Preservation Master Plan

for

Riverside Cemetery
Sunderland, Massachusetts

prepared for the

Trustees of Riverside Cemetery
Town of Sunderland
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by

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ACKNOWLEDGEMENTS

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INTRODUCTION

The oldest section of Riverside Cemetery dates to the early 1700s, with the first known interment taking place in 1722.

Riverside Cemetery lies along the east bank of the Connecticut River in Sunderland, Massachusetts. Established ca. 1714, the 5.91-acre property is Sunderland's oldest known place of interment, set aside in conjunction with the first permanent settlement of the town. Interred within are remains of early settlers, several generations of farmers, and others influential in the development of Sunderland. The hundreds of monuments and markers help tell the 300-year story of the town, from its early days as "Swampfield," through to the present. The ages of the burial sections, ranging from the early 18th to the 21st centuries, represent a range historic cemetery styles, each incorporating distinct burial layouts, types of stones, gravestone carvings (iconography), and species of trees and shrubs.

An entity of the town known as the "Trustees of Riverside Cemetery" has taken good care of the property by regularly mowing lawns, removing leaves, overseeing tree care, selling gravesites and maintaining burial records. The group made several improvements to the landscape in 1999-2001 following an evaluation made by the Massachusetts Department of Environmental Management, including clearing the southern section for future expansion; planting deciduous trees; and surfacing the roadways with oil and stone (chip seal).[1] Despite these efforts, the trustees believed additional tasks remained, saw the need to develop a landscape master plan for accomplishing these, and applied to Sunderland's Community Preservation Committee to help finance the plan. The result is the foregoing *Riverside Cemetery Preservation Master Plan,* a phased guide to protecting the cemetery's historic landscape while at the same time allowing for active burials in the future. Development of the plan has coincided with the celebration of Sunderland's tercentennial (1718-2018).

PLAN GOAL & OBJECTIVES

The goal of the project is to devise a plan that will advise the trustees in making improvements, managing, and caring for the cemetery landscape over time. Objectives include, (1) acknowledging the cemetery's historical development and importance to the history of Sunderland; (2) assessing

[1] The Massachusetts Department of Environmental Management (DEM) became the Department of Conservation in Recreation (DCR) in the 2000s. This evaluation was part of a state-wide effort to guide preservation efforts at municipally-owned burial grounds and cemeteries.

the cemetery's existing conditions; and (3) identifying specific improvements for ensuring the cemetery's preservation over time.

PRESERVATION MASTER PLAN PROGRAM

In preparation for application to the Sunderland Community Preservation Committee, the Riverside Cemetery Trustees set forth the following program of improvements to be addressed by the plan:

- *Cemetery Trees and Beautification*. The plan should include a survey and assessment of the condition of the cemetery's trees and establish a maintenance plan as well as a program for fostering the next generation of tree canopy. The plan should also explore opportunities to "beautify" the cemetery through the addition of ornamental plants, and for opening views along the west side across the river towards Whately.

- *Roadway Network.* The plan should include an assessment of interior roads at the cemetery with an eye towards (possibly) establishing a hierarchy. While the "south" section of the cemetery has been cleared of trees and shrubs and made available for burials, it contains no established circulation system, and the plan should outline a solution to providing access to this area.

- *Monuments and Markers*. The plan should include a detailed assessment of the cemetery's monuments and markers and develop a schedule for conservation treatment. Following the DEM evaluation in the early 2000s, the trustees engaged a mason to make some initial repairs. A comprehensive survey and assessment of condition of all markers, however, has not been completed.

- *Infill.* The plan should explore the potential for additional burials in "infill" areas in underutilized portions of the cemetery.

- *The Shed.* The plan should assess the location of the shed and explore opportunities for relocating the structure as a way of conserving space for burials.

HISTORICAL DEVELOPMENT of RIVERSIDE CEMETERY

Beginnings: Before 1714

The earliest known humans to inhabit the area that would, in the early 18th century, become Sunderland, were native peoples, the Norwottucks (Nonotucks). Local tradition holds that some may have built huts (wigwams) on the "island" in the Connecticut River opposite Main Street (north of the bridge). European settlers had arrived in Hadley (to the south) in 1659 from Wethersfield, Connecticut, and by the early 1670s, some of these settlers had migrated northward to the area known as "Swampfield." Historical records from that time indicate that "considerable progress had been made in the new settlement: lands had been measured and to some extent allotted, buildings had been erected and inhabited, and labor had been expended in reclaiming the land and fitting it for cultivation."[2] The settlers may have dug a long drainage ditch to help eliminate the area's swampiness.[3] At the outbreak of King Philip's War (1675), the settlers retreated for safety back to Hadley, and remained there until 1714. No known interment site exists in Swampfield from this early period.

Establishment: 1714-1832

In 1714, the General Court of Massachusetts reaffirmed existing rights of settlers to the land in Swampfield, and immediately following this, settlers divided the land. They drew forty homelots, 39 for proprietors and one for the minister, each running east to west and divided down the middle by the town street. Each lot measured a minimum of 3.5 acres. Settlers began occupying the lots in 1715, and in 1717 raised the first meeting house. The following year, the town officially incorporated as Sunderland, named for Charles Spencer, Earl of Sunderland, England.[4]

The 1715 Platt of the Plantation of Swampfield showed extensive meadows and hills along the east side of the Connecticut River. (Massachusetts State Archives)

While no record is known to exist of the taking of land for a burial ground, or for the reason for its location so far from the meeting house, it is likely this first place of interment was established between 1714 and 1717.[5] The property likely consisted of approximately one acre.[6] Of the forty original

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[2] Smith, John Montague, History of the Town of Sunderland, Volume I, 1673-1899. Greenfield, Mass.: E. A. Hall & Co., 1899, 9

[3] Smith, 14

[4] Smith, 19-21

[5] Hubbard, Arthur W., et. al., History of the Town of Sunderland, Volume II, 1899-1954. Town of Sunderland, 1954, 81

[6] 1.0 acre is the approximate size of the area containing the 18th century graves.

The first known burial at Riverside Cemetery was of Elizabeth Graves, who died in 1722. The portal-shaped marker is carved from local stone.

proprietors, the graves of all but seven are found within the cemetery.[7] These early burials stand to the south and west of Cemetery Road, arranged in irregular rows and marked with slate tablets. Fanciful early 18th century iconography appears on many while others display simple, crude inscriptions. The earliest stone marks the grave of Elizabeth Graves who died in 1722. This small burial ground served as Sunderland's only known interment site for over 100 years.[8]

Enlargement: 1832–1870

By the third decade of the 19th century, the town had identified the need to enlarge the burial ground. The parish chose a committee of three men to seek additional land, and in 1833 a vote was taken to spend $110.00 on the purchase. The parish voted to sell the lots for a fixed amount, or to the highest bidder in the case of competing interests. In 1867, the cemetery was enlarged for a second time.[9] The sizes of these enlargements were not mentioned in the annual reports of the town, but it is likely that they comprised the "north section," the one-acre area to the northwest of the cemetery roadway and with their additions, the total cemetery area amounted to approximately two acres.[10] This new one-acre section was the first to be planned and plotted (and pre-sold).

Several Victorian era "stele" monuments dot the mid-19th century sections of Riverside.

Both the layout and markings of mid-nineteenth century burials at the cemetery contrast with those of the previous century. Marble is the predominant choice of stone material, and while many markers are simple rounded-top tablets, larger monuments were interspersed with these, commemorating families and marking family plots. Victorian symbols, such as wheat shafts, upward-pointing fingers, urns and weeping willow branches adorn many of the tablets. Curbs, copings and/or fences surround several plots throughout this mid-19th century section.

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[7] Everts, Louis H., History of the Connecticut Valley in Massachusetts, Volume II. Philadelphia, PA: J. B. Lippincott & Co., 1879, 680

[8] A second cemetery at North Sunderland was established in 1837.

[9] Hubbard, 81-83

[10] Deeds for these additions may be filed at the Franklin County Registry. A map detailing the area to the north of the main road, originally dated 1867, is retained by the Riverside Cemetery Trustees.

Embellishment and the Establishment of Riverside Cemetery: 1870-1936

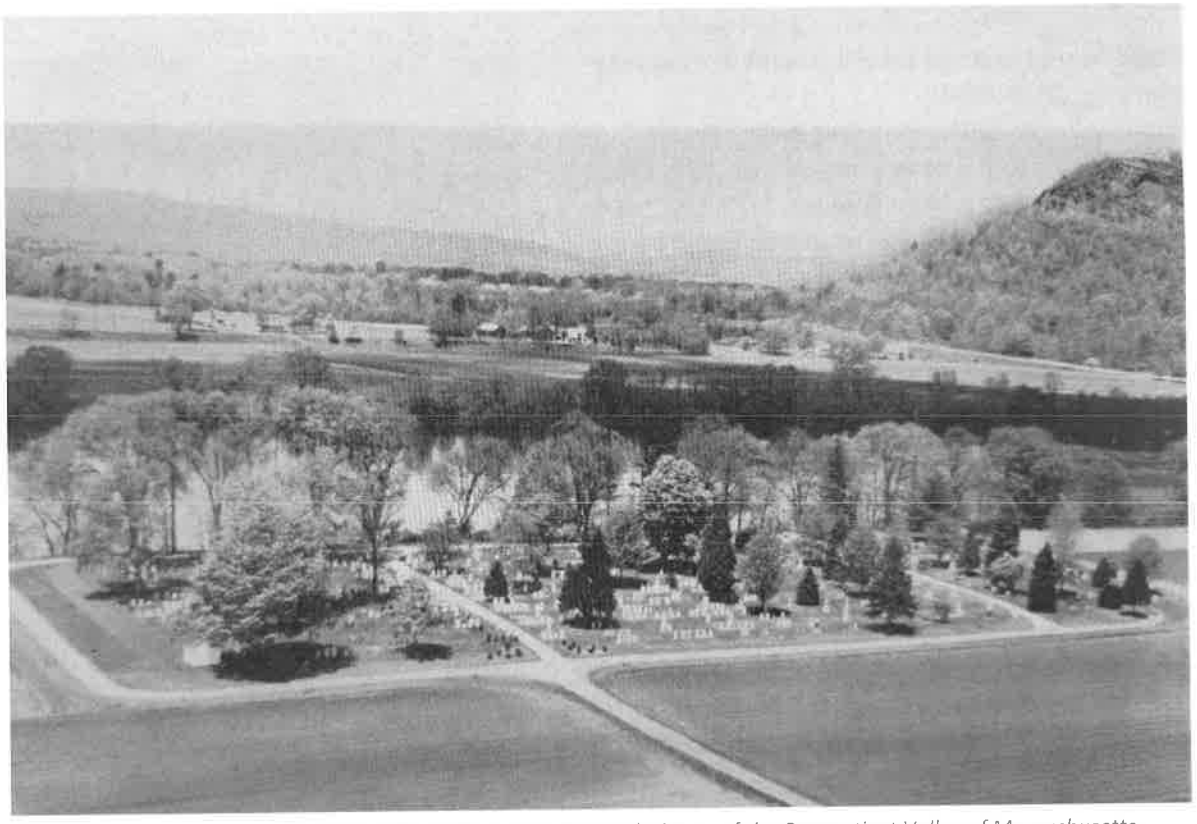
Beginning in the 1870s, the town made several improvements to the cemetery. Before 1870, the property contained a hearse house, a door for which was purchased in 1871. The town purchased a new hearse (1870), a set of traverse runners (1871) and cloth curtains (1872) for the hearse[11] and continued to use the vehicle until 1904 when it was replaced. In 1875, the town voted to lay out a road one rod (sixteen feet) wide leading from Main Street to the cemetery, acquiring land from two adjacent landowners to do so at a total cost of $45.00.[12] Also in this year a fence costing $166.72 was constructed at the cemetery[13] and painted the following year.[14] In 1878, R. R. Graves established a fund of $1,000 "to be faithfully used in keeping in repair, and in good order, the fence, the avenues and paths of the cemetery, the lots where lie buried the family friends of the donor, also any lots the owners of which neglect to keep in proper condition."[15]

F. W. Beers map of Sunderland from the 1871 Franklin County Atlas showed the cemetery at the end of Cemetery Road.

In 1877, the town set up a cemetery committee and in their annual report to the residents, the members noted that the cemetery contained approximately 700 marked graves, with about 375 graves in the north section alone."[16] The report also detailed several physical features of the cemetery: (1) the walks between lots had been laid out three feet and six feet wide, alternately; (2) many unsightly trees had been removed; (3) three hitching posts had been added (location not mentioned); (4) the hearse house had been painted; and (5) several stones had been straightened. The committee recommended the removal of footstones, and the turning around of headstones so that they all faced the same way. The committee proposed renaming the property "Riverside Cemetery."[17]

In the 1880s, the town assumed legal control of the cemetery; historical records indicate that prior to this time, the property remained in the possession of the parish (church).[18] In 1887, the town

[11] Sunderland Annual Town Reports, 1871 and 1872
[12] This roadway appears on the Beers map of 1871; it is likely that some type of access path led to the cemetery prior to 1875, but not an official road.
[13] Hubbard, et. al., 83
[14] Sunderland Annual Town Report, 1876, 5
[15] Sunderland Annual Town Report, 1878, 7
[16] Sunderland Annual Town Report, 1879, 8-9
[17] Ibid.
[18] The town meeting warrant of 1883 included *Article 15: to see what action the Town will take if any relative to the purchase of the burying ground owned by the Parish or any land adjoining it to be used for a burial ground.*



Riverside Cemetery was photographed in 1879 as part of Everts' History of the Connecticut Valley of Massachusetts. Views were possible from the west side looking across the Connecticut River towards Whatley and Mount Sugarloaf (right side of photograph).

voted to enlarge the cemetery by 5/8 acre on the north side by purchasing additional land from Charles F. Clark. In conjunction with this purchase, the town graded, fertilized, and seeded the addition, laid out roads, avenues and burial lots, and erected a "substantial" fence. The new section offered forty single and twenty-five double lots.[19] The town continued to make improvements to the cemetery, including adding ornamental trees and shrubs, painting the fence and hearse house, and re-setting headstones in bases with Portland cement. By 1891, the grounds were in such a fine condition that Charles Warner included a description of them in Picturesque Franklin:

> "[j]ust out of the village, westerly, at the lower end of the level meadow land next to the river is the burying ground. It is remarkably neat in its appearance. There are none of the wiry grasses, thistles and weeds, and straggling and fallen stones which so often mark the country burial ground. It is a beautiful spot, there by the tree bordered river, with Sugar-loaf rising stiffly just across the stream."[20]

[19] Sunderland Annual Town Report, 1887, 10
[20] Warner, Charles F., Picturesque Franklin. Northampton, Mass.: Wade, Warner & Co., 1891, 21

The Northernmost section, added in 1887, contains modern style markers – 30" height granite stones at the graves of two persons.

Throughout the first three decades of the 20th century, the town continued to carefully tend the cemetery landscape, painting the fence, cleaning, re-lettering, and re-setting stones, and regularly adding flowering plants purchased from the Massachusetts Agricultural College. By 1911, the town had hired a superintendent who assumed responsibility for these maintenance tasks. In 1934, the garden section of the Sunderland Women's Club sponsored a plan for marking each tree as to its name, and Professor Frank Waugh (from the college) identified and marked the trees with metal tags.[21]

Burial patterns from this period reflect two distinct styles. During the late decades of the 19th century, families continued to inter members in larger group plots, with large monuments marking the center, and smaller individual stones surrounding the central monument. Marble and granite were most commonly used. By the early 20th century, a more modern approach emerged, with standard 30" height granite monuments marking the graves of two persons, and small plantings of shrubs flanking the stone. The northernmost sections of Riverside reflect this trend.

Modernization: 1936-Present

By the mid-1900s, the town began making changes to the cemetery landscape that would shed some of its historic appearance. Floods and hurricanes in the 1936 and 1938 caused the river to overflow the cemetery, leaving a thick layer of silt over the grounds and eroding the riverbank.[22] In the 1950s, the town removed the perimeter fence and began paving the roads with a hard surface, presumably asphalt.[23] Paving continued into the 1960s. In 1979, the Town Annual Report mentioned that a new maintenance building had been erected to replace the old structure which had been in poor condition, and that a flag pole was donated by the Hale-Clapp Post 3295 V. F. W. of South Deerfield.[24]

The southernmost section, added in the 1990s, has been plotted but does not contain a roadway or paths.

[21] Hubbard, et., al., 84
[22] Ibid.
[23] Sunderland Annual Town Report, 1952, 45
[24] Sunderland Annual Town Report, 1979, 14 The flagpole was moved to increase its visibility in 2005.

Beginning in the 1900s, the trustees stepped up their efforts to expand and improve the cemetery grounds. In 1991, they purchased a parcel of land adjacent to the cemetery's south side, enough area to provide 32 additional four-plot lots for immediate use, and 100 lots for future development. This action brought the cemetery's acreage to the total of today, 5.91. In the same year, the trustees installed a new water line, fed from the main on South Main Street and extending up Cemetery Road into the north and south ends of the property. Other efforts to improve the cemetery landscape included erecting a directional sign at the corner of South Main Street and Cemetery Road and resurfacing of Cemetery Road (1995); reclamation of the riverbank (1997); clearing the southern end (2001); painting the storage shed and flagpole (2002); installing original fence posts near the cemetery entrance (2005); placing a "rules and regulations" sign just inside the cemetery.[25]

In the 1990s, Sunderland affirmed its commitment to town-wide preservation of its historic. In 1992, the Sunderland Historical Commission was formed, and to support this new entity, the Riverside Cemetery Trustees donated $1,000 to conduct a comprehensive historic resources inventory. In 2002, Riverside Cemetery, along with 143 other resources, was officially listed on the National Register of Historic Places as part of the Sunderland Center Historic District.

As the town approached its 300th anniversary (2018), the trustees identified the need to further their improvement efforts at Riverside – to assess and plan for the replacement of the trees; to expand and upgrade the roadway system; to conserve the monuments and markers; to plan for additional burial space; to evaluate the location of the maintenance shed. They applied for and secured a grant through the Community Preservation Act and matched the award with funds from the cemetery trust fund. The result is the foregoing *Riverside Cemetery Preservation Master Plan.*

Historic Cemetery Styles

As summarized above, the Riverside Cemetery landscape has evolved over the course of 300 years, as evidenced by the changes in its physical appearance through time. The changes reflect the shifting approaches taken by Americans to interring and commemorating the dead, as follows:

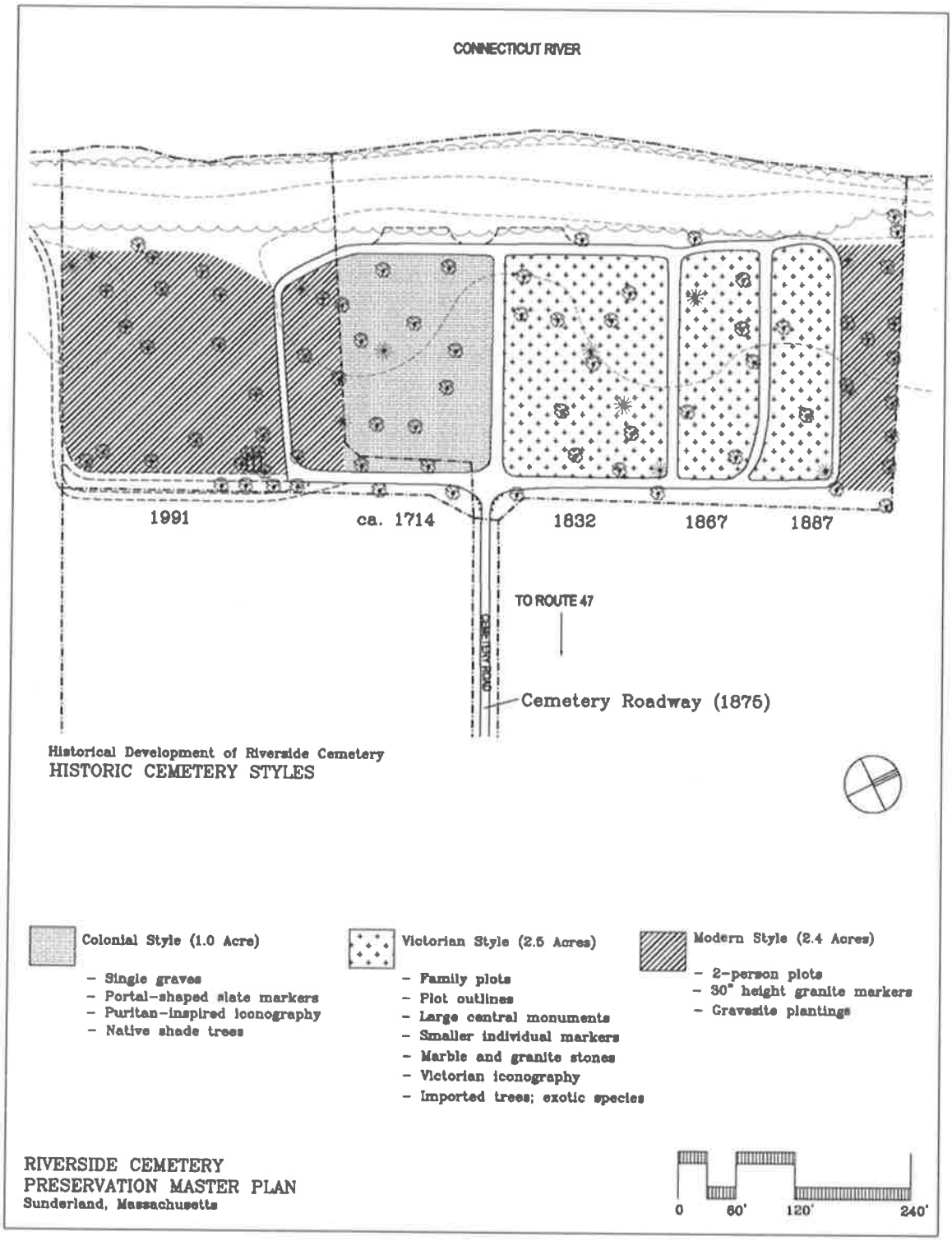
Colonial Burial (approximately 1.0 acre)

The earliest burials, found in the one-acre section immediately to the south of Cemetery Road, exhibit characteristics of the 18th and early 19th centuries. Single graves, marked with portal-shaped slate tablets dominate, appearing in uneven rows. The stones, carved largely by local artisans, contain puritan-inspired imagery, and native trees shade the landscape.

Victorian Burial (approximately 2.4 acres)

Burials dating to the mid and late 19th centuries lie in the two sections immediately to the north of Cemetery Road. Unlike the Colonial burial section, these sections were planned and plotted, and pre-sold to families. Many owners outlined their plots with fencing, curbing or coping, and placed prominent markers at the center (often surrounded by smaller stones marking individual graves). Material for the stones shifted from slate to marble and later, granite; carvings displayed Victorian imagery. Imported trees were readily available at the time and liberally planted.

[25] Sunderland Annual Town Reports from each of the aforementioned years detail these improvements.


CONNECTICUT RIVER
1991
ca. 1714
1832
1867
1887
TO ROUTE 47
Cemetery Roadway (1875)
Historical Development of Riverside Cemetery
HISTORIC CEMETERY STYLES
Colonial Style (1.0 Acre)
- Single graves
- Portal-shaped slate markers
- Puritan-inspired iconography
- Native shade trees
Victorian Style (2.5 Acres)
- Family plots
- Plot outlines
- Large central monuments
- Smaller individual markers
- Marble and granite stones
- Victorian iconography
- Imported trees; exotic species
Modern Style (2.4 Acres)
- 2-person plots
- 30" height granite markers
- Gravesite plantings
RIVERSIDE CEMETERY
PRESERVATION MASTER PLAN
Sunderland, Massachusetts
0
60'
120'
240'

Modern Burial (approximately 2.5 acres)
The northern and southernmost sections of Riverside reflect modern approaches to burial, when plot embellishments in the form of large monuments, as well as plot enclosures, were no longer fashionable. Instead, standard 30" height markers, made largely of granite, mark individual, two-person graves. Gravesite plantings – perennials and pruned shrubs – ornament the graves.

The marble marker of Eliza Graves typifies the Victorian style of gravestone, with Classical architectural detailing and a wheat shaft inscribed in the tympanum (arch).

Period of Historical Significance
The period of significance for Riverside Cemetery spans the years 1714 to 1968. During this time, land for the cemetery was set aside along the river, at the southern end of town, and served as the town's only known place of interment for over 100 years. As Sunderland grew in population, more land for burial was needed, and the town enlarged the property four times (1832, 1867, 1887, 1991). The resulting 5.91-acre landscape exhibits a range of historic cemetery styles including the Colonial, Victorian and Modern. Future efforts to preserve, alter, and expand the cemetery should meld, as closely as possible, with these distinctive historic styles.

LANDSCAPE ASSESSMENT

This section of the Preservation Master Plan provides an assessment of the existing conditions of the Riverside Cemetery landscape. It includes an inventory of the cemetery's features; an analysis of their condition and appropriateness to the property's period of significance; and an evaluation, or set of preliminary recommendations for preservation, improvement, and long-term care. This assessment has been compiled in accordance with the United States Secretary of the Interior's *Standards for the Preservation of Historic Properties, Guidelines for the Treatment of Cultural Landscapes*.

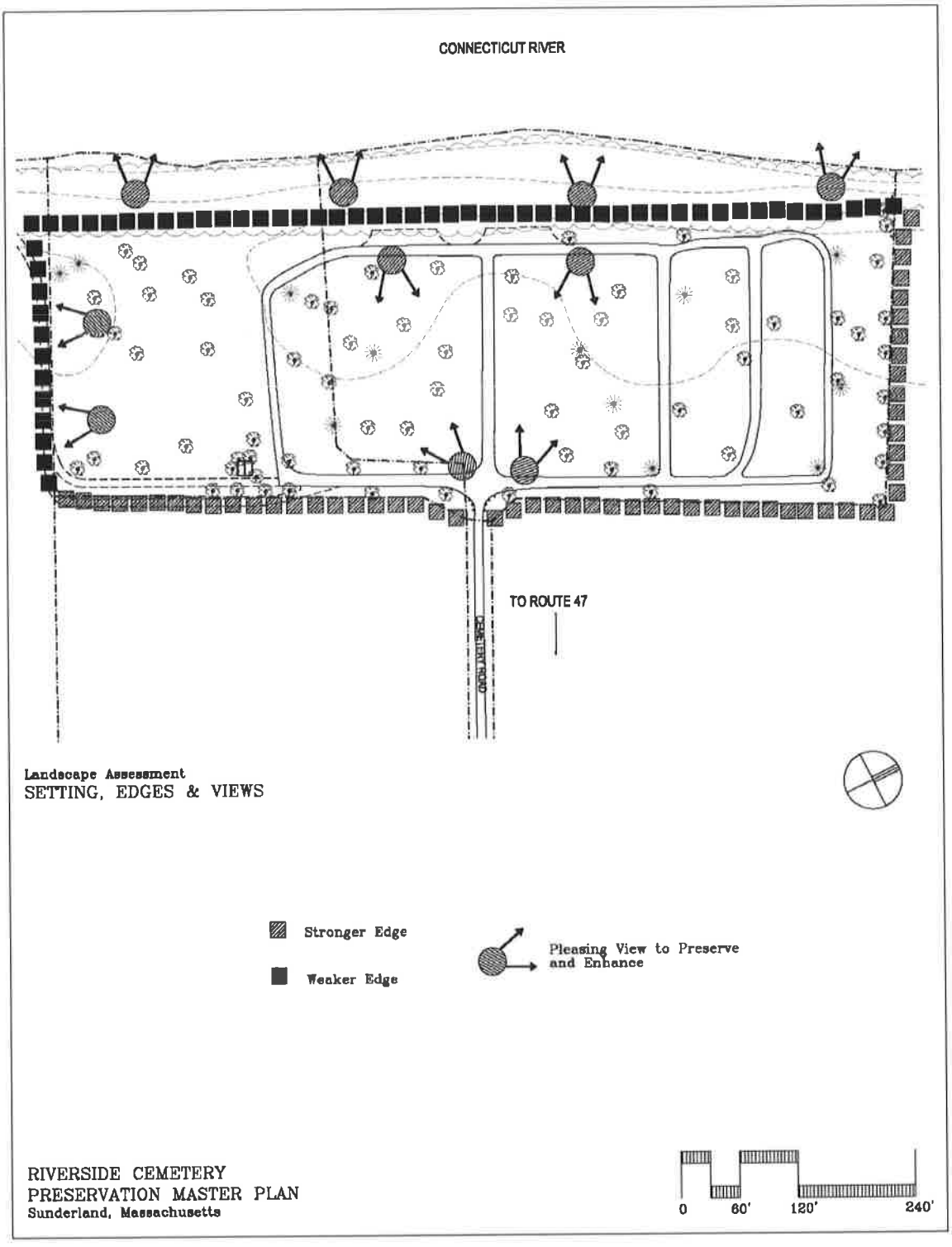
Glimpses of the Sunderland Center National Register Historic District are possible from the north side of the cemetery.

Setting, Edges, Views

Riverside Cemetery's context is one of its most outstanding features. Founders established the cemetery near the south end of the original "town street," thus its location at the edge of the historic village. In the distance, Mounts Sugarloaf and Toby respectively rise to the northwest and northeast, and the Holyoke Range appears in the south, while views of the Sunderland Center Historic District are possible to the north and east. Closer to the cemetery, the Connecticut River rims the west side, and active farmland wraps the north, east and west sides creating a green buffer between the cemetery and nearest road (Main Street). This spot, set back approximately 800 feet from Main Street past farm fields and along the river, provides a quiet and peaceful setting for commemorating the dead.

The cemetery edges themselves both reinforce and compromise this lovely context. On the west, volunteer deciduous trees have emerged along the full extent of the riverbank, blocking all views during spring, summer and fall. A group of declining spruce trees stands between the cemetery and riverbank along a portion of this edge, contributing to the unmanaged look. On the south, the cemetery lacks an edge element (such as trees or a fence) separating the burial areas from the adjacent farmland. On the east and north, the town has maintained rows of deciduous trees that form a stronger, distinctive edge between farmland and the cemetery. Sugar maple trees line the east sides, and Kousa dogwood trees stand along the north. For many years, the town maintained a fence around the cemetery; all of this has been removed except for a few remaining granite posts, located along the north property line.

Views from within the cemetery to the outside correspond with the setting and edges. Along the west side the overgrown riverbank obstructs views of Whately and Mount Sugarloaf. On the south, views to the Holyoke Range are compromised by the lack of a clear cemetery edge. On the east and north, the perimeter shade trees frame views across adjacent farmland to the historic district and


CONNECTICUT RIVER
TO ROUTE 47
CEMETERY ROAD
Landscape Assessment
SETTING, EDGES & VIEWS
Stronger Edge
Weaker Edge
Pleasing View to Preserve and Enhance
RIVERSIDE CEMETERY
PRESERVATION MASTER PLAN
Sunderland, Massachusetts
0
60'
120'
240'

further in the distance, Mount Toby. Within the cemetery, many striking views are possible across the landscape, taking in the array of monuments and markers. Outstanding among these are the views from just inside the entrance looking westward across the Colonial and Victorian sections, as well as from the western roadway, looking eastward across these same sections.

Access & Circulation

Visitors access the property via the 800 feet-long Cemetery Road, extending from South Main Street westward in a straight line to the cemetery. Sixteen feet wide and paved with asphalt, this roadway comfortably allows for one-way vehicular traffic. Many visitors also use this route to reach the cemetery on foot, as the terrain is largely flat and easily traversed by persons of all levels of physical ability. Once inside the cemetery, visitors generally follow the perimeter road, turning left or right inside the entrance and looping around the two oldest sections. Judged by the condition of the pavement, the roadways at the north end appear to be lesser used. Oil and stone, applied in 1995, covers the entire roadway network, providing a permanent surface but one with an historic appearance (of gravel). This pavement is in good condition, and as with the entrance road, the level terrain of the cemetery roads provides an accessible route for most visitors. The cemetery does not contain any defined pedestrian ways.

"Cemetery Road" became an official town way in 1875, one rod wide and approximately 800 feet long, connecting Main Street to the cemetery.

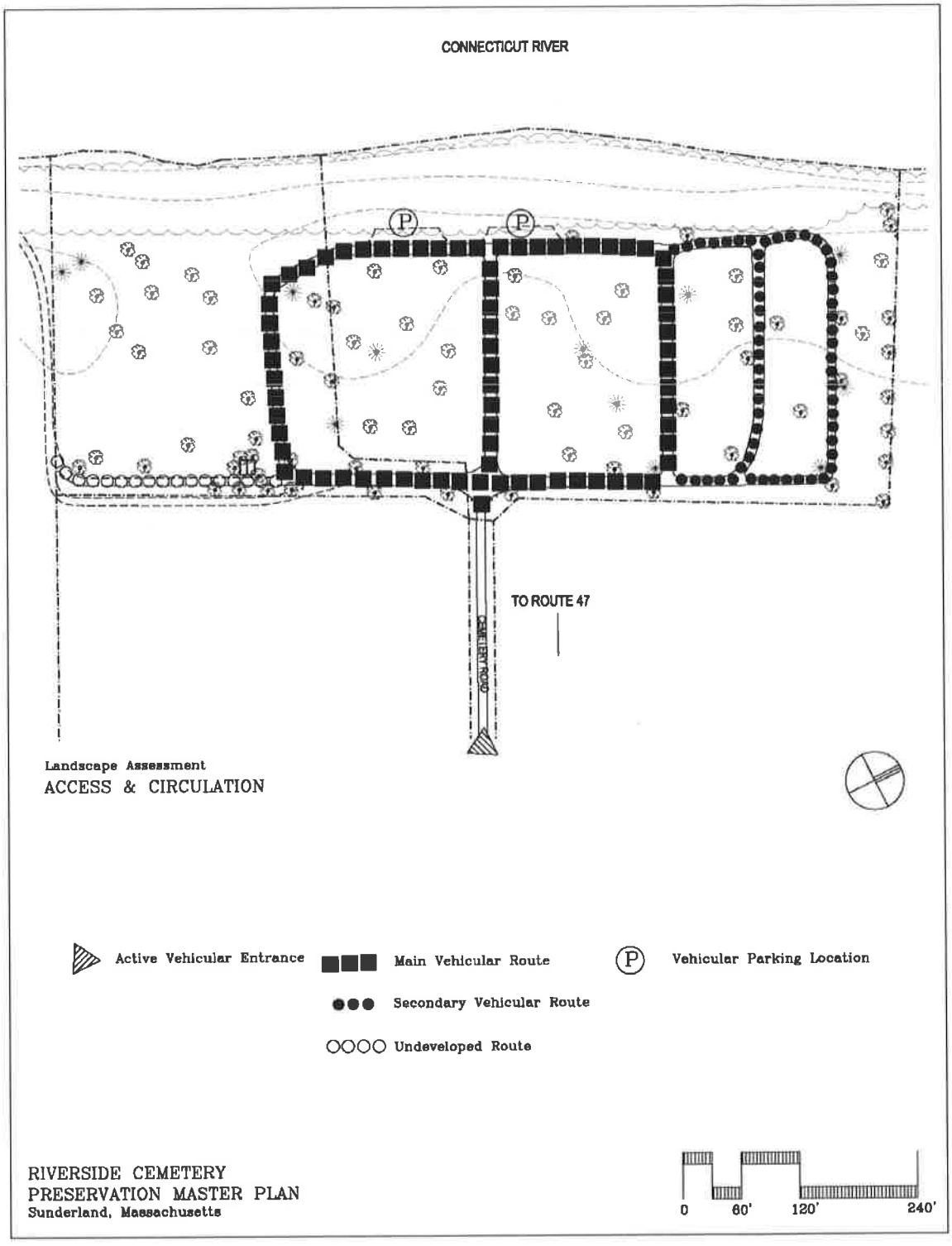
The cemetery lacks established parking areas, and as a result, visitors have created make-shift spots, in the form of dirt pull-offs, along the west edge, between the cemetery road and riverbank. The ragged appearance of these detracts from the neatness of the cemetery landscape, and conflicts with the historic character.

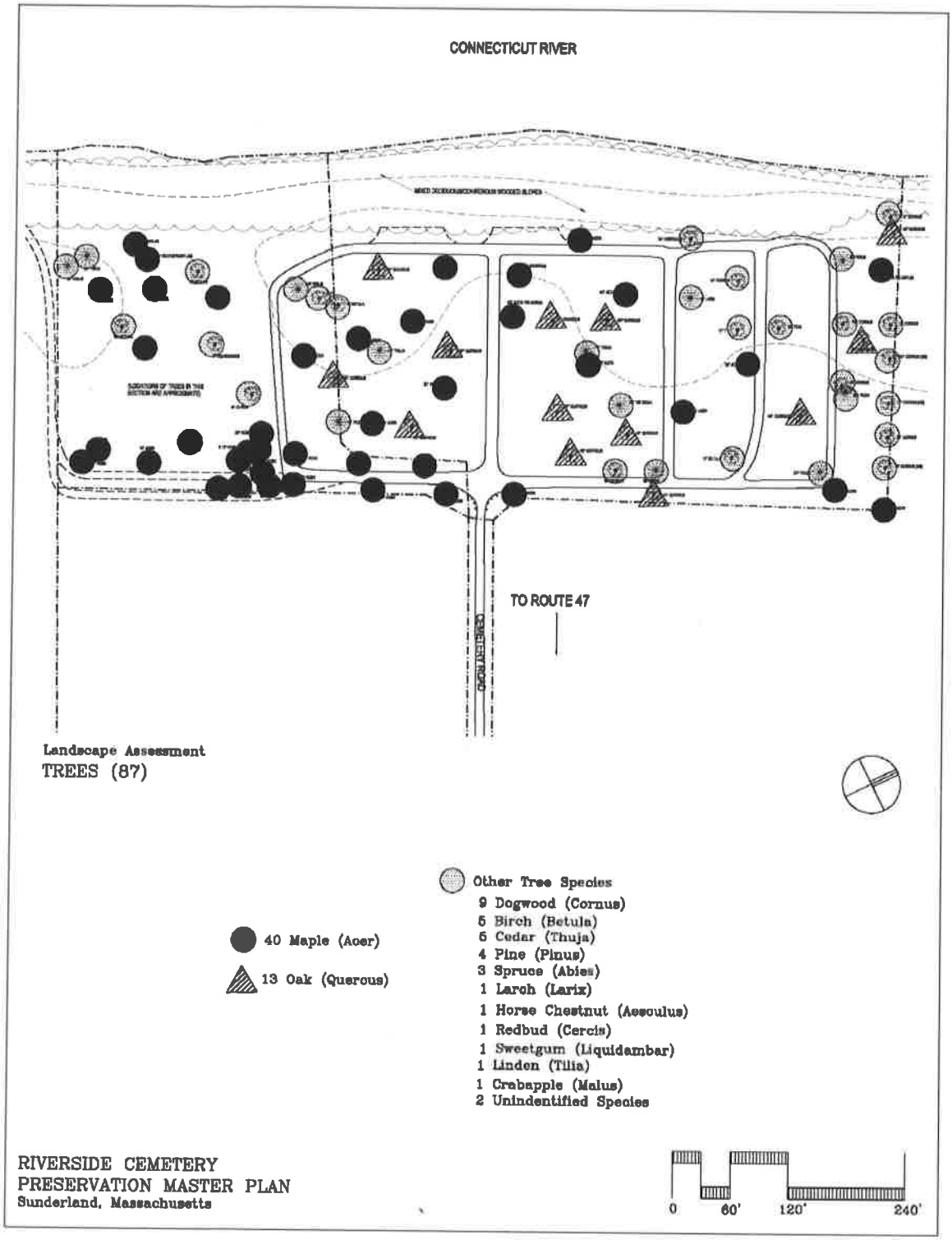
When the most recent addition of land on the south side was made in 1991, the town planned to add a perimeter roadway to this section, continuing in the same pattern as the existing roads, outlining sections. Only a portion of this route exists, and it remains unpaved, resulting in an unfinished look to this portion of the cemetery.

Trees & Plants

A total of eighty-seven deciduous and evergreen trees fill the cemetery grounds, providing structure to the edges, creating shade, and adding character to the historic landscape. Of these, nearly half (46%) are maples, 13 (15%) are oaks, and 9 (10%) are dogwoods. Eleven other species, including birch, cedar, pine, spruce, larch, horse chestnut, redbud, sweetgum, linden, and crabapple make up the remaining 29% of trees (two species have not been identified).[26] This mix of sizes, forms and colors adds variety to the look of the cemetery. However, many of the trees, particularly in the

[26] The row of spruces (*Picea*) between the cemetery and riverbank has not been included in this count.


CONNECTICUT RIVER
P
P
TO ROUTE 47
CEMETERY ROAD
Landscape Assessment
ACCESS & CIRCULATION
Active Vehicular Entrance
Main Vehicular Route
Vehicular Parking Location
Secondary Vehicular Route
Undeveloped Route
RIVERSIDE CEMETERY
PRESERVATION MASTER PLAN
Sunderland, Massachusetts
0
60'
120'
240'


CONNECTICUT RIVER
TO ROUTE 47
CHURCH ROAD
Landscape Assessment
TREES (87)
40 Maple (Acer)
13 Oak (Quercus)
Other Tree Species
9 Dogwood (Cornus)
5 Birch (Betula)
6 Cedar (Thuja)
4 Pine (Pinus)
3 Spruce (Abies)
1 Larch (Larix)
1 Horse Chestnut (Aesculus)
1 Redbud (Cercis)
1 Sweetgum (Liquidambar)
1 Linden (Tilia)
1 Crabapple (Malus)
2 Unindentified Species
RIVERSIDE CEMETERY
PRESERVATION MASTER PLAN
Sunderland, Massachusetts
0
60'
120'
240'

oldest sections, have reached maturity and some appear to be in decline. The large percentage of maples places the landscape at risk of losing large swaths of cover, should a pest or disease infest this species.

A mature horse chestnut tree stands along the west edge, one of many old trees within the cemetery.

Several species of shrubs have been planted in the newer sections (north) of the cemetery, further ornamenting the cemetery. Species include lilac, rose, and azalea. While these do add texture and color to the landscape, they can present long-term maintenance problems for cemetery crews attempting to control the shrubs' growth long after initial planting. Family members have also decorated graves with herbaceous plantings, including hosta, peony, lily-of-the-valley, iris and daylily. These, along with existing perennial ground covers (lichens, mosses, violets, etc.) reduce the need for mowing and lessen overall maintenance requirements.

A cluster of Japanese knotweed (*Polyganum cuspidatum* or *Fallopia japonica*) has taken root at the northwest corner. This invasive exotic species aggressively spreads underground via a system of rhizomes and can easily dominate a landscape, regardless of light levels (grows in sun and shade), smothering other desired species of trees and shrubs. It will continue to infiltrate the cemetery, unless properly controlled.

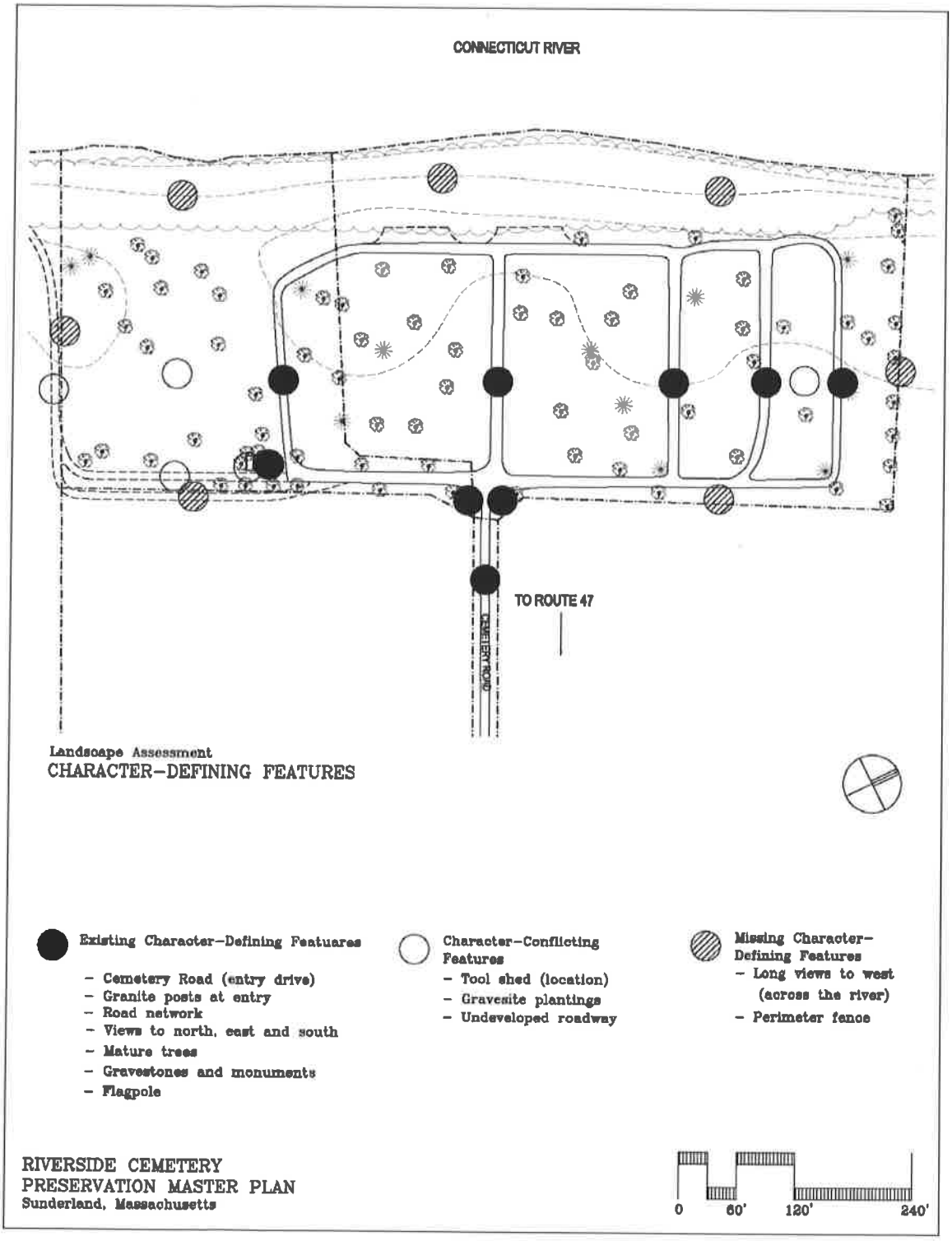
Gravestones & Monuments

As noted in the previous section, Riverside Cemetery contains hundreds of gravestones and monuments, dating from the early 1700s to the present. The oldest markers appear in the "ca. 1714 section," inside the entrance to the immediate south, while the newest stand along the north and south ends. A detailed assessment of all markers revealed that a majority are in very good condition, given their age and continual exposure to the outdoor environment (refer to Appendix B for the complete assessment). The assessment identified a total of 61, however, that will require conservation treatment, including stabilization and restoration. The conditions range from unstable (loose), fallen, fractured, extremely tilted, delaminating, or a combination of these. The assessment placed those stones requiring treatment include three classifications of conservation priorities:

- *Priority 1 – Immediate Action Required.* A total of 19 markers are in danger to themselves, to adjacent markers, and to passersby.

- *Priority 2 – Treatment Required Within One to Two Years.* A total of 20 markers are extremely tilted, fallen and fractured.

- *Priority 3 – Treatment Within Three to Five Years.* A total of 22 stones exhibit ongoing deterioration, such as the slate markers that are delaminating and those which are stable but require resetting.



Other Character-Defining Features
Riverside Cemetery retains many historic features that add to its historic character and contribute to its period of significance. These include:

- The entry drive, "Cemetery Road," dating to the 1870s;
- Granite fence posts, moved from the perimeter to the entrance;
- The roadway network;
- Views to the north, east and south, across farm fields to the mountains and Sunderland Center Historic District;
- Mature deciduous and evergreen trees
- Gravestones and monuments
- Flagpole

The cemetery contains several features that conflict with the cemetery's historic character:

- Tool shed and its location
- Shrubs and gravesite plantings
- Undeveloped roadway on the south side

The Hubbard family monument is one of the cemetery's most prominent works of sculpture.

Missing from the cemetery are long views to the west (across the river), the perimeter fence and the extension of the roadway around/through the southernmost section.

Environmental Considerations
Section 404 of the federal Clean Water Act (CWA) regulates the discharge of dredged or fill material into waters of the United States, including the Connecticut River. Because the cemetery abuts the river, amendments to the riverbank, including tree removal, relocation of the tool shed, removal of Japanese knotweed, and establishment of parking spots, may require review and permitting through the CWA. Individual permits are reviewed by the U. S. Army Corps of Engineers, particularly if the project has the potential to damage the aquatic environment and or significantly degrade the waterway. The nearest Army Corps permitting office, the Eastern Area Office, is located in Concord, Massachusetts.

The Natural Heritage & Endangered Species Program (NHESP) of the Massachusetts Endangered Species Act (MESA; 321 CMR 10.00) has mapped priority and estimated habitat of endangered species throughout the state and has identified a majority of the cemetery acreage as within both a priority and estimated habitat area (refer to the graphic on the next page). When making improvements to the cemetery, including clearing and planting along the riverbank, the Town of Sunderland will likely need to file for a MESA project review. Detailed information about MESA review is available online via the following link:
https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review

Natural Heritage and Endangered Species Map of the area surrounding and including the Cemetery. The property falls within Estimated Habitats of Rare Species and Priority Habitats of Rare Species zones.

Preliminary Recommendations

Future efforts to preserve the landscape at Riverside Cemetery will involve each of the four treatment methods outlined by the US Secretary of the Interior's *Standards for the Preservation of Historic Properties, Guidelines for the Treatment of Cultural Landscapes*:

- *Preservation*, where existing form, integrity, and materials of the landscape will be sustained;
- *Rehabilitation*, where features in the landscape will be repaired or altered to make their use compatible with the landscape's historical value;
- *Restoration*, where landscape features will be returned to their original form; and
- *Reconstruction*, where landscape features no longer extant will be re-created.

Based on the preceding assessment, the following preliminary recommendations should be considered for the Preservation Master Plan. Note that the recommendations do not appear in order of importance or priority.

- To improve overall context and open views to the west, selectively clear the edges of the riverbank, by removing trees;

- Improve the definition of the south edge by planting shade trees, spaced so that views of the Holyoke Range remain possible (frame the views);

- Remove the lower branches of deciduous trees within the cemetery to open views across the interior landscape;

- Consider installing a partial or complete perimeter fence that defines the cemetery boundary but does not obscure views in and out; consider a seasonal barrier;
- Retain the oil and stone surface on the major loop road, reapplying the material as needed;
- Extend the roadway system to loop around or through the southern end;
- Consider covering the remainder of roads with reinforced turf and/or developing them into cremation burial plots;
- Create a defined parking pull-off area (to be reviewed by the Sunderland Conservation Commission, State of Massachusetts for compliance with the Massachusetts Endangered Species Act (MESA) and U. S. Army Corps of Engineers for compliance with Section 404 of the Clean Water Act);
- Update the existing assessment of all cemetery trees, identifying trees to be removed and trees to be stabilized;
- Develop a re-planting plan restores trees along the north-south roadway, and that includes a diversity of species appropriate to each historic cemetery style;
- Gradually remove the shrubs as they mature and become unsightly/unmanageable; enforce the "no-shrub policy;"
- Introduce perennial ground covers to areas that have been disturbed by new interments;
- Control the invasive growth of the Japanese knotweed;
- Conserve the 61 markers and monuments identified in the Gravestone Assessment as requiring treatment;
- Develop a policy for addressing gravestone fragments;
- Consider relocating the tool shed to a less visually prominent location.

RECOMMENDATIONS

The following section of the *Preservation Master Plan* organizes the preliminary recommendations at the end of the *Assessment* section into a series of seven "preservation projects," or tasks to be completed in phases. The projects do not appear in any order of importance or urgency. A preliminary planning-level budget accompanies each project as a way of helping the Town of Sunderland and Riverside Cemetery Trustees set fundraising goals. Figures are based on 2018 construction industry rates and should be refined and updated as projects advance beyond planning phases.

Cemetery Trees

As noted in the *Assessment* section of the plan, the cemetery contains 87 trees representing as many as fifteen different genii with nearly half maples. While the trustees have been conscientious about care, including removing dead trees and pruning away dead limbs, additional work remains to (1) improve the cemetery's edges; (2) open visibility within the cemetery; and (3) open views across the river towards the west and Mount Sugarloaf. This project includes tasks that will accomplish each of these objectives:

- Planting shade trees along the outside of the north-south roadway to establish a regular allee (row) and reinforce the outer cemetery edge;
- Planting shade trees along the southern edge between the cemetery and adjacent asparagus field, to demarcate the boundary between the two properties (note: these trees must be spaced appropriately so that views to the Holyoke Range are preserved);
- Removing the lower limbs (below 15 feet) of shade trees within the cemetery to provide long views across the landscape;
- Selectively clearing the western edge, above the river, including the several Picea abies (blue spruce) that are at the end of their lives and in decline (note: this work may require review by the State for compliance with the Massachusetts Endangered Species Act, as the river edge falls within a "Priority and Estimated Habitat" zone as well as the US Army Corps of Engineers for compliance with Section 404 of the Clean Water Act);
- Updating the existing tree survey, noting any significant changes in health and identifying any trees that should be slated for removal.

Cemetery Fence

Historical documentation revealed that some type of fence surrounded the cemetery as early as the 1870s, and likely before. Today, all but a few granite posts remain. While enclosing the entire cemetery property with a fence of historically compatible material may be both cost prohibitive and impractical, a partial fence, lining just the east side, is an acceptable compromise. The existing granite fence posts located along the western portion of the northern property boundary can be re-used in a granite post and steel rail assembly. The entire length of this fence would be approximately 800 feet, and the fence could be extended along the north (approximately 275 feet) and south (approximately 250 feet) property lines in the future, if desired. Before any fencing is

constructed, the trustees should commission a boundary survey to confirm the precise location of the property lines.

Cemetery Roadways
As discussed in the *Assessment* section, the cemetery contains a network of roadways forming several loops across the property. The southern (newer) section contains no roadways whatsoever. This project will involve closing some of the roadways to make way for cremation burials, and creating new roads in the southern section, as follows:

- Closing the central roadway leading from the cemetery entrance westward to the river by removing the existing pavement and replacing it with loam and seed or perennial ground cover;

- Closing the two roadways furthest to the north in the cemetery by removing the existing pavement and replacing it with loam and seed/perennial ground cover;

- Creating a roadway to access the southern section, surfaced with oil and stone (chipseal) pavement to match to remaining cemetery roads. This roadway should be designed to accommodate existing burial plots and new cremation and/or scattering garden burials.

Tool Shed
The existing tool shed, constructed in the late 1970s, stands in a visually prominent location, near the entrance to the newest burial section (south section of the cemetery). While complimentary in design to the historic character of the cemetery (it resembles a hearse house), it occupies space that could be used for interments. By relocating this structure to the west and south along the existing loop road, the trustees will be able to maintain access to the shed, make it less visible, and secure more space for burials. Relocation to this site may require local, state and/or federal review and permitting.

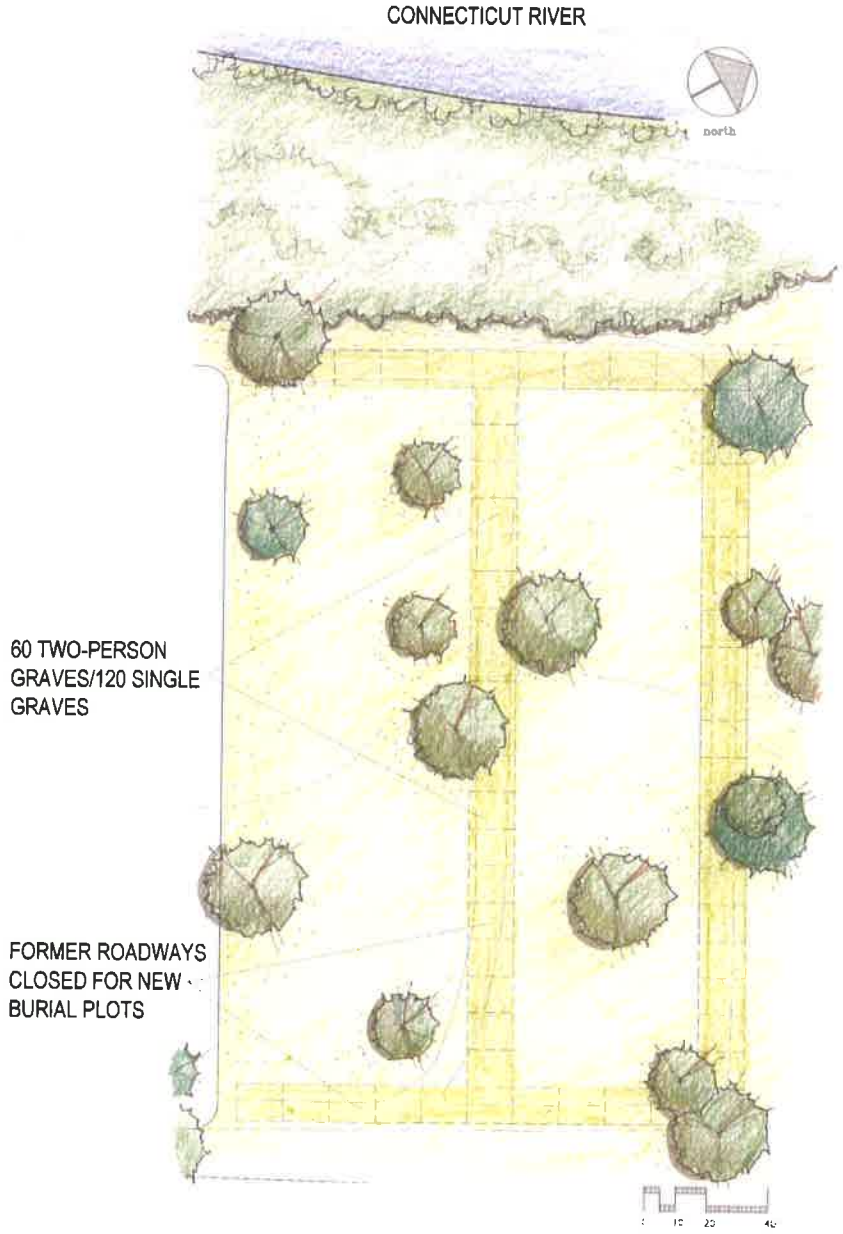
Gravestone and Monument Conservation
The *Gravestone Assessment* identified a total of 61 markers in need of conservation treatment that fall into three priority levels. Priority #1 markers, a total of 19, are considered to be "hazardous" or a danger to themselves, to adjacent markers, and/or to passersby and should be conserved immediately. Priority #2 markers, a total of 20, are "unstable," meaning they are wobbly on their bases; have failing or failed repairs; are extremely tilted; or are fractured. These should be conserved within one or two years. Priority #3 markers, a total of 22, are experiencing ongoing deterioration and should be treated within three to five years. Work on all categories of stones will involve photographing (before and after conservation treatment), measuring and fully documenting each stone, in addition to conserving according to the specifications outlined in the *Gravestone Assessment* (Appendix B).

New Burial Areas (for Cremations)
Riverside Cemetery is Sunderland's only active, non-denominational place of interment, and available gravesites are limited to the southern section only. Part of this area has been plotted with one-and two-grave sites, measuring 7 ½' x 20' and 15' x 20' respectively. As cremation burial has become increasingly desirable, the need has emerged for Sunderland to offer alternative types of interment space, in the form of cremation "walks," cremation "gardens," and "scattering gardens"

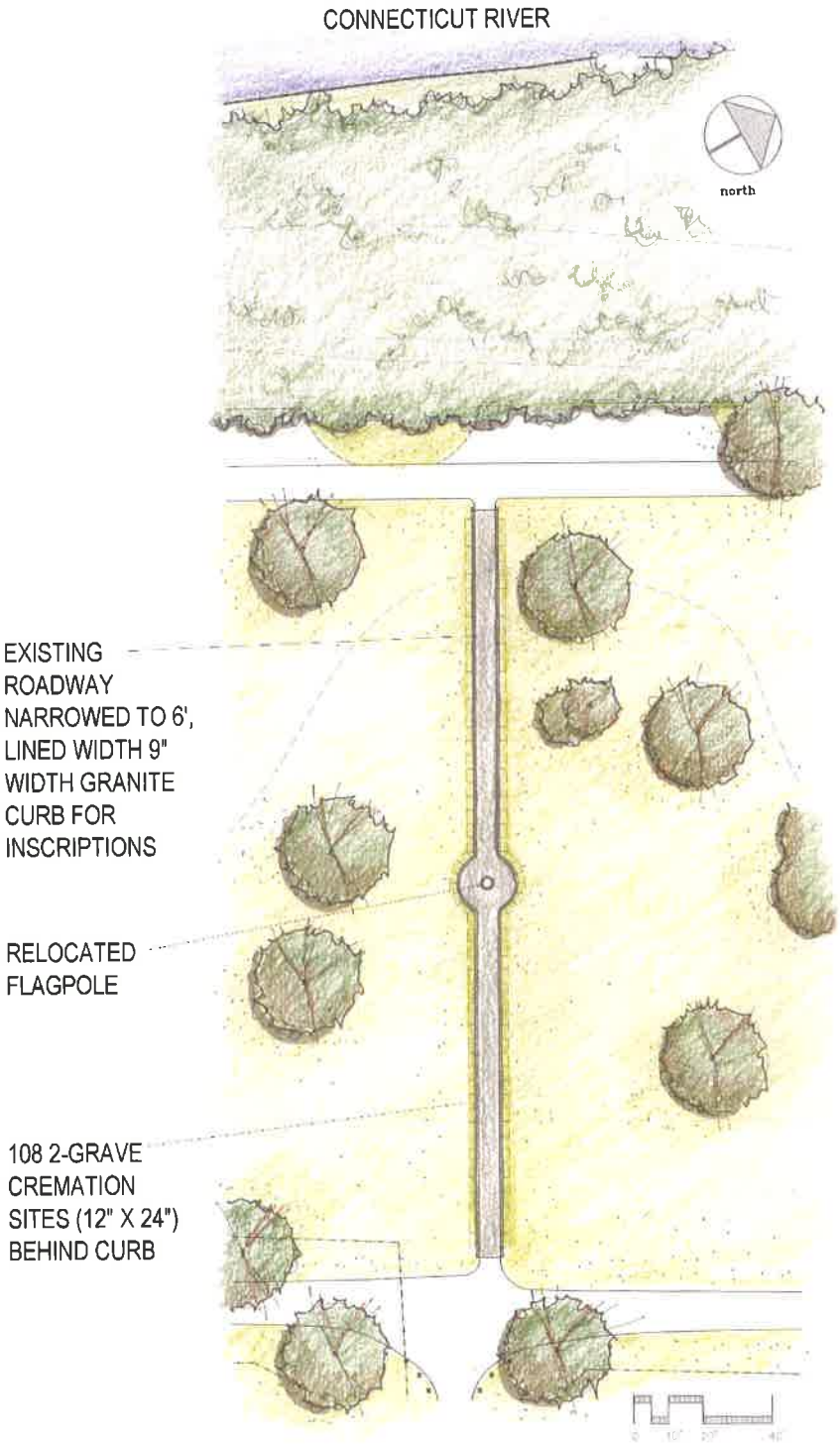
for spreading of cremains within a larger garden. Several sites within the cemetery offer possibilities for these alternative forms, as follows:

- Single and/or double grave plots in the former roadways, now discontinued, including the two east-west roadways at the northern end;
- A cremation "walk" along the formal central east-west roadway (extension of Cemetery Road), incorporating the relocated flagpole;
- A cremation "garden" area located within un-plotted southern section;
- A scattering garden, located within the un-plotted southern section.

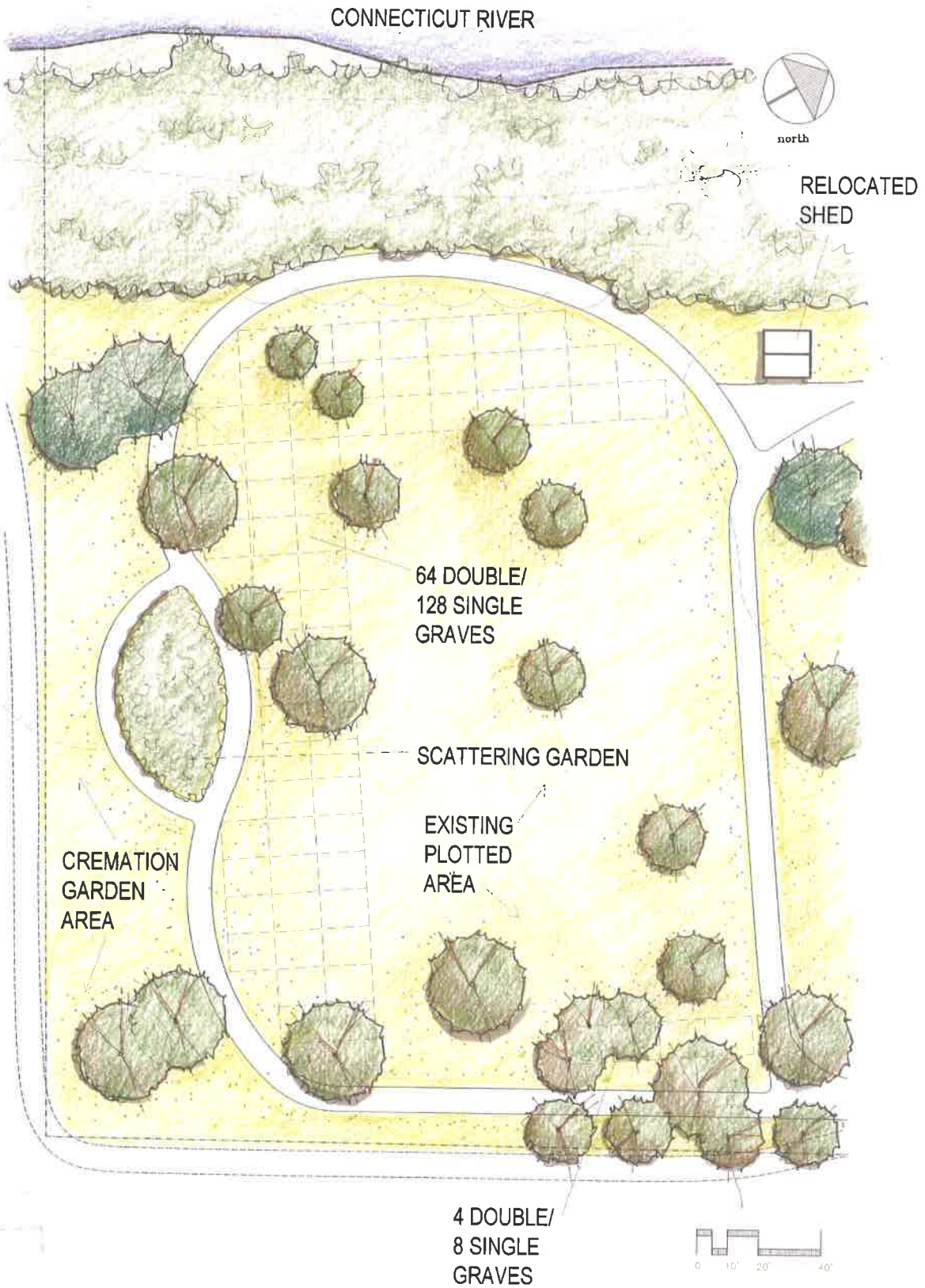
Illustrations of these concepts have been included for planning purposes.



The northern section of Riverside Cemetery with the roadways removed and new burial sites established within the old road beds. Shade trees can fill some of the plots to provide more canopy in this area.



The central cemetery roadway, narrowed to 6', lined with 9" granite curb (holding inscriptions), cremation sites set behind the curb, and the flagpole relocated and provided with a more prominent, dignified setting.



The southern section of the cemetery, with an extension of full-casket grave plots, as well as a scattering garden and cremation garden area. The shed is relocated to a less prominent location nearer the riverbank.

Budget Projections

The following list assigns a preliminary budget projection to each of the preservation projects described above. Note that the figures are merely projections, intended as guidelines for the Town of Sunderland to use in setting fundraising goals. All figures are based on 2018 construction industry and conservation trade rates.

Cemetery Trees
This project takes an incremental approach to evaluating, managing, removing, and re-planting trees along the cemetery's edges and across its landscape. New tree costs assume planting of 2.5" to 3" caliper trees, and include:

- Planting approximately 8 shade trees along the outside of the north-south roadway: $350 - $500 per tree
- Planting approximately 4 shade trees along the southern cemetery edge: $350 - $500 per tree
- Removing the lower limbs of existing shade trees within the cemetery: $250 - $500 per tree

In addition, this project involves two efforts that involve additional planning, before capital costs can be calculated:

- Updating the existing tree survey. Often, Massachusetts-certified arborists will offer this service pro bono, with the understanding that the arborist will be engaged by the town in future tree care services.
- Selective clearing along the western cemetery edge. As noted earlier in this section, this work will likely require permitting to allow work within the MESA Priority and Estimated Habitat zone and review and permitting by the U. S. Army Corps of Engineer for compliance with Section 404 of the Clean Water Act, to be overseen by an environmental planner/engineer. The extent to which clearing is permitted will affect the costs of the effort.

Cemetery Fence
This project involves reconstructing a portion of the perimeter fence along the 800' eastern edge with the possibility of extensions along the northern (275') and southern (250') edges. This fence would consist of rough-hewn (rock face) granite posts, spaced 8' on center, connected by 2-1/2" OD painted steel rails (two tiers) attached to posts with stainless steel rail hangers. Estimates are as follows:

- East Edge (800 LF): $56,000 - $60,000
- North Edge (275 LF): $20,000 - $25,000
- South Edge (250 LF): $18,750 - $23,000

Cemetery Roadway
This project involves altering some of the cemetery's existing roadways to free up space for additional burial sites, and to create a new loop roadway through the southern end to allow access to new cremation burial sites:

- Remove central roadway, fill temporarily with loam and seed (2300 SF): $3,500 - $4,000
- Remove roads at northern end, fill with loam and seed (10,800 SF): $20,000 - $23,000
- Construct new roadway through southern end (610 LF), 8' in width and surfaced with oil and stone (chip seal): $22,000 - $25,000

Tool Shed
This project will involve clearing and leveling approximately 1,200 SF along the western edge, pouring a concrete slab, resetting the shed, and creating a gravel-surfaced area in front of the shed doors, between the shed and roadway. As noted earlier in this section, this work may require permitting to allow work within the MESA Priority and Estimated Habitat zone and review and permitting by the U. S. Army Corps of Engineer for compliance with Section 404 of the Clean Water Act, to be overseen by an environmental planner/engineer.

- Relocated tool shed: $3,500 - $4,000

Gravestone and Monument Conservation
The budget for this project includes the cost of labor and material required to treat nineteen hazardous gravestones (priority #1), 20 unstable gravestones (priority #2), and 22 gravestones showing ongoing deterioration (priority #3). Fees will include documenting existing conditions of each stone (photographing, documenting material, size, location, inscription and compiling condition); providing the appropriate conservation treatment; photographing the stone after treatment is complete; and compiling a treatment report.

- Priority #1 (19 stones): $13,300 - $14,800
- Priority #2 (20 stones): $16,400 - $17,600
- Priority #3 (22 stones): $11,500 - $13,000

New Burial Areas
Costs for construction of these new interment areas will depend heavily on the final layout of plots and scattering area(s). To calculate the budget for each, the trustees should calculate the projected amount of revenue from plot sales[27], and scale the design accordingly, so that construction of the burial areas pays for itself, as follows:

[27] Current prices for burial plots are $500 per ½ plot and $1,000 for full plot for residents of Sunderland; $1,000 per ½ plot and $2,000 for full plot for non-resident; budgets have been calculated assuming 50% of plots are sold to residents and 50% to non-residents.

- North Burial Area: 60 double-grave plots/120 single grave plots: design/construction not to exceed $80,000
- Central Burial Area: 108 two-grave cremation sites: design/construction not to exceed $162,000
- South Burial Area: 64 double-grave plots/128 single-grave plots: design/construction not to exceed: $96,000[28]

[28] $96,000 reflects projected revenue from full-casket burial plot only and does not include interment costs for cremated remains (scattered or interred).

MANAGEMENT

This final section of the *Preservation Master Plan* will help the Riverside Cemetery Trustees better manage the cemetery landscape. It includes strategies for the care of plants (trees and ground cover) and gravestones and provides a maintenance schedule. By following this guide, the trustees and landscape crews will help ensure the long-term health of this important historic resource.

Management Log

Before beginning to care for the landscape, the cemetery superintendent should set up a "management log," or ongoing written record of inspections, repairs, and introduction of new features, listed by date. The log should include methods and materials employed, as well as names and contact information for any specialists involved in the cemetery's care. The log should be stored, in both electronic and manual (hard copy) formats, in a secure location.

Plants

Existing Plants: Trees

Before the town undertakes any measure to treat the property's trees, the trustees should consult a tree specialist, and preferably a Massachusetts-certified and International Society of Arborists (ISA)-certified professional.[29] This individual is trained to assess the health of aging plants and prescribe appropriate care. General guidelines for tree care are as follows:

- Once per year in late winter, consult an arborist about the general health of the trees. Ask the arborist:
  - If any of the trees or branches are dead, broken or in any way hazardous. These need to be removed as soon as possible for safety;
  - If the trees are free of disease, and if not, how the disease should be treated;
  - If the diseased branches/sections of the tree should be removed, or if the entire tree should be removed to protect the health of neighboring trees;
  - If the trees need fertilizing, and if so, what they should be fed, how they should be fed, and how often they should be fed;
  - If root suckers or other growth (such as limbs branching below 12 feet) should be removed to ensure the health and beauty of the tree.
- Test the cemetery's soil for quality in relationship to the tree population. The test will detect any soil deficiencies and determine a remedy for correcting them. Soil can be tested

[29] The existing survey of trees at Riverside Cemetery, prepared by Shumway and Sons, Inc., can serve as a basis for this consultation.

by a soils professional, or through the University of Massachusetts Extension Program, located in Amherst.

- Provide and install cables to help any weakly-joined limbs.
- Treat trees with a systemic insecticide to minimize stress caused by leaf feeding pests.
- Prune trees, removing all dead wood greater than ½" in diameter.
- Where possible, create mulch rings around the bases of trees, as wide as possible and up to the diameter of the tree crown. Shape the rings into saucers (with the low point at the center), rather than volcano-like mounds. In places where gravestones lie near or adjacent to trees, avoid accumulating mulch around the stones.
- Where soil has built up at the base of trees, remove enough to expose the root collar.
- Remove any dead or dying trees.

Existing Plants: Ground Covers & Turf
The trustees should make an effort to retain existing ground covers, as opposed to turfgrass, and encourage their growth, as they minimize the need for mowing, thus easing maintenance requirements. Each ground cover should be allowed to bloom, wither, and cast their seeds before they are mown, allowing them to multiply. Weed killers and other such herbicides should not be used where these plants are growing (some may be classified as "weeds").

Where grass lawns are desirable, the trustees can sustain their health by following these mowing and fertilizing guidelines:

- Fertilize sparingly, as too much fertilizer can cause grass to grow too rapidly, requiring more mowing and making the plants more susceptible to disease. Not enough fertilizer can result in weaker plants that are more prone to disease of stress brought on by drought (including allowing the infiltration of crabgrass).
- Apply fertilizer three times per year – around Memorial Day and Labor Day, and finally, around Halloween.
- Do NOT fertilize in mid-summer. At this time of year, roots have become dormant. Fertilizer will cause the leaves to grow, making the plants less tolerant of drought, heat and disease.
- Follow these fertilizing instructions:
  - *Memorial Day* – apply 1 pound of Nitrogen per 1,000 SF (with 50% of Nitrogen slow-release). Use an N:P:K Ratio of 14-14-14
  - *Labor Day* – apply 2 pounds of Nitrogen per 1,000 SF (with 50% Nitrogen slow-release). Use an N:P:K Ratio of 14-14-14

  - *Halloween* – apply 1 pound of Nitrogen per 1,000 SF (with 75% of Nitrogen slow-release). Use an N:P:K Ratio of 28-3-9

- When mowing, remove no more than one-third of the height of the turf at one time, always leaving twice as much leaf height as is cut.

The best level for mown grass is 2 ½ inches, with 2 to 3 ½ inches the range. It is best to mow lawns on an as-needed bases, not on a regular schedule, such as once per week.

Existing Plants: Invasive Species
As noted in the Assessment section of this plan, a colony of Japanese knotweed (Polyganum cuspidatum/Fallopia japonica) as taken root at the northwest corner of the cemetery. Aggressive management of this plant is needed to control its spread. Its location along the riverbank may limit the options available for control, as state and federal regulatory bodies may not permit the use of herbicides (such as Glysophate) and the town may further object to its application. Non-chemical control measures include the following and can be used in combination:

- Regular cutting of plant stems, beginning in early spring, to retard photosynthesis (needed to fuel growth)
- Covering the cut stems with heavy black plastic to block sunlight
- Physically removing (through excavation) the root systems

New Plants: Trees
The *Recommendations* section of this plan included an effort to plant new trees within the cemetery. In selecting new trees to plant, the trustees should aim to diversify the tree species within the cemetery while, at the same time, choosing species appropriate for each historic cemetery style (refer to *Historical Development of Riverside Cemetery* for a description and location of each style).

Colonial Style

Amelanchier canadensis	Shadblow Serviceberry
Cercis canadensis	Eastern Redbud
Cladrastus kentuckea	Kentucky Coffeetree
Franklinia alatamaha	Franklin Tree
Larix laricina	Tamarack
Liquidambar sytraciflua	Sweetgum
Nyssa sylvatica	Northern Black Tupelo
Platanus occidentalis	American Sycamore

Victorian Style

Cercidiphyllum japonica	Katsuratree
Gingko biloba	Gingko
Magnolia acuminate	Cucumbertree Magnolia
Tilia cordata	Littleleaf Linden
Viburnum lentago	Nannyberry Viburnum

Modern Style

Cedrus libani	Cedar of Lebanon
Metasequoia glyptostroboides	Dawn Redwood
Sophora japonica	Scholar-Tree
Zelkova serrata	Japanese Zelkova

Newly planted trees are unlikely to survive if they do not receive special care and attention, particularly in the first few years after planting. In general, adhere to the following care guidelines:

- Plant in the spring or fall, and never during the heat of summer.

- Utilize crews working under the supervision of a Massachusetts-certified arborist, or hire a landscape contracting company to plant trees. Trees that are planted correctly will be far more likely to survive and thrive, and the arborist/landscape company should exercise the best tree planting practices. Landscape contractors should guarantee all trees for one year after planting. However, *the guarantee is valid only if the plants have been properly cared for.*

- If staking new trees is necessary, be sure to remove stakes and guy-wires within one year of planting. If the trees appear to need some kind of individual protection because of their location, build a simple fence rather than leaving the guy-wires on. Wires can damage and will eventually kill the tree if left in place too long.

- Provide the trees with at least one inch of water each week. This water can be supplied by rainfall or by supplemental watering. Spreading one inch of water using a hose attached to an exterior water spigot takes approximately two-three hours. Water must soak deep into the soil to encourage good root growth and overall plant health. Adjust the flow of water so it has time to sink into the ground, reducing the pressure if small "rivers" develop. The water should sink into the ground around the tree or shrub, rather than flowing away. Tree "gator" bags may also be installed so that watering will be required every five to seven days.

- If drought dominates the fall, be sure to water trees well before the ground freezes, protecting the plants from entering winter in dry soil.

- Mulch plants to help control weeds and keep moisture in the soil (and maintain a neat appearance in the landscape). Use composted pine bark mulch that has been aged a minimum of three months. Apply the mulch to a depth no greater than three inches. Each spring, fluff the existing mulch and add more, as needed. Keep mulch away from the stems or trunks of trees (to minimize decay and prevent insect infestations).

- Prune trees to enhance their natural form and appearance, and to help maintain their health. Enlist the expertise of a professional or person trained in proper pruning practices. Prune only by hand (never use electric pruners). Prune broken branches immediately to prevent disease.

New Plants: Ground Covers

As previously mentioned, ground covers add beauty to the cemetery landscape and minimize the need for mowing. In shady areas, the trustees should select shade-tolerant species, indicated by asterisks ("*"), below.

Ajuga reptans	Bugleweed
Arctostaphylos uva-ursi	Bearberry
*Asarum canadense**	Wild Ginger
*Cornus canadensis**	Bunchberry
*Erythronium albidum**	White Trout Lily
*Fern spp.**	Ferns
Gallium odoratum	Sweet Woodruff
Housatonia caerulea	Bluets
Lamium spp.	Dead Nettle
Phlox stolonifera	Creeping Phlox
Phlox subulata	Moss Pink
Sedum	Stonecrop
sp. reflexum, sp. cauticola,	
sp. anglicum, sp.bBrevifolium	
Thymus serpyllum	Creeping Thyme
*Viola canadensis**	Canadian Violet
Waldsteinia ternate	Barren Strawberry

No- Shrub Policy
Shrubs in the cemetery largely lie alongside individual gravesites, providing families an opportunity for individual expression and personal commemoration. Unfortunately, gravesite shrub plantings are inconsistent with the cemetery's predominantly 18th and 19th century design (a concept introduced in the 20th century). Furthermore, they present long-term maintenance problems by becoming quickly become overgrown, obscuring grave markers and complicating lawn mowing. For the most part, families do not maintain shrub plantings, leaving the arduous pruning, shaping, and feeding tasks to cemetery maintenance crews.

As part of the planting policy for the cemetery, the trustees should adopt a "no new shrub" rule. As existing shrubs mature and die, they should be removed and replaced. Instead, the trustees should ask families to donate trees to the cemetery allowing for the replacement of dead trees with new, needed species.

Gravestones
The trustees should regularly inspect the gravestones and monuments for signs of damage or decay, and if found, consult a conservation professional. Under no circumstances should untrained individuals attempt to repair grave markers, as improper treatment of stones can lead to further deterioration. Conservation professionals will employ treatments that help stabilize the stones for many, many years, however because the stones lie exposed to weather and are vulnerable to vandalism, further deterioration is always possible.

Management Schedule

January - March	▪ Enjoy the snow!
April	▪ Inspect the fences and gravestones for damage that may have occurred over the winter; consult a specialist about repairing any major damage. ▪ Remove leaves from inside the cemetery
May	▪ Inspect trees for damage that may have occurred over the winter and note any needs for pruning and removals ▪ Begin mowing turf on an as-needed basis to a height no less than 2-1/2 inches ▪ Around Memorial Day, fertilize turf areas (14-14-14) ▪ Plant new trees and groundcovers, as required
June	▪ Conduct pruning and removals of trees ▪ Continue mowing turf on an as-needed basis to a height no less than 2-1/2 inches ▪ Continue to plant new trees and groundcovers, and grassy areas, as required
July	▪ Continue mowing turf on an as-needed basis to a height no less than 2-1/2 inches; suspend mowing during hot, dry periods
August	▪ Continue mowing turf on an as-needed basis to a height no less than 2-1/2 inches; suspend mowing during hot, dry periods ▪ Around Labor Day, fertilize turf areas (14-14-14)
September	▪ Continue mowing turf on an as-needed basis to a height no less than 2-1/2 inches ▪ Resume planting of new trees and groundcovers, and lawns, as required ▪ Inspect fences and gravestones for damage that may have occurred over the summer; consult a specialist about repairing any major damage
October	▪ Around Halloween, fertilize lawn areas (28-3-9)
November - December	▪ Enjoy your break!

HISTORICAL CHRONOLOGY

Before 1714.
The first inhabitants were native peoples, Norwottucks (Nonotucks). Tradition holds that some wigwams may have stood on the "island" in the river to the east of the main street in Sunderland.

1673. Sunderland was set off from Hadley; the area was originally known as Swampfield, because of the large low-lying swath extending north to south through the area.

1674-1675. While no official town was attempted in Swampfield before King Philip's War (1675-1676), historical records indicate that in the years 1674-1675 "considerable progress had been made in the new settlement: lands had been measured and to some extent allotted, buildings had been erected and inhabited, and labor had been expended in reclaiming the land and fitting it for cultivation." (Smith, 9)

Also in 1674-1675 a long ditch was dug to drain the swampy area. (Smith, 14) No evidence exists that settlers were attacked as they were at Deerfield during the war, but those living in Swampfield fled southward to Hadley for safety.

Establishment: 1714 - 1832

1714. In 1714, the General Court of Massachusetts reaffirmed existing rights of settlers to the land that would become Sunderland, and immediately following this, settlers divided the land. (Smith, 11) The land was beautiful – Mt. Toby to the north, then Mt. Sugarloaf; broad meadows. The east side, however, was swampy. (Smith, 13) Homelots were drawn and allotted to 39 signers, with one additional lot reserved for a minister. Each lot ran east to west, and was divided by the town street. Each lot measured a minimum of 3.5 acres. (Smith, 15-17) *An early map of the original layout of Sunderland is included on p. 18 of Smith*

1715. The area held no actual settlers until 1715, when many came. Also in 1715, the new settlement moved to procure a minister. (Smith, 19)

1716. By 1716, 39 proprietors had taken up residence.

1717. On June 18, 1717 the meeting house was raised.

1718. In November 1718 the town official incorporated as Sunderland (named for Charles Spencer, Earl of Sunderland, England). (Smith, 20-21) It is likely that Riverside Cemetery was established at this

time, although there is no record of the taking of land for the burial ground or the reason for its location so far from the church. "The early map calls it 'reserved ground from the river to the village street.' The original ground evidently served the community until 1832. (Hubbard et. al., 81) Of the 40 original proprietors, the graves of all but 7 can be found at the cemetery. (Everts, 680)

1722. The first burial at Riverside took place in 1722, Elizabeth Graves.

1754. Montague was set off from Sunderland.

1774. Leverett was set off from Sunderland.

1812. The first bridge at Sunderland was constructed across the Connecticut River (before that time, only ferries were used).

1813. A second cemetery was established in Sunderland at the northern end of the town. The deed for this property was conveyed in 1837.

Enlargement: 1832 – 1870

1832. In 1832 a committee was chosen by the parish, consisting of Elihu Rowe, Quartus Smith and Horace Henderson, to purchase additional land for burial purposes. "The parish meeting of April 1, 1833, voted one hundred and ten dollars for its purchase. The Parish Society met on November 15, 1832, with William Delano as moderator and voted that 'the lots in the new burial ground be sold at the appraisal affixed to each lot, unless there should be competition, and if so they would be sold to the highest bidder.' Lot number 49 was then sold to William Delano, he agreeing to pay the price affixed to it." (Hubbard et. al., 81)

1867. The cemetery committee reported (in 1879) that the cemetery had been enlarged a second time. (Hubbard, et. al., 83)

Embellishment and the Establishment of Riverside Cemetery – 1870 - 1936

1870. The town purchased a new hearse at a cost of $355.00 from John Ockington of South Deerfield. Later that year, the town paid Mr. Ockington $26.50 for traverse runners for the hearse, and in 1871, a door was purchased for the hearse house (ATR, 5). In 1872, cloth was purchased for curtains for the "old hearse." The town continued to use this hearse until 1904, when a new vehicle was procured.

1875. The town voted to lay out a road one rod (16 feet) wide leading from Main Street to the cemetery, and paid two adjacent landowners –Horace Sanderson and Timothy Graves—damages of

$25 and $20, respectively. The town also paid to have a fence constructed at the cemetery ($166.72).

1876. The cemetery fence was painted at a cost of $15. (ATR, 5)

1877. The Annual Town Report stated that a committee had been chosen, to be known as the Cemetery Committee. (Reported in 1878, 7)

1878. The ATR reported that the Cemetery Committee "received the very generous bequest of R. R. Graves, and on the first of October, invested the sum of $1,000, upon satisfactory real estate security, and bearing interest at six percent. It is understood that the income of the fund is to be faithfully used in keeping in repair, and in good order, the fence, the avenues and paths of the cemetery, the lots where lie buried the family friends of the donor, also any lots the owners of which neglect to keep in proper condition." (ATR, 7) Also, the report stated, "the committee invite the cooperation of all interested in the good appearance of our cemetery, to assist them in the care and adornment of their own lots, and in the general appearance of this City of the Dead." [This was also noted in several other sources: Rufus R. Graves left $1,000 (invested at 6%) to keep the cemetery in repair and to beautify it from time to time. (Hubbard, et. al, 83 and Everts) This was reported to the town by the "cemetery committee."]

1879. The cemetery committee reported that, "we find that the north part of the Burying-ground was laid out in 1832 and enlarged in 1867, and now contains about 375 graves, (with 700 marked graves in both parts of the yard). Some nine lots only now remain unsold. Four lots have been sold the past year, and the proceeds passed into the parish treasury. The walks between the lots were laid out three feet and six feet wide, alternately. Some of the owners, in grading their lots, unintentionally, we believe, have encroached upon the walks, giving the lots and walks an irregular appearance. During the year, the Committee have caused many of the old and unsightly trees to be removed, others to be trimmed and the evergreens sheared. Also they have dug over several lots to exterminate the poison ivy, fertilized and reseeded them. Three stone hitching posts have been put down. All of the headstones have been plumbed, and about 50 have been reset in the socket and brimstone. The family lot of Mr. R. R. graves has received special care according to the conditions accompanying the legacy. The committee made two efforts during the season by appointing special days, and invited lot owners to dig over, grade, and improve their grounds, but with little success. They have been obliged to notice that more care has been bestowed upon private lots by persons living out of town, than by resident lot owners. The Committee would recommend the removal of most of the

footstones in the yard, also the grading of the walks to a uniformity in width, and that sometime a portion of the headstones be turned around that all shall face the same way. The yard is worthy of a name, and we have proposed to call it the "Riverside Cemetery." (ATR, 8-9)

Expenses listed this year included cleaning and "re-lettering" stones in the old yard; digging ivy; resetting stones; planting 9 ornamental trees.

Note: Everts stated that in 1879 the cemetery held 900 graves.

Also in 1879, expenses listed in the ATR included destroying woodchucks and painting the hearse house. (ATR, 9)

1883. The town warrant raised the question of purchasing the burying ground from the parish. "Article 15: to see what action the Town will take if any relative to the purchase of the burying ground owned by the Parish or any land adjoining it to be used for a burial ground." (The warrant from 1884 suggests that a committee was set up to investigate this.) (2) Also in this year, funds were paid out for an ornamental gate ($64.00). (8)

1884. Article 12 of the Town Meeting warrant read "to hear the report of the Committee chosen upon the matter of the purchase of land for Burial Ground, and act thereon. (2) The burying ground was taken over by the town (this was stated in Hubbard, History of Sunderland, Vol. II).

1887. The ATR reported, "the area of the Cemetery has, as by vote of the town, been enlarged during the past year by an annex, on the North side, of a little more than 5/8 of an acre, which has been enclosed by a substantial fence, graded, fertilized, ne seeded, and laid out into roads, avenues, and burial lots, numbering forty single and twenty-five double ones, with the price affixed at six and twelve dollars respectively. Three of the lots have now been engaged."

Also, the ATR reported, "there will need to be set during the coming season a good number of ornamental trees and shrubs, and the fence around the whole should be re-painted...Several old trees were removed last spring and thirty-two new ones were planted, all of which, are believed, to be a growing and thrifty condition." (10)

5/8 acre was purchased from Charles F. Clark for additional burials. This area contained 40 single and 25 double lots and the prices for these were fixed at 6 and 12 dollars, respectively. (Hubbard)

1890.

The ATR included a lengthy report on the town cemetery: "It has been the aim of the Committee to keep the grounds constantly in order, The work commencing in the early spring is to rake and clear the yard of leaves and brush, fertilize the sod, keep the evergreens cut back to close and uniform proportions, many of which were found growing too near together, and have been removed and planted in vacant places. The grass has all been mowed twice during the season, and one third of it three times. Trees have been trimmed and the brush on the river bank cleaned off. The old method of setting headstones with brimstone, has been found faulty. Some two hundred and fifty have been reset in the sockets with Portland cement, which is now most approved.

"Very few of the marble slabs have a permanent base. Every year more or less work has to be done plumbing and setting them on a line. The Committee have requested that all headstones set in the future should contain a prominent base below frost. The fence and hearse house have been painted when necessary. Special care has been given the family lot of Erastus and Rufus Graves, the donors of our cemetery funds. Some twenty lots have been cared for and the expense paid by private individuals. The Committee have assumed only a general care of the grounds but have paid more attention to some lots where there was no friends to care for them. Lot owners desiring to leave the perpetual care of their grounds with the Committee can have them attended to for a reasonable sum. The landscape plan has been adopted in the new grounds. A close cut sod, and level surface, much preferred. The "city of the dead" far outnumbers the town of the living. Although the soldiers' graves all have headstones, it would be well if these graves could be freshly re-sodded and kept green; some suitable tree or shrub planted on Decoration Day more fitly mark the spot of those who sleep beneath the patriots' graves. Six or seven generations from the first settlers of the town lie buried in these grounds. The carriage road leading to the yard should be improved. Much more work should be done. Your committee do not wish to assume all the care of the cemetery, but ask that all who have friends buried there should assist in keeping it in a neat and proper manner. In the thirteen years that the committee have held the trust of the Graves fund, nothing has been lost. The principal has been constantly and securely invested and the conditions of the giver carried out. Four lots have been sold and eight investments made during the past year. (ATR, 12)

Also in 1890, the Amherst to Sunderland Street Railway began operating, allowing students from Sunderland to attend high school in Amherst. The railway operated until 1926. (Houle, ATR, 1975).

1891.	In 1891, Wade, Warner & Co. published Picturesque Franklin, depicting, though words, photos and sketches, the natural and built landscape of the county. In it, they described the cemetery, "Just out of the village, westerly, at the lower end of the level meadow land next to the river is the burying ground. It is remarkably neat in its appearance. There are none of the wiry grasses, thistles and weeds, and straggling and fallen stones which so often mark the country burial ground. It is a beautiful spot, there by the tree bordered river, with Sugar-loaf rising stiffly just across the stream." (21) Also in 1891, the ATR reported that funds had been spent for painting the cemetery fence and hearse house. (ATR, 9)
1892.	The ATR reported funds expended on resetting and cementing of headstones. (ATR, 9)
1893-4.	The ATR from both years reported plantings of shrubs, trees and plants in the cemetery (ATR 10 in 1894)
1895.	The ATR reported funds expended to re-letter old headstones, and cleaning the same. (ATR, 12)
Before 1896.	Hollis Graves, a cemetery committee member, planted many trees and shrubs within the cemetery.
1900.	The ATR reported that funds had been expended to clean stones. (ATR, 20)
1902.	The ATR reported payment for resetting stones and providing a granite base for Austin Cary's grave. (ATR, 11)
1903.	The ATR reported payment for cleaning and re-setting stones. (ATR, 15)
1904.	The ATR reported payment for painting the fence. (ATR, 14)
1905.	Expenditures were made on painting "house" and fence, and for cleaning the Hubbard monument. (ATR, 14)
1906.	$5.50 was expended on a "lawn mower." (ATR, 16)
1907.	The ATR recorded an expense of $250, paid to C. F. Clark for land for a "cemetery extension." Payments were also made for paint and fence posts for this extension (ATR, 9). The cemetery committee also listed expenses for cleaning 40 old stones; cleaning monuments; re-setting stones; surveying the new part; laying out new lots; purchasing shrubs and tulip bulbs (ATR, 15-16).

1908. The ATR listed expenses for lawn mowers; flowering plants (purchased from Mass. Ag. College. (ATR, 14)

1910. The town warrant included an article, "to see if the town will take any action with regard to the by-laws of "Riverside Cemetery" (ATR, 4). Expenses were also paid for trees and shrubs; resetting of stones (ATR, 19-20).

1911. The ATR included a report of the "Riverside Cemetery Association." (23) Around this time, a superintendent was hired to manage the cemetery.

1913. The ATR included expenses for taking down trees and re-setting stones. It also noted that the Rev. David Peck monument had been re-set and "a convenient tool house had been built by the town at an expense of about $100. (ATR, 21-22)

1915. The town warrant included an article, "to see if the town will raise and appropriate a sum of money to paint the cemetery fence. (ATR, 5) Funds were expended to paint the fence and "house." (ATR, 26)

1926. The ATR recorded an expense for "painting fence." (ATR, 35)

1934. The Garden section of the Sunderland Women's Club sponsored a plan for marking each tree as to its name, and Professor Frank Waugh from the University identified and marked the trees with metal tags. (Hubbard, et. al., 84) (Note, the 1940 ATR listed a receipt from the Community Service Committee of 1939 Sunderland's Women's Club, (ATR, 45))

Modernization: 1936 – Present

1936/1938. A flood and hurricane damaged the trees and grounds. During the flood, river water rose to a depth of five feet over the cemetery, covering it with silt. Following the flood, the government supplied funds to riprap the riverbank to prevent further damage in the cemetery by floodwaters. (Hubbard, et. al., 84)

1952. Funds were expended to pave a road within the cemetery (ATR, 45). The picket fence at the cemetery was removed, and the borders improved with plantings of trees and shrubs. The cemetery committee this year arranged for the grading and laying out of "hard surface drives" under Chapter 81 (highway system). (Hubbard, et. al., 84)

1961. The Board of Selectmen's report included: "[d]uring this year a satisfactory agreement was reached between the D. P. W. and the Town through Associate Commission Fred B. Dole and other state

officials for the damage caused by the drainage system being laid across a portion of the Riverside Cemetery. The sum of $4,000 was agreed upon as a just amount which sum has been paid to the Town for damages." (ATR, 21)

1967. The ATR listed an expense for asphalt at Riverside Cemetery. (ATR, 14)

1973. The ATR listed expenses for cemetery roadway work. (ATR, 31)

1979. The ATR included a "Riverside Cemetery Report:" "the cemetery trustees wish to thank the Hale-Clapp Post 3295 V.F.W. of South Deerfield, Massachusetts for their donation and installation of a new flag pole. The flag pole is located in front of the new Maintenance building which was built during the year, replacing the old one which was in poor condition." (ATR, 14)

1980. ATR's "Report of the Riverside Cemetery Trustees" noted that the town Highway Department had performed a major seasonal clean-up. (ATR, 15)

1991. The ATR included a report of the Riverside Cemetery Trustees: "After 10 years of absence of an entry in the Annual Town Report from the Trustees of Riverside Cemetery, we are happy to provide news of several important events for the Town's Cemetery in 1991. Early in the year, a new edition of the rules and Regulations governing the Cemetery was published and readied for distribution. At the same time, a new section at the south end of the Cemetery was surveyed out to provide thirty-two additional four-plot lots for immediate use, and 100 lots for future development. During May, eight large pine trees (some diseased and most of the post-mature) were taken down along the river bank road as a protective measure against damage to monuments in high winds and storms from falling trees. Shortly following completion of the tree work, a new water line was installed from the South main Street town water main along Cemetery Road to include two all-season faucets, one in the north end and the other in the south end of the Cemetery. And, as the year 1991 came to an end, the Trustees were discussion with the Selectmen some form of recognition for the town center, including Riverside Cemetery, with Massachusetts Historical Commission. (ATR, 11)

1992. The ATR Riverside Cemetery Trustees' report stated, "based on the historical significance of Riverside cemetery (namely, its layout and access road can be traced to the same period as the incorporation of the Town), the Trustees were instrumental in proposing and supporting the formation of the Sunderland Historical Commission at the Annual Town Meeting on April 24, 1992...Distribution of the

1990 revision of the RULES & REGULATIONS Booklet of Riverside Cemetery to all new lot subscribers of the past 10-12 years was accomplished during the month of August. (ATR, 11)

1993. The ATR included a report of the newly-formed historical commission. $1,000 had been donated by the Riverside Cemetery Trustees for the purposes of conducting an inventory of historic resources in the town. (ATR, 13)

1994. The ATR included a Riverside Cemetery Trustees report that stated the following:

1. There is sufficient land area to accommodate burials for the next 100 years.
2. The current system of supervision/administration by the Town elected Board of Trustees, as mandated by Mass. General Laws, should be continued.
3. Consideration should be given to a perimeter fence and entrance gate, as was present in the past.
4. Cemetery Road and the roadways within the cemetery need re-paving.
5. Full mapping and inventory (and computerized listing) of all burials, past and future, by section and plot, must be done.
6. Individual repair of damaged and/or decaying monuments must be undertaken and continued on, as need arises.
7. Annual preventative maintenance of trees and shrubbery needs to be instituted in order to preserve the general ambiance and appearance.
8. The Cemetery should be included in an historical survey of the Town, destined for designation by the Massachusetts and National Historical Commission respectively as an Historic District.
9. The financial policy statement of the Trustees should be continued as a matter of public record and revised periodically.
10. The Rules and Regulations booklet should be similarly continued and revised periodically. (ATR, 13)

1995. The ATR Riverside Cemetery Report included: "The cemetery's directional sign at the corner of South Main Street and Cemetery Road was erected just prior to Memorial Day, and has since been rewarded with many words of praise. The financing of the sign was totally from the generosity of the Sunderland Women's Club and eleven private citizens in town...Cemetery Road was resurfaced in the summer, a dead elm was removed, a badly damaged maple was cabled in the fall, and a major reclamation of the south end of the riverbank was started in August/September." (ATR, 12)

1997. The ATR Riverside Cemetery Trustees report included: "in 1997, the Town Cemetery has continued to be the site of further repairs to the monuments and the site of further landscaping improvements,

marked by reclamation and seeding of the upper border of the riverbank and by cabling and pruning of selected major trees and shrubbery...The Cemetery's Rules & Regulations booklet has been updated and reprinted anew; and the Trustees are searching for grant funding to support a cemetery wide inventory of the monuments and burials." A summary of the financial policy was also included. (ATR, 22)

1999. The ATR listed the projects of the Riverside Cemetery Trustees (paraphrased):
1. Nomination, along with Main Street, to the National Register of Historic Places;
2. Evaluation by DEM through the Historic Cemeteries Initiative;
3. Application to DEM for a monument and burial inventory'
4. Planning for future expansion to the south, including the removal of less desirable trees in 2000; begin plans for planting of deciduous and specimen trees in the new section, as well as laying out an expansion of the road for access to the new southern section;
5. Work on education programs, including an historical guide to the cemetery for schools and visitors. (ATR, 87)

2000. The ATR included a report on the following at Riverside cemetery: "A grant was secured from DEM, to be used to begin to expand the cemetery to the south by removing the scrub pines and by planting some select deciduous trees. The grant will also be used to establish an education program in conjunction with the elementary school to help involve our children in Sunderland's history. In addition, a portion of the money will be used to begin the restoration of our most threatened monuments." (ATR, 34)

2001. The Riverside Cemetery Trustees' Report in the ATR included: "the grant from DEM was and still is ongoing. The southern was cleared for future expansion. The spring of 2002 will bring a planting of a number of deciduous trees. Issues facing the cemetery in the future will be expansion of the interior roadway to the south; resealing the existing interior roads and the Cemetery Road itself. The Trustees have discussed the addition of decorative fencing." An eagle scout, Michael Glucksman, has undertaken a mapping and inventory project. (ATR, 21)

2002. The ATR Riverside Cemetery report included: "The grant from DEM is now complete; the final act was the planting of a number of deciduous trees." Issues for 2003 include the addition of decorative fencing; repair of the entrance sign; addition of interior signage; stone reconditioning and repair; and administrative issues. Also pending is the expansion of the interior roadway to the south, and resealing of existing roads and Cemetery Road. (ATR, 31a)

2003. The ATR Riverside Cemetery Trustees' report included a listing of accomplishments (partial):
1. All interior roads were chip sealed. Cemetery Road was not included because this is a town road.
2. The entrance sign was repaired and painted.
3. The Warner stone was repaired after being damaged by a vehicle. (ATR, 36)

2004. ATR Riverside Cemetery Trustees' report noted that the storage shed and flag pole had been painted. (ATR, 40)

2005. ATR Riverside Cemetery Trustees' report noted that:
1. Mowing of the new (south) section had begun,
2. The flag pole had been moved so that it was no longer obscured by trees.
3. Original fence posts from the north end of the cemetery were installed at the road entrance. These posts and a chain (to come) will be used to close the cemetery to vehicle traffic in the winter months when the cemetery is closed to vehicles. (ATR, 47)

2006. ATR Riverside Cemetery Trustees' report noted that:
1. A sign bearing the cemetery rules and regulations had been posted just inside the cemetery.
2. Tree maintenance was ongoing.
3. The banks were trimmed to reduce the growth of knotweed. (ATR, 42)

2007. ATR Riverside Cemetery Trustees' report noted that tree maintenance continued throughout the season, as well as roadway maintenance. (ATR, 43)

2008. The ATR reported that a large storm hit the cemetery in July, and damaged several trees. (ATR, 37)

2009. The ATR reported that the Cemetery road sign had been refurbished, and that most of the southern section had been pinned. The plot maps had been updated. The trustees were looking into the option of including green burials at the cemetery. (ATR, 48)

2010. The ATR reported that the Trustees had held an open public meeting to discuss green burials and options for such burials at Riverside. (ATR, 40)

2011. The ATR reported that the Riverside Cemetery Trustees had voted to allow green burials. (ATR, 46)

2012. The ATR reported that the Trustees replaced the cemetery sign at the interior entrance due to damage from tree work. Northeast Grave Restorations worked on the tablet (table?) stone, cleaning and restoring. Several other stones were up-righted. (ATR, 42)

2017. The ATR described the Trustees' intentions for the Master Planning project:

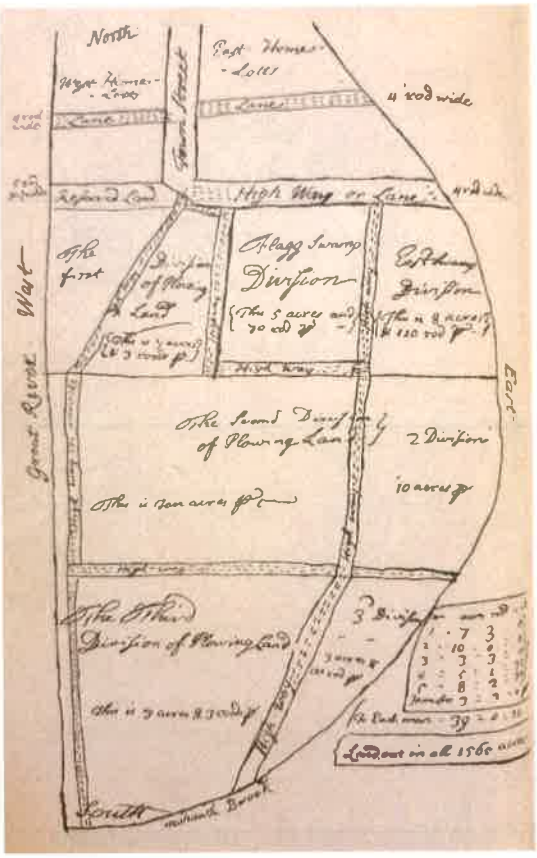
- Potential for infill burials
- Next generation of tree canopy
- Effectiveness of interior roads at the cemetery
- Survey and repair schedule for monuments.

Three large spruces were removed and the Trustees' continued to fight invasive species, including knotweed, poison ivy, and oriental bittersweet. Several stones were also repaired. (ATR, 61)

HISTORIC MAPS & PHOTOGRAPHS

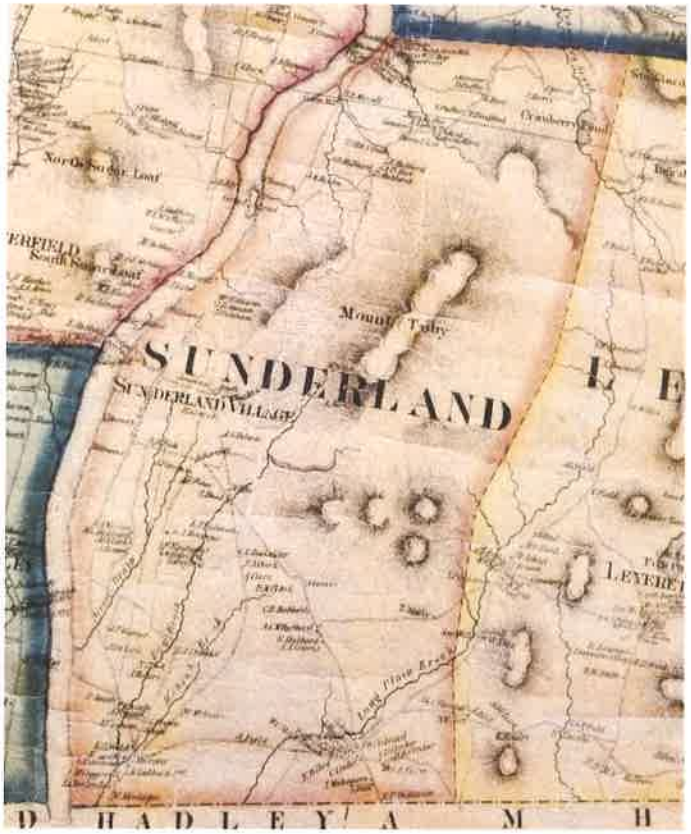
1715. Platt of the Plantation of Swampfield

1794. Sunderland (William Bowman)



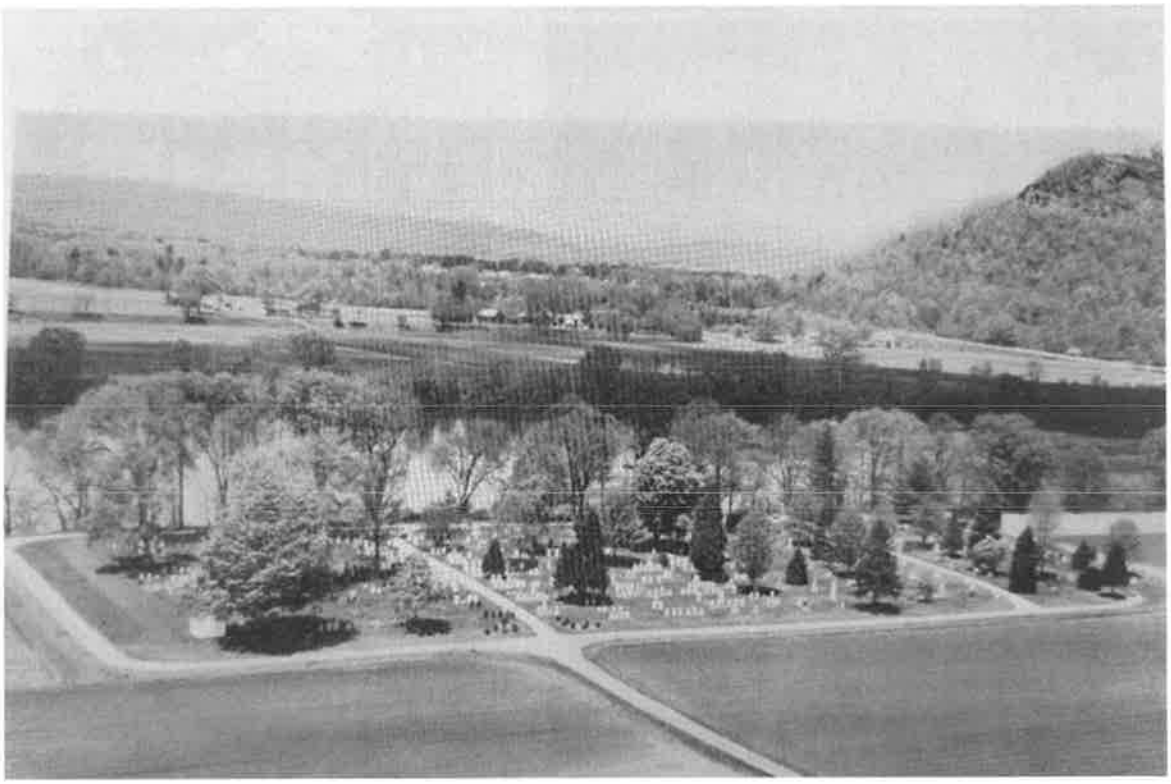
Representation of Sunderland in the early 1700s (included in Smith's History of the Town of Sunderland, 1899)

1830. Sunderland (Josiah Gould)



1858. Sunderland, Map of Franklin County (H. F. Walling)

1871. Sunderland, Atlas of Franklin County (F. W. Beers)



1879. Riverside Cemetery (Everts, History of the Connecticut Valley in Massachusetts)

1891. Riverside Cemetery (Warner, Picturesque Franklin)

1899. Riverside Cemetery (Smith, History of the Town of Sunderland, Massachusetts)

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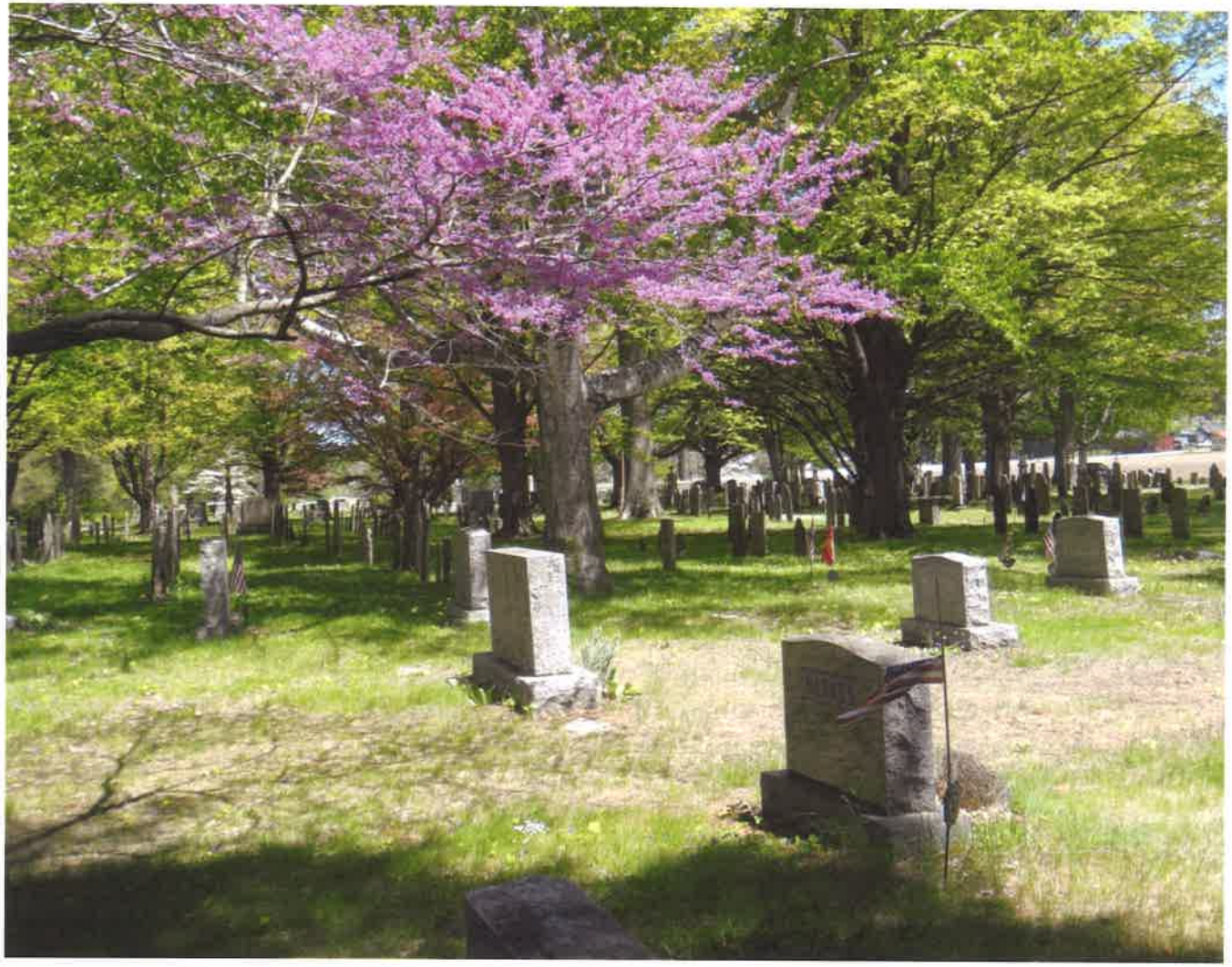
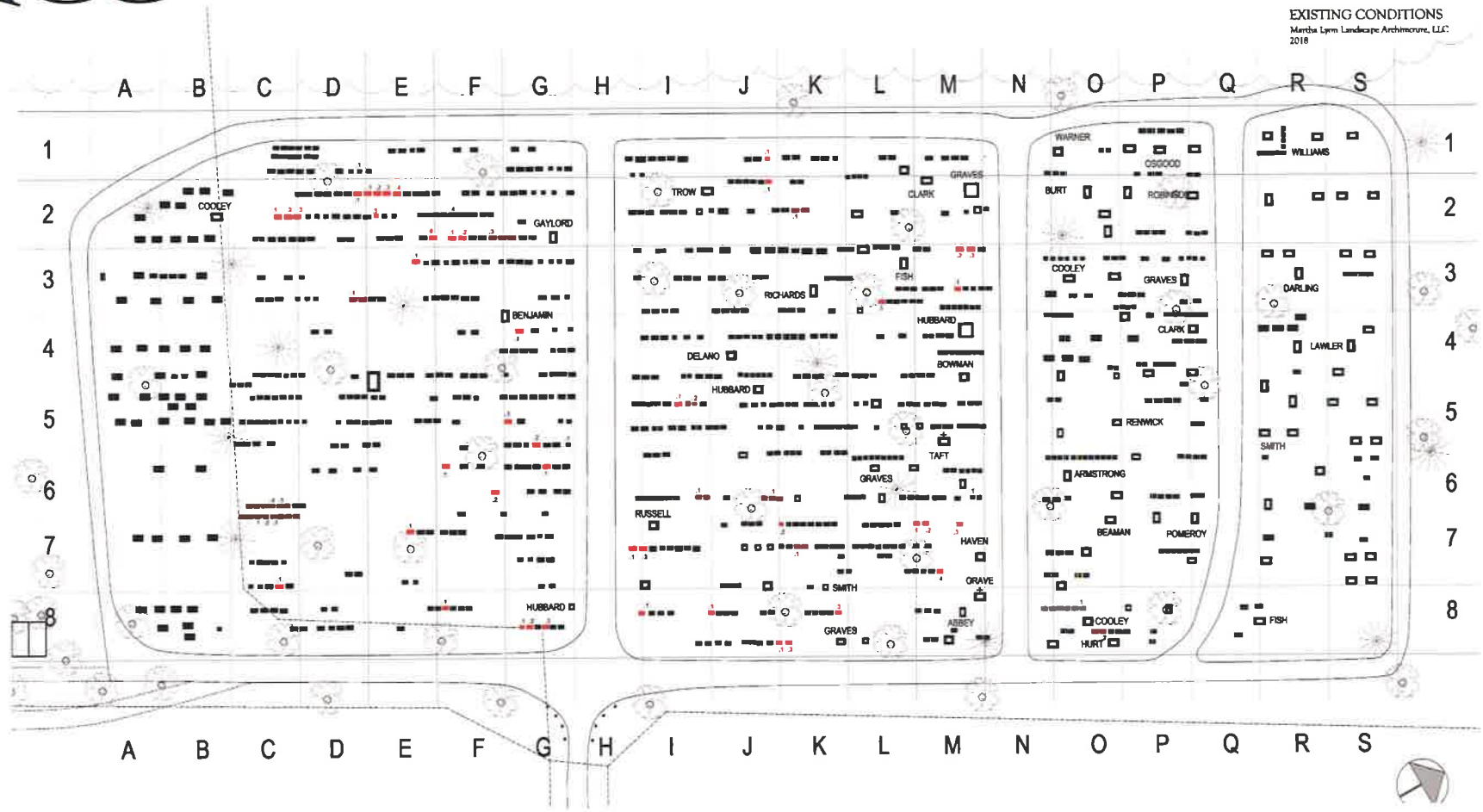
Strategies: preservation and restoration

The goal of the monument conservator is the preservation of both the physical substance and the historic/artistic meaning of each monument. Because of the proximity of the visitor to the artifact, and the rather high level of scrutiny given to the inscriptions and decoration, cemetery conservation practices demand closer tolerances of color and texture than are typical in building preservation.

In recent years, most monument conservators have been moving toward a "conserve as found" approach, emphasizing preservation with materials and methods that are dedicated to retarding environmental decay.





Approximate location of markers. Markers are identified within the cross grids. Markers in red are in need of restoration.

MCC

Conservation Recommendations
Riverside Cemetery, Sunderland, MA July 2018

MCC inspected the cemetery in June, 2018, and discovered 61 markers requiring restoration.

These were prioritized into 3 categories.

The first restoration priority are markers that are unstable and can be dangerous to themselves, to adjacent markers, and most importantly- to passerbys.

19 markers were found to be in this category and should be stabilized as soon as possible.

Loc.	Priority	First	Last	Date	Condition
1J.1	1	n.a. (sm. Monument)			Unstable/on base
2C.1	1	(sm. Mon)	Cooley		Unstable/on base
2C.2	1	Charles	Cooley	12/17/1854	Unstable/on base
2F.1	1	James	Hunt?		Complete Delamination
2J.1	1	n.a.			Unstable/on base
2K.1	1	Hattie	Bisbee	12/13/1869	Unstable/on base
3M.1	1	Pamela	Smith	2/10/1868	Loose top
3M.2	1	Mary	Wilder	8/28/1872	Unstable/on base
3M.3	1	Henry	Wilder	4/12/1869	Unstable/on base
5I.1	1	Eliza	Lyman	9/30/1892	Unstable/on base
7C.1	1	Pamelia & Harriet	Leonard	4/3/1858	Unstable, New base
7K.1	1	Stoughton	Crocker	12/23/1891	Unstable/on base
7M.1	1	Cornelia	Newell	10/27/1851	Unstable/on base
7M.2	1	sm. Mon.			Unstable, Tilted/ on base
7M.3	1	George	Abbey	4/13/1864	Unstable/on base, clean
7M.4	1	Mattie	Williams	9/9/1870	Unstable/Tilted/ in base
8K.2	1	Horace	Beaman	10/1/1908	Unstable/on base
8K.3	1	Edward	Dunklee		Unstable/in base
8O.1	1	n.a.			Unstable, Poss new base

Conservation Recommendations
Riverside Cemetery, Sunderland, MA July 2018

The 2nd conservation priority are those markers which are extremely tilted, fallen, or fractured.

These markers should be treated within 1 to 2 years.

20 markers were found to be in this category

Loc.	Priority	First	Last	Date	Condition
2C.3	2	Dexter	Cooley	11/21/1851	Reset elements
2D.1	2	Dea. Samuel	Montague	1/31/1789	Tilted
2E.1	2	Elizabeth	Montague	10/15/1753	Tilted
2E.2	2	Zaccheus	Crocker	2/19/1805	Poss New Base
2F.3	2	Rosanna	Crocker		New base
3D.1	2	Urania	Robinson		Unstable/in base
3L.1	2	Richard	Dean	6/19/1958	Fractured/Reset in base
4G.1	2	Rhoda	Graves	4/15/1827	Tilted
5I.2	2	Fanny	Cooley	8/28/1831	Poss. New base
6F.1	2	Robert	Robert		Fractured
6G.1	2	n.a.			Fractured
6M.1	2	n.a.			Fractured, Poss new base
7E.1	2	Joseph	Field		New base
7I.1	2	Dexter	Bartlett	1/6/1887	Tilted/ on base
7I.2	2	Clarinda	Dean	4/2/1852	Tilted/ on base
7K.2	2		Prouty		Fractured/Poss new base
8F.1	2	n.a.			Tilted, Clean
8I.1	2	Levi	Warner	8/22/1881	Failed rep/ on base
8K.1	2	Lizetta	Beaman	11/20/1914	Reset onto base
8O.2	2	Abbie			Poss. New base

The 3rd conservation priority are those with ongoing deterioration, such as the slate markers that are delaminating and those which are stable, but require resetting.

These markers should be treated within 2 to 5 years..

22 markers were found to be in this category

Loc.	Priority	First	Last	Date	Condition
1D.1	3	Stephen	Cooley	9/13/1776	Delaminating
2E.3	3	Ansel	Crocker	4/30/1801	Tilted Delaminating
2E.4	3	Lucy	Crocker	2/5/1797	Delaminating
2E.5	3	Manerva	Russell	10/19/1808	Delaminating
2E.6	3	Simon	Cooley	9/21/1746	New base
2F.2	3	Melzar	Hunt	5/4/1796	Delaminating
3E.1	3	n.a.			Delaminating/Clean
5G.1	3	Thankful	Graves	8/7/1805	Delaminating
5G.2	3	Evander	Graves	4/17/183	Delaminating
5G.3	3	Mariam	Russell	9/30/1808	Delaminating
6C.1	3	n.a.			New base/ Clean
6C.2	3	Submit	Smith	3/10/1807	Delaminating
6C.3	3	Mabel	Graham	8/28/1822	Delaminating
6C.4	3	Silas	Hosmer	10/9/1804	Delaminating
6C.5	3	Bulah	Hosmer	10/14/1804	Delaminating
6F.2	3	Jerimiah	Ballard	12/22/1774	Delaminating/clean
6I.1	3	Fanny	Graves	9/21/1851	New base
6J.1	3	William	Gary		Poss. New base?
8G.1	3	Miles	Alexander	4/10/1806	Delaminating
8G.2	3	Mary	Alexander	2/21/1820	Delaminating
8G.3	3	Cynthia	Alexander	9/16/1809	Delaminating
8J.1	3	Gideon	Warner	1/11/1837	Reset higher, New base

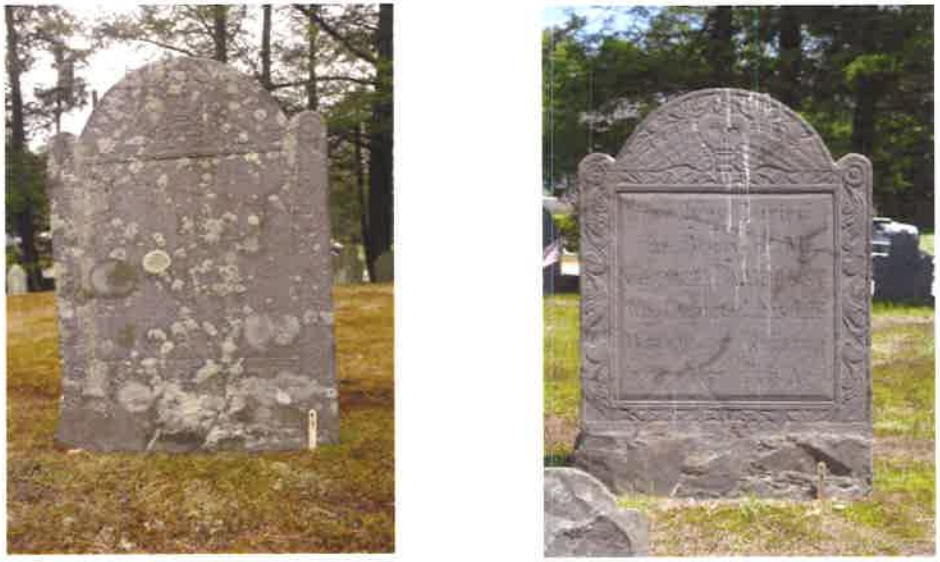
Cleaning

The goal of cleaning is not to return the monument to a "like new" appearance, but to remove particulate soiling, staining and biological growth that may interfere with successful restoration. In most situations, cleaning will be done prior to other treatments.

Cleaning of marble markers should be limited to those requiring structural adhesions. General cleaning of marbles would make the markers appear very white and the cemetery would appear historically inaccurate.

Other markers such as slate, schist and sandstone can be successfully cleaned without disturbing the overall aesthetics.

The cleaning of one marble inappropriately stands out; and cleaning all the stones would be historically incorrect.



Typical slate, before and after cleaning

When cleaning, both aesthetic and technical considerations should be considered.

Removal of biofilm is with D/2 Biological Solution. It is an aqueous antibacterial solution that also aids in the removal of algae, fungi and other organisms. After application and scrubbing with soft brushes, surfaces are fully rinsed with water. Stubborn, well-attached growths will slowly release their grip in a short amount of time and the stone will appear cleaner.

Failed adhesives, mortars and pins are carefully removed before proceeding with new conservation treatments. Mechanical removal to be done with hand tools and smaller power tools.

Resetting Tilted and Sunken Markers

Earlier gravestones are typically long panels of stone that were set directly into the ground. After determination of the correct location and orientation of the stone, soil is removed to an appropriate depth. Gravel (or broken stone) is introduced to establish a stable base.

The stone is made plumb and level, and set in plane with the adjacent markers. Backfilling to be done with sand and gravel, wetted and compacted. Replace disturbed areas with the existing topsoil and turf.

Since the existing conditions of these marker are typically not discovered until excavating, there can be a number of restoration variables.

Breaks at, or just below grade are very common. Most of these markers will require new bases, since the success of below and near grade repair with structural adhesives is limited.

Fabrication of a base may also be necessary to re-erect the upper fragment of earlier gravestones that now do not have adequate height for proper re-setting, i.e., for positioning to permit the viewing of inscription and decoration.

A new below-grade base is also fabricated when an original base cannot be located, or an existing base is damaged beyond repair.

18th century markers often have as much below the ground as above. Only upon excavating this marker for resetting does the massive below grade portion becomes apparent..

Resetting Tilted and Sunken Markers Cont'd

Resetting into existing bases

In many cases, markers have been set into below grade bases either originally or at a later date upon fracturing. When discovered, these bases can often be uncommonly deep, more than one foot.

Older bases should be carefully excavated, examined for soundness and reset level at a higher elevation and aligned with adjacent markers.

Old base removed and inspected for soundness

When excavating for resetting often original, or old bases are discovered

Old base reset higher and aligned with adjacent markers

Gravestones that required insertion into existing bases are to be set with a relatively weak cement/lime-based grout (3:2:9) with fine aggregates (00 or 000), made fluid with a high-range water reducer which ensures a complete fill.
This mix is poured into the base slot. Stones to be braced for a minimum of three days to limit movement during curing of the grout.

Resetting Tilted and Sunken Markers Cont'd

Re-setting in new base

A new below-grade base is fabricated when an original base cannot be located, or an existing base is damaged beyond repair.

New below grade bases are made on site by casting in the ground with concrete. The casting is generally 9 to 12 inches deep, and 12 inches greater in thickness and 6 inches wider than the stone itself. The finished top surface of the base should be entirely below grade.

Formwork for new base

A form insert for a 1-inch deep setting slot, 1/2 inch wider and 1 inch thicker than the stone, is positioned in the concrete, in line with adjacent markers.

Poured base with form insert for setting slot

After the base has cured, the form is removed, and the area backfilled. The gravestone is reset into the slot using a cement/lime mortar (3:2:9) with 00 or 000 sand, made fluid with a high-range water reducer which ensures a complete fill.

After stones are set plumb and level, and braced for a minimum of three days, topsoil is added to re-grade the disturbed area..

New base ready for resetting

Fractures-
Most broken markers can be re-assembled with structural adhesives, without pinning. Bonding is dependent upon the soundness, cleanness and conformation of the fractured surfaces, factors often associated with the age of the break.

Before and after restoration

Structural adhesion
All bonding surfaces to be carefully cleaned and the fragments dry fitted. Aboweld 55-22 (Abatron, Inc.), a thixotropic, moisture-insensitive two-part epoxy, is thinly and evenly applied along both surfaces of the glue line, keeping slightly back from the edge of the break.

The properly-aligned fragments are joined with clamps, and braced during curing, which is typically a period of several days. Any extra epoxy flowing from clamped joints should be left to partially cure for 24 hrs before attempting removal, and carefully chipped off. The slight gap created is concealed with a crack filler.

Example of bracing and clamping

Although the use of pins is not typically recommended for routine adhesion, complex breaks sometimes require drilling and structural pinning for safer re-assembly. (Larger voids can be spanned by these pins to provide an armature for restoration mortars.)

Where pinning is required, threaded stainless steel rods are recommended, the diameter not more than 1/3 the thickness of the stone, and the total depth of the pin equal to 8 to 10 times its diameter, set in a two-part epoxy.

Filling of cracks and losses

Loss is the disappearance of material by fracturing, erosion, or flaking, or by the delamination of larger, distinct layers that have entirely detached (and fallen) from the monument.

The loss of significant parts of a marker can create complex structural and/or weathering problems. The restoration of the profiles, decoration and inscriptions, can require complicated aesthetic decisions.
Losses designated for treatment can be filled with a pigmented cement/lime mortar, using colored aggregates.

The mortar color and texture should be matched to that of the unsoiled stone. If the stone has not been cleaned, artificial "soiling" of the cured mortar surfaces can be done by a variety of means, including use of potassium silicate paint systems, such as Silin (Cathedral Stone Products, Inc.), or a diluted acrylic wash with alkali-stable pigments.

Examples of cement-lime repair mortars

Large losses in sandstone are filled with a custom-colored cementitious restoration mortar, such as Jahn™ M-70 (Cathedral Stone Products, Inc.). For marble, losses are filled with Jahn™ M-70 Custom Limestone Maximum White or with a marble-based repair composite designed to match the appearance of weathered surfaces. Most fine cracks can be filled with pigmented #400 PHLc Crack Filler (Voidspan), a pozzolanic hydraulic lime crack filler and grout.

All filled areas are misted with water and covered for a minimum of 3 days. After partial curing the filled areas are given a light acid washing and thoroughly rinsed with water to remove the paste from the surface and expose the aggregate.

Fills and patches are made to look weathered. Where lettering and inscriptions are lost, they are not replaced. In these areas the filled plane is kept slightly back from the stone surface to indicate that there is a loss. Areas where there are no inscriptions can be filled level with the original stone.

Filling cracks in a sandstone with a pigmented crack filler

Patching and crack filling should not be performed when the temperature of the air or of the stone surface is below 40 degrees Fahrenheit.

Delaminations– Slate

The treatment of delaminations is designed to prevent further detachment of stone, by re-establishing cohesion between layers, and preventing the penetration of water.

Because slates have such extreme temperature variations, their continual expansion and contraction will eventually loosen any solid fills or grouts. Thus, many solid fills will fail within a short period of time. What appears to be a simple treatment is actually quite challenging. Recent successful treatments have been with industrial flexible fillers.
Depending on the individual circumstances, materials and recommendations for stabilization can vary widely.

Best practice begins with the careful removal of loose debris in the voids, using hand tools and the cautious use of compressed air.

In "capping" a marker with delaminations, the voids are usually filled along the top side of the marker only. The sides are kept open to allow the escape of any water that may enter the interior. A pigmented flexible crack filler by STO can be used to fill openings up to 1/8" wide.

For larger voids, a pigmented PHLc Grout (a pozolanic hydraulic lime manufactured by VoidSpan) can be is used as a flowable grout.

Filling top cavities with a pigmented crack filler by Sto. Excess material to be immediately wiped off with damp sponging

A pigmented Sto Crack Filler being tooled into an open face crack

Filling voids by syringe and by a flowable grout (VoidSpan

PRODUCTS/SUPPLIERS

D/2 Biological Solution

Granite City Tool
11 Blackwell Street Barre, VT 05641
802) 476-3137

Jahn™ Restoration Mortars

Cathedral Stone Products Inc.
7266 Park Circle Drive
Hanover, MD 21076 USA
800 684 0901 fax 800 684 0904

Adhesives
Aboweld 55-22

Abatron Inc
5501 95th Avenue
Kenosha, WI 53144
414 653 2000 fax 414 653 2019

Sto Flexible Crack Filler

http://www.stocorp.com/

VoidSpan PHLc

VoidSpan Technology
34 Boardman St
Salem MA 01970

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA

NAME ON MARKER **Stephen Cooley**

Death Date: 9/13/1776 Marker Type: Headstone

Cond. of Inscription: Decipherable Material: Slate

EXISTING CONDITIONS	CONSERVATION STRATEGY
Delaminating	**Fills voids caused by delaminating slate**

Conservation Priority: 3

RECOMMENDED TREATMENT

1. Flush interior voids with water and remove any lichens and/or debris with hand tools.
2. After full drying, all voids caused by splitting or delaminations at top edge of marker filled with a pigmented Sto Crack Filler using injection syringes and/or trowels. Voids along the lower sides of monument typically left open to allow escape of any water which may enter.
3. Excess crack filler immediately removed with damp sponging.
4. Large voids filled with a pigmented PHLc flowable grout

Comments:

Marker# **1D.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA
NAME ON MARKER

n.a.

Death Date:

Marker Type: Small monument

Cond. of Inscription: Illegible

Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Unstable	**If required, level base. Reset elements with cementitious lime mortar**

Conservation Priority: 1

RECOMMENDED TREATMENT

1. Inspect soundness of setting joint of marker to base, if unstable, remove from base.
2. Excavate area around existing base.
3. Align base with adjacent markers and re-set level and plumb.
4. Backfill with tamped gravel and re-grade with existing topsoil
5. If setting joint was unsound, remove failed setting mortar and replace setting pins with stainless pins if necessary.
6. Prime setting surfaces with Acryl 60 diluted 1:3 with water.
7. Re-set marker plumb onto base with cementitious hi-cal lime mortar
8. Remove excess grout and brace marker until cured.

Comments:

Marker# **1J.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA

NAME ON MARKER **Cooley**

Death Date: Marker Type: Small monument

Cond. of Inscription: Partially Decipherable Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Unstable	**If required, level base. Reset elements with cementitious lime mortar**

Conservation Priority: 1

RECOMMENDED TREATMENT

1. Inspect soundness of setting joint of marker to base, if unstable, remove from base.
2. Excavate area around existing base.
3. Align base with adjacent markers and re-set level and plumb.
4. Backfill with tamped gravel and re-grade with existing topsoil
5. If setting joint was unsound, remove failed setting mortar and replace setting pins with stainless pins if necessary.
6. Prime setting surfaces with Acryl 60 diluted 1:3 with water.
7. Re-set marker plumb onto base with cementitious hi-cal lime mortar
8. Remove excess grout and brace marker until cured.

Comments:

Marker# **2C.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA

NAME ON MARKER **Charles Cooley**

Death Date: 12/17/1854 Marker Type: Small Monument

Cond. of Inscription: Decipherable Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Unstable	**If required, level base. Reset elements with cementitious lime mortar**

Conservation Priority: 1

RECOMMENDED TREATMENT

1. Inspect soundness of setting joint of marker to base, if unstable, remove from base.
2. Excavate area around existing base.
3. Align base with adjacent markers and re-set level and plumb.
4. Backfill with tamped gravel and re-grade with existing topsoil
5. If setting joint was unsound, remove failed setting mortar and replace setting pins with stainless pins if necessary.
6. Prime setting surfaces with Acryl 60 diluted 1:3 with water.
7. Re-set marker plumb onto base with cementitious hi-cal lime mortar
8. Remove excess grout and brace marker until cured.

Comments:

Marker# **2C.2**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Dexter Cooley**

Death Date: 11/21/1851 Marker Type: Headstone on base

Cond. of Inscription: Partially Decipherable Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Fallen	**Reset base level**
Base elements detached	**Reset al elements**

Conservation Priority: 2

RECOMMENDED TREATMENT

1. Remove marker from base and inspect sound-ness
2. If required, excavate area around existing base and align with adjacent markers and re-set level onto a gravel bed
3. Backfill with tamped gravel and re-grade area with existing top-soil
4. Clear any failed mortar from setting surfaces of base and bottom of marker
5. Inspect any existing pins, if required, replace with threaded stainless pins.
6. If necessary, treat setting surfaces with D/2 biological solution, scrub with nylon brushes, and fully rinse with water
7. Prime setting surfaces with Acryl 60 diluted 1:3 with water.
8. Re-set elements with 2:1:8 cementitious high cal lime mortar using fine (00 or 000) sand. Use lead shims if necessary to plumb
9. Remove excess mortar from joints.

Comments:

Marker# **2C.3**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA

NAME ON MARKER **Dea. Samuel Montague**

Death Date: 1/31/1789 Marker Type: Headstone

Cond. of Inscription: Legible Material: Slate

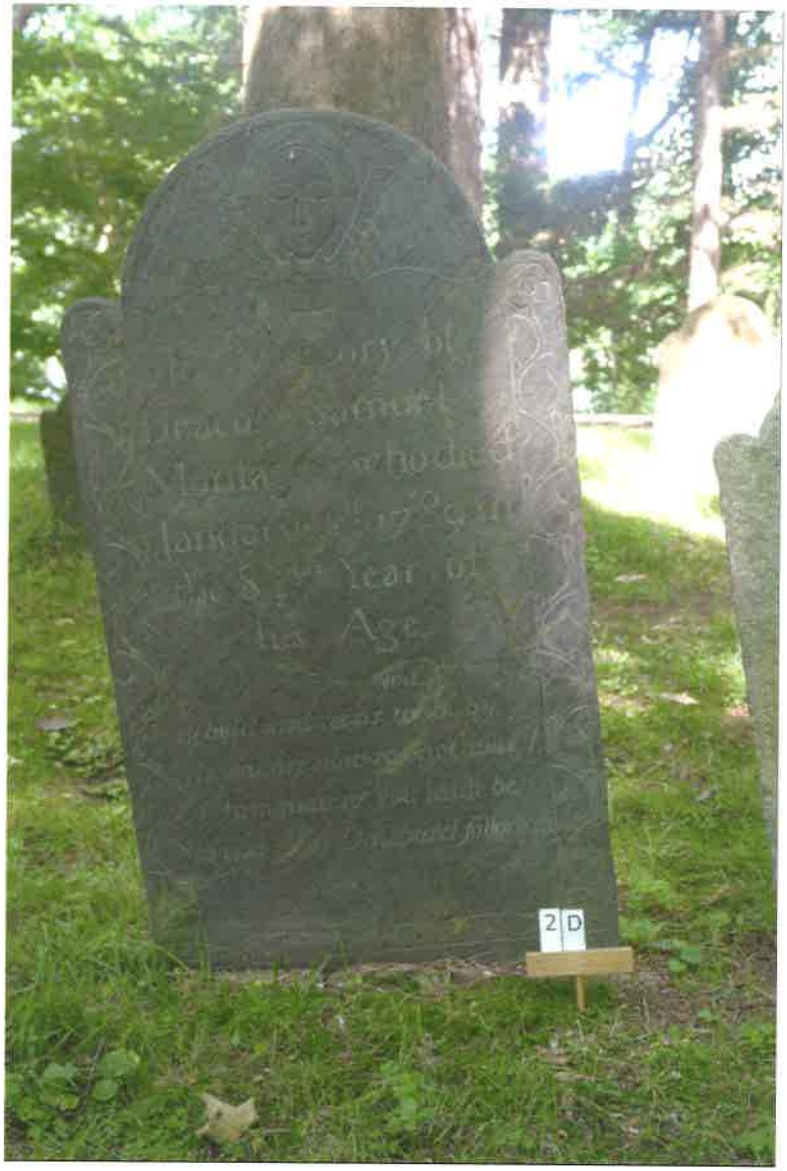
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	**Reset plumb**

Conservation Priority: 2

RECOMMENDED TREATMENT

1. Carefully excavate marker; extremely tilted markers are hazardous. Remove soil around stone to an appropriate depth, if required, remove stone from ground. Inspect marker for soundness,
2. When excavated to sufficient depth, re-set stone plumb at appropriate height and level onto gravel bed, and align with adjacent markers
3. Backfill area around marker with tamped sand and gravel
4. Re-grade disturbed areas with existing topsoil.

Comments:



Marker# **2D.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA

NAME ON MARKER **Elizabeth Montague**

Death Date: 10/15/1753 Marker Type: Headstone

Cond. of Inscription: Partially Decipherable Material: Slate

EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	**Reset plumb**

Conservation Priority: 2

RECOMMENDED TREATMENT

1. Carefully excavate marker; extremely tilted markers are hazardous. Remove soil around stone to an appropriate depth, if required, remove stone from ground. Inspect marker for soundness,
2. When excavated to sufficient depth, re-set stone plumb at appropriate height and level onto gravel bed, and align with adjacent markers
3. Backfill area around marker with tamped sand and gravel
4. Re-grade disturbed areas with existing topsoil.

Comments:

Marker# **2E.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA

NAME ON MARKER **Zaccheus Crocker**

Death Date: 2/19/1805 Marker Type: Headstone

Cond. of Inscription: Legible/Buried Material: Slate

EXISTING CONDITIONS	CONSERVATION STRATEGY
Loose in ground	**Probe to evaluate resetting conditions.** **Possible resetting into new below grade base**

Conservation Priority: 2

RECOMMENDED TREATMENT

1.Carefully excavate marker. Inspect marker/ base for soundness.
2. If original base is sound or adequate below grade length is found for resetting (over 18"), ideally 24", reset marker plumb.
3. If unsound material or less than 18" is found, new below grade cast concrete base will be required. Sized minimum of 12 inches deep, 12 inches greater in thickness and 6 inches wider than the stone. The finished top to be entirely below grade. Align the setting slot (1" deep, ½" wider and thicker than the marker) with adjacent markers.
4. If required, re-square the lower edge of marker with min. loss.
5. After min 3 day cure, remove the setting form and reset marker plumb and level into slot using a cement/lime grout (3/2/9) Brace for minimum of 5 days.
6. Backfill disturbed areas with tamped sand and gravel, and re-grade with existing topsoil.

Comments:

Marker# **2E.2**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA

NAME ON MARKER **Ansel Crocker**

Death Date: 4/30/1801 Marker Type: Headstone

Cond. of Inscription: Partially Legible Material: Slate

EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	**Reset plumb**
Delaminating	**Fill voids caused by delaminations**

Conservation Priority: 3

RECOMMENDED TREATMENT

1. Excavate area around marker to an appropriate depth and remove stone from ground.
2. Re-set stone plumb at appropriate height and level onto gravel bed, and align with adjacent markers
3. Backfill area around marker with existing tamped gravel and re-grade disturbed areas with existing topsoil.
4. Flush interior voids with water and remove any lichens and/or debris with hand tools.
5. After full drying, all voids caused by splitting or delaminations at top edge of marker filled with a pigmented Sto Crack Filler using injection syringes and/or trowels. Voids along the lower sides of monument typically left open to allow escape of any water which may enter.
6. Excess crack filler immediately removed with damp sponging.
7. Large voids filled with a pigmented PHLc flowable grout

Comments:

Marker# **2E.3**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Lucy Crocker**

Death Date: 2/5/1797 Marker Type: Headstone

Cond. of Inscription: Partially Legible Material: Slate

EXISTING CONDITIONS	CONSERVATION STRATEGY
Delaminating	**Fills voids caused by delaminating slate**

Conservation Priority: 3

RECOMMENDED TREATMENT

1. Flush interior voids with water and remove any lichens and/or debris with hand tools.
2. After full drying, all voids caused by splitting or delaminations at top edge of marker filled with a pigmented Sto Crack Filler using injection syringes and/or trowels. Voids along the lower sides of monument typically left open to allow escape of any water which may enter.
3. Excess crack filler immediately removed with damp sponging.
4. Large voids filled with a pigmented PHLc flowable grout

Comments:

Marker# **2E.4**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA

NAME ON MARKER **Manerva Russel**

Death Date: 10/19/1808 Marker Type: Headstone

Cond. of Inscription: Legible Material: Slate

EXISTING CONDITIONS	CONSERVATION STRATEGY
Delaminating	**Fills voids caused by delaminating slate**

Conservation Priority: 3

RECOMMENDED TREATMENT

1. Flush interior voids with water and remove any lichens and/or debris with hand tools.
2. After full drying, all voids caused by splitting or delaminations at top edge of marker filled with a pigmented Sto Crack Filler using injection syringes and/or trowels. Voids along the lower sides of monument typically left open to allow escape of any water which may enter.
3. Excess crack filler immediately removed with damp sponging.
4. Large voids filled with a pigmented PHLc flowable grout

Comments:

Marker# **2E.5**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA

NAME ON MARKER **Simon Cooley**

Death Date: 9/21/1746 Marker Type: Headstone

Cond. of Inscription: Partially Decipherable Material: Sandstone

EXISTING CONDITIONS	CONSERVATION STRATEGY
Set too low **Possible below grade fracture**	**Reset into new below grade base**

Conservation Priority: 3

RECOMMENDED TREATMENT

1. Inspect marker for soundness. Remove soiling by light brushing with nylon brushes and water. Locate setting area.
2. Excavate setting area for new below grade cast concrete base sized minimum of 12 inches deep, 12 inches greater in thickness and 6 inches wider than the stone. The finished top to be entirely below grade. Align the setting slot (1" deep, ½" wider and thicker than the marker) with adjacent markers.
3. If required, re-square the lower edge of marker with minimal loss
4. After min 3 day cure, remove the setting form and reset stone into slot using a cement/lime grout (3/2/9)
5. Set marker plumb and level, brace for minimum of 5 days.
6. Disturbed areas to be backfilled with tamped sand and gravel, and re-graded with existing topsoil.

Comments:

Marker# **2E.6**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA

NAME ON MARKER **James Hunt**

Death Date: Marker Type: Headstone

Cond. of Inscription: Partially Decipherable Material: Slate

EXISTING CONDITIONS	CONSERVATION STRATEGY
Complete delamination	**Attach fragments with structural adhesive** **Fill edges at joint**

Conservation Priority: 1

RECOMMENDED TREATMENT

1. Attach fragments with structural adhesive (Abatron 55-22), clamp and brace until cured. Remove excess epoxy with hand tools when partially cured.
2. Fill delaminated edges with a pigmented Sto Crack Filler using injection syringes and/or trowels. Excess crack filler immediately removed with damp sponging

Comments:

Marker# **2F.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA

NAME ON MARKER **Melzar Hunt**

Death Date: 5/4/1796 Marker Type: Headstone

Cond. of Inscription: Legible Material: Slate

EXISTING CONDITIONS	CONSERVATION STRATEGY
Delaminating	**Fills voids caused by delaminating slate**

Conservation Priority: 3

RECOMMENDED TREATMENT

1. Flush interior voids with water and remove any lichens and/or debris with hand tools.
2. After full drying, all voids caused by splitting or delaminations at top edge of marker filled with a pigmented Sto Crack Filler using injection syringes and/or trowels. Voids along the lower sides of monument typically left open to allow escape of any water which may enter.
3. Excess crack filler immediately removed with damp sponging.
4. Large voids filled with a pigmented PHLc flowable grout

Comments:

Marker# **2F.2**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA

NAME ON MARKER **Rosanna Crocker**

Death Date: 10/21/1834 Marker Type: Headstone

Cond. of Inscription: Partially Decipherable Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Set too low	**Reset into new below grade base**
Possible below grade fracture	

Conservation Priority: 2

RECOMMENDED TREATMENT

1. Inspect marker for soundness. Remove soiling by light brushing with nylon brushes and water. Locate setting area.
2. Excavate setting area for new below grade cast concrete base sized minimum of 12 inches deep, 12 inches greater in thickness and 6 inches wider than the stone. The finished top to be entirely below grade. Align the setting slot (1" deep, ½" wider and thicker than the marker) with adjacent markers.
3. If required, re-square the lower edge of marker with minimal loss
4. After min 3 day cure, remove the setting form and reset stone into slot using a cement/lime grout (3/2/9)
5. Set marker plumb and level, brace for minimum of 5 days.
6. Disturbed areas to be backfilled with tamped sand and gravel, and re-graded with existing topsoil.

Comments:

Marker# **2F.3**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA
NAME ON MARKER **n.a.**

Death Date: Marker Type: Headstone

Cond. of Inscription: Illegible Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Unstable	**If required, level base. Reset elements with cementitious lime mortar**

Conservation Priority: 1

RECOMMENDED TREATMENT

1. Inspect soundness of setting joint of marker to base, if unstable, remove from base.
2. Excavate area around existing base.
3. Align base with adjacent markers and re-set level and plumb.
4. Backfill with tamped gravel and re-grade with existing topsoil
5. If setting joint was unsound, remove failed setting mortar and replace setting pins with stainless pins if necessary.
6. Prime setting surfaces with Acryl 60 diluted 1:3 with water.
7. Re-set marker plumb onto base with cementitious hi-cal lime mortar
8. Remove excess grout and brace marker until cured.

Comments:

Marker# **2J.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA

NAME ON MARKER **Hattie Bisbee**

Death Date: 12/13/1869 Marker Type: Headstone on base

Cond. of Inscription: Legible Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Unstable	**If required, level base. Reset elements with cementitious lime mortar**

Conservation Priority: 1

RECOMMENDED TREATMENT

1. Inspect soundness of setting joint of marker to base, if unstable, remove from base.
2. Excavate area around existing base.
3. Align base with adjacent markers and re-set level and plumb.
4. Backfill with tamped gravel and re-grade with existing topsoil
5. If setting joint was unsound, remove failed setting mortar and replace setting pins with stainless pins if necessary.
6. Prime setting surfaces with Acryl 60 diluted 1:3 with water.
7. Re-set marker plumb onto base with cementitious hi-cal lime mortar
8. Remove excess grout and brace marker until cured.

Comments:

Marker# **2K.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Urania Robinson**

Death Date: 3/25/1884 Marker Type: Headstone in base

Cond. of Inscription: Partially Decipherable Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	**Reset base level**
Marker loose in slot	**Reset marker plumb into setting slot**

Conservation Priority: 2

RECOMMENDED TREATMENT

1. Remove unstable marker from base and inspect soundness
2. When required, excavate area around existing base and align with adjacent markers and re-set level onto a gravel bed
3. Remove stone fragments and failed mortar from setting slot. A power grinder may be necessary to aid in removal of fragments.
4. When required, re-square the lower edge of the marker with minimal loss using a power grinder.
5. Marker set into setting slot with a cement/lime grout (3/2/9) with fine sand (00 or 000) made fluid with a super plasticizer.
6. Marker plumbed and level, and braced for min. of 5 days.
7. Disturbed areas backfilled with existing topsoil

Comments:

Marker# **3D.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **n.a.**

Death Date: Marker Type: Headstone

Cond. of Inscription: Illegible Material: Slate

EXISTING CONDITIONS	CONSERVATION STRATEGY
Bio-growth	**Treat bio-growth and remove soiling**
Delaminating	**Fills voids caused by delaminating slate**

Conservation Priority: 3

RECOMMENDED TREATMENT

1. Flush interior voids with water and remove any lichens and/or debris with hand tools.
2. Treat all surfaces with D/2 biological solution and scrub with nylon brushes. Use wooden or plastic scrapers to remove stubborn lichens. Rinse fully with water
3. Repeat applications of D/2 and scrubbing as necessary, rinsing with water.
4. After full drying, all voids caused by splitting or delaminations at top edge of marker filled with a pigmented Sto Crack Filler using injection syringes and/or trowels. Voids along the lower sides of monument typically left open to allow escape of any water which may enter.
5. Excess crack filler immediately removed with damp sponging.
6. Large voids filled with a pigmented PHLc flowable grout

Comments:

Marker# **3E.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Richard Dean**

Death Date: 6/19/1858 Marker Type: Headstone in base

Cond. of Inscription: Partially Decipherable Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Fractured	**Level base**
Reset into base	**Reset lower fragment and attach fragments with structural adhesive**

Conservation Priority: 2

RECOMMENDED TREATMENT

1. Excavate base and reset level and aligned with adjacent markers. Remove any previous failed repairs.
2. Clear setting slot of debris and remove any failed setting mortar and stone fragments from setting slot
3. If required, re-square the lower edge of marker fragment to fit setting slot. Reset the stone into slot using a flowable cement/lime grout (3/2/9) with fine (00, 000) sand
4. Reset lower fragment plumb and level, braced 3 days minimum.
5. Clean mating edges and attach fragments with structural adhesive, Abatron 55-22, braced and clamped until cured.
6. Cracks and losses filled with Voidspan and/or Jahn products.
7. Filled areas misted with water and covered for 3 days minimum

Comments:

Marker# **3L.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Pamela Smith**

Death Date: 2/10/1868 Marker Type: Headstone on base

Cond. of Inscription: Legible Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Loose top	**Reset top element**

Conservation Priority: 1

RECOMMENDED TREATMENT

1. Remove loose top element and clean setting surfaces with water
2. Prime setting surfaces with Acryl 60 diluted 1:3 with water.
3. Re-set elements with 2:1:9 cementitious high cal lime mortar using fine (00 or 000) sand.
4. Remove excess mortar from joints

Comments:

Marker# **3M.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Mary Wilder**

Death Date: 8/28/1872 Marker Type: Headstone on base

Cond. of Inscription: Legible Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Unstable	**If required, level base. Reset elements with cementitious lime mortar**

Conservation Priority: 1

RECOMMENDED TREATMENT

1. Inspect soundness of setting joint of marker to base, if unstable, remove from base.
2. Excavate area around existing base.
3. Align base with adjacent markers and re-set level and plumb.
4. Backfill with tamped gravel and re-grade with existing topsoil
5. If setting joint was unsound, remove failed setting mortar and replace setting pins with stainless pins if necessary.
6. Prime setting surfaces with Acryl 60 diluted 1:3 with water.
7. Re-set marker plumb onto base with cementitious hi-cal lime mortar
8. Remove excess grout and brace marker until cured.

Comments:

Marker# **3M.2**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Henry Wilder**

Death Date: 4/12/1869 Marker Type: Headstone on base

Cond. of Inscription: Legible Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Unstable	**If required, level base. Reset elements with cementitious lime mortar**

Conservation Priority: 1

RECOMMENDED TREATMENT

1. Inspect soundness of setting joint of marker to base, if unstable, remove from base.
2. Excavate area around existing base.
3. Align base with adjacent markers and re-set level and plumb.
4. Backfill with tamped gravel and re-grade with existing topsoil
5. If setting joint was unsound, remove failed setting mortar and replace setting pins with stainless pins if necessary.
6. Prime setting surfaces with Acryl 60 diluted 1:3 with water.
7. Re-set marker plumb onto base with cementitious hi-cal lime mortar
8. Remove excess grout and brace marker until cured.

Comments:

Marker# **3M.3**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Rhoda Graves**

Death Date: 4/15/1827 Marker Type: Headstone

Cond. of Inscription: Partially Decipherable Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	**Rest plumb in ground**

Conservation Priority: 2

RECOMMENDED TREATMENT

1. Carefully excavate marker; extremely tilted markers are hazardous. Remove soil around stone to an appropriate depth, if required, remove stone from ground. Inspect marker for soundness,
2. When excavated to sufficient depth, re-set stone plumb at appropriate height and level onto gravel bed, and align with adjacent markers
3. Backfill area around marker with tamped sand and gravel
4. Re-grade disturbed areas with existing topsoil.

Comments:

Marker# **4G.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Thankful Graves**

Death Date: 8/7/1805 Marker Type: Headstone

Cond. of Inscription: Legible Material: Slate

EXISTING CONDITIONS	CONSERVATION STRATEGY
Delaminating	**Fills voids caused by delaminating slate**

Conservation Priority: 3

RECOMMENDED TREATMENT

1. Flush interior voids with water and remove any lichens and/or debris with hand tools.
2. After full drying, all voids caused by splitting or delaminations at top edge of marker filled with a pigmented Sto Crack Filler using injection syringes and/or trowels. Voids along the lower sides of monument typically left open to allow escape of any water which may enter.
3. Excess crack filler immediately removed with damp sponging.
4. Large voids filled with a pigmented PHLc flowable grout

Comments:

Marker# **5G.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Evander Graves**

Death Date: 4/17/1813 Marker Type: Headstone

Cond. of Inscription: Partially Decipherable Material: Slate

EXISTING CONDITIONS	CONSERVATION STRATEGY
Bio-growth	**Treat bio-growth and remove soiling**
Delaminating	**Fills voids caused by delaminating slate**

Conservation Priority: 3

RECOMMENDED TREATMENT

1. Flush interior voids with water and remove any lichens and/or debris with hand tools.
2. Treat all surfaces with D/2 biological solution and scrub with nylon brushes. Use wooden or plastic scrapers to remove stubborn lichens. Rinse fully with water
3. Repeat applications of D/2 and scrubbing as necessary, rinsing with water.
4. After full drying, all voids caused by splitting or delaminations at top edge of marker filled with a pigmented Sto Crack Filler using injection syringes and/or trowels. Voids along the lower sides of monument typically left open to allow escape of any water which may enter.
5. Excess crack filler immediately removed with damp sponging.
6. Large voids filled with a pigmented PHLc flowable grout

Comments:

Marker# **5G.2**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Mariam Russel**

Death Date: 9/30/1808 Marker Type: Headstone

Cond. of Inscription: Decipherable Material: Slate

EXISTING CONDITIONS	CONSERVATION STRATEGY
Delaminating	**Fills voids caused by delaminating slate**

Conservation Priority: 3

RECOMMENDED TREATMENT

1. Flush interior voids with water and remove any lichens and/or debris with hand tools.
2. After full drying, all voids caused by splitting or delaminations at top edge of marker filled with a pigmented Sto Crack Filler using injection syringes and/or trowels. Voids along the lower sides of monument typically left open to allow escape of any water which may enter.
3. Excess crack filler immediately removed with damp sponging.
4. Large voids filled with a pigmented PHLc flowable grout

Comments:

Marker# **5G.3**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Eliza Lyman**

Death Date: 9/30/1892 Marker Type: Headstone on base

Cond. of Inscription: Legible Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Unstable	**If required, level base. Reset elements with cementitious lime mortar**

Conservation Priority: 1

RECOMMENDED TREATMENT

1. Inspect soundness of setting joint of marker to base, if unstable, remove from base.
2. Excavate area around existing base.
3. Align base with adjacent markers and re-set level and plumb.
4. Backfill with tamped gravel and re-grade with existing topsoil
5. If setting joint was unsound, remove failed setting mortar and replace setting pins with stainless pins if necessary.
6. Prime setting surfaces with Acryl 60 diluted 1:3 with water.
7. Re-set marker plumb onto base with cementitious hi-cal lime mortar
8. Remove excess grout and brace marker until cured.

Comments:

Marker# **5I.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Fanny Cooley**

Death Date: 8/28/1831 Marker Type: Headstone in base

Cond. of Inscription: Partially Decipherable Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Fallen	**Probe to evaluate resetting conditions.** **Possible resetting into new below grade base**

Conservation Priority: 2

RECOMMENDED TREATMENT

1. Inspect marker for soundness. Remove soiling by light brushing
1.Carefully excavate marker. Inspect marker/ base for soundness.
2. If original base is sound or adequate below grade length is found for resetting (over 18"), ideally 24", reset marker plumb.
3. If unsound material or less than 18" is found, new below grade cast concrete base will be required. Sized minimum of 12 inches deep, 12 inches greater in thickness and 6 inches wider than the stone. The finished top to be entirely below grade. Align the setting slot (1" deep, ½" wider and thicker than the marker) with adjacent markers.
4. If required, re-square the lower edge of marker with min. loss.
5. After min 3 day cure, remove the setting form and reset marker plumb and level into slot using a cement/lime grout (3/2/9) Brace for minimum of 5 days.
6. Backfill disturbed areas with tamped sand and gravel, and re-grade with existing topsoil.

Comments:

Marker# **5I.2**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA
NAME ON MARKER **n.a.**

Death Date: Marker Type: Headstone

Cond. of Inscription: Illegible Material: Slate

EXISTING CONDITIONS	CONSERVATION STRATEGY
Set too low	**Reset into new below grade base**
Possible below grade fracture	**Remove bio growth**
Bio growth	

Conservation Priority: 3

RECOMMENDED TREATMENT

1. Remove marker from ground and inspect for soundness.
2. Treat all surfaces with D/2 biological solution and scrub with nylon brushes. Use wooden or plastic scrapers to remove stubborn lichens. Rinse fully with water. Repeat applications of D/2 as necessary, rinsing with water.
3. Excavate setting area for new below grade cast concrete base sized minimum of 12 inches deep, 12 inches greater in thickness and 6 inches wider than the stone. The finished top to be entirely below grade. Align the setting slot (1" deep, ½" wider and thicker than the marker) with adjacent markers.
4. If required, re-square the lower edge of marker with minimal loss
5. After min 3 day cure, remove the setting form and reset stone into slot using a cement/lime grout (3/2/9)
6. Set marker plumb and level, brace for minimum of 5 days.
7. Disturbed areas to be backfilled with tamped sand and gravel, and re-graded with existing topsoil.

Comments:

Marker# **6C.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Submit Smith**

Death Date: 3/10/1807 Marker Type: Headstone

Cond. of Inscription: Legible Material: Slate

EXISTING CONDITIONS	CONSERVATION STRATEGY
Delaminating	**Fills voids caused by delaminating slate**

Conservation Priority: 3

RECOMMENDED TREATMENT

1. Flush interior voids with water and remove any lichens and/or debris with hand tools.
2. After full drying, all voids caused by splitting or delaminations at top edge of marker filled with a pigmented Sto Crack Filler using injection syringes and/or trowels. Voids along the lower sides of monument typically left open to allow escape of any water which may enter.
3. Excess crack filler immediately removed with damp sponging.
4. Large voids filled with a pigmented PHLc flowable grout

Comments:

Marker# **6C.2**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Mabel Graham**

Death Date: 8/28/1822 Marker Type: Headstone

Cond. of Inscription: Legible Material: Slate

EXISTING CONDITIONS	CONSERVATION STRATEGY
Delaminating	**Fills voids caused by delaminating slate**

Conservation Priority: 3

RECOMMENDED TREATMENT

1. Flush interior voids with water and remove any lichens and/or debris with hand tools.
2. After full drying, all voids caused by splitting or delaminations at top edge of marker filled with a pigmented Sto Crack Filler using injection syringes and/or trowels. Voids along the lower sides of monument typically left open to allow escape of any water which may enter.
3. Excess crack filler immediately removed with damp sponging.
4. Large voids filled with a pigmented PHLc flowable grout

Comments:

Marker# **6C.3**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Silas Hosmer**

Death Date: 10/9/1804 Marker Type: Headstone

Cond. of Inscription: Legible Material: Slate

EXISTING CONDITIONS	CONSERVATION STRATEGY
Delaminating	**Fills voids caused by delaminating slate**

Conservation Priority: 3

RECOMMENDED TREATMENT

1. Flush interior voids with water and remove any lichens and/or debris with hand tools.
2. After full drying, all voids caused by splitting or delaminations at top edge of marker filled with a pigmented Sto Crack Filler using injection syringes and/or trowels. Voids along the lower sides of monument typically left open to allow escape of any water which may enter.
3. Excess crack filler immediately removed with damp sponging.
4. Large voids filled with a pigmented PHLc flowable grout

Comments:

Marker# **6C.4**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Bulah Hosmer**

Death Date: 10/14/1804 Marker Type: Headstone

Cond. of Inscription: Decipherable Material: Slate

EXISTING CONDITIONS	CONSERVATION STRATEGY
Delaminating	**Fills voids caused by delaminating slate**

Conservation Priority: 3

RECOMMENDED TREATMENT

1. Flush interior voids with water and remove any lichens and/or debris with hand tools.
2. After full drying, all voids caused by splitting or delaminations at top edge of marker filled with a pigmented Sto Crack Filler using injection syringes and/or trowels. Voids along the lower sides of monument typically left open to allow escape of any water which may enter.
3. Excess crack filler immediately removed with damp sponging.
4. Large voids filled with a pigmented PHLc flowable grout

Comments:

Marker# **6C.5**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Robert**

Death Date: Marker Type: Headstone

Cond. of Inscription: Partially Decipherable Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Fractured	**Attach fragments with structural adhesive**

Conservation Priority: 2

RECOMMENDED TREATMENT

1. Clean all mating edges of fragments with water and remove any failed adhesives with hand tools
2. Attach fragments with structural adhesive (Abatron 55-22), clamp and brace until cured.
3. Remove excess epoxy with hand chisels within 24 hours
4. Fill cracks and voids with approved cementitious products.
5. Mist filled areas with water and keep covered for 3 days min.
6. Treat filled surface areas with light acid wash and rinse thoroughly with water

Comments:

Marker# **6F.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Jerimiah Ballard**

Death Date: 12/22/1774 Marker Type: Headstone

Cond. of Inscription: Illegible Material: Sandstone

EXISTING CONDITIONS	CONSERVATION STRATEGY
Delaminating	**Treat bio-growth and remove soiling**
Biological soiling	**Fills voids caused by delaminating stone**

Conservation Priority: 3

RECOMMENDED TREATMENT

1. Flush delaminated voids with water and remove any lichens and/or debris with hand tools.
2. Treat all surfaces with D/2 biological solution and scrub with nylon brushes. Use wooden or plastic scrapers to remove stubborn lichens. Rinse fully with water
3. Repeat applications of D/2 and scrubbing as necessary, rinsing with water.
4. After full drying, all voids caused by splitting or delaminations at top edge of marker filled with a pigmented Sto Crack Filler using injection syringes and/or trowels. Voids along the lower sides of monument typically left open to allow escape of any water which may enter.
5. Excess crack filler immediately removed with damp sponging.
6. Large voids filled with a pigmented PHLc flowable grout

Comments:

Marker# **6F.2**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **n.a.**

Death Date: Marker Type: Headstone

Cond. of Inscription: Illegible Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Fractured	**Attach fragments with structural adhesive**

Conservation Priority: 2

RECOMMENDED TREATMENT

1. Clean all mating edges of fragments with water and remove any failed adhesives with hand tools
2. Attach fragments with structural adhesive (Abatron 55-22), clamp and brace until cured.
3. Remove excess epoxy with hand chisels within 24 hours
4. Fill cracks and voids with approved cementitious products.
5. Mist filled areas with water and keep covered for 3 days min.
6. Treat filled surface areas with light acid wash and rinse thoroughly with water

Comments:

Marker# **6G.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Fanny Graves**

Death Date: 9/21/1851 Marker Type: Headstone

Cond. of Inscription: Legible/Buried Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Set too low	**Reset into new below grade base**
Possible below grade fracture	

Conservation Priority: 3

RECOMMENDED TREATMENT

1. Inspect marker for soundness. Remove soiling by light brushing with nylon brushes and water. Locate setting area.
2. Excavate setting area for new below grade cast concrete base sized minimum of 12 inches deep, 12 inches greater in thickness and 6 inches wider than the stone. The finished top to be entirely below grade. Align the setting slot (1" deep, ½" wider and thicker than the marker) with adjacent markers.
3. If required, re-square the lower edge of marker with minimal loss
4. After min 3 day cure, remove the setting form and reset stone into slot using a cement/lime grout (3/2/9)
5. Set marker plumb and level, brace for minimum of 5 days.
6. Disturbed areas to be backfilled with tamped sand and gravel, and re-graded with existing topsoil.

Comments:

Marker# **6I.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **William Gary**

Death Date: Marker Type: Headstone

Cond. of Inscription: Legible Material: Marble

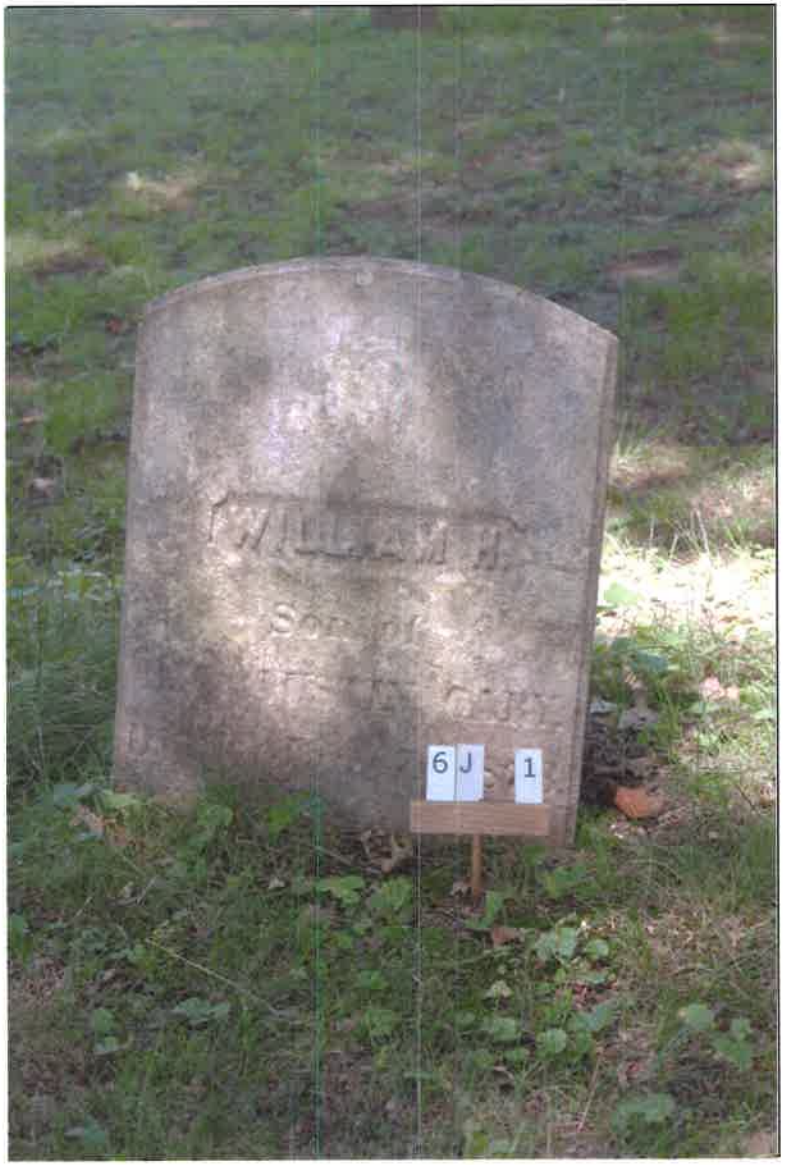
EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted, loose in ground **Poss below grade fracture**	**Probe to evaluate resetting conditions.** **Possible resetting into new below grade base**

Conservation Priority: 3

RECOMMENDED TREATMENT

1.Carefully excavate marker. Inspect marker/ base for soundness.
2. If original base is sound or adequate below grade length is found for resetting (over 18"), ideally 24", reset marker plumb.
3. If unsound material or less than 18" is found, new below grade cast concrete base will be required. Sized minimum of 12 inches deep, 12 inches greater in thickness and 6 inches wider than the stone. The finished top to be entirely below grade. Align the setting slot (1" deep, ½" wider and thicker than the marker) with adjacent markers.
4. If required, re-square the lower edge of marker with min. loss.
5. After min 3 day cure, remove the setting form and reset marker plumb and level into slot using a cement/lime grout (3/2/9) Brace for minimum of 5 days.
6. Backfill disturbed areas with tamped sand and gravel, and re-grade with existing topsoil.

Comments:



Marker# **6J.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA
NAME ON MARKER **n.a.**

Death Date: Marker Type: Headstone

Cond. of Inscription: Illegible Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Fractured	**Reset plumb and attach fragments with structural adhesive**

Conservation Priority: 2

RECOMMENDED TREATMENT

1. Reset lower, inground fargmnet plumb.
2. Clean all mating edges of fragments with water and remove any failed adhesives with hand tools
3. Attach fragments with structural adhesive (Abatron 55-22), clamp and brace until cured.
4. Remove excess epoxy with hand chisels within 24 hours
5. Fill cracks and voids with approved cementitious products.
6. Mist filled areas with water and keep covered for 3 days min.
7. Treat filled surface areas with light acid wash and rinse thoroughly with water

Comments:

Marker# **6M.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Pamela & Harriet Leonard**

Death Date: 4/3/1858 Marker Type: Headstone

Cond. of Inscription: Decipherable Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Unstable **Failed repair**	**Probe to evaluate resetting conditions.** **Possible resetting into new below grade base**

Conservation Priority: 1

RECOMMENDED TREATMENT

1.Carefully excavate marker. Inspect marker/ base for soundness.
2. If original base is sound or adequate below grade length is found for resetting (over 18"), ideally 24", reset marker plumb.
3. If unsound material or less than 18" is found, new below grade cast concrete base will be required. Sized minimum of 12 inches deep, 12 inches greater in thickness and 6 inches wider than the stone. The finished top to be entirely below grade. Align the setting slot (1" deep, ½" wider and thicker than the marker) with adjacent markers.
4. If required, re-square the lower edge of marker with min. loss.
5. After min 3 day cure, remove the setting form and reset marker plumb and level into slot using a cement/lime grout (3/2/9) Brace for minimum of 5 days.
6. Backfill disturbed areas with tamped sand and gravel, and re-grade with existing topsoil.

Comments:

Marker# **7C.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA

NAME ON MARKER **Joseph Field**

Death Date: Marker Type: Headstone

Cond. of Inscription: Decipherable Material: Sandstone

EXISTING CONDITIONS	CONSERVATION STRATEGY
Out of ground	**Reset into new below grade base**

Conservation Priority: 2

RECOMMENDED TREATMENT

1. Inspect marker for soundness. Remove soiling by light brushing with nylon brushes and water. Locate setting area.
2. Excavate setting area for new below grade cast concrete base sized minimum of 12 inches deep, 12 inches greater in thickness and 6 inches wider than the stone. The finished top to be entirely below grade. Align the setting slot (1" deep, ½" wider and thicker than the marker) with adjacent markers.
3. If required, re-square the lower edge of marker with minimal loss
4. After min 3 day cure, remove the setting form and reset stone into slot using a cement/lime grout (3/2/9)
5. Set marker plumb and level, brace for minimum of 5 days.
6. Disturbed areas to be backfilled with tamped sand and gravel, and re-graded with existing topsoil.

Comments:

Marker# **7E.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Dexter Bartlett**

Death Date: 1/6/1837 Marker Type: Headstone on base

Cond. of Inscription: Legible Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	**Reset base unit level in ground. Reset elements with cementitious lime mortar**

Conservation Priority: 2

RECOMMENDED TREATMENT

1. Inspect soundness of setting joint of marker to base, if unstable, remove from base.
2. Excavate area around existing base.
3. Align base with adjacent markers and re-set level and plumb.
4. Backfill with tamped gravel and re-grade with existing topsoil
5. If setting joint was unsound, remove failed setting mortar and replace setting pins with stainless pins if necessary.
6. Prime setting surfaces with Acryl 60 diluted 1:3 with water.
7. Re-set marker plumb onto base with cementitious hi-cal lime mortar
8. Remove excess grout and brace marker until cured.

Comments:

Marker# **7I.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Clarinda Dean**

Death Date: 4/2/1852 Marker Type: Headstone on base

Cond. of Inscription: Legible Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	**If required, level base. Reset elements with cementitious lime mortar**

Conservation Priority: 2

RECOMMENDED TREATMENT

1. Inspect soundness of setting joint of marker to base, if unstable, remove from base.
2. Excavate area around existing base.
3. Align base with adjacent markers and re-set level and plumb.
4. Backfill with tamped gravel and re-grade with existing topsoil
5. If setting joint was unsound, remove failed setting mortar and replace setting pins with stainless pins if necessary.
6. Prime setting surfaces with Acryl 60 diluted 1:3 with water.
7. Re-set marker plumb onto base with cementitious hi-cal lime mortar
8. Remove excess grout and brace marker until cured.

Comments:

Marker# **71.2**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Stoughton Crocker**

Death Date: 12/23/1891 Marker Type: Headstone on base

Cond. of Inscription: Decipherable Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Unstable	**If required, level base. Reset elements with cementitious lime mortar**

Conservation Priority: 1

RECOMMENDED TREATMENT

1. Inspect soundness of setting joint of marker to base, if unstable, remove from base.
2. Excavate area around existing base.
3. Align base with adjacent markers and re-set level and plumb.
4. Backfill with tamped gravel and re-grade with existing topsoil
5. If setting joint was unsound, remove failed setting mortar and replace setting pins with stainless pins if necessary.
6. Prime setting surfaces with Acryl 60 diluted 1:3 with water.
7. Re-set marker plumb onto base with cementitious hi-cal lime mortar
8. Remove excess grout and brace marker until cured.

Comments:

Marker# **7K.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Prouty ?**

Death Date: Marker Type: Headstone

Cond. of Inscription: Partially Decipherable Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Fractured	**Poss new base** **Attach fragments with structural adhesive**

Conservation Priority: 2

RECOMMENDED TREATMENT

1. Excavate marker and fragments. Remove any previous failed repairs.
2. If adequate below grade length is found for resetting, reset lower marker fragment plumb in ground.
3. If unsound material is found a new below grade cast concrete base will be required. Sized minimum of 12 inches deep, 12 inches greater in thickness and 6 inches wider than the stone. The finished top to be entirely below grade. Align the setting slot with adjacent markers.
4. If required, re-square the lower edge of marker fragment with min. loss.
5. After min 3 day cure, remove the setting form and reset lower marker fragment plumb and level into slot using a plasticized cement/lime grout (3/2/9) with 000 sand . Brace for minimum of 3 days.
6. Backfill disturbed areas with tamped sand and gravel, and re-grade with existing topsoil.
7. Attach fragments with structural adhesive, brace and clamp until cured.
8. Fill cracks and losses with RepliCal and Jahn products.
9. Mist filled areas with water and cover for 3 days minimum

Comments:

Marker# **7K.2**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA

NAME ON MARKER **Cornelia Newell**

Death Date: 10/27/1851 Marker Type: Headstone on base

Cond. of Inscription: Decipherable Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Unstable	**If required, level base. Reset elements with cementitious lime mortar**

Conservation Priority: 1

RECOMMENDED TREATMENT

1. Inspect soundness of setting joint of marker to base, if unstable, remove from base.
2. Excavate area around existing base.
3. Align base with adjacent markers and re-set level and plumb.
4. Backfill with tamped gravel and re-grade with existing topsoil
5. If setting joint was unsound, remove failed setting mortar and replace setting pins with stainless pins if necessary.
6. Prime setting surfaces with Acryl 60 diluted 1:3 with water.
7. Re-set marker plumb onto base with cementitious hi-cal lime mortar
8. Remove excess grout and brace marker until cured.

Comments:

Marker# **7M.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA
NAME ON MARKER

n.a.

Death Date: Marker Type: Small Monument

Cond. of Inscription: Illegible Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Unstable	**If required, level base. Reset elements with cementitious lime mortar**

Conservation Priority: 1

RECOMMENDED TREATMENT

1. Inspect soundness of setting joint of marker to base, if unstable, remove from base.
2. Excavate area around existing base.
3. Align base with adjacent markers and re-set level and plumb.
4. Backfill with tamped gravel and re-grade with existing topsoil
5. If setting joint was unsound, remove failed setting mortar and replace setting pins with stainless pins if necessary.
6. Prime setting surfaces with Acryl 60 diluted 1:3 with water.
7. Re-set marker plumb onto base with cementitious hi-cal lime mortar
8. Remove excess grout and brace marker until cured.

Comments:

Marker# **7M.2**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **George Abbey**

Death Date: 4/13/1864 Marker Type: Headstone on base

Cond. of Inscription: Legible Material: Granite

EXISTING CONDITIONS	CONSERVATION STRATEGY
Unstable	**If required, level base.**
Bio-growth	**Reset elements with cementitious lime mortar**
	Treat with D2 Biological solution

Conservation Priority: 1

RECOMMENDED TREATMENT

1. Inspect soundness of setting joint of marker to base, if unstable, remove from base.
2. Excavate area around existing base.
3. Align base with adjacent markers and re-set level and plumb.
4. Backfill with tamped gravel and re-grade with existing topsoil
5. Treat all surfaces with D/2 biological solution and scrub with nylon brushes. Rinse fully with water.
6. If setting joint was unsound, remove failed setting mortar and replace setting pins with stainless pins if necessary.
7. Prime setting surfaces with Acryl 60 diluted 1:3 with water.
8. Re-set marker plumb onto base with cementitious hi-cal lime mortar.
9. Remove excess grout and brace marker until cured.

Comments:

Marker# **7M.3**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Mattie Williams**

Death Date: 9/9/1870 Marker Type: Headstone in base

Cond. of Inscription: Legible Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Unstable	**Investigate soundness of marker setting** **Reset base level**

Conservation Priority: 1

RECOMMENDED TREATMENT

1. If marker is securely set into base, reset base and marker as one unit, aligned with adjacent markers.
2. If maker is loose form base, remove marker from base and reset base unit level and aligned with adjacent markers.
3. Remove any mortar or stone fragments from setting slot and re-set marker with a cement/lime grout (3/2/9) with fine (00-000) sand made fluid with a super plasticizer.
4. Marker plumbed and level, and braced for min. of 3 days.
5. Disturbed areas backfilled with existing topsoil

Comments:

Marker# **7M.4**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **n.a.**

Death Date: Marker Type: Headstone

Cond. of Inscription: Illegible Material: Slate

EXISTING CONDITIONS	CONSERVATION STRATEGY
Tilted	**Reset in ground**
Bio growth	**Clean**

Conservation Priority: 2

RECOMMENDED TREATMENT

1. Carefully excavate marker; extremely tilted markers are hazardous. Remove soil around stone to an appropriate depth, if required, remove stone from ground. Inspect marker for soundness,
2. When excavated to sufficient depth, re-set stone plumb at appropriate height and level onto gravel bed, and align with adjacent markers
3. Backfill area around marker with tamped sand and gravel
4. Re-grade disturbed areas with existing topsoil.
5. Treat all surfaces with D/2 biological solution and scrub with nylon brushes. Rinse fully with water

Comments:

Marker# **8F.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Miles Alexander**

Death Date: 4/10/1806 Marker Type: Headstone

Cond. of Inscription: Partially Decipherable Material: Slate

EXISTING CONDITIONS	CONSERVATION STRATEGY
Delaminating	**Fills voids caused by delaminating slate**

Conservation Priority: 3

RECOMMENDED TREATMENT

1. Flush interior voids with water and remove any lichens and/or debris with hand tools.
2. After full drying, all voids caused by splitting or delaminations at top edge of marker filled with a pigmented Sto Crack Filler using injection syringes and/or trowels. Voids along the lower sides of monument typically left open to allow escape of any water which may enter.
3. Excess crack filler immediately removed with damp sponging.
4. Large voids filled with a pigmented PHLc flowable grout

Comments:

Marker# **8G.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA

NAME ON MARKER **Mary Alexander**

Death Date: 2/21/1820 Marker Type: Headstone

Cond. of Inscription: Legible Material: Slate

EXISTING CONDITIONS	CONSERVATION STRATEGY
Delaminating	**Fills voids caused by delaminating slate**

Conservation Priority: 3

RECOMMENDED TREATMENT

1. Flush interior voids with water and remove any lichens and/or debris with hand tools.
2. After full drying, all voids caused by splitting or delaminations at top edge of marker filled with a pigmented Sto Crack Filler using injection syringes and/or trowels. Voids along the lower sides of monument typically left open to allow escape of any water which may enter.
3. Excess crack filler immediately removed with damp sponging.
4. Large voids filled with a pigmented PHLc flowable grout

Comments:

Marker# **8G.2**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Cynthia Alexander**

Death Date: 9/16/1802 Marker Type: Headstone

Cond. of Inscription: Legible Material: Slate

EXISTING CONDITIONS	CONSERVATION STRATEGY
Delaminating	**Fills voids caused by delaminating slate**

Conservation Priority: 3

RECOMMENDED TREATMENT

1. Flush interior voids with water and remove any lichens and/or debris with hand tools.
2. After full drying, all voids caused by splitting or delaminations at top edge of marker filled with a pigmented Sto Crack Filler using injection syringes and/or trowels. Voids along the lower sides of monument typically left open to allow escape of any water which may enter.
3. Excess crack filler immediately removed with damp sponging.
4. Large voids filled with a pigmented PHLc flowable grout

Comments:

Marker# **8G.3**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA

NAME ON MARKER **Levi Warner**

Death Date: 8/22/1881 Marker Type: Headstone on base

Cond. of Inscription: Legible Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Failed repair	**Attach fragments with structural adhesive** **Reset elements**

Conservation Priority: 2

RECOMMENDED TREATMENT

1. Disassemble elements and remove any previous repair materials and failed mortar from setting surfaces with hand tools.
2. Level in-ground base if necessary. Replace setting pins with threaded stainless pins if required.
3. Attach fragments with structural adhesive (Abatron 55-22), clamped and braced until cured.
4. Fill cracks and losses with RepliCal Marble or Jahn restoration mortar, misted with water and covered for 3 days min.
5. Filled surface areas treated w/ light acid wash, rinsed thoroughly with water.
6. Prime setting surfaces with Acryl 60 diluted 1:3 with water.
7. Re-set elements with 2:1:8 cementitious high cal lime mortar using fine (00 or 000) sand.
8. Remove excess mortar from joints and brace for a min. 5 days

Comments:

Marker# **8I.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA
NAME ON MARKER

Gideon Warner

Death Date: 1/11/1837 Marker Type: Headstone

Cond. of Inscription: Legible/Buried Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Set too low	**Reset into new below grade base**
Possible below grade fracture	

Conservation Priority: 3

RECOMMENDED TREATMENT

1. Inspect marker for soundness. Remove soiling by light brushing with nylon brushes and water. Locate setting area.
2. Excavate setting area for new below grade cast concrete base sized minimum of 12 inches deep, 12 inches greater in thickness and 6 inches wider than the stone. The finished top to be entirely below grade. Align the setting slot (1" deep, ½" wider and thicker than the marker) with adjacent markers.
3. If required, re-square the lower edge of marker with minimal loss
4. After min 3 day cure, remove the setting form and reset stone into slot using a cement/lime grout (3/2/9)
5. Set marker plumb and level, brace for minimum of 5 days.
6. Disturbed areas to be backfilled with tamped sand and gravel, and re-graded with existing topsoil.

Comments:

Marker# **8J.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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Riverside Cemetery Sunderland, MA

NAME ON MARKER **Lizetta Beaman**

Death Date: 11/20/1914 Marker Type: Headstone

Cond. of Inscription: Partially Decipherable Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Marker off base	**Reset elements with mortar**

Conservation Priority: 2

RECOMMENDED TREATMENT

1. Inspect soundness of setting joint of base elements, if unstable, remove from base.
2. Remove any failed setting mortar and replace setting pins with stainless pins if necessary.
3. Prime setting surfaces with Acryl 60 diluted 1:3 with water.
4. Re-set base elements if necessary, and reset marker plumb on-to base with cementitious hi-cal lime mortar 3.2.9 with fine sand. Level as necessary with lead shims
5. Remove excess grout

Comments:

Marker# **8K.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA

NAME ON MARKER **Horace Beaman**

Death Date: 10/1/1908 Marker Type: Headstone on base

Cond. of Inscription: Legible Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Unstable	**If required, level base. Reset elements with cementitious lime mortar**

Conservation Priority: 1

RECOMMENDED TREATMENT

1. Inspect soundness of setting joint of marker to base, if unstable, remove from base.
2. Excavate area around existing base.
3. Align base with adjacent markers and re-set level and plumb.
4. Backfill with tamped gravel and re-grade with existing topsoil
5. If setting joint was unsound, remove failed setting mortar and replace setting pins with stainless pins if necessary.
6. Prime setting surfaces with Acryl 60 diluted 1:3 with water.
7. Re-set marker plumb onto base with cementitious hi-cal lime mortar
8. Remove excess grout and brace marker until cured.

Comments:

Marker# **8K.2**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

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PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA

NAME ON MARKER **Edward Dunklee**

Death Date: 8/1/1884 Marker Type: Headstone in base

Cond. of Inscription: Decipherable Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Unstable	**If required, level base. Reset elements with cementitious lime mortar**

Conservation Priority: 1

RECOMMENDED TREATMENT

1. Remove unstable marker from base and inspect soundness
2. When required, excavate area around existing base and align with adjacent markers and re-set level onto a gravel bed
3. Remove stone fragments and failed mortar from setting slot. A power grinder may be necessary to aid in removal of fragments.
4. When required, re-square the lower edge of the marker with minimal loss using a power grinder.
5. Marker set into setting slot with a cement/lime grout (3/2/9) with fine sand (00 or 000) made fluid with a super plasticizer.
6. Marker plumbed and level, and braced for min. of 5 days.
7. Disturbed areas backfilled with existing topsoil

Comments:

Marker# **8K.3**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA
NAME ON MARKER **n.a.**

Death Date: Marker Type: Headstone on base

Cond. of Inscription: Illegible Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Unstable on exist base	**Probe to evaluate resetting conditions. Possible resetting into new below grade base**

Conservation Priority: 1

RECOMMENDED TREATMENT

1.Carefully excavate marker. Inspect marker/ base for soundness.
2. If original base is sound or adequate below grade length is found for resetting (over 18"), ideally 24", reset marker plumb.
3. If unsound material or less than 18" is found, new below grade cast concrete base will be required. Sized minimum of 12 inches deep, 12 inches greater in thickness and 6 inches wider than the stone. The finished top to be entirely below grade. Align the setting slot (1" deep, ½" wider and thicker than the marker) with adjacent markers.
4. If required, re-square the lower edge of marker with min. loss.
5. After min 3 day cure, remove the setting form and reset marker plumb and level into slot using a cement/lime grout (3/2/9) Brace for minimum of 5 days.
6. Backfill disturbed areas with tamped sand and gravel, and re-grade with existing topsoil.

Comments:

Marker# **8O.1**

CONDITION ASSESSMENT Inspected by: IS Date: **6. 20.2018**

MONUMENT CONSERVATION COLLABORATIVE LLC
PO Box 541, Norfolk, CT 06058 860 307 6695 MCCLLC@gmail.com

Riverside Cemetery Sunderland, MA

NAME ON MARKER **Abbie**

Death Date: Marker Type: Headstone

Cond. of Inscription: Partially Decipherable Material: Marble

EXISTING CONDITIONS	CONSERVATION STRATEGY
Fallen	**Probe to evaluate resetting conditions.** **Possible resetting into new below grade base**

Conservation Priority: 2

RECOMMENDED TREATMENT

1.Carefully excavate marker. Inspect marker/ base for soundness.
2. If original base is sound or adequate below grade length is found for resetting (over 18"), ideally 24", reset marker plumb.
3. If unsound material or less than 18" is found, new below grade cast concrete base will be required. Sized minimum of 12 inches deep, 12 inches greater in thickness and 6 inches wider than the stone. The finished top to be entirely below grade. Align the setting slot (1" deep, ½" wider and thicker than the marker) with adjacent markers.
4. If required, re-square the lower edge of marker with min. loss.
5. After min 3 day cure, remove the setting form and reset marker plumb and level into slot using a cement/lime grout (3/2/9) Brace for minimum of 5 days.
6. Backfill disturbed areas with tamped sand and gravel, and re-grade with existing topsoil.

Comments:

Marker# **8O.2**

BIBLIOGRAPHY

Books

Everts, Louis H., History of the Connecticut Valley in Massachusetts, Volume II. Philadelphia, PA: J. b. Lippincott & Co., 1879.

Hubbard, Arthur W., Ruth C. Warner and Benjamin J. Toczydlowski, History of the Town of Sunderland, Massachusetts, Volume II, 1899 – 1954. Town of Sunderland, Mass.: 1954.

Smith, John Montague, History of the Town of Sunderland, Massachusetts, which originally embraces within its limits the present towns of Montague and Leverett, Volume I, 1673 - 1899. Greenfield, Mass.: E. A. Hall & Co., 1899.

Warner, Charles F., Picturesque Franklin. Northampton, Mass.: Wade, Warner & Co., 1891.

Documents

National Register of Historic Places Nomination for the Sunderland Center Historic District, 2002

Town of Sunderland Annual Reports, 1868 – 2017

Maps

1715. Platt of the Plantation of Swampfield. (Collection of the Massachusetts Archives, #255)

1794. Sunderland, MA, 1794. William Bowman. (Collection of the Massachusetts Archives)

1830. Sunderland, MA, 1830. Josiah Gould. (Collection of the Massachusetts Archives)

1858. Sunderland, Map of Franklin County, MA. H. F. Walling

1871. Sunderland, Atlas of Franklin County, MA. F. W. Beers

1894-95. Sunderland, MA. US Geological Survey

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