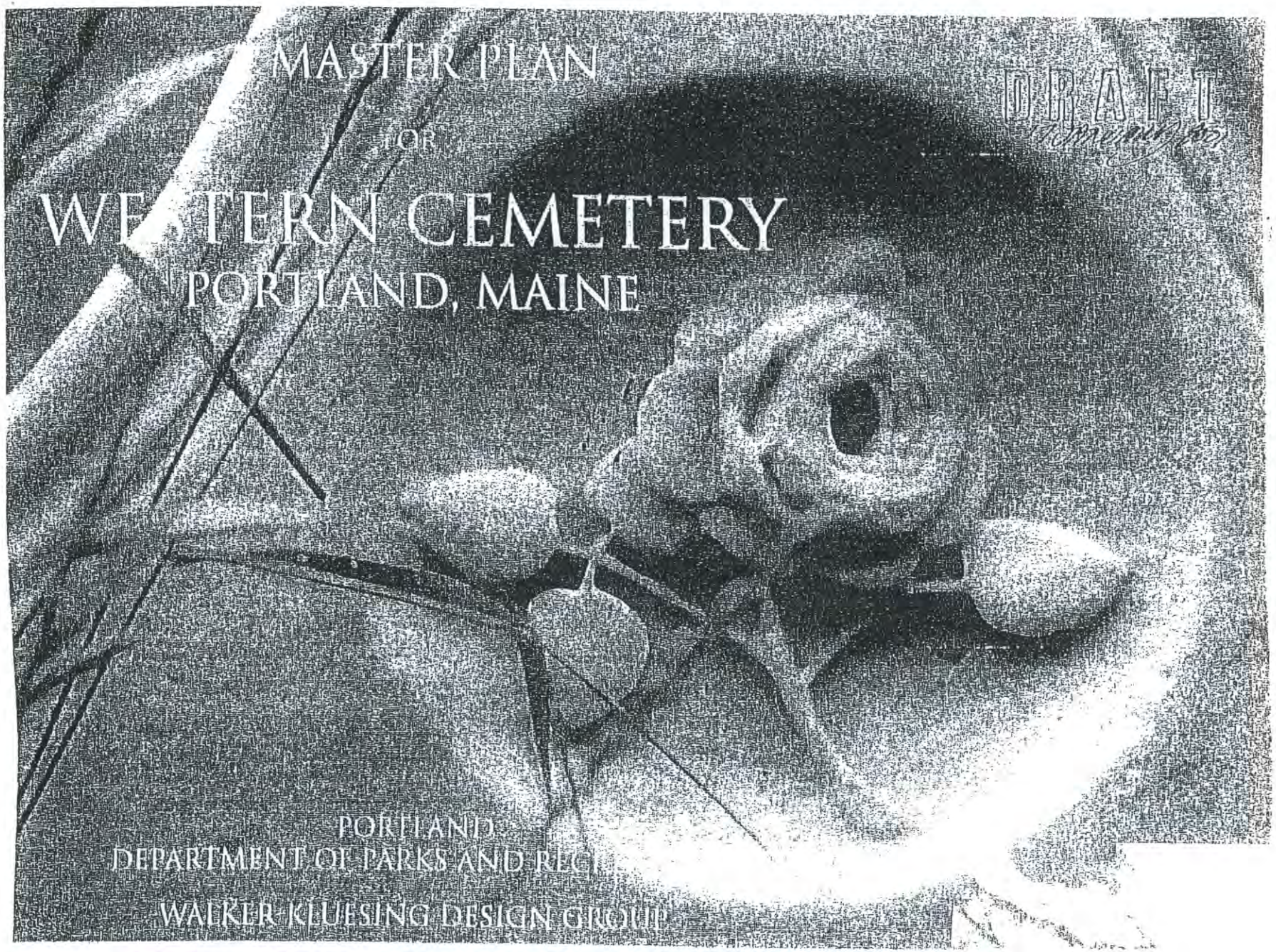
MASTER PLAN
FOR
WESTERN CEMETERY
PORTLAND, MAINE
DRAFT
PORTLAND
DEPARTMENT OF PARKS AND REC
WALKER KLUESING DESIGN GROUP

A MASTER PLAN

FOR

WESTERN CEMETERY
PORTLAND, MAINE

DRAFT

JANUARY 2001

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Cover illustration:
Detail of grave marker of Ruth Stetson, d. 1871

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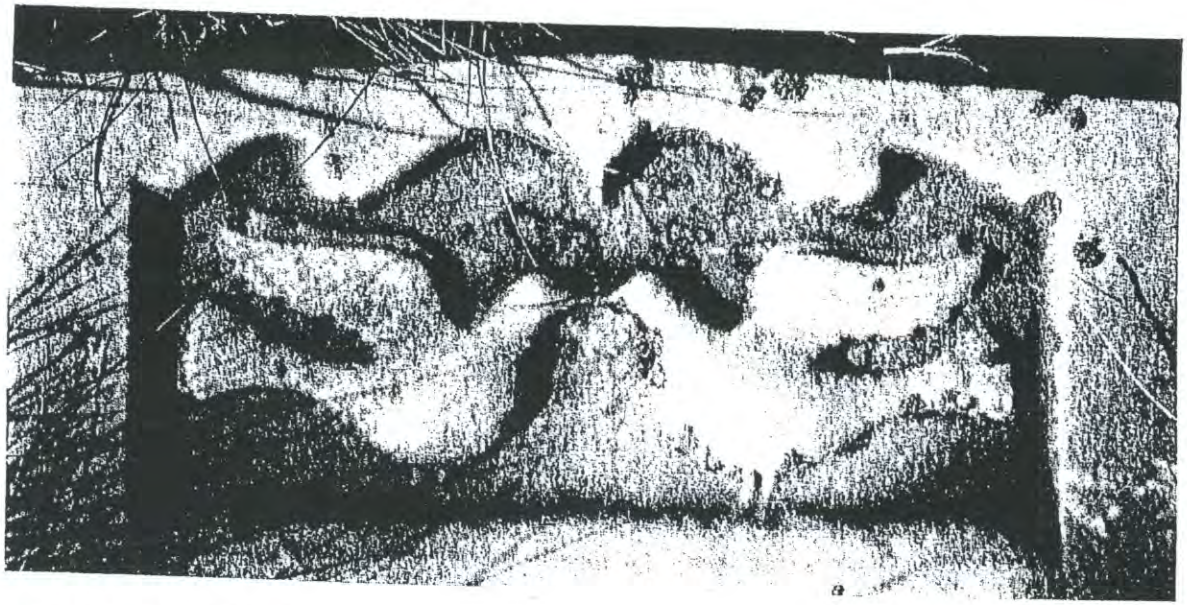
Note:
All photographs of Western Cemetery and other contemporary images are by Walker-Kluesing Design Group unless otherwise noted.

The condition of our parks, cemeteries, and public grounds, their embellishments and attractiveness, is the thermometer that registers the degree of refinement and culture of the individuals that compose the community.

Report of the Commissioners
1885-1886 Annual Report, p. 211



FOREWORD

OVERVIEW

Western Cemetery is a 12 acre 19th century historic cemetery situated on a high bluff overlooking the Fore River on the south end of Portland. The site is characterized by curved sweeping walkways, a small stone entrance gateway, and a row of vaulted tombs. Included in the locally designated West End Historic District, it is bounded by the curving Western Promenade on the west and south, Vaughan Street on the east and private residential development on the north. The street edges are defined by chain link fencing and some stone retaining walls. The residential boundary at the top of a steep rise in grade is generally defined by a low concrete retaining wall.

Today, at least four constituencies have been identified that have a vested interest in Western Cemetery.

- *Families and friends of the deceased who want to preserve it as a sacred space for the departed;*
- *Preservationists who want to preserve the historic record of the city in this historic cultural landscape;*
- *Dog owners who want a large attractive fenced in area to allow their dogs to run off leash; and*
- *Neighbors who want relief from the traffic congestion and noise created by the current use of the cemetery as a sanctioned off leash dog area.*

Two or three decades ago Western Cemetery was a neighborhood facility that was used by neighbors for walking their dogs off leash. At the time it had the appearance of abandonment with a significant amount of vandalism. According to some, maintenance was limited to cutting waist high grass once a year.

In recent years Western Cemetery has become more of a regional dog park than historic cemetery. It is extremely popular for this type of use because it has been sanctioned as an off leash area, mostly fenced, large at 12 acres, and has varied vegetation and topography. Maintenance has improved with monthly grass cutting, making it a more desirable place for dog walkers. It has been claimed by some that this use has reduced vandalism although this is unlikely because most vandalism tends to occur after dark when dog related users are not present.

Historic cemeteries present unique preservation challenges including damaged and vandalized headstones, deterioration of older walks and enclosures, and aging and hazardous trees. These historic artifacts are a finite and deteriorating resource that need preservation and protection from damage by weathering, vegetation and vandalism, as well as deferred and often inappropriate maintenance practices.

For much of the 20th century, many historic burial grounds and cemeteries have suffered the adverse impacts of neglect. A number of factors influenced this plight of municipal cemeteries today. Perhaps the most important is the fact that once a site becomes full and inactive, it no longer generates income and no longer has or needs sales appeal. Many sites were essentially abandoned after the sale of all of the plots. The lack of sufficient endowment funds meant that there were no funds for maintenance and long term care.

Competing needs and low municipal budgets, coupled with increased labor costs, have generally placed the maintenance and preservation of historic burial grounds and cemeteries low on a municipality's priority list. Municipalities have many needs for the funds that they have available. Improvements in the tools and devices for maintenance over the last century have reduced, but not eliminated, labor requirements.

Today a basic conflict has come to the forefront pitting societal values of respect for the dead against the popular use of Western Cemetery as an off leash dog area. In the eyes of some, dog use of the cemetery has created a crisis. According to a recent news report, there are an estimated 53,000,000 dogs in the United States. Dog ownership is an increasing component of American society and different than it was 150 years ago when the majority of dogs had a functional purpose. Now they are more like family members and increasingly important to the growing adult single population.

We need to separate this from a local issue and think of it as a national issue, ie., what to do with "inactive" historic cemeteries that take up valuable urban space where many needs have to be accommodated. We can use this as an opportunity to think about our attitudes about these places. Many will be influenced by the decisions made here and we may be judged by many more.

Societal attitudes about death have changed many times throughout history and will undoubtedly continue to do so, much like the cyclical care of historic burying grounds and cemeteries. We need to care for our cultural heritage. A great deal has already been lost at Western Cemetery.

SIGNIFICANCE OF WESTERN CEMETERY

The diversity in the character of the historic burying grounds and cemeteries reflects the unique and identifiable quality special to each community. This property is historically significant for a number of reasons. Western Cemetery illustrates an important development in the evolution of graveyard design in that it was developed during the transition period between historic burial grounds and rural cemeteries. It was developed during the pre-Civil War period of rapid population growth and deteriorating conditions in older urban burying grounds. While certainly influenced by Mount Auburn which was developed at about the same time, Western Cemetery has less dramatic topography and a more engineered approach that resulted in a formality to its layout. The design appears to have more in common with New Haven's "New Burying Ground". The later landscape treatment may have been influenced by the "Rural" cemetery movement that began in the early 1830's.

While listed as part of the locally designated West End Historic District, it should be eligible for individual listing on the National Register of Historic Places, although no attempt has been made to achieve this status to date. The design is consistent with the leading edge of cemetery development thought of that time. The site has been maintained as such and has been in continual use from its consecration through today.

Burial grounds and cemeteries are one of the richest cultural and historic records of our past. In addition to providing specific genealogical information about our ancestors, they also tell a broader story about evolving attitudes towards death, burial and public landscapes. However, this significant cultural legacy is often a subtle and fragile message that is not well documented or understood.

Preservation planning for historic cemeteries is tied to the cultural significance of the sites, the artifacts contained within them and the supporting landscape character. These properties are considered not only urban open space and areas of respite, but also outdoor museums with priceless assemblages of artistic treasures. Unlike traditional museums, these sites present a permanent collection of rare three dimensional museum pieces, some of which have remained in place almost 350 years.

The site houses a rich collection of historic artifacts that tell many stories regarding the legacy of Portland's cultural heritage. These gravestones, tombs, markers and monuments provide numerous fine examples of the disappearing art of stone carving and finishing. They honor the many founding and other prominent members of the community including Revolutionary, Civil and other war heroes, and other outstanding figures of local, national and international fame.

The ultimate significance of this historic cemetery is the aggregate sum of its parts. The entirety of the collection needs to be dealt with in a coherent way that recognizes its historic importance, contemporary interpretive purpose and passive public use.

PURPOSE AND GOALS

The purpose of this study is to develop a master plan, treatment plan and implementation plan for the entire property and its relationship to adjacent lands that can be used as a guide for both long and short term planning and improvements. The latter includes assistance with decision making related to use of the cemetery by dog walkers as an off leash area.

In an effort to restore this historic cemetery, and knowing that expedient solutions too often ultimately compound the problem, the City mandated preparation of this master plan along with a program to encourage community support, advocacy and public education.

The purpose of this publication is to document the historic background of this cemetery, evaluate the current conditions, including structural elements, and to assess the extent of significant deterioration. The plan offers a compendium of information directly related to the preservation, restoration, rehabilitation, reconstruction, management and care of this historic cemetery landscape. It also provides recommendations reflecting current preservation techniques, technologies and approaches. Recommendations and prioritized cost projections are presented on work that needs to be accomplished as well as recommendations for ongoing maintenance and management.

General goals include restoration and rehabilitation of this historic resource where possible in a contemporary context, reinforcement of an overall image that is compatible with existing natural and historic assets, improvement of accessibility, and increasing educational and passive recreation opportunities.

METHODOLOGY

The study began with on site investigations and a review of available historic and current materials found in the files of the Portland Parks and Recreation Department, Department of Public Works, Portland Public Library, Maine Historical Society and Greater Portland Landmarks, Inc. Files at other repositories and other likely places of historic information were not examined. A number of meetings with the Portland Parks and Recreation Department, Western Cemetery Master Planning Committee and other interested parties as well as three well attended public meetings to develop and refine to concepts presented here.

The Maine Historic Preservation Commission has not been contacted in regard to records of any archaeological investigations that may have taken place on the site. It is suggested that an archaeologist review the site to make a preliminary determination of any potential archaeological sensitivity prior to any future excavation work.

ORGANIZATION OF THE MASTER PLAN DOCUMENT

The Master Plan is organized for easy reference by the Portland Parks and Recreation Department and others who may participate in completing components of the rehabilitation, restoration, preservation and maintenance efforts.

General information is presented first with some historic background on burial ground and cemetery development, and specific background on the development and evolution of Western Cemetery. This is followed by a site specific Master Plan for the site including an assessment of existing conditions and specific recommendations. It includes general recommendations for the restoration and rehabilitation of historic and other cemetery components, prioritized cost estimates for work at the cemetery, and administrative and maintenance management issues and recommendations. The appendix contains a chronology of Western Cemetery, a list of available drawings and a selected bibliography for further reading.

A second volume contains other supplemental relevant information like user survey results, soil test reports, arborist report and product data for conservation materials.

PRESERVATION STANDARDS

As a designated historic landmark included in the locally designated West End Historic District, improvements to the property should follow the 1996 Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes.

These standards provide guidance in decision making about historic properties, setting forth options to be considered depending on the current condition of a space and the availability of historic documentation. The standards address four treatments: preservation; rehabilitation; restoration; and reconstruction. "Of the four, Preservation standards require retention of the greatest amount of historic fabric, including the landscape's historic form, features and details as they evolved over time. Rehabilitation standards acknowledge the need to alter or add to a cultural landscape to meet continuing or new uses while retaining the landscape's historic character. Restoration standards allow for the depiction of a landscape at a particular time in its history by preserving materials from the period of significance and removing materials from other periods. Reconstruction standards establish a framework for recreating a vanished or non-surviving landscape with new materials, primarily for interpretive purposes."

OVERALL CONCEPT

The broad period of significance is between 1826, when the Vaughan family plot was established on the site of the future Western cemetery, and 1888 when the city considered the cemetery effectively full and passed an ordinance to discourage further burials there. The most significant period for the cemetery was between 1840 when the property had been assembled and the overall plan was completed, and the late 1850's after Evergreen, Mount Calvary and Forest City cemeteries had opened. From that point on the citizens of Portland had numerous choices in selecting their final resting place.

Many of the natural site features remain including the general terrain. The site elements remaining from that era include cultural features like grave markers and the avenues. Some important elements have been added since that time like the Daveis Memorial Gate

The overall goal is to maintain the historic integrity of the site within the context of "rehabilitation", recreating the image of the historic cemetery in as much as possible, with the current loss of historic fabric, while adapting selected areas to accommodate existing and proposed changed needs and conditions.

While "restoration" is applicable to grave markers and structural elements, "rehabilitation" is applicable to pathways, fences and gates, site amenities and vegetation because of maintenance and use considerations, as well as societal expectations in regard to safety and security.

The primary focus of recommendations for improvement is the protection, stabilization and preservation of historic artifacts, tomb structures and retaining walls. These efforts will prevent significant deterioration of these valuable resources and reduce risk to visitors. Clean up needs to continue, removing the detrimental effects of volunteer growth and evidence of vandalism, reducing the general misuse of the grounds and generally making it a more desirable place to visit. Additional improvements need to be made related to landscape issues [pruning, planting and removals] and making improvements for visitors [path systems, site amenities, fences and gates, water supply and an identification, regulatory, informational and interpretive sign system].

Achievement of the overall concept will require restoration of the historic character of the period of emphasis with removal of incongruent elements, vegetative work and site improvements, resolving pedestrian circulation and control, and restoring/reconstructing critical components.

SUMMARY RECOMMENDATIONS

The following is a summary of the primary recommendations.

Landscape Character

While decisions regarding the preservation of artifacts of this historic cemetery is a relatively straight forward matter, decisions related to an appropriate overall landscape image are more difficult because of the changes that have occurred over more than one and a half centuries. The historic cemetery contains a vast storehouse of visual imagery that should be supported by landscape imagery.

Selecting an appropriate landscape expression is perhaps the most difficult choice to be made here because of the conflict between historic appropriateness and public sentiment. Evidence indicates that the cemetery was never heavily planted with some of the lush plantings of the later rural cemetery movement. In this century vegetation has been added, either purposefully or by natural forces giving it a more heavily planted appearance than it ever had.

The landscape character should return to that shown in the 1870 survey and as modified by the 1905 Olmsted plan which includes heavier perimeter planting, particularly along the north slope to provide a visual buffer for the later adjacent residential development.

Specific consideration should be given to maintaining and/or restoring important vistas to off site features like the Fore River.

Volunteer growth in the interior portions of the site should be removed on an incremental basis beginning with specific trees that present a clear and present danger to the historic resources. Given the strong public sentiment for the preservation of vegetation, consideration could be given to leaving some better volunteer specimens in locations in the interior of the cemetery where they present no hazard.

Along the north embankment, begin with the removal of volunteer and other vegetation in the immediate proximity of the vaulted tombs. Replant as necessary in this area to control erosion on the embankment and to maintain a vegetated buffer. Over time, continue the removal of volunteer species and replace with more appropriate and long lived selections with a mixture of evergreen and deciduous species.

All lawn areas should be restored. This is particularly necessary in the Woodbine Grove area where much of the surface has been disturbed. To support vegetative work, soils should be improved.

The planting shown on the master plan only illustrates the broad concept for new planting and vegetation removals. It needs to be developed at a more detailed scale for implementation. Ideally, the removal of vegetation should be balanced with the addition of new vegetation.

Circulation Systems and Materials
Maintain the historic circulation system except as modified by the addition of the Daveis Memorial Gate. Define the edges of grave sites along primary circulation systems to prevent people from inadvertently walking over grave sites. This is particularly important in the area near the Daveis Memorial Gate where people walk directly over grave sites on their way to and from Woodbine Grove. Restoration of the historic avenue and pathway materials is recommended provided a commitment is made to ongoing maintenance. This includes gravel surfaces for the primary circumferential avenues, and lawn surfaces for the perpendicular avenues and narrower circumferential paths.

Access and Security
Maintain the historic access and egress points, except that the Daveis Memorial Gateway should remain as the principal pedestrian access point on Vaughan Street, and the former pedestrian access opposite Spring Street should not be restored even though these two changes occurred outside the period of significance for the site. Provide improvements at the Daveis Memorial Gateway such that it can become the principal universal access point. Provide two designated handicap parking spaces immediately adjacent to it on Vaughan Street. Maintain the gravel surfaces for the primary circumferential avenues such that they remain a universally accessible surface.

As long as dogs are allowed to enter Western Cemetery, they should be prohibited from using the Daveis Memorial Gateway entrance to help alleviate the odor problems. The pedestrian gate adjacent to the maintenance gate should be retained to facilitate dog owner access from Vaughan Street. Should a time come when dogs are no longer allowed, remove this pedestrian gate to simplify and clarify access from Vaughan Street.

Maintain security by retaining a fenced public perimeter. The current policy of locking vehicular gates and not locking pedestrian gates should continue provided the level of vandalism remains minimal. Although vandalism is not a significant issue at this time, continue to monitor these detrimental activities.

Grave Markers
Understanding that the current city policy views these elements as private property, general conservation recommendations should be taken into consideration once a cemetery wide or individual stone restoration program is undertaken. It is recommended that the city reconsider it's current policy, particularly for significant grave markers and monuments.

Structural Elements
General restoration recommendations should be followed for structural elements including the Daveis Memorial Gate, tomb and vault structures, and stone and concrete perimeter retaining walls.

Fences and Gates
Retain the existing remaining iron perimeter fence and restore it. Replicate it and extend it along the Western Promenade edge. Install a modified version of that fence along the Vaughan Street edge. Maintain the existing chain link fence until it is replaced.

Much like the grave markers, the current city policy views fences, gates and edging at family plots as private property. It is recommended that the city reconsider it's current policy. Once a restoration program is undertaken, restore those that are in restorable condition and those that have a high percentage of existing remaining components. Those that are not to be restored should be left in situ until such time that they become a public safety hazard. At that time the remaining components should be removed.

Site Amenities
Provide a sign system for the cemetery including identification, regulatory, orientation, informational and interpretive signs.

As long as the cemetery is open to and heavily used by the public, trash receptacles should remain but be relocated outside the fenced perimeter, near the entrances where dogs are permitted.

A limited number of benches could be provided in non burial areas where they do not obstruct access or views to grave markers.

The flagpole should be removed because the responsible constituency does not maintain the flag, raise it and take it down.

Storm Water Management
Resolve erosion conditions on pathways by rebuilding pathways and providing proper and ongoing maintenance to eliminate concentrated overland flows both on and off pathways.

Utilities
Provide water supply for lawn restoration, plant establishment and the cleaning of grave markers and other stone elements. Do not add light fixtures inside the cemetery.

Administrative Management
Because of the detrimental impacts of the overuse of the cemetery caused by its use as an off leash area for dogs, implementation of the following is recommended.

Assuming a January 2001 adoption of this master plan, provide an alternative site for off leash dog use prior to 30 April 2001. After that facility is operational, restrict the area in Western Cemetery where dogs are allowed to pathways only. Require dogs to be on a 6 foot maximum length leash. Prohibit the use of the Daveis Memorial Gate as an entrance for dogs. In addition limit the hours of dog use to early morning and late afternoon to encourage use of the site by school children and others who may have concerns about having dogs in the space at the same time.

Monitor the cemetery for compliance and reevaluate every 6 months thereafter to determine the acceptability of continuing to allow dogs in the cemetery.

Amend the applicable city ordinances to reflect the above recommendations. Reexamine and post rules and regulations related to use of the cemetery at each pedestrian entrance.

Continue to work with veterans organizations to insure compliance with the recently passed state law requiring the placement of flags at each veteran grave site on Memorial Day.

Consider a coalition of advocacy groups interested in the future of Western Cemetery to assist with increasing public awareness and fund raising, particularly related to the restoration of lots.

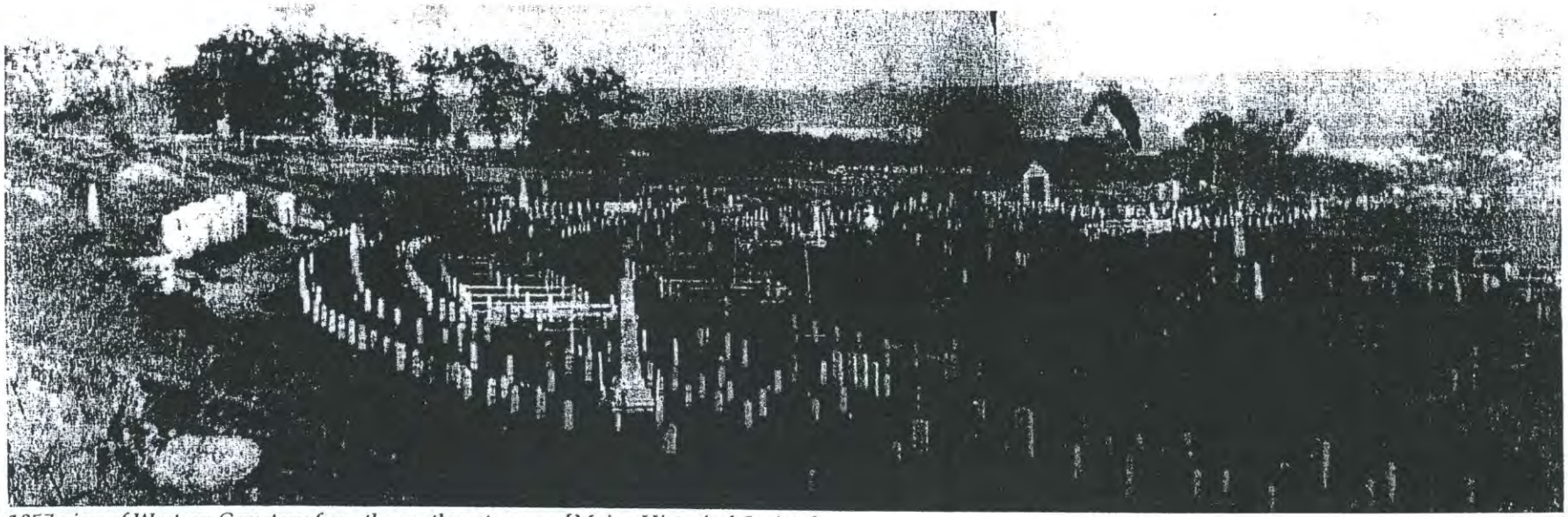
Maintenance Management
The quality of grounds maintenance has improved significantly in recent years, however, it is clear that additional staff positions are necessary. The landscape maintenance time requirements for Western Cemetery indicates that the city needs at least one full time and two seasonal positions on a year round basis to care for this one site, exclusive of administrative staff. Implementation of the maintenance recommendations and a capital improvement program is dependant upon the availability of additional staff. Without this staff or additional overtime hours, conditions in the cemetery will continue to deteriorate.

Consideration should be give to providing a dedicated crew for the care of the 8 historic inactive cemeteries, including Western Cemetery.

Periodic help for tree pruning and volunteer growth removal at Western Cemetery from city personnel and/or outside vendors will continue to be required. The long range reality is that trees require continual recurring work. With the exception of seasonal positions, unskilled labor for this work is not desirable. Expansion of staffing expertise in arboriculture and historic masonry will dramatically improve this historic cemetery as well as other historic city properties.

Future Needs
Completing the work recommended herein will make great improvements. The next step is to work with lot owners to restore the conditions of grave markers which is essential to complete the cared for appearance of the cemetery as a whole. Positive publicity on the significance of the cemetery will assist in this endeavor. A well written and illustrated guidebook for the cemetery would help stimulate public interest and provide increased public exposure which would in turn lead to greater use of this open space. The 175th anniversary of the establishment of the Vaughan family plot occurs in 2001. Western Cemetery as a whole will celebrate the same anniversary of its opening in the Fall of 2005. While the latter would be an ideal time to unveil such a publication, an earlier date would improve early prospects for needed improvements.

Sites that are taken care of tend to have high visibility and significance in the community. They are also often recognized as an important component of the local tourism industry. Recent broadened interest in the preservation of cultural landscapes has uncovered the wide ranging information and significance that these properties have to offer. As a potential tourism component for the city, this historic cemetery must be presented in a compelling and appropriate manner. It could be more highly utilized if it was associated with a trail or neighborhood walk that was publicized in tourism publications.



1857 view of Western Cemetery from the northwest corner [Maine Historical Society]

HISTORIC BACKGROUND

The purpose of this historic overview is to provide a sense of the major trends in cemetery development, and help readers identify where Western Cemetery falls in this spectrum. It is not intended to be a definitive history. There are several excellent contemporary publications on the historic development of burial grounds and cemeteries in the United States. Perhaps the most comprehensive is David Sloane's *The Last Great Necessity: Cemeteries in American History*. Others focus on specific periods of time like John Stilgoe's *Common Landscape of America, 1580-1845* and Blanche Linden-Ward's *Landscapes of Memory and Boston's Mount Auburn Cemetery*.

A summary of the development of burial places in Portland follows the historic overview with a more definitive history of the development and evolution of Western Cemetery.

THE EVOLUTION OF CEMETERY DESIGN

There is a significant difference between the sterile plainness of the old graveyards and the beautiful grounds and flowers of the charming Victorian cemeteries that followed. Sketches and etchings of the early 1800's tend to show burying grounds in a much more barren condition than photographs from the 1850's through the turn of the century. These later photographs illustrate the Victorian influence with more decorative elements and heavier, more mature plantings.

Puritan Graveyards

The 17th century Puritan graveyards like Portland's Eastern Cemetery were literally boneyards, simply a place of burial and often located on infertile or leftover land considered undesirable for other uses. They reflected the general austerity and difficulty of life during this period and were intentionally unwelcoming as Puritans wanted as little as possible to do with the place of the dead.

The earliest graveyards might house the graves of an extended family or a small community but typically had only a few graves, which often faced west towards the setting sun, but were otherwise laid out with little formal organization. The overall appearance was barren, with rough, uneven topography from frequent digging, poor grass cover, few trees or other plants and no attempt at embellishment. Pathways were few because space was at a premium. Because many of the early grave markers were not permanent, older graves were frequently disturbed by subsequent burials. Many graveyards began as pastures and continued as such after being developed as burying grounds, adding to the unkempt appearance. Few graveyards were carefully tended.

As towns grew beyond a few families, they began to establish municipal burial grounds. Some were located adjacent to meetinghouses or on commons, while others were situated in more isolated locations.

Over time, burial markers became more permanent, with a growing tradition of slate carving by skilled artisans like Joseph Lamson, James Foster and Henry Christian Geyer. These early grave markers represent some of America's first public art. Markers during this period were usually portal shaped, with images of winged skulls and hourglasses. Inscriptions typically read "Here lies the body of ...", reflecting the Puritan rejection of bodily resurrection.

Unitarian Burial Grounds

Towards the end of the 18th century, ideas about death and burial began to change as Unitarianism replaced rigid Puritan beliefs. Attitudes towards death and the afterlife became more ambivalent, reflecting a cautious optimism that became evident in the burial grounds of New England. Burials no longer faced west but were oriented east towards the rising sun. Gravestones remained mostly slate but the iconography changed to reflect the new optimism. Winged cherubs and angels offered more positive images and were soon supplemented by urns, willows and other symbols of hope. Inscriptions took on a different tone as well. "Dedicated to the memory of ..." implied a permanent legacy, even though the body was departed.

Burial grounds, by this time much larger than they were a century earlier, began to reflect the general orderliness that was valued in New England during the Federal period. They were no longer fields with a few scattered graves, but sites that contained rows of headstones, and sometimes footstones. The landscape remained rough and unadorned although the burial ground might have been enclosed by a fieldstone wall or wooden fence, particularly if it was used as pasture. There would have been little if any ornamental planting.

An early 19th century New England writer wrote:

> *"the burying place continues to be the most neglected spot in all the region, distinguished from other fields only by its leaning stones and the meanness of its enclosures, without a tree or shrub to take from it the air of utter desolation."*

The Rural Cemetery Movement

By the beginning of the 19th century, the population of many urban areas had increased dramatically. The increased urbanization fouled the air and water of urban areas with a resultant rise in epidemics like Small Pox, Diptheria, Scarlet Fever, Yellow Fever, Whooping Cough, Measles and Asiatic Cholera that caused high death rates.

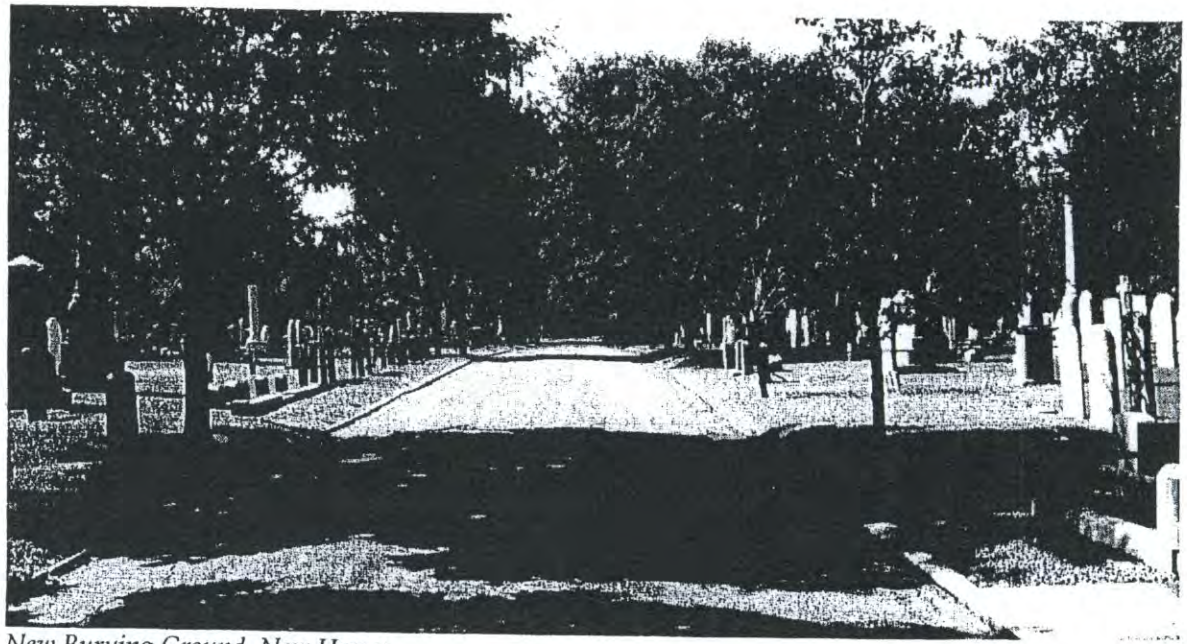
In 1822 Boston's burial grounds were in such a deplorable state that Mayor Josiah Quincy proposed to ban interments within the city limits. Existing urban burial grounds were in a deplorable state because of vandalism, abandonment and shuffling of locations. The burial grounds were seriously overcrowded with no space available for burials. It was believed that burial grounds were contaminating the water supply and that gases emanating from graves threatened public health. The 1830's and 1840's witnessed the closure of many of the nation's urban burial grounds because of neglect, abandonment and desecration.

> *We should be warned by the experience of other cities, which are now taking up the dead within their bounds, and cease to bury within the city. The health of the growing population demands this. No more burial should be permitted in the eastern cemetery, whose soil is now rank and reeking with the exhaltations of decaying bodies.*
> Portland Transcript, June 18, 1853

The overcrowding and unhealthy conditions of urban burial grounds and city churchyards led to the perceived need to remove burial grounds from urban centers. While Boston's problems were very dramatic, these issues were also reflected in other large cities and towns prompting a new approach to the design of burial grounds called the rural cemetery movement. Improvements in transportation made it possible to establish cemeteries in areas remote from crowded living conditions. These locations provided assurance that the dead could be interred and their remains would not be disturbed. Prior to that the dead were exhumed to make room for others in the tight confines of urban burial grounds or churchyards.

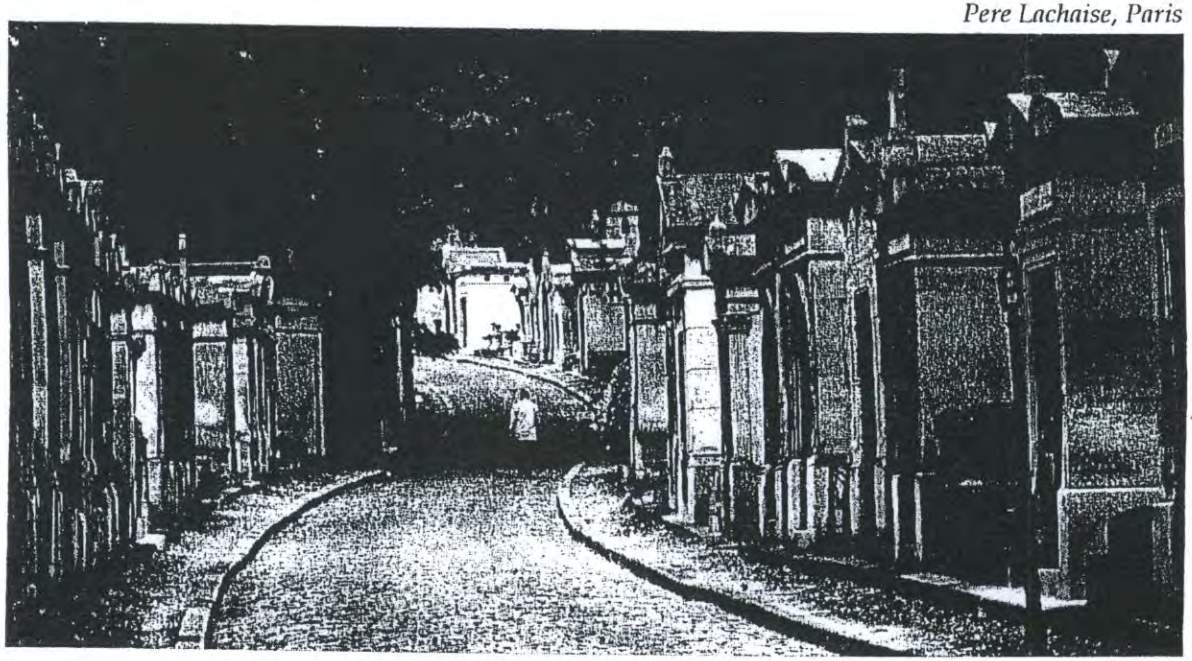
The rural cemetery movement was influenced by two important precedents, New Haven's New Burying Ground and Pere Lachaise in Paris.

New Haven's New Burying Ground, established in 1796, introduced the idea of a private nonsectarian burial ground free from church and municipal oversight. It was located far enough from the city so it would not be perceived as a public health risk and was laid out in a geometric grid with private family burial lots. It was an enclosed level field with pathways broad enough for carriages to pass and the area was planted with trees [Poplars and Willows]. The influence of this design, influenced the form and style of burying grounds to follow, including Portland's Western Cemetery.



New Burying Ground, New Haven

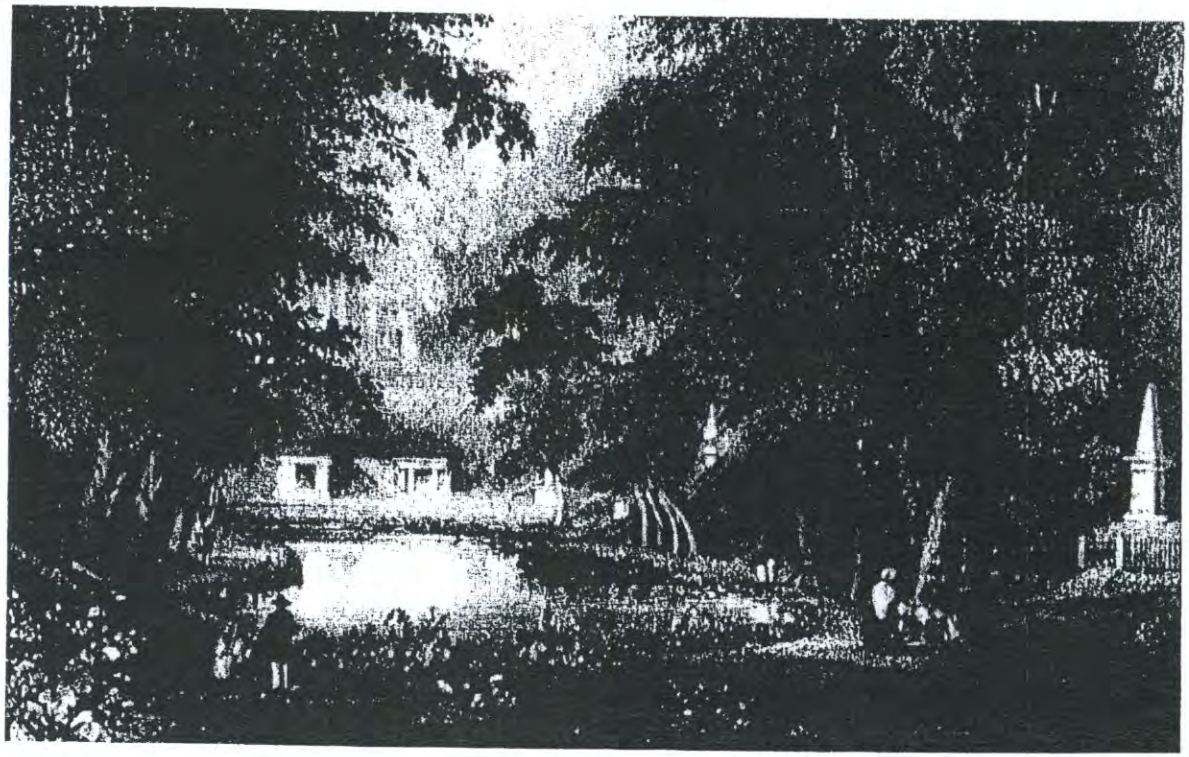
Pere Lachaise, Paris



The 1804 design of the new rural cemetery, Pere Lachaise in Paris, drew international acclaim. It too was located outside the city but unlike earlier precedents, it was deliberately laid out to reflect an Arcadian ideal, a landscape for mourning. The design borrowed elements from the English romantic landscape style of the period with formal and informal design elements. It was a picturesque commemorative landscape with paths separated from carriageways. The cemetery was unified by a curving drive which led visitors past the classical monuments and offered a sequence of carefully constructed views.

By the 1830's the three major cities in the United States [Boston, New York and Philadelphia] had established large cemeteries on sites carefully chosen for accessibility and natural beauty.

From these two early precedents, and the specific issues arising out of Boston's burial reform, came Mount Auburn Cemetery in Cambridge, established by the Massachusetts Horticultural Society in 1831. Key principles of Mount Auburn were that it was located outside the city, it was a place of permanent burial in family lots and it was nondenominational. It was the first American cemetery intended to emulate the romantic character of estate design and was widely imitated in the years that followed. Portland's Evergreen Cemetery is a prime example of a rural cemetery.



Mount Auburn Cemetery, Cambridge

Mount Auburn Cemetery and Pere Lachaise were created with a similar design intent and landscape aesthetic. But the two sites developed with very different results. Pere Lachaise became built up and congested with monuments and the French landscape expression of man's dominance over nature. It became a classic representation of mourning. At Mount Auburn natural expression dominated and came to represent a calming sense of hope and expectation in the hereafter. It has retained the careful balance of art and nature intended by its founders.

Pere Lachaise, Paris

The rural cemetery movement brought a new aesthetic to the design of other cemetery landscapes. Varied topography was desirable to create a landscape of complexity and visual interest. Broad vistas and picturesque landscapes were introduced to offer a view of the sublime in nature. Roads were circuitous and laid out to create a series of views as visitors moved through the landscape. Unlike earlier burial grounds, rural cemeteries were heavily planted. Some, like Mount Auburn, were even conceived of as arboretums. Enclosed vegetated spaces were provided for contemplation.

This new type of cemetery experience changed the public perception of burial grounds to such an extent that during the 1840's and 1850's tours of cemeteries became popular. For many these fashionable excursions combined pleasure with duty.

There was an important change in nomenclature as well. The older term "burial ground" was gradually replaced by the term "cemetery" which came from the Latin "to sleep". Even the names of the rural cemeteries [Greenlawn, Harmony Grove, Hope and Forest Hills] evoked their new ideals as places of consolation and inspiration.

Central to the concept of the rural cemetery was the idea of family lots where family members could be buried together in perpetuity. Absorbed in the world of the dead, Victorians lavished family plots with embellishment as an outward recognition of their sorrow. Lots were often edged with stone and/or defined by ornate iron fences or hedges. A large central family monument often supplanted individual grave markers. Families often took pleasure in maintaining their lots, which sometimes had furnishings for visitors.

Grave marker and memorial iconography and materials changed dramatically during the 19th century. Urns, willows and other symbols of solace gradually replaced earlier images. Upright slabs remained popular but there was growing use of three dimensional monuments. Classical symbols, particularly obelisks and columns, were popular early in the century. Iconography became less abstract and more sentimental, with figures like lambs and cherubs used for graves of children.

Monuments of the wealthy sometimes reflected aspects of a person's life or career. Some affluent families constructed tombs or mausoleums, often into a hillside. These structures also served to protect the deceased from grave robbery which was not unusual at that time.

Many cemeteries also built receiving tombs to house the bodies of those who died during the winter months until the ground was soft enough to dig. Hearse houses also became popular during the 19th century, as many cities and towns were now so large that the deceased could no longer be carried from their houses to the cemetery.

Influences of the Rural Cemetery Movement

Although many of the burial grounds were established prior to the rural cemetery movement, the influence of these new ideas was widely felt. Burial grounds were no longer considered desolate places to be avoided but places of solace to the living as well as permanent resting places for the dead. Many cemeteries developed after the 1830's integrated some aspects of the rural cemetery movement into their design. This new generation of cemeteries featured curvilinear roads and paths, rustic ponds, extensive plantings and more ornate architectural features. Some were laid out by the growing number of surveyors, gardeners and landscape architects who specialized in design of rural estates and cemeteries.

Many of the older burial grounds were also upgraded during the 19th century, giving them a more park like appearance. While many of the gravestones are older, the romantic image of a tree covered Colonial burial ground is largely a 19th century phenomenon. Municipal records indicate that fencing, tree planting and other improvements were common during this period. One of the most dramatic changes was the addition of vegetation as a normal part of the cemetery landscape. Trees were added to all of Boston's existing burial grounds within 15 years of the founding of Mount Auburn Cemetery. Decorative Victorian embellishments, including fencing, was another common addition to older burial grounds. Elaborate entry gates were often added, representing earthly gates to paradise.

Slate and sandstone markers were replaced with marble markers, granite obelisks and replicated statues. The whiteness of the marble markers was less somber than the earlier dark slate and more appropriate for positive feelings about the hereafter. While marble was comparatively easy to carve, its disadvantages became apparent over time. It was not as permanent and carvings began to erode. Improved quarrying technology made granite more readily available towards the end of the 19th century and it soon replaced marble as the preferred stone for grave markers.

Lawn-Park Cemeteries and Memorial Parks

After the Civil War, public interest focused less on cemeteries because newly established large parks provided better opportunities for recreation. There were also changing attitudes about the earlier emphasis on death. Evolving technology, most noticeably the advent of the lawnmower and vastly improved granite cutting techniques, were also strong influences.

The Lawn-Park cemetery image, exemplified by Spring Grove Cemetery in Cincinnati, Ohio, was influenced by the late 19th century City Beautiful movement and attempted to balance formalism with naturalism. Family monuments set in large lawn areas replaced individual markers. The clutter of the individually enclosed family lots was replaced with a more unified, park like landscape. Few clusters of trees or shrubs interrupted the expanses of lawn.

As the Lawn-Park style became more popular, the fences and hedges began to disappear in many older cemeteries as well, due partially to the difficulty of maintaining the enclosures and mowing around them and partially for aesthetic reasons. These elements, in very close proximity with each other, competed visually to the detriment of the broader cemetery experience.

Another late 19th century trend was an increase in the number of cemeteries associated with particular religious or ethnic groups, particularly in industrial cities. As the population became more diverse, many groups chose to establish their own cemeteries, often retaining distinctive features from their own culture.

Other groups acquired sections in municipal cemeteries where they could be buried together in a cemetery 'neighborhood' that would include those with whom they had lived. During the latter part of the 19th century, many municipal burial grounds assumed a commemorative and patriotic function, serving as the location of civic monuments and gatherings like Memorial Day ceremonies.

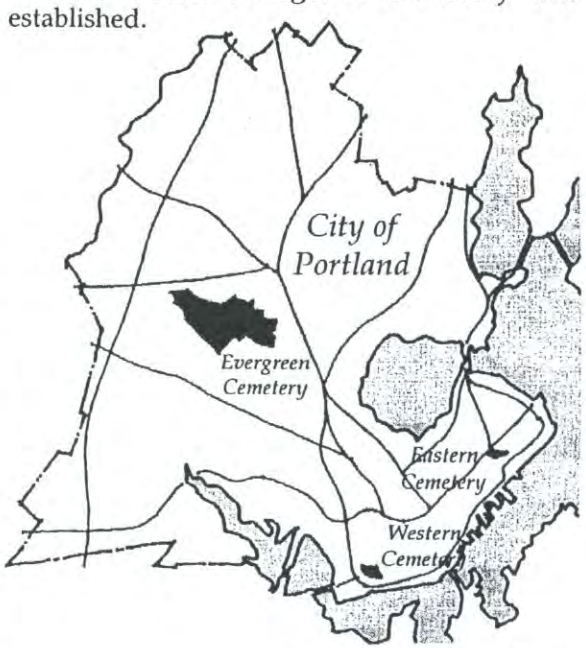
By the early 20th century, cemeteries became even more park like. The 1913 establishment of Forest Lawn Memorial Park in Glendale, California took the Lawn-Park cemetery to a new dimension as the use of flush burial markers placed a greater emphasis on lawns and created a sense of spaciousness and unity, reducing visual distractions. Plantings became a backdrop for large artistic memorials that emphasized community rather than individual.

Some of the older cemeteries adopted the new aesthetic of Forest Lawn for expansion areas. Since World War II many cemeteries favored efficiency of burial over aesthetic considerations. Uniform rows of straight plots, coupled with uniform or back to back placement of headstones of similar size and limited vegetative development, have left an impression of warehousing the dead.

CEMETERY DEVELOPMENT IN PORTLAND

Five major public burial grounds have been developed in Portland. Eastern Cemetery on Munjoy Hill, established c 1668, was the earliest burial place. For over 160 years a portion of it was the only common burial place in the territory that is now included in the city limits. The original site was small, but elevated, overlooking the city and the sea. In 1860 the active use of Eastern Cemetery ended. All burials there were suspended except in cases of close family ties where it was obvious that space was available.

Western Cemetery, on the south side of Bramhall's Hill, became Portland's second public burial ground. The city acquired about 15 acres in 1829 and the cemetery opened in 1830. Remote from the city center in a relatively rural setting, the site overlooked Fore River. It afforded a large space of quiet repose and served as Portland's primary burying ground from 1830 until sometime after Evergreen Cemetery was established.



Context Plan

Three major cemeteries were developed in the 1850's. Evergreen Cemetery, the first of the three, was created in 1852 as the tide of population moved west. It began with 55 acres and was modeled after the rural cemetery examples of Mount Auburn Cemetery, Laurel Hill and others. Mount Calvary Cemetery followed in South Portland as a Catholic burial ground when 6 acres was purchased for it in 1857. Catholics had been previously been buried in the southern part of Western Cemetery in an area set apart for their exclusive use. That area had become overcrowded. Forest City Cemetery followed in 1858. About 63 acres was purchased for it in Cape Elizabeth, now South Portland, from Samuel Haskel to provide less expensive graves.

THE DEVELOPMENT OF WESTERN CEMETERY

In June of 1788, a committee was appointed to investigate the availability of a suitable location for a new cemetery. In April of 1805 the town appropriated $2,000 for the purchase of land from David Ross for a new burial ground. In June of 1812 it was reported that the site was of doubtful suitability.

In December 1828, the Committee on Burying Grounds recommended purchasing another site. One year later about 15 acres [2/3 of the land area of the present cemetery] was acquired from the heirs of William Vaughan [Phebe Paine, Henry Merrill and Elizabeth Merrill]. The tract contained a small private cemetery, the Vaughan family burying ground, that was established in 1826. Located in the center of the present cemetery, about 100 feet square, it was retained by the Vaughan family along with a right of way, a 30 foot wide passageway about "3 rods" [this may actually have been 30 rods or 495'] in length to Vaughan Street.

In October of 1830 a public notice was issued that a new burial ground [South Cemetery, or Western Cemetery as it came to be known] was enclosed and ready for use. The public was also advised that the small part of Eastern Cemetery that yet remained unoccupied was fast filling up. With this sense of urgency, burials began in the central area called Woodbine Grove or Section E and perhaps Section L or the Strangers Ground, prior to the laying out of lots. The latter, adjacent to Vaughan Street, provided burial space for indigents and those from out of town.

In 1832 the City of Portland was incorporated, a Superintendent of Burials was appointed and a Joint Committee on Burial Grounds was established. Some plans for the layout of Western cemetery were completed that year.

In 1836 the initial acquisition of parcels was completed for Western Promenade from the Vaughan, Merrill and Little families. The drive was laid out on Western Promenade on the highest ground in Portland, 175 feet above sea level. Western Promenade was first laid out as a public walk and carriage way commanding the view over the unspoiled countryside and White Mountains beyond. Land acquisition included portions of the site initially purchased for Western Cemetery.

In the Spring of 1836, James Hall, a civil engineer, was engaged to prepare a plan for the layout of lots and avenues. The cemetery was graded that year and the City Council ordered that lots be 15' x 15' minimum and avenues at least 6' wide. Ranges were arranged alphabetically and each lot was designated by number. Lots were made available to citizens of Portland free of charge. Later that year, in October, an additional and major parcel was acquired for Western Cemetery from Henry Merrill.

In the Spring of 1839, City Council authorized the construction of a fence enclosure [presumably for the additional land that had been acquired that year] and the planting of shade trees. In January of 1840, the plan for Western Cemetery was completed by James Hall.

In 1841 the Maine legislature gave authority to towns to raise funds for cemeteries. William T. Vaughan transferred to the city the passageway and 3/4 of their family lot leaving it 50 feet square, but reserved all of the Norway [Red] Pines, not to be cut down or removed by either party.

On 1 July 1846 the city passed an ordinance that the Superintendent of Burials should assign to each and every family, on application, a family lot, not exceeding 15 feet front, agreeably to Hall's plan and subject to the Committee on Burying Grounds. The following year the Committee on Burying Grounds named avenues and paths.

Vaughan family plot with Woodbine Grove beyond

The 1852 Annual Report noted that Eastern Cemetery was "so much crowded that but few additional interments can be made. The Western Cemetery is almost all taken up, and the Council considered it absolutely necessary to secure additional grounds, to meet the wants of the city." That year the city purchased 55 acres for a rural cemetery that became Evergreen Cemetery.

The lot lines of Western Cemetery were surveyed in 1853. It has been noted that parts of avenues had been used for single unmarked burials and in many others more than one body had been placed in a single grave. The lost 1845 grave site of Clement Sawyer was noted as "buried at upper end of walk" and lost grave of Dennis O'Donnell, "buried side of bank".

In 1855 a stone wall was laid at the corner of Vaughan and Danforth Streets as well as installation of fencing, avenues and trees. In 1863 a minor property line adjustment at the north edge of Western Cemetery added land to the cemetery from Henry Merrill.

In the 4th of July fire of 1866, the only copy of Hall's plan was destroyed. Burial records seldom indicated the specific location of a grave, and less than half of the graves were marked in any way. The specific location of a number of plots [at least 6] in Woodbine Grove, Section E, was lost when the plan was destroyed.

The First Decline of Western Cemetery

Early in 1877 the city passed "An Ordinance Additional to the Ordinance on Cemeteries". It stated "that any non-resident representing a Portland family deceased and buried in any cemetery belonging to the city shall have the right to remove the same to Evergreen cemetery, and the treasurer shall give the deed of a lot to such non-resident on the same terms as to residents and tax-payers." Nathan Clifford and others were moved at some point after this ordinance was passed. This set the stage for the 1888 ordinance specifically targeting Western Cemetery.

The next year, 1878, William Goodwin, city civil engineer, noted that "Western Cemetery would soon be abandoned and that it could be subsequently utilized as a ramble". By 1880 it was evident that Western Cemetery must be phased out as a place of burial. The tool house was destroyed by fire in 1882 and 1885 and was replaced each time.

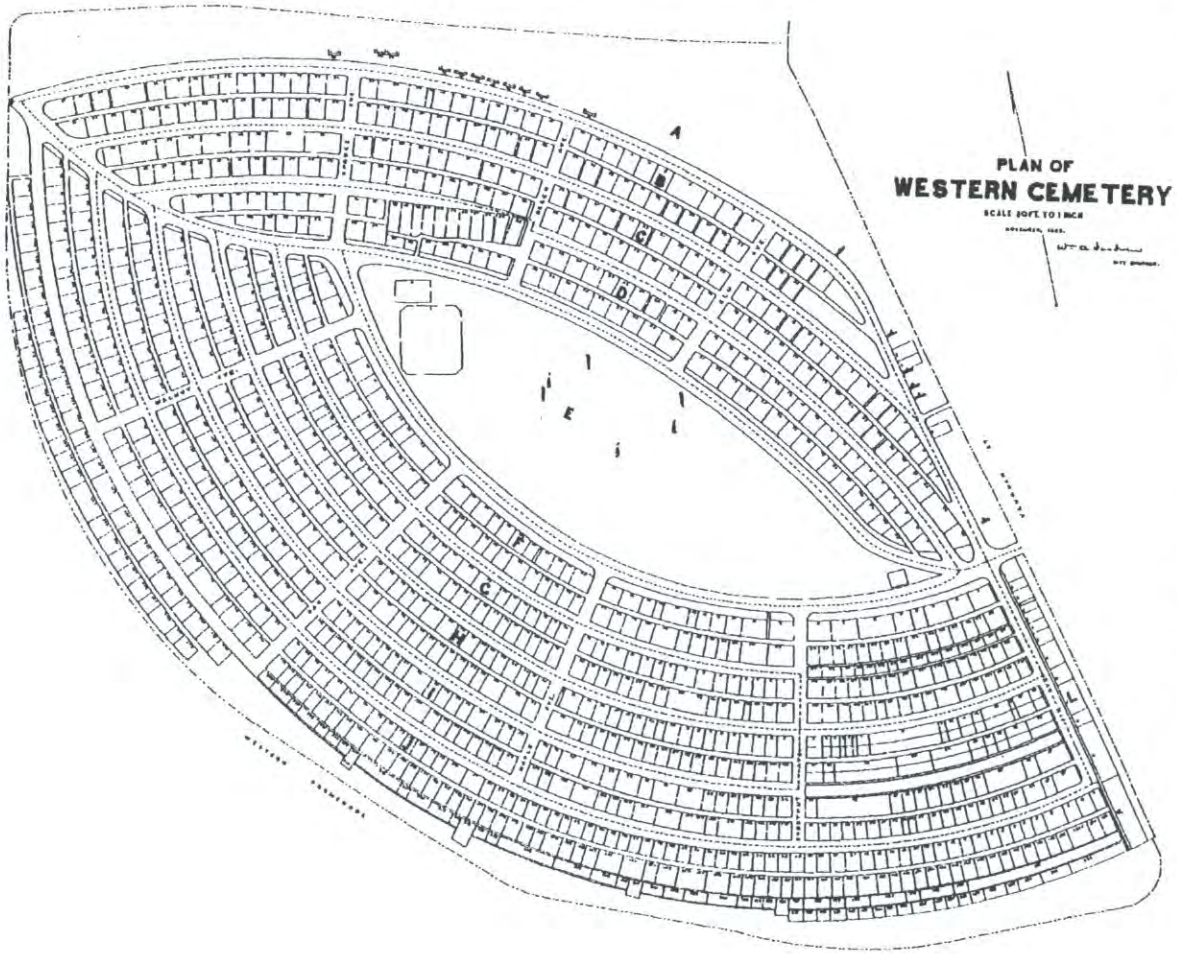
The mid 1880's marked the beginning of residential development along the north edge of the cemetery. In 1883 a minor property line adjustment disposed of a small amount of land to Ashbel Chaplin leaving approximately 12 acres for the cemetery. The same year the Chaplin-Small house was built at the corner of Western Promenade and Bowdoin Street. Four more houses followed on Bowdoin adjacent to the cemetery through 1887.

In March of 1888 the city passed "An Ordinance Relating to Western Cemetery". The cemetery was considered to be filled and the ordinance was meant to prevent the further assignment of burial plots at Western Cemetery and discourage burials there. It stated that "all interments of the dead in the Western Cemetery in Portland are hereby expressly forbidden, except upon the special written permission of the Board of Commissioners of Cemeteries and Public Grounds, first obtained therefor." Those who were natives or died residents of Portland and were owners or members of the immediate families of owners of private lots in that cemetery could exchange any lot to which the city has full title in Evergreen for any lot in Western free of cost upon condition of the immediate removal of the remains of the dead from such lot in Western.

After the passage of this ordinance Western Cemetery slowly went into disuse and disrepair. It was an awkward time with moved interments, misplaced burials and lost records. Some took advantage of the offer and moved to Evergreen Cemetery like US Senator William Pitt Fessenden, Sr. Those lots were then no longer privately owned, and became city responsibility. Not all lots were being taken care of by their owners [families of the deceased] and some became neglected and full of weed growth. Untended lots existed next to cared for lots. Even though there should have been no expectation of perpetual care by the city for the vast majority of lot owners, the city did provide some maintenance. Care, including grass cutting, had been previously provided by individual lot owners.

In 1889 William A. Goodwin, City Engineer, prepared two plans pertaining to Western Cemetery. One was a plan recording burial plot locations, avenues and paths. The other included the cemetery as part of the overall site proposal to move the state capitol to Portland. In this plan he treated the cemetery as a "ramble", following up on his 1878 conjecture as to what could happen to the cemetery after it was "abandoned".

1889 Record Plan of Western Cemetery by Goodwin



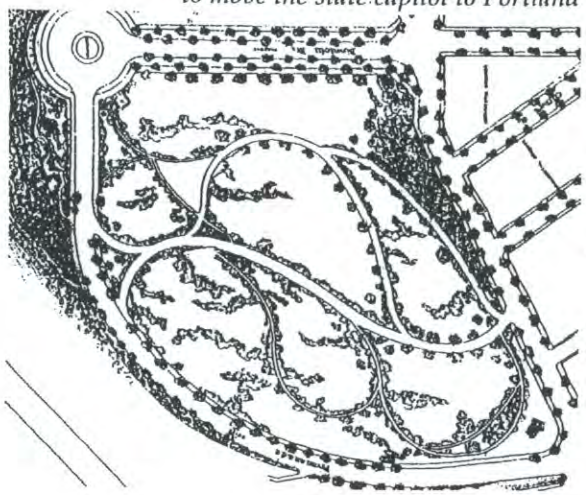
A Resurgence of Interest

In the Summer of 1897, a man was given charge of Eastern and Western Cemetery. In addition to regular maintenance, he also reset gravestones. The man was still full time at Eastern and Western Cemetery in 1900. By then he was also giving the history of lot owners to visitors. That year the trees were trimmed, under brush cleaned up, fences painted and old rotten fences removed from around lots where owners ceased to care for them at Western Cemetery.

Despite this effort Nathan Gould wrote two articles in the "Portland Transcript" in 1899 expounding upon the significance of Western Cemetery and criticizing the deplorable condition. He wrote "The Western Cemetery is the least cared for of any of our public grounds". The Commissioners responded to criticism regarding the care of the two old cemeteries in 1902, noting that the city has to repair lots at city expense and that there was no income to the city for expenditures on care. After more strong criticism, a special appropriation was made for cleaning up Western Cemetery in 1903.

In 1908 state legislation was amended allowing the power of taxation @ 1 mil. This enabled a substantial budget increase for 1910 when a 5' high iron fence was installed along the Western Promenade edge of Western Cemetery by Megquier & Jones Co. to replace an old wooden fence removed a few years ago. The installation was delayed somewhat because the record line cut into the cemetery. The line was relocated to clear all lots.

Detail of the Western Cemetery portion of Goodwin's 1889 proposal to move the state capitol to Portland



In 1911 the main entrance on Vaughan Street was improved, removing an old tool house, regrading roadways and planting new shrubs and trees at the entrance. An ornamental fountain, gift of Commissioner Edward A. Noyes, was placed at the end of the lawn near the entrance. The general appearance was greatly improved and lot owners were encouraged to regrade lots and put them in good condition.

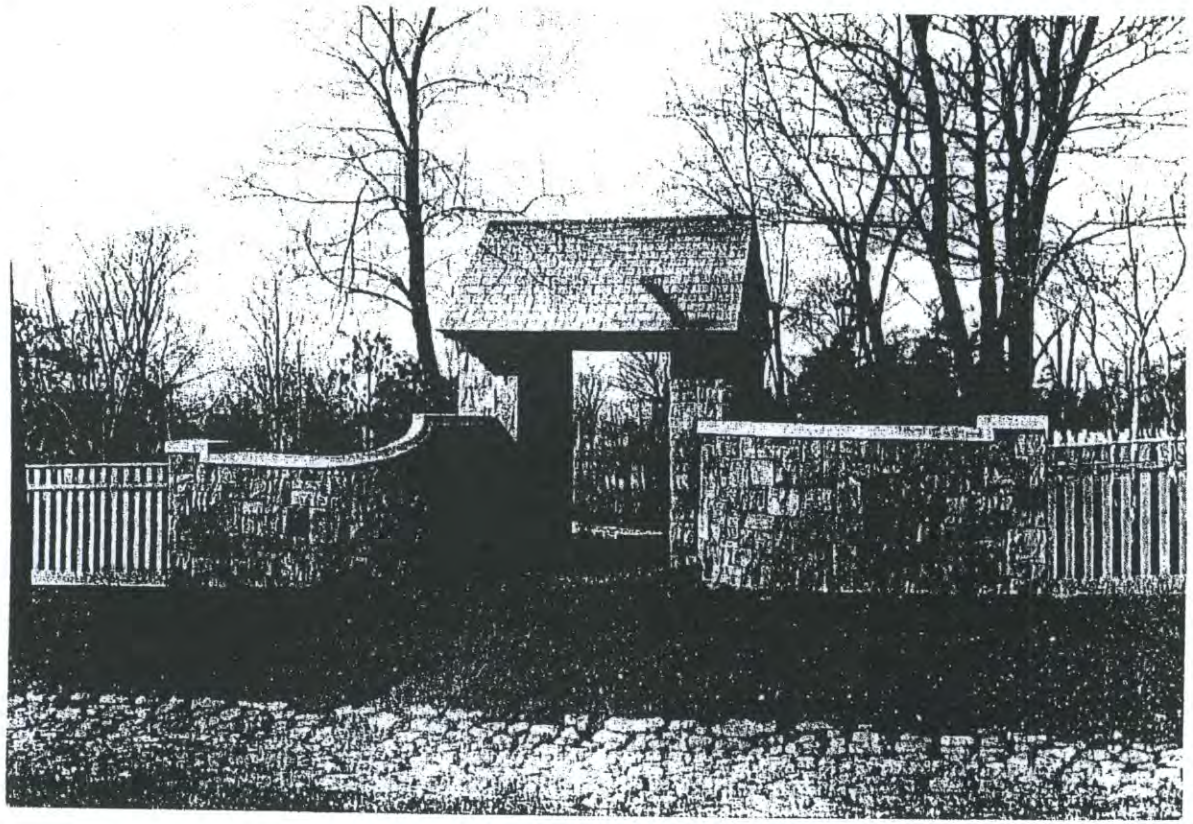
In the Spring of 1914, the family of the late Edward H. Daveis built and donated the Memorial Gateway opposite Clifford Street. It was considered a great convenience to the public in reaching the upper portion of the cemetery. At that time walks were laid out from the gateway, shrubs and vines set out on either side and about 25 trees were planted.

This interest kept up through 1919. During the Depression improvements began once again. The extensive remaking of neglected burial lots resulted in a more attractive appearance of the old cemetery from Western Promenade. The entrances to 7 tombs in Eastern and Western Cemetery were replanked and an Unemployed Relief Project at Western Cemetery provided the regrading, loaming and seeding of 4,120 SY of burial areas, roads, etc. Another 7,800 SY were graded but not seeded and 32 trees were planted.

The Second Decline of Western Cemetery

The next dark period in the history for the cemetery began about 1938 with a significant reduction in the maintenance budget. After removal of the iron fence to support the effort of World War II, a survey of city recreation needs in 1943 identified Western Cemetery as a logical site for a badly needed play area for the Western Promenade neighborhood. The notion of reuse of the cemetery resurfaced in 1968 when the Model Cities program considered converting the central area to a ball field surrounded by a chain link fence.

In 1950 vandalism was noted as a perennial problem in the cemetery. Neglect of the grounds was a topic of concern during the 1960's and through the 1980's. There were however some bright moments during this period of darkness. The trustees of the Mabel S. Daveis estate provided funds to restore the stone work and install a wrought iron gate at the entrance gateway in 1953. The following year they also provided funds for 1,400 feet of chain link fencing along Vaughan Street. Some renovation work was also done in 1972 by volunteers and some city funds. In 1993 the Friends of Western Cemetery was formed ostensibly to prevent dogs from being banned from the cemetery.



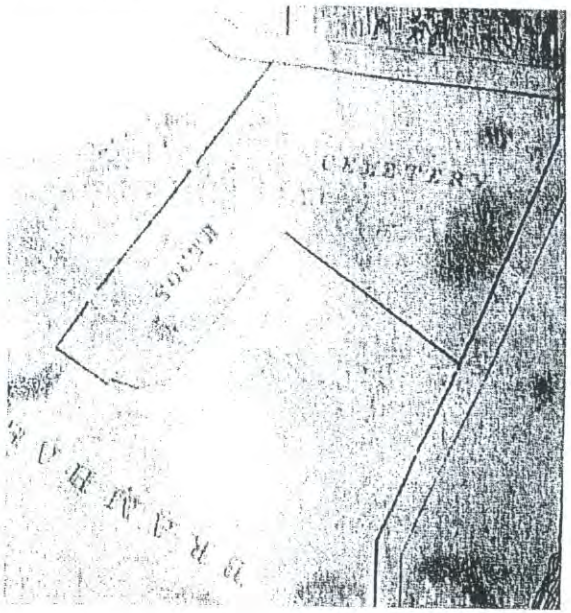
Daveis Memorial Gate [1915 Annual Report]

In recent years there has been another resurgence of interest in Western Cemetery as evidenced by some restoration work on the Daveis Memorial Gate and installation of a black granite memorial marking "The Catholic Ground".

DESIGN EVOLUTION OF WESTERN CEMETERY

The specific development sequence for the design and layout of the cemetery is unknown at this time. The loss of the original plan and many records of the time leads one to speculate as to the sequence of events and potential desires for the site. Land acquisition occurred from 1829 through 1839, with a few minor adjustments after that. While the cemetery was advertised as open in 1830, mention of the design of the site did not occur until 1832 and it continued through 1840, although the civil engineer and designer of record James Hall was not engaged until 1836.

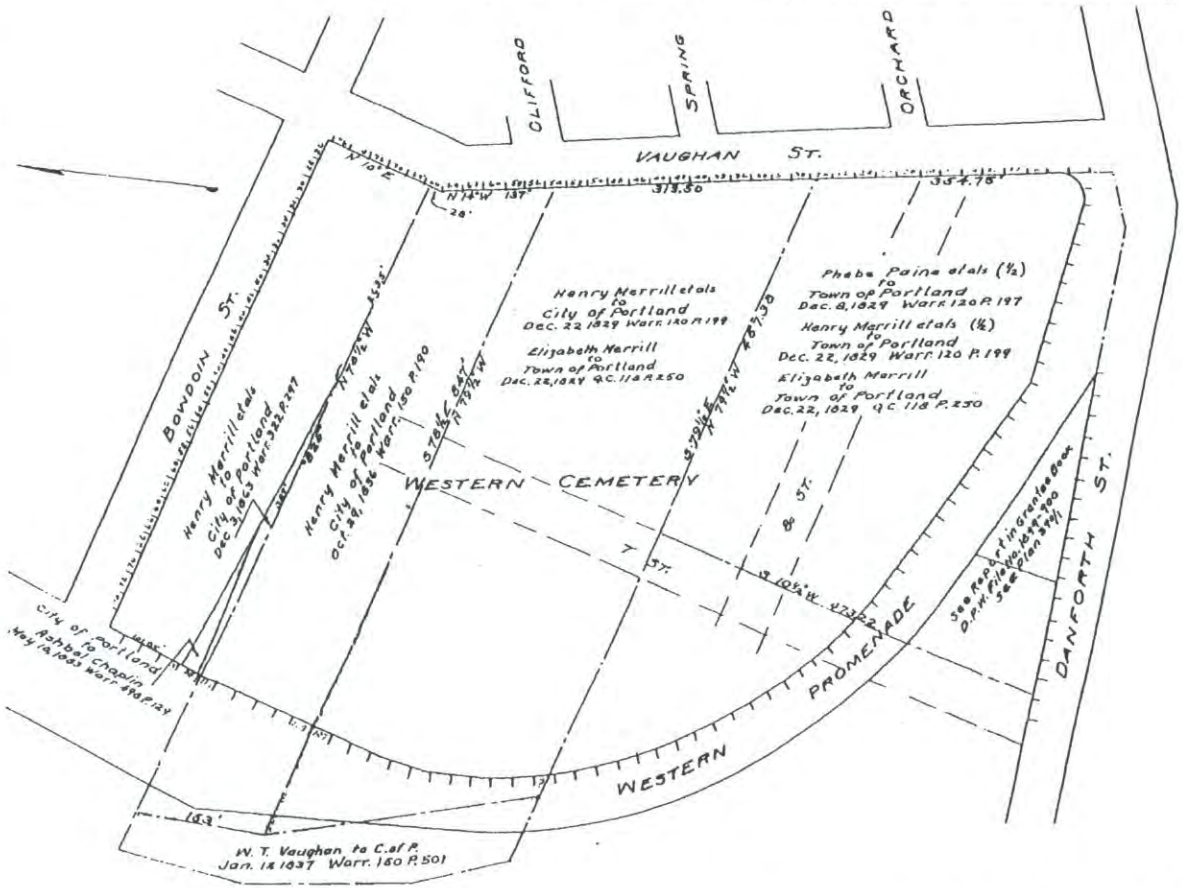
Detail of 1836 map of Portland



One must speculate that there was no plan when the initial burials occurred and that over time a plan evolved that assumed that certain parcels of land would be acquired to allow for completion of the plan. This becomes evident when examining an 1836 map of the city by John Cullum, where Western Cemetery is shown with an incomplete L shaped outline.

One could speculate that the original plan reserved the entire north edge or embankment for the development of continuous row of vaulted tombs. Most of the land is undeveloped and no other burial plots are indicated in that area. Most of the existing tombs were built from the mid 1840's to the mid 1850's. Few were built after the opening of Evergreen Cemetery whose popularity occurred at a critical juncture for Western Cemetery.

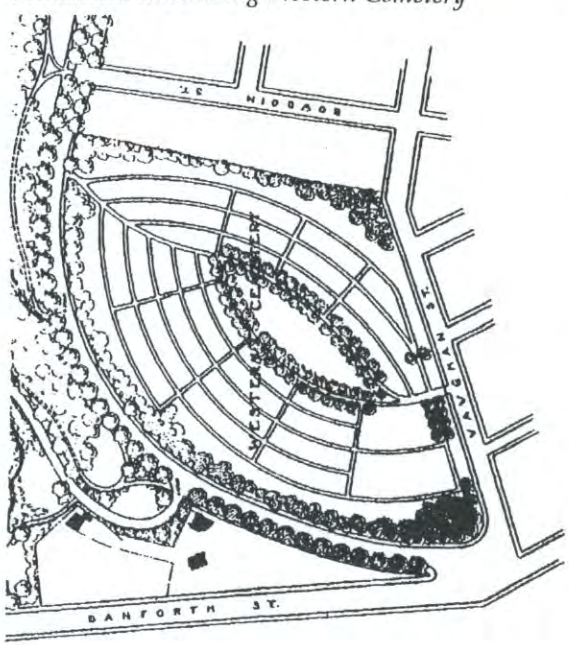
Undated plan indicating the acquisition of various parcels related to Western Cemetery

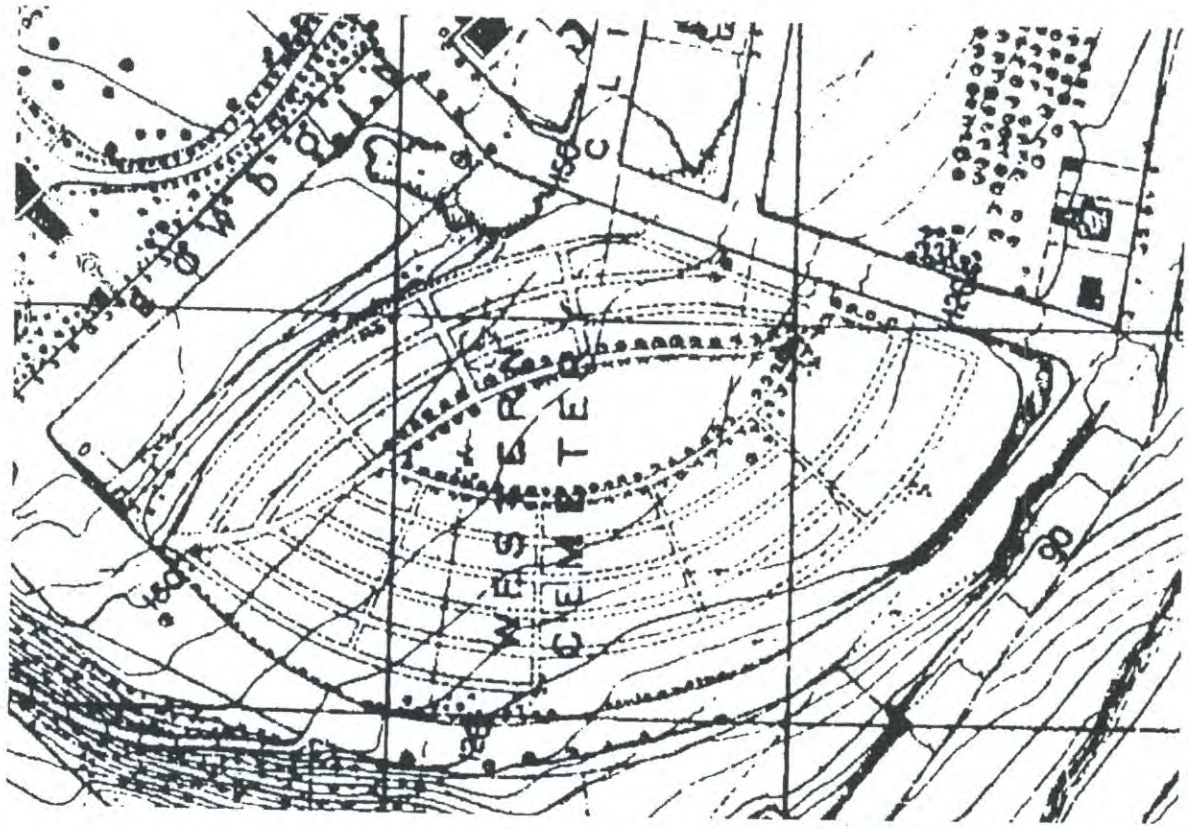


The layout of the underground tombs is not consistent with the layout of the immediate surrounding area, indicating that there may have been survey control problems at some points during the layout of the plots. In Section J, the outer row of burial plots along the Western Promenade edge is less regular, more haphazard and may have been added to the original plan at a later date, inadvertently reducing the width of the green space along Western Promenade.

The visual character of the cemetery and its surroundings has changed over time. As seen in the 1857 photograph, the site was relatively open with little vegetation. During this period the treatment of family plots and the "tool shed" were the dominant visual features of the site.

Detail of 1905 Olmsted Brothers plan for Western Promenade illustrating Western Cemetery





Detail of 1870 Survey of Portland

The 1870 survey illustrates that the planting of shade trees provided a double row of trees around Woodbine Grove and some buffer planting along Western Promenade. The expansion of this buffer planting was proposed along the north edge in the 1905 Olmsted Brothers plan for Western Promenade to provide some visual separation from the residential development that had occurred along that edge in the intervening time.

REMAINING HISTORIC FEATURES

The basic cemetery layout including the circulation system and burial plots is intact and remains the dominant historic feature of the site. The general topography or way the land was shaped to accommodate the use is also a strong remaining feature.

CHANGES TO THE ORIGINAL PLAN

The landscape character of Western Cemetery has changed significantly, primarily due to volunteer growth, recent additions and heavy use. The visual character has also been altered, particularly with the deterioration of grave markers and family plot edge treatment. The original wood fence has been removed and replaced with a chain link fence. The pedestrian entrance on Vaughan Street has changed. The early pedestrian entrance opposite Spring Street has disappeared and the Daveis Memorial Gateway opposite Clifford Street was added in 1914.

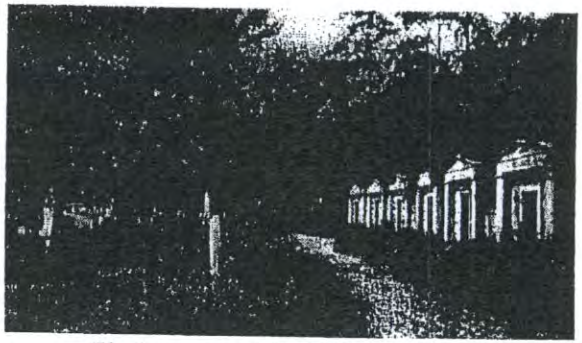
It also appears that some gravesites may have been grafted onto the 1840 plan, particularly the higher plot numbers in Section J on the southern edge of the cemetery adjacent to Western Promenade.

SIGNIFICANT PEOPLE BURIED IN WESTERN CEMETERY

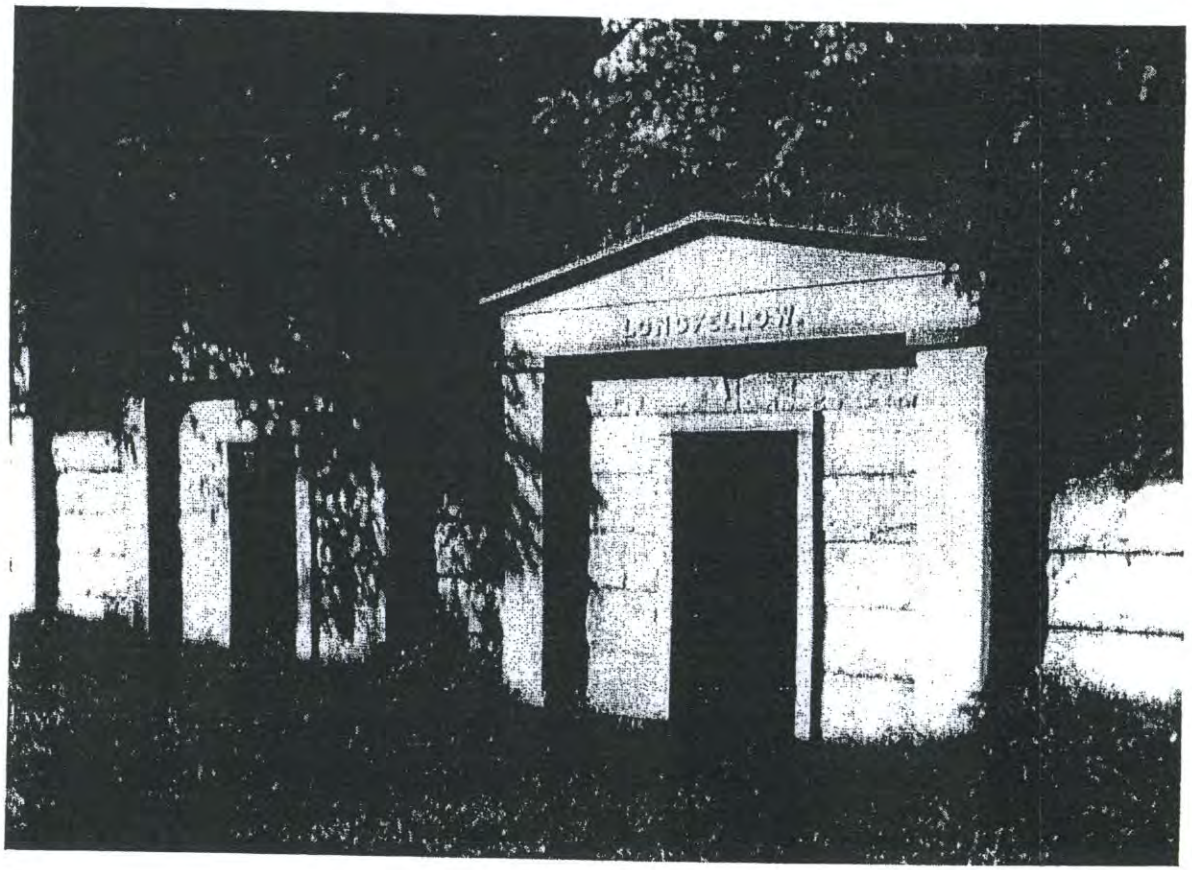
The following significant people were identified by writers knowledgable about Portland's history. They are listed in alphabetical and numerical order of burial plot.

A-11, Ten Broeck Tomb, Petrus Styvesant Ten Broeck, Rector of St. Paul's from 1819-1831, a famous and early clergyman in Portland for the Episcopal Diocese of Maine.

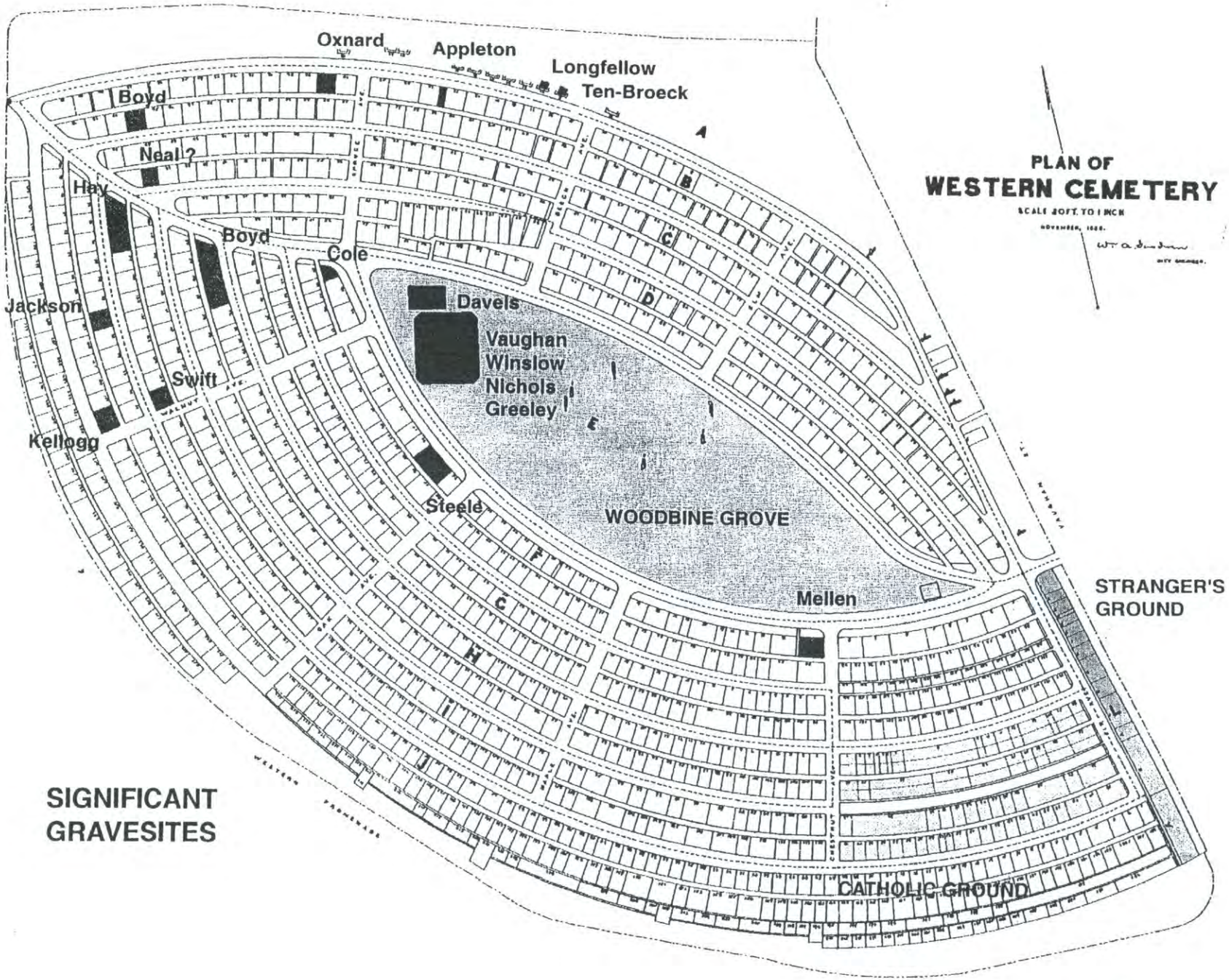
A-12, Longfellow Tomb, Stephen [1776-1849] and Zilpha Wadsworth [died 1851]Longfellow, Parents of the poet Longfellow. Stephen, a lawyer, represented the town in the General Court of Massachusetts, member of Congress and President of the Maine Historical Society. After his father's burial Longfellow wrote in his journal "It was sunset in the Western Cemetery on the hill overlooking the water. Farewell, Oh thou good man, thou excellent father!" He also noted: "On the hillside I saw the stones of the graveyard gleaming white; my father seemed to wave me a last adieu."



Fir Avenue and the Hillside Tombs, undated [Maine Historic Preservation Commission]



Longfellow Tomb, undated [Maine Historical Society]


PLAN OF
WESTERN CEMETERY
Oxnard
Appleton
Longfellow
Ten-Broeck
Boyd
Neal ?
Hay
Boyd
Cole
Jackson
Swift
Kellogg
Davels
Vaughan
Winslow
Nichols
Greeley
Steele
WOODBINE GROVE
Mellen
STRANGER'S GROUND
CATHOLIC GROUND
SIGNIFICANT GRAVESITES

B-22, John W. Appleton, marker not found.

B-27, Edward Oxnard, marble marker, toppled, eroded, fractured base.

C-44, Robert Southgate Boyd, plot contains eroding marble markers for Joel Hall and Sarah Hall.

C-46 or in a hillide tomb, John Neal [died 1876] established the first gymnasium in Portland, a clerk, writing and drawing master, trader, lawyer, journalist, early American poet, author and magazinest. No marker was found in C-46.

D-52, John D. Kinsman.

E-1, William Vaughan [died 1826] and family, Vaughan's Bridge, Vaughan Street, William T. Vaughan, son. The Vaughan plot is marked by 20 granite posts [8 broken]. It formerly had 2 iron rails [gone]. No Vaughan markers found.

E-1, Isaac Riley [died 1824]. Riley Township named for him.

E-1, Rev. Ichabod Nichols [died 1859], buried near Riley, 3rd pastor of the First Parish Church for half a century, President of the Maine Historical Society. Broken eroding marble marker.

E-1, Judge Nicolas Emery [died 1861?], Lawyer, represented city in legislature. Emery Street named for him.

E-1, Nathan Winslow, [died 1861], a noted Portland hardware merchant, established the canning business in the state, early abolitionist. Eroding but legible marble marker leaning against granite post.

E-1, Eleazer Greeley, toppled marble marker, broken with grass growing through cracks.

E-2, Charles Stewart Daveis, [died 1865], a 19th century diplomat and lawyer, one of most brilliant in Maine. [11 buried in this plot]

E-2, Edward H. Daveis [1818-1909], Prominent in the Portland Gas Light Company. Daveis Memorial Gate was erected in his memory. Marble, broken top of shaft.

F-9, Prentiss Mellen, [1764-1840], US Senator, Maine's first Chief Justice before Maine's separation from Massachusetts. His monument was erected by the Maine Bar Association. Marble stained, badly eroded on one side with inscriptions very difficult to read.

F-33, Eben Steele, broken marble marker.

F-42, Charles Octavius Cole [died 1858], Artist, Portland's renown portrait painter of the 1840's and 1850's, died of tuberculosis in 1858, marble marker with artist's pallet and brushes with inscription: "His name is engraved on the tablets of our hearts and we give him the laurels of genius and the immortelles of affection". Marker noted as broken, shattered and consigned to the dump in 1982, not found in 2000.

H-53, Lendall G. S. Boyd [H-53], not found.

I-117, Dr. Charles Hay, two piece marble marker on a granite base, marble eroding, difficult to read.

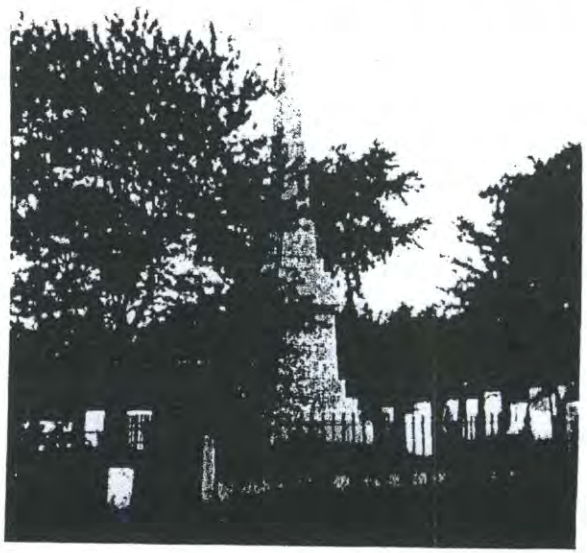
I-125, Joseph Swift, Marble obelisk badly eroded, top reset not square, set on a marble base with a two piece brownstone subbase.

J-86, Master Henry Jackson, [1783-1850], taught in the Grammar School for Boys for 50 years. Erected in 1851 by the pupils of Master Jackson's school as a tribute to their teacher. It is the largest monument in the cemetery. The granite obelisk was designed by Thomas J. Sparrow, architect of the Maine Charitable Mechanics Building [Congress and Casco Streets]. The plot has granite edging with an iron fence.

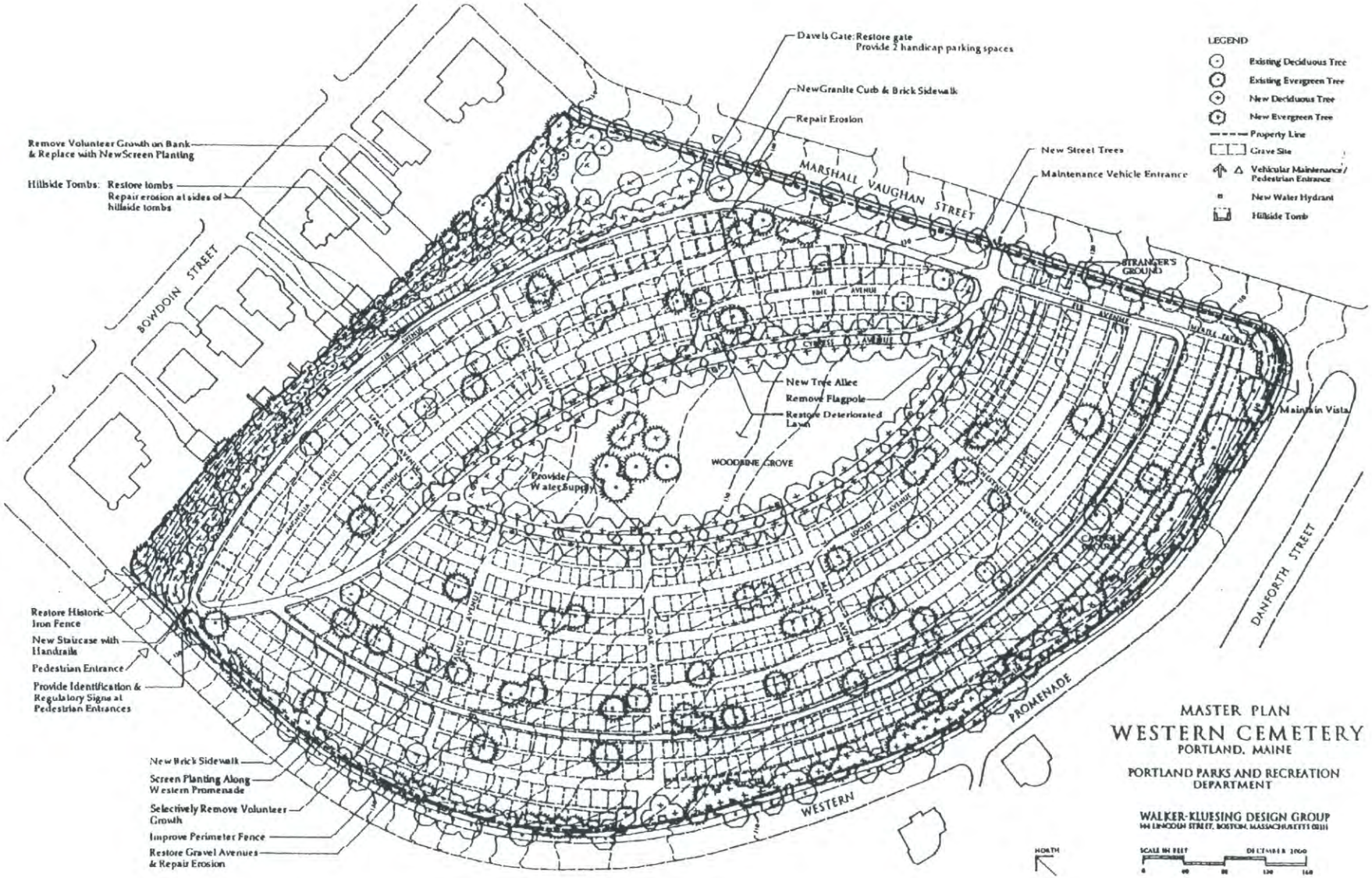
J-108, Rev. Elijah Kellogg [died 1842], Revolutionary War veteran, organized the Second Parish Church, also pastor of the Third Parish. Marker badly eroded. [15 buried in this plot]

J-108, son Elijah Kellogg [1813-1901], local novelist and minister.

Master Jackson obelisk, undated [Maine Historical Society]



LEGEND
Existing Deciduous Tree
Existing Evergreen Tree
Existing Volunteer Growth
Tree Inventory Number
Property Line
Grave Site
Hillside Tomb
Existing Contour
TREE ABBREVIATIONS
AP Austrian Pine
BC Black Cherry
BL Black Locust
BS Blue Spruce
CM Crimson Maple
FC Flowering Cherry
LA Larch
LL Littleleaf Linden
M Maple Sp.
NM Norway Maple
PP Pitch Pine
RM Red Maple
RO Red Oak
RP Red Pine
SM Sugar Maple
WC White Cedar
WP White Pine
WS White Spruce
BOWDOIN STREET
MARSHALL VAUGHAN STREET
DANFORTH STREET
WESTERN PROMENADE
Flagpole
NORTH
EXISTING CONDITIONS PLAN
WESTERN CEMETERY
PORTLAND, MAINE
PORTLAND PARKS AND RECREATION DEPARTMENT
WALKER-KLUESING DESIGN GROUP


Dawes Gate: Restore gate
Provide 2 handicap parking spaces
New Granite Curb & Brick Sidewalk
Repair Erosion
New Street Trees
Maintenance Vehicle Entrance
Remove Volunteer Growth on Bank & Replace with New Screen Planting
Hillside Tombs: Restore tombs
Repair erosion at sides of hillside tombs
MARSHALL VAUGHAN STREET
BOWDOIN STREET
STRANGER'S GROUND
New Tree Allee
Remove Flagpole
Restore Deteriorated Lawn
WOODBINE GROVE
Provide Water Supply
Maintain Vista
DANFORTH STREET
Restore Historic Iron Fence
New Staircase with Handrails
Pedestrian Entrance
Provide Identification & Regulatory Signs at Pedestrian Entrances
New Brick Sidewalk
Screen Planting Along Western Promenade
Selectively Remove Volunteer Growth
Improve Perimeter Fence
Restore Gravel Avenues & Repair Erosion
WESTERN
PROMENADE
LEGEND
Existing Deciduous Tree
Existing Evergreen Tree
New Deciduous Tree
New Evergreen Tree
Property Line
Grave Site
Vehicular Maintenance / Pedestrian Entrance
New Water Hydrant
Hillside Tomb
MASTER PLAN
WESTERN CEMETERY
PORTLAND, MAINE
PORTLAND PARKS AND RECREATION DEPARTMENT
WALKER-KLUESING DESIGN GROUP
NORTH

The Western Cemetery is the least cared for of any of our public grounds.
Nathan Gould, "Portland - Old and New", Portland Transcript, February 22, 1899

Vaughan family plot

MASTER PLAN RECOMMENDATIONS

During the spring and summer of 2000 an on site investigation, analysis and evaluation of the existing conditions at Western Cemetery was conducted. Recommendations were developed during the summer and fall in conjunction with the master planning committee.

OVERALL CONCEPT

The primary goal is to recreate the image of Western Cemetery within the broad period of significance between 1826, when the Vaughan family plot was established on the site of the future Western cemetery, and 1888 when the city considered the cemetery effectively full and passed an ordinance to discourage further burials there. The overall goal for the site is rehabilitation, recreating the image of the historic cemetery in as much as possible, with the current loss of historic fabric, while adapting selected areas to accommodate existing and proposed changed needs and conditions using design principles established in the historic plan.

Achievement of the overall concept will require restoration of the historic character of the period of emphasis with removal of incongruent elements, vegetative work and site improvements, resolving pedestrian circulation and control, and restoring/reconstructing critical components for educational and interpretive purposes.

Recommendations regarding use and maintenance issues are covered in the administrative and maintenance management sections that follow.

The goals that follow describe broad aims or ideals for achievement.

Develop a master plan and an implementation plan that can be used as a guide for both short and long term planning and improvements.

Recreate the pastoral qualities of the historic landscape design while solving the contemporary problems of public safety, security, appropriateness of use, maintenance, management and preservation.

Recommend changes to existing facilities, management policies and maintenance practices that are inconsistent with the original landscape design intent and/or contemporary cemetery needs.

Increase the quality and quantity of passive recreation opportunities.

Each major component of the master plan is presented and discussed in three parts: the Issue; Objectives to be resolved in achieving established goals for the cemetery; and Recommendations.

LANDSCAPE CHARACTER, LAWNS AND VEGETATION

Issues

Landscape Character

Laid out by a civil engineer in a simple geometric pattern, the landscape character of the cemetery appears to have been influenced by the 1796 design of New Haven's New Burying Ground. Land form development, a leveled or smoothed off site, and designated space for vegetative treatment relates to the New Haven style. Over time, the overall vegetative character and treatment of family plots may have been influenced by the later rural cemetery movement. The variety of vegetative species today is somewhat limited in relation to the rural cemetery style and the disposition of these plants and use of lower level elements is inconsistent with that style.

Written evidence indicates that some mature Red Pines existed on the site in 1826 and it was agreed that they should remain when the Vaughan family transferred about 1/4 acre of their family plot to the city in 1841. An 1857 photograph shows limited landscape development. The site was essentially open with views to the adjacent farmland and Fore River. It had been essentially cleared, with no mature trees. Trees were noted as being planted in 1851, 1856 and 1858, and funds were spent for watering trees in 1857. No trees are evident in the photograph, most likely because they were installed at a very small size as was typical at that time. Shrubbery was noted as being planted in the cemetery from 1879 to 1885. Other plants were added in 1888. The first notation of flowers in the cemetery occurred in 1890.

An 1870 map of Portland indicates a double row of trees lining the avenues immediately adjacent to the central oval, a few trees on the Vaughan Street side and some scattered plants along the Western promenade edge. No other trees to speak of are indicated inside the cemetery in that plan. The 1876 birds eye view of the City by Joseph Warner indicates scattered trees throughout with no sense of order. It is probable that this was artistic license rather than a true depiction of the cemetery landscape.

A plan was prepared by William Goodwin in 1889 for a proposed site for the new state capitol that included the Western Cemetery site as part of the overall development. The plan proposed a change to the layout of the cemetery site, treating it as the ramble he envisioned in 1878 and ignoring the fact that it was an existing cemetery. The plan was not implemented as capitol remained in Augusta and did not move to Portland. The cemetery landscape was cared for at this time as trees were trimmed and the underbrush was cleaned up in 1900.

The 1905 Olmsted Brothers Plan for Western Promenade included Western Cemetery as part of the plan. Paths immediately adjacent to the central oval shaped open space were lined with a double row of deciduous shade trees on each side of the path, much like the 1870 plan. The plan also indicated a buffer planting along the perimeter edges except for the Vaughan Street edge which was relatively open.

New shrubs and trees were planted over lawn at the entrance in 1911. When the Daveis Memorial Gate was built in 1914, shrubs and vines were set out on either side and about 25 trees were planted. Over the next three years 18 trees, 64 shrubs and two flower beds were planted, and trees and shrubs were trimmed. In 1933, during the Depression, 32 additional trees were planted.

Today views of the Fore River have effectively been lost due to the development and maturation of vegetation primarily on the opposite side of Western Promenade. A narrow glimpse remains with a view due south parallel and adjacent to Vaughan Street. Inside the cemetery there is a variety of heavily vegetated areas and open lawn areas with a relatively even mixture of evergreen and deciduous trees scattered throughout. The central oval has a broad, open feeling. It was reported that the lower limbs of trees inside most of the cemetery were removed several years ago, improving visibility throughout. This came to be seen as a positive contribution.

The more mature trees tend to be located in and adjacent to Woodbine Grove, the central oval area, and along the perimeter. Newer plantings of Linden and Maple as well as some smaller flowering trees [Cherry and Crabapple] border the path around Woodbine Grove. Lower level vegetation found includes Lilac, Japanese Barberry, Honeysuckle, Euonymous, Periwinkle and Virginia Creeper.

The following inventory includes all trees except for the bulk of volunteer growth on the north bank.

Deciduous Trees	[46%]
Larch	3
Littleleaf Linden	12
Black Locust	131
Crimson Maple	4
Norway Maple	6
Red Maple	1
Sugar Maple	7
Maple species	4
Red Oak	10
Black Cherry	20
Cherry and Crabapple	7
	205

Evergreen Trees	[54%]
White Cedar	1
Austrian Pine	4
Pitch Pine	218
Red Pine	4
White Pine	2
Blue Spruce	9
White Spruce	1
	239

The irregular topography in the area near the northeast corner gives the impression that it may have once been a borrow pit for work inside the cemetery. There are also boulders on the north slope similar to those seen in the 1857 photograph. This indicates that few improvements were made to this slope during the development of the cemetery other than the construction of the hillside tombs from the mid 1840's to mid 1850's. This space may have been reserved for additional tombs that were never realized once Evergreen Cemetery became popular.

Volunteer Growth

Volunteer growth represents about 80% of the vegetation on the site. It was not planted, but rather introduced by wind, birds or animals, then self seeded. It tends to be short lived, weak wooded and ultimately a hazard to historic resources. Predominant species found include Pitch Pine [49% of the total vegetation], Black Locust [30%], Black Cherry and Norway Maple. This does not include the north slope which is virtually all volunteer growth.

Numerous groves of Pitch Pine are located in sections south and north of the oval. Groves of Black Locusts are located along the path that parallels Vaughan Street. Many of the Black Cherry have grown into large, mature shade trees.

The slope next to Bowdoin Street was cleared in 1911 and all dead wood was removed. Today, thick, predominantly deciduous, volunteer growth is also present on the bank along the north property line. It was reported that much of this growth was removed 5 to 8 years ago and that it caused a negative reaction from abutters. Today the predominant species in that area are Norway Maple, Black Locust and Black Cherry, some about 60' high. There are also a few Pitch Pine as well as White Birch and Oak.

Lawns

Lawn has been the traditional ground cover in the cemetery. It has had varying degrees of care over the years. Hay was sold from Western Cemetery from 1872 to 1875. Cutting of the grass was noted in 1886-87, 1891-92, 1917, 1918 and 1919. Manure was spread on lawns in 1918.

The lawns are in generally poor condition throughout the cemetery today with a large, barren area in Woodbine Grove. Exposed soil areas are also evident in lawn areas on the south side of the cemetery. One is located at the bottom of an eroded swath running down the bank from a long run of eroded pathway. Erosion is evident along some of the major gravel avenues and portions of the north bank. Little moss is evident.

Soils

The soil type in the cemetery is identified by the USDA as a Hinckley gravely, sandy loam (HlB) with slopes of 3 to 8%. The Hinckley series are deep, excessively drained soils. Permeability is very rapid and available water capacity is very low. This soil does not retain fertilizer well, so large applications are necessary. This soil is typically found or associated with an old abandoned field with Red Pine.

Topsoil samples were taken on 20 May from 4 locations and combined into a single sample for testing. Subsoils tend to be sandy and consistent with USDA findings, indicating that local on site materials were used with excavation and backfill during the development of the cemetery. Topsoil depths varied from 3" to 7" as follows: about 3" in the center of the large oval; about 5" toward the northwest in a narrow path near plot C-40; about 7" toward the west in a narrow path near plot J-72; and about 7" toward the southeast in a narrow path near plot I 32.

Testing of the topsoil yielded the following results. The textural analysis found that it is a coarse sandy loam. The soil is acidic with a pH of 4.9 and buffer pH of 6.0, as is typical of most New England soils. Organic matter content is 9.6%. This is relatively high, offering a good growing medium in this respect. Micronutrient levels are normal. Soluble salt and lead levels are low. Extractable aluminum levels are high, but correctable.

Objectives

To use vegetation to restore the scenery and historic style intended for the cemetery.

To enhance scenic opportunities inside the cemetery and as seen from adjacent streets.

To create healthy, long lived plant communities within the cemetery.

To develop an ongoing vegetation management program.

Recommendations

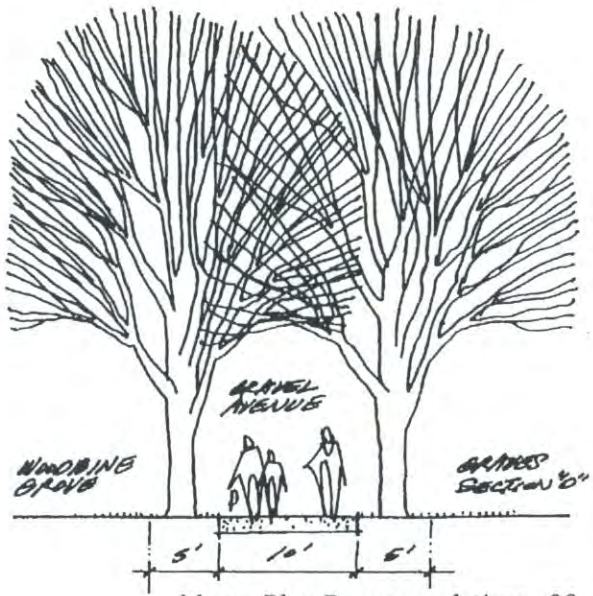
Landscape Character

It is generally recommended to return the landscape character to that shown in the 1870 survey and as modified by the 1905 Olmsted plan which includes heavier perimeter planting, particularly along the north slope to provide a visual buffer for the adjacent residential development. Volunteer growth should be removed on an incremental basis beginning with specific trees that present a clear and present danger to the historic resources. Given the strong public sentiment for the preservation of vegetation, consideration could be given to leaving some better volunteer specimens in locations in the interior of the cemetery where they present no hazard.

Along the north embankment, begin with the removal of volunteer and other vegetation in the immediate proximity of the vaulted tombs. Replant as necessary in this area to control erosion on the embankment and to maintain a vegetated buffer. Over time, continue the removal of volunteer species and replace with more appropriate and long lived selections with a mixture of evergreen and deciduous species.

Some concerns have been raised about the potential loss of the sound attenuation benefits provided by the volunteer growth. At the scale of Western Cemetery, vegetation provides limited benefits in regard to noise reduction. Much more benefit is provided by the earth mass of Bramhall's Hill and the cemetery's location on top of the hill. In addition, the proposed treatment includes the addition of about as many trees as the quantity recommended for removal.

Gravel avenue with allee of shade trees adjacent to Woodbine Grove



Species Selection Considerations

A specific planting plan should be developed prior to planting additional trees. The selection of tree species is an important consideration in terms of appropriateness, maintenance requirements and protection of historic artifacts. Botanic diversity is an important consideration. Large scale monocultures are generally not recommended because of experience with devastating diseases like Dutch Elm Disease, White Pine Blister Rust and Chestnut Blight.

Replacement trees should be limited to areas that do not interfere with grave markers, paths, drives, fences and walls. The preference is to use large native shade trees like Sugar Maple and Oak. Consideration should be given to the reintroduction of improved disease resistant species of Elm and the use of non-natives like Katsuratree.

New trees planted adjacent to Woodbine Grove and along Vaughan Street should be at least 3" caliper. New buffer plantings along Western Promenade and the north edge can be smaller.

Evergreen trees add winter interest and could be used provided they are limbed up to maintain sight lines and a sense of security for visitors. Evergreens also offer the symbolic connotation of immortality. Some Red Pines should remain in Woodbine Grove at least as a symbolic gesture to the desires of the Vaughan family.

Acid rain has been monitored for many years and it is suspected to be affecting Sugar Maples, causing Maple decline. Traditionally, Maples have been considered to be long lived trees where narrow tree pits, road salt and drought have not been a problem.

Trees that require increased maintenance or present potential hazards to historic resources, like Poplar and Willow, should be used sparingly. Trees that are subject to storm damage should not be planted in the historic burying grounds and cemeteries because of the potential damage to historic artifacts with falling limbs, etc. This includes Ailanthus, Ash, Black Cherry, Cucumbertree Magnolia, Poplar, Red Maple, Silver Maple, Sophora, Tuliptree and Willow. White Pine, White Ash and Tuliptrees are also struck more often by lighting than most other trees.

Trees that grow fast like Willow, Poplar and White Pine break up easily and have one of the highest failure rates. Most White Pines have codominant branching from White Pine Weevil invasion when they were young. This type of growth is prone to large branch failure facilitating the entrance of decay within main stems.

Trees that are subject to wind throw have had their surface roots damaged from vehicles or lawn equipment. Root failure occurs more readily on trees that have root decay or other root problems. Up to 75% of all tree failures are due to root problems. Tall trees with large upper crowns are more subject to wind throw with root loss. Trees that have vertical cracks and decay throughout the lower and upper stems are prone to failure.

Trees with a dense surface feeding root system make it difficult to grow turf in the same area and should also be avoided. These include Beech, Honeylocust, Linden, Norway Maple, Poplar and Willow. Trees that have annual problems with insects such as aphids on Lindens should be avoided because of the staining and mess it causes on the grave markers.

Trees that create significant litter due to fruit and/or seed production should also be used sparingly because of the additional cleanup work required by maintenance staff. This includes Ash, Black Cherry, Catalpa, Corktree, Ginkgo, Horsechestnut, Mulberry, Planetree and Sweetgum. Many fruits cause staining on grave markers, pavements, walls, etc. Flowering trees of choice should have small fruits and be disease resistant to leaf and stem disease like fire blight, leaf spot and apple scab. Crabapple and Red Cedar should not be on the same site unless disease resistant varieties are used. Diseases, causing leaf and stem damage, can be devastating when both hosts are present.

The dropping of aphid excretion or 'sap' on gravestones and tombs is also a particular problem when the preservation of gravestones is of prime importance. Linden and Norway Maple should be avoided because of this undesirable trait. Both also create a dense shade that inhibits the establishment of a stabilizing ground cover beneath them. Their tendency to develop basal sprouts is unattractive and blocks views. Structural problems and heavy pruning requirements for Zelkovas to allow sufficient light penetration for lawn development should limit the use of this tree.

Lawns

All lawn areas should be restored. This is particularly necessary in the Woodbine Grove area where much of the surface has been disturbed. After aeration to alleviate compacted conditions in this area, topsoil should be added before seeding to restore a proper depth of 6 inches.

Soils

In general, the soils in the cemetery have a low pH and are acidic in nature. There are also high levels of extractable aluminum. Both conditions can be corrected with an application of limestone. For established turfgrass, apply fertilizer with a 20-3-12 composition at a rate of 5 lbs/1,000 sf. For new lawns, apply fertilizer with a 10-10-10 composition at a rate of 20 lbs/1,000 sf and 0-0-60 at 3 lbs/1,000 sf.

CIRCULATION SYSTEMS AND MATERIALS

Issues

Circulation Systems

In 1847 the Committee on Burying Grounds named avenues and paths. Some of those names have since been lost or forgotten. Known avenue names include Beech, Cypress, Chestnut, Elm, Fir, Locust, Magnolia, Maple, Oak, Pine, Spruce and Walnut. Others apparently once included Almond, Cedar, Citron, Hemlock, Laurel, Olive, Poplar and Willow. The approximate location of Myrtle Path is known but not Columbine, Hawthorne, Hazel, Hyacinth, Jasmine, Rose or Tulip.

Bordered on three sides by public streets, the cemetery has an excellent internal circulation system of avenues [drives] in the form of a series of concentric arcs organized around a central oval with connecting avenues running perpendicular to the concentric arcs. The broad [8 to 10' wide] gravel avenues typically alternate with narrow [5 to 6' wide] lawn paths. Because of use, a number of avenues are apparently now wider than they were initially, particularly adjacent to Woodbine Grove.

The main central avenue, Cypress Avenue, runs northwest to southeast on the north side of the central oval and connects the southernmost vehicular/pedestrian entrance on Vaughan Street with the pedestrian entrance at Western Promenade. A well used avenue along the north side, Fir Avenue, connects the Daveis Memorial Gate pedestrian entrance with the Western Promenade entrance. Another well used avenue, name unknown, follows the concentric arc on the south side of the cemetery paralleling Western Promenade. Many people walking their dogs follow the outer perimeter avenues.

The addition of the Daveis Memorial Gate apparently caused the development of a man made, eroded path leading from the gate directly down the hill to Woodbine Grove over some grave sites. Not part of the original layout for the cemetery, this path has apparently been created over time fulfilling a natural desire line. The lack of burial plot definition in this area has contributed to the formalization of this as an acceptable pedestrian route.

A narrow path connecting Fir Avenue to Vaughan Street, opposite Spring Street, that is shown in plans from 1870 to 1905 is now missing. This may have disappeared with the installation of the Daveis Memorial Gate or when the chain link fence along Vaughan Street was installed in 1954.

Unintended path across grave sites from Daveis Memorial Gate

Narrow, eroded pathways are visible along most of the side walls of the hillside tombs. These paths are man made or dog made and have been in use for some time as piles of eroded dirt are present at the bottom of each pathway.

Pavement Materials

Apparently matching the original historic materials, the three main avenues are paved with compacted, often eroded, gravel. The other avenues and paths are lawn, often worn and occasionally with thin, sparse lawn cover. A small patch of asphalt is located in the northwest corner, the origin and purpose of which is unknown. Perimeter streets are paved in bituminous concrete.

Road and Path Edging

No edging [curbs and/or gutters to control storm water runoff and reduce erosion potential] is visible inside the cemetery except for a short length of stone located along Cypress Avenue on the north side of Woodbine Grove.

The perimeter streets are edged. Vaughan Street has bituminous concrete curb, although it is quite broken up in several locations near the Daveis Memorial Gate. At the time this gate was installed, there was a broad cobblestone gutter on Vaughan Street. Western Promenade has a vertical granite curb edge.

Steps

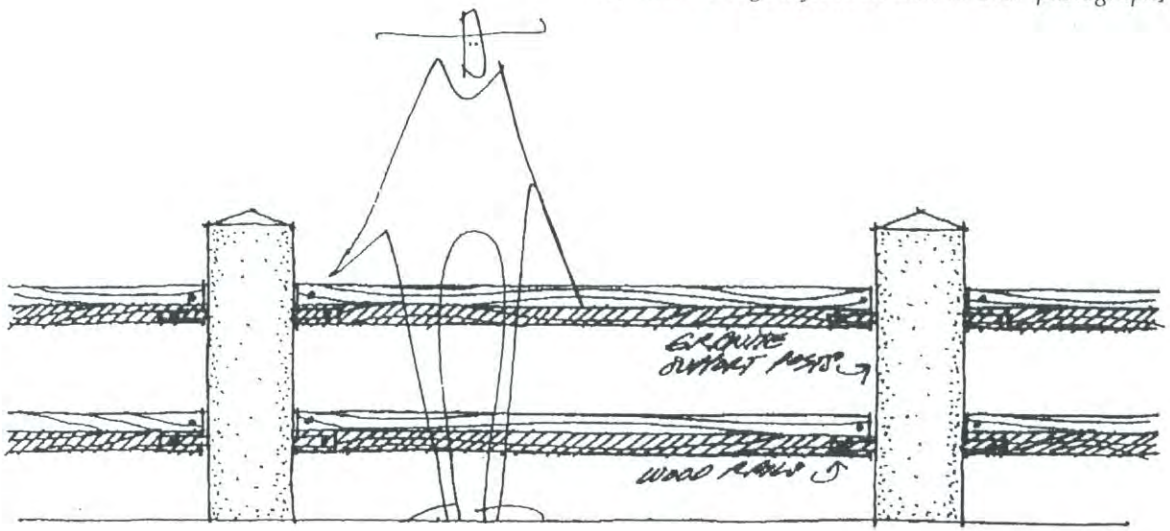
The west pedestrian entrance has a concrete stair, approximately 4' wide with 8 risers. The concrete landing at top is about 6' wide which connects to a brick sidewalk in the public way. The stair has no handrails and silt has been deposited over part of the stair.

Objectives

To maintain and reinforce the historic interconnected network of circulation systems.

To maintain the historic style of pavement materials.

Proposed edge definition at grave sites near Daveis Memorial Gate [similar to edge definition seen in 1857 photograph]



Recommendations

Circulation Systems

Maintain the historic circulation system except as modified by the addition of the Daveis Memorial Gate. Define the edges of grave sites along primary circulation systems to prevent people from inadvertently walking over grave sites. This is particularly important in the area near the Daveis Memorial Gate where people walk directly over grave sites on their way to and from Woodbine Grove. The area has become severely eroded.

Grass path

Pavement Materials
Consideration must be given to historic and visual appropriateness as well as initial and long term cost and maintenance implications. Restoration of the historic avenue and pathway materials is recommended provided a commitment is made to ongoing maintenance. This includes gravel surfaces for the primary circumferential avenues, and lawn surfaces for the perpendicular avenues and narrower circumferential paths. Profiles and cross sections for the gravel avenues should be constructed and maintained in such a manner that they do not collect or deter storm water.

If gravel is not deemed maintainable with the steep slopes, significant use and available maintenance manpower and funding, the use of chip sealed bituminous concrete is recommended on the primary circumferential avenues [do not snow plow] and lawn for minor avenues and paths.

Road and Path Edging
Edging inside the cemetery should not be introduced unless it is deemed necessary. It is not historically appropriate.

Steps
The steps at the Western Promenade entrance should be reconstructed as noted under storm water management. They should be broader and more gracious as is appropriate for outdoor steps, and as opposed to a building's egress stairs which tend to be more functional. Appropriate handrails should also be provided for public safety.

ACCESS
Issues
Pedestrian and Universal Access
In the initial development of the cemetery, the land was apparently cut on the northwest side and filled on the southeast side to create a broader, gently sloping area for burials. The property as a whole slopes from a high point at the northwest corner, approximate elevation 166, to a low point at the southeast corner, approximate elevation 105, near the intersection of Vaughan Street and Western Promenade. The overall grade change is about 60' and the slope on the north bank is generally 2.5/1. Internal path slopes vary in steepness from the gentle slope of 2.5% on Chestnut Avenue to the steepest slope of 13% on Maple Avenue.

The site has pedestrian access, but does not offer universal accessibility because of slope considerations and/or the condition and materials of avenues and paths. These and historic impediments make it virtually impossible for the entire site to be completely universally accessible. Lawn paths running from Woodbine Grove are generally not accessible.

All gates have wide enough clear openings to be considered universally accessible. On the Vaughan Street edge the Daveis Memorial Gate has a 4'-4" clear opening, the maintenance vehicular access gate has an 11'-9" clear opening and the adjacent pedestrian gate has a 3'-10" clear opening. The latter needs to be graded to reduce the steepness of the slope to accommodate universal access. The Western Promenade edge has two gates, a maintenance gate with a 7-7" clear opening and a pedestrian gate with a 3'-10" clear opening. The latter also has steps associated with it.

During recent restoration work at the Daveis Memorial Gate, a pedestrian gate was added adjacent to the maintenance gate to provide continual pedestrian access from Vaughan Street. Because of the traffic the new gate generated, it has been reported that abutters desire removal of the new gate. Abutters of the Daveis Memorial Gate do not. Both prefer a location on Western Promenade which will impact parking on Western Promenade [currently not allowed adjacent to the cemetery] and raise universal access issues.

Vehicular Access
Controlled vehicular access has been and needs to be provided for service vehicles. It does not appear that vehicular access is normally granted for visitors. The double leaf chain link gate at the southern most entrance on Vaughan Street provides access for maintenance vehicles. There is a curb cut at this entrance. A second double leaf chain link gate on Western Promenade is apparently rarely used because it is too narrow for general vehicular use.

Objectives
To provide pedestrian and universal access, and meet current safety standards while restoring historic character.

To maintain adequate maintenance access to the site.

Recommendations

Pedestrian and Universal Access

Maintain the historic access and egress points, except that the Daveis Memorial Gateway should remain as the principal pedestrian access point on Vaughan Street, and the former pedestrian access opposite Spring Street should not be restored even though these two changes occurred outside the period of significance for the site. The Daveis Memorial Gateway is a substantial and attractive civic contribution.

As long as dogs are allowed to enter Western Cemetery, they should be prohibited from using the Daveis Memorial Gateway entrance. Over time, this should help alleviate the odor problems created by urine being absorbed into the mortar and concrete components of the gateway. The pedestrian gate adjacent to the maintenance gate should be retained to facilitate dog owner access from Vaughan Street. However, should a time come when dogs are no longer allowed inside the cemetery, this pedestrian gate should be removed to simplify and clarify access from Vaughan Street.

Universally accessible improvements should be made to the Daveis Memorial Gateway such that it can become the principal universal access point. Provide two designated handicap parking spaces immediately adjacent to it on Vaughan Street.

Maintain the gravel surfaces for the primary circumferential avenues such that they remain a universally accessible surface.

Vehicular Access

Maintain the historic access and egress point on Vaughan Street.

SECURITY AND VANDALISM

Issues

For the most part, the cemetery is contained within fences as was once required by state law. Some areas on the north side have unintentional or unauthorized access through lack of fencing. At 5 feet high, fences on the public perimeter are relatively easily scaled as has been observed. Several relatively recent fence repairs were noted along both street edges. All gates are lockable, but only the vehicular gates are kept locked. Pedestrian gates are kept unlocked except during maintenance operations.

There are no light fixtures inside the cemetery. According to cemetery rules posted at the gates, no one is allowed inside the cemetery after sun down. The site has suffered from significant vandalism over the years although not much of it appears to be recent.

Objectives

To enhance the safety and security of visitors.

To keep vandalism to a minimum.

Recommendations

Security of the historic resources should be maintained by retaining a fenced public perimeter. The current policy of locking vehicular gates and not locking pedestrian gates should continue provided the level of vandalism remains minimal.

To help keep the level of vandalism down, it is desirable to maintain a sufficient level of use though appropriate programming and dissemination of information about the cemetery. Refer to the administrative management section for further discussion and recommendations.

MONUMENTS, MEMORIALS AND GRAVE MARKERS

Issues

Grave markers

Based upon death dates, many people were apparently moved here at a later date, i. e., quite a number of people died before the cemetery was open. The earliest burials were in the central area, Woodbine Grove. There are few markers or remnants of markers left in the area except in the defined family plots E-1 [Vaughan family plot, 34 burials] and E-2 [Daveis family plot, 18 burials]. William B. Jordan's 1982 research indicates that 11 people were buried in the central area of Woodbine Grove, mostly from 1832-38. On the 1889 plan 6 headstones were noted in this area. Today 2 are missing, 2 slate markers [1834 and 1836] are in good condition, a marble marker [1824 and 1826] has the top corner missing and a slate marker is broken such that only a stub remains. The marble marker could have been placed here at a later date.

It is assumed that other early burials occurred along the Vaughan Street edge, perhaps before burial plots were laid out. On the 1889 plan 6 markers are noted north of the main entry and 1 south of the main entry. The nearest, north of the main entry is a slate marker with the top broken off and missing. It is also assumed that these two areas were used primarily from 1830, after the cemetery was open to the public, to 1840, when the cemetery plan was completed.

The earliest death date from Mr. Jordan's research is 1796 for Joseph Jewett, who was moved here from Andover MA at a later date. The grave site has since been lost. The most recent death date and burial is 1978 in plot [J-71]. The first mention of the Catholic Ground is related to the burial of Mary Dickey in 1843.

A brief review of the listing of graves in Mr. Jordan's 1982 inventory of the cemetery, found that there were over 6,600 burials. Almost half of those grave sites have been lost. About a quarter [1,650] of the burial places had sound stones, 15% [990] had stones that have been destroyed and another 5% [30] were broken, badly eroded or both. A number of plots have no markers or only fragments of stone. These factors contribute to the impression that the existing markers seem scattered.

Based on the 1982 inventory, it is estimated that there were approximately 2,000 grave markers at that time. A field count in the summer of 2000 found approximately 1,630 markers. The grave markers include monuments, obelisks, multi-part headstones and plain tablet headstones. The vast majority, approximately 90%, are white marble with about 6% slate, 4% granite and a few other materials [brownstone, fieldstone and bronze]. No zinc markers were observed.

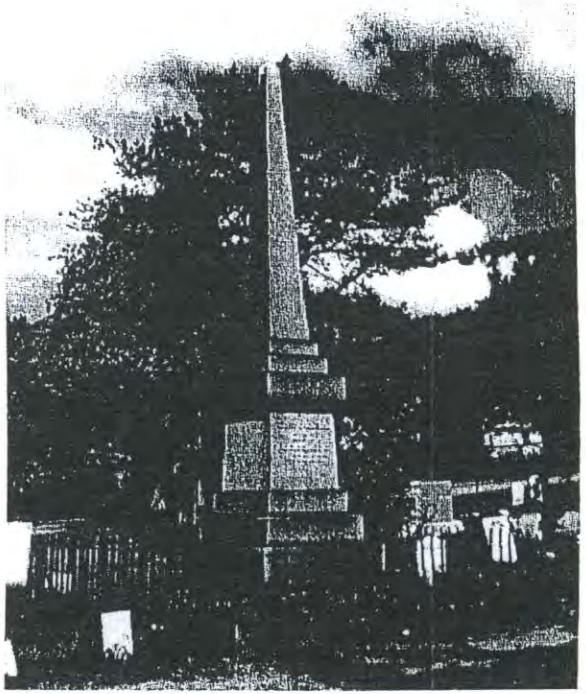
Some small brownstone grave markers were observed, Sarah E. Walton, a thick, ornately carved marker in good condition, and the Joseph Walker marker that is delaminating and in poor condition. A collection of some buff sandstone and large brownstone elements at a horizontal tomb appear to have been reassembled in an irrational manner.

The general impression is that there has been a lot of damage. Many of the usual problem conditions occur throughout the cemetery. Many markers are leaning, fallen or broken. Tablets and obelisks both have been knocked off their bases, or are turned or have been reset such that they are not square with their bases. Mortar is missing. Trees and overgrown shrubs crowd the markers in many places. A very high percentage of the markers need some sort of remedial treatment. Approximately 30% of the markers should be cleaned, 25% set upright and 15% repaired.

The stones that show the most extensive deterioration and are the most at risk are the marble markers. Calcium carbonate is particularly susceptible to deterioration from acidic deposition [acid rain] and other atmospheric pollutants. About 1,000 of the marble markers [over 60% of the total markers] have eroded surfaces varying from slight to severe. Lichen, moss, mildew, fungi grow on many of the marble, sandstone and even granite markers. The markers in the best condition are the slate tablets and granite markers. While all of the slates have clear inscriptions and very little splitting or spalling, many are tilted and need to be reset to preserve their stability.

Eroding inscription on Jackson monument

Jackson monument



The first notation of gravestones being "reset" was in 1897. Twenty years later, in 1917, all of the stones were cleaned and those that had fallen were uprighted. Two markers in the Hall-Boyd lot were relettered. Stones were also noted as being straightened in 1919. One marble marker has an iron strap repair and at least 10 others have had adhesive repairs. Some of the multi-stone markers that had been previously toppled were reset without dowels and are subject to overturning.

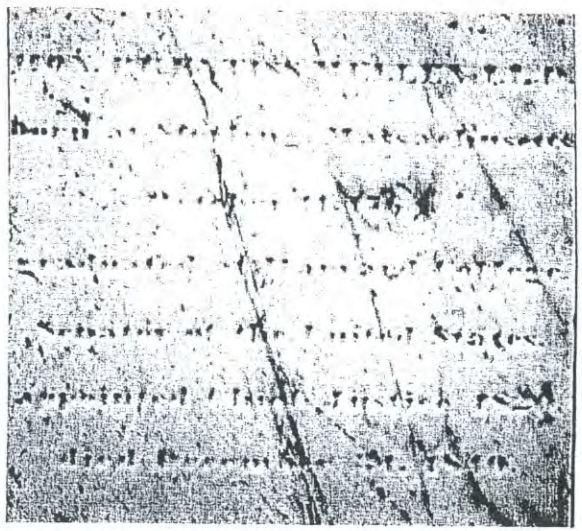
Monuments

There are numerous larger markers including monuments and obelisks in various conditions. For example, the small granite obelisk for Philip Shaw is leaning and broken. The marble Boyce obelisk has been poorly reset and is missing the decorative element at the top. An 1857 photograph shows a large obelisk in the northwest quadrant of the cemetery. No longer there, it may have been moved at some point to Evergreen Cemetery although it has not be found to date.

The granite Jackson obelisk consists of large dressed stones arranged as a base, pedestal and shaft. The stones are tightly fitted without mortar joints. There does not appear to be any settlement or relative displacement among the dressed stones although the foundation is exposed from adjacent earth settlement and appears to be loose rubble. However, the surrounding curb stones have displaced horizontally and embedded iron corner posts have broken while also breaking and cracking the stone where they were embedded.

The marble Prentiss Mellen monument is generally in good condition except for some soiling and the erosion of incised letters on the west side. There may be an element missing from the top. The carving detail plus additional erosion from acid deposition have caused natural channels for rainwater and other moisture to run. The upper portions of the monument are soiled from rain water carrying with it "dirt" of various sorts from the top, nearly horizontal, planes to the underside mouldings of the cap and to the square column.

On the lower right corner of the front of the square column, a stain apparently due to some casually poured remnant of a sweetish and sticky beverage has attracted ambient atmospheric dirt particles. On the marble base, not the granite bedding base, soiling appears to be the result of splash back. As the marble there is moist for a slightly longer time with splash back soaking, it can support the growth of mildew, fungi and other botanicals.



Eroding inscription on Mellen monument

Materials and Considerations

The deterioration of gravestones is becoming increasingly evident. Stone is subject to deterioration by natural weathering, and that process has been accelerated by atmospheric pollution. Porous stones like marble, sandstone, brownstone and limestone are more subject to the effects of weathering than nonporous stones like granite.

Mellen monument

Slate and Sandstone: These silicate stones were the predominant material used for grave markers through the 17th, 18th and early 19th centuries. Sandstone, including brownstone, was used much less frequently than slate although some mid 19th century burial grounds have sandstone obelisks.

The vast majority of markers made of these materials are individual grave markers. Shaped like a doorway, they suggest passage from this world to the next. Smaller foot stones were often used in addition to further demarcate the limits of a grave site. Headstones and foot stones in combination suggest a bed, or final resting place.

Some of these stones have survived in fairly good condition. Slate's relatively smooth surface does not absorb much water and both stone types are less affected by acid rain deposition than marble. The incised lettering and low relief carving on slate is often still quite clear. Both slate and sandstone were geologically formed in horizontal layers. When the stones are set vertically with the horizontal layers facing upward, exposing the bedding planes, they often begin to delaminate over time. When moisture seeps into the openings between the bedding planes, freeze-thaw cycles in this climate force the planes apart. Many of these stones, particularly the less dense slates, show some degree of delamination.

Sandstone also has the problem of being a granular stone. The binder between the grains weathers more rapidly than the silica [sand] grains, causing erosion of surface detail.

Marble and Limestone: These calcium carbonate stones came into use during the 1810's and remained very popular through the 1870's. The rural cemetery movement became a showcase for carved marble and most sites of this era contain a very high percentage of marble markers. Marble has not endured as well as the earlier silicate [slate and sandstone] markers, particularly in the northeastern states, because it is very susceptible to acid deposition and other pollution damage. Most of the marble markers have lost surface detail due to acid rain and general weathering.

Many of the marble markers that were set into bases of brownstone, marble or granite with slots cut into them to hold the markers are now broken with some or all of the slots left filled with broken pieces of marble.

Granite: During the 1870's and 1880's the use of granite increased because of improved equipment related to quarrying and stone carving. Now the standard for grave markers, granite is relatively impervious [more than slate] and endures quite well in outdoor environments. It is the hardest and most stable grave marker material in general use.

Objectives

To preserve a primary historic resource by restoring monuments, memorials and grave markers.

Recommendations

Understanding that the current city policy views these elements as private property, the following recommendations should be taken into consideration when a cemetery wide or individual stone restoration program is undertaken.

Gravestone rubbings should be prohibited because the process can leave wax or ink and cause surface losses.

Monuments, Memorials and Grave Markers

The first step in a rational and cost effective conservation program is a stone by stone survey that also serves a triage purpose.

The highest priority should be given to public safety hazards, structurally unsound stones, restoration of marker foundations, pin replacement in two part marble markers that are visibly cracked or spalled, resetting and repair of slate markers, and conservation of historically significant marble markers that are in danger of becoming illegible. Broken stones should be repaired if more than 75% of the stone is available for reassembly and the inscriptions are legible.

The next priority should be given to marble markers with visible metal stains at the junction between base and marker, and cleaning legible markers.

The lowest priority should be given to granite markers that have shifted or are leaning, and marble markers that are currently in satisfactory condition.

Stones that have legible inscriptions covered by lichen or other botanical growth should be priority conservation items. Stones that have barely legible inscriptions could be earmarked for priority recording, documentation and conservation as funds become available. Stones that have no legible inscriptions should be left in place. Workshops led by stone conservators could probably lead to cleaning and resetting in a cost effective manner.

Conservatorial judgments vary regarding cleaning. In general, where the botanical growth entails the erosion of the stone, like marble or sandstone, removal of growths and stains is recommended. On granite and slate, however, cleaning should only take place to enhance legibility or when a stone is reset.

Clean the Mellen monument and Jackson obelisk with water and a stiff natural bristle brush. Remove remaining stains with ProSoCo's Marble & Limestone Cleaner, used according to manufacturer's specifications.

STRUCTURAL ELEMENTS

Issues

General

The repair and restoration requirements for elements like walls, tombs, vaults and larger monuments are different than for grave markers. Most of these are constructed of a number of smaller components.

The principle underlying all conservation work is the retardation of the natural process of decay in a manner that does not cause any other sort of harm. Water penetration, combined with freeze/thaw movement, is the major cause of damage encountered today. Horizontal and vertical structures exposed to the weather are susceptible to a gradual infiltration of moisture and frost with subsequent damage in the form of movement and deterioration of porous elements like mortar, brick and concrete. It has been observed that structures made up of large stones withstand the punishment from weather much better than structures built of smaller elements.

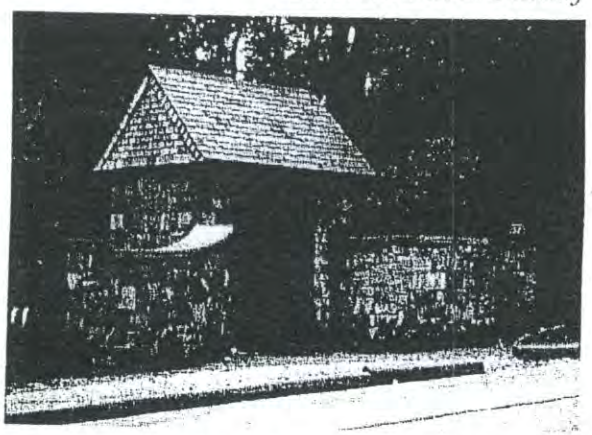
Stone and concrete cap details are often inadequate to prevent water intrusion and/or they were built without sufficient allowance for differential movement. The introduction of roofing and flashing materials on historic masonry is often inappropriate, impractical and in many cases impossible.

Daveis Memorial Gate

The single most visible and used masonry feature of Western Cemetery may be this picturesque stone gateway. The Gate consists of a small open shelter with granite walls supporting a roof and small sheltered benches set in alcoves formed by those walls, covered and sheltered by a slate roof. To either side of the street face of those walls are low curved flanking walls of ashlar granite.

Erected the Spring of 1914, opposite Clifford Street, in memory of Edward H. Daveis [1818-1909] by the surviving family, the gateway was designed by John Calvin Stevens, who was also the architect of many of the abutting houses on Bowdoin Street. Built of random rubble gray granite from Trundy's Reef in a style familiar in English cemeteries, the structure had a slate roof. At the time it was considered a great convenience to the public in reaching the upper portion of the cemetery. In support of this new entrance, walks were laid out from the gateway, shrubs and vines were set out on either side and about 25 trees were planted.

Daveis Memorial Gateway



Since that time some work has been performed on the memorial gateway. The stone work was restored in 1953 and a new wrought iron gate was added. Restoration of the slate roof and gateway structure commenced in 1998.

The Daveis Memorial Gate consists of curving stone wing walls that meet the sideways of a roofed passage from Vaughan Street into the cemetery. Iron gates close the entrance through the passageway. The wing walls and the gate house side walls have face wythes consisting of 3" thick, dressed stone units laid up in mortar beds. The space between the face wythes is filled with rubble and mortar.

The roof over the passageway is a cast in place concrete vault covered with slate shingles. The slate and copper ridge flashing appear sound. Wood rafter tails extend beyond the ends of the side walls. The rafter tails and eave molding appear to be sound. However, some paint is peeling from the exposed wood rafter tails and some of the wood is beginning to show evidence of rot.

The stonework of the gate house appears to have been repointed in the recent past. The mortar varies in color and hardness. It is generally sound although there are thin horizontal cracks present along the stone arrises. The stone units appear to be solidly seated and no displacement was observed. The cast stone benches appear to be sound and stable.

The stone wing walls are capped with a continuous course of concrete placed over through wall metal flashing. The caps do not have a cut drip edge. The wing walls have not been maintained as well as the gate house side walls. This lack of routine maintenance has allowed cracks to develop in the faces of the wall such that water has penetrated the stonework in spite of the protective flashing on the top of the wall. Several missing stone units and efflorescence staining [white streaks of calcium salts] indicate water routinely penetrates the stonework and freezes within the walls. An unsightly black staining was also found on the lower 12-16" of the stone. Large, one inch wide vertical cracks have developed where the wing walls meet the gate house side walls. These cracks may have developed from water and ice intruding where the concrete cap and flashing end. There is also a large vertical crack near the end of the south wing wall but this appears to have occurred either from settlement of the ground or perhaps from being hit by a vehicle. Overall, however, the wing walls appear to be plumb and level, indicating that the foundations are adequate in depth and width.

The iron gates are mounted on hinges embedded into the stonework of the side walls. The stonework surrounding the anchors of one of the bottom hinges has shattered and the hinge plate has bowed due to corrosion induced rust jacking. Rust jacking occurs when ferrous oxide scale builds up that is several times the volume of the metal being removed in the corrosion process. As the scale increases within a confined space, bursting pressures develop that are similar to the way freezing water heaves or breaks anything that confines it.

Although the gate house has been maintained periodically, other structural elements generally have not. Nevertheless, most of the damage to structural elements is localized and can be stabilized or repaired.

Tomb and Vault Structures

Hillside Tombs

Built from the mid 1840's to the mid 1850's, there are 11 granite faced vaulted burial tombs located along the north edge embankment. The facades of the vaults range from simple three piece, one foot thick stones to temples with dressed stone corner posts, capitals [that vary in detail from vault to vault], architraves, door jambs and lintels. Seven of the tombs are connected, two form a duplex tomb, and two are isolated. No. 10 stands alone. No. 11 through 17 stand in a line, separated by short connecting retaining walls. No. 18 and 19 stand together and No. 20 stands alone. Many of the doors were brazen, reputedly bronze, and stolen years ago. They have been replaced with unsympathetic and nonhistoric infill. Openings have been bricked in except 19 and 20 which have stone and concrete block infill respectively.

Some of the tombs are relatively intact while others, such as the Edward Ingraham tomb, have deteriorated or have been inappropriately repaired. The joints between stone units vary considerably. Some of the stones are fitted so tightly that there are no apparent mortar joints. Other stones have wide joints, especially where they have been repointed after the stones have shifted. Where stones have shifted, the movement has been lateral rather than vertical. Sometimes the entire facade has tilted outward as a complete system and sometimes individual stones have moved. This lateral movement is probably from water infiltrating and freezing in the masonry and also from volunteer tree growth on top of or adjacent to the vaults. Foundations appear to be adequate, however.

None of the interiors of these tombs were inspected. Based on the brickwork visible at eroded areas, the walls and roofs of the tombs are brick arches. The outer surfaces are not treated with any waterproofing coating but appear to be tightly jointed. Because of the nature of arches, the roofs are squeezed in compression, a condition that probably prevents extensive water intrusion through the vault. The primary structural weakness of the vault construction is at the joint between the horizontal brickwork and the vertical stone facade. Pressures from volunteer tree growth, ice and water have pried these elements apart.

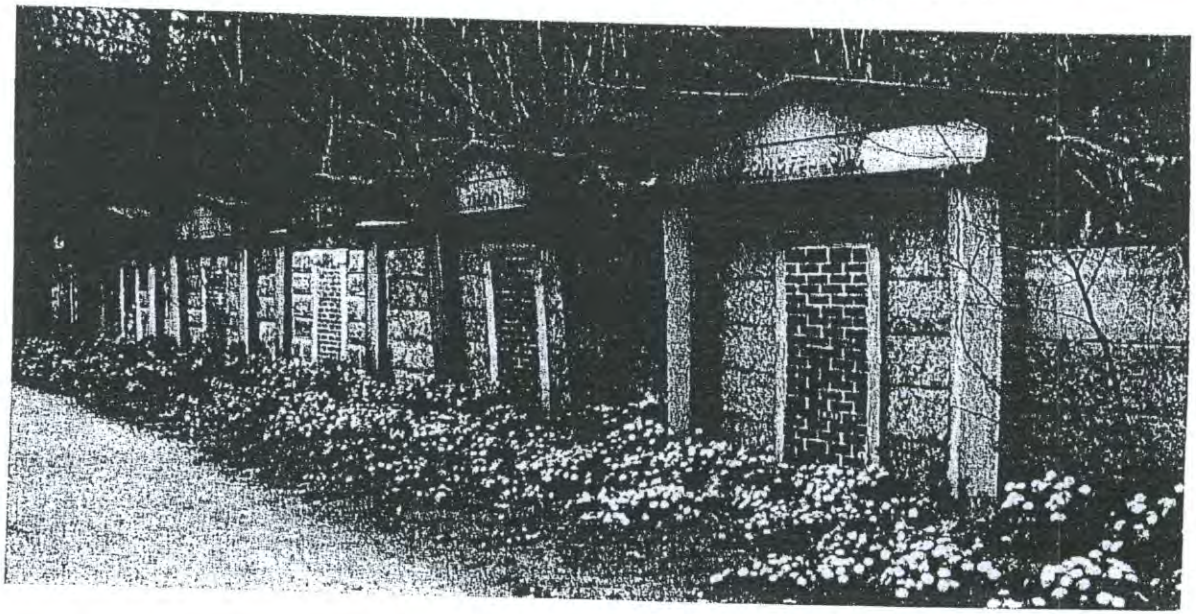
No. A-10: Hilborn, 1851 in cut letters
The facade of this tomb is composed of three large blocks of cut granite. The doorway has been filled with mortared brick. The brick vault behind the facade is exposed at the top due to an eroded path. The tomb appears in good condition.

No. A-11: Ten-Broeck in raised letters
The facade of this tomb is composed of smooth cut granite corner posts, architrave and door frame with rough faced cut granite block infill. The doorway has been filled with mortared brick. Two iron hinge pins remain. The tomb appears in good condition.

Connecting retaining wall: The top stone has apparently been replaced as it does not match the lower stones.

No. A-12: Longfellow in raised letters
The granite facade appears sound and stable, needing repointing. A patch of cleaned stone is probably due to the removal of graffiti. The doorway has been filled with mortared brick. Some brick is visible at the rear of the facade. This tomb was reputedly opened in 1986 and found empty.

Connecting retaining wall: The top stone has shifted and should be reset.



Hillside Tombs

No. A-13: Cummings in raised letters
This granite facade is leaning forward and should be rebuilt. The doorway has been filled with mortared brick.

Connecting retaining wall: The top stone has been reset slightly forward of the original position and the wall has been repointed before.

No. A-14: L. & C. E. Sawyer, 1853 in raised letters
This granite facade is sound and stable and has been repointed before. The doorway has been filled with mortared brick.

Connecting retaining wall: The top stone has been reset with one edge slightly forward of the original position and the wall has been repointed before.

No. A-15: Nathan Dyer, 1853 in raised letters
Some rotation is evident on the west side of the facade and some repointing is required. The doorway has been filled with mortared brick. The mortar is coarse and it should be repointed.

Connecting retaining wall: The top stone has been reset with one edge slightly forward of the original position.

No. A-16: Edward Ingraham, 1853 in raised letters
Missing granite units at the top of this facade have been replaced with mortared brick that appears to be the same vintage as the brick in the doorway. Some of the bricks have spalled. The architrave stone at the top has rotated forward and corner post capitals have shifted.

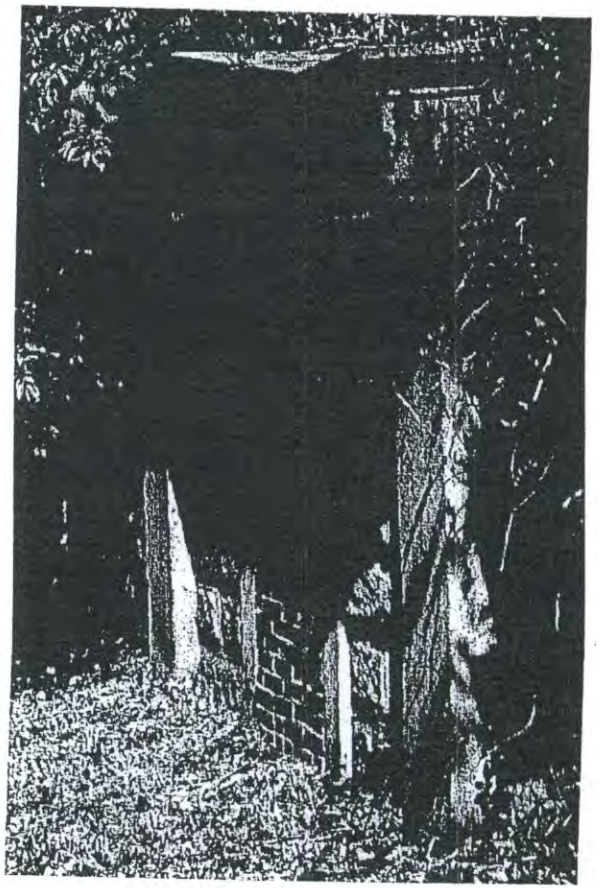
Connecting retaining wall: This wall has a different character than the others in that it has a large granite base stone with brick and granite above. The latter appears to have been salvaged and reused from the Ingraham tomb facade.

No. A-17: Hosack/Kinsman, 1856 in raised letters
The interior stones of this granite facade have been finished to give the appearance of smaller stone units. It has been repointed before and appears sound.

No. A-18: S. F. Haggetts Tomb, 1846 on a marble plaque and Samuel in cut letters
The stone work in this cut granite block facade appears to be in relatively good condition. One stone in the interior of the face has shifted before and has been mortared in place. Some repointing is desirable. The doorway has been filled with mortared brick and needs repointing. An iron hinge at the doorway is intact. The latch point is broken. Some stone backing is exposed at the rear of the facade.

No. A-19: F. Daniels Tomb, 1812 on a marble plaque, and Ebenezer in cut letters
Previous patching efforts are evident at this tomb. The top stones of the cut granite block facade have slightly rotated and shifted forward. At least the top two courses need to be removed and reset. Rust jacking is evident at the bottom of the iron door frame with a stone door. The hinge stone is cracked at the top hinge. The iron latch is intact with no lock. Part of the parged top of the tomb is exposed behind the facade.

Note that No. A-18 or A-19 may have had an obelisk set on top of one of these tombs, toward the rear, based upon an 1857 photograph. A gray granite obelisk is lying on the ground in front of these two tombs.



Ingraham Tomb

No. A-20: Safford/Hall in raised letters
This isolated tomb is of special interest. Not only does it have an elaborate stone facade, it also has dressed stone side walls. The tomb appears to be in excellent condition although the east side stones were repointed without resetting several displaced stones. This face is shifting outward. One of the repointed joints is two inches wide and has recracked. The west side wall appears to have collapsed and fallen away, exposing rubble stone backup. It is not clear whether some of the dressed stone is missing or whether the earth was banked asymmetrically around the back and sides of the tomb. A shallow granite edged planter is on top of the tomb, filled with Euonymous and volunteer growth. The doorway has been filled with concrete block with brick courses at the top. A patch of cleaned stone on the facade is probably the result of graffiti removal. The top two facade joints have lead sheet filler, as opposed to mortar, that appears incomplete.

Underground Tombs
There are 11 underground or buried tombs in Section D. Built in the 1840's, it is assumed that they are similar in construction to those on Eastern Cemetery. On the surface it is difficult to tell that these plots house underground tombs. Access ways were filled in at some point, leaving the tops of edging exposed that are assumed to be the cheek walls of descending stairs. Greener grass is typical at these buried access ways, sometimes a slight depression. Some of the tops of the tombs are edged with stone and/or remnants of former iron fences.

No. D-28: Charles Jordan Tomb [11 interred in this tomb]
A marble grave marker is sited at the head of the buried access way [C. Jordan - 1845]. Granite edging defines the top of the tomb with 6 square granite blocks serving as the base of former fence iron posts. Remnants of fence post base can be seen.

No. D-29: Henry Foye Tomb [8 interred in this tomb]
A marble grave marker is sited inside the edging. Granite edging defines the top of the tomb with 6 square granite blocks. There is no evidence that there was once a fence. Granite edging defines one side of the buried access way.

No. D-30: Joseph T. Sherwood Tomb [8 interred in this tomb]
Granite edging forms three sides of the former access way. Three square granite blocks indicate that there was a former fence over the tomb.

No. D-31: Frost Tomb [8 interred in this tomb]
A marble grave marker [Frost's - 1846] is sited at the head of the buried access way outlined by granite edging. There is also granite edging defining the top of the tomb with 4 square granite corner pieces. There is no evidence that there was once a fence.

No. D-32: McComb Tomb [5 interred in this tomb]
Granite edging defines the top of the tomb with 4 square granite corner pieces. Evidence indicates that there was once a fence.

No. D-33: Wilson Tomb [9 interred in this tomb]
There is nothing visible on the surface other than greener grass over former access way.

No. D-34: Unknown Tomb
Granite edging defines the top of the tomb with 4 square granite corner pieces. There is no evidence that there was once a fence.

No. D-35: Merrill Tomb [4 interred in this tomb]
There is nothing visible on the surface other than greener grass over former access way.

Underground tombs

No. D-36: Joseph Walker Tomb [3 interred in this tomb]
The Brownstone grave marker, Joseph Walker, is in poor condition at the rear of the plot. Six granite posts have been patched at the tops indicating a former chain barrier. Granite edging forms three sides of the former access way.

No. D-37: Unknown Tomb
There is nothing visible on the surface other than greener grass over former access way.

No. D-38: Unknown Tomb
There is nothing visible on the surface other than greener grass over former access way.

Stone Retaining Wall
A stone retaining wall, first built in 1855, is located at the southeast corner of the cemetery along Vaughan Street and around the corner westerly along Western Promenade. Grading and building of a wall was also noted in 1883. This most likely refers to an extension of the wall, and probably along Western Promenade. Overall the wall is about 24" wide, 420' long and varies in height from about 12" to 4'.

The Vaughan Street wall is characterized by large 2 to 3' dry laid stones. These stones are well seated and little relative movement has occurred among the stones. The wall on Western Promenade has smaller, well fitting, mortared stones. Much of the mortar is cracked and broken and portions of the wall are wavy or laterally displaced where the upper level ground slopes down to the top of the wall. At one 4' long area the wall apparently collapsed and was rebuilt with heavily mortared, poorly fitted stones. Displacement along this wall is also related to the presence of trees growing above and close to the wall.

Concrete Walls
The development of retaining walls along the north edge began in 1915 when permission was given to Franklin C. Payson of 28 Bowdoin Street to build a wall at his expense between his property and the cemetery, 1/2 on the cemetery grounds. In 1923 the city installed 192' of cement retaining wall surmounted by wire fence along the north side. The ownership of and responsibility for most of the walls is undetermined at this time.

The concrete retaining wall along the north property line varies in height and allows the private yards to be raised and leveled relative to the steep natural slope on the cemetery side of the wall. The condition of the board formed wall is sound and intact except where it has been penetrated by embedded fence posts or volunteer tree growth. Because the only damage is localized at these penetrations, the concrete is probably not reinforced. Therefore, issues of chloride absorption from sea spray and long term carbonation from the absorption of ambient carbon dioxide are not a major concern insofar as these issues affect deterioration of reinforcing steel and its subsequent rust jacking effect on the surrounding concrete. Where the posts for a chain link fence are embedded in the top of the concrete, rust jacking has caused local spalling of the concrete around the posts. Where volunteer trees have rooted next to the wall or in cracks in the wall, general disintegration of the concrete has occurred. The chain link fence is generally intact, although volunteer trees have encapsulated portions of the fence within their trunks.

Walls starting at the west end:

At the rear of 72 and 62 Bowdoin Street
A city owned concrete wall, approximately 200' long, with a 5' high chain link fence on top of the wall. The fence has U-channel supports. The exposed wall height varies on the cemetery side from about 12" to 30". Trees are growing through the fence from the uphill side. The wall is beginning to fail at one tree, and there is spalling at the top of a portion of the wall.

At the rear of 56 Bowdoin Street
A concrete wall, approximately 55' long, with 10 courses of brick and a cast in place concrete cap at the top. The wall is 8-10' high and there is no fence at the top.

At the rear of 52 Bowdoin Street
A concrete wall, approximately 70' long, with no fence at the top. The wall height varies from 18 to 60". Cracks are apparent in the concrete.

At the rear of 44 Bowdoin Street
A rubble stone wall, approximately 100' long, with no fence at the top. The wall face is parged at the west end and the parging is failing. Cracks in the joints at the east end need repointing. A small utility vault is located inside the cemetery outside this wall.

At the rear of 40 Bowdoin Street
There is no wall along this property line, only a 4' high wood fence, approximately 40' long.

At the rear of 36 Bowdoin Street
A free standing concrete wall, approximately 50' long and about 3' high. There is no fence and dogs reputedly jump this wall. An old fallen brick pier is located on the cemetery side of this wall.

At the rear of 28 Bowdoin Street
A privately owned concrete wall, approximately 110' long and about 30" high, with a 30" high chain link fence on in 20' spans between brick piers on top of the concrete wall. The piers are failing. A brick corner post [12" square by about 6' high] is located at the northeast corner.

Building
A small building, probably a tool shed, was once located at the Vaughan Street vehicular entrance. An 1857 photograph shows a wood frame structure near the Vaughan Street entrance with a large doorway facing the cemetery on the west side. A new "house" was noted in 1862-63 and was called a head house in 1881. The building was destroyed by fire in 1882 and 1885 and was replaced each time. An undated work sheet indicates that it was about 14' square while it is shown as 9' by 11' on the 1889 plan. The 1905 Olmsted Brothers Plan for Western Promenade shows a building near the Vaughan Street entrance at the east end of the central oval shaped space. Even though it was noted as being removed in 1911 when the main entrance on Vaughan Street was improved, a 1921 notation indicated that it had been painted. There is no surficial evidence of the building today.

Objectives
To meet current public safety standards while restoring historic character.

Recommendations
General
No repair that has been made should be regarded as permanent because the original construction was often inappropriate for the intended purpose or dimensionally less ample than would be used today. Ongoing maintenance will be necessary because unsheltered cemetery structures will deteriorate rapidly without some form of protection from water penetration. Repairs should be considered an ongoing process, rather than "permanent" solutions, because the work involves historic components. The rate of natural deterioration can be slowed, but can not be completely stopped, as long as masonry and metals remain in their historic outdoor locations.

The overuse and over application of excessively hard mortars has been observed. Virtually all of the original work involved the use of lime/sand mortar which predominated until about 1880. Although susceptible to washout, it was soft enough to allow bricks or stones some movement relative to each other. In a structure that lacks flexibility, stones and bricks break, mortar joints open and serious damage results. Cement mortars used after about 1880 were hard, creating strong and unyielding joints. They are appropriate to contemporary bricks and concrete blocks. Hard and soft building materials can not be used together effectively. Hard cement mortar will cause soft bricks and stones to spall and deteriorate.

Daveis Memorial Gate
Remove by hand and replace all loose and cracked mortar at the gate house and wing walls. Remove the stones around the gate hinges and remove the hinges. Then clean and treat the hinges or replace the hinges with galvanized metal or stainless steel. Restore the hinges and stones. Provide hammer soundings along the wing walls. Remove stone units at any hollow sounds, and replace and relay missing and loose stones. Repair split stones with epoxy, covered with high lime mortar for the outer 1 to 1-1/2". Locally rebuild the wing walls at the large vertical cracks. Using proper procedures [flushing out joints, spacers or equivalent as necessary, etc.,] and light gray Type O mortar, repoint walls. Keep new joints carefully tooled back from arrises of stones. Most of the current pointing is good in that respect. Clean off the unsightly black staining on the lower portion of the stone, as well as the mortar leachate, with an appropriate dilute acidic cleaner.

Check all wood for rot. Consolidate or replace in kind as necessary. Repaint all wood using the historic color and possibly a marine grade epoxy paint.

Regrade the area around the gate house as necessary to insure that water does not collect at the base of the stonework. Consider relocation of the chain link fence as it intersects the gate house.

Tomb and Vault Structures
Stabilization and selective improvements can be made to the vault tombs on the north side fairly easily. The vaults should be ranked in order of condition and the ones in the poorest condition should be repaired first. Those include the Cummings, Ingraham and Safford/Hall tombs. Repairs of the worst conditions should include demolition and reconstruction of tilted and displaced facades to a plumb and true condition. Stones should be reset in thin mortar to match historic work. At the best conditions, joints should be repointed where necessary. Mortar joints with Type N mortar, using a gray Portland cement and gray sand to match the granite. Clean the granite after earth has been moved and plants removed using a properly diluted acidic restoration cleaner. Provide door opening infills that give a more appropriate impression of the original doors.

Remove volunteer growth from the tops and sides of the vaults and replace the earth where erosion has occurred. This may require grading the earth at a shallower slope to reduce future erosion if vault construction allows this.

Stone Retaining Wall
Maintain the existing stone retaining wall as noted in the maintenance management section.

Concrete Walls
Perform a property line survey along the north edge to determine ownership and responsibility for care of the walls along that edge. Once ownership has been determined, remove volunteer tree growth with a potential adverse impact on the wall. Remove and treat, repair or replace fence posts. Chip back any unsound concrete to sound concrete. Reset fence posts. Patch disintegrated areas of the concrete.

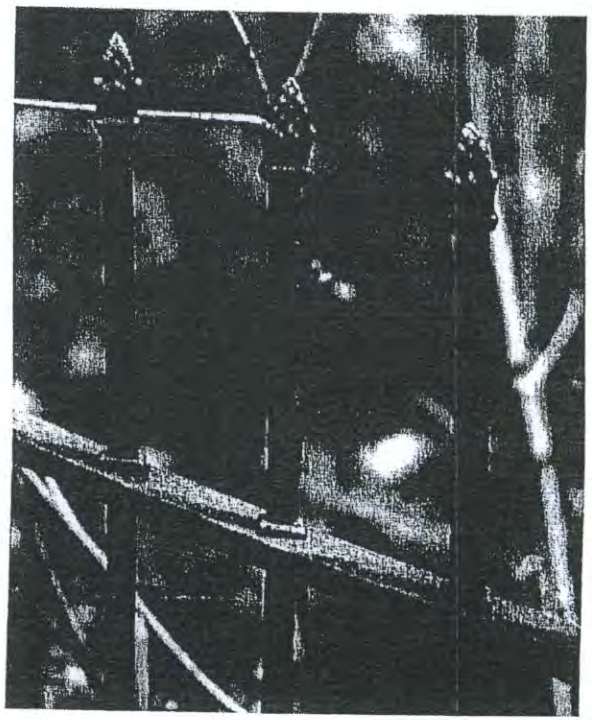
Building
The former building should not be replaced unless there is an overwhelming desire for this to occur and a commitment to maintain it because it could potentially become a target for vandalism once again, as it was in 1885.

FENCES AND GATES
Issues
Today the perimeter is mostly fenced, primarily with 50 year old chain link and a 32' length of iron fence at the northwest corner. Considerable effort was made to maintain this perimeter fencing at least through 1921. The north edge is partially fenced with chain link and some wood picket fencing. Most of this fencing is located at the top of a wall running most of the length of the property line. The ownership of these elements on the north side is unknown at this time.

Wood Fence
An 1828 state law required a fenced enclosure for cemeteries. The 1830 notice of the opening of Western Cemetery noted that the enclosure had been completed. The original enclosure was constructed of wood as can be seen in an 1857 photograph. The Annual Reports contain numerous notations about funds spent for lumber, repairs and painting of gates and fencing from 1856 through 1900. In 1882 at least a portion of the fence was destroyed by fire and had to be replaced. In 1901 it was noted that the fence on the north side should be rebuilt at once and in 1911 the wood fence adjoining the Chaplin property [Western Promenade corner] was rebuilt.

The Vaughan Street edge maintained a wood fence from the time the cemetery opened until the early 1950's when it was replaced with chain link. A 1914 photograph of the Daveis Memorial Gate shows a wood fence on Vaughan Street.

Iron Fence
A perimeter iron fence [on the Western Promenade edge] was installed in 1910 to replace an old wooden fence removed a few years before. It was installed by Megquier & Jones Co., the low bidder at $2,284.74. Installation was delayed somewhat because the record property line along Western Promenade cut into cemetery. It was relocated to clear all lots. The fence was painted in 1911. A section of fence damaged by an automobile on the Promenade side required repairs in 1921.



Iron fence at northwest corner

Removed for the WWII war effort, only 4 panels, about 32', are left. It was 5' high with 8' long panels set on concrete posts 4' oc and 4' into ground. Support posts were 3/4" square and back braced. Pickets, 5/8" square with acorn tops, were set @ 45 degrees and spaced at 4-1/4" oc. The fence had 2 horizontal channel rails, 1-1/2" wide by 1/2" high. Now missing, there were a pair of entrance gates with a 9.5' opening, and a 4.5' wide gate left of the entry near Bowdoin Street. Today, the remaining iron fence is rusted and pitted.

Chain Link Fence

The chain link fencing along Western Promenade and Vaughan Street is 5' high with a top rail and about 50 years old. The former was installed in 1948 and the latter in 1954 to replace an "old wooden barrier". Typically rusted, the fence is in fair to good condition except for 4 or 5 new ill matching panels opposite Spring Street and a few other locations along Western Promenade where a few newer fabric sections apparently close former breaches. A section of fabric is also not secured to the top rail opposite Spring Street. Much of the north edge is also enclosed with chain link fencing.

The posts are capped with an old style decorative device that holds the top rail. The posts are embedded in concrete cylinders. Where concrete or stone retaining walls occur, the posts are embedded directly into the wall or into concrete cylinders cored into the stone. In some locations, earth has eroded away from the cylinders.

Leaf litter at the base of the fence at the southeast corner and other locations retains moisture and will speed up deterioration of the fence.

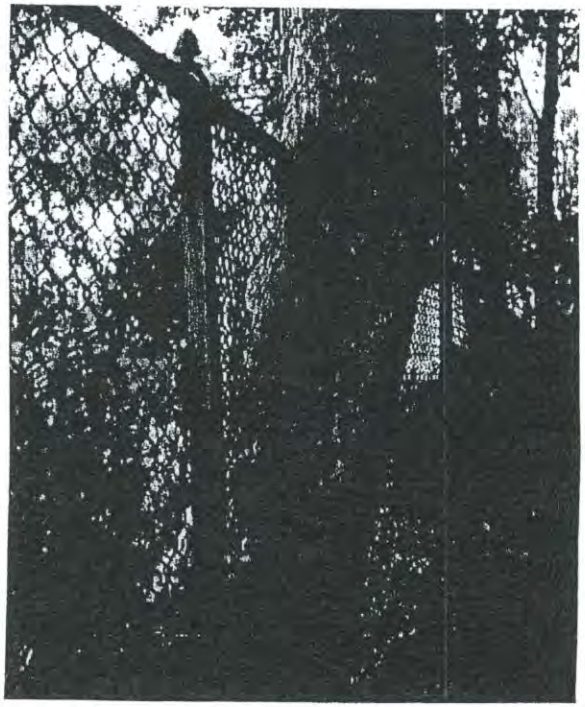
Interior Fences and Gates at Family Plots

An 1857 photograph illustrates that many of the family plots on the north side of the cemetery were enclosed or edged with wood fencing. While most had three horizontal rails, one had x-bracing. Wood fences require regular periodic maintenance. "Old rotten fences" were removed from around lots where owners ceased to care for them in 1900. In 1917 it was noted that fences, including the fence surrounding the cemetery, were repaired and painted. None of the wood fence enclosures remain today.

During the Victorian era, affluent families enclosed their plots with a formal, enduring perimeter of granite or marble. The continuous stone edging typically raised the level of the plot above the surrounding surface and steps were frequently part of the plan. The less wealthy often used metal fence or chain enclosures. Most of the latter are missing today with remnants of low, square granite posts at the corners and/or granite fence post bases.

A number of family plots have cast or wrought iron fences and remnants of other elements often associated with them. These enclosures had many advantages. They were adaptable to a variety of topographic conditions and it was possible to express imagery [religious and symbolic iconography] in the molded iron to an extent that was not previously possible. Even though cast iron was relatively inexpensive, it gave an impression of great luxury.

Although popular early in the rural cemetery movement, these elements fell into disfavor by 1867 and were being removed from sites. Extensive plot fencing came to be viewed as detracting from the overall beauty of the landscape. By 1890 cemetery managers actively discouraged the installation of fences at individual plots. The boundaries of numerous adjacent plots were marked with competing fences, with complete disregard for the visual impact on the cemetery as a whole.



Chain Link Fence along north edge

Cast iron was not supposed to deteriorate if it was regularly painted. However, this routine maintenance did not always occur. Rust and overgrown vegetation hastened the deterioration of a lot of iron fencing. Many of the remaining iron fences were removed for scrap iron to support 20th century war efforts, leaving few examples of this most typically Victorian of embellishments.

There are numerous former and existing examples of iron work at family plots in Western Cemetery. An 1857 photograph shows the northern most avenue edged with granite posts and two horizontal iron rails on the burial plot side of the avenue. Most of these posts and rails are missing today. Much of the fencing remnants was made of simple granite fence posts [square, or sometimes slightly tapered] that held single or double rail or chain fencing. Where it remains, family plot iron fencing is in poor condition.

Some specific examples include the Jackson, Mellen and Souther plots. An iron picket fence is mounted on a raised granite edge that defines the Jackson obelisk plot. The fence is composed of 4 tubular cast iron corner posts that are 3" square by 32" high [1 is missing, 3 are cracked/broken], and 7/8" square solid iron pickets with a 2-1/2" x 3/8" horizontal rail. All iron components are heavily rusted. Many picket bottoms have eroded at the point where they are imbedded in the granite edging. The latter exhibits evidence of a minor degree of settlement and overturning.

The Prentiss Mellen monument is also edged with granite, but the former fence above it is missing. This is a relatively common condition for many of the plots in the cemetery.

At the Souther and two adjacent family plots a typical situation occurs where there are three contiguous plots defined by raised ground behind stone edging. Granite corner posts and low iron picket fences also define the plots. The iron pickets, which are embedded into the edging, are necked down by corrosion and the stone edging is split along the line of the embedded pickets. The features of many family plots were not well built. Edge stones have no significant foundations and corrodible ferrous materials have been embedded in weak stone materials.

Interior Edging at Family Plots

The edges of family plots include brownstone, granite and concrete edging. Some of the stone edging is in good condition, but much has suffered from settlement and/or overturning and has heaved or rotated out of position. Stone corners are sometimes nominally pinned together with iron cramps.

Objectives

To reconfirm the historic character of the cemetery through the appropriate use and restoration of fences, gates and edging.

Recommendations

Wood Fence

Do not replace or replicate the wood fence on Vaughan Street. While it would have a comparatively low first cost, ongoing maintenance costs make this an unattractive option. A wood fence would also not provide the desired degree of security.

Iron Fence

Retain the existing remaining iron perimeter fence and restore it. Although this fence was initially installed at a time outside the period of significance for the cemetery, it should be replicated and once again extended along the Western Promenade edge. Install a modified version of that fence along the Vaughan Street edge so as to provide a subtle visual distinction between it and the historic fence. The iron fence has historic relevance for the site and the long term low maintenance benefits outweigh the high initial cost of this fence.

Chain Link Fence

Maintain the existing fence until it is replaced. Clean and paint the chain link fencing. Replace the modern sections with posts, top rails and fencing matching the rest of the fencing. Regrade around the concrete cylinders where erosion has occurred.

Interior Fences and Gates at Family Plots

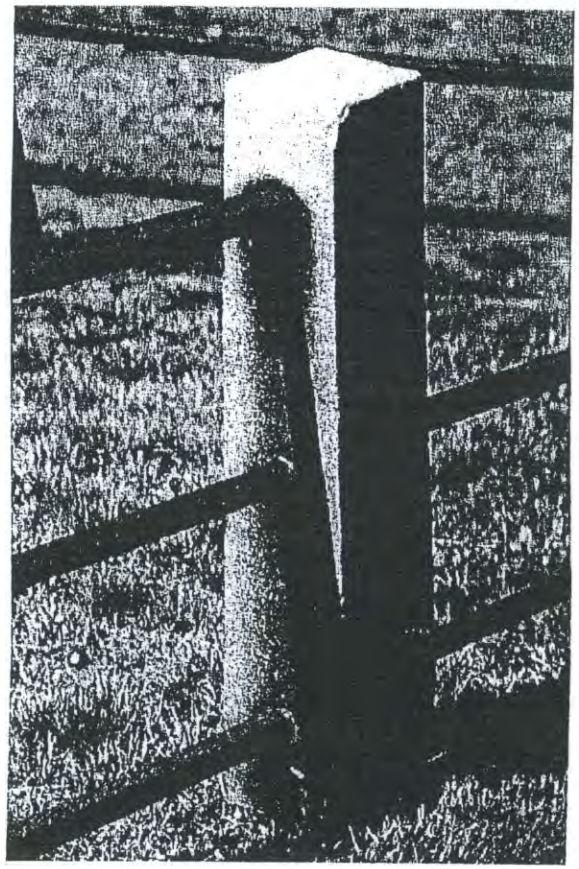
Much like the grave markers, the current city policy views these elements as private property. Family plot fences and gates are a disappearing resource in many historic cemeteries. In many cases they provide excellent examples of this form of cemetery art. The following recommendations should be taken into consideration when a restoration program is undertaken.

Interior Fences and Gates at Family Plots
Much like the grave markers, the current city policy views these elements as private property. Family plot fences and gates are a disappearing resource in many historic cemeteries. In many cases they provide excellent examples of this form of cemetery art. The following recommendations should be taken into consideration when a restoration program is undertaken.

Restore those that are in restorable condition and those that have a high percentage of existing remaining components. It would also be desirable to restore the fencing and gates at historically significant plots, like the Mellen plot. Do not restore those that have limited remaining components or those that have disappeared, particularly without strong documentary evidence [like historic photographs, illustrations or other reliable information] as to what was there before.

Those that are not to be restored should be left in situ until such point that they become a public safety hazard. Clean granite posts of rust and black stains. Reset them straight and true.

Granite post and iron fence at family plot



Iron fence at family plot

Interior Edging of Family Plots
Displaced edge stones should be reset and the ground raised adjacent to them to cover the foundations and bottoms of the edging. Existing corner pins are generally ineffective and should be replaced with concealed stainless steel angles and adhesive anchors. Alternatively, the stone foundations could be replaced with a continuous concrete pad and the edge stones could be set on top of the concrete on mortar beds, with vertical stainless steel pins connecting the two materials. Repoint edge stones where appropriate.

SITE AMENITIES AND FURNISHINGS

Issues

Signs

There is little available information about the style and extent of signs used in Western Cemetery. The painting of signs was noted in 1890 and an undated historic photograph shows a wood sign marking range "B". A newspaper photograph from 1954 shows a contemporary street type sign at the Vaughan Street vehicular entrance, presumably identifying the cemetery.

There are four categories of signs appropriate to historic burial grounds and cemeteries: identification; regulation; orientation; and interpretation. Western Cemetery has numerous regulatory signs, but does not have identification, orientation or interpretative signs. Rules for use are not posted except for the signs noting no entry after sunset.

Outside the cemetery are 3 vinyl no parking on this side Tuesday nights. 2 no parking signs at each side of the main entrance, one galvanized steel and 1 vinyl. A 24" square sign secured to the fence adjacent to the Daveis Memorial Gate entrance states no entry after sunset. A similar sign is post mounted at the Western Promenade entrance. The Western Promenade edge has 3 no parking this side of street, 1 stop ahead and 1 sign indicating a curving road. There is also a wood identification sign for Western Promenade near the intersection with Vaughan Street.

Inside the cemetery is a bent galvanized steel "Mutt Mitts" sign with plastic bag dispensers near the Daveis Memorial Gate. Inside the main vehicular entrance is a wood billboard with plastic bag dispensers.

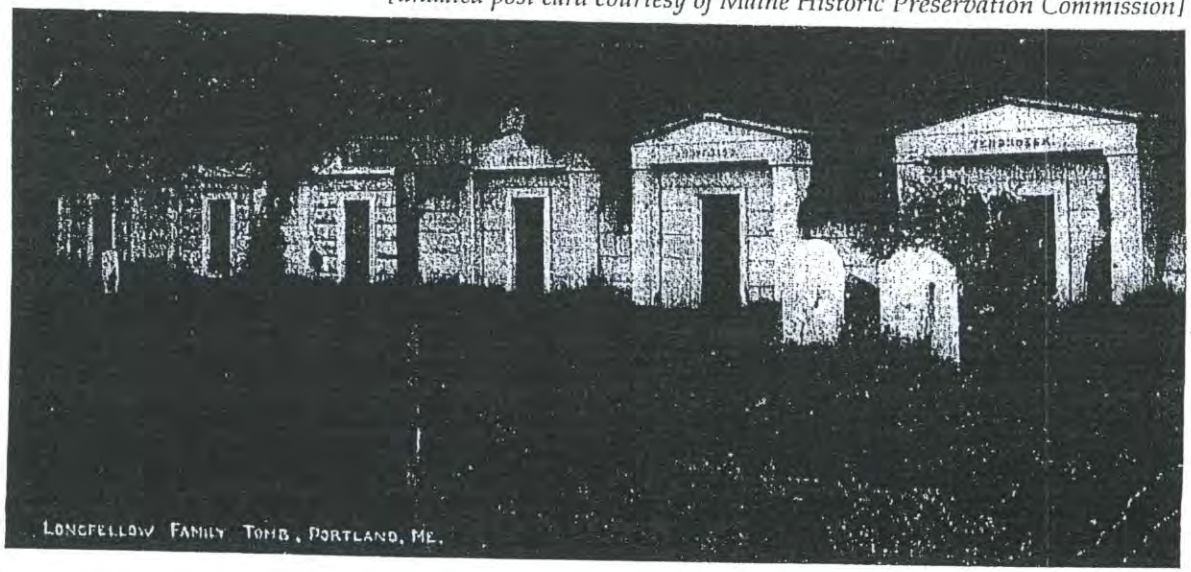
Trash Receptacles

There is no historic reference to trash receptacles related to the cemetery. Today there are 5 trash receptacles inside the cemetery, all of a similar city standard style but of different construction. Some are painted galvanized steel and others are white fiberglass. There are fiberglass receptacles at the two Vaughan Street entrances. There is also a black painted steel receptacle at the Daveis Memorial Gate entrance and a green painted steel receptacle at the main entrance, as well as a green painted steel receptacle near the Western Promenade pedestrian entrance.

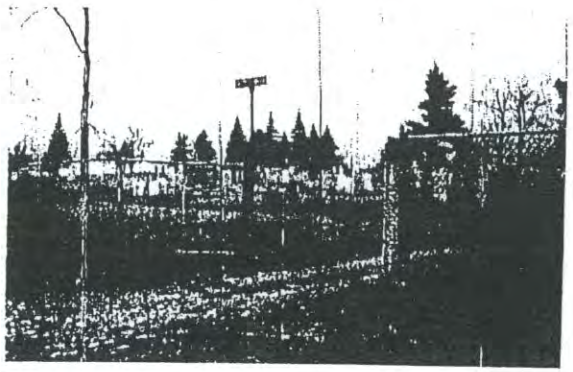
Seating

Benches were not typically provided in burial grounds prior to the rural cemetery movement that began in 1831. Although the 1921 annual report noted scraping and painting of seats, there are no benches inside the cemetery today other than the two benches built into the inside of the Daveis Memorial Gate.

Sign identifying "Range B" of the cemetery
[undated post card courtesy of Maine Historic Preservation Commission]



Vaughan Street entrance, 1954
[courtesy of Portland Evening Press]



Flagpole
A single 50' high flagpole is located near the Vaughan Street maintenance entrance. It is brushed aluminum and in good condition. No flag was observed. It is not known if it has a military association or serves as a memorial.

Miscellaneous
When the tool house was removed and the main entrance on Vaughan Street was improved in 1911, an ornamental fountain [the gift of Commissioner Edward A. Noyes] was placed at the end of the lawn near the entry. It was repaired in 1918 and painted in 1921. The fountain is no longer there and no reference was found regarding its removal.

Twenty five bird houses were installed in 1917, presumably to make the cemetery a more desirable place to visit. No remnants of these elements could be found today.

No planters were found

Objectives
To reconfirm the historic character of the cemetery through the appropriate use of site amenities.

To enhance the experience of visitors through informative, attractive and functional site amenities.

Recommendations
Signs
Western Cemetery needs a sign at each pedestrian entrance that identifies the property and lists rules and regulations as a first priority. The identification sign should provide some basic information like date of establishment and historic designation, at a minimum. The posting of rules and regulations is critical to help resolve and control issues related to use.

Placement of an orientation and informational or interpretive sign at or near the Daveis Memorial Gateway entrance of the site is also recommended. Consideration should be given to identifying important areas [Woodbine Grove, Stranger's Lot, Vaughan family plot, etc.] and grave sites. Interpretation is extremely important and a supporting sign system is critical.

Special consideration should be given to restoring avenue, path and range sign systems. Decisions related to sign materials should be made with consideration to the overall setting. Many materials, colors and styles can be visually distracting in terms of viewing a historic property. Signs set in stone bases might give the appearance of grave markers, potentially confusing visitors. Concrete bases are often an inappropriate material.

Signs should be legible and visually compatible with the character of the grounds and an overall system to present a sense of uniformity and wholeness. The system should be designed to reflect the museum quality of the grounds. The issue of donor and/or organization markers or plaques is discussed under the topic of administrative management.

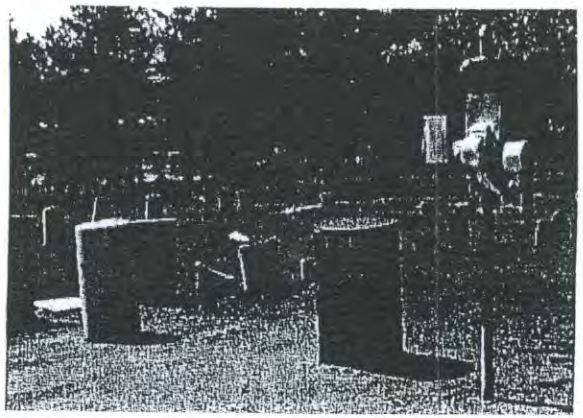
The placement of signs inside the grounds should be coordinated with path systems so that visitors naturally remain on path surfaces and are not attracted to walk on lawn surfaces or over grave sites.

Trash Receptacles
As long as the cemetery is open to and heavily used by the public, trash receptacles should remain, and they should be emptied on a regular basis. However, the trash receptacles should not be located inside the cemetery, rather they should be located outside the fenced perimeter near the entrances where dogs are permitted. This will relieve the visual conflict with grave sites and facilitate waste removal. The visual character of trash receptacles should be consistent [color and style] and compatible with adjacent fencing.

Should a time come when dog use is no longer allowed in the cemetery, consideration should be given to removing the trash receptacles.

Seating
While there is no record of benches being provided as part of the original cemetery development, and they are not typically associated with cemeteries of this era, a limited number of benches could be provided in non burial areas where they do not obstruct access or views to grave markers. The appropriate style of bench requires further study.

Trash receptacles at Vaughan Street entrance



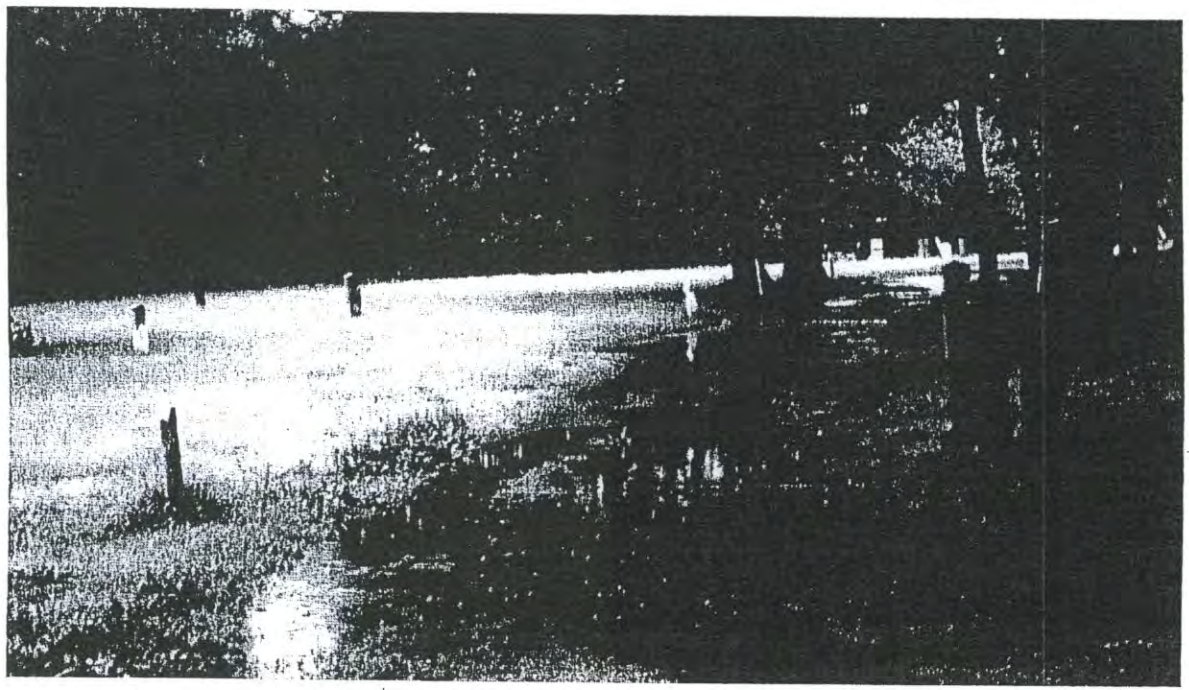
Flagpole
The flagpole should remain only as long as the responsible constituency [if that constituency can be determined] continues to maintain the flag, raise it and take it down. Since this does not appear to be occurring, it should be removed. It should not be illuminated.

Miscellaneous
The ornamental fountain and birdhouses should not be replaced because they were installed at a time outside the period of significance of the cemetery. However, if the original fountain were to be found, consideration should be given to returning it to its original site.

STORM WATER MANAGEMENT
Issues
No drainage structures were evident on site. There are catch basins on Vaughan Street and Western Promenade. All drainage occurs on the surface and tends to concentrate in the depressed circulation routes creating erosion conditions. Avenues and paths generally act as drainage ways because they tend to be set lower in the landscape than adjacent burial plots.

The Fir Avenue on the north side, from the high point near the Longfellow tomb, carries a concentrated flow toward Vaughan Street and then turns toward the central oval, Woodbine Grove, near the Daveis Memorial Gate where it runs over burial plots in an eroded area. It appears that earth fill has been added [it has a different color and texture than surrounding materials] inside the Daveis gate diverting surface drainage from following Fir Avenue adjacent to Vaughan Street. Water flows along Cypress Avenue adjacent to Woodbine Grove to the main vehicular gate and then down Fir Avenue parallel to Vaughan Street. At the southeast corner of the cemetery, water leaves the avenue and flows overland toward Western Promenade.

Erosion on southwest perimeter avenue



Ponding on southeast perimeter avenue

The lack of sound curbing on Vaughan Street above the Daveis gate allows surface water to run between the street edge and the cemetery. Erosion is significant at the upper end of Vaughan Street adjacent to the cemetery where curbing is missing. It has been reported that water used to flow through the gate and puddle there until some fill was added at the gate. If this had not been done, water would have flowed through the gate and down Fir Avenue parallel to Vaughan Street, joining the original flow from the Longfellow tomb area.

From the high point near the Longfellow tomb, water also runs west toward Western Promenade. It then turns south and divides where some of the water runs toward Woodbine Grove and the rest follows the southern path. Water collected on the southernmost avenue drains to the low point near the intersection with Maple Avenue where it flows overland toward Western Promenade. It settles in a low point before it reaches Western Promenade and sediment deposits are evident in the area.

From the high point at northwest corner Woodbine Grove, water runs along both Cypress Avenue and the path south of the oval meeting near the main Vaughan Street gate. There is a depression on the south side of Woodbine Grove, at about the midpoint, that holds about 12" of water during heavy rain storms.

It is possible that overland flow into the site from adjacent properties along the north edge may be contributing to erosion and sedimentation conditions. Some surface water enters the site over the stair at the northwest corner.

Objectives
To eliminate erosion and sedimentation conditions.

To eliminate standing water by providing positive drainage.

Recommendations
Resolve erosion conditions on pathways by rebuilding pathways and providing proper and ongoing maintenance to eliminate concentrated overland flows both on and off pathways.

Provide continuous granite curbing along the Vaughan Street edge of the cemetery to protect the site from the detrimental effects of storm runoff from the street. Storm water discharges into the site from adjacent properties should be rectified as soon as possible to prevent further erosion and sedimentation damage. Remove and replace the stair and walk at the northwest corner adjacent to Western Promenade in a manner such that it directs surface water away from the cemetery as is normally done with sidewalks in a public way.

New underground storm drainage systems should generally not be added to inactive cemeteries like this unless it is deemed absolutely necessary.

UTILITIES

Issues

General

Most older burial grounds had no need for utility services. As the rural cemetery movement became established, water supply was deemed desirable to help maintain the overall landscape and allow visitor maintenance of plantings at individual and family plots. Electricity was only needed to service building needs and was not used for the general illumination of a site.

Water Supply

No hose bibbs were found inside the cemetery. It is assumed that there was water supply during the early development of the cemetery. The 1890 Annual Report noted painting the pump and the 1907 Annual Report noted that there would have to be a new pump purchased for Western Cemetery because the old one was worn out.

There are two fire hydrants on the cemetery side of Vaughan Street and none along Western Promenade. Lack of water, overuse and compaction are significant reasons why lawns, particularly in Woodbine Grove, are in fair to poor condition during the dry summer months.

Lighting

No light fixtures were found on site. Street lights are adjacent to the site on Vaughan Street and on the opposite side of Western Promenade providing some ambient illumination.

Overhead Wires

Wood telephone poles serving adjacent residences are located inside the cemetery below the retaining and other walls on the north side. This reputedly occurred about 20 years ago. Pole locations are not in conflict with grave sites.

Objectives

To accommodate utility services in a manner that is compatible with the historic image of the site.

To provide utility services that would benefit the maintenance of the cemetery.

To provide remedial measures for utility services that are detrimental to the site.

Recommendations

General

If this cemetery were in a more urban area it would be generally preferred that utility services such as electricity and water supply for irrigation be provided from adjacent public, institutional and/or commercial buildings. This would create the least disruption of the cemetery and the least potential visual intrusion. It is less feasible in this residential setting. The site of the former tool shed should be investigated to determine if utility services were provided to it and if they are potentially serviceable.

Water Supply

The addition of water supply is desirable for lawn restoration, plant establishment and the cleaning of grave markers and other stone elements. Water lines should be located within defined avenues to reduce the possibility of damaging to grave sites. Flush mounted frost proof hose bibbs should be located adjacent to Woodbine Grove. Until such time as water supply is provided to the site, the city water truck or adjacent fire hydrants may be used on a temporary basis to assist with restoration efforts.

Lighting

Do not add light fixtures inside the cemetery because there is generally no need to provide lighting. A high incidence of recurring vandalism may cause consideration of providing illumination in areas of or the entire site. The lighting of the site from adjacent streets should be maintained and/or upgraded where deemed necessary for security reasons. If deemed necessary, security lighting should be pole mounted at the edges of the property where they would create the least visual intrusion. Decorative or "period" pedestrian or holiday lighting should not be added.

Overhead Wires

While it is inappropriate that these services have been sited on cemetery grounds, they do not impact burial sites and relocation is not recommended provided the north edge remains vegetated with large screen trees.

With little interest and effort, the Western Cemetery might be made a credit and an ornament to our city. Certainly our dead merit it and would cry out against the neglect.
Nathan Gould, Portland Historian, 1913

IMPLEMENTATION

PRIORITIES AND PHASING

Priority Setting

In preservation projects for historic cemeteries priority setting is a relatively straight forward matter, that is, protect historic resources first. Other issues come to the forefront like the need to maintain deteriorating infrastructure and maintaining an appropriate visual character for visitors.

Improvements have been broken down into three priority levels to ease construction financing requirements. The actual order of events will depend completely upon sources and availability of funds and the needs and desires of the City. Priority levels can be combined or further subdivided as funds are available and as opportunities present themselves.

The highest priority items are typically related to issues of public safety, structural stability and protection of historic fabric. These items should be corrected first and as soon as funds allow this work to be accomplished.

Medium priority improvements should be corrected next and generally relate to issues of security, preventing accelerated deterioration or damage which could lead to higher future costs, replacement of items which are expected to last less than five years, and repair or replacement of items that significantly detract from the appearance of a cemetery.

Low priority improvements include cosmetic repairs and future considerations that can be delayed at least five years.

MASTER PLAN COST ESTIMATE

This estimate is presented with the priority levels described above. It should be considered preliminary in nature and used for discussion purposes only. Many items should be considered flexible because of the scale and level of detail development of this plan. Because of the probable long range nature of this project, a factor for inflation has been omitted. Inflation could easily double this estimate in a very short period.

This estimate focuses on capital improvements that can be funded and administered within the structure of the Portland Parks and Recreation Department.

Costs for work related to lot owners [such as marker conservation, gravestone repair and resetting, repair of family plot edging and fences, monument cleaning and restoration, and vault restoration] has not been included except where a public safety issue is present or imminent. Work on three of the hillside tombs has been included for this reason. These items are considered to be in private ownership by the city and not covered under a trust fund agreement. In active cemeteries it has virtually become an industry wide practice to require private owners to pay for these types of services. The practice in inactive public historic cemeteries varies although it has become customary for municipalities to assume this responsibility.

Stone conservation, although one of the highest priorities, needs to be addressed more substantially outside this report. Stone by stone inventories recording the number, materials, artistic and historic significance, condition and conservation priority of each gravestone must form the basis for stone conservation programs.

COST ESTIMATE FOR CAPITAL IMPROVEMENTS

HIGH PRIORITY		
Remove volunteer growth at hillside tombs	$4,000	
Remove volunteer growth at important endangered historic resources	32,000	
Restore 3 hillside tombs	48,000	
Repair erosion at sides of hillside tombs	6,000	
Initiate screen planting along north bank	16,000	
Restore gravel avenues and control erosion	48,000	
Provide definition of edges of grave sites along main avenues, where necessary	41,000	
Provide granite curb and sidewalk along Vaughan Street edge	125,000	
Restore deteriorated lawn areas in Woodbine Grove	46,000	
Complete restoration of Daveis Memorial Gateway and provide a universally accessible route into the cemetery	33,000	
Provide regulatory signs at pedestrian entrances	9,000	
Provide water supply inside cemetery	22,000	
Subtotal		$430,000
MEDIUM PRIORITY		
Remove additional volunteer growth at north bank	14,000	
Remove additional volunteer growth at less endangered historic resources	38,000	
Continue screen planting along north bank	44,000	
Provide tree allee on avenues adjacent to Woodbine Grove	47,000	
Provide tree planting along Vaughan Street	19,000	
Rehabilitate Western Promenade pedestrian entrance including steps	15,000	
Provide sidewalk along Western Promenade edge	144,000	
Preserve existing sections of historic iron fence at Western Promenade	10,000	
Provide identification signs at pedestrian entrances	9,000	
Subtotal		340,000

It is estimated that the cost for all grave marker work would be approximately $400,000 if it were to be completed through a public bidding process. On the other hand, volunteers could perform most of the required tasks related to uprighting, cleaning and some repairs, leaving about $150,000 for professional efforts.

Costs for work related to the repair of the concrete walls and fencing along the north edge has not been included because the ownership of these elements has not been determined at this time.

These estimates are in year 2001 dollars and are subject to change. Estimates reflect a public bid process as required by the city. Although construction costs were very stable between 1990 and 1995, they have increased substantially in recent years. Some of these costs could be reduced with selected services provided by City forces like the removal of volunteer growth and other items.

It should be noted that the above costs are for budgeting purposes only. We have no control over economic conditions affecting construction costs and have had experiences where comparably qualified bidders have been 100% apart in bid prices for minor masonry restoration work.

Fees for professional services, topographic and other survey, testing, etc., have not been included in the above estimate.

Noncapital Improvement Project Recommendations

Initiate property line survey along the north edge to determine ownership and responsibility for care of walls along that edge.

COST ESTIMATE FOR CAPITAL IMPROVEMENTS [continued]

LOW PRIORITY		
Remove remaining volunteer growth at north bank	7,000	
Complete screen planting along north bank	22,000	
Provide screen planting along Western Promenade	19,000	
Replace fence along Vaughan Street [assumes 700' iron]	320,000	
Replace fence along Western Promenade [assumes 1,430' iron]	632,000	
Provide benches in selected locations	9,000	
Remove flagpole	1,000	
Provide identification signs [avenues, sections and areas]	65,000	
Provide informational/interpretive signs	95,000	
Subtotal		1,170,000
Grand Total		$1,940,000

Operational Costs

Costs related to the improvement of operations such as staffing, equipment and supplies has not been included in the capital improvements estimate. Recommendations for improvements to maintenance management has several cost implications, and they will vary depending upon the choices made.

Expenditures for continued overtime operations has one cost. The provision of the staff necessary solely for the upkeep of Western Cemetery has another cost. And the provision of staff as a dedicated crew for inactive historic cemeteries has another cost. Each choice needs to be further evaulated in terms of the Cemetery Division as a whole to determine which would best benefit the city.

The allocation of additional staff is also important with the implementation of a capital improvement program. Their presence will be very important in the establishment of plantings and lawn areas as well as the other items noted in maintenance management.

As stated under maintenance management, the budget should also be increased to allow for contracted services for necessary tree work and removals, unless the city Horticulture Department can provide this service. A budget of $25,000 per year, with appropriate increases for inflation, should be carried for at least the next 5 years to accomplish this work. An annual budget for tree work should be maintained thereafter at approximately 25% of that required annually for the initial work. The former amount is reflected in the capital improvements estimate. The latter is not.

Sunbathers and dog at Western Cemetery

ADMINISTRATIVE MANAGEMENT

LAWS, RULES AND REGULATIONS

Issues

The City of Portland is the governing authority responsible for the care and maintenance of this historic cemetery. A series of state laws and City ordinances protect the cemetery, graves and grave markers. Principal among them are:

State Laws

All-terrain vehicles, operating in, prohibited acts, > ME ST T. 12 § 7857

Maintenance and repairs, responsibilities, > ME ST T. 13 § 1101

Veterans graves, ME ST T. 13 §§ > 1101, > 1102

Approval for repair, maintenance and removal, gravestones, > ME ST T. 13 § 1371

Trespass, > ME ST T. 17-A § 402

Desecration and defacement, ME ST T. 17-A §§ > 507

Interference with cemetery or burial ground, > ME ST T. 17-A §§ 507-A

Illegal possession or sale of gravestones, > ME ST T. 17-A § 507-B

Scope of preservation interest, historic property, > ME ST T. 29 § 1553

Veterans, graves, Caring, > ME ST T. 30-A § 5723

City Ordinances

Chapter 7 - Cemeteries

Article 7, Rules of Conduct covers issues of trespass [7-123], malicious mischief [7-124], not walking on lots [7-125], prohibition of alcoholic beverages [7-128], litter [7-131], disorderly conduct [7-132], prohibition of sports and games, except ice skating [7-133], prohibition of unleashed animals [7-135], etc.

Chapter 5 - Animals and Fowl

In general unleashed animals are prohibited in cemeteries [7-135] except as allowed by Article 2, Section 5-15.1 which allows unleashed dogs at a number of city properties including Western Cemetery provided their owner is within 50' of their dog and has the dog under voice control at all times. Dogs are only allowed on walkways and roadways, not cemetery lots. This code was reputedly changed sometime between 1968 and 1996 to allow dogs in Western Cemetery.

Recommendations

Controlling activities in cemeteries is generally beneficial. Curtailing them can sometimes have negative results. Other than a posting of the acceptable time of use Western Cemetery, no other rules and regulations are posted. Once rules pertaining to use are adopted, they should be clearly stated on signs at pedestrian entrances. They should include:

No Gravestone Rubbing
Do Not Sit or Lean on Tombs or Gravestones
No Alcoholic Beverages

They should also include pertinent regulations related to dogs. Other considerations should include the prohibition of bicycles, roller skates, roller blades and skateboards as well as picnics [the consumption of food or beverages], jogging and athletic games. Visitors should be reminded to conduct themselves in a manner keeping with the dignity and sacredness of a cemetery. Loud or unseemly conduct or music should be prohibited. Visitors should not litter the grounds, or cut, break or injure trees, shrubs or other plants.

In regard to tributes, cut flowers should be allowed at any time provided they are laid on the ground and not wired or tied to grave markers. Potted plants and artificial plants or flowers should not be allowed. The planting of perennials or shrubs should also not be allowed. Statues, lights, glass objects or other impediments should also not be permitted.

HISTORIC DESIGNATION

Issues

Western Cemetery is included as part of the locally designated West End Historic District. While the district has been determined eligible for National Register status by the Maine Historic Preservation Commission, the nomination has not been completed.

As an eligible resource, any activity that affects Western Cemetery is subject to review and approval under the Section 106 process of the National Historic Preservation Act, if the activity os federally funded or licensed. Under this process, alterations must meet the Secretary of Interior's Standards for Rehabilitation. The National Park Service document "Guidelines for the Treatment of Historic Landscapes" provides guidance for making a determination as to whether proposed changes meet the Secretary's standards.

On the local level, any physical changes to Western Cemetery need to be reviewed and approved by the Historic Preservation Committee, applying the preservation ordinance's Standards for Review of Alterations. These local standards are patterned directly after the Secretary's standards.

Recommendations

While Western Cemetery benefits from being part of the locally designated West End Historic District, National Register status should be pursued for the cemetery.

VETERANS

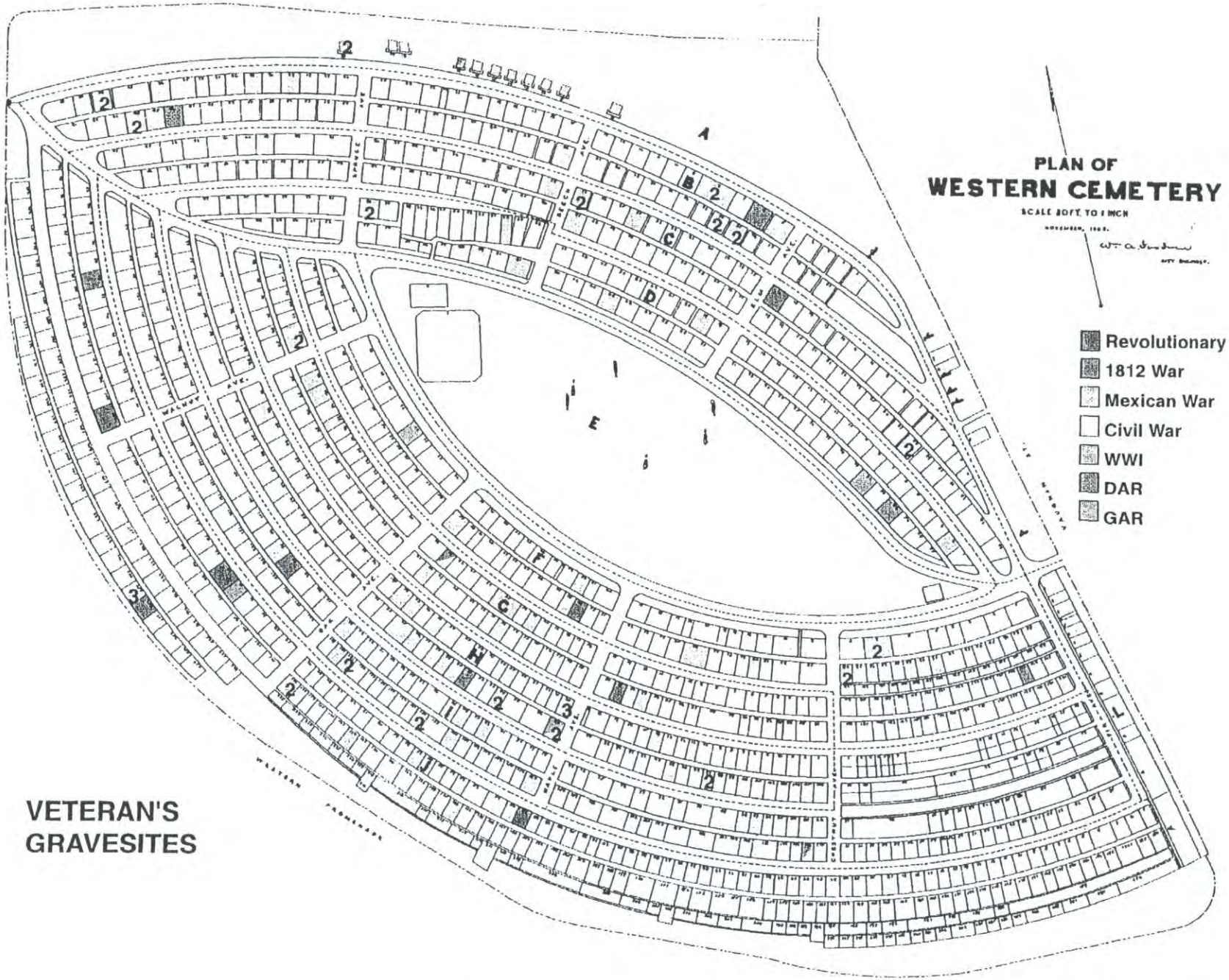
Issues

Based upon William Jordan's research there are at least 140 veteran's graves that can be identified and another 4 grave sites that have been lost. Some of these veterans served in more than one war. In addition there is one DAR member [Sarah Hatch, B-46] and two GAR members [Women's State Relief Corps].

- Revolutionary War [2 plus 1 that has been lost]
- War of 1812 [15 plus 1 that has been lost]
- Mexican War [3]
- Civil War [119 plus 2 that have been lost]
- WWI [1]

It has been reported that flags used to be placed at veteran's graves, but the practice stopped at some point. The state law that took effect in 2000 requires that municipalities decorate veteran's graves in public and private cemeteries that are classified as ancient burying grounds [ie., in existence prior to 1880] with American flags and flag holders each year on Memorial Day.

The law also requires that municipalities to "keep in good condition and repair, all graves, headstones, monuments or markers designating the burial place of . . . revolutionary soldiers or sailors or veterans of the Armed Forces of the United States of America who served in any war and shall keep the grass suitably cut and trimmed from May 1st to September 30th of each year."



VETERAN'S GRAVESITES

Recommendations

Continue to work with veterans organizations to insure compliance with the recently passed state law requiring the placement of flags at each veteran grave site on Memorial Day. The placement of flags on Veteran's Day should be optional. Flags on individual graves should only be permitted for 48 hours before and after Memorial Day and Veteran's Day.

Continue to maintain lawn areas as further described in the maintenance management section that follows.

USE AND USERS

Issues

The primary use today appears to be dog owners bringing their dogs to run off leash inside the cemetery. There is also a small percentage of casual visitors, some taking a walk over their lunch hour. Most people tend to stay less than an hour.

A neighbor reported that about 20 years ago the major problem in the cemetery was drug dealing and parties. At some point after that use of the cemetery by dog owners began. There used to be 3 to 5 dogs at a time off leash, with a maximum of 20 per day. This neighbor stopped going to the cemetery about 5 years ago because of overuse, deterioration of the earth surface, the number of dogs and dog fights.

Today there is the perception of such a larger number of dogs running off leash [some not under control] that some neighbors won't go into the cemetery anymore, with or without a dog.

During the Spring, Summer and Fall of 2000 the following uses were observed: people sitting on grave markers, family plot edging and fences; people using grave markers for aerobic exercise; a game of Frisbee between three men in Woodbine Grove; a lawn chair set up next to a monument; sunbathers; a young trail bike rider; a woman bike rider with a dog following; a jogger; a woman relieving herself on the north slope; a few beer bottles; a blind person with a companion and a dog; a wheelchair visitor with a companion and a dog; a couple with an infant and a dog; young kids looking for the Longfellow tomb; teenagers posing on top of a large unstable monument for pictures; a number of people without dogs socializing at the Western Promenade end. Out of state license plates observed included: MA, NJ, IL and VA.

In addition, the following dog related uses were observed: a dog on a leash inside the cemetery; dogs left inside the cemetery for a few minutes while owners left; games of fetch with dogs using balls, sticks and frisbees; slow responses to voice control; a number of dogs not under voice control of their owners; 6 unleashed dogs outside the cemetery in a 30 minute period; a number of dogs more than 50' from their owners inside the cemetery; a commercial dog walking van parked outside the cemetery; a dog knocking over an unpinned, reset marker; dogs playing in a large puddle in Woodbine Grove; a few fights between dogs; and numerous piles of uncollected dog feces, about 20, prior to the May clean up.

In December, 2 people and a dog were observed entering the cemetery at least an hour after sunset. They stayed inside for about 10 minutes. During the third public meeting, people stated that this was not an unusual occurrence and that they normally took flashlights to assist with clean up. In January, numerous people with dogs were observed inside the cemetery shortly after sunset. These incidents are in clear violation of posted regulations.

User Surveys

A 1996 survey was directed at dog use and polled by the Friends of Western Cemetery. It occurred on site from 9-11 AM and 3-5 PM on Saturday 27 April, from 10-noon and 3-5 PM on Sunday 28 April, from 7:30-9:30 AM and 4-6 PM on Tuesday 30 April, and 7:30-9:30 AM and 4-6 PM on Friday 3 May.

The 2000 survey was polled by city staff and Walker-Kluesing Design Group and occurred on site from 6:00 AM to 8:00 PM on Wednesday 28 June, Saturday 8 July and Thursday 13 July. Repeat visitors and those who had filled out questionnaires at the earlier public meeting were asked not to complete a second survey. On the first day of the survey, most wanted to participate and some would wait their turn.

The surveys differed somewhat in terms of questions asked. The information presented here is to assist with direct comparison of questions. More complete information regarding the questions and responses to the 2000 survey can be found in Volume II, Supplemental Information.

In addition to the survey of users on site, a similar survey was distributed to the Western Cemetery neighborhood and it was available at one of the public meetings.

User Surveys

	Spring 1996	Summer 2000
How often do you visit Western Cemetery?		
More than once per day	-	32
Daily	92	21
2-5 times per week	62	80
Weekly	7	25
Twice a month	-	7
Monthly	-	8
Occasionally	32	9
Rarely [once a year or less]	1	-
	194	182
Where do you live?		
West End/Western Promenade	111	76
Downtown	13	12
Parkside	10	9
Munjoy Hill	7	19
North Deering/Deering/Baxter	21	30
Libby Town/Stroudwater/Rosemont	4	3
South Portland	10	12
Other	18	21
How do you typically get to Western Cemetery?		
Walk	-	35
Drive a car	-	109
Ride a bike	-	35
Take a bus	-	3
Other	-	-
How do you use Western Cemetery?		
Spiritual contemplation	-	10
Education	-	1
Exercise or recreation	-	34
Dog walking	-	171
Neighborhood camaraderie	-	24
Socializing	-	29
If you bring your dog, why do you choose Western Cemetery?		
Fenced area	168	143
Dog comradeship	166	30
People comradeship	118	21
Aesthetics of the area	116	67
Convenience to home	119	61
Ease of parking	65	3
Personal safety	89	-
Other	-	30

For a different level of information regarding use of the cemetery, field observation surveys were conducted by Walker-Kluesing Design Group to help ascertain levels of use by people, dogs and parked vehicles at various times of day and days of the week.

FIELD OBSERVATION SURVEYS
25 April - 5 December 2000
People Inside Western Cemetery

	MON-FRI				SAT-SUN			
	# of Obs.	Range	Total	Average	# of Obs.	Range	Total	Average
6-7 AM								
7-8 AM								
8-9 AM								
9-10 AM	2	5	10	5				
10-11 AM	6	5-10	46	7.6	1	1	1	1
11-12 AM	2	3-14	17	8.5	3	3-9	15	5
12-1 PM	3	4-6	15	5	3	5-13	24	8
1-2 PM	7	2-11	41	5.8				
2-3 PM	9	1-16	56	6.2	1	17	17	17
3-4 PM	3	2-7	14	4.7				
4-5 PM	12	2-17	115	9.6				
5-6 PM	10	5-33	130	13				
6-7 PM	4	16-25	75	18.7				
7-8 PM	1	16	16	16				
8-9 PM	2	0-3	3	1.5				
	61	0-33	538	8.8	8	1-17	57	7.1

Note: As it got darker earlier in the day, more people showed up earlier late in the day.

Dogs Inside Western Cemetery

	MON-FRI				SAT-SUN			
	# of Obs.	Range	Total	Average	# of Obs.	Range	Total	Average
6-7 AM								
7-8 AM								
8-9 AM								
9-10 AM	2	4-5	9	4.5				
10-11 AM	6	4-10	43	7.2	1	1	1	1
11-12 AM	2	5-12	17	8.5	3	4-10	19	6.3
12-1 PM	3	2-5	10	3.3	3	2-13	22	7.3
1-2 PM	7	2-7	29	4.1				
2-3 PM	9	1-15	50	5.5	1	15	15	15
3-4 PM	3	2-9	15	5				
4-5 PM	12	2-18	112	9.3				
5-6 PM	10	5-37	137	13.7				
6-7 PM	4	14-25	73	18.2				
7-8 PM	1	16	16	16				
8-9 PM	2	0-2	2	1				
	61	0-37	514	8.4	8	1-15	57	7.1

The people of Portland have had a long term love-hate relationship with "man's best friend" as can be seen in the Report of the Commissioners in the 1886-1887 Annual Report [pp 95-96] regarding expenditures on the public grounds including Lincoln Park, Eastern and Western Promenades, and Eastern and Western Cemeteries.

Much more might be done, with little expense, were it not for the army of dogs kept by those that live in the vicinity of the park, who let their animals go at large. We shall have to insist that the owners take care of them in the future. The aged, the sick, and the feeble, whose avenues of pleasure are fast closing up, yet find delight in the fragrance of the flower, and its bright and delicate tints. The cool shade and fresh breeze, invigorate and shorten up the long hours of the heated summer. Here mothers can feel that their little ones are safe, so long as tramps, disorderly persons, and vicious dogs are not allowed to intrude.

It was judicially settled in this State, some year[s] ago, that a dog was an animal wild by nature, [fierce nature]. We wish to Heaven it were so, and that the dog would take to the woods, and stay there, the companion of the savage wolf and fierce tiger. But he is with us, under foot at all times. He sleeps in our apartments; he eats at our table; he tears the clothes of our children; he lingers upon our outgoing, and he greets our incoming. What is still worse, he worries and destroys our small drones, the animals and fowls; he digs up our gardens, he befouls our plants and flowers, he dives into the nearest puddle, and shakes his muddy and dripping locks in our faces and dwellings. He is altogether too domestic, in spite of the Court. If our people will take care of their domestic dogs, the wild ones, [fierce natures] will take care of themselves. As in the case of Lincoln Park, we here protest against this dog nuisance.

Vehicles Parked on the Cemetery side of Vaughan Street

	MON-FRI				SAT-SUN			
	# of Obs.	Range	Total	Average	# of Obs.	Range	Total	Average
6-7 AM								
7-8 AM								
8-9 AM								
9-10 AM	2	6	12	6				
10-11 AM	6	5-10	46	7.7	1	2	2	2
11-12 AM	2	5-10	15	7.5	3	2-8	14	4.6
12-1 PM	3	3-7	14	4.7	3	6-8	21	7
1-2 PM	7	5-12	55	7.8				
2-3 PM	9	5-12	67	7.4	1	8	8	8
3-4 PM	3	2-7	14	4.7				
4-5 PM	12	1-14	102	8.5				
5-6 PM	10	7-19	120	12				
6-7 PM	4	10-17	51	12.7				
7-8 PM	1	4	4	4				
8-9 PM	2	0-1	1	0.5				
	61	0-17	505	8.3	8	2-8	45	5.6

Note: Two vehicles were observed parked illegally in the wrong direction, one in a no parking zone partially blocking the maintenance gate, and two near collisions opposite the Spring Street intersection. There was increased parking on both sides of the street with the start of the school year.

Vehicles Parked on the opposite side of Vaughan Street

	MON-FRI				SAT-SUN			
	# of Obs.	Range	Total	Average	# of Obs.	Range	Total	Average
6-7 AM								
7-8 AM								
8-9 AM								
9-10 AM	2	4-10	14	7				
10-11 AM	6	2-8	26	4.3	1	1	1	1
11-12 AM	2	3-4	7	3.5	3	1-8	10	3.3
12-1 PM	3	1-6	8	2.7	3	2-8	12	4
1-2 PM	7	2-12	41	5.8				
2-3 PM	9	0-14	50	5.5	1	5	5	5
3-4 PM	3	0-3	5	1.7				
4-5 PM	12	1-11	62	5.2				
5-6 PM	10	4-11	76	7.6				
6-7 PM	4	5-7	24	6				
7-8 PM	1	4	4	4				
8-9 PM	2	1-2	3	1.5				
	61	0-14	320	5.2	8	1-8	28	3.5

The use of Western Cemetery as an off leash area for dogs has been the subject of a great deal of discussion for a number of years. Many are divided over the issue of allowing such a use to continue considering the impacts of this use on the historic resources and condition of the cemetery as well as the impacts on the surrounding neighborhood. There are strong emotions and sharply divergent views on both sides of this issue.

The positions on each side were summarized as follows by one of the master plan committee members.

Opponents of continued off leash use have expressed the following concerns about the use of Western Cemetery as an off leash area:

- It desecrates the cemetery and the graves within it.
- It is responsible for the physical deterioration of the cemetery.
- It is creating problems for the surrounding neighborhood related to traffic, parking and odor.
- It precludes use of the cemetery by other neighborhood residents, particularly as a place for quiet contemplation and/or visiting graves.
- It is incompatible the character of a historic cemetery.

Proponents of continued off leash use have noted the following points in support of their position:

- Western Cemetery currently meets an important need in Portland as the only fenced off leash area for dogs.
- A sense of community has developed among users [dog owners who desire an off leash area] of Western cemetery which is an important consideration in the fabric of urban life in Portland.
- Use of the cemetery as an off leash area has displaced previous undesirable uses.
- Most people using the cemetery as an off leash area are conscientious in cleaning up after their dogs.
- Because Western cemetery is no longer an active cemetery, it should be managed as a public open space or park as well as a historic cemetery.
- Any negative impacts resulting from off leash use of the cemetery can be adequately addressed by improved maintenance and other management changes.

At least some of the proponents of continued off leash use of Western Cemetery have acknowledged that the current level of off leash use is too great and that alternative off leash areas must be identified and developed throughout the city to reduce the pressure on Western Cemetery.

Alternatives Considered

Three basic alternative approaches were considered as a means to resolve the inherent conflict between the historic intended use and recent current use of Western Cemetery.

One approach explored the means necessary to accommodate off leash dogs in the cemetery while respecting current state laws and city ordinances. This solution considered the erection of a barrier or fence along each pathway to physically prevent off leash dogs and their owners from unintentionally crossing known grave sites. Numerous gates would be required to facilitate visitor and maintenance access to grave sites. The physical and economic impact of such a solution was generally deemed unacceptable to all.

A second approach considered various compromise schemes utilizing physical means and/or time management solutions to allow all users to maintain their current use of the site. These alternatives concentrated use in specific areas [leading to a more rapid rate of deterioration] or at specific times of day. This approach was generally only acceptable to off leash dog constituents. All other constituents only felt that the problem was being confined or constrained, but not alleviated.

The last approach assumed that all dogs would be accommodated off site. This was acceptable to most opponents of off leash dog use, but raised many concerns and fears from off leash dog constituents particularly in regard to the location and character of another site. Irrespective of the fact that it is a historic cemetery, for many Western Cemetery is a large, beautiful and convenient site for off leash dogs that will be difficult to provide in another setting.

Recommendations
Because of the detrimental impacts of the overuse of the cemetery caused by its use as an off leash area for dogs, implementation of the following is recommended.

Assuming a January 2001 adoption of this master plan, the city should provide an alternative site for off leash dog use prior to 30 April 2001. After that facility is operational, restrict the area in Western Cemetery where dogs are allowed to pathways only. Require dogs to be on a 6 foot maximum length leash. Prohibit the use of the Daveis Memorial Gate as an entrance for dogs. In addition, limit the hours of dog use to early morning and late afternoon to encourage use of the site by school children and others who may have concerns about having dogs in the space at the same time.

Monitor the cemetery for compliance and reevaluate every 6 months thereafter to determine the acceptability of continuing to allow dogs in the cemetery.

Amend the applicable city ordinances to reflect the above recommendations. Reexamine and post rules and regulations related to use of the cemetery at each pedestrian entrance.

The current policy that allows dogs in Portland cemeteries needs to be reevaluated in consideration of all users and constituencies. This recommendation takes into account the findings of the public process and surveys, and should be considered an achievable solution that will be acceptable to many on both sides of the issue.

While it does allow dogs on a short leash in areas that do not desecrate grave sites for certain periods of the day, it also importantly maintains a degree of use while allowing specific times for a new programming of uses for the site without internal conflicts. It will also sharply reduce the rapid physical deterioration of the cemetery.

ACCESS AND CONTROL

Issues
The perimeter is fenced on the public sides and along much of the private residential edges. With a height of 5' the fence is relatively easily scaled and there are unfenced sections along the north edge. The official pedestrian entrances are gated, but not locked. Vehicular entrances are kept locked. Closing hours are posted. Eastern Cemetery on the other hand is always locked, and opened upon request.

This can be a complex issue because while there are numerous advantages to encouraging the public to spend time at a historic burial ground or cemetery, there are also benefits to keeping people out of these sites. The reduction of potential theft and vandalism are the primary reasons for keeping these sites locked on a regular basis. Unintentional damage by indigents and animals, dogs primarily, is also a concern. These potential problems have surfaced at various times at Western Cemetery.

Recommendations
Western Cemetery should retain some form of visible boundary definition, like a fence, to discourage unintentional damage. The type and form of this definition should be determined by the historic nature of the property and the financial ability of the city.

Because there are no significant problems in this regard at this time, pedestrian access to Western Cemetery should remain unlocked and vehicular access should remain locked and opened only on request. Neighborhood surveillance and reporting should continue. Should problems arise, consideration should be given to discussing the matter with the local law enforcement entity and incorporating policies adopted by other municipalities that have urban cemeteries.

TRUST FUNDS AND PERPETUAL CARE

Western Cemetery developed during a transitional period in terms of cemetery design and the concept of perpetual care. When it opened with the sale of lots for public consumption in 1830, the families of the deceased were expected to maintain their family lots. The obligation for care by the city focused on unsold lots and the areas outside lot boundaries. For those who desired a level of care that a family might not be able to provide, some set up trust funds with the city for the care of specific lots.

Trust Funds for the care of lots in Western Cemetery were purchased from 1894-1961. The trust funds were typically set up for the annual care of a lot, i.e., grass, but not for the repair of grave markers, lot edging, etc. according to city records. The earliest was established after the 1888 ordinance, during a period of decline for the cemetery. The J. Hall Boyd Trust Fund set up in 1894 included care of the fence, although in 1917 it apparently also included the relettering of two grave markers.

The decline of Western Cemetery and the increase of popularity of Evergreen Cemetery with its established levels of care may have been part of the reason a few individuals were moved from Western to Evergreen like Nathan Clifford, William Pitt Fessenden, Sr. [US Senator], William Pitt Preble [Judge] and William Willis. Others were reputedly moved to Evergreen Cemetery, but there is not record of them in Western Cemetery like Luther Dana, Neal Dow, Rev. Henry Goddard, Horatio N. Jose [no record at either cemetery] and Thomas B. Reed [perhaps father, but no record].

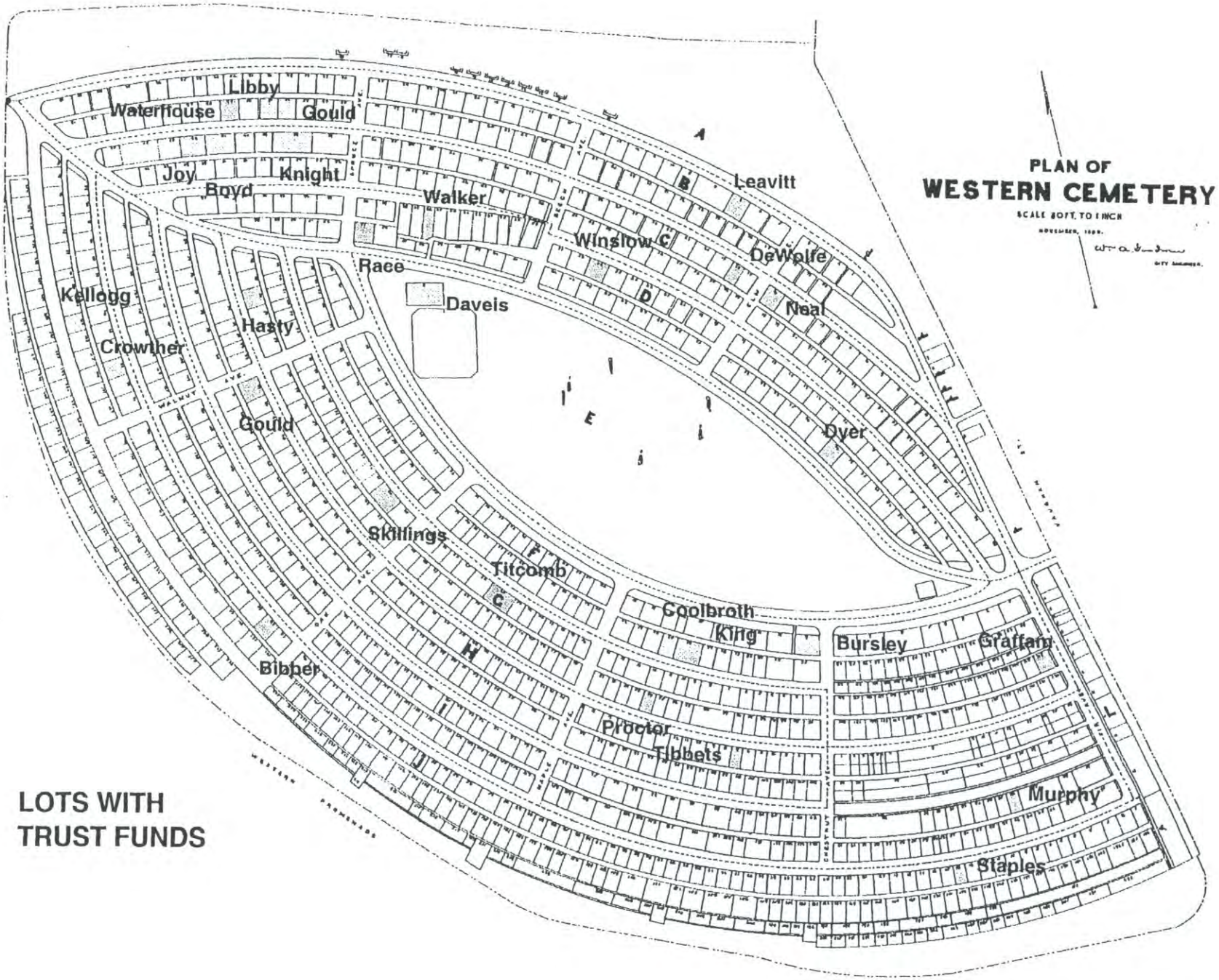
As the concept of perpetual care became enmeshed of the traditions of public and private cemeteries, the responsibility for care shifted from families to cemetery managers, with appropriate compensation to the cemetery. By the end of the 19th century most cemeteries requested that prospective and current lot owners establish a fund to cover the real cost of maintaining lots.

While the earlier attitude toward perpetual care at Evergreen Cemetery is not known at this time, three levels or classes of care were listed in the 1882 "Ordinance for the Government and Control of Evergreen Cemetery". The first class entitled lot owners to have the cemetery management care for grass inside the family plot. The second class included care of trees, plants, shrubs, myrtle or hedge [but not furnishing or replacing them] as well as grass. The third class included care of all granite, stone, marble, or other work as well as grass and plants. Metal items were not included and wood "headboards" and fences were prohibited in the cemetery.

It is not known if these standards were ever applied to Western Cemetery. The level of perpetual care purchased is undetermined at this time as no trust fund documents have been found to date. City Hall records were reputedly purged in 1983-84. The list of 29 trust funds was compiled from annual reports, cemetery files and research by William Jordan.

Lots with Trust Funds

Lot	Name [Date fund established, amount]
B-7	Abba C. Leavitt Fund [1913, $200]
B-49	Mary P. Brackett Fund for care of Josiah Waterhouse lot, [1908, $100]
B-51	Mrs. Charles Plummer Fund for care of Andrew Libby lot
B-52	Elizabeth G. Goold Fund [1913, $400]
C-16	Margaret Neal Fund
C-18	Robert DeWolfe Fund
C-38	Albert Knight Fund [1932]
C-41	[44?] J. Hall Boyd Fund for care of Joel Hall and R. S. Boyd lot [1894, $300]
C-42	Minnie Joy Fund [1961]
D-25	Howard Winslow Fund
D-36	[56?] Joseph Walker Tomb Fund [1920, $200]
D-53?	Minnie E. Race Fund [1940]
D-78	Josephine Dyer Fund [1929]
E-2	Edward F. Daveis Fund [1939]
F-9	Ida Bursley Fund
F-75	Mary L. Coolbroth Fund for care of Jonathan M. Coolbroth lot [1905, $200]
F-76	Nancy King Fund [3 September 1917]
F-129	John W. Graffam Fund [<1922, $125]
G-23	M. S. & A. H. Titcomb Fund [1905, $200]
G-30	Skillings [1942, no records found in cemetery files]
G-50	Eleanor R. Hasty Fund, [1916, $150 later noted as $100]
G-84	Jane Proctor Fund [7 May 1934]
H-7	[G-32?] Ira F. Tibbets Fund [1937]
H-47	M. Florence Gould Fund [1945]
I-36	James Murphy Fund
J-14	Blanche L. Staples Fund
J-68	Ellen E. Bibber Fund [1927]
J-83	John W. Crowther Fund [1932]
J-103	Frank G. Kellogg Fund



LOTS WITH TRUST FUNDS

The most recent City of Portland Code lists four types or classes of perpetual care. The second, third and fourth classes apply only to Evergreen Cemetery, not Western. As a practical matter the city only offers, and requires, the first class.

First Class: Includes the care of grass and the trimming of trees and shrubs. This is required for all lots sold after 19 August 1970 except in one section of Evergreen and three sections of Forest City Cemetery.

Second Class: Includes the care of stone and bronze [but not replacement] as well as grass and plants.

Third Class: The same as second class but includes replacement.

Fourth Class: Includes the care of tombs, vaults and mausoleums [pointing joints, keeping walls in place and the structure in a suitable and sanitary condition] as well as grass and plants. This is required for those constructed after 19 August 1970

New lots can no longer be defined by fences, rails, curbs, hedges, etc.

City responsibilities at Western Cemetery include the general care of lawns, plantings and roads, but not the care of sold lots except as required by trust funds. The city does however care for the lawn on all lots, whether sold or not. The city is not responsible to care for individual plantings, urns, etc.

Recommendations

The City should continue to care for the lawns on all lots as well as roads. Recommendations regarding the care of vegetation is covered in other sections of this report.

The City should reconsider its position regarding responsibility for the care of grave markers, lot edging, etc., as in other sections of this report. Many of these historic resources are in danger of being lost and some have already disappeared.

PUBLIC EDUCATION AND COALITION/ SUPPORT BUILDING STRATEGY

Issues

The preparation of preservation master plans or guidelines like this can help a closed or abandoned historic cemetery become a community asset once again. They can provide guidance on how to present a historic cemetery as a community asset and/or appropriate tourist destination. Without such guidance even the most devoted cemetery advocates find it difficult to sustain support. With the assistance of local constituency groups this can be created by enlightening people as to the historic value or significance of such a property to a community.

Partnerships formed between municipalities and local constituency groups such as neighborhood associations, historical societies and friends groups can be beneficial for a historic cemetery. These relationships are essential for site management and successful fund raising. Local constituency groups are effectively the eyes and ears for these resources, providing oversight and watchdog functions. Local constituency groups also provide support for grant writing activities. Incorporation as nonprofit entities enables them to receive funds from charitable foundations, corporations and individuals.

Some local constituency groups have already been formed. The Friends of Western Cemetery was established in 1993 reputedly to prevent dogs from being banned from the cemetery. Since that time they have contributed to the repair of the Daveis Memorial Gate and do help with clean ups each spring. The Western Promenade Neighborhood Association has an interest in the neighborhood as a whole. The Maine Olmsted Alliance has an interest in Western Promenade as well as property adjacent to it like Western Cemetery.

Recommendations

Increased public exposure will lead to greater use of this valuable open space resource. As a potential tourism component for the City, this historic cemetery must be presented in a compelling and appropriate manner.

Constituency group and volunteer efforts could be directed toward developing strategies and efforts to preserve and improve this site including a stone by stone inventory, stone fragment collection, cleanups, plantings, watering of newly planted trees, public education, interpretation, special events, the development of visitor brochures and guided walks to increase public awareness of this important site. Western Cemetery could be more appropriately and highly utilized if it were associated with publicized trails or neighborhood walks.

Consider a coalition of advocacy groups interested in the future of Western Cemetery to assist with increasing public awareness and fund raising, particularly related to the restoration of lots.

Education can play a prime part in support building. Western Cemetery could be used as an outdoor laboratory for local schools, giving classes in history, art, sociology, religion, geology, botany and metallurgy.

Listed in a local hotel publication as an off leash area for dogs, Western Cemetery has not been receiving the recognition that it deserves. Efforts should be made to enlighten the community as to the significance of the cemetery.

WORKING WITH VOLUNTEERS

Issues

Volunteer involvement is an integral part of the success of most cemetery preservation projects. They provide the enthusiasm, energy and driving force behind most projects. Much responsibility falls to those faithful volunteers who see a project through from beginning to end.

Recommendations

Because of the nature of volunteer staff, a coordinator, preferably a paid position, is essential. The coordinator takes charge of all the varied talents and time schedules of volunteers, sets timetables for goal accomplishment, assigns tasks and follows up to insure that they are completed. This person keeps others informed and on track, and insures that each participant understands the project and his or her part in it.

With only limited training, volunteers can be the backbone of the work force for documenting and photographing the site.

Following more in depth training, volunteers can undertake elementary conservation efforts such as washing or resetting certain types of markers. Each volunteer must receive the necessary training for the particular task assigned. Untrained or unskilled individuals should not attempt even the most elementary conservation work.

FUNDING

Issues

Western Cemetery has limited endowment funds, unlike many of the well maintained private cemeteries. Care and restoration is primarily funded by capital programs of the Departments of Parks and recreation or Public Works.

Recommendations

Supplemental sources of funding will undoubtedly be necessary to complete recommended implementation projects. A descendant's research project could become a means to encourage community members to make contributions. Entities like the Maine Bar Association could be approached to assist with restoration of specific markers like the Mellen stone.

Recognition of Contributions

As funds are raised for improvements, donor recognition becomes an issue of concern. Plaques, if necessary, should be grouped in a location near the main entrance of the cemetery so as not to detract from the primary experience of the site. If this is not acceptable, plaques for donated or memorial trees should be hung on trees as opposed to being ground mounted on concrete bases. A minimum gift level should be set to at least cover the cost of purchasing and installing the tree and memorial plaque. It is preferred that donations be made to a Memorial Tree Fund that can be used as an endowment for tree planting, maintenance and eventual replacement.

RESOURCES

Potential sources of assistance with burial ground and cemetery related issues:

Informational Resources

American Institute for Conservation of Historic and Artistic Works [AIC]
1717 K Street, NW, Suite 301, Washington DC 20006
[202] 452-9545

Association for Preservation and Technology [APT]
P.O. Box 8178, Fredericksburg VA 22404
[703] 373-1621

Association for Gravestone Studies [AGS]
278 Main Street, Suite 207, Greenfield MA 01301
[413] 772-0836
[info@gravestonestudies.org]

National Park Service
Monument Research and Preservation Program
200 Chestnut Street, 3rd fl., Philadelphia PA 19106
[215] 597-5824

National Park Service
Preservation Assistance Division
Technical Preservation Services Branch
P.O. Box 37127, Washington DC 20013
[202] 343-9578

National Trust for Historic Preservation
1785 Massachusetts Avenue, NW, Washington DC 20036
[202] 673-4296
Northeast Office
7 Fanueil Hall Marketplace, 5th fl., Boston MA 02109
[617] 523-0885

Save Outdoor Sculpture
Heritage Preservation
1730 K Street, NW, Suite 566, Washington DC 20006
[800] 422-4612
[heritagepreservation.org/PROGRAMS/SOS/aboutsos.htm]

Partners for Sacred Places
1616 Walnut Street, Suite 2210, Philadelphia PA 19103
[215] 546-1288

Alliance for Historic Landscape Preservation
82 Wall Street, Suite 1105, New York NY 10005

American Society of Landscape Architects
636 Eye Street, NW, Washington DC 20001
[202] 898-2444
[asla.org]

National Center for Preservation Technology and Training
[ncptt.nps.org]

General Information Websites

alsirat.com/silence/
members.aol.com/TombView/links.html
potifos.com/cemeteries.html

State and Local Organizations

Benton County Cemetery Preservation Group [Arkansas]
Center for Historic Cemeteries Preservation [Florida] [simpsonj@mail.ci.tlh.fl.us]
Coalition to Protect Maryland Burial Sites
Connecticut Gravestone Network
Florida State Task Force on Abandoned and Neglected Cemeteries
Grave Concern, Inc. [Lancaster County PA]
Maine Old Cemetery Association [Augusta]
Oregon Historic Cemeteries Association, Inc.
Save Our Cemeteries, Inc. [Louisiana] soc@gnofn.org
Save Southern Cemeteries
Save Texas Cemeteries [savegrave@aol.com]
State Association for the Preservation of Iowa Cemeteries
Vermont Old Cemetery Association
Washington State Cemetery Association [andimac@oz.net]

Education Programs

The GraveNet Project [EduTel Communications, Inc.] gives K-12 students an opportunity to investigate community history, geology, etc., through cemeteries by providing lesson plans and other resources. [edutel.org/gravenet/gravenet.html]

Grant Assistance
Foundation Center
888 7th Avenue, New York NY 10019

Grantsmanship Center
1031 South Grand Avenue, Los Angeles CA 90015

Foundation Grants Index, New York Foundation Center

Potential Funding Sources
Getty Grant Program
401 Wilshire Blvd., Suite 1000, Santa Monica CA 90401
[310] 395-8624

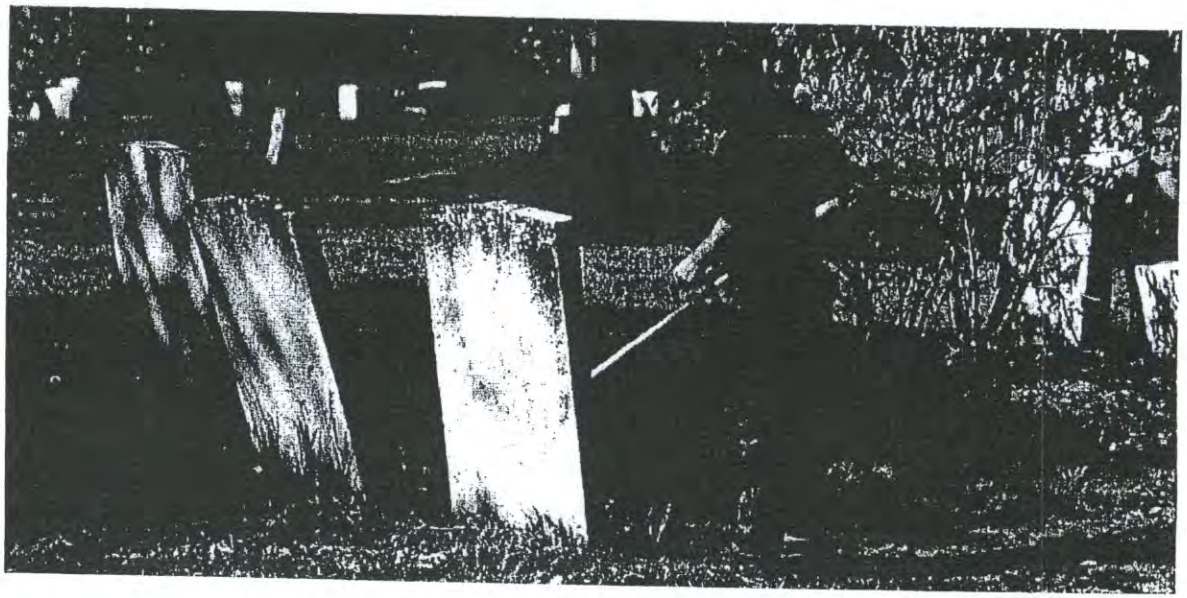
Institute of Museum Services [IMS]
1100 Pennsylvania Avenue, NW, Washington DC 20506
[202] 786-0536

National Endowment for the Arts [NEA]
1100 Pennsylvania Avenue, NW, Washington DC 20506
[202] 682-5400

National Endowment for the Humanities [NEH]
1100 Pennsylvania Avenue, NW, Washington DC 20506
[202] 786-0438

Additional published resources can be found in the bibliography.

There is no better sign of the spirit of a people than the care of their dead. A well kept cemetery is a constant reminder of the dignity and worth of human association and human life.
Judge Symonds at a hearing regarding care at Evergreen Cemetery



Weed whip in use at Western Cemetery

MAINTENANCE MANAGEMENT

The overall goal is preservation and stabilization to prevent further damage and to enhance the appearance of the cemetery wherever possible. The importance of this site to the community is emphasized by well kept lawns, other components kept in a good state of repair and an inviting informative sign system. A well maintained site tends to discourage vandalism and promote further community support. All outdoor elements need regular maintenance regardless of age or condition.

The following contains a summary of general guidelines for protection, stabilization, preservation, restoration and/or maintenance. Because of the rapid advances in knowledge and techniques today, this should serve only as a general guide. Specific changes in these recommendations, particularly in regard to materials and methods, are expected over time.

These guidelines are provided for general information and are presented on a variety of levels. Most of these techniques and materials should not be used without appropriate training and in most cases a professional should be consulted before attempting anything. Inappropriate use of these techniques and/or materials can cause irreparable damage. In the majority of cases, a professional conservator should prepare a program of work specifying appropriate methods and materials for use. Conservation work should be performed by professional conservators. In some instances a conservator might be able to train people to perform some of the types of work involved, and should supervise any work done by volunteers.

MAINTENANCE GUIDELINES

General Clean up

Issues

Western Cemetery is currently maintained by the Cemetery Division of the Portland Parks and Recreation Department. The cemetery is kept reasonably free of trash and leaves, and the grass is mown regularly. Leaves, fallen limbs and debris are removed in the Spring with some assistance from the Friends of Western Cemetery. There is no fall leaf removal.

Trees were trimmed up and the ground surface was cleaned about 4 years ago. After public criticism the raking of Pine needles ceased. The large pile of Pine needles in the northwest corner is left over from these efforts.

Trash receptacles are currently emptied three times per week [Monday, Wednesday and Friday] by the Cemetery Division. They "volunteered" to provide this service after the Parks Division staff refused to do it any longer. The average weight of trash removed is reported to be 500 to 800 pounds per week, primarily dog waste. There are times when over stuffed trash bags break because of the weight of the contents, making clean up an unpopular task. The current plan is to keep 5 receptacles on site as long as dogs are permitted in the cemetery.

Recommendations

Litter is a major problem in any public open space and one that must be controlled to create pride in a historic property. A neglected appearance seems to encourage vandalism or additional trash dumping. In this regard it is important to provide at least a moderate maintenance and management approach. A site should receive complete attention at least every 4 weeks during the summer. Collection of the contents of trash receptacles and litter like paper, trash or debris should ideally be removed on a weekly basis and more often if it is a heavily visited site like Western Cemetery. Leaves should be removed during the fall and the grounds cleared of fallen branches.

Each landscape character has its own requirements and potential hazards that maintenance personnel and budgeting or funding entities must be aware of. There needs to be maintenance standards and an interest in upgrading training beyond a basic level. Maintaining a continuity of maintenance staff with a commitment to the preservation of a historic place is critical. It is also beneficial in that this specialized knowledge becomes transferred to new staff members over time.

Tree work is currently performed by the city tree crew. They should be made aware of concern about historic artifacts on the ground below trees. Maintenance practices should continue to include the use of weed whips to reduce chipping and scratching damage on grave markers and not use side collecting lawn mowers. Power mowers should be equipped with rubber bumpers as well as blade guards to prevent stones and sticks from being thrown by them.

Landscape Character and Vegetation

Issues

Vegetation Management

The goal of tree maintenance is to maintain healthy trees free of dead wood which could fall on people or gravestones and tombs. The reasons for pruning trees may include reducing hazards, maintaining or improving tree health and structure, improving aesthetics, or satisfying specific needs such as: removing disease; removing dead, dying, interfering or obstructing branches; training young trees; eliminating screened areas to discourage loitering; and providing clearances for utility lines. The uncontrolled growth of trees and weeds hides vandals and can cause toppling of stones and widening of cracks in already damaged stones.

Trees require pruning on a regular basis to protect historic resources from damage by falling limbs. Too many trees or trees of the wrong type can create shade that is too dense to support and maintain a stabilizing ground cover which makes the surface subject to erosion. Too much shade can also be detrimental to particularly slate and marble grave markers in that moisture could be retained for long durations, increasing the probability of biological growth on important historic artifacts.

Volunteer Growth

It is essential to maintain a landscape with an appropriate historic character. The character of a landscape is dynamic compared to the relative stasis of other historic components like grave markers and structural elements. Natural forces like landscape succession will change an unmaintained lawn into a forest in a relatively short period of time. The undeniable results of these forces can be seen. Many of the large trees may appear as old as the cemetery. However, none of the trees on this site were there before the turn of the century. Many are volunteers, developed from seed brought or blown in from outside areas.

Volunteer growth is attended to by the city Horticulture Department who has a staff of 4 serving the entire city. Consequently, work at Western Cemetery is provided on an as requested basis. The north bank was cleared 7 or 8 years ago without replacement planting and caused some public outcry.

Lawns

The primary ground cover is grass. It is often in poor condition with areas of erosion, sloughing, bare spots, weeds and depressions. Erosion and sloughing of some of the steep banks is apparently due to concentrated pedestrian or animal circulation, sheet runoff, settlement of steep slopes and/or steep sloped mound tombs. Bare spots are typically related to concentrated pedestrian or animal circulation, root competition from trees and/or dryness. Weed intrusion is primarily related to dryness and low fertility levels. Heavy shade conditions also impact lawn quality. Most depressions are related to earth settlement and tree removals.

Moss is present in lawn areas. The presence of moss in lawns is an indication of wet soil, poor soil in need of fertilizing, very acid soil or a combination of these factors. In the areas where it is present on these properties, wet soil does not appear to be the issue. Most New England soils are acidic, but not to the degree that moss is present. More often than not, moss on these sites is an indication that a soil has low light and fertility levels, particularly a nitrogen deficiency.

Most lawn areas need renovation, including proper pH level and fertilization. Maintaining a healthy lawn cover with adequate light, moisture and nutrients, and good maintenance procedures would reduce bare spots, weeds, moss and erosion.

It has been reported that Western Cemetery was only mowed once or twice a year in the early 1990's. There were times when the grass reached waist height. The frequency of maintenance has improved in recent years. In 2000 the site was mowed and weed whipped on a monthly cycle from May through October [6 times per year].

Soils

Soil Tests: Soil analysis and testing helps determine the proper quantity and ratio of nutrients and other additives to improve a soil. Tests for pH and fertility levels should be made every 3 to 5 years to determine fertility changes made with basic treatments and to give a bench mark for further soil improvements. It typically also takes 3 to 5 years for the soil and the basic treatments to reach an equilibrium.

Recommendations

Vegetation Management

Inspect trees to safeguard against threats to stones and tombs from root systems and falling or scraping branches. Inspections should be made on a yearly basis and after each storm where winds exceed 55 mph. Ideally trees should be pruned to remove potentially hazardous dead wood on a yearly basis, but safety pruning every 5 years by certified arborists is acceptable. A 5 year cycle of pruning will help maintain and preserve large old trees. Provide plywood shelters as necessary to protect stones and monuments until pruning operations are complete.

Trees should be pruned in such a manner as to preserve the natural character of a plant and in accordance with ANSI 300 standards. All pruning cuts should be made outside the branch collar. Remove all dead wood, suckers and badly bruised or broken branches to reduce potential injury or damage to people, grave markers, vehicles and structures. Remove branches to provide 8 foot overhead clearance.

The pruning of trees should only be performed or supervised by a certified Arborist. It should be done by nonprofessional crews only during an emergency situation or when there is an immediate issue related to public safety. The removal of dead trees should also be done by certified arborists. In cases where gravestones are impinged upon by tree trunks or roots, the gravestones should be temporarily moved to a new location to prevent additional damage to them, but only if it is safe to move the gravestone. If growth is in conflict with gravestones or tombs extreme care should be exercised. Cut trunks as close to the soil as possible and leave the stump in place to decay. After a stump has decayed sufficiently, topsoil fill should be added to blend in with surrounding grades, and the area should be reseeded.

Root collars should be cleared of soil, mulch, stones, brush and other items that could hide or cause decay which could cause a tree to fail. Keeping root collars clean helps control girdling roots and decay that leads to tree decline and failure. Questionable trees with cavities, cracks or seams in main stems or branches, or fungi fruiting bodies on or around the root area should be assessed for potential tree failure.

Failure prediction with any sort of accuracy is difficult. However, performing a systematic approach of evaluating each part of a tree with proven procedures that the International Society of Arboriculture has adopted through the guide know as "A Photographic Guide to the Evaluation of Hazardous Trees in Urban Areas" will help to eliminate most of the suspected hazards. Remedial action such as pruning, installing support systems and removal will help reduce the failure percentages and the damage or injury to property or persons.

Mulching: Trees growing in an area with a restricted root zone, low nutrient levels, pH imbalance, low moisture conditions and soil compaction decline faster as they mature. Grass and weeds also compete for nutrients and moisture. Research is showing that trees, especially older mature trees, improve in health when turf or grass is removed under the branch spread and mulch or wood chips are applied at a depth of no more than 3 to 4". Surface roots are also protected when mulch is applied at that rate. When appropriate, trees should have grass removed from beneath their canopies as far as possible from the main stem. However, this is not always appropriate in historic cemeteries where prevention of erosion is of paramount concern.

Shrubs: Fertilize shrubs once a year during the spring. Spread fertilizer over the surface of the ground surrounding the shrubs. Soak the area thoroughly. Edge plant beds twice a month or as needed. Ornamental trimming or pruning should be consistent with the natural landscape and historic character. Plants should appear natural and healthy as opposed to geometric and fanciful. Prune to admit light and air to the center of the shrub. Prune only as plant growth requires. Prune spring flowering shrubs after they have bloomed. Prune summer flowering and other deciduous shrubs during the dormant season. Prune evergreen shrubs in late spring or early summer. Remove dead wood at any season.

Ground Cover: Keep weeded continually. Avoid disturbing runners. Prune regularly to maintain a low spreading appearance. Remove vertical shoots. Fertilize at the same time lawns are fertilized.

Volunteer Growth

Most, if not all, volunteer species should be removed. Volunteer growth should be removed on a yearly basis during the months when frequency of mowing is reduced and maintenance crews have time to remove it. Because lawn areas and edges attract volunteer growth, lawns must be mowed on a regular basis to keep this under control. The edges of a property and individual elements like markers and tombs must also be constantly monitored to keep volunteer growth in check.

Lawns

Rehabilitating existing lawn areas: The rehabilitation of lawn areas in historic cemeteries needs to be done with more care than any other lawn because of the grave markers and potential bone fragments at or just below the surface of the ground. Weeds and other undesirable species should be removed. The soil should be loosened by power rake or vigorous hand raking. Rototilling is not recommended because of potential damage. Fertilizer and lime should be added as recommended by soil analysis. The fertilizer choice should be checked with a stone conservator as recommended herein under the discussion of soils.

Depressions that inhibit proper drainage of an area should be filled with topsoil to blend smoothly into surrounding grades. Care should be exercised with mounded or raised areas and regrading should be avoided or limited to avoid potential damage to subsurface elements. Bare spots should be topdressed, seeded and rolled. Water must be provided to maintain a sufficient moisture level to establish grass. The best time to plant a lawn is between August 15 and October 1 to reduce weed infestation and maintenance requirements. If it is necessary to plant in the spring, plant as soon as the ground can be worked and when the soil is free of excess moisture.

Installation of new lawn areas: In general sod is recommended in areas that need immediate use and seed is recommended for all other areas. Most seed mixes should incorporate improved, low maintenance, slow growing, drought resistant and shade tolerant seed cultivar mixes of Kentucky Bluegrass and Fescue.

Watering: Water lawns as necessary to maintain normal growth and color. Soak the entire root area. Avoid light, frequent sprinklings. Water is essential to establish a lawn. Watering established lawns during the dry months of summer, does not appear to be a realistic possibility at this time given the current budget, maintenance crew size and lack of a sources of water.

Mowing: Mow to an average height of 3 inches. The most serious issue is the routine removal of grass in the immediate vicinity of gravestones and tombs. Power mowers can scar and break stones. The types of stone used in older gravestones tend to be softer and more easily damaged than granite. Damage of this type was observed on two slate markers. The best current solution is to mow with lawn mowers to within twelve inches of gravestones and tombs and then use weed whips [rotating nylon filament trimmers] to trim the remaining area. The use of weed whips is permissible at granite and brick, possibly slate, but not marble markers. Metal hand trimmers should not be used because they can abrade stone. At the marble gravestones, and perhaps slate, consideration should be given to removing grass from areas around the bases of the stones. However, with most maintenance crew staffing, hand trimming is not feasible nor is the removal of lawn by hand to maintain a vegetative free zone adjacent to gravestones.

Frequency of Mowing: An ideal schedule would include: mowing every 5 days from the beginning of the season to mid June; every 10 days from Mid June to mid August; and every 5 days from Mid August to the end of the season. Mowing just once or twice a year has some appeal in grounds with a low visitor population. However, the removal of grass adjacent to gravestones is more difficult with longer and thicker grass blades, which in turn could potentially cause more damage to gravestones.

Weed, Disease and Pest Control: The use of salt, chemical weed killers as well as insect and disease sprays should be discouraged to prevent potential damage to gravestones. Many of these materials contain salts and acids which can be damaging to marble and limestone markers. When chemical controls are recommended, the formula should be checked with a stone conservator before use. Provide appropriate pesticide application in late spring and early fall, if necessary. Do not treat a new lawn until its second year of growth. Do not burn the grass.

Rolling: Roll lawn areas in the spring as necessary to repair frost heaving irregularities caused during the winter. Use a light roller and roll the lawn when the soil is fairly dry, and freezing weather has passed.

Aeration: In sites with heavy visitation, aerate compacted lawn areas twice a year during the spring and late summer or early fall. Tines should not penetrate more than a 3 inch depth to protect buried resources. Do not aerate when the soil is extremely wet or dry.

Soils

Liming: Lime serves several important functions. It is of particular value in correcting the acidity of the soil. It also changes the structure of the soil, hastens bacterial action in the soil, aids in the liberation of plant foods which otherwise remain in the soil in unavailable form, hastens the decomposition of organic matter and supplies a small amount of calcium, which is one of the essential plant foods. By reducing the acidic nature of the soil, lime also helps protect in ground marble and limestone markers which are susceptible to acid damage.

Ground limestone should be applied every 3 to 5 years as determined by soil test results to bring lawn areas to the preferred 6.0-6.5 pH level. If a lime application is necessary, apply it 2 to 3 weeks prior to fertilizing. The soil pH must be at the proper level to make the benefits of a fertilizer available to plants. Lime should not be used in combination with animal manures or with nitrogenous fertilizers, as it causes the rapid release of ammonia. A fall application of lime provides time for it to break down in the soil before spring growth.

When applying lime for new lawn construction, it should be spread over the surface of the ground and thoroughly mixed with the upper few inches of soil. The rate of application depends upon the form in which the lime is applied and the texture of the soil. The rate of application of ground limestone should be determined by soil testing and should not exceed 75 pounds per 1,000 square feet at any one time. For new lawns lime should be applied either in early spring or late fall, with early spring [April] preferred. On established lawns or under trees, lime should only be surface applied so as not to disturb below ground elements or roots.

Fertilizing: Supplemental fertilizer improves vegetative health and vigor in a short period of time. Lawns and trees are both heavy consumers of nitrogen and they compete for it. Because nitrogen leaches from the soil, it should be applied annually. Application methods are different for trees and grass. If fertilizer is applied on the surface, the grass absorbs most of it.

Soil tests are required to determine fertilization needs. Lawn areas should be fertilized a minimum of twice a year to maintain a healthy lawn. Light, frequent applications of readily available Nitrogen fertilizers are preferred over heavy, infrequent applications. Lawns in this area generally require 0.5 pounds of Nitrogen per 1,000 square feet per growing month. Fertilizer should be applied with a mechanical spreader when turf is dry. This work could be either contracted out or performed by maintenance crews.

All trees should receive an annual application of fertilizer to sustain a reasonable level of health. Fertilizing with a slow release fertilizer with a ratio of 3-1-1 will not only improve the health but will also prolong the life of a tree. Trees should be subsurface fertilized to a depth of 12" at least every other year during the growing season, with Spring or Fall preferred. This could be contracted at the same time as pruning.

The chemical formulation of all fertilizers proposed for use should be checked by a stone conservator prior to use to prevent potential damage to gravestones and other artifacts. Many fertilizers are acidic which is detrimental to marble and limestone. Ideally a nonacidic, slow release, organic fertilizer should be used to reduce the potential conflict between stone conservation and the desire to obtain healthy vegetation.

Circulation Systems and Materials

Issues

It has been reported that some years ago the gravel paths used to get repairs in the spring every 2 to 3 years. It is apparent that no repairs have been provided in recent years.

The master plan recommendations include gravel surfaces inside the cemetery and paved surfaces outside.

Recommendations

Gravel

Clean paths weekly. After each heavy rainfall, examine path surfaces, repair erosion gullies by topdressing with path materials and compacting. Maintain the path cross section to prevent collection or diversion of overland flow. Maintain an overhead clearance of 8' and a side clearance of 3'.

Paved Surfaces

Clean paths weekly. Remove snow, keeping walks passable at all times and as safe as possible. Start removal when accumulation reaches one inch. Spread sand on icy spots and steps. The use of excessive amounts of salt for deicing is not recommended because it is toxic in excessive quantities to trees and other vegetation. It also accelerates the decomposition of mortar and concrete and is potentially detrimental to gravestones. Repair paved areas as needed. Patch depressions of 1 inch or more annually. Repair cracks every 5 years.

Grave Marker Conservation and Repair

Grave Markers

Issues

It has been reported that cemetery staff uprighted and glued some broken markers at Western and Eastern Cemeteries 7 or 8 years ago with a grant of about $3,000.

Stone conservation emphasizes the preservation of the original object as found rather that its restoration. Conservators have numerous and varied opinions on the issues of grave marker repair, restoration and protection. The suggestions and recommendations presented here are a relative, but not complete, consensus of opinion. Professionals should always be consulted on these matters prior to undertaking any of these efforts.

There is a philosophical conflict in the major approaches to preserving historic cemeteries. One approach is to preserve the integrity of a cemetery as a collection of memorials made for that location. The other approach is to preserve the integrity of individual gravestones. The latter is compounded by a major question regarding gravestones, that is whether to move some of the best early stones indoors for safekeeping. This was suggested as early as 1938 to prevent theft and protect against the detrimental effects of weathering. In the past, important fragments were encased in granite, concrete or copper, or a copy [identified as a replica] was erected while the original was placed indoors.

Seasonal site visits should be conducted to check for fallen stones and any other cases of accelerated deterioration due to weather and/ or vandalism. Repair/restoration efforts should be monitored at least once each year.

Recommendations

Seasonal site visits should be conducted to check for fallen stones and any other cases of accelerated deterioration due to weather and/ or vandalism. Repair/restoration efforts should be monitored at least once each year. Gravestone rubbings should be prohibited because the process can leave wax or ink and cause surface losses.

Specifications and trained supervision must accompany all conservation treatments. The repair of broken, vandalized, otherwise damaged or deteriorating gravestones should be assigned to professional conservators, particularly when the gravestones have historic value. These general recommendations include mention of many conservation materials which may be used to conserve historic stone and masonry in burying grounds and cemeteries. In no case, however, should anyone attempt to purchase and use these materials and techniques without the supervision of a qualified conservator. The recommendations often do not include information about dilution, methods of application and techniques of removal, dwell time, symptoms of dangerous situations or unforeseen hazards to applicators and stones. The infinitely various conditions of old grave markers require that the use of conservation materials must be done only by experienced persons in controlled conditions.

Many grave markers require repairs and/or cleaning because of general deterioration, vandalism, inappropriate previous repair techniques, etc. Prior to making repairs, all markers should be inventoried and then prioritized for conservation/restoration in terms of significance. Most survey and some evaluation can be performed by trained volunteers and/or municipal staff. Work should be completed according to priority as funds are available. All repairs, resetting and cleaning should be done by professional stone conservators, particularly for sensitive work on historic pieces. It should not be undertaken by general contractors or amateurs, unless the work is done under the supervision of a conservator. Trained local staff can assist with resetting, mortaring into bases and keeping grave markers free of botanic growth and graffiti. Repair of stone masonry other than grave markers in these historic sites may be done by professional masons.

Stone conservation programs need to consider the urgency of a condition along with the integrity of a gravestone, visual priorities and cost effectiveness of treatments. Concurrent with archival research, an existing conditions survey should be conducted on site. Periodic surveys measure and evaluate deterioration that occurs gradually. An understanding of the decay processes is considered essential to developing appropriate and effective conservation treatments.

Conservators should document their work thoroughly. Conservation efforts should include documentation of methods and materials used and a close evaluation of the performance of those materials and methods. All repair treatments should be documented before and after treatment in writing and with photographs. All repairs that are documented should be monitored on an annual basis for performance. Reexamine each site at 5 year intervals to evaluate long term condition trends and effectiveness of treatments.

Proper treatments must be based on analysis of the stones and their conditions for any given location at any specific point in time. Miracle cures proposed for all stones and conditions often cause greater damage in the long term. Understanding what does not work might serve future expenditures well, so that investment in repairs which only endure for a short term is done with the knowledge that the repairs will have to be repeated within a year or two. When possible, conservation efforts should also include documentation of past methods and materials used and a close evaluation of the performance of those materials and methods.

Several guidelines should be followed when repairs are required in historic stone.

- Survey the stone and its history to determine its age, source, geologic type and the extent of degradation as accurately and as specifically as possible. This could be considered a modified form of a conservator's standard statement of existing conditions.

- The goal should be a repair that returns the stone to a sound functioning condition with the least alteration of its historic appearance. The repair should not remove all traces of the history of the stone, or the passage of time.

- Specify the use of materials suitable for use in outdoor conditions. Many materials are only suitable for indoor conditions and can not stand up to the harsh extremes of the New England climate.

- Specify the use of known stable noncorroding materials to protect stone such as stainless steel dowels [type 304 or better], titanium dowels for monuments, nylon or Teflon dowels for gravestones and monuments prone to vandalism, and lead flashings. Iron dowels should be avoided as they rust, expand and crack stones. Dowels should preferably be set with molten lead. Do not use face pinning, polyester resin adhesives or gray cement grouts.

- Include fabrication and setting tolerances in the specifications as well as joint sizes.

- Include criteria for acceptance in the specifications including viewing distances, and finishes to match weathered appearance of adjacent historic stone.

- Stone dutchman repairs are rare, but may sometimes be required on large monuments. They are even more rare on small individual grave markers. Where these repairs are required, cut deteriorated stone to a depth of at least 2 inches until sound stone is reached. Require a sample of the stone to be used for patching. A sample should be required that can be incorporated into the final work if acceptable.

- Where epoxy adhesives or grouts are used, the epoxy glue line should be kept back from visible surfaces by 1/4 to 1/2 inch so that the visible surfaces can be filled with a cementitious material having a historic appearance and composition. Epoxy adhesives should be concealed because the color of epoxies tends to darken over time. Hard or rigid epoxy adhesives should not be used on materials with significant coefficients of expansion like slate and sandstone.

- Prebid and preconstruction meetings should be required to fully acquaint Bidders and Contractors with site conditions, requirements and special conditions.

- Require submittals and mockups [to remain in place until completion of work] for approval for all materials used [mortar and grout formula and samples, dowels, adhesives, parging].

- If field measurements are made by an installer, they should be submitted for review prior to commencement of work.

Slate Markers

Issues

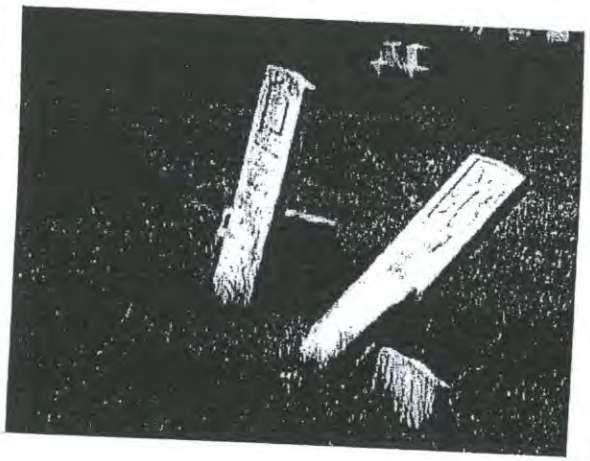
Various treatments used to stabilize conditions such as splitting, cracking and delamination lead to losses. A variety of repair and conservation efforts for slate markers are apparent in historic burying grounds and cemeteries including encasement in concrete, encasement in bronze, encasement in sheet copper, encasement in slate, bronze bolts, bronze and iron straps, material applications and various coatings. Some of these efforts were made almost 100 years ago and most are either unsuccessful, unattractive or both. A number of different methods have had disastrous effects.

Some early repairs and many contemporary materials that were considered miracle cures when first used 10 or 20 years ago have failed, leaving the stones in fragments today. Epoxy repair techniques, and later polyester resins, were often specified for the adhesive repair of gravestones in the 1970's and 1980's. Many of these repairs failed within 5 to 7 years because of the adhesive's sensitivity to ultraviolet light, thermal conditions and external stresses. The encasement of slate in various materials must be given thoughtful consideration because of the high coefficient of expansion of slate compared to other materials.

Recommendations

Stones that have vertical splits or are about to delaminate present difficult conservation issues and should be treated by a stone conservator. Ideally, moisture should be prevented from entering the voids, with a substance that remains flexible and does not expand to push the slate layers further apart. Previously used fillers have proved unsatisfactory. Mortar and adhesives should not be used to reattach peeling stone, as that material inserted between layers will eventually act as a wedge, applying pressure that continues the splitting process. Before filling any of the delaminations on slate tablets, a careful re-evaluation of all existing methods of treating that condition should be completed.

Until a long term solution is discovered, consideration could be given to installing a noncorroding metal cap [perhaps lead or anodized aluminum] that covers the skyward edge, limiting intrusion of rain and snow into the stone and movement of the stone layers. This is not a particularly attractive solution. Earlier attempts using such caps in bronze, copper and iron have proved mechanically stable, but the resultant corrosion stains on markers can be permanent and unsightly.



Laening marble markers

Resetting Single Slab Grave Markers

Issues

Upright grave markers are one of the most important visual impressions conveyed to visitors. This gives the appearance that a property is being watched over and cared for. Righting the stones is also one of the least expensive maintenance activities for the value received. Fallen or tilting grave markers should be reset in an upright position. Left in place, a leaning grave marker is more liable to be damaged by lawn mowers. Deterioration may be accelerated because some stones may absorb moisture from the ground or collect rainwater.

The vast majority of grave markers are individual grave markers. By far, the most widespread problem observed was the large number of substantially tilted, fallen, sunken, frost or root heaved gravestones. Stones tilted 15 degrees or more can break off at ground level due to their own weight. Grave markers will suffer less deterioration if they are upright. All grave markers that are lying on the ground are in danger of damage from mowers, pedestrians and weather. Sunken stones subject their inscriptions to lawn mower scarring. Those that are being overgrown by grass may soon disappear from sight. Displaced stones can rub against other stones and fall over on the ground.

Recommendations

All stones that are tilted or toppled should be reset in a secure upright position. They should not however be reset to straighten minor tilts, "correct" orientation, or moved to line them up in straight rows. Markers should not be moved or turned capriciously. Once a stone is moved it no longer serves as a grave marker because it no longer marks a burial site. A marker should also not be reset if the stone appears in fragile condition.

Some excavation needs to occur to reset a gravestone because the use of force to straighten one may cause the stone to snap. Some conservators recommend straightening one piece slate and marble grave markers by digging out the soil from the backside of a stone, if possible. This keeps the soil on one side firm for a strong compacted face against which to reset the stone. After the stone is set on a firm foundation with a cushion of sand, the excavation should be filled with alternating layers of soil with layers of a mixture of sand and crushed stone [1/2-3/4" sharp edged gravel], periodically wetting the earth as it is applied. Topsoil and lawn should be replaced at the surface.

Other conservators recommend excavating on all sides of a marker and then surrounding it with compacted sand and peastone. This is particularly beneficial when working in soils that tend to retain moisture.

Generally, 40% of a single slab marker is below ground. Stones with insufficient bases or shaft length should not be reset. They should remain on site temporarily or be removed for storage until a suitable mounting technique is developed. They can temporarily be leaned against the back of another stone, or against an adjacent building or fence until repair is done. This should not be considered a long term solution, because leaning stones are subject to breakage.

Gravestones should not be set directly in concrete, even incomplete broken markers. This setting method is too rigid and soluble salts in the cement may migrate into a porous stone forming efflorescence and accelerating deterioration. However, markers broken at or below ground level may be reset with a buried concrete foundation provided a soft, high lime content mortar joint separates the marker from the concrete. This method can also be used for marble markers. Dowels should not be used on slate markers because drilling can cause delamination and destroy a stone.

Damaged or Broken Markers and Fragments

Issues

The disposition of stone fragments is a significant issue. Uncollected, fragments tend to disappear. Power mowers can easily cause these fragments to disintegrate. It is also very tempting for visitors to pick them up and take them home as souvenirs.

Another issue is determining what to do with found gravestones that have no records. Ground disturbance is a concern of state agencies like the Maine Historic Preservation Commission. It is often not known how deeply people are buried. Bone fragments have been found just below the surface at depths as shallow as 6 to 8 inches.

Recommendations

Record, collect and properly store out of the ground stones, whole and fragments. Carefully documented salvage of all fragments of fallen stones is recommended. Fragments should be picked up, recorded and stored in a secure location. The intent should be to eventually return these items to the field in appropriate locations.

All fragments should be saved for the ultimate goal of reconstructing stones. This is particularly important for fragments larger than 2" by 2", or smaller if they contain inscriptions or carvings. It has been recommended that stone fragments be left where they are found, buried with the location marked. Storage below ground is considered good preservation by some. As a general rule, granite and slate fragments can be buried. Marble and sandstone should not. While it is desirable not to remove fragments from sites, marble and sandstone fragments should be moved indoors because of their more porous nature and the potential of further deterioration. Conservation efforts should include documentation of all stones or monuments removed from sites. Damaged gravestones that have lost their nomenclature and/or artistic merit should not be repaired, but left in place or buried on site with their location documented.

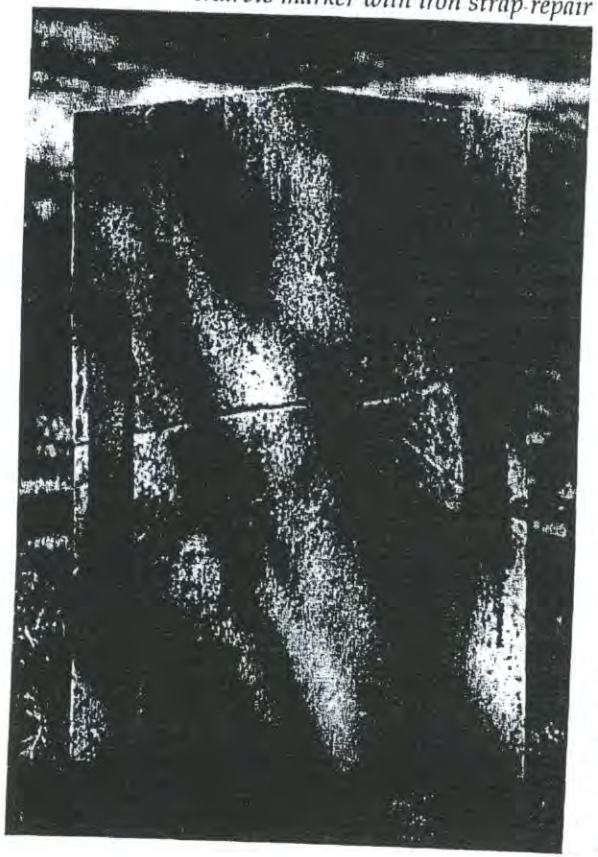
Secure structures on many of the sites, like unused receiving tombs, could be designated as storage areas. If a sufficient amount of storage space is not available, slate and granite fragments can be buried, but not marble or sandstone because the acidic nature of our soils is detrimental to them. When burying fragments, document the fragments first, then bury them 10-15" deep behind the standing major fragment to which each belongs. Set them flat and face up on a 2" deep bed of clean graded sand, then cover them with sand and 6" of topsoil. The burial of grave markers, including fragments, should be conducted under the supervision of a qualified archaeologist.

Previously Repaired Markers

Issues

Where broken stones have been repaired with iron or bronze straps and bolts, they are extremely liable to cracking around the bolt hole. Iron straps not only stain markers, but they also rust and expand, causing the stones to fracture. Bronze straps also cause staining.

Marble marker with iron strap repair



Recommendations

When considering whether to remove prior repairs of this type, the main issue is the friability of the marker. Can it tolerate being taken apart? Repairing strapped markers is rarely attempted because of the high probability of causing more damage than leaving the straps in place. Straps are not often used for grave marker repair today because of the long term damage they are likely to cause.

Marble Grave Markers

Issues

Most of these relatively porous stones have lost surface detail due to acid rain, other pollution damage and general weathering. Many others have suffered the negative impacts of vandalism. Conservation needs are significant in this part of the country.

Recommendations

The recutting of markers should never be done. This irreversible alteration of a historic artifact violates all codes of conservatorial ethics. Where surface detail has been diminished or lost, the honing of sugared marble surfaces is also **not** recommended because it results in loss of the information cut into the stone.

Two part markers that have come apart or been poorly reassembled should be reconstructed in their original configuration. Priority in dowel replacement should be given to marble markers that are visibly cracked or spalled, and second to marbles with visible metal stains at the junction between marker and base. Recommending an appropriate method to join two part markers is based on determining what may cause the least damage when the stones are subjected to vandalism and what will resist corrosion when the joint filler fails. Iron rods are clearly not recommended.

Multipart stones that have come apart should be repinned with noncorroding dowels. Ideally these should be set in lead, preferably molten although lead wool and/or lead wedge strips tapped in place may be acceptable. Lead work should be done by an experienced and skilled tradesman. An epoxy fill is often used by conservators because less time and training is required. The joint between the vertical stone and base stone should be filled with a material matching the original installation such as lead or a high lime mortar. The latter may not be as stable in the long run as lead which has the added benefit of killing mildew and fungus as water or ambient moisture bring some of its ions into solution and washes them down over the stone. No polymeric caulk or sealant should be used.

Repair of broken stones may be done using Akemi or other appropriate adhesives if the break is clean and not worn at the edges. This is particularly appropriate for marble. The adhesive should match the color of the stone, if it will be visible. The use of cement or lime mortar is not recommended for these repairs. Teflon dowels may be used in cases where reinforcement is required.

Broken marble marker

Mounting truncated stones and fragments requires the development of clips to attach them to "blanks", new stones cut to support fragments. This method is proposed for use if ready made clips can be found or custom clips can be fabricated according to a conservator's specifications.

Cleaning Soiled Stones

Issues

It is difficult to remove even some of the soiling from historic stones safety. Stones with heavy soiling have limited legibility. Airborne particles that settle into the pores and crevices of porous stones are even more difficult to remove.

Recommendations

General cleaning of all stones is not necessary and less cleaning is generally considered better than over cleaning. Soiled markers should be examined for legibility of inscriptions. If the inscription is fully eroded and the surface has no legible lettering or designs, the stone should be given a lower priority for treatment. No stone should be cleaned if its stability is in question.

Much more care needs to be exercised when cleaning marble compared to granite. Marble markers should be cleaned only if the surfaces are stable and not sugaring. If a grave marker is cleaned, the entire surface should be treated. Otherwise, the stone will look mottled and future soiling or growth will occur differentially and may appear more intense in some areas than others.

Some cleaning may be done using only a very soft natural bristle brush with distilled water and a properly diluted very mild non-ionic detergent in solution, safely removing some soiling from grave markers. Sound marble should not be cleaned with any more than regular hose pressure. These simple things can prove dramatically effective against environmental soil.

Never use any acidic compound or household bleach for cleaning. Acid cleaning marble should be avoided, not only because of the damage it can cause but also because it tends to leave marble with an orange cast. Ordinary household bleaches should never be used on marble because of discoloration and the long term detrimental effects of destructive salts.

Baking soda blasts for granite should be avoided because it can cause salt build up and general site clean up is difficult.

The removal of stains should be left to professional stone conservators. After the nature of a stain is determined, an appropriate solvent and poultice is typically applied and then covered with plastic for 24 hours. At that point the poultice is removed, the stone is thoroughly rinsed with clean water and checked for a neutral pH balance. Oxalic acid may be used on granite. Clorox, Naval Jelly or Lime Away should not be used on any stone.

Removing Biological Growths

Issues

Some lichens and biological growths are acidic in nature or produce acids that can etch the surface or eat into stone, particularly porous stones like marble and limestone, in addition to discoloring them. Some lichen penetrate stone causing microfractures. Others develop parallel with the stone surface and may be mechanically removed. It is possible that some protect the surface of stone reducing degradation from weathering.

In general, the larger the population of certain types of growth above the stone surface, the more decay is caused below the surface, and thus the greater the need for removal. On the other hand, more damage is often incurred by removing these growths than the decay caused by them. Removal may be desirable but can result in considerable harm. Careless intervention can make the process of degradation more rapid. At the Botanic Garden of Ajuda in Lisbon, it was recently decided to leave botanic growths in place on a very important limestone balustrade rather than risk causing irreparable damage.

Recommendations

A stone conservator should determine the type and nature of biological growths and the condition of a stone prior to taking any action. If it is determined that it is a growth that can be removed without causing damage, a conservator may proceed with caution. Biological growths on the surface of markers should be removed **only** if the stone is stable to the touch. Only those older stones which have substantial moss or dark botanical growth should be cleaned.

GENERAL GUIDELINES FOR CLEANING STONE GRAVE MARKERS

Evaluate the Surface to be Cleaned

Determine the type of stone.

Check the entire stone for condition. Some areas of a stone may be more weathered than others and need to be treated more gently.

Determine the type of soiling.

Do **Not** Clean **if**:

A stone has cracks, loose or broken parts, is tilted or unstable.

Grains of the surface come off on your hands at the touch.

There are underlying hollow areas [gently tap the surface with your finger].

Joints are open. Point first with soft lime mortar or lead as appropriate prior to cleaning. Do **not** use silicone caulk.

The temperature is below 40° F, frost is anticipated, or temperature exceeds 85° F.

Do **not** attempt to clean stones without first receiving proper direction.

Do not clean stones often. Even the most carefully cleaned stone loses some stone particles with each cleaning.

Test the Water

Test the water for excessive amounts of salts, iron and other potentially deleterious materials.

Use filters at faucets or in cleaning equipment if needed.

Select the Appropriate Equipment

Garden Hose: Use on fragile stones and for gentle cleanings.

Steam Cleaner [with variable pressure and measurement gauges]: Use on all stones, varying psi accordingly.

Pressure Washer [with variable pressure and measurement gauges]: Use **only** on stable granite and **only** with a fan tip nozzle.

Washer Nozzle: Always use a fan tipped nozzle with no less than a 15° spread.

Brushes: Use soft nylon brushes or soft natural bristle masonry brushes. Soft toothbrushes and sometimes smooth wooden sticks like ice cream sticks or tongue depressors are acceptable for intricate areas as are Q-tips. **Never** use wire brushes, brillo pads, steel wool or scothbrite or other abrasive pads. Do **not** use metal instruments to clean stones.

Miscellaneous: Make sure water is available. Provide plastic buckets for non-ionic detergents and biocides. Do not mix solutions. Provide spray bottles or small pumps with sprayers for the application of non-ionic detergents and biocides. Provide clean soft rags, natural sponges, goggles and rubber gloves.

Determine the Appropriate Water Pressure

Garden hose pressure is best. Use the lowest effective pressure because water can act as a damaging abrasive, particularly on old weathered stones. Pressure washing can reduce the longevity of a stone and reduce legibility. Note that water is used by some stone fabricators to cut granite.

For Marble, Sandstone, rough cut Limestone, damaged Slate and other stones: Use low water pressure 35-60 psi maximum on sound stone. Use a garden hose or hand held steam cleaner. **Never** use high water pressure.

For Slate, Rose Quartz and other silicate stones: Treat the same as for Marble.

For Limestone: Treat the same as for Marble.

For Granite: Use 100 to 600 psi maximum on sound stone. Other stones will abrade at this pressure.

Select Appropriate Cleaning Solutions

Clean only if necessary. Always use the weakest cleaning agent that cleans stone effectively. Do not increase the recommended strength of a given solution. Use only those solutions recommended for the type of stone being cleaned.

Soapstone: Use water only.

Slate and Sandstone: If water is ineffective, use a sodium free, non-ionic detergent like PhotoFlo, Triton-X or Igepal at a rate of one ounce to five gallons of water.

Marble and Limestone: If water is ineffective, use a sodium free, non-ionic detergent like PhotoFlo, Triton-X or Igepal at a rate of one ounce to five gallons of water. For more stubborn cleaning requirements use Vulpex at a rate of one part Vulpex to 2 to 4 parts water. **Never** use household soaps, bathroom and sink cleansers, abrasive cleaners or solutions containing sodium like Ivory Soap, Clorox [sodium hypochlorite], Borax, Spic and Span, Comet, TSP [tri-sodium phosphate], Calgon, Fantastik, Formula 409 or other formulations with caustic lye [sodium hydroxide, NaOH].

Biological Growth Remover for Marble and Limestone: If an acceptable test is achieved, use calcium hypochlorite [CaOCl sold as HTH or SST in pool supply stores], Architectural Biocide D-2 or hydrogen peroxide. A 1 to 2% solution [125 to 250 cc in 5 gallons of clean warm water] with a small amount of non-ionic detergent [0.2% Triton-X-100, 20 to 25 ml in 5 gallons of water] is recommended. Use 2 ounces by volume of dry HTH to 5 quarts of water and note that it must be dissolved in warm water. Vulpex is an effective, although expensive, detergent for black and green growths on granite. Do **not** use Clorox.

Never use household bleaches for cleaning.
Never use a cleaning solution more acidic than pH 4.5.
Never use wire brushes.
Never use high pressure spraying or sandblasting.

Clean with the Least Aggressive Method

Remove dry loose particles with a soft bristled brush.
Gentle cleaning with clean water is best.
Test selected cleaning method[s] in a small unobtrusive area, preferably on the back of a stone, before general application.
Prewet the stone thoroughly. Do **not** press the nozzle up against the stone. The softer the stone, the farther back from the surface the nozzle should be.
Flush thoroughly with a low pressure hose to remove most surface dirt.

Then, if determined necessary:

Prewet the area with water before using a cleaning solution.
Prepare a dilute alkaline solution, 1 ounce in 5 gallons of water.
Apply the solution from bottom to top with a spray bottle.
Allow solution to soak into the surface for 3 to 5 minutes.
Scrub gently with a soft nylon brush or soft natural bristle masonry brush, cleaning from bottom to top to avoid streaking.
Rinse thoroughly with clean water from top to bottom. Do **not** allow cleaning solutions to dry on a stone surface.
Rinse for at least 5 minutes and do **not** direct the rinsing spray at one area for longer than 5 to 7 seconds.
Check pH for neutral balance.
Check the stone once it is dry and later in the season.

One approach to removing some surface biological growths is dry brushing with a soft brush during dormant seasons. With great care, soft wood or flexible plastic scrapers may be tested, but care should be taken not to remove any surface grains of a stone, particularly if it is marble or sandstone. Another good conservative approach entails the use of copious wetting and neutral poultices.

It is possible to retard the growth of harmful biological matter on historic markers. Seek the advice of a professional conservator for how that may best be done for any given stone and growth. Always be sure to have supervised testing of any material recommended before working on a whole stone.

After brushing and/or scraping, a biocide solution may be brush applied to retard recolonization and to remove exceedingly stubborn growths. Markers with stable surfaces may be brushed with a biocide solution and then washed gently.

Once every five years is a typical cycle of retreatment, but local conditions of exposure to vegetation, water and shade may suggest more or less frequent application.

Marble Protection

Issues

Marble components have generally deteriorated much more than the older slate components. Most of the white marble stones have lost surface detail due to acid rain and general weathering. A survey should be undertaken to identify and locate the most endangered marble markers at each site, designating those that still have legible inscriptions for immediate conservation. Many however are now illegible.

Recommendations

A long term plan should include selective conservation. Enough carved detail and lettering must remain legible to make a stone worth conserving. Where there is no legible lettering, conservation or consolidation is not advisable.

Do **not** treat stones with protective coatings that are impermeable to water vapor. These coatings can be very harmful to stones over time and others are ineffective.

Some conservators recommend that significant marble components have a clear protective coating applied to prevent further deterioration. The coating should have a proven track record like "BMC" or "Conservare". These materials have a low risk and can be applied by less experienced personnel. This will last 8 to 10 years before wearing off. Reapplication will be necessary at that time.

While there are conflicting opinions on the matter, some conservators recommend the use of stone consolidants like "Conservare OH Consolidation Treatment". These require more attention and experience during application and need a water resistant top coat for effectiveness. A two coat system is generally recommended with a first coat of "Conservare OH Consolidation Treatment" and a second coat of "Stand-Off Stone, Tile and Masonry Protector" also manufactured by ProSoCo, Inc., Kansas City, Kansas or approved equal. Materials should be applied in strict accordance with the manufacturer's recommendations, after the marble is clean and repointing is complete. This system should be reapplied in 8 to 10 years.

Repairing Erosion and Settlement at the Bases of Markers and Monuments

Issues

Many of the larger markers exhibit settlement and/or erosion at ground level exposing foundations of dry laid or mortared broken stone. Left alone this process will continue, undermining the structural stability of the marker.

Deteriorated marble marker

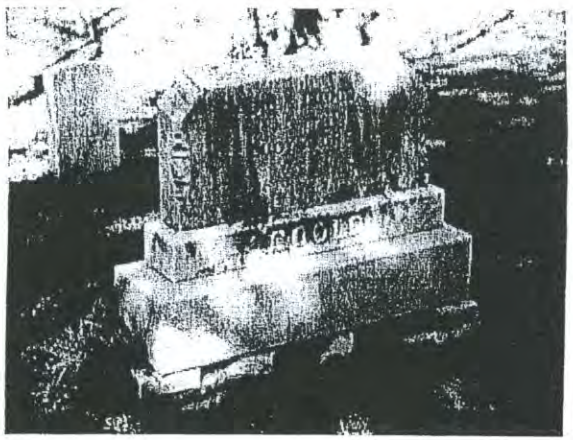
Recommendations
Repair of settlement includes providing a porous fill and/or topsoil to return the ground elevation to the proper level. Surface drainage conditions should be inspected and corrected to prevent concentrated flows of water at the bases of large structures.

Structural Elements
Issues
Because this site is located in a northern temperate climate, structural elements are subjected to a wide range of temperatures. This thermal stress requires regular examination and subsequent maintenance of structural elements.

Recommendations
Inspect for cracked mortar, loose bricks, broken stones and other movement annually. Repair at least every 5 years.

Stone Retaining Wall
Inspect the stone walls and make repairs on a routine, periodic basis. Care should be taken to match the workmanship and materials [replacement stones, mortar] of the original work.

Marble marker with exposed foundation



Masonry Repair and Repointing
Repointing is probably the most common operation practiced in preserving and restoring old masonry structures. Improper repointing with soft mortars has been done on occasion in the past. But repointing that has been done since the introduction of hard cement mortar is more harmful. Repointing when badly done is difficult and expensive to correct. In extreme cases it causes irreparable damage to the physical structure as well as its appearance.

The clean, white appearance of lime tinted slightly by sand was a highly favored architectural effect. As a general rule, the color of the mortar used in historic structures in the United States depended on the color of the sand used in the mixture. White marble dust was sometimes added to mortar, replacing part or all of the sand, when pointing the joints between bricks and stones. Colored mortar, obtained by mixing in mineral or earth pigment like lamp black or Venetian red, was used sparingly. They are sometimes subject to fading. During the second half of the 19th century, dark mortar was popular. When colored to approximate brick, the narrow joints then fashionable contributed to create a continuity of wall surface effect.

Masonry repairs should be performed by experienced conservation professionals. When choosing the type of mortar to be used in repointing, full consideration must be given to matching the old mortar in color, texture, aggregate, strength and hardness [density and porosity]. The new mortar used in repointing should have the same physical characteristics as the old, only if the old mortar was reasonably appropriate in the first place. It is best to repoint with mortar having the same density and absorbency as the stones or bricks in a structure.

Masonry repairs should be performed with a mortar formulation which contains at least equal parts of cement and Type S hydrated lime for repointing. Lime mortars are both more compatible with brick masonry, and more flexible in conditions of thermal and moisture cycling. It is important that mortar used for routine pointing is compatible with the softness or hardness of a brick or stone. With long stretches of unrelieved wall, the mortar should be as soft as possible [for thermal expansion and contraction resiliency] with some hardness for durability. A type N mortar formulated just above the proportions used for type O would provide both of these characteristics. Use a color, aggregate and joint profile to harmonize visually with the adjacent work.

Perimeter walls and retaining walls need routine, periodic maintenance at least once every five years. All joints that have loose mortar should be repointed. All surfaces to be repointed should be properly prepared and cleaned, removing all loose and deteriorated mortar. Joints should be raked out by hand. The depth of chipping and raking should be at least twice the width of the joint to a maximum depth of 1-1/2 inches. Care must be taken to avoid enlarging the width of joints. Mortar should be applied in lifts no greater than 1/2 inch at a time.

Masonry repairs should include repointing of all field stone walls. Where mortar which is deep inside the joints of a wall is soft, remedial work should include consideration of weep holes or other drainage devices. In addition, cavities should be packed with a material such as foam backer rods or the equivalent. Walls should be anchored to the work of adjacent materials where possible. Many walls remain standing despite incredible abuse and neglect simply because they possess some form of tie back.

Masonry repairs should be supervised by experienced professionals. Specific but broad comments relating to this topic are as follows:

- Never use premixed bagged mortar or grout. These materials are too hard. They will not accommodate movement of the masonry and in rare cases they may overstress the stone edge.

- Never point a bulged or leaning wall with hard mortar. This type of quick fix solution accelerates outward movement. Bowing is generally caused by earth pressure and/or mortar washout. Where possible and appropriate, use gravel backfill behind the wall and install weep holes.

- Masonry that has undergone excessive local movements should be rebuilt, not repointed. Do not exceed a joint width of 3/8 inch when rebuilding.

- Whenever possible, carry repointing below grade.

- Do not smear mortar on adjacent surfaces or on the joint being repaired.

- Where possible, tie thin elements together using stainless pins.

- Allow for large relative movements between concrete and brick. According to the Brick Institute of America, the thermal movement of concrete is more than double that of brick construction. Where possible and practical, install or cut drip edges in concrete caps to prevent moisture from entering mortar beds.

Where brick walls require rebuilding, horizontal wire joint reinforcement and vertical reinforcing bars should be included in their reconstruction. Surface brick work should be performed so as to match surrounding brick work in every respect. Bricks should match in dimension, color, surface texture and gloss, hardness and absorption rate.

On masonry and stone fence or gate posts, the insertion points of horizontal metal fence rails should be repaired with appropriate pockets to take the metal inside the masonry or stone surfaces.

Repointing weathered materials

Weathered bricks and stones in an old wall frequently acquire worn edges and rounded profiles. When repointing them it is advisable to recess the face of the new mortar slightly to keep the joint from becoming too wide and avoid spreading mortar over the edges of the bricks and stones. When repointing bricks and rubble, feather edges should be avoided. They break off easily, carrying particles of stone with them and leaving cavities through which moisture may enter.

The surface of an area that has been repointed or patched should be brushed so that some aggregate is raised before the mortar becomes hard. Alternatively, stippling the joint [marking it by touching it with the end of a stiff brush] before the mortar completely sets helps to give it a worn appearance. This surface texture retains a historic appearance and does not call as much attention to itself as a smooth mortar surface.

Sealants

A sealant is a contemporary material that has been used in historic applications to prevent the intrusion of moisture. The use of sealants should be limited because they are not visually compatible with the historic appearance of stone and masonry construction. Sealants also invade adjacent materials, making them extremely difficult to remove without removing some of the adjacent material. In addition, there is some degree of difficulty in controlling joint preparation and installation. Where sealants have been used, they are typically failing. It is preferable to use sealants only at expansion joints. In other locations, such as at a moving crack, they should only be used as a last resort. Caulking and sealing materials should not be used for repointing. Silicone sealants should not be used because of their tendency to absorb soil from soot and atmospheric pollutants. A fine aggregate can be applied to the surface of a sealant during the curing period to make it more closely match adjacent surfaces. Over time however, this aggregate has a tendency to erode away.

Sealant backings must be provided of preformed, compressible, resilient, nonwaxing, nonextruding strips of plastic foam of flexible, open cell polyurethane foam or nongassing, closed cell polyethylene, of a size, shape and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

Concrete Repair

Concrete has been used in a variety of applications. In many instances repair is a preferable option to replacement. Remove damaged concrete [cracked, chipped, spalled, gouged, etc.] to a 2" minimum depth and 2" minimum beyond the damage in all directions. Roughen and prepare finish surfaces to accept new concrete material. In locations where reinforcing can be repaired, clean it to bright metal and prime with a zinc rich primer. In locations where it can not be repaired but replacement is possible, provide in kind or epoxy coated replacement. Remove reinforcing where it is exposed, corroded and can not be repaired or replaced. Replace it with vinyl ester resin bars reinforced with fiberglass equal to "Rebar" as manufactured by IMCO Reinforced Plastics, Inc., Moorestown NJ.

Seal all field cut ends in accordance with the manufacturer's recommendations. Keep reinforcing back 1-1/2" from exposed faces.

In areas where concrete is to be repaired, install threaded dowels, vinyl ester resin reinforced with fiberglass equal to "Fibrebolt" as manufactured by IMCO Reinforced Plastics, Inc., Moorestown NJ, at 6" on center and 1-1/2" clear from exposed faces. Apply a bonding agent [equal to Nitobond Epoxy Gel 400C by Fosroc, Inc., Georgetown KY or Sonneborn Sonoprep by Chemrex, Inc., Shakopee MN] prior to placing concrete. Concrete should be air entrained and of the same strength as the concrete being repaired. The concrete should match the profile, finish and color of adjacent concrete.

Fences and Gates

Issues

Iron and Chain Link Fences

Although both are relatively durable, they do require periodic inspections and maintenance to extend their useful lives.

Recommendations

Iron Fences

All metals that are rusting or have failing paint finishes should be cleaned down to bright metal and properly primed and coated to prevent further corrosion. Older paint finishes should be laboratory tested for lead content prior to removal. The preferred method of cleaning and paint removal from historic cast iron is using low pressure dry grit blasting on site. It is the most effective, being fast, thorough and economical. The pressure should be less than 100 pounds per square inch using a fine aggregate of iron slag or sand, but not copper slag. The aggregate should not be very sharp or very hard. It is preferable not to use wet sandblasting or flame cleaning. Hand scraping, chipping and wire brushing is not as effective as other methods. Chemical rust and paint removal methods should generally be employed in the shop as opposed to in the field. When employing pressure blasting, comply with local building codes and environmental authorities, and take every precaution to protect adjacent materials, including plant materials.

Bare surfaces should be painted within 48 hours of proper cleaning. The preferred paint system for cast iron includes a two part epoxy primer and an aliphatic or acrylic polyurethane finish coat. An acceptable, but less durable, less expensive alternate for non corrosive environments includes an application of a passivating material, such as a high zinc dust content [90% zinc content minimum] primer, then a red oxide alkyd metal primer and alkyd enamel finish. Concealed surfaces should be thoroughly prime coated prior to concealment. While a semigloss black finish is often recommended for ease of maintenance, a paint seriation analysis should be performed on existing remaining metal components to determine historic paint colors and other characteristics. Shades of green, brown or black may be appropriate historic colors.

If spray operations are used, extreme caution should be exercised to prevent overspray from coming into contact with persons, motor vehicles, trees, surrounding buildings and other objects [particularly historic artifacts like gravestones] not intended for treatment.

Paint as often as required to maintain good condition and appearance, but not less than once each ten years. When coatings fail, fences corrode. Paint coatings should be monitored annually for peeling and failure.

In the design, fabrication and installation of fencing and gates, allowances should be made for the thermal movement that results from changes in ambient temperature to prevent buckling, opening up of joints, overstressing of components or connections and other detrimental effects. Slip joints should be provided between embedded elements and connecting rails for lateral movement. Slip joints should consist of slotted holes and Teflon washers.

Galvanic action and other forms of corrosion should be prevented by insulating metals and other materials from direct contact with incompatible materials. Although the corrosion or oxidation of aluminum is far less destructive to stone than iron's "rust jacking", it is nevertheless unsightly. Aluminum replacement parts should not be used in cast iron or steel fences.

Where metal fence posts are inserted into masonry or concrete, there should be no pockets to collect moisture. The preferred joint material in these locations is molten lead or a lime-sand mortar. Sealant will shrink and embrittle over time. The use of joint sealants within metal fabrications is appropriate to prevent moisture from collecting in metal to metal joints. Sealants for this use should be a premium grade polyurethane based elastomeric sealant conforming to ASTM C920, Type S, Grade NS, Class 25 equal to Sikaflex-1a as manufactured by the Sika Corporation, Lyndhurst NJ of a color to match the paint finish.

Chain Link Fences

Missing and bent components should be replaced and/or repaired. Rusted sections should be prepared and painted. Structurally deficient rusted support posts should be replaced. Rust stains on masonry and concrete copings are primarily an aesthetic problem, as iron oxide deposits do not support botanic growth or harm masonry. However, rusting metal expands, and rusted support posts will crack masonry and concrete copings. This allows moisture penetration inside the coping and eventually the wall below where freeze/thaw cycles can cause significant damage.

Support posts should be inspected at least once a year for stability to insure structural support. Replace those that are weak or structurally unsound. Repair damaged fabric as soon as possible. For the long term, consideration should be given to replacing the chain link fence at some sites with a more historically appropriate fence. This is particularly important in areas of high visibility and/or visitation.

Inspect fences once per season and clean as needed. Repairs should be made immediately upon discovery of need or notification.

Site Amenities

Issues

These are the elements that invite the public to use the cemetery. They also provide the conveniences that much of the public has come to expect. They should be kept in a condition that sustains that sense of invitation.

Recommendations

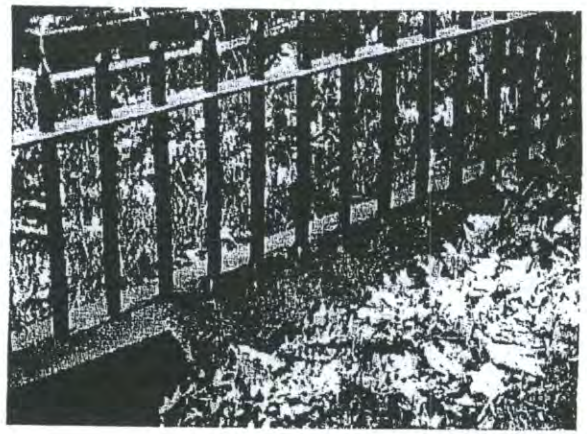
Signs:

Signs should be kept clean and legible. Text on all signs should be reviewed at least once every 5 years to insure that it is current.

Trash Receptacles: Inspect at least 3 times a year including all connections Repairs should be made immediately upon discovery of need or notification. Paint metal components once a year.

Benches should be inspected weekly with immediate repairs if needed. Paint benches once a year.

Rust jacking damage at family plot edging



Utilities

Issues

Maintenance of recommended utility systems will be essential for the rehabilitation of the cemetery.

Recommendations

Drainage and Storm Water Management: Refer to recommendations provided for circulation systems and materials.

Water Supply: Inspect all working parts and plumbing for leaks or faulty operation at least annually and repair at once. Drain each fall to prevent damage from frost and turn on each spring.

Vandalism

Issues

Vandalism tends to be more of a problem in older inactive sites without adequate security measures and where visibility is difficult. The impacts of vandalism include toppled grave markers, vandalized tombs with doors removed, painted graffiti and broken glass. The latter is usually found at the rear of a site, away from public streets.

About 25 years ago it has been reported that Western Cemetery was generally neglected with the character of a romantic ruin. It was thought by some to be a pleasant quiet retreat, a private neighborhood park. Others remember illicit activities with drinking parties, noise problems, drug and gay problems, an occasional vagrant and vandalism after dark. While trash and debris were common, rats have not been a reported problem.

Today, evidence of recent vandalism appears to be minimal.

Recommendations

Efforts should continue to reduce the misuse of this sacred ground and remove the remaining evidence of vandalism. A stone conservator should be consulted to determine the gentlest effective means to remove graffiti from grave markers and tombs.

Should the level of vandalism increase, consideration should be given to locking the gates when the site is not open to visitors and to increasing the height of the fence. Vandalism and other problems should be reported promptly to the Parks and Recreation Department. The Police Department should be notified immediately if an act of vandalism or other delinquency is in progress.

LANDSCAPE MAINTENANCE TIME REQUIREMENTS

On 20 May 2000 a maintenance crew of 12 was observed mowing the site in 4 hours using riding mowers, push mowers and weed whips. The work was completed in a total of 48 manhours, or about 4 manhours per acre, not including travel time. The north slope was not addressed, only about 1/2 of the grave markers and plot edging had been weed whipped and only about half of Woodbine Grove had to be mowed due to lack of vegetative cover.

About 150 of the 239 acres at Evergreen Cemetery are developed and maintained. Using 1 riding mower and 4 push mowers, mowing takes about 600 manhours [4 manhours per acre], not including weed whipping. Also at Evergreen, 1 person devotes 5 hours per day [25 hours per week] trimming an estimated 12,000 shrubs.

It is estimated that Western Cemetery has a higher density of obstacles [grave markers and plot edging] than Evergreen. This has an adverse impact on the amount of time required for mowing and weed whipping. It is also one of the reasons that cemetery managers discouraged the installation of plot edging and fencing in the late 1800's.

Based upon the experience at Evergreen and Western Cemeteries, and the density of obstacles at Western, it is projected that it should take 72 manhours or about 6 manhours per acre for a thorough job of mowing, weed whipping and clean up at Western Cemetery.

LANDSCAPE MAINTENANCE TIME REQUIREMENTS

Area and Operation	Average Frequency per Year	Minutes per 1000 SF	Area in SF	Man Hours per Year
Lawns				
Mowing	15	9	440,000	990
Weed Whipping	15	9	40,000	90
Raking	2	30	440,000	440
Fertilizing	2	15	440,000	220
Weed Control	2	10	440,000	147
Disease Control	1	10	440,000	73
Aeration	1	15	440,000	110
Seed Bare Areas	1	30	10,000	5
Gravel Paths				
Repair Paths	12	20	33,000	132
Edge Trim	4	75	6,600 lf	33
Litter				
Empty Tr. Recept. contents	156	5	2	26
Litter Pick Up	4	2	470,000	63
Total Time requirements per year				**2,329**

Items not included: Tree pruning, shrub trimming, removal of volunteer growth, cleaning of walks outside the cemetery fence, grave marker cleaning and repair, repointing of walls, fence and site amenity maintenance, irrigation system maintenance, and other miscellaneous items like inspections and travel time.

STAFF

Current Staff

The Cemetery Division has 3 administrative, 5 full time and about 10 seasonal staff with the sole responsibility for interments and the maintenance of 264 acres of cemeteries on 4 sites. The latter includes 2 active cemeteries [Evergreen and Forest City with about 247 acres of developed land area] and 2 inactive cemeteries [Western and Eastern with about 17 acres]. Western Cemetery makes up approximately 4.5% of the developed land area of this total.

Cemetery Division:	3	Administrative
	1	Superintendent
	1	Supervisor
	1	Secretary
	2	Foremen
	3	Laborers
	8	full time staff
	10	seasonal staff

In FY 99 the Cemetery Division lost 2 full time staff positions. The number of seasonal staff varies with 10 or 11 typical. Most do not stay on for the full season.

The Parks Division currently maintains 6 other inactive historic cemeteries that consist of about 10 acres.

Maintenance Crews

Consideration should be given to changing the responsibility for maintenance of the 6 inactive cemeteries from the Parks Division to the Cemetery Division. Should that occur, further consideration should be given to providing a dedicated crew to care for the 8 historic inactive cemeteries with a total land area of about 27 acres.

As a matter of comparison, the City of Boston has a dedicated crew of 3 people for inactive historic burial grounds and cemeteries. With 15 sites on 22 acres, the crew attends to each site every 10 to 15 days including mowing, weed whipping and litter removal.

Staffing Recommendations

Given that the current maintenance of Western and Eastern Cemetery occurs on an overtime basis, it is clear that additional staff positions are desirable. Using 1,383 working hours annually per staff position, which allows for holidays, vacations and sick leave, the landscape maintenance time requirements for Western Cemetery indicates that the city needs at least one full time and two seasonal positions on a year round basis to care for this one site, exclusive of administrative staff. More than 90% of the landscape maintenance requirements occur within an 8 month time frame between April and November.

Implementation of these maintenance recommendations is dependant upon the availability of additional staff. Without this staff or additional overtime hours, conditions in the cemetery will continue to deteriorate.

If a dedicated crew for the care of the 8 historic inactive cemeteries is deemed desirable, it is recommended that two full time positions be supplemented with two seasonal positions on a year round basis. This would allow supervision of the seasonal positions if one of the full time positions is out due to vacation, illness or leave.

A less desirable alternative would include one full time position supplemented with three seasonal positions. Staff for the full time positions should have a background in grounds maintenance.

Periodic help for tree pruning and volunteer growth removal at Western Cemetery from city personnel and outside vendors will continue to be required. Because city property is only attended to on an as needed basis, it is apparent that the city Horticulture Department is also understaffed. The long range reality is that trees require continual recurring work. Each tree needs to be examined and pruned at least once every five years. With the exception of seasonal positions, unskilled labor for this work is not desirable.

There is no current training other than on the job training. There needs to be maintenance standards and an interest in upgrading training beyond a basic level. Maintaining a continuity of maintenance staff with a commitment to the preservation of a historic place is critical. It is also beneficial in that this specialized knowledge becomes transferred to new staff members over time. The issues of continuity and transfer of specialized knowledge make the value of full time positions much more significant to the city than seasonal positions.

BUDGET RECOMMENDATIONS

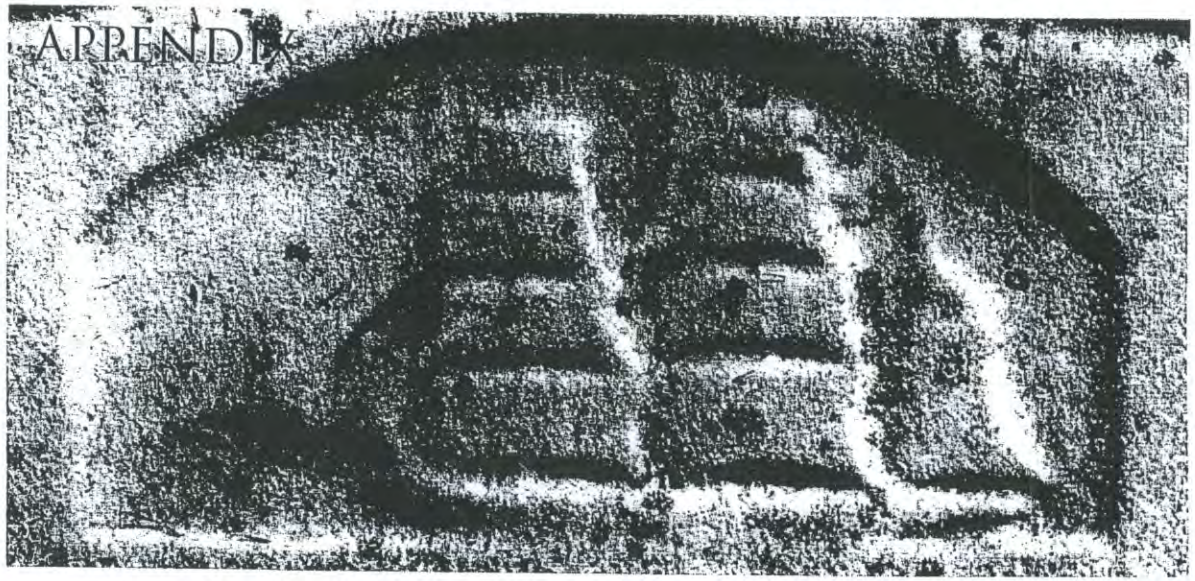
There is no dedicated funding for inactive cemeteries and is no specific budget for Western Cemetery. Funds are allocated from the general Cemetery Division budget as needed. With insufficient staff levels, maintenance [mowing, weed whipping and clean up] at Western and Eastern Cemeteries is currently performed on an overtime basis.

Because of the method of disbursements and allocations necessary for an entire cemetery system, it is difficult to make specific recommendations directly relevant to a budget for Western Cemetery. It is obvious however that increases should be made to allow for additional staff positions, equipment acquisition and the annual procurement of supplies necessary for proper grounds maintenance.

Unless the city Horticulture Department can undertake this work, the budget should also be increased to allow for contracted services for necessary tree work and removals. A budget of $25,000 per year, with appropriate increases for inflation, should be carried for at least the next 5 years to accomplish this work. An annual budget for tree work should be maintained thereafter at approximately 25% of that required annually for the initial work.

While the procedures outlined in these guidelines are accepted practices in the field of stone conservation, the authors do not assume any responsibility for the preservation, conservation or restoration work of readers of this publication.

Good friend, for Jesus' sake forbear,
To dig the dust enclosed here.
Blessed be the man that spares these stones,
And cursed be he that moves my bones.
Shakespeare's epitaph



SELECTED CHRONOLOGY

c1632 First Europeans settle Portland.

1668 Eastern Cemetery established.

1680 George Bramhall purchases 400 acres in West End.

1788 June, committee appointed to investigate availability of a suitable location for a new cemetery.

1789 October, committee empowered to continue search.

1796 New Haven's New Burying Ground established, with a new direction for cemetery design. It is a potential model for Western Cemetery.

1800 William Vaughan purchases 400 acres on Bramhall Hill

1803 William Vaughan and Gen. Peleg Wadsworth begin plan for layout of part of a new city on Bramhall Hill.

1805 April, town appropriates $2,000 for purchase of land from David Ross for a new cemetery.

1812 June, it was reported that the site for the cemetery is of doubtful suitability.

1813 Vaughan's plan completed.

1816 Vandalism reported at Eastern Cemetery.

1826 William Vaughan private family lot established in site of future Western Cemetery.

1828 February, Governor approves "An Act providing for the protection of Grave Yards". It requires incorporated towns, parishes and religious societies to erect and maintain a good, substantial and durable fence around any ancient or public burying yard within one year. Vandalism reported at Eastern Cemetery.

December, Committee on Burying Grounds recommends purchasing another site.

1829 May, Grave robbing attempt at Eastern Cemetery.

September, Committee on Burying Grounds recommends purchasing approximately 10 acres for $200 per acre at Vaughan and Bridge Streets. The tract contains a small private cemetery, retained by the Vaughan family with a 30' wide right of way to Vaughan Street.

December, City purchases 2 parcels, approximately 11 acres, from the heirs of William Vaughan [Phebe Paine, Henry Merrill and Elizabeth Merrill] on the south side of Bramhall's Hill for Western Cemetery, the site of Portland's second public burial ground. Prior to the lay out of lots, interment begins in the central area [later called Section E], because Eastern Cemetery is considered essentially full.

1830 October, Public notice that Western Cemetery is enclosed and ready for use. Samuel Allen, Sexton of the Methodist Society, appointed Superintendent. It is noted that Eastern Cemetery can never be enlarged and as the small part of the enclosure which yet remains unoccupied is fast filling up.

1831 Mount Auburn Cemetery in Cambridge MA is consecrated, beginning the American Rural Cemetery Movement.

1832 City of Portland incorporated. Superintendent of Burials given authority to appoint one or more persons to layout "southwest burying ground". Joint Committee on Burial Grounds established. Some plans for layout of Western Cemetery completed.

1833 Additions to the Standing Committee on Burying Grounds.

1834 May, Committee on Burying Grounds authorized to employ one or more persons to take charge of grounds.

Committee of the Council recommends land purchase on Bramhall Hill for park and road.

1835 Plea for establishment of a cemetery like Mount Auburn in Portland suggesting Bramhall's Hill or Mount Joy as a site.

1836 Spring, James Hall, civil engineer, engaged to prepare a plan for layout of lots and avenues. Ranges arranged alphabetically and each lot designated by number. Western Cemetery is graded. City Council orders that lots be made available to citizens of Portland free of charge and that they be 15' x 15' minimum and avenues be at least 6' wide.

October, additional parcel acquired for Western Cemetery from Henry Merrill. Initial acquisition of Western Promenade parcels from Vaughan, Merrill and Little families. Drive laid out on Western Promenade which is first laid out as a public walk and carriage way commanding a view over the unspoiled countryside and White Mountains beyond.

1837 Additional plans completed for layout of Western Cemetery. Trees laid out on Western Promenade, but not adjacent to Western Cemetery yet.

1838 First use of the name Western Cemetery in City Council records. City authorizes restriction of burials to Western Cemetery of "strangers" and others with no near relations in Eastern Cemetery.

1839 May, City Council authorizes Joint Standing Committee on Burying Grounds to purchase up to one acre of land from the heirs of Elias Merrill as may be necessary to enlarge Western Cemetery in conformance with the plan. City Council authorizes construction of a fence enclosure similar to that already there and the planting of shade trees.

1840 Plan for lay out of cemetery completed by James Hall.

April, City Council begins discussion of whether to plant trees in Eastern Cemetery.

1841 Maine legislature votes to give authority to towns to raise funds for cemeteries. City Council authorizes purchase of approximately 1/2 acre from William T. Vaughan for Western Cemetery. William T. Vaughan transfers the passageway and 3/4 of their lot, leaving it 50 feet square, to the city but reserves all of the Norway Pines [also known as Red Pine, Pinus resinosa], not to be cut down or removed by either party.

1842 Pine Grove Cemetery established by local residents on Stevens Avenue.

1846 City ordinance passed, Superintendent of Burials to assign a lot at Western Cemetery to each family upon application, not to exceed 15' frontage, agreeable to Hall's plan and subject to approval by the Committee on Burying Grounds.

1847 Committee on Burying Grounds names avenues and paths at Western Cemetery.

1851 Grading of avenues and setting out trees at Western Cemetery. City halts burials in the oldest section of Eastern Cemetery except under unusual circumstances.

1852 Eastern Cemetery described as so crowded that only a few additional interments can be made. Western Cemetery described as almost all taken up. City purchases 55 acres for a rural cemetery to become Evergreen Cemetery.

1853 Survey of lines of Western Cemetery. Parts of avenues at Western Cemetery had been reportedly used for single unmarked burials and in many others more than one body had been placed in a single grave. Plan prepared for Evergreen Cemetery and the first lots are sold.

1854 Evergreen Cemetery consecrated.

1855 Tree ordinance passed prohibiting damaging trees on public property with a minimum fine of $5 per offense. Tree removal requires a written permit from the Mayor and Aldermen.

1856 Stone wall laid at corner of Vaughan and Danforth Streets at Western Cemetery as well as installation of fencing and trees, and work on avenues.

1856-8 J. B. Brown builds "Bramhall" mansion on Bramhall Hill.

1857 Joint Committee on Burial Grounds is expanded to Joint Committee on Cemeteries and Public Grounds. Land [6 acres] for Mount Calvary Cemetery is purchased in South Portland. Funds expended for loam and gravel, fences and repairs, and watering trees at Western Cemetery.

1858 Land [about 63 acres] for Forest City Cemetery is purchased in Cape Elizabeth [now South Portland] from Samuel Haskel to provide less expensive graves. William Willis moved from Western Cemetery to Evergreen Cemetery.

1859 William A. Goodwin [future city civil engineer] house built on corner of Vaughan and Bowdoin Streets adjacent to the cemetery.

1860 End of active use of Eastern Cemetery. All burials suspended except in cases of close family ties where it was obvious that space is available.

1862 A new tool house [a replacement?] built at Western Cemetery.

1863 A minor property line adjustment at the north edge of Western Cemetery adds land to the cemetery from Henry Merrill.

1866 The 4th of July Great Fire in Portland destroys 1,500 buildings and the record plans for Western Cemetery. New gates and fences are installed and existing ones are repaired at Western Cemetery.

1869 May, City Council removes responsibility for Evergreen Cemetery from the Committee on Cemeteries and Public Grounds and appoints the Trustees of Evergreen Cemetery.

August, another ordinance is passed prohibiting the removal of gravel, soil or other material, from any portion of the Western Promenade, the cemeteries or any other public grounds within the city. 59 interments at Western Cemetery.

1870 53 interments at Western Cemetery.

1871 65 interments at Western Cemetery. Evergreen Cemetery grows to 177 acres.

1872-5 Hay sold from Western Cemetery.

1873 43 interments at Western Cemetery.

1874 69 interments at Western Cemetery.

1875 39 interments at Western Cemetery.

1876 34 interments at Western Cemetery.

1877 January, "An Ordinance Additional to the Ordinance on Cemeteries" is passed, "That any non-resident representing a Portland family deceased and buried in any cemetery belonging to the city shall have the right to remove the same to Evergreen cemetery, and the treasurer shall give the deed of a lot to such non-resident on the same terms as to residents and tax-payers." 51 interments at Western Cemetery.

A state law requires licensing of dogs.

1878 William Goodwin, city civil engineer, notes "Western Cemetery would soon be abandoned and that it could be subsequently utilized as a ramble". 36 interments at Western Cemetery.

1879 Expenditures for labor, lumber, shrubbery and repairs at Western Cemetery. 37 interments at Western Cemetery.

1880 Expenditures for labor, lumber, shrubbery and repairs at Western Cemetery. 42 interments at Western Cemetery.

1881 Expenditures for labor, lumber, shrubbery and repairs at Western Cemetery. 44 interments at Western Cemetery. Headhouses noted at Western and Eastern Cemeteries. Nathan Clifford moved from Western Cemetery to Evergreen Cemetery.

1882 Expenditures for labor, lumber, shrubbery and repairs at Western Cemetery as well as building and painting a fence destroyed by fire. 33 interments at Western Cemetery.

April, city passes "An Ordinance for the Government and Control of Evergreen Cemetery" that supersedes others, sets three classes of care [perpetual care], and authorizes the issuance of certificates of sale for the three types.

1883 Expenditures for labor, lumber, shrubbery and repairs at Western Cemetery as well as grading and building a wall. 35 interments at Western Cemetery. A minor property line adjustment at the north edge of Western Cemetery disposes of land to Ashbel Chaplin leaving approximately 12 acres for the cemetery. Chaplin-Small house built at the corner of Western Promenade and Bowdoin Streets. Four more houses follow on Bowdoin adjacent to the cemetery through 1887.

August, "An Ordinance Relating to the Protection of Public Grounds in the City" is passed preventing loaded wagons from traveling through, and the defacement of improvements including plants.

1885 Tool house in Western Cemetery burns down and is replaced. Expenditures for labor, paints and hardware on new building as well as labor, lumber and repairs.

March, state legislature authorizes the city to appoint a Commission of Cemeteries and Public Grounds. The three person commission has charge and control of all cemeteries [excluding Evergreen] with parks, promenades, squares and other grounds used for ornamental purposes belonging to the city. The list includes Lincoln Park, Eastern and Western Promenades, Deering Oaks, Eastern and Western Cemeteries, and Forest City Cemetery. The Report of the Commissioners states "The condition of our parks, cemeteries, and public grounds, their embellishments and attractiveness, is the thermometer that registers the degree of refinement and culture of the individuals that compose the community." 30 interments at Western Cemetery.

1886 Expenditures for labor, lumber and repairs as well as cutting grass at Western Cemetery. Some work done for George Walker. 22 interments at Western Cemetery.

1887 Expenditures for labor, lumber and repairs at Western Cemetery. 23 interments at Western Cemetery.

1888 Expenditures for labor and plants at Western Cemetery. 10 interments at Western Cemetery.

March, city passes "An Ordinance Relating to Western Cemetery" that forbade interments except for those with special permission [natives of Portland, residents of the city or whose immediate family possess one of the original private lots].

July, City passes "An Ordinance Relating to Evergreen Cemetery" prohibiting loose dogs on the premises.

1889 Plan of Western Cemetery prepared by William A. Goodwin, City Engineer. Expenditures for labor at Western Cemetery.

1890 Expenditures for labor and flowers at Western Cemetery as well as painting signs and pump, and cutting grass. 28 interments at Western Cemetery.

1891 Expenditures for labor and flowers at Western Cemetery as well as painting signs and fence, and cutting grass. 25 interments at Western Cemetery.

1892 Expenditures for labor at Western Cemetery.

1894 Expenditures for labor at Western Cemetery. Earliest known date of trust fund establishment for care of a family lot at Western Cemetery [J. Hall Boyd Trust Fund for care of Joel Hall and R. S. Boyd lot, $300].

1897 Expenditures for labor at Western Cemetery as well as fence repair, new fence and gateway, painting of old fence. During the summer a man is given charge of Eastern and Western Cemetery. Gravestones are reset.

1898 Expenditures for labor at Western Cemetery. The full time man for maintenance also serves as watchman. Demand by general public for more care at Eastern and Western Cemetery.

1899 Expenditures for labor at Western Cemetery. Commissioners report that the constant care has very much improved things in the past year.

1900 Trees trimmed, under brush cleaned up, fences painted and old rotten fences removed from around lots where owners ceased to care for them at Western Cemetery. Man still full time at Eastern and Western Cemetery. He also gives history of lot owners to visitors.

1901 Commissioners report that the fence on the north side of Western Cemetery should be rebuilt at once. Judge William Pitt Preble moved from Western Cemetery to Evergreen Cemetery.

1902 Commissioners respond to criticism regarding care of the two old cemeteries. They note that the city has to repair lots at city expense and that there was no income to the city for expenditures on care.

1903 A special appropriation is made for cleaning up Western Cemetery after strong criticism. The work is commended by a majority of old lot owners.

1904 January, amendment of the ordinance of 1888, requires that burial permits at Western Cemetery be obtained from the Superintendent of Burials, not the Board of Commissioners of Cemeteries and Public Grounds.

June, City Solicitor Scott Wilson submits an opinion to City Council related to ownership of lots and rights of burial at Western Cemetery.

1905 Western Cemetery is given the usual care.

1906-7 Richard Webb house built on Bowdoin Street, abutting the cemetery.

1907 Western Cemetery is given the usual care. It is noted that the old pump is noted as worn out and a new one must be purchased.

1908 Western Cemetery is given the usual care.

1909 The 1885 state legislation that created the Commissioners of Cemeteries and Public Grounds is amended to give the Commission the power of taxation @ 1 mil.

1910 Funds from the mil tax are available, resulting in a substantial budget increase. Five foot high iron fence installed by Megquier & Jones Co. around Western Cemetery to replace old wooden fence removed a few years ago. Installation delayed somewhat because record line cut into cemetery. It is relocated to clear all lots.

1911 Commission of Cemeteries and Public Grounds is renamed Parks Commission. Iron fence is painted and wood fence adjoining Chaplin property is rebuilt [Western Promenade corner]. The slope next to Bowdoin Street is cleared with all dead wood removed. The main entry on Vaughan Street is improved, removing the old tool house, regrading roadways, new shrubs and trees planted over lawn at entrance. An ornamental fountain, the gift of Commissioner Edward A. Noyes, is placed at the end of the lawn near the entry. The general appearance is greatly improved and lot owners are encouraged to regrade lots and put them in good condition. 9 interments at Western Cemetery.

1912 Western Cemetery is given the usual care with no new cemetery work. 10 interments at Western Cemetery.

1913 April, State legislature replaces Commission of Cemeteries and Public Grounds with Parks Commission. Nathan Gould, Portland Historian, writes "With little interest and effort, the Western Cemetery might be made a credit and an ornament to our city. Certainly our dead merit it and would cry out against the neglect. . . A well-kept cemetery is a constant reminder of the dignity and worth of human association and human life."

1914 Memorial Gateway, designed by J. C. Stevens, is built at Western Cemetery in memory of Edward H. Daveis [1818-1909].

1915 "Bramhall", the J. B. Brown estate, is demolished to make way for a subdivision. Western Promenade esplanade is built from Bowdoin Street to Vaughan Street and lined with 60 Rock Maples. Recreation Commission established by state legislature. Permission given to Franklin C. Payson to build wall at his expense between his property and Western Cemetery, 1/2 on cemetery grounds. 6 interments at Western Cemetery.

1916 At Western Cemetery 6 trees and 50 shrubs are planted, stones are repaired, roadways are kept clean and the is grass cut. 3 interments at Western Cemetery.

1917 All stones are cleaned and those that have fallen down are uprighted. Two stones are relettered in Hall-Boyd lot. Fences are repaired and painted, including the fence surrounding the cemetery. Planting of 12 trees, 14 shrubs and 2 flower beds. 25 bird houses are put up. Trees and shrubs are trimmed, the grass is cut, and walks are cleaned. 7 interments at Western Cemetery.

1918 Expenditures on building steps, fountain repair, trimming shrubs, cutting grass, cleaning walks and drive. Manure is spread on lawns. 4 interments and 6 transfers at Western Cemetery.

1919 Stones are straightened, fences repaired and painted when needed, shrubs trimmed, grass cut, walks and drives cared for.

1920 2 interments at Western Cemetery.

1921 Section of fence on Promenade side damaged by auto and repaired. Fountain, seats and fences scraped and painted.

1923 Installation of 192 lf of cement retaining wall surmounted by wire fence.

1926 $511 spent on Western Cemetery, a low amount and lower than for Eastern Cemetery.

1928 Eastern and Western Cemetery have higher maintenance costs. Extensive field work to properly mark lots and considerable tree work at Western Cemetery.

1930 3 interments at Western Cemetery.

1931 Small cemetery maintenance expenditures of $1,095.35 [Western $486.60]. 2 interments at Western Cemetery.

1932 Small cemetery maintenance expenditures of $813.55 [Western $437.51]. 2 interments at Western Cemetery.

1933 Small cemetery maintenance expenditures of $1,326.19 [Western $909.24]. Unemployed Relief Project at Western Cemetery with extensive remaking of neglected burial lots resulting in more attractive appearance of old cemetery from Western Promenade. Entrances to 7 tombs in Eastern and Western Cemetery replanked. 3 interments at Western Cemetery.

1934 Small cemetery maintenance expenditures of $1,025.77 [Western $331.02 for general upkeep, plus 411.17 outlay for ERA project that includes extensive regrading of southerly side, 20,833 SY of burial areas [3 ranges] regraded, loamed and seeded. 2 interments at Western Cemetery.

1935 Other cemetery maintenance expenditures of $1,263.07 [Western $890.68]. 1 interment at Western Cemetery.

1936 Other cemetery maintenance expenditures of $529.25 [Western $331.50]. 2 interments at Western Cemetery.

1937 Western Cemetery maintenance expenditures of $292.65. 1 interment at Western Cemetery.

1938 Western cemetery maintenance expenditures of $29.25. 1 interment at Western Cemetery.

1940 1 interment at Western Cemetery.

1941 2 interments at Western Cemetery.

1942 3 interments at Western Cemetery.

c1942 Iron fence removed during WWII for scrap to support the war effort.

1943 Survey of city recreation needs notes that Western Cemetery would be a logical site for a badly needed play area for the Western Promenade section.

1945 5 interments at Western Cemetery.

1946 Park and Recreation Department is formed with merger of Parks Commission and Recreation Commission.

1948 1,200 lf of chain link fence installed along Western Promenade edge of cemetery.

1950 Vandalism in Western Cemetery is noted as a perennial problem. 2 interments at Western Cemetery.

1952 1 interment at Western Cemetery.

1953 Trustees of Mabel S. Daveis estate provide funds to restore stone work and install wrought iron gate at the entrance gateway.

1954 Trustees of Mabel S. Daveis estate provide funds for 1,400 lf of chain link fencing along Vaughan Street to replace an old wooden barrier.

1956 1 interment at Western Cemetery.

1957 3 interments at Western Cemetery. Trustees of Evergreen Cemetery is abolished and cemetery is placed under the control of the Parks and Recreation Department.

1958 1 interment at Western Cemetery.

1961 1 interment at Western Cemetery. Most recent known date of trust fund establishment for care of a family lot at Western Cemetery [Joy].

1962 1 interment at Western Cemetery.

1968 Central portion of Western Cemetery considered to become a ball field surrounded by a chain link fence by Model Cities Program.

1972 Some renovation work on Western Cemetery with some city funds and volunteers.

1974 Many cemeteries in Portland noted as vandalized.

1975 1 interment at Western Cemetery.

1978 1 interment at Western Cemetery. [most recent recorded interment]

1982 Western Promenade neighborhood, including Western Cemetery, listed on the National Register of Historic Places. After visiting a relative's grave, Mary C. LaRocca of Placentia CA expresses concern about neglect at Western Cemetery including decay, neglect, vandalism, broken glass, vagrants, vandals, dogs, beer bottles, trash bags, dog excrement, woods and overgrown condition.

1983 City Council amends ordinance allowing unleashed dogs on Western Promenade. This is later interpreted to include Western Cemetery.

1986 June, Longfellow and Cummings tombs opened for repairs to entryways, both found empty.

1993 Friends of Western Cemetery formed, reputedly to prevent dogs from being banned in the cemetery.

1994 Press about dog use of Western Cemetery. Portland DAR chapter replaces and rededicates grave marker of "real daughter" Sarah Hatch at Western Cemetery.

1997 Locally designated West End Historic District created which combined the Western Promenade and Spring Street Historic Districts, including Western Cemetery.

1998 Restoration of Daveis Memorial entrance gate begins, funded by the Friends of Western Cemetery.

1999 August, Ancient Order of Hibernians installs black granite grave marker marking "The Catholic Ground".

APPENDIX

AVAILABLE DRAWINGS

Department of Public Works

Undated

[apparently from c 1872], Untitled, ink on linen, 1"=50', 379/21, [appears to be a conveyance plan of first acquisition]. Western Cemetery portion noted Paine to City of Portland, December 8, 1829. Streets copied from Vaughan plan, shows right of way for Promenade

Undated

City of Portland City Property Revaluation Sheet No. 70-71 @ 1" = 100' Notes Deeds and Deed File Pages

Southernmost parcel of Western Cemetery
Phebe Paine et als [1/2] to Town of Portland 8 December 1829
Henry Merrill et als [1/2] to Town of Portland 22 December 1829
Elizabeth Merrill to Town of Portland 22 December 1829

Central portion of Western Cemetery
Henry Merrill et als to City of Portland 22 December 1829
Elizabeth Merrill to Town of Portland 22 December 1829

Northern portion of Western Cemetery
Henry Merrill et als to City of Portland 29 October 1836

West side in Western Promenade
W. T. Vaughan to City of Portland 12 January 1837

North edge of Western Cemetery [apparent property line adjustment]
Henry Merrill et als to City of Portland 3 December 1863
City of Portland to Ashbel Chaplin 10 May 1883

Undated

Untitled, 5 work sheets, pencil on heavy paper, 68/3. [May be work sheets for 1889 plan]

November 1889

Plan of Western Cemetery, William A. Gordon, City Engineer, 1"=30', ink on linen, 383/35

March 1897

Plan of Cassidy Property, Gen.[?] Fernald, City Engineer, 390/1

April 1902

Western Cemetery, Plan showing location of fence adjoining Western Promenade, William O. Thompson, Engineer, 1"=40', ink on linen, 948/47 [traced from plan 108/2].

November 29, 1904

Plan of Western Promenade, Olmsted Brothers [plan no. 186-1], 1"=100', Blueprint, 740/9

May 1910

Western Cemetery, Plan showing location of fence adjoining Western Promenade, William O. Thompson, Engineer, 1"=40', ink on linen, 948/47A

August 1948

Location Plan for Proposed Chain Link Fence Construction, Western Cemetery, Parks and Recreation Department, 1'=40', pencil on linen, 808/10

1986 aerial photo

Other Locations

May 1905

General Plan for Western Promenade, Olmsted Brothers

Maps

1836 A Map of the City of Portland with the latest Improvements by John Cullum, hand colored copper engraving. Eastern noted as cemetery and Western noted as South Cemetery and shown with an incomplete L shaped outline [Portland Public Library]

1870 A Map of City and Harbor of Portland [Department of Public Works]

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