preservation Act in 1966, the site was administratively listed in the National Register of Historic Places. At this point, properties included in the National Register were subject to review, but agencies were not yet required to survey their holdings for buildings that might be eligible for inclusion.⁴ Since Springfield Armory was decommissioned in 1968, portions of the site were taken over by the state for an educational institution, and by the City of Springfield for a museum and public school playfields. The newly established Armory Museum did not acquire enough funds to maintain its operations, prompting the President of the Museum Board to approach the National Park Service and State Representatives to discuss incorporating Armory Square into the National Park System.⁵ Subsequently, two bills were introduced to the House of Representatives and the Senate in 1971, both requiring an agreement between the National Park Service and the Commonwealth of Massachusetts to preserve the historic buildings and physical setting of lands not in federal ownership.⁶ In addition, Springfield Technical Community College was in the process of demolishing several historic Armory buildings for the construction of new academic buildings, further galvanizing the efforts of the National Park Service to establish which historic buildings and areas were to be preserved. As a result of ensuing hearings and reports conducted by the United States Senate and the House of Representatives, Congress authorized Armory Square as a National Historic Site in 1974, with full establishment in 1978, stating the following,

for the establishment as the Springfield Armory National Historic Site, Massachusetts...the oldest manufacturing arsenal in the United States: *Provided*, That the historic site shall not be established unless an agreement is executed which will assure the historical integrity of the site and until such lands are needed for the historic site are donated for this purpose.⁷

The legislation required that a Cooperative Agreement between the National Park Service and the Commonwealth of Massachusetts be effected to ensure the environmental and historical integrity of the lands and historic structures that would remain under state control. Springfield Technical Community College serves as the primary representative for the Commonwealth.⁸

COOPERATIVE AGREEMENT

The required Cooperative Agreement involved many negotiations and draft agreements concerning the amount of protection and preservation of historic buildings and the Green, new building restrictions, and each party's specific authority over the management of the site. The Agreement was finalized on March 27, 1978. The National Park Service then assumed management of 20.32 acres through a separate informal agreement with the Board of Directors of Springfield Armory Museum Inc., and the City of Springfield, encompassing the perimeter fence, the Main Arsenal, the Commanding Officer's Quarters, and the sloping land west of the Green.⁹ The remaining thirty-five acres, called the "Preservation Control Area," was managed by the Commonwealth of Massachusetts under the Massachusetts Board of Regional Community Colleges.¹⁰

The Cooperative Agreement prohibited Springfield Technical Community College from undertaking "construction, alteration, or repair" that would change the historical integrity of the Parade Ground [Green] or the structures within the Preservation Control Area apart from the exceptions already condoned, such as the previous construction of the new college buildings on the north edge of the Green. Any construction, alteration, or repair proposed by the college was to be subject to the concurrence of the National Park Service following review of its impact on the Green. Any new construction undertaken behind the first row of buildings fronting the Green on the northwest side would be deemed acceptable as long as it did not project above that range, as seen anywhere within the Green or its southwestern side. The college retained the Master Armorer's Quarters (Building 10) but was required to give the National Park Service 180 days notice before demolishing it in order to give the National Park Service the opportunity to relocate it."¹¹ The City of Springfield continued to own and maintain the tree belt and sidewalk around the perimeter fence. Under a separate agreement with the United States Army, the museum collection of firearms was also transferred to the National Park Service.

The Cooperative Agreement was amended in 1993 to provide three different levels of preservation control ranging from strict to less stringent standards, depending on which structure or space was being considered for modification.¹² Level one provided the strictest controls and included the Green; Officers' Quarters 5/6 (duplex); the West, Middle, and East Arsenals; the Guardhouse; the Administration Building; and Shops in the northeastern portion of the Armory Square grounds. Level two provided latitude to make some exterior modifications for adaptive reuse and included the Officers' Quarters 7, 8, and 9, the Long Storehouse, and the Master Armorer's Quarters. Level three comprised everything remaining and would employ the least restrictive standards to facilitate adaptive reuse.¹³ Level Three included Property and Manufacturing, Garage for Plant Vehicles, Ballistics Building, Research and Engineering, the gatehouse on Federal Street, and the Maintenance Building. In addition, the revised Agreement provided that primary review responsibility for any construction, alteration, or repair within the area of the Green and the facing buildings, was conferred to the Massachusetts Historical Commission to ensure the concurrence of the Massachusetts State Historic Preservation Office.¹⁴ The National Park Service was to provide technical and professional assistance to the college and serve as a liaison between the college and the Massachusetts Historical Commission.¹⁵

Beginning with the initial 1978 Cooperative Agreement, the National Park Service and the Commonwealth of Massachusetts have continued to reinforce their partnership and preservation management goals through a Memorandum of Understanding that is periodically updated and approved approximately every five years. The current Memorandum continues to recognize three levels of building preservation and the required concurrence by the Massachusetts State Historic Preservation Office as per the 1993 Agreement, but it does not address specific site-wide landscape issues such as the maintenance of the ornamental fence or perimeter vegetation.

MISSION AND POLICIES

As a unit of the national park system, treatment of Springfield Armory National Historic Site is guided by the mission of the National Park Service "...to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations."¹⁶ The application of this mission is defined in National Park Service Management Policies (2001), which calls for the National Park Service to "...provide for the long term preservation of, public access to, and appreciation of, the features, materials, and qualities contributing to the significance of cultural resources (Section 5.3.5)." These policies are based on the *Secretary of the Interior's Standards for the Treatment of Historic Properties* and are further articulated in 36

CFR Part 2: Resource Protection, Public Use and Recreation (Preservation of Natural, Cultural, and Archeological Resources). The application of these regulations to cultural landscapes are contained within National Park Service Management Policies (2006), Director's Order #28 (Cultural Resource Management), and National Park Service Resource Management Guidelines (National Park Service-28).

Of relevance to Armory Square, National Park Service-28 states that historic circulation features are rehabilitated to accommodate health and safety codes (such as the Americans with Disabilities Act), but in ways that minimize impacts on historic character. It also directs the management of specimen vegetation, such as trees and hedges, to ensure health and vigor. In addition, National Park Service-28 provides for earthworks, such as the below-grade ballistics building, to be maintained with a healthy, vigorous vegetation to minimize erosion and loss of integrity.¹⁷

RELATIONSHIP TO CURRENT PLANNING EFFORTS

In 1986, Springfield Armory National Historic Site adopted a General Management Plan/Development Concept Plan that establishes the framework for preserving park resources, integrating the park into the local environment, and accommodating public use.¹⁸ Regarding cultural landscape preservation, the overall objective as stated in the 1986 plan is to modify the site to look as the Armory did in 1968, the year it was deactivated. The 1986 General Management Plan designates the National Park Service portion of the site as a Historic Zone, requiring the restoration, preservation, and interpretation of cultural resources. Elsewhere, four sub-zones further refine preservation management goals (Figure 4.0). The Adaptive Use Landscape consists of the Main Arsenal building, the Commanding Officer's Quarters and adjacent garage, and the gate house at the Byers and State street entrance. Landscape treatment in this zone is limited to preservation maintenance as defined in the National Park Service "Cultural Resources Management Guidelines." The Landscape Modification Subzone comprises portions of the landscape that are to be restored to their general appearance in 1968, requiring regrading of non-historic playing fields and the planting of trees to reestablish former appearances. The Historic Access and Circulation Subzone includes all roads, parking lots and walkways, and are to be maintained to preserve their existing appearance. Surfacing materials were identified to be replaced as necessary. The Landscape Management Subzone includes all the remaining areas of the Armory Square landscape, and they are to be preserved in their 1986 condition.

In 2005, the National Park Service and Springfield Technical Community College participated in a planning workshop in order to articulate a vision for the entire site that includes opportunities for the two institutions to benefit from each other's programs and strengths while creating a more unified sense of place. The

National Park Service emphasized the need to recognize compatible opportunities and to reconcile conflicting uses of the property and expand the educational programming connected to the Armory Museum. Springfield Technical Community College sought to create a more cohesive site and to partner with the National Park Service to enhance their joint stewardship of the entire historic landscape.¹⁹ Both institutions were looking for ways to maximize opportunities to reach out to the broader community. One of the outcomes from the workshop was the articulation of a mutual desire for a uniform signage and wayfinding system in which both institutions are easily recognized. A signage study and design was completed in 2008, incorporating both institutional identities, but the final specifications have not yet been finalized. Another issue that was addressed during the 2005 workshop was the opening the Byers and State Street gate in order to attract more tourism and improve circulation. The entrance has been recently repaved in preparation for reopening.

The National Park Service is scheduled to undertake a new General Management Plan for Springfield Armory National Historic Site in the near future. The findings of this Cultural Landscape Report will help guide and inform the development of the new General Management Plan concerning the preservation and management of the Armory Square cultural landscape.

GENERAL TREATMENT ISSUES

The following are general treatment issues that inform the treatment tasks in the subsequent section of this chapter. These issues concern the loss of historic character in the landscape, preservation of its campus setting, and integration of both contemporary institutional uses of the site. The National Park Service has to balance preserving and enhancing character defining features of the cultural landscape while continuing to provide visitor access and interpretation, as well as space for ongoing maintenance and storage. Springfield Technical Community College, as the only technical community college in Massachusetts, is charged with providing educational opportunities that promote professional success in a competitive and ever-changing technical job market. This includes creating surroundings that reflect a progressive learning environment.

IMPAIRED CIRCULATION AND INADEQUATE ACCESSIBILITY

Circulation issues in the Armory Square landscape include circuitous vehicular circulation for park visitors, perimeter sidewalks in disrepair, and a lack of accessible building entrances. Currently, visitors are required to enter on Federal Street and drive or walk through the Springfield Technical Community College campus before reaching the Main Arsenal/Museum and grounds at the opposite end of the site. The one-way access road loops clockwise through the campus and exits north of the entrance on Federal Street. Along the perimeter of Armory

Square, large portions of the sidewalk have deteriorated, making it difficult to traverse, especially by those with physical disabilities.

There are currently several historic buildings on the site that are not universally accessible. The park is responsible for making its facilities accessible to all visitors, which can pose challenges in constructing compatible alterations to historic building entrances and pathways. For the park, the lack of accessibility prevents buildings from being programmed for any kind of public use or activity. The college also cannot utilize buildings for their programs if they are not universally accessible.

One of the primary concerns for Springfield Technical Community College is the lack of on-site parking, a perennial problem of accommodating a large commuting student population, as well as faculty and staff. Any effort to expand parking on the campus must avoid detracting from the historic setting the Green which is the oldest and most significant landscape feature of the site.

LOSS OF HISTORIC LANDSCAPE PATTERNS AND DECLINING HISTORIC VEGETATION

Since the late 1950s, many ornamental gardens and landscape features, such as the greenhouses, the rose arbor, the water fountain, planting beds, and hedges have been removed. Horticultural use of the Armory Square landscape dates to the early development of the federal Armory in the 1800s with agricultural plots west and north of the Green and ornamental gardens in the late nineteenth through the mid-twentieth century. These historic landscape patterns are no longer present on the site. In addition, volunteer vegetation has infiltrated the ornamental fence and other portions of the site, diminishing the historic character of the Armory Square landscape.

Existing landscape features that reflect the historic character of Armory Square include the canopy of trees, mowed lawns, the lilac hedge, and the wooded ravine. The park has undertaken a tree assessment and has completed several tree pruning and removal projects, but an expanded study would provide a more in-depth understanding of the entire landscape's features and potential future issues.

UNCLEAR AND INCONSISTENT WAYFINDING AND SIGNAGE SYSTEM

Wayfinding in Armory Square is unclear for visitors, especially with only one main vehicular entrance. Park visitors have to navigate from the east end of the site through the college campus to reach their destination at the western portion of the site. Students find it confusing to find their way around the campus because many Springfield Technical Community College buildings are very similar in appearance and are identified by small number plaques and temporary hanging departmental plaques mounted at building entrances. There are

currently an assortment of signs on the campus, including a large freestanding wooden billboard facing State Street, an electronic LED sign southeast of Garvey Hall, National Park Service standard wayside exhibits, historic plaques, and metal regulatory signs.

PRIMARY TREATMENT

The recommended treatment philosophy for the Armory Square landscape is derived from the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. The Standards outline four approaches to treatment: Preservation (maintenance of the landscape as it currently exists); Restoration (returning the landscape to a prior historic condition); Reconstruction (rebuilding of a lost landscape); and Rehabilitation (enhancing the historic character of the landscape while making compatible modifications to address contemporary uses and needs). These four treatments share a common philosophical approach that emphasizes retention of historic character and repair rather than replacement of historic materials.

To implement the treatment philosophy, the recommended primary treatment for Springfield Armory National Historic Site is rehabilitation. Rehabilitation is defined as "...the act or process of making possible a compatible use of a property through repair, alterations and additions while preserving those portions or features which convey its historical, cultural or architectural values."²⁰ This treatment concept is defined within the ten standards for rehabilitation.

1. A 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. The historic character of a cultural landscape is retained and preserved. The replacement or removal of intact or repairable historic materials or alteration of features, spaces, and spatial relationships that characterize a landscape is avoided.
3. 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 and features is physically and visually compatible, identifiable upon close inspection, and properly documented for future research.
4. Changes to a cultural landscape that have acquired historical significance in their own right are retained and preserved.

5. Historic materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a cultural landscape are preserved.
6. 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.
7. Chemical or physical treatments that cause damage to historic materials are not used.
8. Archeological and structural resources are protected and preserved in place. If such resources must be disturbed, mitigation measures are undertaken including recovery, curation and documentation.
9. Additions, alterations, or related new 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.
10. Additions and adjacent or related new construction are undertaken in such a manner that if removed in the future, the essential form and integrity of the cultural landscape would be unimpaired.²¹

While the 1986 General Management Plan mentions restoration, preservation, and interpretation of cultural resources, the further articulation of adaptive reuse subzones necessitates a rehabilitation approach when considering the treatment of the property as a whole. Effective treatment choices need to address contemporary park functions and visitor services, such as interpretation, pedestrian circulation, universal accessibility, parking, and maintenance. Rehabilitation will allow the park to meet its objectives of both preserving and enhancing the property for public visitation. Rehabilitation is also the most appropriate treatment for the Armory Square grounds considering that two-thirds of the site is actively used as an educational facility.

TREATMENT DATE

Defining a consistent treatment reference date provides an objective benchmark for managing historic landscape character. Helpful choices regarding treatment dates most typically correspond to a well documented time period when a historic landscape reached the height of its development and which effectively conveys a property's historical significance and interpretive themes.

As mentioned previously, the 1986 General Management Plan for Springfield Armory National Historic Site specifically establishes that the site should reflect its appearance in 1968, the date when Springfield Armory ceased operating. However, the findings of this Cultural Landscape Report suggest the possibility of reassessing this prior objective. The process of closing the Armory had been initiated well before 1968 and included a reduction in budgets and staff for the care and upkeep of the property. By 1968, important changes to the landscape had already been implemented, including the discontinuation of many of the labor intensive and costly horticultural and gardening practices surrounding the commanding officer's quarters. In order to represent the character of the site at the height of the Armory's development and historic significance, it would be beneficial to reflect the period when the Armory was in full operation, which coincides with circa 1950. By this time, being at the mid-point of the twentieth century, Armory Square had fully established its boundaries that exist today, enclosed by the ornamental iron fence. Formal gardens and limited agriculture continued to flourish in the northwestern portion of the site. Trees continued to be planted and maintained throughout the site and along the perimeter, creating an expansive shade canopy. Open, mowed lawns were well maintained as well. At this time, arms manufacturing thrived, peaking during World War II with the production of the M1 Garand, followed by the production of the M14 in the 1950s.

Implications for managing the landscape to reflect its circa 1950 mid-twentieth century character would include, for example, the reintroduction of ornamental gardens and garden structures, and the reestablishment of major circulation routes. While the circa 1950 treatment date emphasizes the character of the landscape at that time, this choice does not preclude interpretation of either earlier or later history. Features lost prior to 1950 can still be interpreted in the landscape through surviving traces or their physical sites.

TREATMENT PHILOSOPHY

In accordance with applicable legislation, policy, and park planning, the following statement of broad landscape preservation philosophy is offered for consideration to park managers as they develop appropriate treatment choices regarding the Armory Square landscape in the upcoming General Management Plan.

Springfield's Armory Square will be treated as whole, a single cultural landscape managed jointly by multiple parties. Treatment will reinforce longstanding qualities of order, uniformity, and consistency that prevailed in the Armory Square landscape until the midpoint of the twentieth century, prior to the onset of historical developments leading to its closure in 1968. Treatment will preserve and reinforce

historic landscape patterns and features while accommodating contemporary use by a diverse group of users. The Armory Square landscape will provide opportunities to interpret the rich history of the entire National Historic Landmark, while supporting the contemporary use of the square as an educational campus, and supporting the role of Armory Square in revitalizing the City of Springfield.

TREATMENT TASKS

This section provides tasks for implementing the rehabilitation of Armory Square according to the treatment framework previously outlined. These tasks are organized according to the four landscape character areas outlined in the analysis and evaluation chapter: the Perimeter Landscape, including the historic iron ornamental fence and gates that enclose the entire site, and the surrounding brick and concrete sidewalks and trees outside the fence which is now under the City's ownership; the Central Green, comprising the main lawn, trees, and pathways that have served as the historic core of Armory Square, and the building facades along the eastern and southern edges of the Green; the Western Slope, consisting of the Main Arsenal and adjacent parking along the western edge of the Green, the terraced area west of the Main Arsenal, and the Commanding Officer's Quarters and the ravine immediately northeast of it; the Institutional Landscape, consisting of the property owned by the Commonwealth of Massachusetts and operated as the Springfield Technical Community College campus. This area spans north, east and south of the Central Green, as well as the main entrance on Federal Street, and includes the three large academic buildings along the north edge of the Green. Preservation is the default treatment where historic landscape features have no specific tasks identified. The tasks are numbered along with an abbreviation of the landscape area name, such as PL for Perimeter Landscape, WS for Western Slope, CG for Central Green, and IL for Institutional Landscape. Each task is followed by a list of the affected landscape features as inventoried in chapter 3 (Analysis and Evaluation) and related tasks, if any. Treatment tasks are keyed to a treatment plan (Drawing 8). A summary list of tasks is at the end of this chapter.

PERIMETER LANDSCAPE TASKS

PL1. Stabilize and restore perimeter fence.

Develop and implement a plan for restoring the perimeter ornamental fence, including assessing existing conditions, prioritizing repairs and ensuring that appropriate materials are used in keeping with the historic character of the fence and are in keeping with the Secretary of the Interior's Standards for the Treatment of Historic Properties (Figures 4.1, 4.2). Treatment issues include

repairing the piers that have cracked with the passage of time, and addressing those portions that have been replaced with tinted concrete. In addition, stabilization of the fence should also incorporate measures to mitigate water-run-off that occurs during high rain fall along the perimeter of the site. Completed in 1853, the edges of Armory Square, bounded by State, Byers, Pearl, and Federal streets, were formally defined by the ornamental fence which was constructed to secure the manufacturing facility. Scrap iron was utilized for the construction of the nine-foot high pickets and intricately patterned gates. Locally quarried sandstone was used for the piers.

Involved Features: Perimeter ornamental fence (contributing)

Related Tasks: PL2, PL3

PL2. Reestablish historic landscape character at the perimeter.

Remove shrubs and any site furniture, such as bicycle racks, ten feet from inside the fence and reestablish rows of shade trees inside and outside perimeter with grass (Figure 4.3). During the period of historic significance, the Perimeter Landscape was maintained as a visually open feature, allowing views in and out of the campus (Figure 4.4). Regularly spaced trees lined the walks and along the interior perimeter as well. There are currently several areas where trees and other vegetation have grown too close to the fence, obscuring views and posing a potential hazard to the stability of the structure (Figure 4.5). Historic site plans show trees planted at ten to fifteen feet from the fence line. At a minimum, new trees should be planted ten feet from the ornamental fence. Regular pruning will help prevent branches from falling and damaging the fence, and root barriers can be installed to mitigate root infiltration of the below-grade fence structure and sidewalk. The choice of tree species can be derived from historic planting plans from the late 1950s which show the interior perimeter planted with mostly sugar maples (*Acer saccharum*) and elms (*Ulmus americanus*). The plans do not specify the species of trees outside the perimeter fence, but extant mature oak trees (*Quercus sp.*) suggest that they were more widely used along the street. Removing overgrowth that has penetrated the fence, and planting trees, will further define the historic edge of the campus and reestablish the historic perimeter landscape.

There are also sections of the Perimeter Landscape that contain contemporary site elements which are unavoidable, such as the metal guardrail along the edge of the parking area at the southeastern corner of the campus (Figure 4.6). The guardrail could be replaced with a structure that is more compatible with the surrounding landscape and set back from the perimeter fence.

Involved Features: Perimeter shade trees and grass (contributing),
Perimeter ornamental fence (contributing)

Related Tasks: PL1, PL3

PL3. Rehabilitate historic perimeter walks and curbing.

The National Park Service and Springfield Technical Community College should work with the City of Springfield to restore the sidewalks, including the reinstallation of brick paving along the Pearl Street sidewalk. The sidewalks surrounding Armory Square have been in place since the early 1850s. The sidewalks were originally constructed with brick paving edged with red sandstone, similar to the perimeter fence stone material. After the Armory was decommissioned in 1968, the City of Springfield acquired ownership of the sidewalks and replaced the brick paving along the Pearl Street sidewalk with concrete at some point in the late 1960s or 1970s. The sidewalk along Byers Street has deteriorated and patched with inappropriate materials. The sandstone curbing is destabilized along portions of the sidewalk (Figures 4.7, 4.8). With prolonged neglect, the ornamental perimeter fence will also become vulnerable to further structural destabilization. Maintaining the sidewalks in good condition also helps to demonstrate that both institutions recognize that they are a part of a larger urban community and care about the physical condition of the neighborhood.

Involved Features: Brick sidewalks and granite and sandstone curbing (contributing)

Related Tasks: PL1, PL2

PL4. Enhance visual compatibility of State Street access ramp.

An accessible pedestrian ramp was installed along State Street in 2009, connecting the street with the elevated sidewalk (Figure 4.9). The ramp is on the most publicly visible edge of the campus, and the concrete surface detracts from the historic character of the landscape. To reduce its visual impact, the concrete should be tinted a color that is compatible with the brick Armory buildings or the adjacent sandstone fence piers (Figure 4.10).

Involved Features: Concrete access ramp (non-contributing)

Related Tasks: PL3

PL5. Finalize design and install unified signage program.

Implement new signage system along the site perimeter. In 2008, both the park and Springfield Technical Community College hired consultants to assess the existing campus signage and create a new system that is aesthetically cohesive, clear, and addresses the needs of both institutions while preserving the character of the cultural landscape.²² Bunting Graphics and Sasaki Associates conducted a signage survey and developed a list of key issues that the new signage should address, including pedestrian and vehicular wayfinding, institutional identity, facility/building identification, and regulatory signage. The resulting designs utilize each institution's color and insignias to distinguish each identity while

integrating both styles. For the perimeter fence, the consultants devised two sign types, including horizontally oriented signs mounted on the iron pickets, and smaller signs mounted on the stone piers (Figure 4.11). The larger signs can be mounted on each of the four street sides, and the smaller signs are appropriate for corner pedestrian entrances.

Involved Features: Signage (non-contributing)

Related Tasks: WS11, IL5

WESTERN SLOPE LANDSCAPE TASKS

WS1. Rehabilitate ornamental gardens in cooperation with Springfield Technical Community College.

The National Park Service and Springfield Technical Community College should develop a cooperative program whereby college students install and maintain ornamental gardens on the sites of former Armory Square gardens north of the Commanding Officer's Quarters (Figure 4.12). In order to efficiently manage the program, an administrative position would need to be established as the main point of contact for both institutions. The purpose is not to install specific historic plants, but to recapture a historic land use. Planting materials could directly relate to college course objectives, such as testing new plant varieties or sustainable landscape maintenance practices. In addition, the existing greenhouse on the Springfield Technical Community College campus could be relocated to the former greenhouse site northeast of the Commanding Officer's Quarters. By reestablishing these landscape patterns, visitors will be able to more fully appreciate the scale of the historic military campus grounds.

Involved Features: Landscape around Commanding Officer's Quarters (non-contributing)

Related Tasks: WS7

WS2. Restore fountain at Commanding Officer's Quarters

Reinstall the water fountain in the same location as the historic fountain. Historic photographs show a fountain, most likely of concrete, with a spout in the center and edged with plants, located southeast of the Commanding Officer's Quarters. A bench is located adjacent to the fountain with a yew shrub behind it (Figure 4.13). Reinstalling the water fountain will further re-emphasize the residential quality of the area around the Commanding Officer's Quarters.

Involved Features: Landscape around Commanding Officer's Quarters (contributing)

WS3. Restore rose arbor.

Reinstall arbor structure and climbing roses in the circular service drive north of the Commanding Officer's Quarters. A rose arbor, consisting of a cruciform wooden structure, was installed in the middle of the service drive in the late nineteenth century with roses planted at the base of the posts (Figures 4.14, 4.15). Historic aerial photographs show that the arbor was aligned north-south and east west (Figure 4.16). Documentation has not been found regarding the construction details of the arbor, or the varieties of roses installed. But archeological investigations can yield information such as the location and spacing of the arbor posts. The intent is not to replicate the exact arbor, but to design a structure of a similar scale and function. Construction details and materials can accommodate park maintenance requirements and use. Information about appropriate rose varieties may be derived from Forest Park, located southeast of Armory Square, where a rose garden, installed in 1890, continues to be maintained and includes climbing roses on arbor structures.

Involved Features: Area within service drive (non-contributing)

Related Tasks: WS7

WS4. Redesign and install accessible entrance to Main Arsenal/Museum.

Design and construct a new accessible ramp, using more compatible materials and working with the building's architectural style (Figures 4.17, 4.18). Completed in 1850, the Main Arsenal/Museum is the chief attraction in the park, housing the extensive gun collection, as well as park offices. At the base of the tower is the main entrance, comprised of a set of wooden steps and a metal accessible ramp. The type of materials and construction used to construct the steps and ramp create a disjointed architectural appearance that detracts from the historic character of the building and its setting. Using similar stone materials and color, the design of the new ramp will not adversely impact the overall appearance of the building entrance.

Involved Features: Accessible ramp (non-contributing), Main Arsenal/Museum (contributing)

WS5. Design and install accessible entrance to Commanding Officer's Quarters.

Completed in 1847, the Greek Revival-style building was sited at the top of the bluff with views out to the west. The exterior featured cast-iron porches, roughly four feet above grade. The building is currently an underutilized resource in the park, but it has the potential to provide interpretive exhibits as well as host public events. In order to meet current codes, a ramp needs to be constructed to provide accessibility without compromising the historic character of the building. With some minor modifications, an accessible ramp could be incorporated into the

porch structure at the main entrance at the south façade of the quarters (Figures 4.19, 4.20).

Involved Features: Commanding Officer's Quarters (contributing)

WS6. Preserve existing historic vegetation.

The park should work with the college horticultural program to develop a strategy to care for existing trees and future tree replacement. The Western Slope contains a number of plants that date to the historic period of significance, including American elm trees (*Ulmus Americana*), red oaks (*Quercus rubra*), and sugar maple trees (*Acer saccharum*), a lilac hedge at the Commanding Officer's Quarters, and two pear trees at the northeastern edge of the park site (Figures 4.21, 4.22). These trees are character defining features of the historic Armory Square landscape and illustrate the design intent to create a canopy of shade trees within an open mowed lawn. The lilac hedge helped to define and enclose the area that made up the Commanding Officer's Quarters. The pear trees evoke the former use of the space for practical cultivation in the nineteenth and early twentieth century.

Involved Features: Trees and lilac hedge (contributing)

Related Tasks: WS1, WS8, WS9, WS10

WS7. Relocate utility structures and mulch pile.

Consolidate and relocate the electrical shed, maintenance shed, and mulch pile in a less visually prominent location, such as further northeast of the Commanding Officer's Quarters. These non-historic elements are currently located adjacent to the service drive north of the Commanding Officer's Quarters and negatively impact the cultural landscape (Figure 4.23). By removing these elements, the historic residential landscape character around the Commanding Officer's Quarters will be enhanced (Figure 4.24).

Involved Features: Electrical and maintenance sheds (non-contributing), storage area (non-contributing)

Related Tasks: WS1

WS8. Regrade western and northwestern portions of Armory Square.

After Springfield Armory was deactivated, portions of the Armory Square property were acquired by the City of Springfield for use as recreational fields by the public school system. As a result, the topography was extensively modified to accommodate three ballfields at the western and northwestern areas of the site. In addition to altering the grade, the new ballfields obliterated the vehicular and pedestrian access from the Pearl and Byers Street gate entrance and partially destroyed the pedestrian path from the Byers and State Street gate. The

modifications to the topography aggravated longstanding drainage issues, rendering the use of the playfields difficult. Regrading the landscape to approximate historic contours would help to recapture an important characteristic that influenced so much of the site's spatial organization and overall layout (Figures 4.25, 4.26).

Involved Features: Former ballfields (non-contributing)

Related Tasks: WS9, WS10

WS9. Reestablish former pedestrian circulation pattern.

Along with returning the topography to its more historic appearance, former circulation patterns can be restored in keeping with the period of significance, including the pedestrian pathway from the Byers and State Street entrance to the circular drive south of the Commanding Officer's Quarters. The historic circulation system of the Western Slope landscape would then be reestablished and offer visitors more opportunities to explore the site (Figure 4.27).

Involved Features: former ballfields (non-contributing)

Related Tasks: WS8

WS10. Reestablish former vehicular circulation pattern.

As part of the effort to reestablish the historic character of the Western Slope, reestablish the vehicular drive from the corner of Pearl and Byers Street to the circular drive south of the Commanding Officer's Quarters (see Figure 4.28). A road trace remains today as a result from regrading the area to accommodate ballfields. After the topography has been restored, the road can then be reintroduced and put into use.

Involved Features: Former ballfields (non-contributing)

Related Tasks: WS8

WS11. Refine signage design and program and install signage system.

As part of the signage program outlined previously for the Perimeter Landscape, signs were developed for building facades and for wayfinding. For building identification, signs that are attached to the facades should be at an appropriate scale which prevents the sign from overwhelming the building and detracting from the overall historic character of the landscape (Figure 4.28). For wayfinding purposes, the scale is also important as well as the placement within the landscape, and the number of signs installed (Figure 4.29). Too many signs will overwhelm and detract from the historic character of the site. Ideally, some views within the landscape should remain unobstructed by contemporary elements to allow visitors the opportunity to more fully experience the historic landscape.

Involved Features: Main Arsenal/Museum, Commanding Officer's Quarters (contributing), Pathways (contributing)

Related Tasks: PL5, IL5

CENTRAL GREEN LANDSCAPE TASKS

CG1. Restore east-west pathway on the Green.

Restore the east-west pathway to its more formal appearance by establishing a consistent width and reinforcing the edges to retain the paving material (Figures 4.30, 4.31). In addition, the path should be further emphasized by a row of trees on either side with regular spacing. The east-west pathway is currently undefined with no clear edges, and loose gravel paving migrates into the adjacent lawn. The Central Green is one of the most significant historic landscape features within Armory Square. As the Armory complex evolved, the Green provided the spatial framework and visual focus around which buildings were organized. The existing layout and circulation system has been in place since the construction of the Main Arsenal in 1850 with the east-west pathway serving as a formal axis between the Main Arsenal and the Administration Building (now Garvey Hall).

Involved Features: Pedestrian pathway (contributing)

Related Tasks: CG2

CG2. Reestablish vegetation in the center of the Green.

Replant the two semi-circles of yew shrubs and spruce trees, with spacing that allows for full growth without overcrowding. The yews and several blue spruce trees have recently been removed due to their decline, but the beech tree is extant. Historic images show a planting of yews (*Taxus baccata*) and spruce trees (*Picea pungens*) dating to at least the early 1960s (Figure 4.32). Located at the pathway intersection on the Green, the half colonnade of trees consisted of a semi-circle of mature yews enclosed by a row of blue spruce trees (Figure 4.33). In addition, as the national holidays celebrated on the Green evolved into major public events, a stone barbecue was constructed in the middle of the Green adjacent to a ceremonial cannon in the early part of the twentieth century. The barbecue was most likely demolished in the early 1960s. A beech tree (*Fagus sylvatica*) was planted in the center of the Green at an unknown date.

Involved Features: Circular planting of trees (contributing)

Related Tasks: CG1

CG3. Rehabilitate tree canopy on the Central Green.

During the treatment workshop attended by the park and Springfield Technical Community College, the college addressed the mature tree canopy that exists on the northwest quadrant of the Central Green. The dense covering of trees is creating too much shade and preventing the establishment of a consistent cover of turf for recreation and other events. Removing trees in the middle of the quadrant will open up the space to sunlight and restore the grass cover (Figure 4.34). The northeast and southeast quadrants are not used for active recreation and can therefore be planted with trees interspersed to provide some shade. Recommended tree species include sugar maple (*Acer saccharum*), red oak (*Quercus rubra*), or new varieties of disease resistant elm trees such as Valley Forge and Princeton.

Involved Features: Tree canopy on the Green (contributing)

Related Tasks: CG1

CG4. Utilize a consistent choice of luminaire for historic cannon tube lamp posts.

Maintaining a consistent use of one luminaire style will help to unify the landscape and reinforce the perception of the site as a single entity (Figures 4.35, 4.36). Under Superintendent Ripley, gaslight lamp posts were installed throughout the campus in the 1840s, consisting of tapered cast iron shafts modeled after cannon tubes. The original luminaires were urn-shaped glass lanterns and were replaced with globes possibly in the early 1900s when the gas lighting was converted to electricity (Figure 4.37). The use of a single lamp post style visually reinforced the uniform military character of the site. Today, the lamp posts are located along the north-south pathway on the Green as well as around the Main Arsenal/Museum and the Commanding Officer's Quarters. Several existing lamp posts on the Green have different luminaire fixtures, which detract from the historic character of the landscape.

Involved Features: Cannon tube lamp post (contributing)

INSTITUTIONAL LANDSCAPE TASKS**IL1. Consider expanding green space around proposed pedestrian area in college master plan.**

In a planning and management workshop attended by the leadership of Springfield Technical Community College and the National Park Service in 2005, the college identified the need to establish a new campus center, consisting of a green space around which campus functions would be consolidated.²³ A master plan prepared for the college by Goody Clancy recommends the consolidation of campus functions northwest of the Green around a new college campus green.²⁴

Explore expanding green space and creating a campus center between the Master Armorer's Quarters (Building 10) and Building 7 (Figure 4.38). The Armory maintained agricultural plots in areas around officers' quarters north of the Green, starting in the late nineteenth century and continuing through World War II when employees were allotted spaces to grow victory gardens. The area is currently paved and used for parking by college staff. Along with the new campus green, the college could program Buildings 7, 8, and 10 for student extracurricular activities, a café, and other spaces for informal interaction. This new social core of the college campus could create a stronger identity for the school while recapturing some of the historic landscape patterns of Armory Square.

Involved Features: Parking areas (non-contributing), Buildings 7, 10 (contributing)

IL2. Remove mature trees located on top of the subterranean ballistics building.

Large, mature trees located on top of the ballistics building north of the Long Storehouse should be removed to prevent damage to the structure (Figure 4.39). Constructed in 1920, the building has most likely been unused since the closing of the Armory manufacturing facility. National Park Service-28 provides standards for the management of earthworks, including that earthworks be maintained with healthy, vigorous vegetation cover to minimize erosion and loss of integrity.²⁵ The existing smaller trees, shrubs, and groundcover should be sufficient to maintain and stabilize the slope, but periodic removal of mature trees is essential.

Involved Features: Ballistics building (contributing)

IL3. Consolidate future college parking away from historic core of the site.

As the need for additional parking becomes more acute, it is imperative that any new strategy should focus on expanding parking away from the historic core of the campus, including the Central Green and adjacent areas. As the oldest portion of the site, maintaining the character of the Green is vital to the preservation of the National Historic Landmark. As a commuter college, parking for students is essential and has been a longstanding issue as the college continues to grow and expand, adding staff, and increasing enrollment. The college currently provides 773 on-campus spaces in eleven lots and 1,500 additional spaces in six off-campus lots. Three of the off-site lots are not owned by the college, rendering the future use of the lots uncertain. Some off-site parking lots are located within a ten minute walk, but their locations are in areas perceived as unsafe. A shuttle system has also been implemented.

Involved Features: Parking areas (non-contributing)

Related Tasks: IL1

IL4. Preserve and restore existing historic small scale features.

Within the Institutional Landscape area, there are several small scale features that contribute to the historic quality of the site. For instance, hand-carved stone splash blocks that help to drain water away from the building edge are located behind Building 27 (Figure 4.40). They are currently unused and lay on their sides, giving an impression of neglect. Reinstalling the splash blocks will improve the building's appearance as people walk by on the adjacent walkway that overlooks the space.

Steel back stops are located north of Building 28a and appear to date to the construction of the ballistics building in the early 1920s (Figure 4.41). As landscape features, the backstops speak to the history and purpose of the site, providing a visual clue to the activities that took place during the historic period of significance. In addition, metal numbered signs located on building facades throughout the campus date to the historic period and should be preserved. Maintaining these features helps to tell the story of the historic landscape.

Involved Features: Stone splash blocks and metal back stops
(contributing)

IL5. Finalize and install new campus-wide signage program.

As outlined previously, the proposed signage design developed by Bunting Graphics and Sasaki Associates should be refined and installed. Building signage should be sized to an appropriate scale to the facility façade (Figure 4.42). The scale of the wayfinding series should also be adjusted in keeping with the overall scale and character of the campus landscape (see Figure 4.29).

Involved Features: Campus buildings (contributing except for Scibelli, Deliso, and Putnam), pathways (contributing)

Related Tasks: PL5, WS11

NOTES

¹ [http://inside.National Park Service.gov/index.cfm?handler=parkdetails&alphacode=spar](http://inside.NationalParkService.gov/index.cfm?handler=parkdetails&alphacode=spar)

² Robert R. Page, Cathy A. Gilbert, and Susan A. Dolan. *A Guide to Cultural Landscape Reports: Contents, Process, and Techniques* (Washington D.C.: National Park Service, 1998), 81.

³ Cultural landscape maintenance is typically addressed in a separate document known as a Preservation Maintenance Plan.

⁴ Ned Kaufman, "Springfield Armory National Historic Site, An Administrative History, 1964-2000," National Park Service, Northeast Region, Resource Stewardship and Science, 2007, 27.

⁵ *Ibid.*, 38.

- ⁶ Identical text in H.R. 108, a Bill to authorize the establishment of the Springfield Armory National Historic Site, Massachusetts, and for other purposes, January 22, 1971 (92nd Congress) and S. 2977, A Bill to authorize the establishment of the Springfield Armory National Historic Site, Massachusetts, for other purposes, December 9, 1971 (92nd Congress), cited in Kaufman, 2007, 40-41.
- ⁷ Public Law 93-486, 93rd Congress, H. R. 13157, October 26, 1974.
- ⁸ United States Department of the Interior, Record of Decision, Finding of No Significant Impact, General Management Plan, Springfield Armory National Historic Site, June 6, 1986, cited in Springfield Armory General Management Plan/Development Concept Plan, 1986, 34.
- ⁹ Ibid.
- ¹⁰ Ibid., 84.
- ¹¹ Ibid., 84-85.
- ¹² Ibid, 108.
- ¹³ Memorandum of Understanding between the United States of America and the Commonwealth of Massachusetts, MU-1600-8-9001, 1998, 2.
- ¹⁴ Kaufman, 2007, 108-109.
- ¹⁵ Ibid.
- ¹⁶ The National Park Service Organic Act, 1916.
- ¹⁷ “NPS-28 Cultural Resource Management Guideline,” Chapter 7: Management of Cultural Landscapes.
- ¹⁸ National Park Service, Springfield Armory General Management Plan/Development Concept Plan, Springfield Armory, 1986, 3.
- ¹⁹ Heritage Partners/Community Partners Consultants, Inc. with Halvorson Design Partnership, “A Collaborative Vision for the Future,” November, 2005, 11.
- ²⁰ Charles A. Birnbaum and Christine Capella Peters, eds. *The Secretary of the Interior’s Standards for the Treatment of Historic Properties and Guidelines for the Treatment of Cultural Landscapes* (Washington D.C.: U.S. Department of the Interior. 1996), 48.
- ²¹ “NPS-28 Cultural Resource Management Guideline,” Chapter 7: Management of Cultural Landscapes, http://www.NationalParkService.gov/history/history/online_books/NationalParkService28/28chap7.htm
- ²² Bunting Graphics and Sasaki Associates, “Signage Survey and Assessment,” June, 2008, 7.
- ²³ Goody Clancy, JJR, and Rickes Associates, “Springfield Community College Master Plan,” May 2007, 15.
- ²⁴ Ibid., 15.
- ²⁵ “NPS-28 Cultural Resource Management Guideline,” Chapter 7: Management of Cultural Landscapes, http://www.NationalParkService.gov/history/history/online_books/NationalParkService28/28chap7.htm

TREATMENT SUMMARY AND PRIORITIES

The following table summarizes the recommended tasks for the rehabilitation of Springfield Armory National Historic Site.

TABLE 4.1: TREATMENT SUMMARY AND PRIORITIES

Number	Task Name	Priority 1/High 2/Medium 3/Low	Related Task
Perimeter landscape			
PL1	Stabilize and restore perimeter fence	1	PL2, PL3
PL2	Reestablish historic landscape character at perimeter	1	PL1, PL3
PL3	Rehabilitate historic perimeter walks and curbing	1	PL1, PL2
PL4	Enhance visual compatibility of State Street access ramp	2	PL3
PL5	Finalize design and install unified signage program	1	WS11, IL5
Western Slope Landscape			
WS1	Rehabilitate ornamental gardens in cooperation with Springfield Technical Community College	2	WS7
WS2	Restore fountain at Commanding Officer's Quarters	3	
WS3	Restore rose arbor	1	WS7
WS4	Redesign and install accessible entrance to Main Arsenal/Museum	1	
WS5	Design and install accessible entrance to Commanding Officer's Quarters	1	
WS6	Preserve existing historic vegetation	1	WS8, WS9, WS10
WS7	Relocate utility structures and mulch pile	2	WS1
WS8	Regrade western and northwestern portions of Armory Square	2	WS9, WS10
WS9	Reestablish former pedestrian circulation pattern	2	WS8
WS10	Reestablish former vehicular circulation pattern	2	WS8
WS11	Refine signage design and install signage system	1	PL5, IL5

Central Green Landscape			
CG1	Restore east-west pathway on the Green	1	CG2
CG2	Reestablish vegetation in the center of the Green	1	CG1
CG3	Rehabilitate tree canopy on the Central Green	3	CG1
CG4	Utilize a consistent choice of luminaire for historic cannon tube lamp posts	1	
Institutional Landscape			
IL1	Consider expanding green space around proposed pedestrian area in college master plan	2	
IL2	Remove mature trees located on top of subterranean ballistics building	1	
IL3	Consolidate future college parking away from historic core of the site	2	IL1
IL4	Preserve and restore existing historic small scale features	1	
IL5	Finalize design and install new campus-wide signage program	1	PL5, WS11

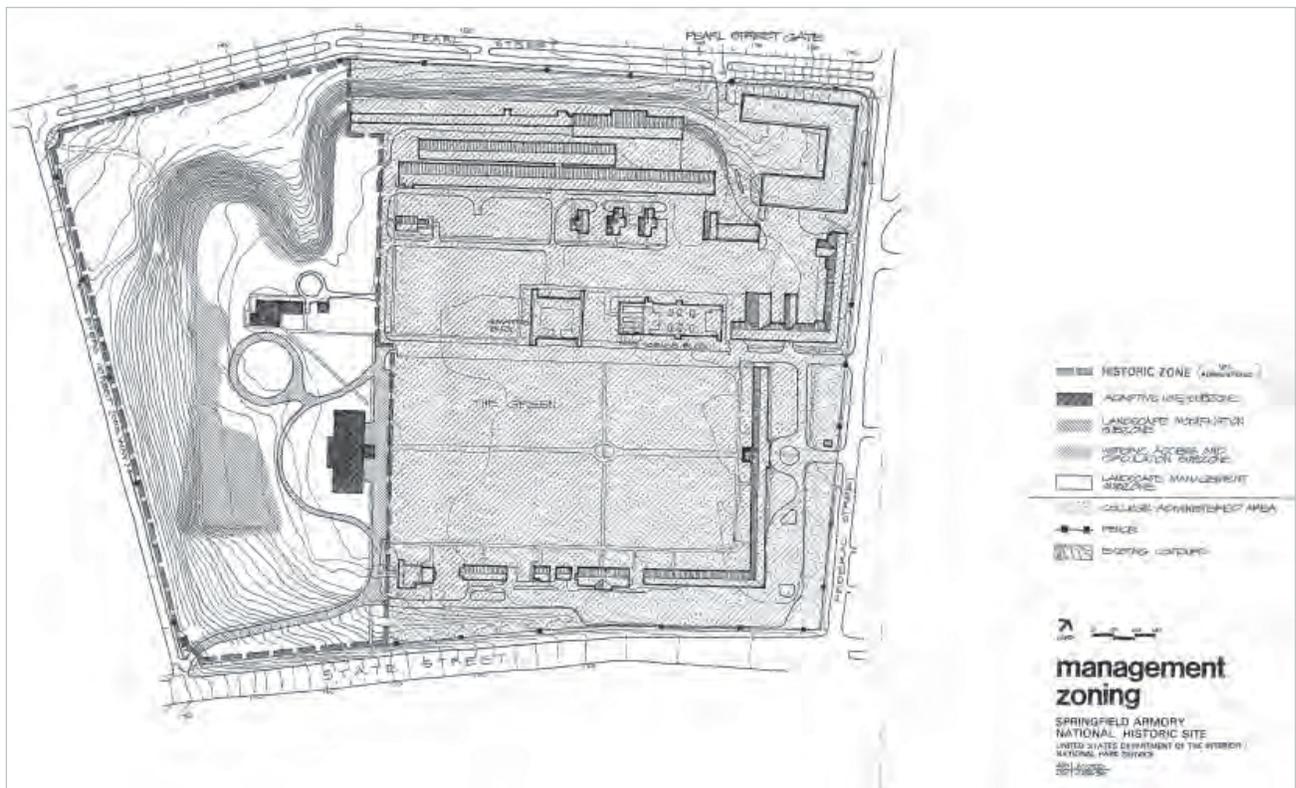


Figure 4.0. Map from the 1986 General Management Plan, illustrating the Historic Zone and its four subzones, for the Armory Square landscape. "Springfield Armory General Management Plan/Development Concept Plan," 1986, 7.



Figure 4.1. View of gate at Pearl and Byers Street corner with deteriorated pier to the right. OCLP, 2009.



Figure 4.2. View of damaged pier on Federal Street. As a Perimeter Landscape treatment task, identify deteriorated portions of the perimeter fence and prepare a plan for prioritizing repairs. OCLP, 2009.

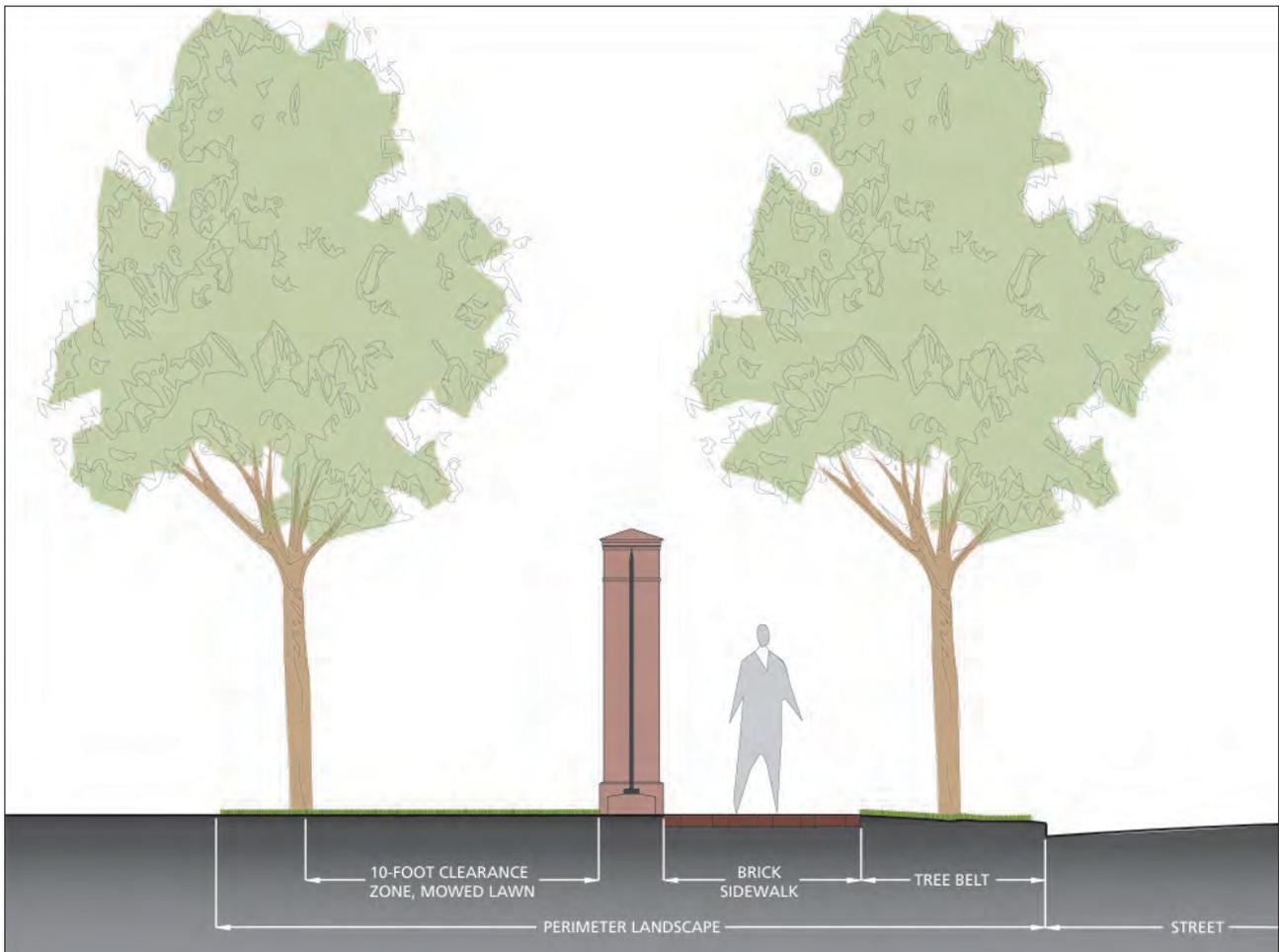


Figure 4.3. Elevation showing proposed landscape treatment for the Perimeter Landscape, including a clear zone planted with grass ten feet from inside the fence and tree belt along the sidewalk. OCLP, 2009.

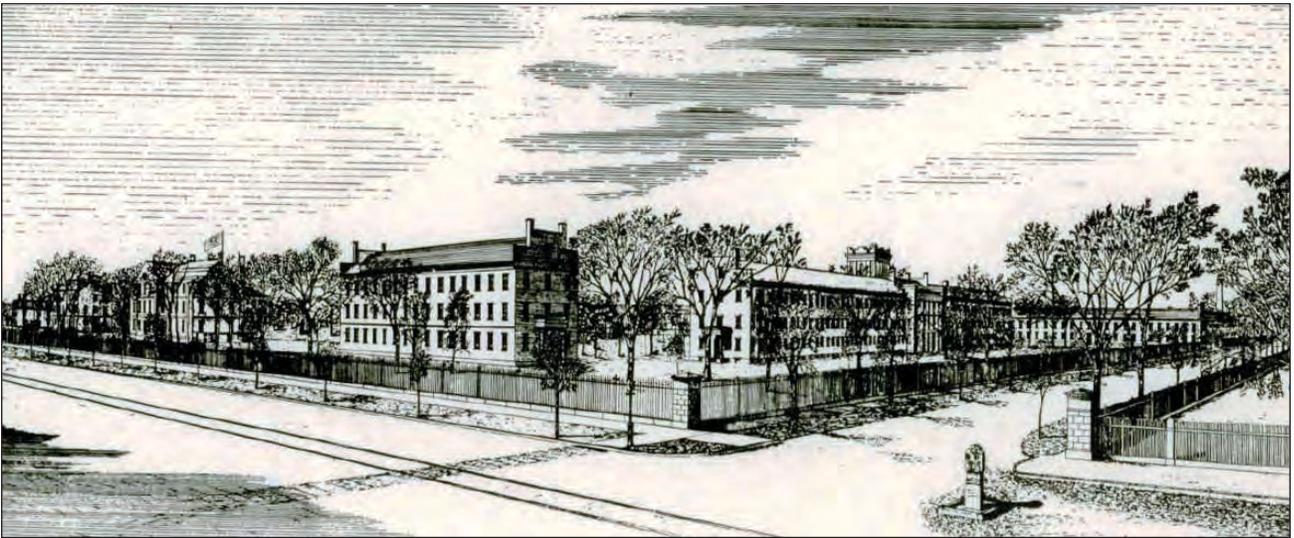


Figure 4.4. Image from 1878 illustrating the southeast corner of Armory Square. Note the line of trees along the Federal and State Street edges and the open character of the perimeter fence, allowing views in and out of the campus. SPAR Museum Archives, Box 011, Folder 05, NEG 785-66.



Figure 4.5. View of the perimeter fence along Pearl Street. Note the growth of volunteer trees and shrubs through the fence. OCLP, 2009.

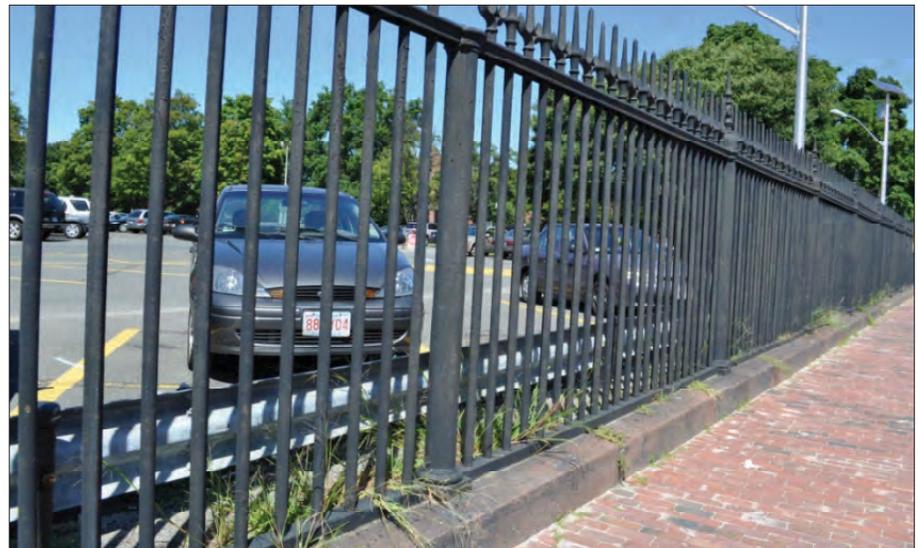


Figure 4.6. View of a metal guardrail as seen through the perimeter ornamental fence on State Street. OCLP, 2009.



Figure 4.7. View of deteriorated brick sidewalk and sandstone curbing along Byers Street. OCLP, 2009.



Figure 4.8. View of sidewalk in disrepair along Byers Street. The deterioration extends to the base of the perimeter fence. Note the pedestrian in the distance walking in the street to avoid the difficult sidewalk. OCLP, 2009.



Figure 4.9. View of recently constructed concrete accessible ramp on State Street. The scale and overall massing overwhelms the street edge of Armory Square. OCLP, 2009.



Figure 4.10. Photosimulation illustrating the modification of the new accessible ramp on State Street with tinted concrete to be more compatible with adjacent campus architecture. OCLP, 2009.

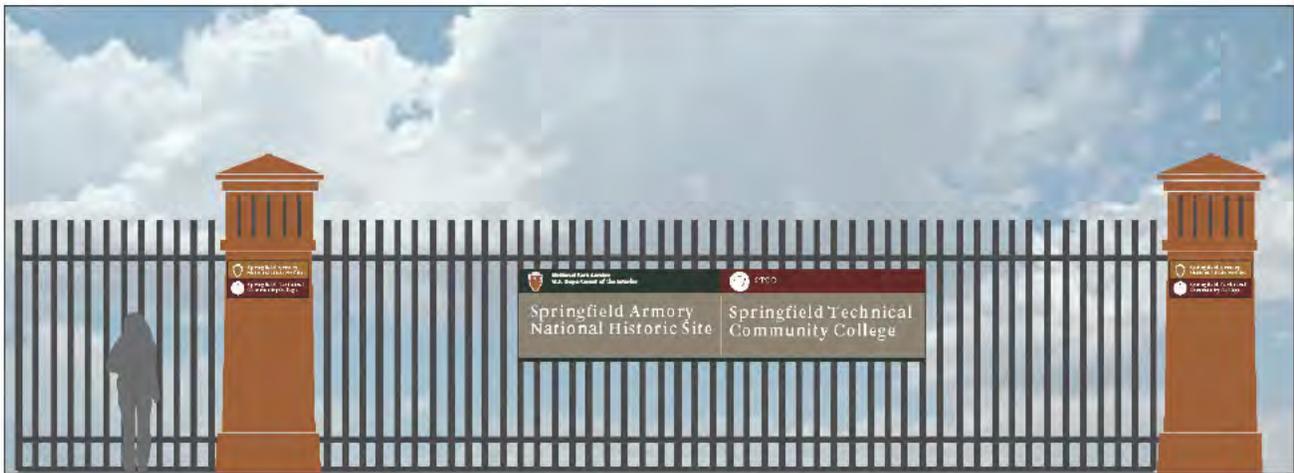


Figure 4.11. Elevation of proposed signage along perimeter of Armory Square, including two types with different sizes and mounting options. Bunting Graphics and Sasaki Associates, 2008.

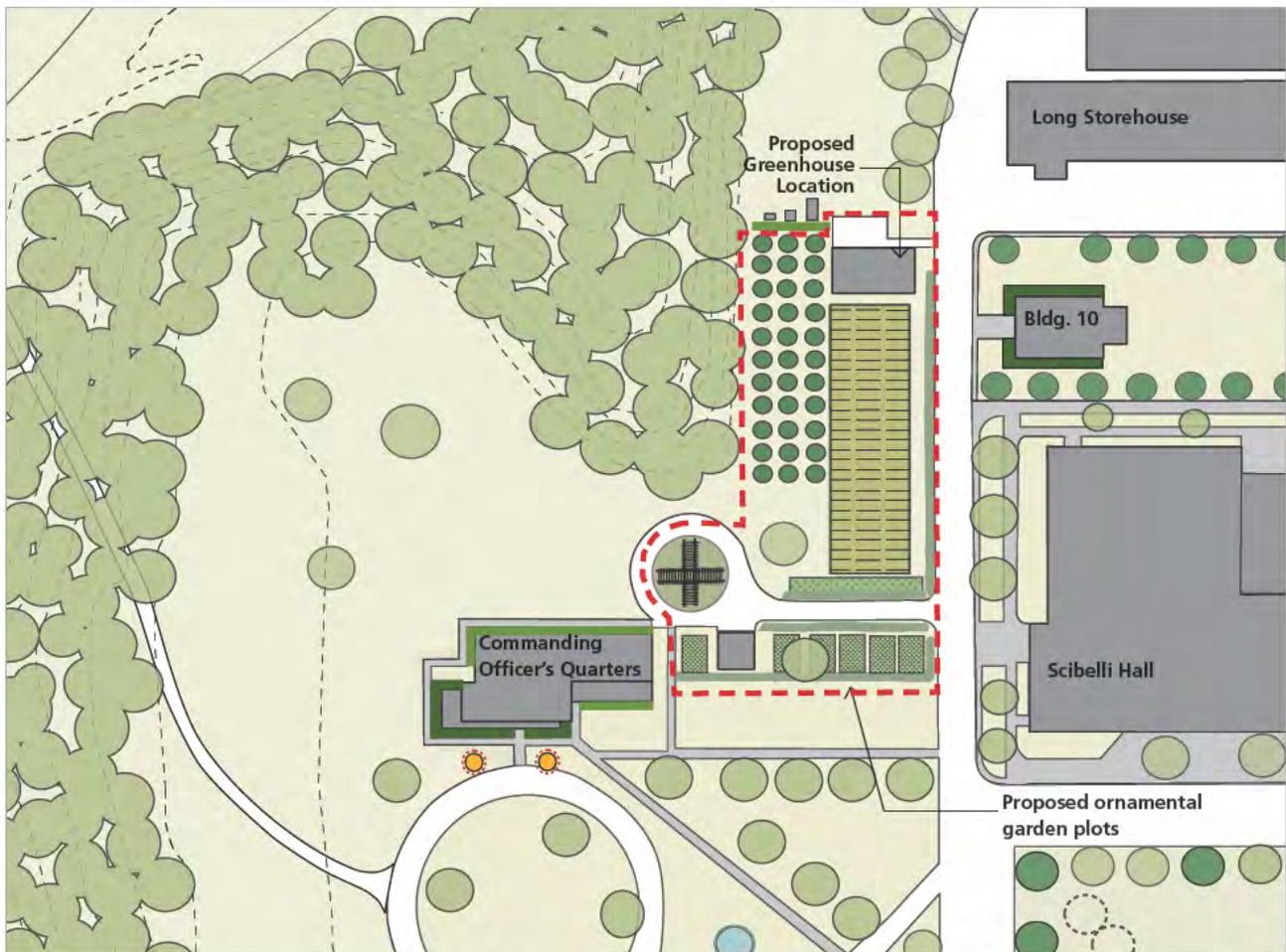


Figure 4.12. Plan showing proposed reestablishment of historic garden spaces (bounded by red dashed line) around the Commanding Officer's Quarters, through a cooperative agreement with STCC. OCLP, 2009.



Figure 4.13. View of fountain at Commanding Officer's Quarters in the early 1950s. A bench to the right is obscured by the yew shrub. The fountain was removed by the end of the 1950s. SPAR Museum Archives, Box 001, Folder 08, NEG.



Figure 4.14. View of the rose arbor in the service drive north of the Commanding Officer's Quarters, circa 1900. SPAR Museum Archives, Box 001, Folder 10.



Figure 4.15. View of rose arbor in the service drive north of the Commanding Officer's Quarters, circa 1950, with ornamental garden in the foreground. SPAR Museum Archives, Box 001, Folder 10.

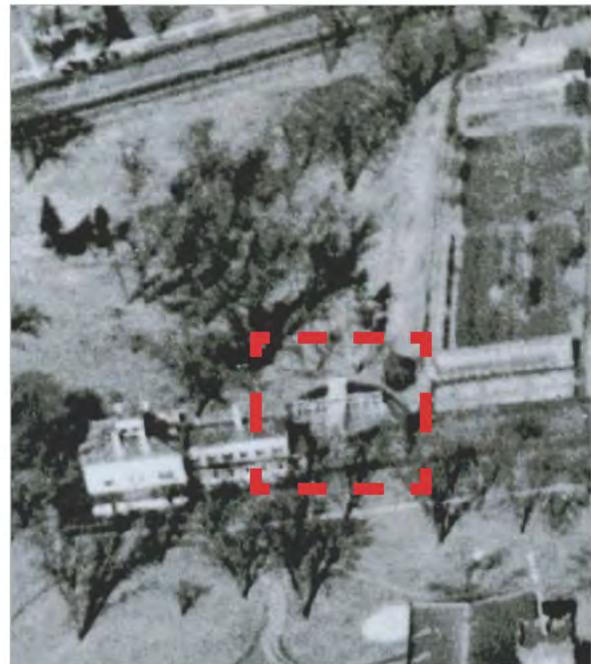


Figure 4.16. Aerial views from 1932 showing the rose arbor north of the Commanding Officer's Quarters, outlined in red. The photographs reveal the general orientation of the arbor structure. SPAR Museum Archives, Box 011, Folder 02.



Figure 4.17. View of existing metal accessible ramp at the entrance to the Main Arsenal/Museum. OCLP, 2009.

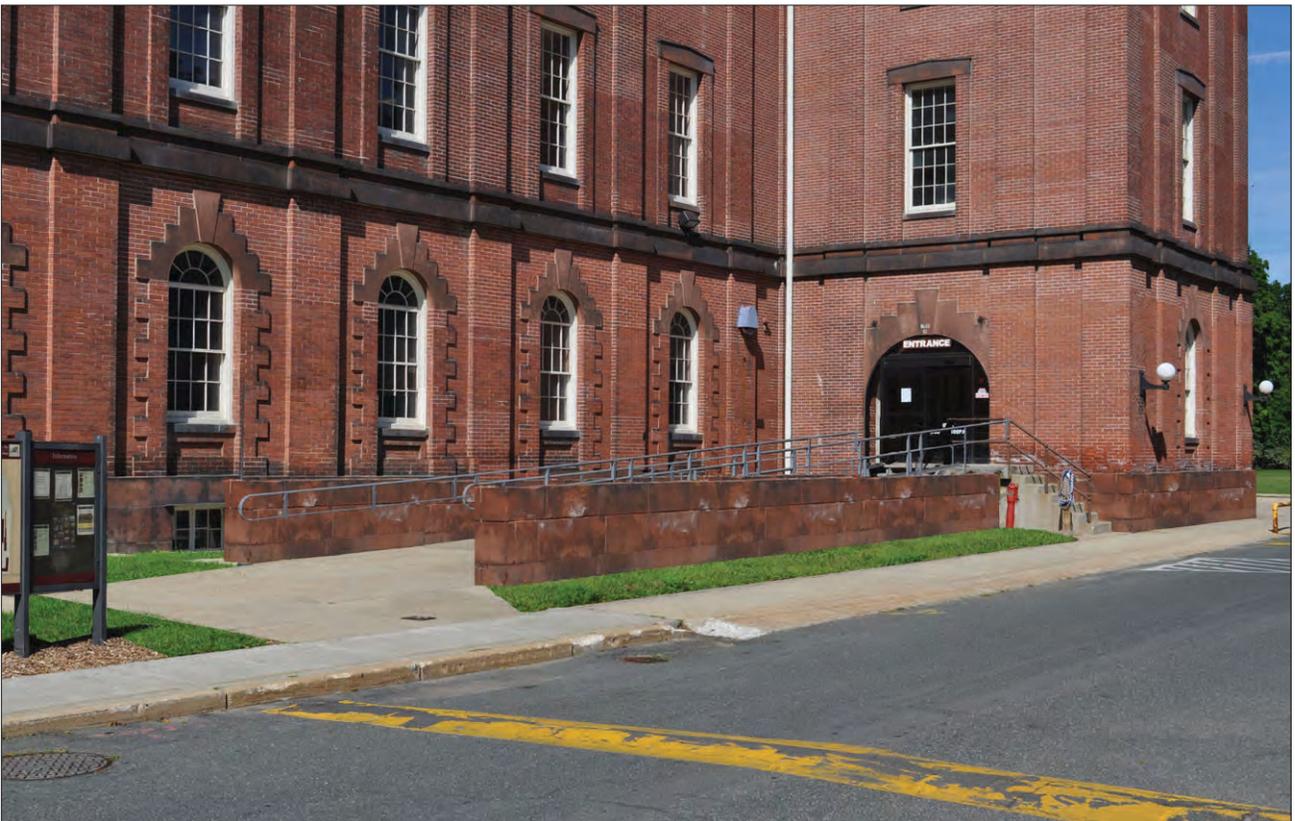


Figure 4.18. Photosimulation illustrating a proposed re-design of the accessible ramp that blends with the existing architecture. OCLP, 2009.

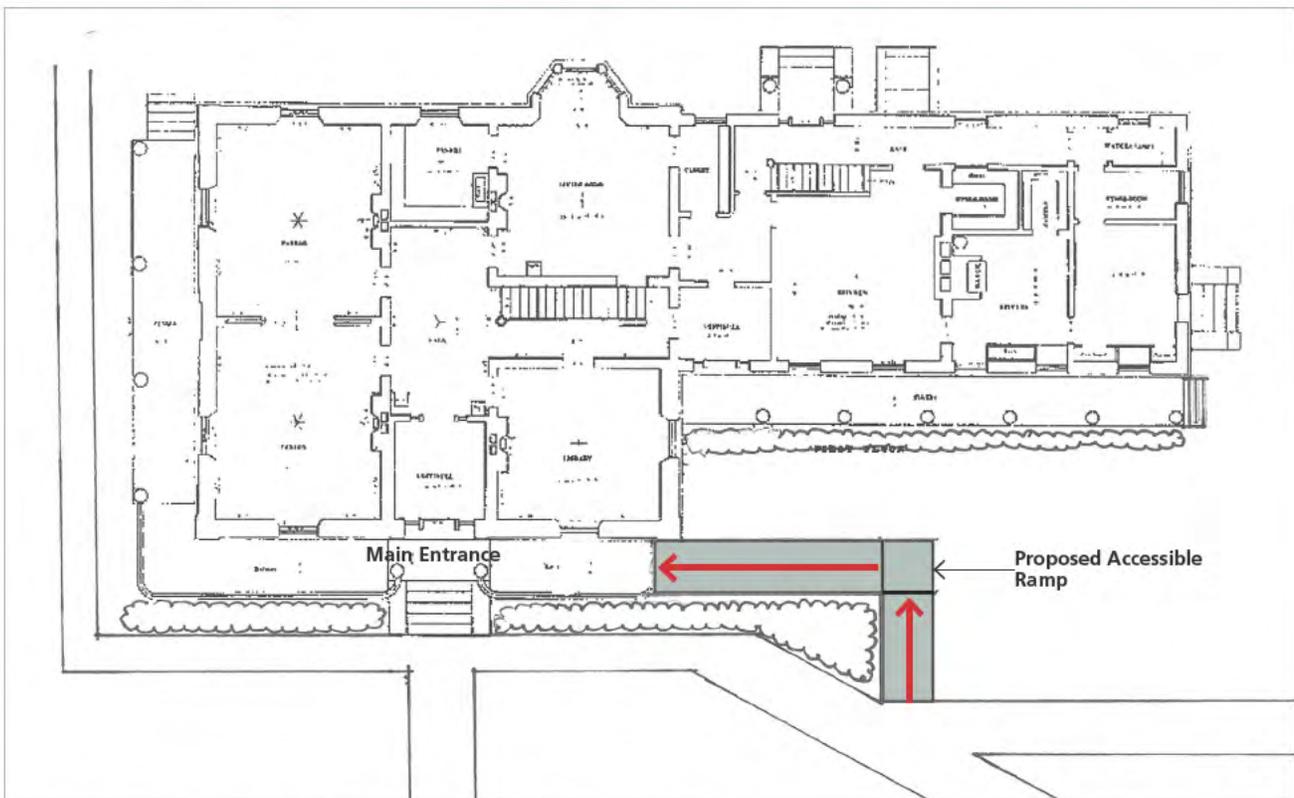


Figure 4.19. Sketch plan showing proposed location for accessible ramp at the Commanding Officer's Quarters. OCLP, 2009.



Figure 4.20. View of Commanding Officer's Quarters. An accessible ramp is proposed for the main entrance to the left. OCLP, 2009.

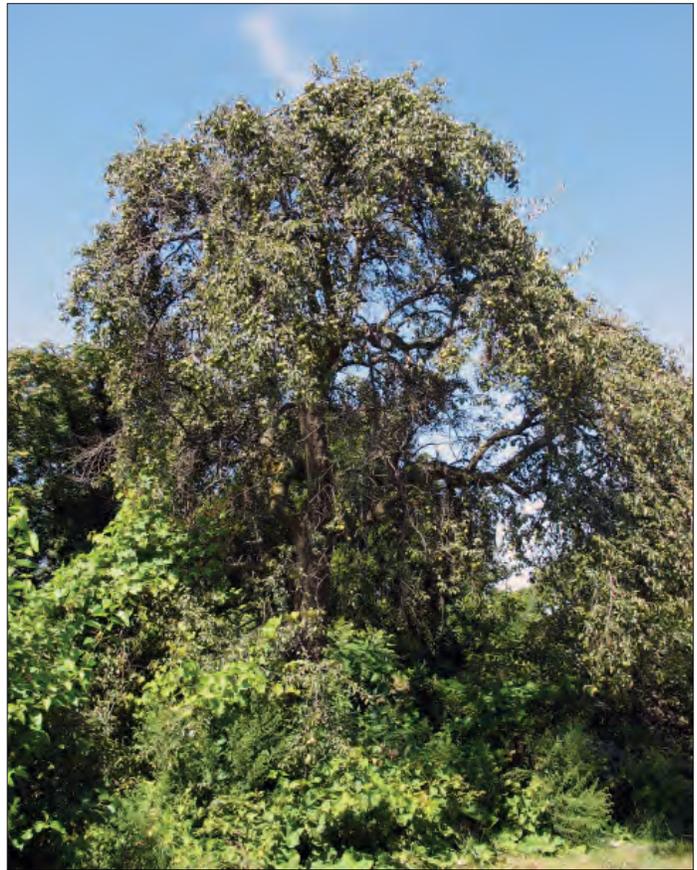


Figure 4.21. View of pear tree northeast of the Commanding Officer's Quarters. The tree was possibly planted in the late 1950s. OCLP, 2009.

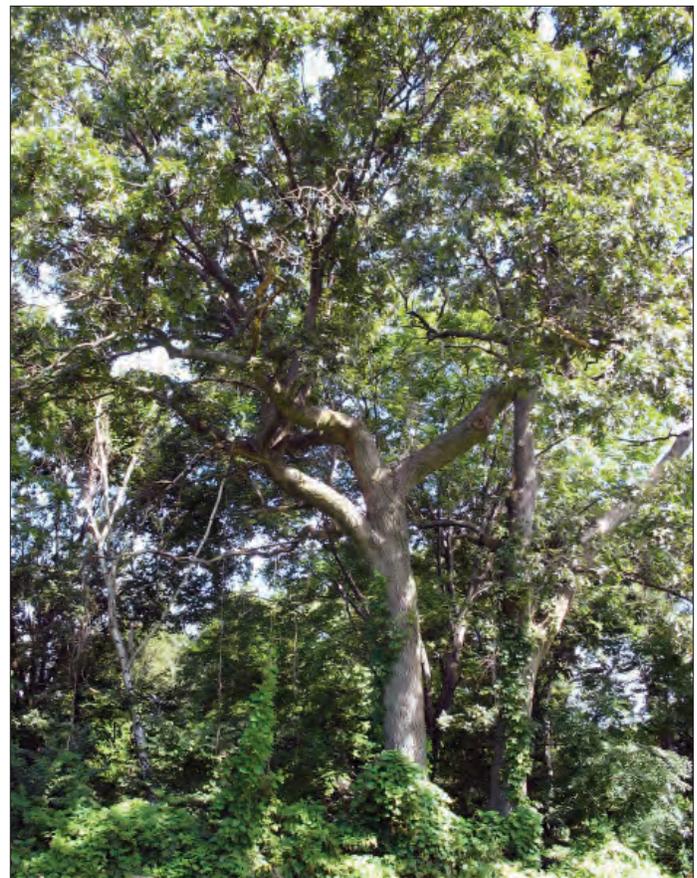


Figure 4.22. View of mature twin oak trees located along the edge of the wooded ravine north of the Commanding Officer's Quarters. OCLP, 2009.



Figure 4.23. View of storage shed and utility structure adjacent to the garage at the Commanding Officer's Quarters. These structures are located in a prominent area and detract from the historic character of the site. OCLP, 2009.

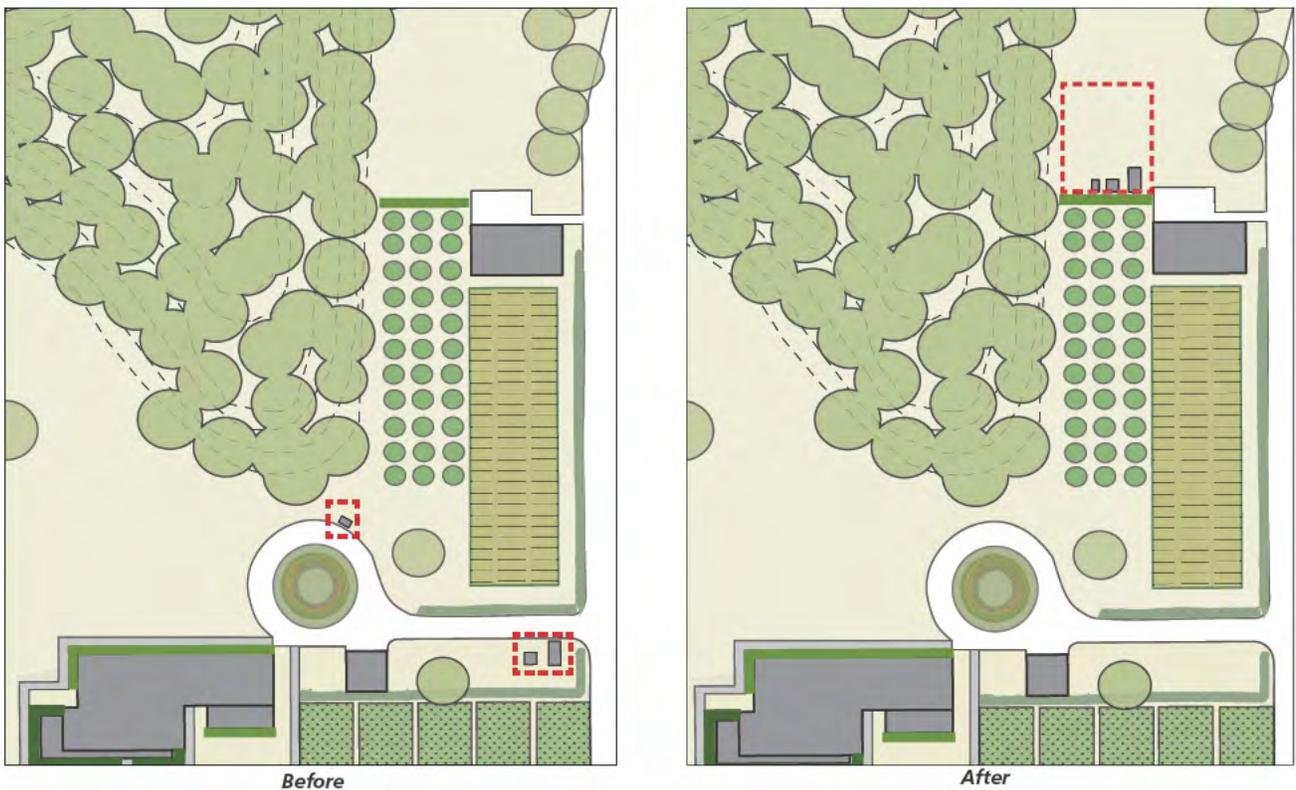


Figure 4.24. Consolidating and relocating the storage shed and utility structures, outlined in red dotted lines (*Before*), to the area northeast of the Commanding Officer's Quarters (*After*), will enhance the historic landscape character. OCLP, 2009.



Figure 4.25. Plan showing proposed regrading of the Western Slope Landscape to restore historic grades prior to the construction of ballfields in the late 1960s. The dashed outlines denote approximate ballfield configurations. The cutline across the slope indicates the location of the section in Figure 4.26. OCLP, 2009.

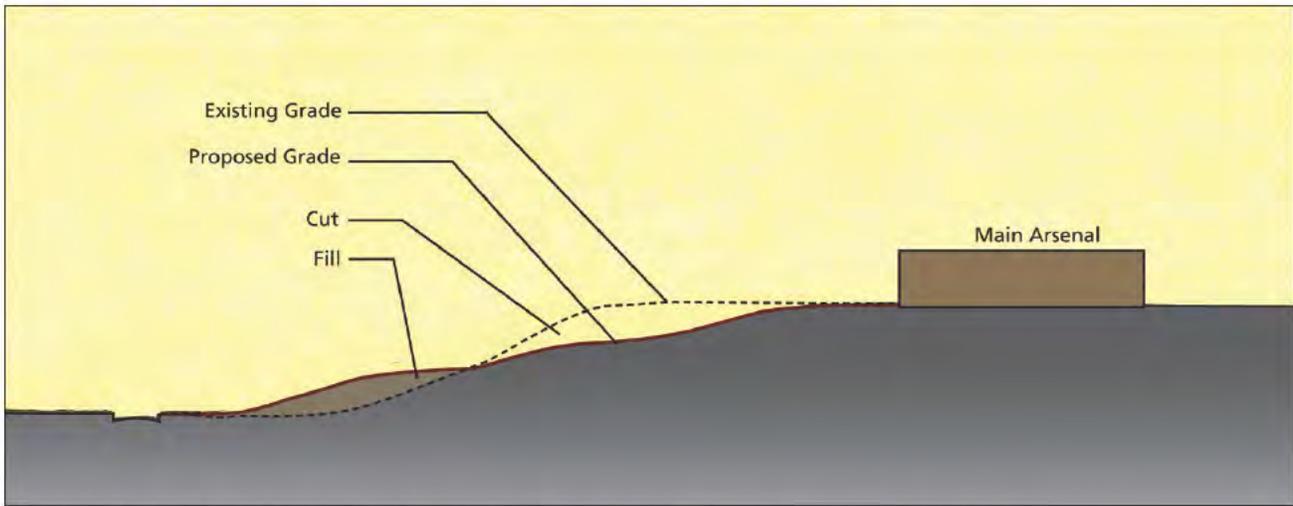


Figure 4.26. Section through the Western Slope Landscape showing existing and proposed grades. OCLP, 2009.



Figure 4.27. Plan of the Western Slope showing the reestablishment of pedestrian and vehicular circulation after regrading. OCLP, 2009.



Figure 4.28. Proposed signage design for building facades from 2008 Signage Survey and Assessment. Care must be given to appropriate scale to prevent signs from detracting from historic character. Bunting Graphics and Sasaki Associates, 2008.

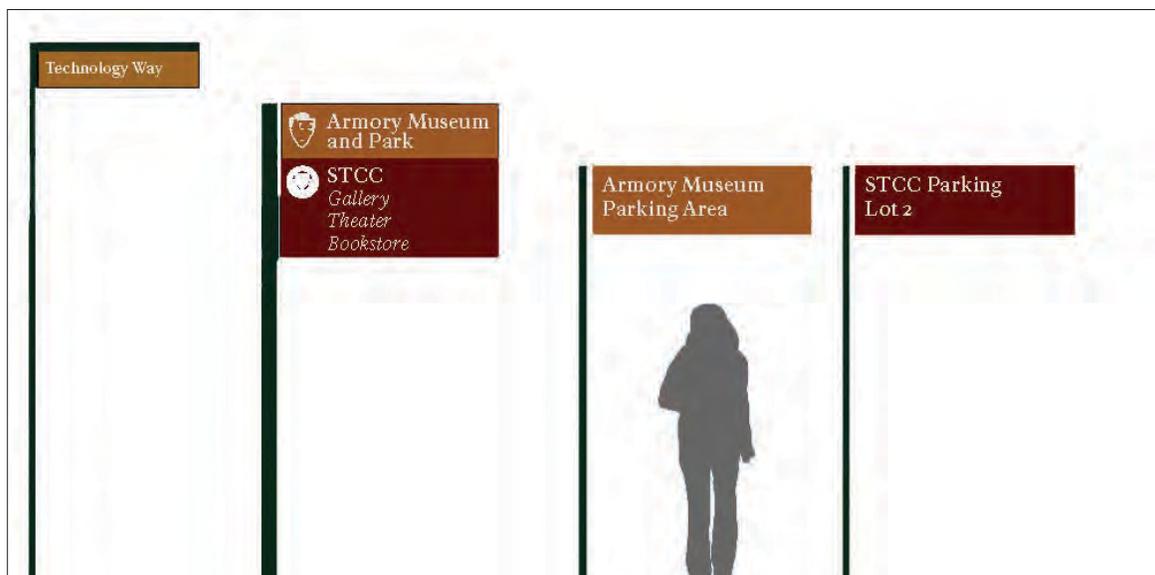


Figure 4.29. Proposed wayfinding signage design for Armory Square. The scale of each sign as well as the quantity of signs must be carefully considered so as not to detract from the overall character of the site. Bunting Graphics and Sasaki Associates graphic, 2008, modified by OCLP, 2009.



Figure 4.30. View of existing condition of the east-west pathway on the Green. OCLP, 2009.

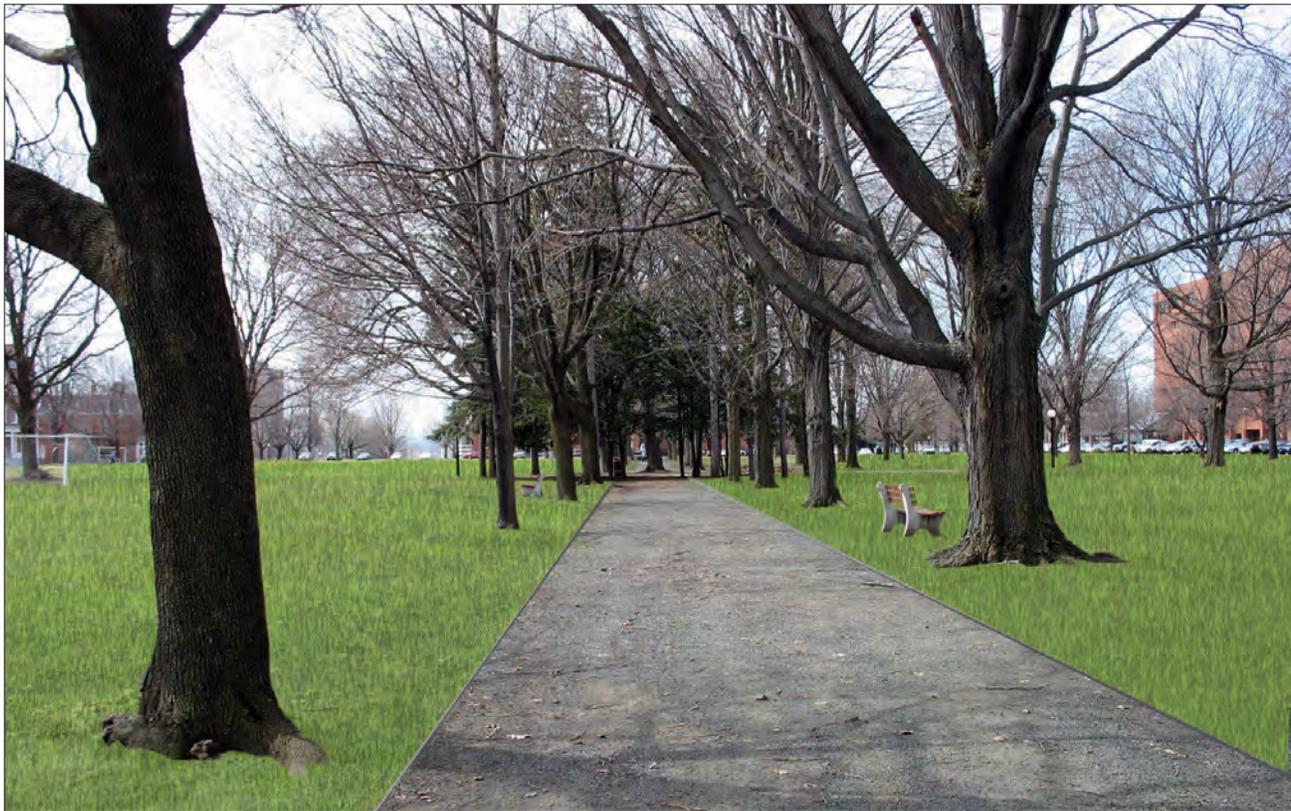


Figure 4.31. Photosimulation of the east-west pathway on the Central Green illustrating the effect of installing a paving restraint to define and contain the gravel pathway. OCLP, 2009.



Figure 4.32. Aerial view of the circle of evergreen trees in the central Green in 1965. SPAR Museum Archives, Box 016, Folder 01.



Figure 4.33. View of mature yews and spruce trees in the center of the Green that need to be replaced. OCLP, 2009.



Figure 4.34. Plan of the Central Green showing trees to be removed (dashed lines) as well as proposed plantings of trees (dark green). OCLP, 2009.



Figures 4.35 and 4.36. View of existing iron lamp post with non-historic luminaire to the left and historic globe style luminaire to the right. Maintaining a consistent use of light fixtures will help to visually unify the campus landscape. OCLP, 2008.



Figure 4.37. View of original iron lamp post in 1931 near one of the Officers' Quarters. SPAR Museum Archives, Box 002, Folder 05, NEG 1803-SA.

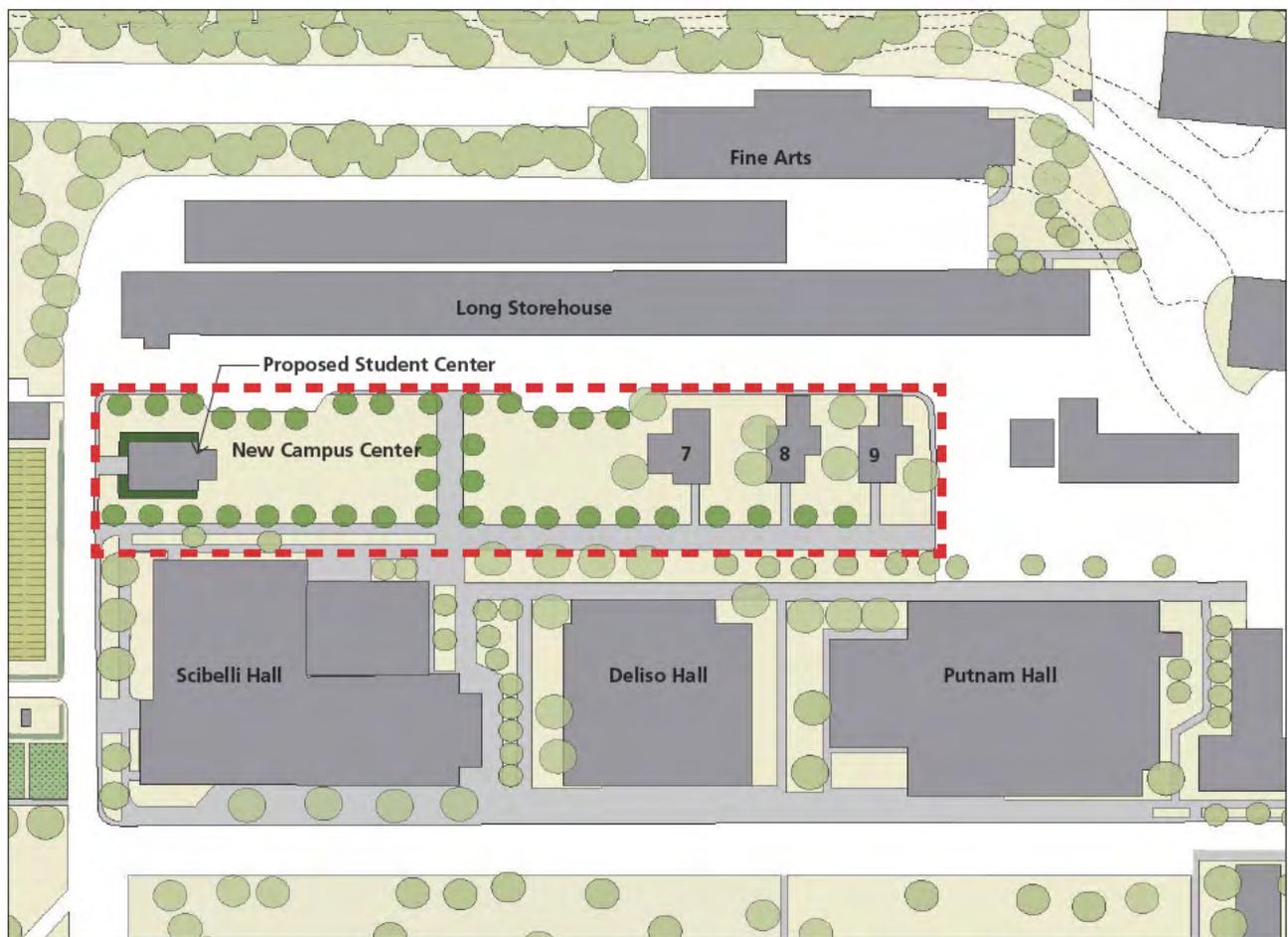


Figure 4.38. Plan illustrating potential new STCC campus green space on site of former Armory garden plots. OCLP, 2009.



Figure 4.39. View of mature trees that need to be removed from the top of the shooting range structure, Building 28a, located on the north side of the campus. Trees of this size could destabilize the structural integrity. OCLP, 2009.



Figure 4.40. View of typical stone splash block located on the eastern side of Building 20. The splash blocks are currently unused and should be reinstated. OCLP, 2009.



Figure 4.41. View of one of two steel back stops north of Building 28a. These structures were most likely constructed in the early 1920s, along with the building, and should be preserved. OCLP, 2009.

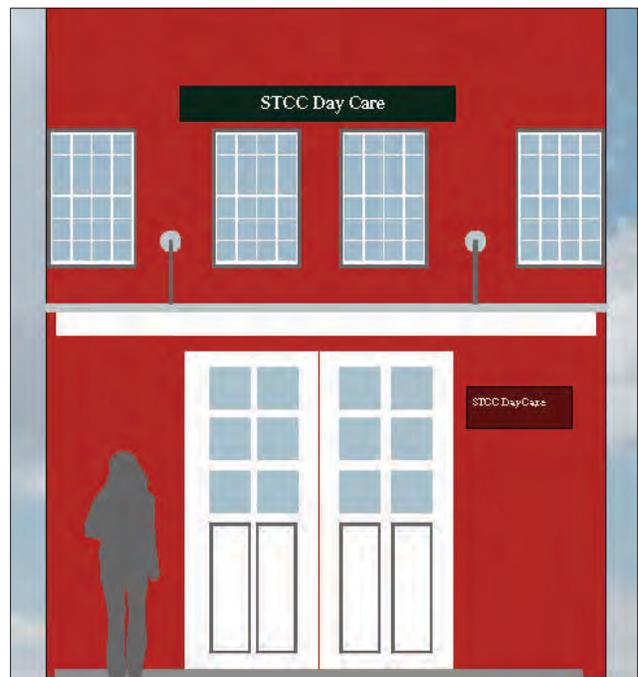


Figure 4.42. Proposed signage design for building facades from 2008 Signage Survey and Assessment. Bunting Graphics and Sasaki Associates, 2008.

Cultural Landscape Report

Armory Square Springfield Armory National Historic Site

Springfield, MA

Treatment



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

SOURCES

1. Ortho Imagery, MassGIS 2005.
2. Springfield Armory Site Map, 2004
3. Infrastructure and Physical Resources Data, MassGIS

DRAWN BY

A. Crosbie, Adobe Illustrator, 2009

LEGEND

- 2010 National Historic Landmark Boundary Line
- - - Fence Line
- - - Existing 5-Foot Contour Line
- - - Proposed 5-Foot Contour Line
- Existing Tree
- Proposed Tree
- Removed Tree
- Lawn
- Building
- Pedestrian Circulation
- Vehicular Circulation
- Proposed Ornamental Planting Bed
- Proposed Horticultural Planting
- Existing Lamp Post
- Sidewalk to be rehabilitated

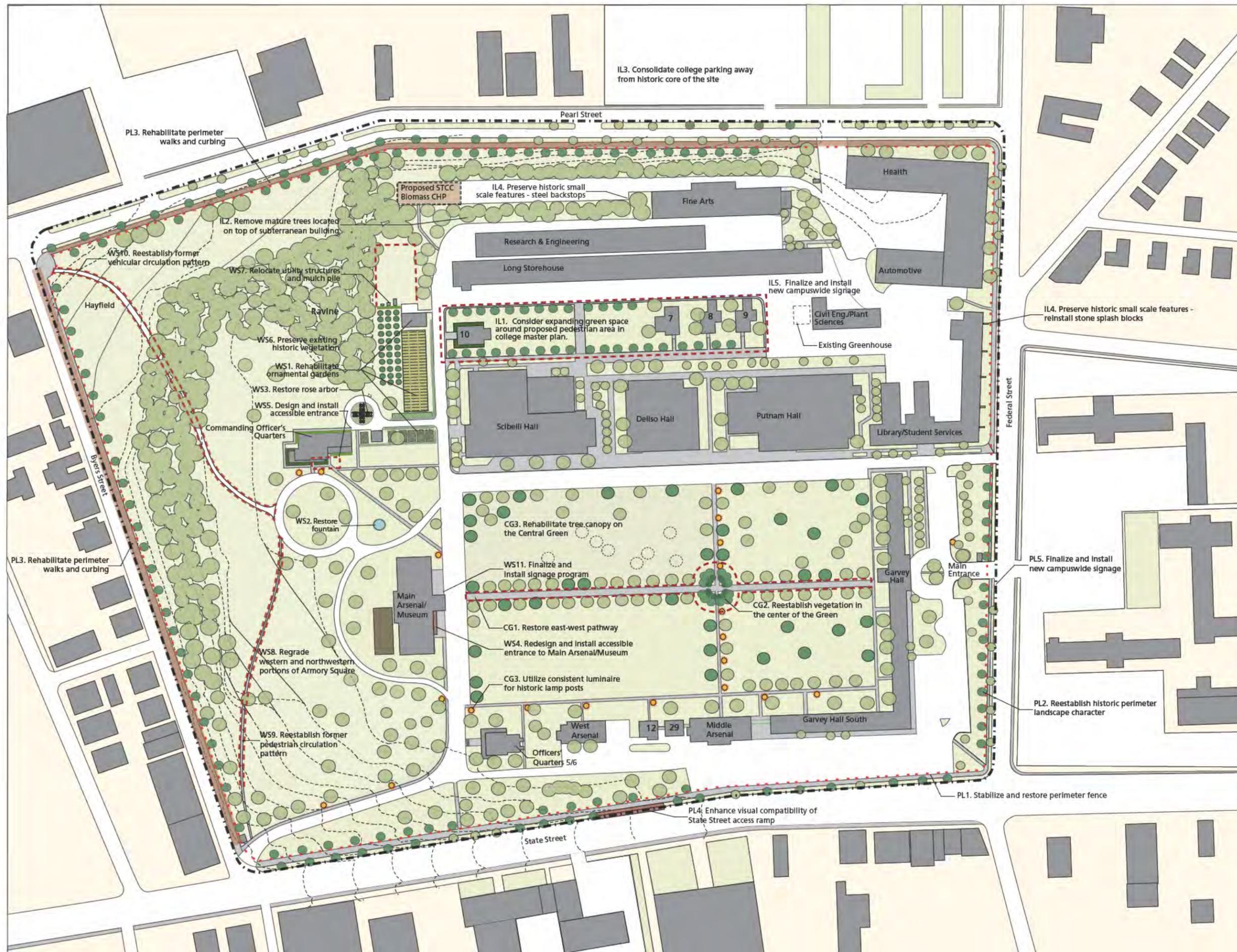
NOTES

1. All features shown in approximate scale and location.
2. Plan represents landscape conditions inventoried in 2008 and 2009.



0 200 400 Feet

Drawing 8



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Service.gov/history/history/online_books/National Park
Service28/28chap7.htm](http://www.NationalParkService.gov/history/history/online_books/NationalParkService28/28chap7.htm)

APPENDIX A

LIST OF SUPERINTENDENTS AND COMMANDANTS OF SPRINGFIELD ARMORY

Springfield Continental Arsenal and Laboratory (1777-1794)

Lieutenant Colonel David Mason
January 1777 to December 1780

Captain John Bryant
1780 to 1794

Springfield Armory (1794-1968)

David Ames, Superintendent
1794 to October 1802

Joseph Morgan, Superintendent
November 1802 to October 1805

Benjamin Prescott, Superintendent
November 1805 to August 1813

Henry Lechler, Superintendent
September 1813 to January 1815

Lieutenant Colonel Roswell Lee,
Superintendent
June 1815 to August 1833

John Robb, Superintendent
November 1833 to April 1841

Major James W. Ripley
April 1841 to August 1854

General James S. Whitney, Superintendent
October 1854 to March 1860

Colonel I. H. Wright
June 1860 to April 1861

Captain George Dwight
April 1861 to August 1861

Captain Alexander B. Dyer
August 1861 to October 1864

Major T. T. S. Laidley
October 1864 to May 1866

Major J. G. Benton
June 1866 to August 1881

Lieutenant Colonel A. R. B. Buffington
October 1881 to February 1892

Colonel Alfred Mordecai
February 1892 to February 1898

Lieutenant Colonel Isaac Arnold, Jr.
February 1898 to May 1899

Lieutenant Colonel Frank H. Phipps
June 1899 to August 1907

Colonel Stanhope E. Blunt
August 1907 to September 1912

Lieutenant Colonel William S. Pierce
September 1912 to January 1918

Colonel Jay E. Hoffer
March 1918 to September 1918

Lieutenant Colonel Lindley D. Hubbell
September 1918 to April 1920

Colonel Thales L. Ames
April 1920 to April 1923

Major Earl McFarland
August 1923 to June 1924

Colonel H. W. Schull
June 1924 to June 1929

Colonel J. W. Joyes
July 1929 to December 1933

Lieutenant Colonel T. J. Smith
January 1934 to February 1938

Brigadier General G. H. Stewart
September 1938 to June 1942

Colonel Earl McFarland
June 1942 to July 1943

Colonel George A. Woody
August 1943 to August 1944

Brigadier General Norman F. Ramsey
October 1944 to November 1945

Colonel Stephen H. MacGregor
November 1945 to August 1947

Colonel Morris K. Barroll, Jr.
August 1947 to May 1950

Colonel James L. Guion
July 1950 to May 1953

Colonel W. J. Crowe
August 1953 to August 1954

Colonel D. G. Ludlam
September 1954 to July 1958

Colonel O. E. Hurlbut
August 1958 to September 1959

Colonel C. L. P. Medinnis
September 1959 to July 1963

Colonel W. J. Durrenberger
July 1963 to September 1965

Colonel S. H. Sweeney, Jr.
September 1965 to November 1967

Lieutenant Colonel C. B. Zumwalt
November 1967 to April 1968

APPENDIX B**ARMORY SQUARE BUILDING NUMBERS AND CONSTRUCTION DATES**

1. Commanding Officer's Quarters - 1845
2. Officers' Quarters - 1894
3. Officers' Quarters - 1898
4. Officers' Quarters - 1836
5. Officers' Quarters - 1870
6. Officers' Quarters - 1870
7. Officers' Quarters - 1833
8. Officers' Quarters - 1836
9. Officers' Quarters - 1836
10. Master Armorer's Quarters - 1833
11. West Arsenal - 1808
12. Guardhouse - 1812 or 1880
13. Main Arsenal - 1847 - 1850
14. Middle Arsenal - 1830
15. East Arsenal - 1824
16. Administration (now Garvey Hall)
17. Paymaster's Quarters - 1833
18. Commanding Officer's Garage - 1937
19. Long Storehouse - 1847 - 1850, extended in 1863, 19A - stables
20. Property and Manufacturing - c. 1932 - 1957
21. Maintenance - by 1864, paint shop and paint storage
22. Greenhouse - 1877
23. Greenhouse - 1905
24. Fuel oil storage tank pit - unknown
25. Storehouse for plant vehicles - c. 1932-1957
26. Garage (Plant vehicle repair)
27. Shop - 1809 with additions by 1864
28. Ballistics - c. 1904-1932 28a. Shooting Range - 1906
29. Garage (3 cars) - unknown
30. Electric locomotive shed - 1918
31. Gatehouse at main gate on Federal Street - circa 1930s
32. Research and Engineering - c. 1904 - 1932
33. Guardhouse at Byers and State Streets - 1908, rebuilt later
34. Vegetable cellar - unknown
35. Maintenance - c. 1904 - 1932, Storehouse
36. Garage (7 cars) - unknown
37. Coal pocket - 1918

APPENDIX C

ENABLING LEGISLATION

Public

Law 93-486
93rd Congress, H. R. 13157
October 26, 1974

An Act

To provide for the establishment of the Clara Barton National Historic Site, Maryland; John Day Fossil Beds National Monument, Oregon ; Knife River Indian Villages National Historic Site, North Dakota ; Springfield Armory National Historic Site, Massachusetts ; Tuskegee Institute National Historic Site, Alabama ; Martin Van Buren National Historic Site, New York ; and Sewall-Belmont House National Historic Site, Washington, District of Columbia ; and for other purposes.
Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

88 STAT. 1461

TITLE I

Sec. 101. (a) Unless otherwise provided hereafter, the Secretary of the Interior (hereinafter referred to as the "Secretary") is authorized to acquire by purchase with donated or appropriated funds, donation, exchange, or by transfer from another Federal agency such lands and interests in lands as hereafter provided for establishment as units of the national park system as follows:

Historic sites
and national
monument.
Establishment.

Land
acquisition.

(1) for establishment as the Clara Barton National Historic Site, Maryland, those lands depicted on the map entitled "Boundary Map, Clara Barton National Historic Site, Maryland", numbered NHS-CLBA 90,001 and dated February 1974, which shall include the land and improvements occupied by Clara Barton, founder of the American Red Cross located at 5801 Oxford Road, Glen Echo, Maryland : *Provided*, That the above-mentioned land and improvements may be acquired only by donation : *And pro provided further*, That the donation of any privately owned lands within the historic site may not be accepted unless and until the property is vacant;

Clara Barton
National
Historic Site,
Md.
16 USC 461
note.

(2) for establishment as the John Day Fossil Beds National Monument, Oregon, those lands depicted on the map entitled "Boundary Map, John Day Fossil Beds National Monument", numbered NM-JDFB-20,014-A and dated June 1971: *Provided*, That the national monument shall not be established unless and

John Day
Fossil Beds
National
Monument,
Oreg.

until the State of Oregon donates or agrees to donate the Thomas Condon-John Day Fossil Beds, Clarno, and Painted Hills State Parks : *Provided further*, That the Secretary shall not acquire a fee title interest to more than one thousand acres of privately owned lands except by donation or exchange : *Provided further*, That the Secretary shall designate the principal visitor center as the "Thomas Condon Visitor Center";

(3) for establishment as the Knife River Indian Villages National Historic Site, North Dakota, those lands depicted on the map entitled "Boundary Map, Knife River Indian Villages National Historic Site, North Dakota", numbered 468-20,012 and dated July 1970;

(4) for establishment as the Springfield Armory National Historic Site, Massachusetts, those lands depicted on the map entitled "Boundary Map, Springfield Armory National Historic Site, Massachusetts", numbered NHS-SPAR-91,003 and dated January 1974, the oldest manufacturing arsenal in the United States: *Provided*, That the historic site shall not be established unless an agreement is executed which will assure the historical integrity of the site and until such lands as are needed for the historic site are donated for this purpose;

(5) for establishment as the Tuskegee Institute National Historic Site, Alabama, those lands depicted on the map entitled "Boundary Map, Tuskegee Institute National Historic Site, Alabama", numbered NHS-TI 20,000-C and dated September 1973, which shall include the home of Booker T. Washington, the Carver Museum, and an antebellum property adjacent to the campus of Tuskegee Institute, known as Grey Columns ; and

(6) for establishment as the Martin Van Buren National Historic Site, New York, those lands depicted on the map entitled "Boundary Map, Martin Van Buren National Historic Site, New York", numbered NHS-MAVA-91,001 and dated January 1974, which shall include the home of Martin Van Buren, eighth President of the United States.

(b) The Secretary may also acquire personal property associated with the areas referred to in subsection (a) of this section. Lands and interests therein owned by a State or any political subdivision thereof which are acquired for the purposes of subsection (a) of this section may be acquired only by donation.

Sec. 102. (a) When the Secretary determines that an adequate interest in lands has been acquired to constitute an administrable unit for each of the areas described in section 1 of this Act, he may, after notifying the Committees on Interior and Insular Affairs of the United States Congress of his intention to do so at least fourteen days in advance, declare the establishment of such unit by publication of a notice to that effect in the Federal Register. Such notice shall contain a map or other description of the boundaries of the unit, together with an explanation of the interests acquired and the costs incident thereto. The Secretary may refrain from acquiring property for establishment of any unit authorized by this Act where, in his judgment, satisfactory

16 USC 431 note.
Thomas Condon Visitor Center, designation.
Knife River Indian Villages National Historic Site, N. Dak.
16 USC 461 note.
Springfield Armory National Historic Site, Mass.
16 USC 461 note.
88 STAT. 1462
Tuskegee Institute National Historic Site, Ala.
16 USC 461 note.
Martin Van Buren National Historic Site, N.Y.
16 USC 461 note.
Personal property, acquisition.
Notice to congressional committees.
Publication in Federal Register.

agreements or donations with respect to properties which are needed for the protection and administration of a particular unit have not been consummated with the owners of such properties.

(b) Pending the establishment of each unit and, thereafter, the Secretary shall administer the property acquired pursuant to this Act in accordance with the provisions of the Act of August 25, 1916 (39 Stat. 535), as amended and supplemented, and, to the extent applicable, the provisions of the Act of August 21, 1935 (49 Stat. 666), as amended.

Sec. 103. Notwithstanding any other provision of law, the Secretary is authorized to construct roads on real property in non-Federal ownership within the boundaries of the Tuskegee Institute National Historic Site. Any roads so constructed shall be controlled and maintained by the owners of the real property.

Sec. 104. There are authorized to be appropriated such sums as may be necessary to carry out the provisions of this Act, not to exceed, however, the following:

(a) Clara Barton National Historic Site, \$812,000 for acquisition of lands and interests in lands and for development ;

(b) John Day Fossil Beds National Monument, \$400,000 for the acquisition of lands and interests in lands and \$4,435,200 for development ;

(c) Knife River Indian Villages National Historic Site, \$600,000 for the acquisition of hands and interests in lands and \$2,268,000 for development ;

(d) Springfield Armory National Historic Site, \$5,300,000 for development;

(e) Tuskegee Institute National Historic Site, \$185,000 for the acquisition of lands and interests in lands and \$2,722,000 for development; and

(f) Martin Van Buren National Historic Site, \$213,000 for acquisition of lands and interests in lands and \$2,737,000 for development.

TITLE II

88 STAT.
1463

Sec. 201. In order to preserve for the benefit and inspiration of the people of the United States as a national historic site, the Sewall-Belmont House within the District of Columbia, the Secretary of the Interior is authorized to enter into a cooperative agreement to assist in the preservation and interpretation of such house.

Sec. 202. The property subject to cooperative agreement pursuant to section 101 of this Act is hereby designated as the "Sewall-Belmont House National Historic Site".

Sec. 203. The cooperative agreement shall contain, but shall not be limited to, provisions that the Secretary, through the National Park Service, shall have right of access at all reasonable times to all public portions of the property covered by such agreement for

the purpose of conducting visitors through such property and interpreting it to the public, that no changes or alterations shall be made in such property except by mutual agreement between the Secretary and the other parties to such agreement. The agreement may contain specific provisions which outline in detail the extent of the participation by the Secretary in the restoration, preservation, and maintenance of the historic site.

Sec. 204. There are hereby authorized to be appropriated such sums as may be necessary to carry out the purposes of this Act, but not to exceed \$500,000. Appropriation.

Approved October 26, 1974.

LEGISLATIVE HISTORY:

HOUSE REPORT No. 93-1285 (Comm. on Interior and Insular Affairs)
SENATE REPORT No. 93-1233 (Comm. on Interior and Insular Affairs)
CONGRESSIONAL RECORD, Vol.120 (1974):

Aug. 19, considered and passed House.
Oct. 8, considered and passed Senate, amended.
Oct. 16, House concurred in Senate amendments.

Excerpted from
Public Law 95-625
November 10, 1978

(11) John Day Fossil Beds National Monument, Oregon : To add 92 STAT.
approximately one thousand four hundred and eleven acres, and to delete 3474
approximately one thousand six hundred and twenty acres as generally
depicted on the map entitled "Boundary Map, John Day Fossil Beds Land
National Monument, Oregon", numbered 177-30,000-B, and dated May conveyance.
1978: \$3,500,000. The Act of October 26, 1974 (88 Stat. 1461), which
designates the John Day Fossil Beds National Monument is amended by
deleting the second proviso of section 101(a) (2). Furthermore, not
withstanding any other provision of law to the contrary, the Secretary
may, if he determines that to do so will not have a substantial adverse
effect on the preservation of the fossil and other resources within the
remainder of the monument, convey approximately sixty acres acquired
by the United States for purposes of the monument in exchange for non-
Federal lands within the boundaries of the monument, and, effective
upon such conveyance, the boundaries of the monument are hereby
revised to exclude the lands conveyed.

<http://www.nps.gov/joda/legislation.htm>

OLMSTED CENTER FOR LANDSCAPE PRESERVATION
Boston National Historical Park
Charlestown Navy Yard, Quarters C
Boston, MA 02129
Phone: 617-241-6954
Fax: 617-241-3952
www.nps.gov/oclp