ASSESSMENT AND RECOMMENDATIONS FOR THE THOMASVILLE, GEORGIA CEMETERIES

Chicora Research Contribution 485

ASSESSMENT AND RECOMMENDATIONS FOR THE THOMASVILLE, GEORGIA CEMETERIES

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MANAGEMENT SUMMARY

This study focuses on four of the five cemeteries owned and operated by City of Thomasville, Georgia. These include two inactive cemeteries – Old (the original cemetery for the town's early white occupants), Colored or Flipper (the original African American cemetery) and two active cemeteries – Magnolia (the African American cemetery) and Laurel Hill (the white cemetery). A fifth African American cemetery, Peaceful Rest, is only briefly examined since it is the most modern of all the city operated cemeteries.

Although under the care of the city's Public Works Division, which also handles the city's parks, cemeteries are very different from virtually all other types of properties that the city administers.

- They are sacred sites – consecrated within are the remains of loved ones deserving of the utmost of care and respect.

- They are artistic sites, such as sculpture gardens or outdoor museums, representing permanent collections of three-dimensional artifacts requiring the same level of care that museums provide.

- They are archives – storehouses of genealogical information, representing our individual and collective pasts.

- And they are scenic landscapes – like parks or open spaces, but requiring far more focused and specific care.

In sum, cemeteries are social, historic, architectural, and archaeological artifacts. When there is little else physically remaining of a community's earliest history, the local cemetery provides a unique tie to the past that would otherwise be lost.

Therefore, cemeteries require very specific consideration and different care from the other types of open sites found in most communities.

Over the years these four cemeteries have received uneven care. Historic documents have been scattered and lost. The landscape has been inexplicably altered. Markers have been damaged through inappropriate care and management. And the cemeteries have gone through episodes of limited care and maintenance. Most recently, the cemeteries have been cared for by contracted Georgia prisoners. As a result of these years of deferred or inappropriate maintenance, a number of issues – many of them critical and costly – require the Thomasville's immediate attention.

This report evaluates these needs, classifying them into three broad categories:

- Those issues that are so critical – typically reflecting broad administrative issues, health and safety issues, and issues that if delayed will result in significantly greater costs – that require immediate attention during the immediate fiscal or calendar year.

- Those issues that, while significant and reflecting on-going deterioration and concerns, can be spread over the next 2

to 3 years. This allows some budgeting flexibility, but this flexibility should not be misconstrued as a reason to ignore the seriousness of the issues.

- Finally, those issues that represent on-going maintenance and preservation issues. These costs can be spread over the following three to five years. Like the Second Priority issues, this budgetary flexibility should not be interpreted as allowing these issues to slide since further delay will only increase the cost of necessary actions.

Critical first year priorities include:

- Obtaining an adequate and appropriately trained staff for the maintenance of the cemeteries is critical. The city is spending approximately $588/acre/year on the care of its cemeteries. In contrast, the city is spending over twice as much – $1,210/acre/year on its sports fields and parks. Cemeteries are far more complex to care for, require far more training and expertise. The city must appropriate the funds necessary to remedy this situation.

- The Assistant Sexton's position should be advertised and filled immediately. The current sexton is doing a good job, but one individual simply cannot deal with all the cemetery maintenance issues and record keeping necessary.

- The city has virtually no information on its various cemetery properties. We recommend that detailed histories be compiled, either by volunteers or through an outside contract.

- Old and Flipper cemeteries should be mapped and thorough transcriptions collected. Stones in these cemeteries are most vulnerable; in addition, these cemeteries offer the greatest potential for heritage tourism.

- There are a number of trees in all of the cemeteries that require immediate attention. Many must be taken down. Others require extensive pruning. Trees removed from the cemeteries must be replaced.

- The shrubbery at the cemeteries requires extensive rejuvenation pruning by a trained horticulturalist. Those performing future pruning must be adequately trained in the correct process to avoid causing irreparable damage to the plantings.

- We recommend that signage be erected at all of the cemeteries immediately. This signage should include cemetery regulations.

- There are a variety of tasks that require relatively small sums of money, such as the placement of trash cans at Old Cemetery.

- There are a variety of additional tasks that require immediate attention, but which may be accomplished using in-house staff at no additional cost to the city. Included in this category are such issues as formalizing the policy that all decisions affecting the cemetery will be made in the context of the Secretary of the Interior's Standards for Preservation; ensuring that police patrols routinely monitor the cemetery; establishing policies and procedures to report any damage or vandalism at the cemetery; and formalizing the policy that all treatments at the cemetery will be conducted under the direction of a conservator subscribing to the standards of practice and code of ethics of the American Institute for Conservation.

The second priority actions may be spread over three years, but the costs will only increase with time, so we encourage action as soon as funding is available. Included are:

- The boundary fence at Old Cemetery is in critical need of preservation efforts, including repair and painting.
- Repair and paint the plot fences in Old Cemetery.
- Undertake the conservation treatment of the stones in the cemeteries. Since this work will likely need to be to be phased, it should begin as soon as practical.
- There is need for considerable tree work at Laurel Hill Cemetery, including removal of diseased and dead trees, pruning, and replacing those trees that require removal.
- Improving the entrance to Laurel Hill would improve the appearance and character of the cemetery.
- The gazebo in Old Cemetery requires a detailed structure report that can prioritize repair needs and evaluate the damaged foundation.
- There should be landscape improvements, such as the addition of mulch to heavily shaded areas and the replacement of the bahiagrass with centipede at Flipper Cemetery. Although costly, this should reduce the need for frequent mowing.
- We also recommend that cemetery lot prices be increased to at least $350 – this would still represent less than half the cost of lots at nearby commercial cemeteries.

The items listed as third priority are those that can be spread over five years – perhaps extending into FY 2013-2014. These issues, however, are no less significant :

- The historic research gathered concerning the cemeteries should be compiled into heritage tourism pieces promoting the cemeteries.
- The brickwork in the cemeteries, especially Old Cemetery, should receive careful repair.
- The bahiagrass at Old Cemetery should be converted to centipede.
- Landscaping at both Flipper and Laurel Hill should be modified.

Cemetery preservation is an on-going requirement. Failing significant maintenance activities to make up for these years of deferred maintenance, the city can anticipate even more serious deterioration of the historic fabric.

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INTRODUCTION

The Project

In mid-November 2007, Ms. Kha M. Thomas, the Assistant City Manager for Thomasville, Georgia asked Chicora to provide a proposal for the assessment of the city's four historic cemeteries – Old Cemetery, Flipper Cemetery, Laurel Hill, and Magnolia. A proposal was submitted on November 17 and by November 19 plans were underway for a visit scheduled for January 9-11, 2008.

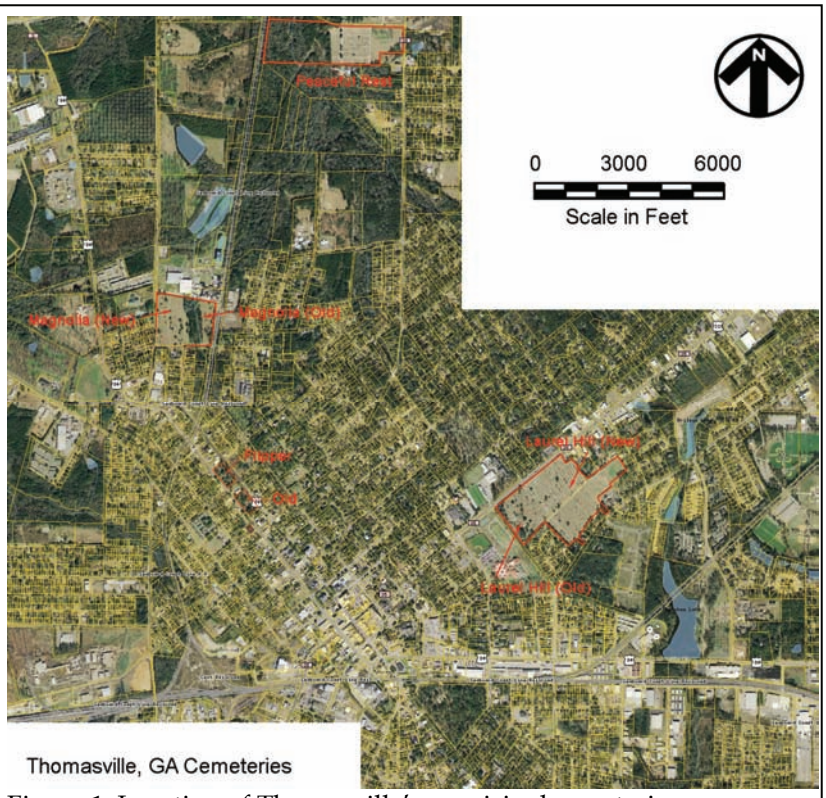


Figure 1. Location of Thomasville's municipal cemeteries.

The assessment was tasked with examining three broad topics:

- The first is an overview of the properties – examining their setting, adjacent properties, vehicular traffic patterns, public use of the properties, and the condition of the hardscape and utilities.

- The second is an examination of the landscape, focusing on issues such as the condition of grass, shrubbery, and trees; evidence of landscape damage or deterioration such as hazardous trees, improperly pruned shrubbery, and grass maintenance; and the landscape character and its relationship to the overall cemetery context.

- The third topic involves the monuments themselves. Although a detailed stone-by-stone assessment was not possible at this stage, we examined the overall condition of the monuments, addressing broad conservation needs and issues.

Our attention was focused on the city's four historic cemeteries – Old Cemetery, used by the community's earliest white inhabitants; Flipper Cemetery (historically called the Colored Cemetery) used by the town's earliest African American population; Laurel Hill Cemetery, used by the white community with the closing of Old Cemetery; and Magnolia Cemetery, used by African American community when the original Colored Cemetery was filled.

Both Laurel Hill and Magnolia have what are loosely termed "old" and "new" sections. Our attention focused on the old sections, although we did examine the entire property in both cases.

There is a fifth municipal cemetery, Peaceful Rest, a relatively new African American cemetery. Only a relatively small portion of this cemetery has actually been developed. This was not included in the assessment, but we did spend a brief amount of time at this property to determine if issues observed at other cemeteries were also present in this newest addition.

This somewhat abbreviated report provides the results of our examinations and recommendations for the long-term preservation of the properties.

Table 1.
Secretary of the Interior's Standards for Preservation

1. A property will be used as it was historically, or be given a new use that maximizes the retention of distinctive materials, features, spaces, and spatial relationships. Where a treatment and use have not been identified, a property will be protected and, if necessary, stabilized until additional work may be undertaken.

2. The historic character of a property will be retained and preserved. The replacement of intact or repairable historic materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.

3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate, and conserve existing historic materials and features will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.

4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.

5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

6. The existing condition of historic features will be evaluated to determine the appropriate level of intervention needed. Where the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material will match the old in composition, design, color, and texture.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

Preservation Fundamentals

Preservation is not an especially difficult concept to grasp, although the key principles are not always clearly articulated. The fundamental concepts are well presented in the Secretary of the Interior's Standards for Preservation (see Table 1).

This document reminds us – at least at a general level – of what we need to be thinking about as we begin a cemetery preservation plan. Those responsible for the care of the Thomasville's historic cemeteries should be intimately familiar with the eight critical issues it outlines.

For example, all other factors being equal, a cemetery should be used as a cemetery – not to walk dogs, not as a playground, and not as a park. And until we are able to do what needs to be done, it is our responsibility to make certain that the site is preserved – it must not be allowed to suffer damage under our watch.

We must work diligently to understand – and retain – the historic character of the cemetery. In other words, we must look at the cemetery with a new vision and ask ourselves, "what gives this cemetery its unique, historical

character?" Perhaps it is the landscape, the old and stately trees, the large boxwoods, the magnificent arborvitae. Perhaps it is the very large proportion of complex monuments, or the exceptional slate markers. It may simply be that it is a unique representation of a cemetery type rarely seen in a rapidly developing urban setting. Whatever it is, we become the guardians responsible for making certain those elements are protected and enhanced (whether they are particularly appealing to us or not).

Whatever conservation efforts are necessary must be done to the highest professional standards; these conservation efforts must be physically and visually compatible with the original materials; these conservation efforts must not seek to mislead the public into thinking that repairs are original work; and the conservation efforts must be documented for future generations. If an agency doesn't have a conservator or if the caregivers aren't conservators, it is our responsibility as the stewards of the property to retain a conservator appropriately trained and subscribing to the Code of Ethics and Standards of Practice of the American Institute for Conservation (AIC).

The Secretary of the Interior reminds us that each and every cemetery has evolved and represents different styles and forms. It is our responsibility to care for all of these modifications and not seek to create a "Disney-land" version of the cemetery, tearing out features that don't fit into our concept of what the cemetery "ought" to look like.

Likewise, we are reminded that there will be designs, monuments, and other features that characterize our cemetery – and we are responsible for identifying these items and ensuring their preservation. We must be circumspect in any modifications, ensuring that we are not destroying what we seek to protect.

Before acting, we are required as good and careful stewards to explore and evaluate the property, determining exactly what level of intervention – what level of conservation – what level of tree pruning -- is actually necessary. And where it is necessary to introduce new materials – perhaps a pathway – into the cemetery, we must do our best to make certain these new elements are not only absolutely necessary, but also match the old elements in composition, design, color, and texture. In other words, if the cemetery has brick pathways, we would be failing as good stewards if we allowed concrete pathways – especially if our only justification was because they were less expensive.

Where conservation treatments are necessary, the Secretary of the Interior tells us that they must be the gentlest possible. However you phrase it – less is more – think smart, not strong – we have an obligation to make certain that no harm comes to the resource while under our care. And again, one of the easiest ways to comply is to make certain that caregivers retain a conservator subscribing to the ethics and standards of the American Institute for Conservation.

Finally, we must also recognize that the cemetery is not just a collection of monuments and the associated landscape – the cemetery is also an archaeological resource. We must be constantly thinking about how our efforts – whether to repair a monument, put in a parking lot, or resurface a path – will affect the archaeological resources – archaeological resources that just happen to be the remains of people buried at the cemetery by their loved ones.

These are especially critical issues for all cemeteries since they have often been violated over the course of the cemetery development and use. People often do not document modifications or even contemplate how those modifications may affect the historic character of their cemetery. In fact, caregivers often do not even recognize that the cemetery under their care may be considered historic.

Our first recommendation, therefore, is that the caregivers become thoroughly familiar with the Secretary of the Interior's Standards for Preservation and reaffirm their responsibility as stewards of these historical resources to ensure that future preservation efforts are consistent with sound preservation principals and practices. These standards must become "talking-points" for all future discussions regarding the cemeteries.

Factors Affecting the Landscape Character

Thomasville is the county seat of Thomas County, situated at the southern edge of Georgia, bordering Florida. It is situated in the Lower Coastal Plain Province and is part of the Tifton Upland District. Nevertheless, the topography is generally level with elevations typically falling between 250 and 280 feet AMSL. Streams are sluggish because of their low gradients.

The soils in the uplands are generally sands or loams with sandy or clayey subsoils. The Old, Flipper, and Laurel Hill cemeteries are dominated by a single soil, the Tifton-Urban land complex. The Tifton soils are formed in loamy sediments of marine origin. They are low in natural fertility, well drained, and moderately permeable. The typical profile consists of about 0.9 foot of dark grayish brown loamy sand topsoil overlying a strong brown fine sandy loam that grades into a yellowish brown sandy clay loam at about 3.3 feet. Sandy clays continue to at least 5.4 feet.

The Tifton soils also compose all of Magnolia Cemetery except for the Alapaha loamy sands found in the drainage that bisects the cemetery. These are poorly drained soils with moderately slow permeability.

The greatest diversity is found in Peaceful Rest Cemetery, although even there nearly two-thirds of the acreage consists of a single soil – Fuquay loamy sands. These are deep, well drained soils that have moderate permeability in the upper horizon and slow permeability in the lower part. The Fuquay soils were developed in sandy to loamy marine sediments on broad upland ridges and are typical of the southern coastal plain.

The bulk of the remaining soils are Tifton, although very small areas of Alapaha loamy sands and Camegie sandy loams are also present.

Thomasville's climate is classified as humid subtropical, with the city experiencing mild winters and humid summers. The average high temperature for the summer months is 91°F; the average low temperature is 70°F. The average high temperature for the winter months is 63°F; the average low temperature is 40°F.

The average growing season is 281 days and Figure 2 shows Thomasville to be within USDA plant hardiness zone 8B, where the

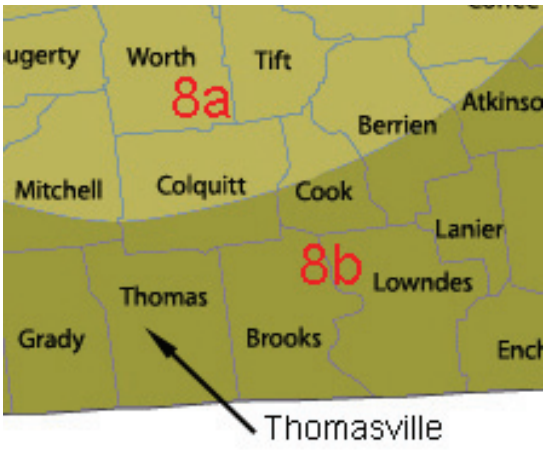


Figure 2. USDA plant hardiness zones in the Thomas County area.

average annual minimum temperature is 15 to 20°F.

The annual Thomasville precipitation is about 51 inches, with about 30% normally occurring between June and August. The wettest month is typically July with about 6 inches of rainfall. There is, however, considerable variation in precipitation over the past 100 years, with periods of noticeable drought (Figure 3). Generally wet weather was typical from about 2002 through 2005, but has been

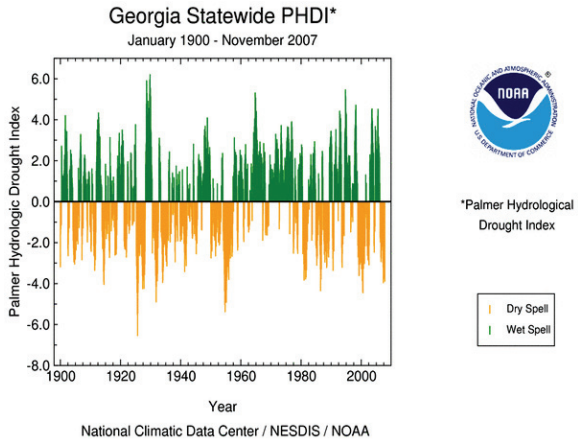


Figure 3. Statewide drought index.

replaced by a deepening drought over the past several years. Currently much of Georgia is classified as in a drought, with Thomasville identified as in stage D-4 drought (exceptional; this is indicative of a 1 in 50 year drought and is based on more than 30 different indices).

General Management Issues

The city's cemeteries are managed by the Thomasville Public Works Division. Until several years ago there was a dedicated cemetery crew; today the approximately 170 acres of cemeteries are managed by one individual, a sexton, and one assistant. Currently this position is vacant and we did not see it advertised on the city's Human Resources on-line job listing. This position should be filled and Appendix 2 provides a recommended job description.

The bulk of cemetery maintenance is performed by prisoners under an agreement with the Georgia Department of Corrections. This agreement provides 12 inmates, but supervision and management must be provided by Public Works. It is not possible to determine the annual budget for cemetery maintenance, although it is likely no greater than $100,000 (including the salary of the single dedicated employee and the $37,500 prison contract). **This amounts to approximately $588/acre/year.**

In contrast, the City devotes $300,000 through a competitive bid contract to its 248 acres of parks. **This amounts to $1,210/acre/year** or over twice as much spent on the care of parks and soccer fields as is spent on the upkeep of the cemeteries. This disparity – and lower per acre funding – is at least partially responsible for the maintenance issues observed at the cemeteries. Additional funding to cemetery maintenance is a critical issue.

The current cost of a single grave plot is $250. The cost of a cemetery lot (containing 4 grave plots) is $800. This is markedly below the free market rates in surrounding communities. For example, at Sunset Memorial Gardens in Thomasville, lots are $495 – twice as much as charged by the city. In nearby Valdosta, at McLane Riverview Memorial Gardens, plots cost between $550 and $875.

Figure 4. Example of improperly backfilled grave. Although only three months old, the grave is already collapsing. This is disrespectful to the family and a safety hazard.

Thus, the cemetery plot costs are significantly subsidized by the city. We

Figure 5. Open graves are safety hazards and should be prohibited.

recommend that the city's charge for a grave plot be increased to $350. This is still 30% less than the least expensive local rate and the additional funding generated by the increase can easily be justified given the expansion of landscape services proposed elsewhere in this study.

The city does not open or close graves – this service is provided by the funeral homes. While this is satisfactory and it reduces the overhead and liability of the city, the city has failed to adequately inspect the work done by the funeral homes. We found numerous examples of poorly backfilled plots (see Figure 4). One plot at Peaceful Rest had been opened and was not covered – presenting a hazard to the public (Figure 5). Monuments are being set with inadequate foundations and this practice will, over time, create the need for the city to spend considerable funds in repairing damage (Figure 6).

The City of Thomasville should begin inspecting each gravesite to ensure the correct plot has been opened and is safe. After the burial, the plot should be inspected to ensure that it is correctly backfilled and compacted. The city should develop specifications requiring appropriate foundations – and periodically inspect to ensure that the foundations are being prepared. The work of monument companies should be inspected after the work is completed.

Recommendations

The City of Thomasville and especially the cemetery caregivers should become familiar with the Secretary of Interior's Standards for Preservation.

All decisions regarding modifications, alterations, additions, or other actions affecting the city's four historic

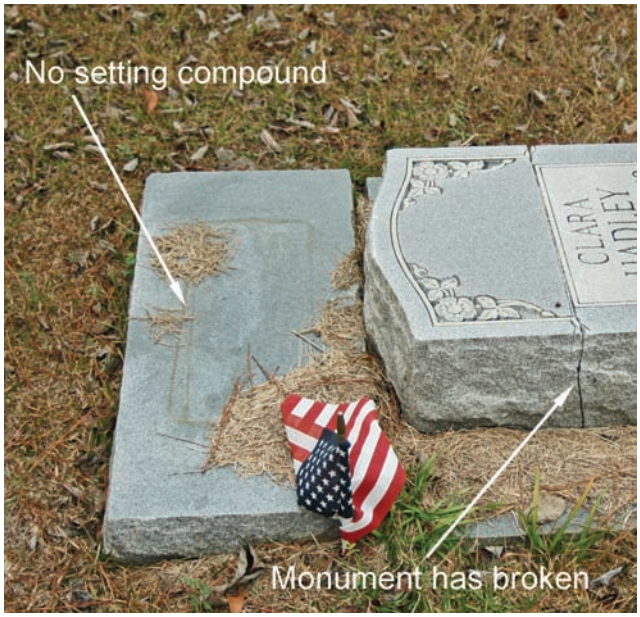


Figure 6. This granite die on base monument was set without using setting compound. This allowed the die to be easily displaced – and as it fell it broke. Its repair will be a significant expense ($600) that could have been prevented using $5 worth of setting compound.

cemeteries should be carefully evaluated against the Secretary of the Interior's Standards for Preservation.

All conservation (i.e., repair work) of monuments or fences should be conducted by conservators who subscribe to the American Institute for Conservation of Artistic and Historic Works (AIC) Code of Ethics and Standards of Conduct.

Special attention should be paid to the current drought conditions when attempting to restore the cemeteries' landscapes.

The currently unfilled assistant sexton position should be immediately filled.

The cemetery maintenance budget must be increased in order to provide appropriate, year-round maintenance at a professional level.

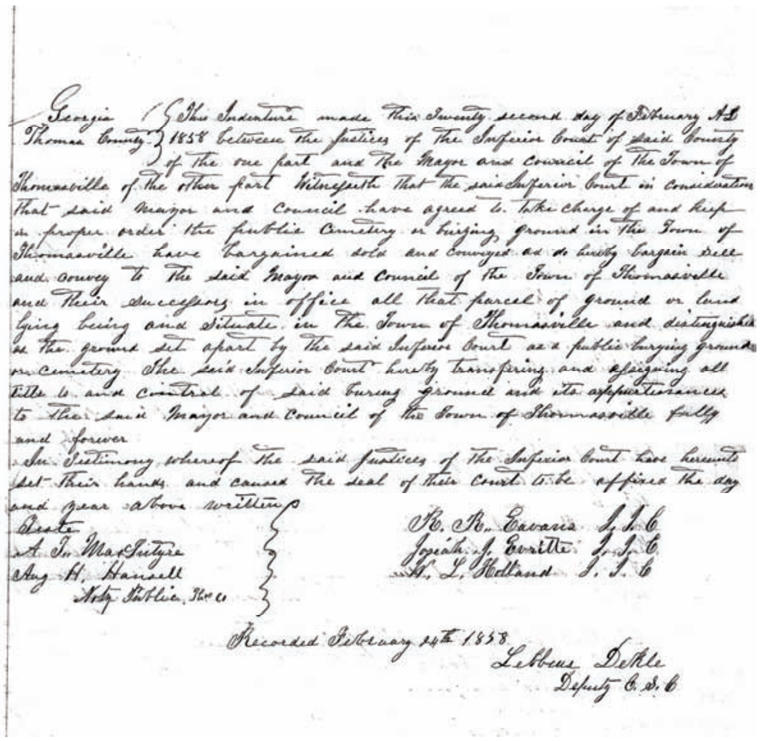
The cost of cemetery lots should be increased to $350. This continues to represent a steep discount over private cemetery lots. The additional revenue is necessary to permit significant landscape improvements.

The City of Thomasville should begin inspecting grave excavations for safety and correct location. After backfilling the City should again inspect the plot to ensure the backfilling is satisfactory.

The City should establish specifications for the setting of monuments and should inspect all work to ensure that it meets these specifications.

HISTORIC SYNOPSIS OF THE CITY'S CEMETERIES

This assessment did not include historical research, although as we became more involved in the project we realized that a historical synopsis of the city's cemeteries was a critical need – not only to better understand the development of the different parcels, but also to provide meaningful contributions to the city's excellent historical brochure and walking tour.



Georgia / Thomas County } This Indenture made this Twenty second day of February AD 1858 between the Justices of the Inferior Court of said County of the one part and the Mayor and Council of the Town of Thomasville of the other part Witnesseth that the said Inferior Court in consideration that said Mayor and Council have agreed to take charge of and keep in proper order the public Cemetery or burying ground in the Town of Thomasville have bargained sold and conveyed and do hereby bargain sell and convey to the said Mayor and Council of the Town of Thomasville and their successors in office all that parcel of ground or land lying being and situate in the Town of Thomasville and distinguished as the ground set apart by the said Inferior Court as a public burying ground or cemetery the said Inferior Court hereby transferring and assigning all title to and control of said burying ground and its appurtenances to the said Mayor and Council of the Town of Thomasville fully and forever

In Testimony whereof the said Justices of the Inferior Court have hereunto set their hands and caused the seal of their Court to be affixed the day and year above written

Teste
A. T. MacIntyre
Aug H. Hansell
Noty Public, Thos Co

R. R. Evans J. I. C
Josiah J. Everitt J. I. C
H. L. Holland J. I. C

Recorded February 24th 1858
Lebbeus Dekle
Deputy C. S. C

Figure 7. Deed conveying the public burying grounds to the mayor and council of Thomasville in 1858.

The city has no historical records for any of the properties and the best estimation is that while Old Cemetery began in the mid-1800s (there is a sign at the cemetery indicating that it began in 1842), Flipper Cemetery is thought to have begun in the late nineteenth century. This, of course, leaves unaddressed the burial location of Thomasville's African American citizens during the antebellum period.

Laurel Hill is ascribed a mid-nineteenth century date, while the African American Magnolia Cemetery is thought to have opened in the late 1800s.

This uncertainty alone demonstrates the need for a thorough examination of the historical records to determine when the various tracts were obtained. For example, we quickly searched the Thomas County Clerk of Court records for the Old Cemetery. We found that on February 22, 1858 the "Justices of the Inferior Court" of Thomas County deeded a plot of land in Thomasville "set apart by the said Inferior Court as a public burying ground or cemetery" to the Mayor and Town Council (Thomas County Clerk of Court, DB H, pg. 335; Figure 7).

Georgia's inferior courts were established in 1789. One of their functions was to handle various administrative matters, such as handling the construction of public buildings, levying taxes, and overseeing the maintenance of county roads. It appears that the Inferior Court established the cemetery at some earlier time and, in 1858, disposed of the property to the town. We have not identified the circumstances

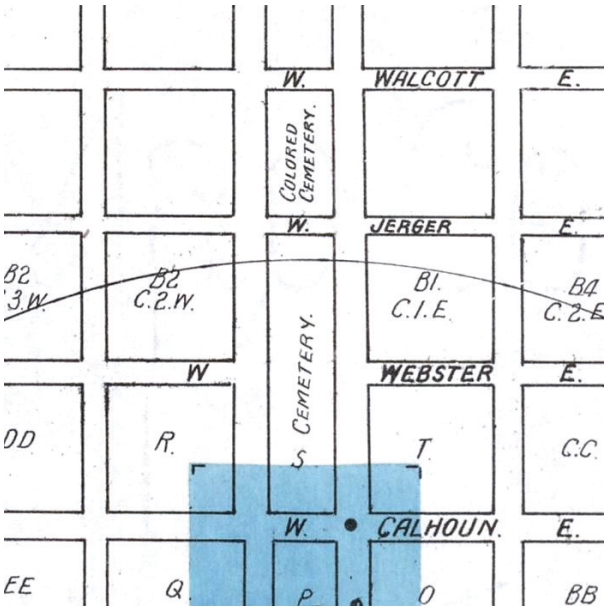


Figure 8. 1900 Sanborn map of Thomasville showing the original white and African American cemeteries.

under which the inferior court originally established the cemetery.

The 1900 Sanborn Fire Insurance map, however, indicates that both Old and Flipper cemeteries were present, although known by the names "cemetery" and "colored cemetery" respectively. Although the index sheet shows the white cemetery taking up the entire block, the more detailed sheet reveals that the south end of the block included the "Colored Baptist Church" – suggesting that by the turn of the century this part of Thomasville was largely African American. The 1912 Sanborn map shows a dwelling on the southeast corner of Flipper and a grocery store at the north end of the Old Cemetery. The presence of a structure in Flipper is of special interest.

By the 1920 Sanborn maps both the white and black cemeteries were called "old" – "Old Cemetery" and "Old Colored Cemetery" – suggesting that they had not been used in a number of years. A shed is shown in the middle of Old Cemetery. The Sanborn map shows Laurel Hill at the end of its coverage. Curiously, Magnolia Cemetery is not shown, although the road system may have been in place and a nearby neighborhood was known as "Magnolia" (Figure 9). Regardless, we know from 1919 Georgia death certificates that both Laurel Hill and Magnolia were receiving burials in that year.

Clearly there is much that needs to be researched concerning all of the city's cemeteries – when did they begin, what is the record of their land transactions, how did the expansions come about? These questions, and others, can only be answered through carefully examining the deeds at the Thomas County Courthouse, exploring local newspapers (such as the early twentieth century *Thomasville Press* or the mid- to late-nineteenth century *Southern Enterprise*), and examining other locally available historic sources.

Recommendations

Additional historical research should be undertaken to identify crucial events in the

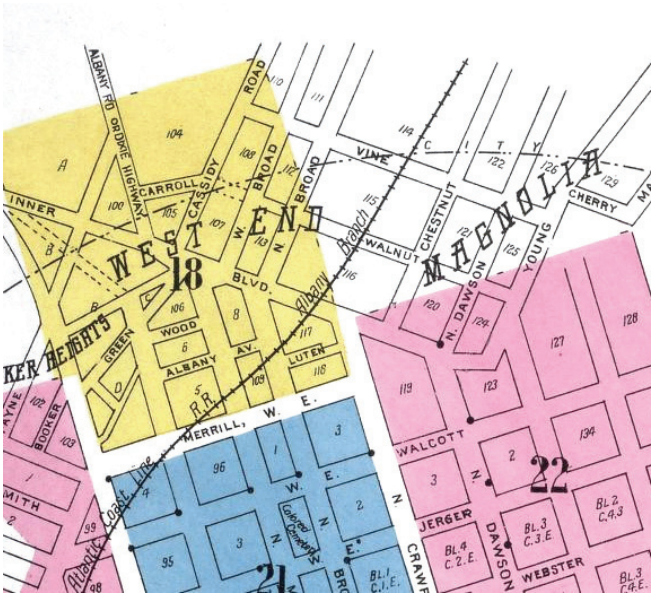


Figure 9. Vicinity of Magnolia Cemetery in 1920 (northeast of the intersection of Cassidy and Vine; Blocks 110, 111, and 114).

histories of the city's five cemeteries. This research may be conducted by a hired consultant such as Chicora or by local volunteers. Regardless, the research should be broad and should not focus on the "rich and famous."

This initial historical research can subsequently be expanded to include social history, such as interesting stories and famous people, but the research must be balanced to include both white and black residents of Thomasville in equal numbers.

The goal of the research is to assist in the development of historical tourism brochures and information.

OLD CEMETERY

The Cemetery Location, Setting, and Context

This cemetery was situated at the northern edge of Thomasville's nineteenth century downtown core – outside the city proper. Today it is within a narrow corridor of general commercial activity flanked to the northeast by a low density residential area and to the southwest by medium to high density residential property. It is situated at the southern edge of the Dawson Street Residential Historic District (entered onto the National Register of Historic Places in 1984).

Figure 10. Aerial image of the Old Cemetery.

The 2.18 acre cemetery is bounded by North Broad Street to the northeast and North Madison Street to the southwest. It is identified as parcel 002-006002 by Thomas County. To the northwest is property owned by the American Legion Post 31, while to the southeast are two small single family lots. Surrounding property is mixed, including an AME church and a used auto lot. There is a bordering sidewalk to the southwest, but only a grassed strip to the northeast. The cemetery is surrounded by a heavy iron fence on its northeast and southwest sides. Entrance is by way of a pedestrian gate off Madison at a marked walking tour location, as well as a double gate off Broad Street.

Over 60% of the area is occupied by African Americans with a median family income of under $30,000 (the median income for Thomasville as a whole is $28,900 and the community is 55.4% African American). The unemployment rate is high at 7.1%. While nearly three-quarters of the population has a high school education, only a quarter have a college degree.

Both property crimes and violent crimes in the Thomasville area are higher than Georgia's average (2003 data).

The cemetery setting is distinctly urban, being visually dominated by the adjacent roads and commercial buildings. The setting is somewhat softened by the relatively dense tree cover not only in the

Figure 11. View of Old Cemetery along North Broad Street.

cemetery, but also on the noncommercial lots. In spite of this, as will be discussed in a following section, much of the cemetery's vegetation is in poor health and will need to be removed. Although replanting is critical, this will affect the character of the landscape.

The topography is level, with the cemetery at essentially the same elevation as the surrounding streets. The elevation is about 270 feet above mean sea level (AMSL) and the cemetery is situated at the northern edge of a ridge bisected by Madison Street.

The cemetery is also dominated by relatively dense brickwork. Unfortunately, it too is in very poor condition – in fact much is in ruinous condition. This compromises the feeling of the cemetery.

Access Issues

Circulation

There are no roads within Old Cemetery, nor are any needed given that the cemetery is inactive and no longer receiving burials. As previously discussed, the cemetery is flanked by two major roads –North Madison to the southwest and North Broad to the northeast. Of the two, Broad seems somewhat less busy (based only on our observations – we did not consult traffic studies) and less commercial. Nevertheless, the city's walking tour takes pedestrians down Madison since only it has sidewalks.

The walking tour stops at the cemetery's northwest corner, the location of a pedestrian gate. There is no signage and the gate takes you into a poorly maintained area littered with trash along the American Legion fence row.

Figure 12. The entrance off Madison Street is the primary stopping point for walking tours. The area is overgrown and littered with trash – presenting a poor first impression.

There are no pathways in the cemetery. This is historically appropriate and we do not recommend that any be added. However, absent a brochure, the walking visitor has no clear direction and is disoriented in the cemetery.

Entrance off Broad Street, where parking is easier for motoring visitors, is by way of a double gate with a small sign naming the cemetery and indicating a founding date. Unfortunately, the first view from this entrance is a small Confederate memorial that features a 3-foot tall cast concrete soldier surrounded by minimally maintained landscaping. This entrance does not convey the beauty or importance of the cemetery and the memorial is out of place. Thomasville, like many southern towns, has a downtown Confederate memorial already and this display, if thought necessary, should be integrated with the historic memorial.

Care must be taken to avoid inappropriate pathways created by visitors. The potential for this problem increases with visitation and heritage tourism. Brochures and walking tours may also encourage visitors to take the same path to monuments, creating worn areas. Therefore, maintenance must be aware of tourism and visitation issues. Worn turf areas will need to be identified and remediated before they become a serious problem.

Universal Access

The ADA or the Rehabilitation Act of 1973 is generally not interpreted to apply to cemeteries by the Department of Justice. Old Cemetery is relatively level and while the grassed areas are not easily navigated by wheelchairs, the cemetery poses fewer obstacles than many.

Reasonable accommodation can also be provided by having photographs and other information on-line or in print materials. The sidewalk along Madison provides additional opportunities for easier visual access.

Figure 13. Examples of gates in Old Cemetery that are susceptible to easy theft.

Security Issues

Vandalism

The city does not report any significant vandalism issues at Old Cemetery and we observed no indications of recent vandalism during this assessment.

The cemetery, however, is not routinely patrolled by police or city maintenance workers. The gates cannot be closed after hours, nor is there any signage concerning regulations.

The city does not have any established procedure to identify and respond to vandalism, should it occur. We recommend that a procedure be established. Critical elements include:

- Periodic inspections at a level to note changes to monuments or other problems,
- A procedure to document this problem, and
- Responses that involve, as appropriate, criminal investigation and repair.

Figure 14. Examples of alcohol containers in Old Cemetery.

Hardening Targets

Much of the iron work in the cemetery is unique and beautiful. It would command very high prices among those collecting and selling this type of material. Many of the gates (see Figure 13) are unsecured and present easy targets for theft.

We strongly recommend that all gates be secured. It is a simple maintenance step to use woven stainless steel wire to secure gates to their hinge posts. This allows the gate to open and close, but makes it considerably more difficult to lift the gate off its hinges and steal it. The per gate cost is less than $20 and the time involved is about 15 minutes each.

Inappropriate Cemetery Uses

Discarded alcohol containers were found both openly discarded and also "stashed" throughout the cemetery. This open consumption of alcohol will discourage visitors and the litter presents a very poor impression.

A more significant presence of city maintenance workers, coupled with a more aggressive police presence, is needed to curb this problem.

Inappropriate use of the cemetery must be discouraged. City Code Section 11-4 Public

Figure 15. Dense, overgrown vegetation such as this provides hiding places for the homeless, drug users, and criminals – it should be carefully pruned.

drunkenness; consumption of alcoholic beverages on municipal property prohibits the consumption or possession of alcohol on city property, including the cemetery. City Code Section 11-18 Littering public property or waters prohibited, makes the discard of these materials in the cemetery illegal. Other city codes deal with both criminal trespass and injury or defacing public property. There are therefore ample means for the city to reduce this problem.

It is also important for the city to carefully prune shrubbery in the cemetery since the vegetation – especially along the north and south fence rows – offer areas for hiding. This presents a significant threat to legitimate visitors.

Fixtures and Furnishings

Confederate Memorial

We have previously mentioned that the small memorial recently added to the cemetery is out of scale and place. It has likely also been placed on top of unmarked graves.

Thomasville has a Confederate memorial, dedicated in 1879, that today is found on the north side of the courthouse. If some additional memorial is necessary, it would perhaps be better to link the two, removing this feature from the cemetery.

If groups wish to participate in the restoration of the cemetery, this report outlines a number of very needy projects that would benefit greatly from financial support.

Plot Iron Fences

There are numerous plot fences in the Old Cemetery. These are significant resources, characteristic of the Rural Cemetery Movement (although found in a town/city cemetery) and are critical components of the cemetery landscape. Consequently, they deserve special care and attention.

Figure 16. Damaged connectors on a plot fence. Note also the lack of a protective coating.

Figure 17. Although most of this fence is now missing, with appropriate repairs the ironwork can still contribute to the cemetery landscape.

These fences, however, are in various states of deterioration and several require immediate attention. Problems include collapse of fence supports, corrosion and failure of various anchoring materials, failure of section connectors on line and corner posts, incorrect previous repairs, and failure of coatings leading to extensive corrosion. In spite of these problems, many fences in the Old Cemetery can be rehabilitated, ensuring that they continue to contribute to the cemetery landscape. Even those with more significant loses can be stabilized so they, too, contribute to the overall interpretation of the cemetery.

There were several situations where fence parts have been allowed to simple lay in or around the plot. This invites theft or souvenir collecting, resulting in the loss of historic fabric. The City should collect, label, and store all such individual parts until such time as repairs can be made – the individual parts should never be allowed to remain loose in or around the plots. Alternatively, it would be acceptable to use woven stainless steel wire to attach the parts discreetly to their respective fences – securing the parts on-site.

While repairs are needed, the primary recommendation is that the fences be painted – this will improve their appearance and will reduce future conservation problems.

Painting of Plot Fences

Absent historic documentation that suggests otherwise, flat or semi-gloss black is an appropriate fence color. Other fence colors that have been documented in cemeteries include a forest (or dark) green and white.

Sandblasting the ironwork should be prohibited – it is unnecessarily aggressive, has the potential to damage surrounding stone, and can result in unnecessary lead

Figure 18. Example of heavy corrosion on the cemetery's boundary

contamination. An alternative to such an approach is minimal wire brushing to release obvious scale and corrosion, then the use of a rust converter as a primer. Of the three that were successfully tested by the Canadian Conservation Center, Rust-Oleum's Rust Reformer is the least expensive and most readily available.

Figure 19. Damaged fence section. This requires disassembly, straightening, and replacement. Note also the sign supports holding up the fence.

We recommend one or two coats of the Rust Reformer. These can be applied over stable corrosion and the product does an excellent job of converting the corrosion into a stable base for a top coat of alkyd paint. A single coat is adequate, but it should not be applied thickly, as thick coats hide detail, cure poorly, and will often prematurely fail. It is critical that all parts be painted – meaning that special attention must be paid to undersides and crevices. It is not adequate to simply swipe the brush under the fence rails, hoping that they receive paint – it is necessary to visually ensure adequate coverage.

Tarps must be used to protect vegetation and adjacent stones from splatter. This is even more critical if airless sprayers are used.

This maintenance program will significantly improve the appearance of the ironwork in the cemetery and will help prevent additional corrosion and deterioration of the various fence components.

Cemetery Boundary Fence

The only property with a boundary fence of historic fabric is Old Cemetery. There the Madison and Broad street frontages are bordered by a very heavy wrought fence that appears to date from the late nineteenth century. This fence is a very significant landscape component and, like the plot fences, its care and retention are critical maintenance issues.

Figure 20. Boundary fence gate supported by bricks and wire.

Unfortunately, sections of this fence are in poor condition and the City must devote immediate attention to its repair.

Figure 21. Tree that has grown into and displaced the boundary fence.

- Paint on all sections of the fence is failing or has failed some time ago, resulting in some areas of extensive corrosion. The fence should be repainted immediately, following instructions provided above for plot fences. There are a number of areas where caulking with an elastomeric product is required to prevent water intrusion (silicone caulks should not be used).

- Fence supports throughout its length have failed and the city has supported the fence using sign posts and wire. Although this did no additional damage to the fence, it detracts from its aesthetics and does not represent an appropriate repair. Supports should be evaluated and repairs made as needed. The sign supports should be removed.

- In numerous areas supports have failed and the fence is held up using wire and bricks. This, too, detracts from the beauty and dignity of the cemetery. Appropriate repairs would allow the bricks to be removed and the fence to again be a beautiful addition to the cemetery landscape.

- Welding, if performed in a workmanship manner that ensures continuous (not spot) welds ground smooth, is acceptable where little or no expansion or contraction of the iron is anticipated. Where there were originally slip joints, however, welding is inappropriate since it will create stresses that can cause additional damage. For these areas it is necessary to infill the fabric and recreate slip joints that allow movement.

- One tree is seriously impacting the fence along Broad Street. The tree is likely a historic specimen. Its health should be evaluated by a certified arborist and a decision made on whether the tree will be removed and the fence reset or to leave the imbedded section until such time as the tree requires replacement.

Given the significance of the fence, the city should place its repair and maintenance as a very high priority. We understand that it may be necessary to spread the work over several years.

Other Lot Amenities

We identified no other lot amenities, such as benches, vases, or grave surrounds. Only one deteriorated trellis was observed.

Often these lot amenities pose significant maintenance issues. Benches, in particular, can be a significant problem in urban settings since they may attract the homeless and discourage legitimate use of the cemetery. We typically discourage the installation of amenities such as benches, water fountains, and restrooms.

Landscape Maintenance

Staffing Levels and Training

Appendix 2 provides details on our recommended level of staffing. It is worth noting that the city is currently understaffed and the use of untrained prisoners fails to provide the level of care the cemeteries deserve. Appendix 2 provides detailed information regarding training and expected duties.

Cemetery Trees

Our examination of the trees in Old Cemetery revealed overall poor health, with many trees requiring immediate attention. All tree care should comply with ANSI A300 (Part 1) - 2001 standards and the ISA standards of practice.

Pruning must be done by individuals trained in arboriculture and having clear knowledge of ANSI A300 (Part 1). The procedures and techniques are difficult; the decisions concerning what limbs to prune and how to best shape the tree are acquired only through both a knowledge of tree biology and experience. Effective safe pruning cannot be accomplished by untrained individuals. *We strongly recommend that the work be performed by an ISA Certified Arborist, preferably one who is also an ISA Certified Tree Worker/Climber Specialist.* Under no circumstances are tree climbers (hooks, spikes, gaffs) to be worn while ascending, descending, or working in trees to be pruned.

After this initial pruning the trees at Old Cemetery should be inspected by an ISA Certified Arborist every 5 years and after any severe weather event (any storm with winds in excess of 55 miles an hour or any winter ice storm).

If removal of a tree is deemed necessary an evaluation should be made concerning the need for an ISA Certified Tree Worker/Climber Specialist. If the tree is small to medium in size (perhaps under 6-8 inches dbh) and can be removed without endangering any monuments, fences, or walls, then it may be suitable for in-house removal.

If the tree is larger than 8-inches dbh or it will need to be topped and removed in sections, then it is critical that an ISA Certified Tree Worker/Climber be retained. Any effort to remove such trees in house will pose a significant risk to the cemetery landscape.

Figure 22. Example of a badly diseased tree that should be immediately removed as both a hazard to the public and stones.

During removals the trunk should be cut as close to the ground as possible, leaving the stump in place to decay naturally. No chemical additives should be used to hasten decay, although it is acceptable to paint an herbicide on the stump if it is a tree that will

Figure 23. This dogwood, planted in full sun, is diseased and should be removed.

promote suckers. Plywood shelters or timber cribbing may be necessary to protect stones and monuments during removals.

We estimate that there are about 64 trees on the property.

Of these only 16 (25%) are healthy and require only minimal pruning. This would be characterized as thinning. Thinning is a technique of pruning that removes selected branches to increase light and air movement through the crown. This also decreases weight on heavy branches. The natural shape of the tree is retained and its overall health is improved. Not more than 25% of the crown should be removed during an annual growing season.

An additional 24 trees (37%) require pruning of dead or diseased limbs, but the tree is otherwise in satisfactory condition. This would be characterized as clean pruning – pruning to remove one or more dead, diseased and/or broken branches.

Three trees are dead or so severely diseased that they must be removed.

An additional 15 trees are deemed to be either inappropriate species or are situated in inappropriate locations. They should be removed before they become more significant problems.

Inappropriate species are problem trees; trees that pose significant maintenance issues. These include trees that produce dense shade (causing problems with the turfgrass); trees that exhibit suckers or surface roots (also causing turfgrass problems, e.g., beech, honeylocust, linden, poplar, and willow); trees that drop large quantities of leaves, seeds, or sap (such as ash, black cherry, catalpa, ginko, horsechestnut, mulberry, and sweetgum); and trees that are especially weak or vulnerable to wind or ice damage (such as ash, black cherry, pine, poplar, red maple, silver maple, tuliptree, willow, and white ash).

Sometimes, however, otherwise appropriate trees can be planted inappropriately. For example, a dogwood, which is an understory tree, should not be planted in an open area with direct sun. The dogwood's health will decline and the tree will fail to thrive. Unfortunately, we found many dogwoods in Old Cemetery (and the other cemeteries) planted in inappropriate locations.

The smaller trees (3-7) can likely be safely removed by in-house crews. The larger trees (4-8) should be removed by an ISA Certified Tree Worker/Climber Specialist.

The removal of 18 trees will noticeably alter the cemetery landscape. Unfortunately, there is no alternative given the problems faced in the cemetery. It is good practice to plant a

new tree for every tree removed. In this case we recommend replacing about nine trees.

While there are no perfect trees, cemetery landscapes were historically dominated by large deciduous trees, although evergreens such as cedar are also very common. They provide a distinctly inviting image for visitors and passersby. These trees also provide some visual separation from adjacent buildings – especially in cluttered urban environments.

A good replacement tree would be Eastern red cedar (*Juniperus virginiana*). Suited for zones 2-9, the cedar thrives in partial to full sun. It is highly drought tolerant, produces no litter, and surface roots are not typically a problem. The cedar is relatively tightly contained, with a spread of about 10-20 feet at maturity.

Another suitable tree, especially as a specimen tree in selected areas, is the Florida maple (*Acer saccharum* var. *floridum*). This tree also is drought tolerant, thrives in an urban setting, has little litter, and surface roots are not a problem. It is also resistant to breakage. Its spread can be up to 40 feet, so care must be exercised in its placement.

All replacement trees should be of at least 1-inch caliper and meet the minimum requirements of the American Nursery and Landscape Association's American Standard for Nursery Stock (ANSI Z60.1-2004).

Shrubbery

There is only minimal shrubbery in Old Cemetery.

The plantings we observed include pittosporum (*Pittosporum sp.*), elaeagnus (probably *Elaeagnus pungens*), abelia (*Abelia x grandiflora*), and spirea (*Spirea sp*). All are heirloom plants although town/city cemeteries rarely contained many plantings since space was always at a premium.

Many of the shrubs require thinning. This involves cutting selected branches back to a side branch or main trunk and is usually preferred over heading back. Thinning encourages new growth within the interior portions of a shrub, reduces the size, and provides a fuller, more attractive plant.

The abelia and spirea, however, have been so ignored that they require renewal pruning. This involves cutting the plants back to within 6 to 12 inches of ground level. In this instance, timing is more important than technique. The best time to prune severely is before spring growth begins. Pruning in late fall or midwinter may encourage new growth which can be injured by cold. Renewal pruning results in abundant new growth by midsummer. Once the new shoots are 6 to 12 inches long, the tips should be pruned to encourage lateral branching and a more compact shrub.

Turfgrass

The cemetery is in bahiagrass (*Paspalum notatum*) – a species introduced from Brazil in 1914. While not historically appropriate, it is a popular low-maintenance lawn grass for infertile soils. It is drought tolerant, does not form thatch, does well in infertile soils, and has relatively few disease problems.

On the other hand, bahiagrass does not have good tolerance to shade or traffic. It also displays an open growth habit, which can result in encroachment of weeds into sparse areas – a very noticeable problem at Old Cemetery. A further problem is that the grass has low tolerance to many common herbicides that would normally be used.

While Banvel®, 2, 4-D, or a combination of the two will control most broadleaf weeds; there is no post-emergence herbicide for grassy weeds in bahiagrass. Nevertheless, most weed problems could be avoided by avoiding inappropriate fertilization, over watering, and proper, timely mowing.

However, all agencies responsible for maintenance of utility turf like bahiagrass, including Thomasville's Public Works, struggle to find funds to keep this grass mown properly. In summer its rapid vertical growth and exuberant seed head production are remarkable.

We are told that the Public Works is beginning a seed head suppression program and is also looking at alternative grasses. This is primarily driven by citizen complaints concerning the seed heads. Due to the rapid growth of bahiagrass seedheads mowing is an expensive solution.

Figure 24. Monument repeatedly scalped by mowing.

The most common treatments are either Plateau (imazapic) or Oust (sulfometuron). Treatments have to be applied frequently and some studies suggest they may result in phytotoxicity. We are also uncertain of the effect these chemicals may have on the cemetery's historic stone and masonry.

Although sympathetic to the public's desire to see a "perfect" turf, such perfection is costly. Seedheads are also a purely aesthetic issue – there are many more substantive issues that affect the long-term viability and preservation of the cemeteries and these should be given priority.

We are more inclined to support the replacement of the bahiagrass with an alternative turf. One low maintenance turf to be considered is centipede. It is slow growing and resistant to drought once established. It does not, however, tolerate traffic and does best in full to partial sun.

Another grass to consider is buffalo grass, *Buchloe dactyloides*, a native, rugged, warm-season prairie resident. It is naturally drought tolerant and disease resistant. It has a gray-green color, is low-growing (in comparison with other native prairie grasses; 4-8 inches), and fine-textured. Some varieties are seeded, newer varieties are seedless. It spreads by stolons (runners), but is not nearly as aggressive as bermudagrass. It grows best in full sun, but is accepting of only 6-8 hours of direct sunlight per day.

Buffalo grass can survive on as little as ¼-inch of water a week and does not require fertilization. It also tolerates a wide range of mowing heights. Although it can be cut short (2-3 inches) to resemble other turfgrasses, taller mowing increases its drought resistance and competitiveness against weeds. Maintenance overall is reduced as it is mowed taller. A "respectable" appearance can be achieved by mowing every 2-3 weeks during the growing season and, later in the season, every 3-4 weeks.

Another approach is to reduce the amount of grass present in Old Cemetery by converting areas in dense trees to mulch. Most grasses (including centipede, buffalo, and bahiagrass) will not grow in shade and efforts to do so will result in thin, weedy, and stressed turf. In addition, tree health will increase by converting such areas to 2-3 inches (no more) of mulch.

Figure 25. Problems along the northern and southern property lines. Upper left to lower right: dense ivy in the northeast corner; ivy, sickly tree, and trash along northern property line; dense vegetation in southwest corner; one of many leaf piles in the southwestern corner of the cemetery; trash and dense vegetation along fence line; trash and dense bamboo along the southern fence line.

All grass, however, will require maintenance – including mowing – and the problem at the Thomasville cemeteries is not really the acreage or need to mow, but rather the inadequate staff.

The Public Works Division is currently using two 60-inch mowers for the five cemeteries, supplemented by nylon string trimmers. We are told that the mowers are equipped with mulching blades – this is an excellent practice and we support its continued use. Not only could a collection bag cause damage to stones and make maneuvering the equipment more difficult, but the clippings when left on the ground will provide nutrients.

The use of these large riding mowers, however, can be problematical, especially in a setting such as Old Cemetery with many walls, fences, and three-dimensional monuments. Figure 24 shows that the crews are not always careful in operating the equipment and these mowers are capable of causing extensive damage to monuments.

In the smaller cemeteries, such as Old Cemetery, the city should limit the use of the large deck mowers and rely instead on 21-inch walk-behind mowers. Only slower, more careful hand work will ensure that these valuable monuments are not further damaged.

The use of the nylon trimmers is an acceptable practice, but it is critical that a very light weight line be used – along with worker attention – to minimize damage to soft stone such as marble. Currently 0.095-inch line is being used. This is acceptable, but we would like to see the cemetery staff switch to a 0.065-inch line which is even safer for use around stones.

Unaddressed in Old Cemetery are the numerous fire ant mounds. One survey done in 1998 concluded that 33,000 people in the state of South Carolina sought medical attention as a result of fire ant stings. Of those 15% had severe localized allergic reactions and 2% had severe systemic reactions resulting in anaphylactic shock. The city leaves itself open to significant liability by failing to adequately treat these mounds.

An excellent publication on fire ants is www.clemson.edu/sandhill/userfiles/file308.pdf. Bait products such as Amdro, Award, or Logic are effective on individual mounds, although control is not immediate. Broadcast applications, however, are even better and it appears that a mixture of 3/4 lb. hydramethylnon in baited granules (under trade names "Amdro" or "Siege") and 3/4 lb s-methoprene in baited granules (under trade name "Extinguish") applied per acre is even more effective. Amdro/Siege, a metabolic inhibitor, takes 3-6 weeks after ants consume it to show an effect and the effect lasts for several months until a re-invasion occurs. Extinguish is a growth regulator that takes longer to show an impact, but then can last a year or more.

Other Landscape Issues

The northern and southern property lines of the cemetery require extensive cleaning.

To the north are stands of dense pittosporum that need to be thinned. Intermixed, especially in the northeastern corner is dense Algerian ivy that, while appropriate, requires extensive pruning. Also present is much smilax that should be entirely removed. Mixed among the vegetation is much trash and a significant section of the wire fence is down. The cemetery landscape is also affected by the trash being stored on the adjacent property.

To the south, again along the fence line, there is much wild growth, including bamboo, that requires extensive cleaning. Trash has also collected along this fence and does not appear to have been collected in some time. In the southwest corner of the cemetery are 5-6 large piles of leaves that appear to have been raked up and never removed.

These areas significantly detract from the cemetery, giving it the appearance of not being cared for. These areas should be immediately cleaned.

Figure 26. Signage at Old Cemetery is inadequate and in poor condition.

Other Maintenance Issues

This category is a catch-all for other issues that are observed in the cemetery, but that don't fit conveniently in other divisions, including signage, trash collection, additions to the cemetery, and the gazebo.

Signage

Old Cemetery has only one sign, situated at the double entrance on the east side, and it is in poor condition (Figure 26).

From a cemetery preservation perspective signage is of four basic types: identification, regulatory, informational, and interpretative. They are generally recommended in this same priority.

Identification signage might include the name of the cemetery and might also include the cemetery's date of founding and historic significance (i.e., eligible for listing on the National Register).

Regulatory signage specifies laws, regulations, or expected standards of behavior. We recommend that the city develop signage dealing with, minimally, these issues (perhaps with some modifications of language as might be needed):

- This cemetery is open from 7:00 am to 7:00 pm. Presence in the cemetery during prohibited hours is trespass.
- Many of the stones in this cemetery are very old and may be easily damaged. Consequently, absolutely no gravestone rubbings will be allowed.
- The stones and monuments in this cemetery are fragile. Please refrain from leaning, sitting, or climbing on any monument or mausoleum. All children must be escorted by an adult.
- Absolutely no alcoholic beverages, fireworks, or fire arms are allowed in the cemetery. Proper conduct is expected at all times.
- No pets are allowed in the cemetery.
- No plantings are allowed within the cemetery and the City will enforce its right to remove any plantings deemed inappropriate, diseased, or damaging the cemetery.
- No placement of monuments or other work may be conducted in the cemetery

without the written permission of the Cemetery Sexton.

- For additional information concerning maintenance issues, please contact the City of Thomasville, Public Works Division at _____. In case of emergency contact _____.

The last two types of signage are informational (for example, directional signs) and interpretative (information on historic people buried in the cemetery). At the present time there is insufficient information to support such signage.

Figure 27. This grave is marked by three monuments, including the recently placed VA marker. The use of this free government marker is in violation of VA policy. It also detracts from the historical integrity of the cemetery.

The new identification and regulatory signage should conform to the city's standard signage in order to present a unified appearance. Signage should be erected at both the eastern and western entrances to the cemetery.

Trash Collection

We are informed that Public Works does not visit Old Cemetery on a regular basis, especially during the winter months. This is clearly evident by the accumulations of trash (Figures 14 and 25). This trash clearly reveals why cemetery maintenance is a year-round, not seasonal, undertaking.

We recommend that vandal resistant trash containers be placed outside the cemetery at the eastern and western entrances. It is not necessary to purchase "historic replicas" – there are a variety of cast concrete receptacles that would perform well in these settings.

Additions to the Cemetery

As we toured Old Cemetery several situations were noticed where modifications had taken place in the cemetery, yet the city was generally unaware of who did the work and there was no clear evidence that the need for the work had been carefully evaluated.

One instance was the placement of the small Confederate memorial. As previously noted, these materials were likely placed on top of pre-existing graves. Since the cemetery is closed to additional burials – it should also be closed to all "additions" such as this. Not only may the modifications disturb graves, but the modern materials are entirely out of place, scale, and character. As a result, they detract from the cemetery's historical integrity and reduce its value to the community.

Another instance is the extensive addition of modern VA military monuments. In some cases graves now have three markers. In

Figure 28. This line of VA military stones appeared in the cemetery where no graves had been previously marked. It is questionable that these individuals are actually buried at these locations and VA policy stipulates that the stones should read "In Memory Of."

several cases the new marker information is slightly different from the original monument. There are also several instances where the markers, apparently for the same individual, are found in different locations – calling into question the actual location of the grave. In fact, the VA clearly states, "for all deaths occurring before September 11, 2001, the VA may provide a headstone or marker only for graves that are not marked with a private headstone." Thus the duplicate markings are in violation of the Department of Veterans Affairs clearly stated policy.

In one location a line of modern markers has appeared, with no indication that the individuals are actually buried in that location. The VA policy for such

Figure 29. Old Cemetery gazebo showing roof deterioration, rotted trim, and foundation collapse.

markers clearly states that since the grave is not known, the markers should "bear an 'In Memory of' inscription, as their first line." They do not.

When a grave it marked with a legible, historically appropriate monument, it is both unnecessary and damaging to the cemetery's integrity, to place additional markers. This practice should cease immediately.

The city currently has an ordinance, Chapter 6, Section 6-1, that specifies no work will be done in the cemetery, "except under the direction of the public works department." It appears, however, that this provision has been either routinely ignored or poorly documented. Given the amount of inappropriate activities that have taken place, we strongly recommend that the city immediately begin enforcing this provision and require that all work be permitted in writing so there is a record of what was done and when.

The Gazebo

A gazebo exists in the southwestern quadrant of the cemetery, erected over family graves. Although reportedly repaired recently, and in much better condition that in the past, there remain both structural and cosmetic issues that require attention.

Although the rotted trim is purely cosmetic, the loss of historic fabric debases the contribution of this structure to the cemetery landscape. As cosmetic issues mount, the structure eventually no longer contributes to the cemetery's historic character. The foundation collapse and roof deterioration, on the other hand, are of immediate concern since they can present either a liability to the public or significantly endanger the condition of the structure.

Conservation

General Types of Stone Damage

Although a stone-by-stone assessment was not included in this assessment, it is possible to provide some general observations concerning the types of problems faced by Old Cemetery.

There are examples of broken stones (we estimate approximately 10). Many of these stones should receive a high priority for conservation treatments since the stones are either a hazard to the public (endangering visitors) or a hazard to themselves (if they fall there will be additional, significant damage that will dramatically increase the cost of repair). The identification of these stones and development of treatment proposals by a professional conservator should be a very high priority. It is only with the development of detailed treatment proposals and cost estimates that a reasonable budget for this conservation work can be determined.

In most cases gravestones are fragile and their repair is delicate work. There are many commercial products on the market, used by many commercial stone companies, which are totally inappropriate for historic stone.

Appropriate conservation treatment will usually involve drilling and pinning, carefully aligning the two fragments. Threaded 316 stainless steel rod (or occasionally nylon) and epoxy adhesives formulated for the specific stone are used in this type of repair. Diameters and lengths of pins vary with the individual application, depending on the nature of the break, the thickness of the stone, its condition, and its expected post-repair treatment.

Sometimes pins are not used in a misguided or misinformed effort to save time and money. Instead the pieces are simply joined using a continuous bead of epoxy or some other adhesive. Experience indicates that for a long-

Figure 30. Broken, unstable stone that is a hazard to the public. Repair should be a high priority.

lasting repair, particularly in structural applications, use of pins is usually necessary. Moreover, most adhesives are far stronger than the stone itself, meaning that failure of the repair is likely to cause additional damage to the stone.

At times mechanical repairs also involve dismantling intact elements and ensuring that a sound foundation is present. Foundation work may involve filling in depressions, establishing a concrete footing, or taking other measures to ensure that subsidence is minimized. Then the entire structure is repaired as it is reassembled.

Several stones were noted with ferrous pins (we observed two). The results of their deterioration is also clearly evident. These should be given a high treatment priority since, left untreated, the corrosion will cause significant spalling, cracking, and breakage of the stones. In these cases it will be necessary to use diamond core drills to remove the ferrous pins. They will then need to be replaced with stainless steel pins.

After many such repairs it will be necessary to fill the voids with a natural cementitious composite stone material resembling the original as closely as possible in texture, color, porosity, and strength. This type of repair may be used to fill gaps or losses in marble and is often used to help slow scaling of bedded sandstone exposed to the elements.

Under no circumstances should latex or acrylic modified materials be used in composite stone repair. These additives may help the workability of the product, but they have the potential to cause long-term problems. Such products are not appropriately matched in terms of strength or vapor permeability.

More suitable materials are materials such as Jahn (distributed by Cathedral Stone) or the lime-based mortars of U.S. Heritage. These

Figure 31.Stone with damage from ferrous pins. Note the loss to the lower corners of the monument.

Table 2.
Comparison of Different Cleaning Techniques

Cleaning Technique	Potential Harm to Stone	Health/Safety Issues
Sand Blasting	Erodes stone; highly abrasive; will destroy detail and lettering over time	Exposure to marble dust is a source of the fatal lung disease silicosis
Pressure Washers	High pressure abrades stone. This can be exacerbated by inexperienced users. Pressures should not exceed 90 psi.	None, unless chemicals are added or high temperature water is used.
Acid Cleaning	Creates an unnatural surface on the stone; deposits iron compounds that will stain the stone; deposits soluble salts that damage the stone	Acids are highly corrosive, requiring personal protective equipment under mandatory OSHA laws; may kill grass and surrounding vegetation
Sodium Hypochlorite & Calcium Hypochlorite (household and swimming pool bleach)	Will form soluble salts, which will reappear as whitish efflorescence; can cause yellowing; some salts are acidic	Respiratory irritant; can cause eye injury; strong oxidizer; can decompose to hazardous gasses
Hydrogen Peroxide	Often causes distinctive reddish discolorations; will etch polished marble and limestone	Severe skin and eye irritant
Ammonium Hydroxide	Repeated use may lead to discoloration through precipitation of hydroxides	Respiratory, skin, and eye irritant
D/2 Architectural Antimicrobial	No known adverse effects, has been in use for nearly 10 years	No special precautions required for use, handling, or storage

closely resemble the natural strength of the original stone, contain no synthetic polymers, exhibit good adhesion, and can be color matched if necessary.

All infill work should be conducted by a trained conservator. The Jahn products, in fact, require certification in their use through Cathedral Stone.

A number of stones are either leaning or out of the ground (we estimate about 25). Stones should never be reset using concrete, but rather should be set in pea gravel. This approach allows the stone some movement should it be accidentally impacted by lawn maintenance activities. The pea gravel will also promote drainage away from the stone, helping the stone resist the uptake of soluble salts.

Cleaning of Monuments

A significant amount of damage may result from inappropriate cleaning techniques. The most common cleaning technique is the use of a bleach product – probably because bleach (either sodium hypochlorite or calcium hypochlorite) is widely available and inexpensive. It is, nevertheless, unacceptable for historic monuments.

Table 2 discusses problems with a variety of "common" stone cleaning processes widely used by commercial firms and the public. Providing this sort of information to families who have loved ones buried at the city cemeteries may help deter abusive cleaning.

Cleaning is largely an aesthetic issue – we saw few examples where soil or biologicals were actually causing damage to the monuments. Consequently, the city should embark on an educational program to discourage inappropriate cleaning – explaining not only the dangers of bleach and other commercial methods, but also pointing out that such activities diminish the historical value and ambience of the cemeteries. These cleaning methods remove not only soil, but also the patina of age – leaving monuments that no longer appear historic.

Figure 32. Brick wall problems at Old Cemetery. The top two photographs show walls that have collapsed. Substantial portions of these walls will need to be rebuilt. The middle two photographs reveal extensive cracking and settling. Some cracks may be repaired, others will necessitate rebuilding a section of the wall after foundation repair. The bottom two photographs show walls damaged by trees. In these cases the health of the trees will determine if the tree can be removed and the wall rebuilt.

Figure 33. Brick tomb problems at Old Cemetery. These "oven" tombs are in poor condition and will require extensive reconstruction. The use of hard Portland cement stucco is especially problematical and much will need to be stripped off.

This educational program should point out that cleaning – even when done correctly – will gradually erode monuments, making them susceptible to more soiling and damage. Consequently, cleaning should be conducted no more frequently than perhaps once every 5 years.

The safest product for cleaning is simply low pressure (less than 90 psi) water and a soft bristle brush. When some other assistance is needed a product that has been found safe for most stones is D/2 Architectural Antimicrobial distributed by Cathedral Stone.

Brickwork and Repointing

Brickwork in the Old Cemetery is in especially poor condition. Several of the walls are unstable and present a significant hazard to the public. These require immediate attention by the city.

We estimate that 400 linear feet of brick wall and approximately 10 tombs require attention.

Brick repair, however, is not simple and should not be entrusted to just any mason. Repairs should always begin with photographing the structure as it exists in order to completely document the original fabric and construction details. Only the unsound brickwork should be removed, stopping as soon as sound material is encountered. Repair should, as far as possible, use similar brick, mortar, joints, and tooling.

Historic bricks are often far softer than modern examples. The use of a modern hard cement mortar will cause extensive damage to this soft brick as one expands more rapidly than the other. Mortar should always be designed to deteriorate more quickly (it should be sacrificial, meaning the use of high lime mortars) than the brick since it can be readily replaced through pointing.

All repointing should minimally meet or exceed the specifications established by *Preservation Briefs 2: Repointing Mortar Joints in Historic Masonry Buildings*.

New mortar must conform to the following criteria: (1) it must match the historic mortar in color, texture, and tooling, (2) it must have greater vapor permeability and be softer than the masonry units, and (3) it must be as vapor permeable and as soft as the original mortar.

To achieve these criteria it may be necessary to have a conservator conduct a mortar analysis. However, in general, the mortar should be high in lime and low in compressive strength. A natural hydraulic lime (NHL) or air lime would generally be specified for such work. For example, an air lime or NHL 3.5 might be mixed at the ratio of 0:1:3 for much repointing work. The sand selection would be especially critical since that additive would primarily determine the final color (and texture) of the mortar.

Existing joints would need to be raked out to a depth 2.5 times their width. Thus, a 3/8-inch joint would need to be raked out to a minimum depth of 15/16-inch (typically expressed as 1-inch). The repointing mortar, generally mixed somewhat dry to minimize shrinkage and reduce cleaning efforts, would be firmly packed in the thoroughly cleaned and moistened joint using lifts no deeper than 1¼-inches.

The specifications are more detailed than this brief overview, but this should serve to indicate the care required.

Recommendations

Circulation

Pathways should be avoided as they are historically inappropriate. Maintenance, however, must be aware of the potential for increased heritage tourism to create wear on turfgrass and respond quickly.

First impressions are very important and the city should ensure that the vistas from entrance points are clean, representative of the cemetery, and pleasing.

Security Issues

The Old Cemetery must have a more routine police presence, with patrols in the evening and night hours. Particular attention should be paid to the problem of alcohol consumption.

The City must provide more visible maintenance staff to ensure the safety of the cemetery and better collect litter. Vegetation must be carefully pruned to prevent hiding places.

Gates and other loose ironwork must be secured to prevent theft.

Fixtures and Furnishings

The existing small Confederate memorial is out of scale and place. It has likely also been placed on top of pre-existing unmarked graves. We recommend that it be removed and, if desired, be reinstalled off the cemetery grounds.

Iron plot fences require immediate maintenance. This will involve, for several, repair and rehabilitation. All require appropriate painting.

The iron boundary fence exhibits a variety of significant problems. It requires immediate intervention consisting of repairs and appropriate painting.

We discourage the introduction of amenities, such as benches, into the cemetery. They are often misused and frequently the target of vandals.

Landscape Maintenance

Tree maintenance has been neglected. Of the ca. 64 trees on the site only 16 are healthy and require only minimal pruning or thinning. An additional 24 trees require pruning of dead or diseased limbs. All pruning must comply with ANSI A300 (Part 1) - 2001 standards and the ISA standards of practice. We strongly recommend that the work be performed by an ISA Certified Arborist, preferably one who is also an ISA Certified Tree Worker/Climber Specialist.

Approximately 18 trees should be entirely removed. Some of these are small enough and so located to allow in-house removals. Others should be removed by an ISA Certified Arborist.

Of the 18 trees removed, about nine should be replaced, primarily with Eastern red cedars, although an occasional Florida maple may be used as a specimen tree.

Shrubbery would never have been extensively used at Old Cemetery and we recommend that no additional plantings be added. The existing abelia and spirea are particularly ignored and require renewal pruning. The other shrubbery in the cemetery may be thinned only.

Areas in dense shade should have any existing grass removed and a 2-3 inch thick layer of mulch should be used instead. This will reduce mowing and improve the health of the trees.

We are more supportive of replacing the bahiagrass with centipede or buffalo grass than in chemical seedhead suppression. The effect of the chemicals on the stones in the cemetery is undocumented.

City cemetery should also be mowed primarily with 21-inch walk behind mowers – the large deck mowers are too likely to cause damage to the stones. Regardless of the grass used, this will require a larger crew.

Nylon line used in trimmers should be reduced from 0.095 to 0.065 inch thickness in order to prevent trimmer damage to the soft marble.

Fire ants are a significant liability to the city should treat the Old Cemetery with a broadcast bait on a yearly schedule.

The northern and southern fence rows require extensive cleaning, clearing, and pruning. Much trash has collected in these areas. The fence along the northern boundary needs to be replaced.

Other Maintenance Issues

Identification and regulatory signage should be erected at the eastern and western entrances to the cemetery.

The cemetery must be walked at least three times a week by crews to collect any trash that has accumulated. We recommend installing trash cans, outside the cemetery, at both entrances.

The city must enforce City Code, Chapter 6, Section 6-1, that requires all work done in the cemetery to be done under the city's direction. In particular, we recommend that no new monuments be allowed in the cemetery where existing monuments are present and legible. No new memorials should be erected in the cemetery.

The gazebo requires a detailed preservation assessment, with recommendations concerning repair needs and approaches.

Conservation

We estimate that monument work will involve about 10 stones to be blind pin repaired, two stones have ferrous pins, and 25 stones require resetting.

There are many brickwork problems in Old Cemetery, including about 400 linear feet of wall that requires rebuilding and 10 brick tombs that require repair.

Cleaning of stones is a very low priority and the city should not allow cleaning of stones in Old Cemetery.

COLORED OR FLIPPER CEMETERY

The Cemetery Location, Setting, and Context

What historically has been known as Colored Cemetery was renamed Flipper Cemetery within the past several decades in honor of the Flipper Family. Henry O. Flipper was the first African American to graduate from the U.S. Military Academy at West Point. Originally buried in Atlanta after his death in 1940, his remains were reinterred in this cemetery in 1978.

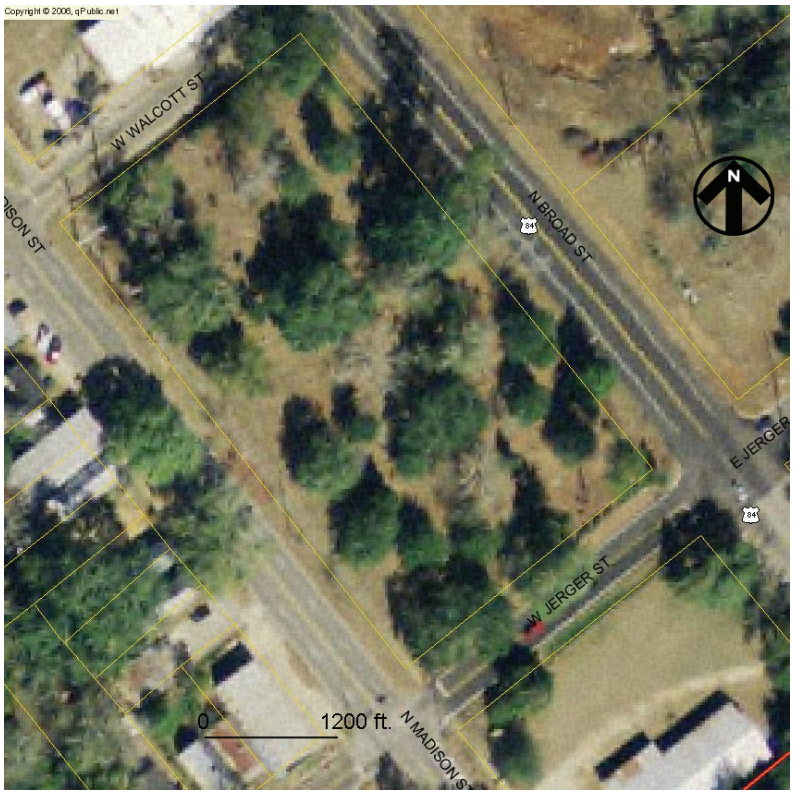


Figure 34. Aerial image of Colored or Flipper Cemetery

The cemetery is situated only a half block northwest of Old Cemetery, also on the edge of nineteenth century Thomasville. The African American cemetery, however, is slightly larger, accounting for 2.34 acres and it encompasses the entire block bounded by North Broad to the northeast, North Madison to the southwest, West Jerger Street to the southeast, and West Walcott to the northwest. Its TMS number is 002 013001.

Unlike Old Cemetery, however, Flipper is situated at the north edge of slopping topography. Elevations range from 260 feet AMSL at the southwest corner to about 240 feet AMSL at the northeast corner. This is most clearly shown by the steep elevations found along the northeastern and northern cemetery boundaries. The cemetery is actually at the headwaters of the Oquina Creek (which also bisects nearby Magnolia Cemetery into the "old" and "new" sections).

This cemetery is surrounded by a residential quality, 4-foot high chain fence. Entrance is by way of a double gate at corner of Jerger and Madison streets.

On Broad Street, across from the cemetery, are two vacant lots – one owned by the city. To the northwest the cemetery is bordered by a garage, while to the southeast is the large asphalt parking lot for the American Legion Post adjacent to Old Cemetery. West, across Madison are several garages, a hardware store, and mixed single family dwellings.

Figure 35. View of Flipper Cemetery looking north.

Although the general socio-economic setting of Flipper is identical to Old Cemetery, the area is far more urban in character. The commercial activities to the north and west, combined with the vacant and heavily disturbed lots to the east, make this setting harsher and less inviting.

Nevertheless, as with Old Cemetery, the setting is somewhat ameliorated by the canopy of hardwoods. However, trees here too have been ignored, resulting in their compromised health.

The cemetery is far more open than Old Cemetery – monuments are sparse, brick walls are generally limited to low coping, and iron fences are not common. All of these features are characteristic of African American cemeteries of the period.

Access Issues

Circulation

Like Old Cemetery, there are no roads in Flipper Cemetery and the only vehicles that may have need to enter are occasional city maintenance trucks.

The only access point to this cemetery is the double wide gate on Jerger at the corner of Madison. There is no parking on Madison and there is a steep bank up to the cemetery on both Broad and Walcott streets. Consequently, most visitors to the cemetery will likely park on Jerger. There is no signage at this entrance and, in fact, during our visit, there was a trash pile at the stop sign near this entrance. There is also no designated parking, so vehicles must pull onto the grassed strip. This practice, over time, will degrade this area – causing compaction and erosion.

This entrance must be made more inviting to visitors and family members. It may, for example, be possible to grade and provide designated parking on the north side of Jerger. Coupled with landscaping along the fence and appropriate signage (discussed below), this would make the first impression of the cemetery

Figure 36. View of the entrance to Flipper, showing parking, trash, and lack of signage.

far more favorable – especially to visitors from outside the community.

Like Old Cemetery – and all traditional town/city cemeteries – there are no pathways in Flipper and this is appropriate. We do not recommend that this be changed. However, a small map and brochure should be created that will self-guide visitors to significant monuments and help explain the history, role, and significance of this cemetery.

As discussed below, soils in the cemetery are prone to erosion. This coupled with the sparse grass, is of concern. The city will need to closely monitor this cemetery if there is increased visitation. Eventually soft paths may become necessary.

Universal Access

The ADA or the Rehabilitation Act of 1973 is generally not interpreted to apply to cemeteries by the Department of Justice. In spite of the slope, Flipper Cemetery is relatively level and while the grassed and mulched areas are not easily navigated by wheelchairs, the cemetery poses fewer obstacles than many.

Reasonable accommodation can also be provided by having photographs and other information on-line or in print materials. The sidewalk along Madison provides additional opportunities for easier (although limited) visual access. However, the commercial nature of Madison in this area will likely discourage visitors from using this sidewalk.

Security Issues

Vandalism

The city does not report any significant vandalism issues at Flipper Cemetery and we observed no indications of recent vandalism during this assessment.

The cemetery, however, is not routinely patrolled by police or city maintenance workers. The gates cannot be closed after hours, nor is there any signage concerning regulations.

The city does not have any established procedure to identify and respond to vandalism, should it occur. We recommend that a procedure be established. Critical elements include:

- Periodic inspections at a level to note changes to monuments or other problems,
- A procedure to document this problem, and
- Responses that involve, as appropriate, criminal investigation and repair.

Hardening Targets

There is very little ironwork such as gates in the cemetery, so it is at less risk than Old Cemetery. However, this not mean that it is immune. There are unusual markers – such as the iron head and footstones – that could attract interest.

Since there is no convenient means of further securing these items it becomes critical that the city periodically monitor them and increase police patrols.

Inappropriate Cemetery Uses

Although trash was found throughout the cemetery, we did not notice the number of alcohol container that were present in nearby Old Cemetery. One possible explanation is that Old Cemetery offers both convenient shelter and also easy cut-through access between Madison and Broad. Flipper Cemetery offers neither.

Regardless, it is important for the city to closely monitor use of Flipper. Visitors will be

Figure 37. Panoramic view of the interior of Flipper Cemetery, looking north.

deterred by inappropriate use such as signs of alcohol or drug activities.

Fixtures and Furnishings

Fixtures and furnishings are almost entirely absent from this cemetery. There are very few brick walls or low coping walls. Fences are absent. We noticed only two gates – one modern gate on the Flipper brick wall plot and another that was heavily damaged and leaning against another brick wall. There are no urns or benches.

In fact, as Figure 37 reveals, the cemetery is rather spartan, with the vast majority of the graves unmarked.

The city should be careful to avoid the temptation to "use" this open space for landscaping, benches, monuments, and other features. Such activities would dramatically change the character of the cemetery and be disrespectful to those buried there. They would also have the potential to significantly affect the bioarchaeological resources of the cemetery.

Landscape Maintenance

Staffing Levels and Training

Appendix 2 provides details on our recommended level of staffing. It is worth noting that the city is currently understaffed and the use of untrained prisoners fails to provide the level of care the cemeteries deserve. Appendix 2 provides detailed information regarding training and expected duties.

Cemetery Trees

Our examination of the trees in Flipper Cemetery revealed overall poor health, with many trees requiring immediate attention. All tree care should comply with ANSI A300 (Part 1) - 2001 standards and the ISA standards of practice.

Pruning must be done by individuals trained in arboriculture and having clear knowledge of ANSI A300 (Part 1). The procedures and techniques are difficult; the decisions concerning what limbs to prune and how to best shape the tree are acquired only through both a knowledge of tree biology and experience. Effective safe pruning cannot be accomplished by untrained individuals. *We strongly recommend that the work be performed by an ISA Certified Arborist, preferably one who is also an ISA Certified Tree Worker/Climber Specialist.* Under no circumstances are tree climbers (hooks, spikes, gaffs) to be worn while ascending, descending, or working in trees to be pruned.

After this initial pruning the trees at Flipper Cemetery should be inspected by an ISA Certified Arborist every 5 years and after any severe weather event (any storm with winds in excess of 55 miles an hour or any winter ice storm).

Figure 38. Example of a tree requiring clean pruning. Note the large number of damaged and broken limbs.

If removal of a tree is deemed necessary an evaluation should be made concerning the need for an ISA Certified Tree Worker/Climber Specialist. If the tree is small to medium in size (perhaps under 6-8 inches dbh) and can be removed without endangering any monuments or walls, then it may be suitable for in-house removal.

If the tree is larger than 8-inches dbh or it will need to be topped and removed in sections, then it is critical that an ISA Certified Tree Worker/Climber be retained. Any effort to remove such trees in house will pose a significant risk to the cemetery landscape.

During removals the trunk should be cut as close to the ground as possible, leaving the stump in place to decay naturally. No chemical additives should be used to hasten decay, although it is acceptable to paint an herbicide on the stump if it is a tree that will promote suckers. Plywood shelters or timber cribbing may be necessary to protect stones and monuments during removals.

We estimate that there are about 43 trees on the property.

Of these 20 (46%) are healthy and require only minimal pruning. This would be characterized as thinning. Thinning is a technique of pruning that removes selected branches to increase light and air movement through the crown. This also decreases weight on heavy branches. The natural shape of the tree is retained and its overall health is improved. Not more than 25% of the crown should be removed during an annual growing season.

An additional 12 trees (28%) require pruning of dead or diseased limbs, but the tree is

Figure 39. Example of hazardous limb. Note the fungus, dropping bark, and ferns – all indications of a dead or diseased limb.

Figure 40. One of dead or dying cedars that requires immediate removal.

otherwise in satisfactory condition. This would be characterized as clean pruning – pruning to remove one or more dead, diseased and/or broken branches.

Two trees (both cedars) are dead or so severely diseased that they must be removed.

An additional nine trees are deemed to be either inappropriate species or are situated in inappropriate locations. They should be removed before they become more significant problems.

Inappropriate species are problem trees; trees that pose significant maintenance issues. These include trees that produce dense shade (causing problems with the turfgrass); trees that exhibit suckers or surface roots (also causing turfgrass problems, e.g., beech, honeylocust, linden, poplar, and willow); trees that drop large quantities of leaves, seeds, or sap (such as ash, black cherry, catalpa, ginko, horsechestnut, mulberry, and sweetgum); and trees that are especially weak or vulnerable to wind or ice damage (such as ash, black cherry, pine, poplar, red maple, silver maple, tuliptree, willow, and white ash).

Sometimes, however, otherwise appropriate trees can be planted inappropriately. For example, a dogwood, which is an understory tree, should not be planted in an open area with direct sun. The dogwood's health will decline and the tree will fail to thrive. Unfortunately, we found dogwoods in Flipper Cemetery (and the other cemeteries) planted in inappropriate locations.

Figure 41. Dogwood planted in an poor location and dying.

Most of these nine trees needing removal are small and can probably be safely removed by in-house crews. If there is any

doubt, however, an ISA Certified Tree Worker/Climber Specialist should be retained.

The removal of nine trees at Flipper will likely not noticeably alter the cemetery landscape and as a result, we do not recommend any immediate replantings. In general, however, it is good practice to plant a new tree for every tree removed.

Figure 42. Example of a crepe myrtle that requires pruning. Note the basal sprouts and "trash" vegetation growing up in the crepe myrtle.

While there are no perfect trees, cemetery landscapes were historically dominated by large deciduous trees, although evergreens such as cedar are also very common. They provide a distinctly inviting image for visitors and passersby. These trees also provide some visual separation from adjacent buildings – especially in cluttered urban environments.

A good replacement tree would be Eastern red cedar (*Juniperus virginiana*). Suited for zones 2-9, the cedar thrives in partial to full sun. It is highly drought tolerant, produces no litter, and surface roots are not typically a problem. The cedar is relatively tightly contained, with a spread of about 10-20 feet at maturity.

Another suitable tree, especially as a specimen tree in selected areas, is the Florida maple (*Acer saccharum* var. *floridum*). This tree also is drought tolerant, thrives in an urban setting, has little litter, and surface roots are not a problem. It is also resistant to breakage. Its spread can be up to 40 feet, so care must be exercised in its placement.

All replacement trees should be of at least 1-inch caliper and meet the minimum requirements of the American Nursery and Landscape Association's American Standard for Nursery Stock (ANSI Z60.1-2004).

Although not included in the count of trees requiring pruning, there are a number of crepe myrtles in the cemetery and all require removal of dead wood and old flower stalks. Many also require the removal of basal stalks.

It is important to caution caregivers that crepe myrtles must not be overpruned by topping – a practice termed by horticulturalists "crepe myrtle murder."

This inappropriate pruning causes profuse growth at the site of the pruning, resulting in a "witches' broom" and a tree that is no longer in proportion. This type of topping causes basal sprouting and increases susceptibility to disease and insects. It also encourages new growth that is too dense for light and air movement to reach the inner branches, large "knobs" where trees have been trimmed repeatedly, and an unsightly appearance until new growth appears. While topping may result in larger blooms, they will grow on thinner, weaker branches which will

droop, especially after rain, and may even break. It may also shorten the life of the trees. Thus, it is critical that the crepe myrtle in the cemetery be only lightly pruned for shape.

Figure 43. Thick, poorly cared-for spirea that needs renewal pruning.

We did not determine the cultivars in the cemetery, but should note that there are a variety of new crepe myrtles that are mildew resistant, including Acoma, Caddo, Biloxi, Hopi, Pecos, Sioux, Tonto, Tuscarora, and Zuni.

Shrubbery

There is only minimal shrubbery in Old Cemetery. These include juniper planted along the chain link fence and spirea (*Spirea sp*). Although town/city cemeteries rarely contained many plantings since space was always at a premium, the spirea is an heirloom plant. The juniper is not and it does little to enhance the cemetery. A more appropriate choice would be an heirloom shrub or climbing vine.

Many of the spirea require pruning. Correct pruning will depend on the species. Summer flowering spirea should be pruned before spring growth begins since they produce flowers on current season's growth. Spring flowering spirea should be pruned after flowering since these produce flowers on the previous season's growth.

Lighter pruning will involve removing branches that are dead, diseased, weak, crossing over other branches, or split. For spring flowering spirea use a technique known as renewal pruning – cut a third to a fifth of the oldest cans to the ground to encourage new growth. The summer blooming spirea should be pruned by thinning crowded and inward growing braches. Cut a few of the oldest branches down to the plant's base. It is also possible to cut all of the branches down to about 6-10 inches to encourage the plant to put out vigorous new growth in spring.

Turfgrass

The cemetery is in bahiagrass (*Paspalum notatum*) – a species introduced from Brazil in 1914. While not historically appropriate, it is a popular low-maintenance lawn grass for infertile soils. It is drought tolerant, does not

Figure 44. Shrub that require extensive pruning.

form thatch, does well in infertile soils, and has relatively few disease problems.

On the other hand, bahiagrass does not have good tolerance to shade or traffic. It also displays an open growth habit, which can result in encroachment of weeds into sparse areas – a very noticeable problem at Flipper Cemetery. A further problem is that the grass has low tolerance to many common herbicides that would normally be used.

While Banvel®, 2, 4-D, or a combination of the two will control most broadleaf weeds, there is no post-emergence herbicide for grassy weeds in bahiagrass. Nevertheless, most weed problems could be avoided by avoiding inappropriate fertilization, over watering, and providing proper, timely mowing.

However, all agencies responsible for maintenance of utility turf like bahiagrass, including Thomasville's Public Works, struggle to find funds to keep this grass mown properly. In summer its rapid vertical growth and exuberant seed head production are remarkable.

We are told that the Public Works is beginning a seed head suppression program and is also looking at alternative grasses. This is primarily driven by citizen complaints concerning the seed heads. Due to the rapid growth of bahiagrass seedheads mowing is an expensive solution.

The most common treatments are either Plateau (imazapic) or Oust (sulfometuron). Treatments have to be applied frequently and some studies suggest they may result in phytotoxicity. We are also uncertain of the effect these chemicals may have on the cemetery's historic stone and masonry.

Although sympathetic to the public's desire to see a "perfect" turf, such perfection is costly. Seedheads are also a purely aesthetic issue – there are many more substantive issues that affect the long-term viability and preservation of the cemeteries and these should be given priority.

We are more inclined to support the replacement of the bahiagrass with an alternative turf. One low maintenance turf to be considered is centipede. It is slow growing and resistant to drought once established. It does not, however, tolerate traffic and does best in full to partial sun.

Another grass to consider is buffalo grass, *Buchloe dactyloides*, a native, rugged, warm-season prairie resident. It is naturally drought tolerant and disease resistant. It has a gray-green color, is low-growing (in comparison with other native prairie grasses; 4-8 inches), and fine-textured. Some varieties are seeded, newer varieties are seedless. It spreads by stolons (runners), but is not nearly as aggressive as bermudagrass. It grows best in full sun, but is accepting of only 6-8 hours of direct sunlight per day.

Buffalo grass can survive on as little as ¼-inch of water a week and does not require fertilization. It also tolerates a wide range of mowing heights. Although it can be cut short (2-3 inches) to resemble other turfgrasses, taller mowing increases its drought resistance and competitiveness against weeds. Maintenance overall is reduced as it is mowed taller. A "respectable" appearance can be achieved by mowing every 2-3 weeks during the growing season and, later in the season, every 3-4 weeks.

Regardless of grass, we recommend that the amount be reduced in Flipper Cemetery by converting areas in dense shade to mulch. Most grasses (including centipede, buffalo, and bahiagrass) will not grow in shade and efforts to do so will result in thin, weedy, and stressed turf. In addition, tree health will increase by converting such areas to 2-3 inches (no more) of mulch.

All grass, however, will require maintenance – including mowing – and the problem

Figure 45. Example of turfgrass issues at Flipper. Top, compacted soil with moss; middle, surface roots being scalped by mowing; bottom, one of the numerous fire ant piles.

at the Thomasville cemeteries is not really the acreage or need to mow, but rather the inadequate staff.

The Public Works Division is currently using two 60-inch mowers for the five cemeteries, supplemented by nylon string trimmers. We are told that the mowers are equipped with mulching blades – this is an excellent practice and we support its continued use. Not only could a collection bag cause damage to stones and make maneuvering the equipment more difficult, but the clippings when left on the ground will provide nutrients.

While the use of these large riding mowers can be problematical in cemeteries with many walls, fences, and three-dimensional monuments, Flipper Cemetery has a number of open spaces (see Figure 37) suitable to large deck mowers. Nevertheless, it is critical that crews be very careful to prevent damage to vegetation and monuments.

The use of the nylon trimmers is an acceptable practice, but it is critical that a very light weight line be used – along with worker attention – to minimize damage to soft stone such as marble. Currently 0.095-inch line is being used. This is acceptable, but we would like to see the cemetery staff switch to a 0.065-inch line which is even safer for use around stones.

Unaddressed in Flipper Cemetery are the numerous fire ant mounds. One survey done in 1998 concluded that 33,000 people in the state of South Carolina sought medical attention as a result of fire ant stings. Of those 15% had severe localized allergic reactions and 2% had severe systemic reactions resulting in anaphylactic shock. The city leaves itself open to significant liability by failing to adequately treat these mounds.

Figure 46. Erosion at Flipper Cemetery. Top illustrates typical vegetated slope along Broad Street. Middle illustrates corner of Broad and Walcott where concrete was used to channel water. Bottom illustrates a brick vault in erosional area and bare soil on steep bank.

An excellent fire ant publication is www.clemson.edu/sandhill/userfiles/file308.pdf. Bait products such as Amdro, Award, or Logic are effective on individual mounds, although control is not immediate. Broadcast applications, however, are even better and it appears that a mixture of 3/4 lb. hydramethylnon in baited granules (under trade names "Amdro" or "Siege") and 3/4 lb s-methoprene in baited granules (under trade name "Extinguish") applied per acre is even more effective. Amdro/Siege, a metabolic inhibitor, takes 3-6 weeks after ants consume it to show an effect and the effect lasts for several months until a re-invasion occurs. Extinguish is a growth regulator that takes longer to show an impact, but then can last a year or more.

Other Landscape Issues

As previously explained, there are steep slopes from Flipper down to Walcott

Street on the north and Broad Street along the east. As shown in Figure 46, most of these slopes are 1:1.5 or less and well vegetated. There are, however, several areas that approach 1:0.5 and that lack vegetation. It is in these areas that there is significant erosion. In some areas it appears that concrete has been used in an effort to channel water. The concrete has failed and erosion is pronounced. The effect this has on cemetery aesthetics is clear enough, but we are also concerned that this erosion may be exposing graves and human remains. At least one clearly marked grave (brick vault with ledger) was found along Broad, half within the cemetery and half on the outside of the chain link fence. The brickwork reveals that it was not originally built to be exposed, so this erosion has occurred since 1936.

Figure 47. Example of sinking grave in Flipper Cemetery that poses a hazard to the public.

This is a very significant issue for this cemetery. The bank is so steep in some areas that it is doubtful that any vegetation can successfully stabilize the soil. We suspect that a more appropriate solution will be to either use rip-rap in these areas or else re-engineer and stabilize the slope. Both are expensive options, but the failure to deal with the erosion in this area will certainly result in the loss of graves and exposure of human remain, as well exposing the city to significant liability.

A second landscape issue at Flipper are several sinking graves (Figure 47). These pose a significant hazard to the public. Their locations should be mapped (since the graves are otherwise unmarked) and then filled with clean sand. The areas should be seeded.

Other Maintenance Issues

This category is a catch-all for other issues that are observed in the cemetery, but that don't fit conveniently in other divisions, including signage and trash collection.

Signage

Flipper Cemetery has no signage. This should be corrected immediately. From a cemetery preservation perspective signage is of four basic types: identification, regulatory, informational, and interpretative. They are generally recommended in this same priority.

Identification signage might include the name of the cemetery and might also include the cemetery's date of founding and historic significance (i.e., eligible for listing on the National Register; although in this case too little is known about the cemetery to add such information).

Regulatory signage specifies laws, regulations, or expected standards of behavior. We recommend that the city develop signage dealing with, minimally, these issues (perhaps with some modifications of language as might be needed):

- Many of the stones in this cemetery are very old and may be easily damaged. Consequently, absolutely no gravestone rubbings will be allowed.
- The stones and monuments in this cemetery are fragile. Please refrain from leaning, sitting, or climbing on any monument or mausoleum. All children must be escorted by an adult.
- Absolutely no alcoholic beverages, fireworks, or fire arms are allowed in the cemetery. Proper conduct is expected at all times.
- No pets are allowed in the cemetery.


Figure 48. Flipper plot showing the historical marker.

- No plantings are allowed within the cemetery and the City will enforce its right to remove any plantings deemed inappropriate, diseased, or damaging the cemetery.

- No placement of monuments or other work may be conducted in the cemetery without the written permission of the Cemetery Sexton.

- For additional information concerning maintenance issues, please contact the City of Thomasville, Public Works Division at _____. In case of emergency contact _____.

The last two types of signage are informational (for example, directional signs) and interpretative (information on historic people buried in the cemetery). At the present time there is insufficient information to support such signage.

The new identification and regulatory signage should conform to the city's standard signage in order to present a unified appearance. Signage should be erected at the entrance at the corner of Madison and Jerger streets.

Trash Collection

We are informed that Public Works does not visit Flipper Cemetery on a regular basis, especially during the winter months. This is clearly evident by the accumulations of trash, especially along the roadsides (see Figure 46 top). This trash clearly reveals why cemetery maintenance is a year-round, not seasonal, undertaking.

We recommend that a vandal resistant trash container be placed outside the cemetery at the entrance. It is not necessary to purchase "historic replicas" – there are a variety of cast concrete receptacles that would perform well in these settings.

Additions to the Cemetery

We have previously noted in our discussions for Old Cemetery that additions to the cemetery should be made with extreme care. The same advice is appropriate for Flipper. For example, we note that a Georgia Historical Marker was erected for Flipper within the boundaries of the cemetery rather than on the roadside. This marker appears out of place in the cemetery and its placement may have disturbed bioarchaeological remains.

The city currently has an ordinance, Chapter 6, Section 6-1, that specifies no work will be done in the cemetery, "except under the direction of the public works department." It appears, however, that this provision has been either routinely ignored or poorly documented. Given the amount of inappropriate activities that have taken place in the combined cemeteries, we strongly recommend that the city immediately begin enforcing this provision and require that all work be permitted in writing so there is a record of what was done and when.

Figure 49. Conservation issues at Flipper Cemetery. Top photos illustrate broken concrete monuments. Middle photos illustrate broken marble stones. Bottom photos illustrate severely leaning monuments that require resetting.

Conservation

General Types of Stone Damage

Although a stone-by-stone assessment was not included in this assessment, it is possible to provide some general observations concerning the types of problems faced by Flipper Cemetery

There are approximately 25 examples of broken stones, including both marble and cast concrete examples. Many of these stones should receive a high priority for conservation treatments since the stones are either a hazard to the public (endangering visitors) or a hazard to themselves (if they fall there will be additional, significant damage that will dramatically increase the cost of repair). The identification of these stones and development of treatment proposals by a professional conservator should be a very high priority. It is only with the development of detailed treatment proposals and cost estimates that a reasonable budget for this conservation work can be determined.

In most cases gravestones are fragile and their repair is delicate work. There are many commercial products on the market, used by many commercial stone companies, which are totally inappropriate for historic stone.

Appropriate conservation treatment will usually involve drilling and pinning, carefully aligning the two fragments. Threaded 316 stainless steel rod (or occasionally nylon) and epoxy adhesives formulated for the specific stone are used in this type of repair. Diameters and lengths of pins vary with the individual application, depending on the nature of the break, the thickness of the stone, its condition, and its expected post-repair treatment.

Sometimes pins are not used in a misguided or misinformed effort to save time and money. Instead the pieces are simply joined using a continuous bead of epoxy or some other adhesive. Experience indicates that for a long-lasting repair, particularly in structural applications, use of pins is usually necessary. Moreover, most adhesives are far stronger than the stone itself, meaning that failure of the repair is likely to cause additional damage to the stone.

At times mechanical repairs also involve dismantling intact elements and ensuring that a sound foundation is present. Foundation work may involve filling in depressions, establishing a concrete footing, or taking other measures to ensure that subsidence is minimized. Then the entire structure is repaired as it is reassembled.

After many repairs it will be necessary to fill the voids with a natural cementitious composite stone material resembling the original as closely as possible in texture, color, porosity, and strength. This type of repair may be used to fill gaps or losses in marble and is often used to help slow scaling of bedded sandstone exposed to the elements.

Under no circumstances should latex or acrylic modified materials be used in composite stone repair. These additives may help the workability of the product, but they have the potential to cause long-term problems. Such products are not appropriately matched in terms of strength or vapor permeability.

More suitable materials are materials such as Jahn (distributed by Cathedral Stone) or the lime-based mortars of U.S. Heritage. These closely resemble the natural strength of the original stone, contain no synthetic polymers, exhibit good adhesion, and can be color matched if necessary.

All infill work should be conducted by a trained conservator. The Jahn products, in fact, require certification in their use through Cathedral Stone.

A number of stones are either leaning or out of the ground (we estimate about 15). Stones should never be reset using concrete, but rather should be set in pea gravel. This approach

allows the stone some movement should it be accidentally impacted by lawn maintenance activities. The pea gravel will also promote drainage away from the stone, helping the stone resist the uptake of soluble salts.

Cleaning of Monuments

A significant amount of damage may result from inappropriate cleaning techniques. The most common cleaning technique is the use of a bleach product – probably because bleach (either sodium hypochlorite or calcium hypochlorite) is widely available and inexpensive. It is, nevertheless, unacceptable for historic monuments.

Table 2 discusses problems with a variety of "common" stone cleaning processes widely used by commercial firms and the public. Providing this sort of information to families who have loved ones buried at the city cemeteries may help deter abusive cleaning.

Cleaning is largely an aesthetic issue – we saw few examples where soil or biologicals were actually causing damage to the monuments. Consequently, the city should embark on an educational program to discourage inappropriate cleaning – explaining not only the dangers of bleach and other commercial methods, but also pointing out that such activities diminish the historical value and ambience of the cemeteries. These cleaning methods remove not only soil, but also the patina of age – leaving monuments that no longer appear historic.

This educational program should point out that cleaning – even when done correctly – will gradually erode monuments, making them susceptible to more soiling and damage. Consequently, cleaning should be conducted no more frequently than once every 5 years.

The safest product for cleaning is simply low pressure (less than 90 psi) water and a soft bristle brush. When some other assistance is needed a product that has been found safe for most stones is D/2 Architectural Antimicrobial distributed by Cathedral Stone.

Brickwork and Repointing

There is much less brickwork in Flipper than is found in Old Cemetery. What is present, however, is not in good condition and it requires quick intervention to prevent additional deterioration and increased repair costs.

Figure 50. Top photo illustrates brick wall with missing sections and brick requiring repointing. The bottom photo illustrates brick coping deteriorated through Portland cement stucco and mechanical damage.

We estimate that 70 linear feet of brick wall require attention. Unlike Old Cemetery, there are no brick tombs standing in Flipper Cemetery.

Brick repair, however, is not simple and should not be entrusted to just any mason. Repairs should always begin with photographing the wall as it exists in order to completely document the original fabric and construction details. Only the unsound brickwork should be removed, stopping as soon as sound material is encountered. Repair should, as far as possible, use similar brick, mortar, joints, and tooling.

Historic bricks are often far softer than modern examples. The use of a modern hard cement mortar will cause extensive damage to this soft brick as one expands more rapidly than the other. Mortar should always be designed to deteriorate more quickly (it should be sacrificial, meaning the use of high lime mortars) than the brick since it can be readily replaced through pointing.

All repointing should minimally meet or exceed the specifications established by *Preservation Briefs 2: Repointing Mortar Joints in Historic Masonry Buildings*.

New mortar must conform to the following criteria: (1) it must match the historic mortar in color, texture, and tooling, (2) it must have greater vapor permeability and be softer than the masonry units, and (3) it must be as vapor permeable and as soft as the original mortar.

To achieve these criteria it may be necessary to have a conservator conduct a mortar analysis. However, in general, the mortar should be high in lime and low in compressive strength. A natural hydraulic lime (NHL) or air lime would generally be specified for such work. For example, an air lime or NHL 3.5 might be mixed at the ratio of 0:1:3 for much repointing work. The sand selection would be especially critical since that additive would primarily determine the final color (and texture) of the mortar.

Existing joints would need to be raked out to a depth 2.5 times their width. Thus, a 3/8-inch joint would need to be raked out to a minimum depth of 15/16-inch (typically expressed as 1-inch). The repointing mortar, generally mixed somewhat dry to minimize shrinkage and reduce cleaning efforts, would be firmly packed in the thoroughly cleaned and moistened joint using lifts no deeper than 1¼-inches.

The specifications are more detailed than this brief overview, but this should serve to indicate the care required.

Recommendations

Access Issues

Designated parking should be created on the north side of Jerger, coupled with entrance landscaping, to make Flipper Cemetery more identifiable and inviting to visitors.

While we do not recommend pathways, it would be helpful to create a brochure and map to guide visitors around the cemetery and help them understand what they are seeing.

Security Issues

Flipper Cemetery must have a more routine police presence, with patrols in the evening and night hours. The City must provide more visible maintenance staff to ensure the safety of the cemetery and better collect litter. Vegetation must be carefully pruned to prevent hiding places.

Fixtures and Furnishings

We discourage the introduction of amenities, such as benches or memorials into the cemetery. They would significantly alter the character of the cemetery and would likely

adversely affect the bioarchaeological resources of the cemetery.

Landscape Maintenance

Tree maintenance has been neglected. Of the ca. 43 trees on the site 20 are healthy and require only minimal pruning or thinning. An additional 12 trees require pruning of dead or diseased limbs. All pruning must comply with ANSI A300 (Part 1) - 2001 standards and the ISA standards of practice. We strongly recommend that the work be performed by an ISA Certified Arborist, preferably one who is also an ISA Certified Tree Worker/Climber Specialist.

At least 10 trees should be entirely removed. Most of these are small enough and so located to allow in-house removals. If in doubt, we recommend the work be performed by an ISA Certified Arborist.

The crepe myrtle in the cemetery require pruning, but they should not be topped.

Given the current density of trees, we do not recommend any be replaced at this time.

Shrubbery would never have been extensively used at Flipper Cemetery and we recommend that no additional plantings be added. The existing spirea are particularly ignored and require renewal pruning.

The juniper along the fence line is not a plant that would historically be found in a this cemetery. We recommend consideration be given to replacing it with an heirloom plant or climbing vine.

Areas in dense shade (such as under the cemetery's beautiful magnolia) should be removed from grass and a 2-3 inch thick mulch should be used instead. This will reduce mowing and improve the health of the trees.

We are more supportive of replacing the bahiagrass with centipede or buffalo grass than in chemical seedhead suppression. The effect of the chemicals on the stones in the cemetery is undocumented. Regardless of the grass used, this will require a larger crew.

Nylon line used in trimmers should be reduced from 0.095 to 0.065 inch thickness in order to prevent trimmer damage to the soft marble.

Fire ants are a significant liability to the city should treat Flipper Cemetery with a broadcast bait on a yearly schedule.

The steep slopes along Broad and Walcott streets should be immediately addressed by the city. Failure to do so may result in the loss of graves.

There are several sinking graves that should be mapped and then filled with clean sand. These should then be sodded or seeded to help restore the landscape.

Other Maintenance Issues

Identification and regulatory signage should be erected at the southwestern entrance to the cemetery.

The cemetery must be walked at least two times a week by crews to collect any trash that has accumulated. We recommend installing a trash cans, outside the cemetery, at the southwestern entrance.

The city must enforce City Code, Chapter 6, Section 6-1, that requires all work done in the cemetery to be done under the city's direction.

Conservation

We estimate that monument work will involve about 25 stones to be blind pin repaired and 15 stones that require resetting.

There are several plots with brickwork problems in Flipper Cemetery, including about 70 linear feet of wall that requires rebuilding.

MAGNOLIA CEMETERY

The Cemetery Location, Setting, and Context

About a half mile north of Flipper Cemetery is Magnolia – an African American cemetery begun when there was no space left in Flipper. This cemetery encompasses 23.5 acres and is situated on the outskirts of the city. The TMS number is 013 009003 and the cemetery is situated to the northeast of the Cassidy Road and Vine Street intersection.

The cemetery is roughly rectangular, bordered by Vine Street to the south, Cassidy Road to the west, the Seaboard Coast Line Railroad to the east, and an industrial site owned by the Joint Development Authority to the north (Figure 51). Surrounding the property to the south and southwest are a number of single family homes in an area known as Magnolia – from which the cemetery likely took its name. To the west are apartments, while other commercial and industrial facilities are scattered throughout the area. In spite of this, Thomasville visualizes the area to eventually be largely residential.

Figure 51. Aerial imagery of Magnolia Cemetery.

About 5 acres of the cemetery property is wooded and consists of the Oquina Creek drainage that runs north-south through the cemetery. The topography slopes up from this drainage to the east and west, with elevations ranging from about 210 to 240 feet AMSL.

This cemetery is clearly dominated by a more rural lawn-park design (although the road arrangement remains rigidly formal, typical of city operated facilities). While three-dimensional monuments are present throughout the cemetery, most are close to the ground. Plantings are sparse overall and the cemetery is dominated by openness.

The eastern 5 acres of the cemetery are thought to be the oldest,

Figure 52. View of the old section of Magnolia Cemetery.

dating to ca. 1900. The area to the west of the drainage, encompassing about 13 acres, is newer. The two areas are very different – the older section contains far fewer monuments, landscaping is minimal, and relatively few plots are clearly defined. Vegetation in this area is in particularly poor condition, with almost all of the very old Eastern red cedars (*Juniperus virginiana*) today dead. Other plantings include magnolia, oak, and sweetgum.

The newer section, on the other hand, contains a large number of monuments, many individual plots can be distinguished, and landscaping consists largely of arborvitae (*Platycladus orientalis*), although cedars, crepe myrtles, and other plantings are also present.

Access to the eastern section is by way of a single, poorly defined, dirt road that roughly bisects the tract. Although there is a narrow dirt access road along the southern boundary connecting the two sections of the cemetery, the western or new section is typically accessed by way of a non-descript entrance at the intersection of Vine and Cassidy. The western section is divided into four uneven quadrants by paved roads, with two additional sections bordering Oquina Creek where there are only dirt roads.

The socio-economic conditions around the cemetery are not dissimilar to City and Flipper cemeteries, although income levels are slightly higher.

Access Issues

Circulation and Roadways

As previously mentioned the primary entrance to Magnolia is at the intersection of Cassidy and Vine streets, although there is a second entrance into the new section on Vine across from North Broad and a third entrance, into the old section also off Broad. There is no indication of a "main entrance" and none of the entrances have signage for the cemetery.

Figure 53. View of the new section of Magnolia Cemetery.

Figure 54. The paved roads in the new section of Magnolia Cemetery are cracked and require filling or sealing. The roads should also be regularly edged.

Once in the cemetery vehicular circulation is constrained by the narrow (ca. 12 foot) drives and sharp, 90° turns. This makes negotiation of the drives difficult. There is no logical progression of traffic through the cemetery.

With the average car or pickup ranging from 5.5 to 6.5 feet wide and heavy vehicles about 7 feet wide, these roads must be considered essentially one-way. Vehicles may pass one another, but it requires both to pull onto the road shoulder, which is often non-existent because of nearby graves.

Nevertheless, any effort to widen the roads would dramatically alter the character of the cemetery. The work would require the removal of large number of graves and create ribbons of asphalt that are out of place in this lawn park cemetery. Moreover, visitation appears relatively low, at least during our survey, so the road network may be adequate. We recommend that the existing roads be maintained, but otherwise not altered.

The new section roads are primary asphalt concrete, although there is one dirt roadway along the western edge, adjacent to the wooded drainage.

The wear coat on the roads appears to be in good condition. There are, however, areas where the wear coat is cracked and deteriorating (Figure 54). Cracks such as these allow water to get into the roadway base and subgrade, resulting in pavement breakup and potholes. The cracks we observed in Magnolia Cemetery roads appear to be good candidates for filling or sealing. This is a job that likely can be performed at little cost by the city's Public Works Division.

Two of the most critical issues affecting the treatment of cracks are the cleaning and drying of the cracks, as well as the preparation and application of the chosen material. Cold temperatures, soil, and moisture can prevent proper adhesion between the sides of the crack and the sealing material. Therefore, the use of hot compressed air followed by a heat lance is often recommended – and would be appropriate for the Magnolia paving.

A 1999 study by the Federal Highway Administration, though based on much heavier traffic than Magnolia's roads see, found that several techniques provide good, long-term performance. The city should consider an asphalt rubber or rubberized asphalt used as either a flush-fill or overband configuration.

Figure 54 also reveals that the roads at Magnolia are rarely edged. This creates an unkempt appearance and will serve to deteriorate the road edge pavement over time.

Figure 55. Poorly defined dirt roadway in the old section.

In the old section there is a single dirt road that is poorly defined by two ruts (Figure 55). It was in satisfactory condition, although our visit occurred during a significant drought. It seems unlikely that the road will hold up well during prolonged rain.

Another issue we noted in the old section was that the poorly defined road, combined with the appearance of few graves has resulted in many vehicles driving across the cemetery (Figure 56). This is disrespectful. In addition, many of the graves evidence sinking and may collapse under the weight of a vehicle.

Figure 56. Tire tracks are clearly visible across the old section of Magnolia. This is disrespectful and dangerous. The activity must be curtailed.

It is critical that the city eliminate this behavior. We recommend not only adding this to signage (discussed below), but the roadway in this cemetery should be paved in order to emphasize the appropriate driving area.

Drainage

The cemetery relies primary on natural drainage provided by the topography sloping into Oquina Creek. We observed no indications of erosion or other damage, so this is acceptable.

We did, however, notice several culverts along the north end of the old section, as well as one drain at the south end of the new section. These should be on a routine maintenance schedule – the one in the new section appeared clogged with debris. The ones in the old section are also clogged, with several evidencing small plants growing up in them. These drains are also open, presenting a significant liability to the city. They should have covers installed to make them safer.

There is a small section of Oquina Creek open at the south end of the cemetery. A narrow roadway passes over the creek, but the creek bed itself is covered in litter. This presents a very poor impression of the

Figure 57. Trash in Oquina Creek. This should be cleaned by the city on a regular basis.

community and should be cleaned up immediately.

Given the narrow roadway across the drainage, the city should either install bollards or consider closing this access.

Pedestrian Access and Pathways

There are no formal pathways in the cemetery, nor do they appear necessary given the limited pedestrian activity in this cemetery. Pathways are an issue that must be considered in conjunction with any effort to increase tourism. Efforts should be made to avoid these concerns by funneling pedestrian traffic along existing roadways.

Universal Access

The ADA or the Rehabilitation Act of 1973 is generally not interpreted to apply to cemeteries by the Department of Justice. Efforts to make Magnolia accessible would not be difficult given the relatively gradual slopes; however it would significantly change the appearance of the cemetery (and would necessitate – and limit the nature of – pathways). We believe that reasonable accommodation can be provided by having photographs and other information on-line or by funneling pedestrian traffic along the roadways.

Security Issues

Vandalism

The city does not report any significant vandalism issues at Magnolia and we observed no indications of recent vandalism during this assessment.

The cemetery, however, is not routinely patrolled by police or city maintenance workers. The gates cannot be closed after hours, nor is there any signage concerning regulations.

The city does not have any established procedure to identify and respond to vandalism, should it occur. We recommend that a procedure be established. Critical elements include:

- Periodic inspections at a level to note changes to monuments or other problems,
- A procedure to document this problem, and
- Responses that involve, as appropriate, criminal investigation and repair.

Inappropriate Cemetery Uses

Discarded alcohol containers were found both openly discarded in the cemetery (although less commonly than at Old Cemetery). This open consumption of alcohol will

Figure 58. Alcohol containers in Old Cemetery.

discourage visitors and the litter presents a very poor impression.

A more significant presence of city maintenance workers, coupled with a more aggressive police presence, is needed to curb this problem.

Inappropriate use of the cemetery must be discouraged. City Code Section 11-4 Public drunkenness; consumption of alcoholic beverages on municipal property, prohibits the consumption or possession of alcohol on city property, including the cemetery. City Code Section 11-18 Littering public property or waters prohibited, makes the discard of these materials in the cemetery illegal. Other city codes deal with both criminal trespass and injury or defacing public property. There are therefore ample means for the city to reduce this problem.

Along the east side of the cemetery there is a road that originally served the industrial facility. This roadway is today essentially abandoned and is being used for illegal dumping (Figure 59). The smell from this garbage was clearly evident in the cemetery during our visit. If this road is no longer being used, the city should block its access after cleaning up the existing piles of garbage.

Figure 59. Dumping along the road to the east of the cemetery.

Fixtures and Furnishings

Plot Fences

Only one plot fence and one iron railing was observed in the old section of Magnolia Cemetery. All that remains today of the fence are the posts. They suggest the fence was probably ornate wire that eventually corroded, leaving only the posts. The posts are marked "CLEAVELAND FENCE CO. INDPLS IN."

This type of fencing was widely used in the late nineteenth and early twentieth centuries as an inexpensive alternative to the longer lasting heavy iron fences found in Old Cemetery. They are not uncommon in African American burial grounds. The Cleaveland Fence

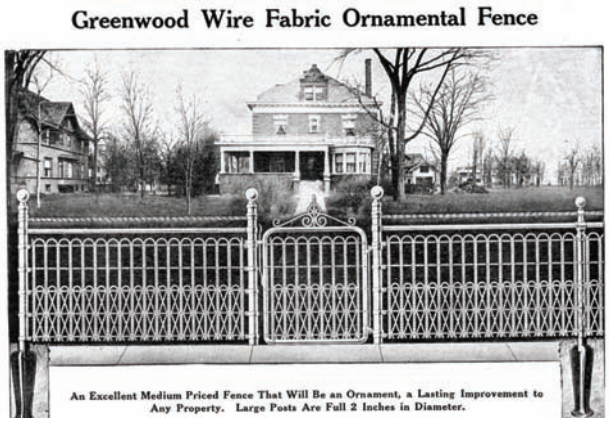


Figure 60. The top illustration shows posts for an ornate wire fence in the old section of Magnolia Cemetery. The middle is an advertisement from the 1921 Sears *Lawn and Cemetery Steel Picket and Wire Fabric Fencing* catalog.

Company is known to have been in operation between at least 1893 and 1901.

Although only the posts remain, we recommend that the city take steps to ensure their preservation. Those that are standing should be painted, following the instructions provide in the Old Cemetery discussions. Briefly, this work would use Rust-Oleum's Rust Reformer after lightly brushing the posts to remove loose corrosion. The Rust Reformer should then be followed by two thin coats of a flat black industrial alkyd coating.

The one post on the ground should be repaired and re-erected.

The plot with the iron railing should be similarly treated to ensure its continued preservation.

Landscape Maintenance

Staffing Levels and Training

Appendix 2 provides details on our recommended level of staffing. It is worth noting that the city is currently understaffed and the use of untrained prisoners fails to provide the level of care the cemeteries deserve. Appendix 2 provides detailed information regarding training and expected duties.

Cemetery Trees

Our examination of the trees in the old section of Magnolia Cemetery revealed overall poor health. Almost all of the old, large cedars are dead. Likewise, a large number of younger dogwoods were incorrectly planted in full sun and are in poor condition. Overall, the old section has an especially forlorn appearance (Figure 61). Although the new section does have dead trees, the vegetation here is characterized by inappropriate pruning. All tree care should comply with ANSI A300 (Part 1) - 2001 standards and the ISA standards of practice.

Pruning must be done by individuals trained in arboriculture and having clear knowledge of ANSI A300 (Part 1). The procedures and techniques are difficult; the decisions concerning what limbs to prune and how to best shape the tree are acquired only through both a knowledge of tree biology and experience. Effective safe pruning cannot be accomplished by untrained individuals. *We strongly recommend that the work be performed by an ISA Certified Arborist, preferably one who is also*

Figure 61. Example of a gas pipe rail fence in Magnolia's old section.

an ISA Certified Tree Worker/Climber Specialist. Under no circumstances are tree climbers (hooks, spikes, gaffs) to be worn while ascending, descending, or working in trees to be pruned.

After this initial pruning the trees at Magnolia Cemetery should be inspected by an ISA Certified Arborist every 5 years and after any severe weather event (any storm with winds in excess of 55 miles an hour or any winter ice storm).

If removal of a tree is deemed necessary an evaluation should be made concerning the need for an ISA Certified Tree Worker/Climber Specialist. If the tree is small to medium in size (perhaps under 6-8 inches dbh) and can be removed without endangering any monuments, fences, or walls, then it may be suitable for in-house removal.

If the tree is larger than 8-inches dbh or it will need to be topped and removed in sections, then it is critical that an ISA Certified Tree Worker/Climber be retained. Any effort to remove such trees in house will pose a significant risk to the cemetery landscape.

During removals the trunk should be cut as close to the ground as possible, leaving the stump in place to decay naturally. No chemical additives should be used to hasten decay, although it is acceptable to paint an herbicide on the stump if it is a tree that will promote suckers. Plywood shelters or timber cribbing may be necessary to protect stones and monuments during removals.

Figure 62. View of Magnolia's old section showing the forest of dead cedars.

We estimate that there are about 42 trees in the old section of Magnolia. No effort was made to tabulate the trees in the new section,

Figure 63. Tree problems at Magnolia's old section. From top left to bottom right: sickly tree with fork, one branch dead, recommended for removal; sickly tree with much dead wood, recommended for removal; dead cedar, recommended for removal; unhealthy tree, recommended for removal.

although the number in this area is about half those identified for the old section (ca. 21).

Considering only the old section, of the 42 only 5 (12%) are healthy and require only minimal pruning. This would be characterized as thinning. Thinning is a technique of pruning that removes selected branches to increase light and air movement through the crown. This also decreases weight on heavy branches. The natural shape of the tree is retained and its overall health is improved. Not more than 25%

of the crown should be removed during an annual growing season.

An additional three trees (7%) require pruning of dead or diseased limbs, but the tree is otherwise in satisfactory condition. This would be characterized as clean pruning – pruning to remove one or more dead, diseased and/or broken branches.

Unfortunately, 18 trees (43%) are dead or so severely diseased that they must be removed.

An additional 16 trees – all dogwoods – have been inappropriately planted in full sun and are sickly. All should be removed before they become more significant problems.

There are several palmettos in the cemetery. They are in good condition and we recommend no action for them. Pruning to the trunk no more than yearly is acceptable, but these trees are self-pruning and we discourage the removal of *any* green fronds.

The smaller trees (for example, all of the dogwoods) can likely be safely removed by in-house crews. The larger trees should be removed by an ISA Certified Tree Worker/Climber Specialist.

The removal of 34 trees will noticeably alter the cemetery landscape. Unfortunately, there is no alternative given the problems faced in the cemetery. It is good practice to plant a new tree for every tree removed. In this case we recommend replacing about 20 trees (although more can be planted, we believe that at least 20 will be necessary to stabilize the landscape).

While there are no perfect trees, cemetery landscapes were historically dominated by large deciduous trees, although evergreens such as cedar are also very common. They provide a distinctly inviting image for visitors and passersby. These trees also provide some visual separation from adjacent buildings – especially in cluttered urban environments.

A good replacement tree would be Eastern red cedar (*Juniperus virginiana*). Suited for zones 2-9, the cedar thrives in partial to full sun. It is highly drought tolerant, produces no litter, and surface roots are not typically a problem. The cedar is relatively tightly contained, with a spread of about 10-20 feet at maturity. Cedars should be replaced with cedars.

The dogwoods are planted as a straight line – a formality that is lost on this section of the cemetery. We recommend using a combination of Florida maples (*Acer saccharum* var. *floridum*) and weeping yaupon hollies (*Ilex vomitoria* "Pendula").

The Florida maple is drought tolerant, thrives in an urban setting, has little litter, and surface roots are not a problem. It is also resistant to breakage. Its spread can be up to 40 feet, so care must be exercised in its placement.

The weeping yaupon holly is typically 15-20 feet in height, with a spread of about 12 up to 25 feet. It, too, is drought tolerant, can grow well in full sun, is resistant to breakage, has no significant litter, and does not have surface roots.

We encourage the city not to plant these trees in a formal line, but to use them to help soften the otherwise harsh landscape of the cemetery. As individual specimen trees they will create interest and soften the area.

All replacement trees should be of at least 1-inch caliper and meet the minimum requirements of the American Nursery and Landscape Association's American Standard for Nursery Stock (ANSI Z60.1-2004).

Some similar problems are noted in the new section – most specifically dead or dying cedars. These should be removed and new

cedars replanted. Given the relatively low density of vegetation in the new section, a new tree should be planted for any tree removed.

Shrubbery

There is only minimal shrubbery in the old section, consisting of boxwood (*Buxus* sp.), ligustrum (*Ligustrum* sp.), and arborvitae (*Platycladus [Thuja] orientalis*). In the new section the shrubbery is dominated by arborvitae and occasional boxwoods. Unfortunately, all have been abused and are in very poor condition.

Both the ligustrum and boxwood have been ignored for years and then inappropriately pruned, resulting in significant damage to the structure and beauty of the plants. At this point the only options are either removal and replacement, or an effort to rejuvenate. We recommend an initial effort at renewal pruning. For the ligustrum this involves cutting the plants back to within 12 inches of ground level.

Figure 64. Inappropriately pruned boxwood. This plant has suffered from a lack of pruning (resulting in the interior bare branches) and recently has been incorrectly cut away to expose the ledger. Not only is the pruning incorrect, but the work is poorly done. These boxwoods require rejuvenation pruning.

A similar approach can be used on the boxwoods since they regenerate well. Although the plants will look poorly for a season or two, new growth becomes evident quickly.

Once rejuvenated, the most appropriate pruning method is thinning; this allows the center of the plant to receive adequate sunlight and air circulation. Properly pruned boxwoods will have leaves along the entire branch. Improperly pruned boxwoods or boxwoods that have been ignored, will have only bare wood on the plant's interior.

The arborvitae is a neat shrub with tight, compact foliage held in dense, fanlike vertical sprays. Although it can grow as tall as 50 feet with a spread of 20 feet, the arborvitae usually grows as a smaller, bushier shrub with a conical or teardrop shape. It has a variety of wonderful characteristics – but it does not tolerate pruning well and it cannot rejuvenate from old wood; therefore when pruning is done, it must be undertaken with great care.

In fact, pruning usually occurs only when the plant was located too close to a feature (such as a walkway or monument). Unfortunately these planning problems can't be easily corrected by pruning without dramatically affecting the character, appearance, beauty, and health of the plant.

We found that many of the beautiful arborvitae in Magnolia have been dramatically affected by inappropriate pruning (Figure 66). The damage done to these plants is so severe that they cannot be salvaged. We recommend

Figure 65. Incorrectly pruned ligustrum in the new section (top) and nearly dead boxwood with much trash vegetation in the new section (bottom).

the gradual removal of all inappropriately pruned materials and their replacement with new arborvitae. In the future special care must be exercised to ensure those entrusted with pruning are knowledgeable and appropriately trained.

Turfgrass

The cemetery is in bahiagrass (*Paspalum notatum*) – a species introduced from Brazil in 1914. While not historically appropriate, it is a popular low-maintenance lawn grass for infertile soils. It is drought tolerant, does not form thatch, does well in infertile soils, and has relatively few disease problems.

On the other hand, bahiagrass does not have good tolerance to shade or traffic. It also displays an open growth habit, which can result in encroachment of weeds into sparse areas – a very noticeable problem at Magnolia Cemetery (see Figure 67). A further problem is that the grass has low tolerance to many common herbicides that would normally be used.

While Banvel®, 2, 4-D, or a combination of the two will control most broadleaf weeds; there is no post-emergence herbicide for grassy weeds in bahiagrass. Nevertheless, most weed problems could be avoided by avoiding inappropriate fertilization, over watering, and with proper, timely mowing.

However, all agencies responsible for maintenance of utility turf like bahiagrass, including Thomasville's Public Works, struggle to find funds to keep this grass mown properly. In summer its rapid vertical growth and exuberant seed head production are remarkable.

We are told that the Public Works is beginning a seed head suppression program and is also looking at alternative grasses. This is primarily driven by citizen complaints concerning the seed heads. Due to the rapid growth of bahiagrass seedheads mowing is an expensive solution.

The most common treatments are either Plateau (imazapic) or Oust (sulfometuron). Treatments have to be applied frequently and some studies suggest they may result in phytotoxicity. We are also uncertain of the effect these chemicals may have on the cemetery's historic stone and masonry.

Although sympathetic to the public's desire to see a "perfect" turf, such perfection is costly. Seedheads are also a purely aesthetic issue – there are many more substantive issues that affect the long-term viability and

Figure 66. Arborvitae in Magnolia Cemetery. From top left to lower right: beautiful, healthy, unpruned arborvitae showing correct form; arborvitae damaged by crown raising that has created an unnatural and inappropriate mushroom shape; arborvitae that has been carved into to move the plant away from a ledger; arborvitae damage by crown raising, exposing many of the interior bare branches.

preservation of the cemeteries and these should be given priority.

We are more inclined to support the replacement of the bahiagrass with an alternative turf. One low maintenance turf to be considered is centipede. It is slow growing and resistant to drought once established. It does not, however, tolerate traffic and does best in full to partial sun.

Another grass to consider is buffalo grass, *Buchloe dactyloides*, a native, rugged, warm-season prairie resident. It is naturally drought tolerant and disease resistant. It has a gray-green color, is low-growing (in comparison with other native prairie grasses; 4-8 inches), and fine-textured. Some varieties are seeded, newer varieties are seedless. It spreads by stolons (runners), but is not nearly as aggressive as bermudagrass. It grows best in full sun, but is accepting of only 6-8 hours of direct sunlight per day.

Buffalo grass can survive on as little as ¼-inch of water a week and does not require fertilization. It also tolerates a wide range of mowing heights. Although it can be cut short (2-3 inches) to resemble other turfgrasses, taller mowing increases its drought resistance and competitiveness against weeds. Maintenance overall is reduced as it is mowed taller. A

Figure 67. The open growth habit of bahiagrass resulting in encroachment of broadleaf weeds into sparse areas.

"respectable" appearance can be achieved by mowing every 2-3 weeks during the growing season and, later in the season, every 3-4 weeks.

All grass, however, will require maintenance – including mowing – and the problem at the Thomasville cemeteries is not really the acreage or need to mow, but rather the inadequate staff.

The Public Works Division is currently using two 60-inch mowers for the five cemeteries, supplemented by nylon string trimmers. We are told that the mowers are equipped with mulching blades – this is an excellent practice and we support its continued use. Not only could a collection bag cause damage to stones and make maneuvering the equipment more difficult, but the clippings when left on the ground will provide nutrients.

While the use of these large riding mowers can be problematical in cemeteries with many walls, fences, and three-dimensional monuments, Magnolia Cemetery has a number of open spaces (see Figures 52 and 53) suitable to large deck mowers. Nevertheless, it is critical that crews be very careful to prevent damage to vegetation and monuments.

The use of the nylon trimmers is an acceptable practice, but it is critical that a very light weight line be used – along with worker attention – to minimize damage to soft stone such as marble. Currently 0.095-inch line is being used. This is acceptable, but we would like to see the cemetery staff switch to a 0.065-inch line which is even safer for use around stones.

Although we are told that after mowing, monuments are blown off, this is clearly not the case (see Figure 68). The failure to clean the monuments is a significant issue and goes to a lack of proper supervision. Cleaning grass off monuments is a standard practice in the industry and must be regularly done by the city.

Unaddressed in Magnolia are the

Figure 68. Examples of grass left on monuments in both the old and new sections of Magnolia. Some grass has been on monuments for so long it has begun to mulch down, staining the marble.

numerous fire ant mounds. One survey done in 1998 concluded that 33,000 people in the state of South Carolina sought medical attention as a result of fire ant stings. Of those 15% had severe localized allergic reactions and 2% had severe systemic reactions resulting in anaphylactic shock. The city leaves itself open to significant liability by failing to adequately treat these mounds.

Figure 69. Fire ants in Magnolia Cemetery.

An excellent publication on fire ants is www.clemson.edu/sandhill/userfiles/file308.pdf. Bait products such as Amdro, Award, or Logic are effective on individual mounds, although control is not immediate. Broadcast applications, however, are even better and it appears that a mixture of 3/4 lb. hydramethylnon in baited granules (under trade names "Amdro" or "Siege") and 3/4 lb s-methoprene in baited granules (under trade name "Extinguish") applied per acre is even more effective. Amdro/Siege, a metabolic inhibitor, takes 3-6 weeks after ants consume it to show an effect and the effect lasts for several months until a re-invasion occurs. Extinguish is a growth regulator that takes longer to show an impact, but then can last a year or more.

Other Landscape Issues

During our visit to Magnolia we observed tire tracks not only on the grass as previously mentioned (see Figure 56), but we even observed tire tracks on ledgers (Figure 70). This is unacceptable and the practice must stop immediately.

Not only is it terribly disrespectful to treat a gravesite in this manner, but it is very dangerous. As will be shown in the following section on conservation, many of the ledgers in Magnolia are purely supported. Driving on these ledgers could cause them to collapse – potentially damaging the vehicle, injuring passengers, and even damaging the human remains.

If it is absolutely necessary to operate over monuments, the city should use mud tracks – platforms designed to distribute equipment weight and prevent damage (although commercially available, even ¾-inch plywood is satisfactory).

The city should also be aware of the thick stand of cane between the abandoned road to the east and the old section of magnolia. While the cane is doing a good job of screening the old road, it is by its nature invasive. Maintenance works must be vigilant to ensure that this cane does not spread into the cemetery proper.

Other Maintenance Issues

This category is a catch-all for other issues that are observed in the cemetery, but that don't fit conveniently in other divisions, including signage, trash collection, and additions to the cemetery.

Signage

Magnolia Cemetery has no signage at any of its entrances and this should be immediately rectified.

From a cemetery preservation perspective signage is of four basic types: identification, regulatory, informational, and interpretative. They are generally recommended in this same priority.

Identification signage might include the name of the cemetery and might also include the cemetery's date of founding and historic significance (i.e., eligible for listing on the National Register).

Regulatory signage specifies laws, regulations, or expected standards of behavior. We recommend that the city develop signage dealing with, minimally, these issues (perhaps with some modifications of language as might be needed):

- This cemetery is open from 7:00 am to 7:00 pm. Presence in the cemetery during prohibited hours is trespass.
- Many of the stones in this cemetery are very old and may be easily damaged. Consequently, absolutely no gravestone rubbings will be allowed.
- The stones and monuments in this cemetery are fragile. Please refrain from leaning, sitting, or climbing on any monument or mausoleum. All children must be escorted by an adult.
- Absolutely no alcoholic beverages, fireworks, or fire arms are allowed in the cemetery. Proper conduct is expected at all times.
- No pets are allowed in the cemetery.
- No plantings are allowed within the cemetery and the City will enforce its right to remove any plantings deemed inappropriate, diseased, or damaging the cemetery.
- No monuments or other work may be conducted in the cemetery without the written permission of the Cemetery Sexton.
- For additional information concerning maintenance issues, please contact the City of Thomasville, Public Works Division at _____. In case of emergency contact _____.

The last two types of signage are informational (for example, directional signs) and interpretative (information on historic people buried in the cemetery). At the present time there is insufficient information to support such signage.

The new identification and regulatory signage should conform to the city's standard signage in order to present a unified appearance. Signage should be erected at all three entrances to the cemetery.

Trash Collection

We are informed that Public Works does not visit Magnolia on a regular basis, especially during the winter months. This is clearly evident by the accumulations of trash both in the cemetery and in the drainage. This trash clearly reveals why cemetery maintenance is a year-round, not seasonal, undertaking.

In an relatively non-urban area, we do not recommend trash containers. The city, however, must walk the cemetery at least twice a week to collect trash.

Designation of Graves

We understand that the city uses cones to designate the correct location of graves to the

Figure 70. Cones need to be collected in a timely fashion from graves. The upper two photographs show cones at graves after burials and after the placement of monuments. The lower two photographs show a cone at a grave so long that grass under the cone has been protected from freezing weather.

funeral homes/grave diggers. During our visit we found traffic cones throughout the cemetery. In many cases it appears that the burial service has already been conducted, but the cone has never been collected. In one case the cone had been on the grave for so long that in spite of the freezing weather, the grass under the cone was still green.

If cones are to be used, they *must* be collected in a timely fashion. Otherwise, their presence detracts from the beauty and dignity of the cemetery setting. Cones should not be left out more than 48 hours – and certainly should be collected *prior to the funeral*.

In fact, we strongly recommend that the city's sexton *routinely* verify the grave location as it is being excavated or immediately afterwards. This will help prevent any errors and reduce the city's liability for damage to pre-existing graves. During these inspections the cones can be collected.

The city's inspection should verify that the grave is in the correct location, excavated to the correct depth, and safely covered. The inspection should also verify that no damage has been done to the landscape or other monuments by the excavation equipment. The city should also ensure that the spoil has been correctly handled (see below).

Grave Spoil

The city does not open or close graves, requiring funeral homes to perform this work. The city does, however, allow these firms to

Figure 71. Spoil should be more discretely placed or removed from the cemetery.

dump excess spoil at the edge of woods bordering Oquina Creek in the new section of Magnolia (Figure 70).

This practice presents an unkempt appearance that damages the cemetery

Figure 72. Grave collapsing shortly after burial from inappropriate compaction. This will lead to the displacement of the ledger.

landscape. The city should either require grave diggers to remove excess spoil after the burial or a designated area should be set aside and screened from public view using plantings or fencing.

Backfilling of Graves and Setting of Stones

The city also allows funeral homes or other commercial firms to backfill the graves and set stones. There appears, however, to be no regulations concerning these practices and we see no indication that the practices are adequately regulated by the city. As a result, we found several examples in Magnolia of defective or substandard work. These included graves collapsing only weeks after the burial and stones inappropriately set by monument companies.

As in other areas, we recommend that the city take a proactive role in overseeing the quality of work performed in the cemetery. Problems not caught today will become preservation concerns several decades from now.

The Issue of Flowers

All cemeteries struggle with the issue presented by flowers on graves. We have never seen a cemetery where, for example, Christmas flowers had not been left for months – becoming faded and detracting from beauty of the cemetery grounds. Magnolia Cemetery is no exception. Figure 74 shows one such grave in Magnolia Cemetery. Decorations left months after holidays affect the beauty and dignity of the entire cemetery. We recommend that the city adopt a flower policy that will minimize maintenance problems.

Figure 73. One example of an incorrectly set monument that has fallen and is now broken.

First, we believe that all flowers or arrangements should be removed by the cemetery staff 10 days after holidays *or* when the arrangements become unsightly. This will allow staff to remove faded flowers, Christmas decorations after the holidays, and so forth.

Floral policies are common at cemeteries. For example, National cemeteries have very constrained policies:

- Natural cut flowers may be used throughout the year and "will be removed when they become unsightly."
- Artifical flowers may be used only from October 10 through March 15 (when cut flowers are often not widely available).
- Potted plants are allowed only from 10 days before and 10 days following Easter Sunday.
- Memorial decorations will be removed 7 days after the holiday.
- Christmas decorations are permitted only during the season and will be removed no later than January 10.

The regulations of Georgia municipalities vary significantly. For example, the Rome, Georgia cemetery rules specify that:

- Only one floral arrangement shall be placed on each grave and only at the base of the monument. All flowers shall be placed at the base of the monument. Any flowers which are determined by the sexton to be outside of the appropriate area may be removed by the city.
- The city recommends that all floral arrangements be placed in clay or plastic containers. Glass, tin, wire and cement containers are prohibited. Any other container must be approved by the sexton.
- The sexton is authorized to remove funeral flowers after 72 hours unless notified by the family or lot owners.
- Floral frames, when removed from the plot, unless called for within ten days by those lawfully entitled to them, shall be disposed of by the city.


Figure 74. Faded burial flowers still on a grave.

Statesboro, Georgia has more generalized regulations:

> The city shall reserve the right to remove all cut flowers and

pot plants in the cemetery that may be dead or otherwise objectionable, and will hold the plants or the containers for two weeks after their removal, using ordinary care and diligence for their protection and safety, but shall assume no further liability in connection therewith. Owners shall call for the plants or containers within the specified time.

Figure 75. Examples of broken headstones requiring repair (see also Figure 73).

Between the two are those for Cartersville, Georgia:

- Funeral flowers will be removed after five (5) days.
- Holiday flowers will be removed after thirty (30) days.
- All flowers must be in proper containers and be placed on markers; none will be allowed to be stuck in the ground. Only clay, plastic or recessable type containers for flowers.

However general or specific, Thomasville should take steps to maintain the cemetery – and this involves removing old, faded, deteriorated, and damaged floral arrangements.

Second, we recommend that the city establish a regulation that all floral arrangements must be placed in vases integral to the stone or that a vase mounted vase holder be used. These choices provide a wide range of cost options for families while still ensuring that the maintenance staff can perform their duties. These are available from a variety of monument companies for about $20 retail or could be ordered by the city and sold directly (one web site is http:/ /www.thompsonmonuments.com /flower_holders.html).

Conservation

General Types of Stone Damage

Although a stone-by-stone assessment was not included in this assessment, it is possible to provide some general observations concerning the types of problems faced by Magnolia Cemetery.

There are examples of broken stones (we estimate approximately 30). Many of these stones should receive a high priority for conservation treatments since the stones are either a hazard to the public (endangering visitors) or a hazard to themselves (if they fall there will be additional, significant damage that will dramatically increase the cost of repair). The identification of these stones and development of treatment proposals by a professional conservator should be a very high priority. It is only with the development of detailed treatment proposals and cost estimates that a reasonable budget for this conservation work can be determined.

In most cases gravestones are fragile and their repair is delicate work. There are many commercial products on the market, used by many commercial stone companies, which are totally inappropriate for historic stone.

Figure 76. Example of a fallen stone (bottom) containing ferrous pins.

Appropriate conservation treatment will usually involve drilling and pinning, carefully aligning the two fragments. Threaded 316 stainless steel rod (or occasionally nylon) and epoxy adhesives formulated for the specific stone are used in this type of repair. Diameters and lengths of pins vary with the individual application, depending on the nature of the break, the thickness of the stone, its condition, and its expected post-repair treatment.

Sometimes pins are not used in a misguided or misinformed effort to save time and money. Instead the pieces are simply joined using a continuous bead of epoxy or some other adhesive. Experience indicates that for a long-lasting repair, particularly in structural applications, use of pins is usually necessary. Moreover, most adhesives are far stronger than the stone itself, meaning that failure of the repair is likely to cause additional damage to the stone.

At times mechanical repairs also involve dismantling intact elements and ensuring that a sound foundation is present. Foundation work may involve filling in depressions, establishing a concrete footing, or taking other measures to ensure that subsidence is minimized. Then the entire structure is repaired as it is reassembled.

Several stones were noted with ferrous pins (we observed two). These should be given a high treatment priority since, left untreated, the corrosion will cause significant spalling, cracking, and breakage of the stones. In these cases it will be necessary to use diamond core drills to remove the ferrous pins. They will then need to be replaced with stainless steel pins.

After many such repairs it will be necessary to fill the voids with a natural cementitious composite stone material resembling the original as closely as possible in texture, color, porosity, and strength. This type of repair may be used to fill gaps or losses in marble and is often used to help slow scaling of bedded sandstone exposed to the elements.

Under no circumstances should latex or acrylic modified materials be used in composite stone repair. These additives may help the workability of the product, but they have the potential to cause long-term problems. Such products are not appropriately matched in terms of strength or vapor permeability.

Figure 77. Stones that require resetting.

More suitable materials are materials such as Jahn (distributed by Cathedral Stone) or the lime-based mortars of U.S. Heritage. These closely resemble the natural strength of the original stone, contain no synthetic polymers, exhibit good adhesion, and can be color matched if necessary.

All infill work should be conducted by a trained conservator. The Jahn products, in fact, require certification in their use through Cathedral Stone.

A number of stones are either leaning or out of the ground (we estimate about 20). Stones should never be reset using concrete, but rather should be set in pea gravel. This approach allows the stone some movement should it be accidentally impacted by lawn maintenance activities. The pea gravel will also promote drainage away from the stone, helping the stone resist the uptake of soluble salts.

Figure 78. Examples of collapsing ledgers.

A final problem observed throughout both the old and new sections is damage to and collapse of ledgers. We observed approximately 45 damaged ledgers in the two areas, with the greatest number in the old section.

Repair of these monuments will require removal of the ledger, correcting foundation problems, possibly installing a secondary Portland cement ledger, repairing the ledger, and resetting.

Cleaning of Monuments

A significant amount of damage may result from inappropriate cleaning techniques. The most common cleaning technique is the use of a bleach product – probably because bleach (either sodium hypochlorite or calcium hypochlorite) is widely available and inexpensive. It is, nevertheless, unacceptable for historic monuments.

Table 2 discusses problems with a variety of "common" stone cleaning processes widely used by commercial firms and the public. Providing this sort of information to families who have loved ones buried at the city cemeteries may help deter abusive cleaning.

Cleaning is largely an aesthetic issue – we saw few examples where soil or biologicals were actually causing damage to the monuments. Consequently, the city should embark on an educational program to discourage inappropriate cleaning – explaining not only the dangers of bleach and other commercial methods, but also pointing out that such activities diminish the historical value and ambience of the cemeteries. These cleaning methods remove not only soil, but also the patina of age – leaving monuments that no longer appear historic.

This educational program should point out that cleaning – even when done correctly – will gradually erode monuments, making them susceptible to more soiling and damage. Consequently, cleaning should be conducted no more frequently than perhaps once every 5 years.

The safest product for cleaning is simply low pressure (less than 90 psi) water and a soft bristle brush. When some other assistance is needed a product that has been found safe for most stones is D/2 Architectural Antimicrobial distributed by Cathedral Stone.

Concrete Repair

Although considerable brickwork is present at the older cemeteries in Thomasville, we did not observe any in Magnolia. What is present, albeit in small quantities, is deteriorating concrete curbing. Constructed using Portland cement and aggregate that varies from fine rock in one case to what appears to be clinkers in another, the condition varies from acceptable to deteriorating. In many cases the only remedy for deteriorating concrete is to remove the damaged section and replace it with an appropriate mixture.

It is at times tempting to dismiss concrete coping as not critical or worthy of funding. Yet, these plot boundaries are a critical element in the cemetery's appearance and they represent unique historic fabric. Consequently the city should ensure their long-term preservation.

There are basic procedures to be followed in concrete use, yet shortcuts are often taken that ultimately result in significantly compromised concrete. The durability of any concrete depends on the quality of the mix and workmanship involved in mixing, placing, compacting, and curing. For example, low permeability of finished concrete depends on the hydration of the cement to fill interstice voids that are initially filled with water. Keeping the newly cast concrete moist prevents the fresh concrete from drying too quickly and allows hydration to continue; this, in turn, promotes greater durability.

Concrete repair must be certain to match the historic material in finish, profile, and color. Aggregate should also match, assuming that the aggregate itself is not the cause of the deterioration. Concrete repair is typically well understood by most reputable contractors. It will consist of the removal of damaged sections to a minimum depth of 2-inches and that distance beyond the damage in all directions. The new surface will need to be roughened. It is

often appropriate to install threaded fiberglass dowels to tie the new section of concrete to the old. In addition, the concrete will be coated with a bonding agent, such as Nitobond Epoxy Gel 400C. Often air-entrained concrete is used and this is acceptable, especially in areas with significant freeze-thaw action.

Recommendations

Circulation

No change in the circulation patterns of Magnolia Cemetery is recommended. The historic patterns should be maintained and are adequate for safety and convenience of the low usage.

The Magnolia paved roads are generally in satisfactory condition, although several areas of premature cracking and erosion were identified. These should be repaired by the city. Asphalt rubber or rubberized asphalt used as either a flush-fill or overband configuration should be considered.

Any effort to widen roads in the cemetery will result in significant damage to the context and integrity of the cemetery. The existing roads should therefore not be modified.

Off-road driving in the old section is of particular concern. The road in the old section should be paved and bollards should be installed as necessary to prevent this activity.

Drains in both the old and new section should be periodically cleaned – all were clogged at the time of this visit.

Drains in the old section are open and present a hazard to the public. These should have grates installed.

The Oquina Creek drainage between the old and new section is filled with trash – it should be immediately cleaned and put on a regime of monthly cleaning by the city.

The roadway over Oquina Creek is very narrow and hazardous. The city should either install bollards or should close the roadway to routine traffic using a gate.

Security Issues

Magnolia Cemetery must have a more routine police presence, with patrols in the evening and night hours. Particular attention should be paid to the problem of alcohol consumption.

The City must provide more visible maintenance staff to ensure the safety of the cemetery and better collect litter.

The abandoned road to the east of the old section must be cleaned up and closed to prevent future dumping.

The city should develop a mechanism to identify, record, and report vandalism in the cemetery.

Fixtures and Furnishings

The old section contains the remains of one ornate wire fence. The remaining posts should be painted and the one post out of the ground should be repaired and reset.

Landscape Maintenance

Tree maintenance has been neglected. Of the ca. 42 trees in the old section only five are healthy and require only minimal pruning or thinning. An additional three trees require pruning of dead or diseased limbs. All pruning must comply with ANSI A300 (Part 1) - 2001 standards and the ISA standards of practice. We strongly recommend that the work be performed by an ISA Certified Arborist, preferably one who is also an ISA Certified Tree Worker/Climber Specialist.

Approximately 34 trees in the old section should be entirely removed as they are either dead, dying, or planted incorrectly. Some of these are small enough and so located to allow

in-house removals. Others should be removed by an ISA Certified Arborist.

Of the 34 trees removed in the old section, about 20 should be replaced, primarily with Eastern red cedars, although occasional Florida maple and weeping yaupon hollies may be used as specimen trees to provide interest and diversity.

There are cedars in the new section that are also dead or dying. These should be removed. In this portion of the cemetery, a new cedar should be replanted for every one removed.

The ligustrum and boxwood require rejuvenation pruning. If this is not successful, these shrubs will need to be removed and replaced. It is not acceptable to simply remove the plants since this would dramatically alter the cemetery landscape.

The inappropriately pruned arborvitae cannot be rejuvenated. They must be removed and replaced with new arborvitae. In the future special care must be exercised to ensure that those entrusted with pruning are knowledgeable and appropriately trained. This incorrect pruning will be an expensive error for the city to correct.

We are more supportive of replacing the bahiagrass with centipede or buffalo grass than in chemical seedhead suppression. The effect of the chemicals on the stones in the cemetery is undocumented.

The sweeping, or blowing, grass off of graves should be standard practice in all cemeteries operated by the city.

Nylon line used in trimmers should be reduced from 0.095 to 0.065 inch thickness in order to prevent trimmer damage to the soft marble.

Fire ants are a significant liability to the city should treat Magnolia Cemetery with a broadcast bait on a yearly schedule.

The cane along the eastern border of the cemetery must be carefully monitored by the city to prevent its encroachment into the cemetery grounds.

Other Maintenance Issues

Identification and regulatory signage should be erected at the eastern and western entrances to the cemetery.
The cemetery must be walked at least twice a week by crews to collect any trash that has accumulated. As previously discussed, the Oquina Creek drainage should be checked and, if necessary, cleaned of trash monthly.

The city must take more proactive involvement to ensure that graves are correctly handled. The use of cones may be acceptable – if the cones are collected prior to the funeral. We found them sitting on graves weeks after the funerals. In addition, the city should inspect grave openings to ensure that the correct grave has been opened, the grave shaft is excavated to the correct depth, that the grave is safely covered, and that there has been no damage to the landscape or other graves.

The city should similarly ensure that all graves are correctly backfilled and adequately compacted to prevent collapse. This is critical to minimize liability for injury in the cemetery. Likewise, the city must begin ensuring that stones are correctly and securely set.

Grave spoil must be either removed from the cemetery or the city should appropriately screen the soil area using fencing or vegetation. Its current open display detracts from the beauty and dignity of the cemetery setting.

The city should adopt flower regulations for Magnolia Cemetery that will limit the length of time that flowers – whether natural or artificial – may be left on graves. Then the city must uniformly enforce this regulation. There should also be regulations concerning the

container, both to protect the cemetery and its workers.

Conservation

We estimate that monument work will involve about 30 stones to be blind pin repaired, two stones have ferrous pins, 20 stones require resetting, and about 45 are collapsing ledgers.

Cleaning monuments is a very low priority and the city should not allow cleaning of stones in Magnolia Cemetery.

There are examples of deteriorated concrete coping in the old section. These are integral to the appearance and landscape of the cemetery and they should be repaired by a reputable concrete company in Thomasville.

LAUREL HILL CEMETERY

The Cemetery Location, Setting, and Context

Laurel Hill is the cemetery still used by Thomasville's white community. It is situated on the south side of Jackson Street, about 0.8 mile northeast of the city's downtown core. The cemetery encompasses 32.86 acres and is designated as TMS 006 030001. The oldest section of this cemetery consists of approximately 12 acres at its western edge.

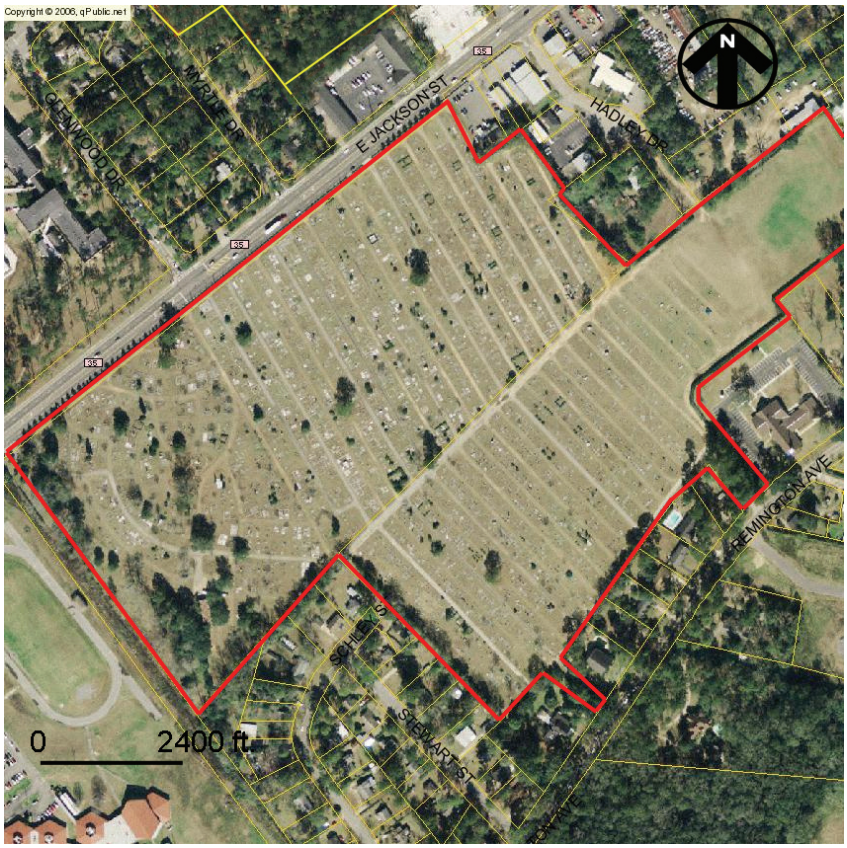


Figure 79. Aerial image of Laurel Hill Cemetery.

The cemetery is bounded to the northwest by Jackson Street, to the southwest by Thomasville High School, and to the south by the Pecan Grove Subdivision. To the southeast the cemetery backs up on single family houses along Remington Avenue. To the east is a mixed area consisting of the Suburban Homes subdivision, as well as warehouses and retail stores.

The western portion of Laurel Hill is clearly characteristic of the mid to late nineteenth century rural cemetery movement. The roads wind around the 12 acres; monuments are largely three dimensional with much sculpture; and family plots are well defined by coping.

The eastern section is more characteristic of the lawn-park style, with the most recently opened sections showing clear evolution to the memorial park design (although central section sculptures are absent). The road network in the eastern section is also very formal. The cemetery is bisected southwest-northeast by a central road, off which run a series of northwest-southeast roads (given numerical and state names) that create sections two plots in width. The roads in the cemetery are both asphalt and dirt.

Figure 80. View of the old section of Laurel Hill Cemetery.

Originally there was a boggy area or creek which ran parallel to the western edge of the cemetery. Although the portion to the west on the school grounds has been entirely obliterated, a remnant of this feature, or its slope, is still clearly evident within Laurel Hill. The feature is not developed or accentuated by landscaping, but is hidden by a tangle of vegetation (much of which consists by once beautiful, but now long forgotten, azaleas).

From this low elevation of about 250 feet AMSL, the cemetery slopes upward to the east and southeast with elevations ranging up to about 270 feet AMSL. At the eastern edge of the cemetery, property is a large open field providing room for expansion. Here the elevations reach about 280 feet before they begin sloping back down into the south flowing Olive Creek drainage.

The socio-economic conditions around Laurel Hill are different from the other cemeteries examined. To the south and west the median family income is less than $30,000, while to the north and northeast it is between $60,000 and $90,000. There are similar racial differences, with the higher income area consisting of 20% or less African Americans and the lower income area characterized by upwards of 60% African Americans. Not surprisingly, the proportion of owner-occupied housing increases toward the north and northeast, while the proportion of rental property increases to the west and southwest.

Overall, the setting seems very commercial, largely because of the cemetery's situation on East Jackson Street (US 319) – a major four lane road connecting Wadley, Georgia to Apalachicola, Florida.

Figure 81. View of the new section of Laurel Hill Cemetery.

Access Issues

Circulation and Roadways

There are two entrances to Laurel Hill off Jackson – one into the old section and another into the new section. There is not, however, a "main" entrance and both are equally uninteresting, being marked with only a

chain erected at night and signage indicating that through traffic is prohibited.

The importance of the cemetery entrance was commented on by one early twentieth century designer, who noted that:

> Perhaps no feature of the cemetery will attract so much attention or give so much chance for publicity as the entrance. This fact should be duly recognized in the care given to the design, so that it will be an attractive architectural feature and in harmony with the other necessary structures.

This potential benefit was lost in the early design of the cemetery.

There is yet another entrance off Jackson using Hadley Street, which terminates in the undeveloped section of the cemetery. A fourth entrance connects the new section to Remington Avenue. It appears that a fifth corridor was intended to connect the old section to Remington, but was never opened. Consequently, the cemetery's boundaries are porous and only those on Jackson are chained at night.

To improve security and eliminate through-traffic, both Hadley Drive and the access to Remington should be permanently closed (Figure 82). The city may even wish to sell the property accessing Remington for single family development.

As previously mentioned the roadways in the two sections are dramatically different. In the old section they consist of winding drives typical of rural cemeteries and even the park cemeteries designed by landscape architects. In contrast, the new section roads are formal and grid-like, typical of what might be laid out by a civil engineer.

The old section roads are about 12 feet in width and consist of both asphalt concrete and dirt. The rational for paving is not entirely clear, although it appears that only the roads leading into the new section are paved – the bulk of the interior old section roads are dirt.

In the new section the primary road running southwest-northeast is 20 feet in width. The arterial roads range from about 9 to 12 feet in width. These, too, include both paved and dirt roads with no clear distinction.

With the average car or pickup ranging from 5.5 to 6.5 feet wide and heavy vehicles about 7 feet wide, all of these roads except the main southwest-northeast road must be considered one-way. Grave plots or coping extends to the roadway, so there is no room for vehicles to pull over. Visitors to graves must park on the roadway, blocking the access of other visitors.

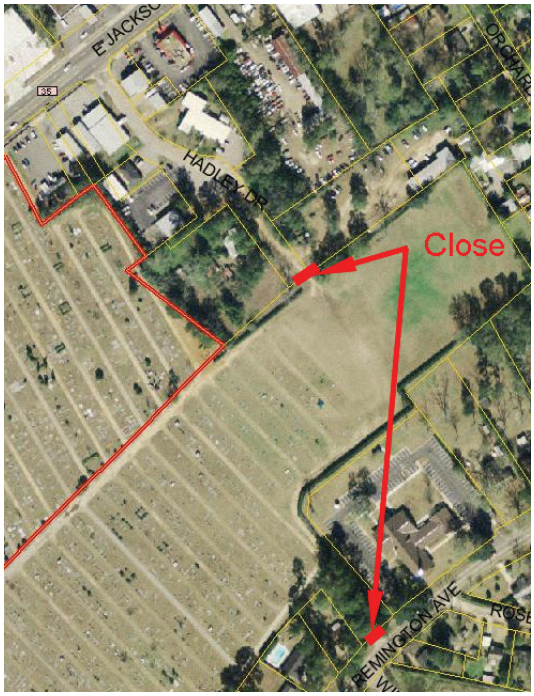


Figure 82. Recommended road closures.

Overall the design is poor and the cemetery is difficult to navigate. Nevertheless,

Figure 83. Road problems in Laurel Hill Cemetery. From upper left to lower right: paved road in the new section showing cracking, note that grass is not being edged; paved road in the old section showing cracking and previous patch repairs, again note the absence of edging; deteriorated roadway showing erosion and inappropriate (and ineffective) concrete patch; deteriorated roadway in the new section; rutted dirt roadway in the old section, indicating that these roads get muddy during rainy weather; heavily compacted dirt roadway in the old section that disappears with no clear or certain pathway.

any effort to widen the roads would dramatically alter the character of the cemetery. The work would require the removal of large number of graves. Moreover, visitation appears relatively low, at least during our survey, so the road network may be adequate. We recommend that the existing roads be maintained, but otherwise not altered.

The wear coat on the paved roads varies from satisfactory to poor condition. Throughout the cemetery there are areas where the wear coat is cracked and deteriorating (Figure 83). Cracks such as these allow water to get into the roadway base and subgrade, resulting in pavement breakup and potholes. Many of the cracks we observed in Laurel Hill Cemetery roads appear to be good candidates for filling or sealing. This is a job that likely can be performed at little cost by the city's Public Works Division.

Figure 84. Unswept roadway.

Two of the most critical issues affecting the treatment of cracks are the cleaning and drying of the cracks, as well as the preparation and application of the chosen material. Cold temperatures, soil, and moisture can prevent proper adhesion between the sides of the crack and the sealing material. Therefore, the use of hot compressed air followed by a heat lance is often recommended – and would be appropriate for the Magnolia paving.

A 1999 study by the Federal Highway Administration, though based on much heavier traffic than Magnolia's roads see, found that several techniques provide good, long-term performance. The city should consider an asphalt rubber or rubberized asphalt used as either a flush-fill or overband configuration.

Some of the roads, however, are in very poor condition, having completely deteriorated, leaving behind remnant base material and rutted clay soils. Extensive work must be performed in these areas to correct drainage problems, put down and compact new base material, and establish a new asphalt wear course.

There is other maintenance on the paved roads that should be performed on a routine basis. Figure 83 reveals that the roads are rarely edged and grass is overtaking the pavement. This presents an unkempt appearance and promotes the gradual deterioration of the asphalt.

The roads are also rarely swept, allowing considerable build-up of organic debris (Figure 84). This also contributes to an unkempt appearance. Cleaning of roadways is also a routine activity of commercial landscaping crews, typically using backpack blowers.

Figure 84 also provides the opportunity to illustrate another issue. The guardrail is aesthetically out of place. This visual intrusion could have been significantly reduced with the

use of a timber barrier (entirely effective for low speed traffic). Another alternative would have been the use of a Corten weathering guardrail. Corten is a corrosion resistant steel that takes on a rust-colored appearance over time to create a more weathered and rustic appearance. A third option would have been to better camouflage the guardrail with plantings – the current plantings do nothing to soften the visual impact.

The dirt roads do not appear to have been prepared in any fashion. We detect no crowning and no aggregate appears to have ever been used on the roads. Some are rutted from heavy traffic (perhaps maintenance vehicles?) in wet weather.

Soil based roads are entirely satisfactory for the light traffic that the cemetery (especially the old section) routinely sees. However, even dirt roads require periodic maintenance. The city should evaluate these roads and undertake maintenance where necessary on a routine basis.

Drainage

Laurel Hill appears to rely on surface drainage – we observed no culverts or drains during our visit. Nor did we observe any significant erosion. Some drainage problems may exist on some of the soil roads, leading to the rutting that we observed. There may also have been drainage issues that contributed to the collapse of the paved roads shown in Figure 83. These issues should be further evaluated by the city.

Pedestrian Access and Pathways

There are no formal pathways in the cemetery, nor do they appear necessary given the limited pedestrian activity and the large number of roadways.

Pathways may be an issue to be considered in conjunction with any effort to increase tourism in the old section. Efforts should be made to avoid these concerns by funneling pedestrian traffic along the existing roadways. This would also allow the winding roads to be explained to the public, adding another dimension to the interpretation.

Universal Access

The ADA or the Rehabilitation Act of 1973 is generally not interpreted to apply to cemeteries by the Department of Justice. Efforts to make Laurel Hill accessible would not be difficult given the relatively gradual slopes, absence of curbs, and paved roads in the old section. The work would also have a low impact to the landscape as long as existing roadways were used.

However, reasonable accommodation can also be provided by having photographs and other information on-line.

Security Issues

Vandalism

The city does not report any significant vandalism issues at Laurel Hill and we observed no indications of recent vandalism during this assessment.

The cemetery, however, is not routinely patrolled by police or city maintenance workers. The two gates on Jackson are routinely closed by the police department, but the entrances off Hadley and Remington are not closed. We have previously recommended these secondary entrances be permanently closed.

If not done already, the police should patrol through the cemetery prior to closing the gates. In addition, occasional patrols during daylight hours are also necessary, especially since at this time cemetery maintenance staffing is so low.

The cemetery fence is not continuous and this further provides easy access into Laurel Hill. In some areas the cemetery is not fenced,

relying instead on residential fences. Along much of the fence line there is very heavy vegetation.

Although we do not, at this point, recommend a continuous fence, we do recommend that the existing fences be inspected, repaired as necessary, and that vegetation be cleaned off the fences.

This vegetation removal must be done by hand – herbicides should not be used. Not only are herbicides non-selective, but they can damage stones.

Figure 85. Road at the rear of the cemetery connecting Remington Street with Laurel Hill. This road should be closed to tighten the boundaries and prevent through-traffic. The lot could then be sold by the city or converted into burial spaces.

The city does not have any established procedure to identify and respond to vandalism, should it occur. We recommend that a procedure be established. Critical elements include:

- Periodic inspections at a level to note changes to monuments or other problems,
- A procedure to document this problem, and
- Responses that involve, as appropriate, criminal investigation and repair.

Inappropriate Cemetery Uses

Although trash was noted in the cemetery (discussed below), we did not observe the quantity of alcohol containers that we have seen in the other city cemeteries. Nor did we observe any inappropriate activities during our visit. This may be the result of there being more city activity in this cemetery or it may simply be the cemetery's location.

Regardless, it is critical that recommended steps on increased maintenance and police presence be implemented to ensure that the cemetery remains safe.

Fixtures and Furnishings

Plot Fences

We identified only one plot fence in Laurel Hill, situated along Jackson Street. It was in good condition and appears to be maintained by family members. The city may wish to make our coating recommendations available to families who are tending their plots. Our recommendations are likely to be less costly than many treatments and provide excellent results.

Boundary Fence

We have previously mentioned that the cemetery does not have a continuous boundary fence. Where present, however, the border is a relatively modern chain link fence. The fence is

in satisfactory condition, although much of it is hidden by dense plant growth. We have recommended that this fence be hand cleaned along its length.

Figure 86. Bench in poor condition.

Other Lot Amenities

Although features such as urns are present on many lots, they tend to be in relatively good condition. The one bench we found in the cemetery (Figure 86), however, is in very poor condition.

Often lot amenities pose significant maintenance issues. Benches, in particular, can be a significant problem in urban settings since they may attract the homeless and discourage legitimate use of the cemetery. We typically discourage the installation of amenities such as benches, water fountains, and restrooms.

The one bench in Laurel Hill should either be removed or the wood members should be replaced with suitable pressure treated lumber. In its current condition it detracts from the cemetery.

Landscape Maintenance

Staffing Levels and Training

Appendix 2 provides details on our recommended level of staffing. It is worth noting that the city is currently understaffed and the use of untrained prisoners fails to provide the level of care the cemeteries deserve. Appendix 2 provides detailed information regarding training and expected duties.

Cemetery Trees

Our examination of the trees at Laurel Hill focused on the old section. As at the other cemeteries, we found overall poor health, with many trees requiring immediate attention. All tree care should comply with ANSI A300 (Part 1) - 2001 standards and the ISA standards of practice.

Pruning must be done by individuals trained in arboriculture and having clear knowledge of ANSI A300 (Part 1). The procedures and techniques are difficult; the decisions concerning what limbs to prune and how to best shape the tree are acquired only through both a knowledge of tree biology and experience. Effective safe pruning cannot be accomplished by untrained individuals. *We strongly recommend that the work be performed by an ISA Certified Arborist, preferably one who is also an ISA Certified Tree Worker/Climber Specialist.* Under no circumstances are tree climbers (hooks, spikes, gaffs) to be worn while ascending, descending, or working in trees to be pruned.

After this initial pruning the trees at Laurel Hill Cemetery should be inspected by an ISA Certified Arborist every 5 years and after any severe weather event (any storm with winds in excess of 55 miles an hour or any winter ice storm).

If removal of a tree is deemed necessary an evaluation should be made concerning the need for an ISA Certified Tree Worker/Climber Specialist. If the tree is small to medium in size (perhaps under 6-8 inches dbh) and can be removed without endangering any monuments,

fences, or walls, then it may be suitable for in-house removal.

If the tree is larger than 8-inches dbh or it will need to be topped and removed in sections, then it is critical that an ISA Certified Tree Worker/Climber be retained. Any effort to remove such trees in house will pose a significant risk to the cemetery landscape.

During removals the trunk should be cut as close to the ground as possible, leaving the stump in place to decay naturally (we observed several stumps in the cemetery and all were well removed, indicating good knowledge of these appropriate procedures). No chemical additives should be used to hasten decay, although it is acceptable to paint an herbicide on the stump if it is a tree that will promote suckers. Plywood shelters or timber cribbing may be necessary to protect stones and monuments during removals.

Figure 87. Sickly dogwood in full sun.

We estimate that there are about 28 trees in the old section of Laurel Hill – not including the many dogwoods.

Considering only the old section, of the 28 trees, 13 (46%) are healthy and require only minimal pruning. This would be characterized as thinning. Thinning is a technique of pruning that removes selected branches to increase light and air movement through the crown. This also decreases weight on heavy branches. The natural shape of the tree is retained and its overall health is improved. Not more than 25% of the crown should be removed during an annual growing season.

An additional six trees (21%) require pruning of dead or diseased limbs, but the tree is otherwise in satisfactory condition. This would be characterized as clean pruning – pruning to remove one or more dead, diseased and/or broken branches.

Unfortunately, nine trees (32%) are dead or so severely diseased that they must be removed. This does not include a relatively large number of small dogwoods that have been incorrectly planted in full sun. These dogwoods are in poor condition and they, too, should be removed as soon as practical.

The smaller trees (for example, all of the dogwoods) can likely be safely removed by in-house crews. The larger trees should be removed by an ISA Certified Tree Worker/Climber Specialist.

The removal of nine large trees and a number of dogwoods will noticeably alter the cemetery landscape. Unfortunately, there is no alternative given the problems faced in the cemetery. It is good practice to plant a new tree for every tree removed. In this case we recommend replacing all of the large trees. Perhaps half of the dogwoods should be replaced initially.

While there are no perfect trees, cemetery landscapes were historically dominated by large deciduous trees, although evergreens such as cedar are also very common. They provide a distinctly inviting image for visitors and passersby. These trees also provide some visual separation from adjacent buildings – especially in cluttered urban environments.

A good replacement tree would be Eastern red cedar (*Juniperus virginiana*). Suited for zones 2-9, the cedar thrives in partial to full sun. It is highly drought tolerant, produces no litter, and surface roots are not typically a problem. The cedar is relatively tightly contained, with a spread of about 10-20 feet at maturity. Cedars should be replaced with cedars.

Other suitable trees, to provide some variation, are Florida maples (*Acer saccharum* var. *floridum*) and weeping yaupon hollies (*Ilex vomitoria* "Pendula").

The Florida maple is drought tolerant, thrives in an urban setting, has little litter, and surface roots are not a problem. It is also resistant to breakage. Its spread can be up to 40 feet, so care must be exercised in its placement.

The weeping yaupon holly is typically 15-20 feet in height, with a spread of about 12 up to 25 feet. It, too, is drought tolerant, can grow well in full sun, is resistant to breakage, has no significant litter, and does not have surface roots.

As individual specimen trees they will create interest and soften the area. All replacement trees should be of at least 1-inch caliper and meet the minimum requirements of the American Nursery and Landscape Association's American Standard for Nursery Stock (ANSI Z60.1-2004).

Some similar problems are noted in the new section – most specifically dead or dying dogwoods. These should receive a secondary

Figure 88. Crepe myrtle on the left shows the natural form. Illustration on the right shows "crepe myrtle murder" by incorrect pruning.

priority to the old section, but we do encourage them to be eventually removed and replaced with a more suitable tree. Small trees that might be suitable include redbud (*Cercis canadensis*), Russian olive (*Elaeagnus angustifolius*), or mildew resistant crepe myrtle (*Lagerstroemia indica*).

Special attention should be directed to the crepe myrtles already in Laurel Hill. Many appear to be very old specimens and are therefore very beautiful (see Figure 88).

Figure 89. Camellias in full sun. All require rejuvenation pruning.

Unfortunately, we also saw several examples of what has been termed among horticulturalists, "crepe myrtle murder." This is when all of the branches are simply cut off to an even height (Figure 88).

This inappropriate pruning causes profuse growth at the site of the pruning, resulting in a "witches' broom" and a tree that is no longer in proportion. This type of topping causes basal sprouting and increases susceptibility to disease and insects. It also encourages new growth that is too dense for light and air movement to reach the inner branches, large "knobs" where trees have been trimmed repeatedly, and an unsightly appearance until new growth appears. While topping may result in larger blooms, they will grow on thinner, weaker branches which will droop, especially after rain, and may even break. It may also shorten the life of your trees.

Thus, it is critical that the crepe myrtle in the cemetery be only lightly pruned for shape. Fortunately, those that have been inappropriately pruned can be brought back by clipping off the twiggy growth close to the base of each twig. Then three to five healthy branches from last year's growth along the periphery are chosen to remain. The rest of the growth is trimmed away. As these few branches grow, the crepe myrtle will resume a more natural shape. However, the best approach is not to overprune – or "murder" the plant to begin with.

Shrubbery

The shrubbery in the old section of Laurel Hill has also been poorly tended over the years and much requires immediate attention. Identified plantings include camellias (*Camellia japonica*), azaleas (*Azalea* spp.), boxwoods (*Buxus* spp.), ligustrum (*Ligustrum* sp.), and arborvitae (*Platycladus [Thuja] orientalis*). Each has distinctive issues that will be briefly discussed below.

Camellias do best in year-round, semi-shaded areas. Those planted in full sun are less dormant during winter warm periods. Sudden temperature drops can cause severe flower bud and leaf injury. Since all appear to be rather old specimens, it is likely that when originally planted they received shade from now removed deciduous trees.

Given the extent of injuries, virtually all of the Laurel Hill camellias require rejuvenation pruning. This should be done in late winter and is accomplished by cutting the plants back to 12

to 18 inches above ground, removing most limbs and all foliage. Plants cut back higher typically fail to fill out near the ground and not as attractive.

The plants will put out new sprouts within eight weeks and by midsummer the vigorous shoots will reach 2 to 3 feet. These new shoots, however, will be crowded and should be thinned (by pinching off) in early spring to midsummer to encourage proper branching.

Figure 90. Cast iron plant in full sun.

Good sanitation is important in pruning camellias. Wash or dip the saw in a mixture of one part bleach to nine parts water to disinfect the blade between cuts. Do not lay the saw on the ground because this can spread harmful organisms to the cut surface of the plant.

The exposed location of the camellias is problematical and periodic rejuvenation may be necessary until additional shade can be established.

Another shade loving plant found in full sun is the cast iron plant (*Aspidistra elatior*). This is normally a beautiful plant that is very drought resistant and often grown for its foliage. Yet, at Laurel Hill the plant is clearly stressed since it is today located in full sun.

It may be of assistance to cut the leaves back and thin the plant – this would certainly improve the overall aesthetics of the plant. However, like the camellias, its location will remain problematical.

Figure 91. Badly pruned azalea on the left, clump of densely overgrown azaleas on the right.

Azaleas were noted in several locations throughout the cemetery. Individual, old specimens were observed that had suffered from very poor pruning. They were also found as borders in several plots.

Figure 92. Dead and dying boxwoods. The first three photos show plants in such poor health that they should be removed. The hedge of boxwoods may be salvageable using rejuvenation pruning.

Rejuvenation pruning may be useful, although many are in very poor condition and the approach may not be entirely successful.

Azaleas should be pruned to a neat rounded group of stubs no longer than 6 inches from the ground. For basically healthy plants clusters of new stems will emerge; these will need to be thinned.

Otherwise, it may be appropriate to remove the azaleas and replace with new plantings.

The boxwoods at Laurel Hill have been particularly abused. Many are dead or in such poor health that they should be immediately removed. Others are in need of rejuvenation pruning. Pruning will involve cutting the plants back to within 12 inches of ground level since they regenerate well. Although the plants will look poorly for a season or two, new growth becomes evident quickly.

There is at least one example of a very beautiful and old ligustrum at Laurel Hill. It has not been damaged by inappropriate pruning and care should be taken to ensure the health of this specimen.

Many other ligustrum, however, have either been very poorly pruned or are dying. As with the other plants discussed here, some are suitable for very drastic rejuvenation pruning, while others simple require removal and replanting.

Figure 93. Ligustrum at Laurel Hill. The top photos shows a very old and beautiful ligustrum that should be carefully protected. Middle shows dead ligustrum. At the bottom is a poorly pruned ligustrum in overgrown plot.

As at the other cemeteries, we found arborvitae at Laurel Hill that have been improperly pruned, resulting in aberrant shapes. The damage done to these plants is so severe that they cannot be salvaged. We recommend the gradual removal of all inappropriately pruned materials and their replacement with new arborvitae. In the future special care must be exercised to ensure those entrusted with pruning are knowledgeable and appropriately trained.

Figure 94. Example of inappropriately pruned arborvitae. This damage cannot be repaired and the plant should be removed and replaced.

Other pruning issues include the failure to remove trash vegetation. For example, Figure 93 shows a poorly pruned ligustrum, yet the remainder of the plot is overrun in smilax and other weedy plants. Figure 94 illustrates additional examples of junky vegetation that should be removed during routine landscape activities.

Figure 95. Trash vegetation that should be removed during routine lawn maintenance.

We also noted very specific issues with several plots. The Chastain plot contains 14 shrubs that have been so poorly pruned that they should be entirely removed and replaced. The Taylor and Steyerman plots contain very extensively damaged boxwoods. We recommend that these plantings also be entirely removed and replaced with dwarf yaupon holly (*Ilex vomitoria* "Nana"). This plant can be pruned to a height of 2 feet and produces a symmetrical and dense plant that tolerates full sun.

We also saw at least one example where plants were indiscriminately added with no understanding of long-term consequences. Figure 96 shows one such situation. A yew (*Taxus* x *media*) was planted in very close proximity to old and historically valuable oaks. This yew will grow to a height of 6-12 feet, with a spread of 8-10 feet – totally encompassing the plot and other vegetation.

Assuming that the yew was not planted by the Public Works Division, this provides an excellent example of why lot holders should not be allowed to add plantings to their plots without the expressed written approval of the Sexton.

Figure 96. Yew incorrectly planted in close proximity to existing historically sensitive vegetation.

Given its location, it is unlikely that the yew can be removed without causing damage to the nearby oaks. We recommend that it be cut down.

Turfgrass

The cemetery is in bahiagrass (*Paspalum notatum*) – a species introduced from Brazil in 1914. While not historically appropriate, it is a popular low-maintenance lawn grass for infertile soils. It is drought tolerant, does not form thatch, does well in infertile soils, and has relatively few disease problems.

On the other hand, bahiagrass does not have good tolerance to shade or traffic. It also displays an open growth habit, which can result in encroachment of weeds into sparse areas – a very noticeable problem at Magnolia Cemetery (see Figure 67). A further problem is that the

grass has low tolerance to many common herbicides that would normally be used.

While Banvel®, 2, 4-D, or a combination of the two will control most broadleaf weeds; there is no post-emergence herbicide for grassy weeds in bahiagrass. Nevertheless, most weed problems could be avoided by avoiding inappropriate fertilization, over watering, and proper, timely mowing.

Figure 97. Area of thatch and grass die-off at Laurel Hill. Note invading broadleaf weeds.

However, all agencies responsible for maintenance of utility turf like bahiagrass, including Thomasville's Public Works, struggle to find funds to keep this grass mown properly. In summer its rapid vertical growth and exuberant seed head production are remarkable.

We are told that the Public Works is beginning a seed head suppression program and is also looking at alternative grasses. This is primarily driven by citizen complaints concerning the seed heads. Due to the rapid growth of bahiagrass seedheads, mowing is an expensive solution.

The most common treatments are either Plateau (imazapic) or Oust (sulfometuron). Treatments have to be applied frequently and some studies suggest they may result in phytotoxicity. We are also uncertain of the effect these chemicals may have on the cemetery's historic stone and masonry.

Although sympathetic to the public's desire to see a "perfect" turf, such perfection is costly. Seedheads are also a purely aesthetic issue – there are many more substantive issues that affect the long-term viability and preservation of the cemeteries and these should be given priority.

We are more inclined to support the replacement of the bahiagrass with an alternative turf. One low maintenance turf to be considered is centipede. It is slow growing and resistant to drought once established. It does not, however, tolerate traffic and does best in full to partial sun.

Another grass to consider is buffalo grass, *Buchloe dactyloides*, a native, rugged, warm-season prairie resident. It is naturally drought tolerant and disease resistant. It has a gray-green color, is low-growing (in comparison with other native prairie grasses; 4-8 inches), and fine-textured. Some varieties are seeded, newer varieties are seedless. It spreads by stolons (runners), but is not nearly as aggressive as bermudagrass. It grows best in full sun, but is accepting of only 6-8 hours of direct sunlight per day.

Buffalo grass can survive on as little as ¼-inch of water a week and does not require fertilization. It also tolerates a wide range of mowing heights. Although it can be cut short (2-3 inches) to resemble other turfgrasses, taller mowing increases its drought resistance and competitiveness against weeds. Maintenance overall is reduced as it is mowed taller. A

Figure 98. All new graves should have their turf restored to maintain the appearance of the cemetery and minimize weeds. Note also that the granite vase has been filled with spoil – the city should inspect all plots and insist that problems such as this be corrected.

"respectable" appearance can be achieved by mowing every 2-3 weeks during the growing season and, later in the season, every 3-4 weeks.

All grass, however, will require maintenance – including mowing – and the problem at the Thomasville cemeteries is not really the acreage or need to mow, but rather the inadequate staff.

Bahiagrass is prone to thatch build-up, evident in Laurel Hill (Figure 97). We suspect that the soils also require aeration – a practice that should be undertaken on a rotating basis throughout the cemetery.

Most cemeteries take some steps to repair the damage to the turf after burials. However, at Laurel Hill we also observed that new graves were neither seeded nor sodded. This degrades the appearance of the cemetery and invites weed invasion. We recommend that all new graves be either seeded or sodded and that adequate water be applied to establish the new turf.

The Public Works Division is currently using two 60-inch mowers for the five cemeteries, supplemented by nylon string trimmers. We are told that the mowers are equipped with mulching blades – this is an excellent practice and we support its continued use. Not only could a collection bag cause damage to stones and make maneuvering the equipment more difficult, but the clippings when left on the ground will provide nutrients.

While the use of these large riding mowers can be problematical in cemeteries with many walls, fences, and three-dimensional monuments, much of Magnolia Cemetery has a number of open spaces (see Figures 80 and 81) suitable to large deck mowers. Nevertheless, There are also significant areas where coping and closely spaced monuments make the use of large equipment difficult. In these areas we recommend 21-inch mowers.

Figure 99. Mower damage.

This means that the city needs to acquire a more diversified range of equipment suitable to cemeteries such as Laurel Hill (and Old).

The use of the nylon trimmers is an acceptable practice, but it is critical that a very light weight line be used – along with worker attention – to minimize damage to soft stone such as marble. Currently 0.095-inch line is being used. This is acceptable, but we would like to see the cemetery staff switch to a 0.065-inch line which is even safer for use around stones. In addition, string trimmers should not be used in lieu of 21-inch mowers since the practice will needlessly slow down lawn maintenance activities.

Figure 100. Fire ants in Laurel Hill Cemetery.

We are told that after mowing monuments are blown or swept off. Although this was clearly not the case at Magnolia, it does appear to be done at Laurel Hill. This is good, but the city needs to standardize this level of care to *all* cemeteries.

Unaddressed in Laurel Hill are the numerous fire ant mounds. One survey done in 1998 concluded that 33,000 people in the state of South Carolina sought medical attention as a result of fire ant stings. Of those 15% had severe localized allergic reactions and 2% had severe systemic reactions resulting in anaphylactic shock. The city leaves itself open to significant liability by failing to adequately treat these mounds.

An excellent publication on fire ants is www.clemson.edu/sandhill/userfiles/file308.pdf. Bait products such as Amdro, Award, or Logic are effective on individual mounds, although control is not immediate. Broadcast applications, however, are even better and it appears that a mixture of 3/4 lb. hydramethylnon in baited granules (under trade names "Amdro" or "Siege") and 3/4 lb s-methoprene in baited granules (under trade name "Extinguish") applied per acre is even

Figure 101. Tire tracks across ledgers in Laurel Hill.

more effective. Amdro/Siege, a metabolic inhibitor, takes 3-6 weeks after ants consume it to show an effect and the effect lasts for several months until a re-invasion occurs. Extinguish is a growth regulator that takes longer to show an impact, but then can last a year or more.

Other Landscape Issues

During our visit to Laurel Hill we observed tire tracks on several ledgers (Figure 101). This is unacceptable and the practice must stop immediately.

Not only is it disrespectful to treat a gravesite in this manner, but it is very dangerous. Driving on these ledgers could cause them to collapse – potentially damaging the vehicle, injuring passengers, and even damaging the human remains.

If it is absolutely necessary to operate over monuments, the city should use mud tracks – platforms designed to distribute equipment weight and prevent damage (although commercially available, even ¾-inch plywood is satisfactory).

Other Maintenance Issues

This category is a catch-all for other issues that are observed in the cemetery, but that don't fit conveniently in other divisions, including signage, trash collection, additions to the cemetery, and the gazebo.

Signage

Laurel Hill has no signage at any of its entrances (other than hours on the chain at two entrances off Jackson and a sign that prohibits through traffic) and this should be immediately rectified.

From a cemetery preservation perspective signage is of four basic types: identification, regulatory, informational, and interpretative. They are generally recommended in this same priority.

Identification signage might include the name of the cemetery and might also include the cemetery's date of founding and historic significance (i.e., eligible for listing on the National Register).

Regulatory signage specifies laws, regulations, or expected standards of behavior. We recommend that the city develop signage dealing with, minimally, these issues (perhaps with some modifications of language as might be needed):

- This cemetery is open from 7:00 am to 7:00 pm. Presence in the cemetery during prohibited hours is trespass.
- Many of the stones in this cemetery are very old and may be easily damaged. Consequently, absolutely no gravestone rubbings will be allowed.
- The stones and monuments in this cemetery are fragile. Please refrain from leaning, sitting, or climbing on any monument or mausoleum. All children must be escorted by an adult.
- Absolutely no alcoholic beverages, fireworks, or fire arms are allowed in the cemetery. Proper conduct is expected at all times.
- No pets are allowed in the cemetery.
- No plantings are allowed within the cemetery and the City will enforce its right to remove any plantings deemed inappropriate, diseased, or damaging the cemetery.
- No monuments or other work may be conducted in the cemetery without the written permission of the Cemetery Sexton.

Figure 102. Trash in the cemetery was clearly visible along roads.

- For additional information concerning maintenance issues, please contact the City of Thomasville, Public Works Division at _____. In case of emergency contact _____.

The last two types of signage are informational (for example, directional signs) and interpretative (information on historic people buried in the cemetery). At the present time there is insufficient information to support such signage.

The new identification and regulatory signage should conform to the city's standard signage in order to present a unified appearance. Signage should be erected at both all three entrances to the cemetery.

Trash Collection

Even though Public Works is based at Laurel Hill, the amount of trash found throughout the cemetery clearly reveals that the cemetery is understaffed and inadequate attention is directed to this fundamental maintenance chore. This trash clearly reveals why cemetery maintenance is a year-round, not seasonal, undertaking.

Trash was observed collecting along plot edges (see Figure 92 for a particularly disturbing example). Other trash was clearly visible along road sides (Figure 102). It is critical that the city maintenance crew walk the cemetery at least three times a week to collect trash. This can typically be done with other work, such as blowing off the roads, collecting dead flowers, and so forth.

More disturbing, however, was the trash being generated by the city itself. The trash cans at the maintenance yard were not overflowing, but trash littered the ground all around the receptacles. This area is not well shielded from the public and this image is not what Thomasville wishes to give those visiting loved ones at the cemetery. The area should be policed daily to prevent this sort of problem.

In addition, the Public Works division is storing a great deal of materials at the cemetery that should be immediately removed. Along the back fence, entirely within public view, is a stop sign, lumber, pipes, and even a tree grate. We feel certain that the city has a supply or maintenance yard – all of these materials (if useful) should be stored there – not in the cemetery. Elsewhere, we found a stack of concrete benches – these too should be removed.

Figure 103. Views such as these – all open to the public – reflect poorly on the city's care of the cemetery.

Along the edge of the property there is a building with signage indicating that it is used to store pesticides. If this sign is correct, then this entire building should be moved off-site. There is no reason to store this amount of pesticides on the cemetery property.

Adjacent to this building is a pile of discarded plastic pots, a large concrete piling, and a number of trash containers. All this debris should be immediately removed.

Adjacent to the maintenance shed is a fenced area containing additional plastic pots, as well as what appear to be cuttings. This area should be cleaned up. Those plants still alive and useful should be stored at an appropriate location where they can receive care. Those that are not useful should be discarded.

The city should insist that its cemetery maintenance area look neat and clean at all times. It should reflect the pride that Public Works, the city, and the community take in the cemetery.

We also recommend that privacy slats be installed on the chain link fence around the equipment in order to better shield its view from the public.

Grave Spoil

The city does not open or close graves, requiring funeral homes to perform this work. The city does, however, allow these firms to dump excess spoil at the edge of the cemetery (Figure 104).

This practice presents an unkempt appearance that damages the cemetery landscape. The city should either require grave diggers to remove excess spoil after the burial or a designated area should be set aside and screened from public view using plantings or fencing.

Figure 104. Soil piles at the edge of the cemetery. Spoil should be removed from the cemetery or screened from view.

Backfilling of Graves and Setting of Stones

The city also allows funeral homes or other commercial firms to backfill the graves and set stones. Although we identified significant issues at Magnolia, the conditions appear much better at Laurel Hill. Nevertheless, we recommend that the city take a proactive role in overseeing the quality of work performed in the cemetery. Problems not caught today will become preservation concerns several decades from now.

The Issue of Flowers

All cemeteries struggle with the issue presented by flowers on graves. We have never seen a cemetery where, for example, Christmas flowers had not been left for months – becoming faded and detracting from beauty of the cemetery grounds. Laurel Hill Cemetery is no exception. Figure 105 shows an example of the effect untended flowers can have on the appearance of the cemetery. Decorations left months after holidays affect the beauty and dignity of the entire cemetery. We recommend that the city adopt a flower policy that will minimize maintenance problems. We have discussed this issue at greater length in the preceding section on Magnolia Cemetery and will only briefly outline key points here.

First, we believe that all flowers or arrangements should be removed by the cemetery staff 10 days after holidays *or* when the arrangements become unsightly. This will allow staff to remove faded


Figure 105. Plastic Christmas flowers strewn about the cemetery detracts from the beauty and dignity of Laurel Hill.

flowers, Christmas decorations after the holidays, and so forth.

Second, we recommend that the city establish a regulation that all floral must be placed in vases integral to the stone or that a vase mounted vase holder be used. These choices provide a wide range of cost options for families while still ensuring that the maintenance staff can perform their duties. These are available from a variety of monument companies for about $20 retail or could be ordered by the city and sold directly (one web site is http://www.thompsonmonuments.com/flower_holders.html).

Figure 106. Examples of cluttered graves that make it difficult to adequately trim the grass and pose a hazard to the cemetery workers.

The Issue of Decorations

Many cemeteries are beginning to also struggle with the increasing tendency for the public to load graves with personal items. This problem is not unique to the United States, but has also been documented in Great Britain, where solar-powered lights, statues and windmills have appeared.

Some cemeteries have established rules based entirely on appearances. At times these are intentionally vague, for instance referring to "adornments considered offensive or otherwise inconsistent with the dignity of the cemetery." In other cases a fairly detailed list of objectionable items has been devised: "Toys, stuffed or otherwise manufactured or sculptured animals, statues or statuettes, personal items and/or other unsightly objects."

Although aesthetics may reasonably be considered to suffer, most cemeteries attempt to control the proliferation on the grounds of the potential hazard to workers – a legitimate concern considering the use of mowers and trimmers on a routine basis.

Many cemeteries enact provisions that allow staff to remove such objects ("temporary objects") when they become withered, unsightly, or an obstruction to maintenance. Other cemeteries exclude all objects made of concrete, glass, plastic, fiberglass, metal, ceramic, and wood, again with the justification of safety.

Cartersville, Georgia itemizes items, although they justify the exclusion in terms of safety: "no hanging poles, no bird feeders, no glass containers, no ceramic figurines, no statuary, no concrete pots, no toys, no rocks, no bricks, or any other objects that may be hazardous to personnel or equipment" is allowed.

While wishing to be sensitive to those who have lost loved ones, there must still be a

Figure 107. Graveled plot showing abundant weeds. These plots are harsh and detract from the overall cemetery appearance. They should be discouraged and gradually converted into grass.

middle ground that helps control the abundance of materials beginning to appear on graves in Laurel Hill. Given the existing wording of Cartersville, Georgia, we would be inclined to support similar wording.

Gravel Plots

In some sections of the cemetery owners have chosen to use gravel, retained by coping, rather than allow the plots to be grassed. Often lot owners do this thinking that it will reduce maintenance. Unfortunately, as shown by this study, this is rarely the case. In fact, these graveled lots almost always present a variety of long-term maintenance problems and the city should discourage the practice whenever possible (we would even support regulations to prevent it in future plots).

Too often the lots, once laid, receive no additional maintenance by the families. As a result, the gravel thins through time, ultraviolet light breaks down the underlying weed block, exposing it and allowing further deterioration. In addition, weeds will often begin to grow on top of the weed block in the gravel. The typical solution to this, rather than laborious hand weeding, is to apply herbicides. Since there is rarely an effort made to prevent future weeds, chemical control becomes a routine practice – causing long-term damage to the memorials. In addition, the weeds killed by the herbicide create a disheveled appearance that detracts from the overall cemetery aesthetics.

Where families have chosen this practice and are unwilling to allow grass, they should be informed that it is their responsibility to replace weed block and periodically infill plots with additional gravel in order to keep them maintained. With the realization of that gravel is not a "silver bullet," but will require long-term maintenance, families may be willing to allow plots to be converted to grass which is more historically appropriate and dramatically softens the cemetery landscape.

Conservation

General Types of Stone Damage

Although a stone-by-stone assessment was not included in this assessment, it is possible to provide some general observations concerning the types of problems faced by the old section of Laurel Hill Cemetery. The new section was not assessed since we presume the majority of these plots are still under the care of family.

There are examples of broken stones (we estimate approximately 60). Many of these stones should receive a high priority for conservation treatments since the stones are either a hazard to the public (endangering visitors) or a hazard to themselves (if they fall

Figure 108. Typical stone conservation issues at Laurel Hill. From upper left to lower right: broken obelisk; tab in socket with broken tab; broken headstones; elevated monument with cradle side boards elevated; die on base with ferrous pins; extensively sugaring and warping ledger.

there will be additional, significant damage that will dramatically increase the cost of repair). The identification of these stones and development of treatment proposals by a professional conservator should be a very high priority. It is only with the development of detailed treatment proposals and cost estimates that a reasonable budget for this conservation work can be determined.

In most cases gravestones are fragile and their repair is delicate work. There are many commercial products on the market, used by many commercial stone companies, which are totally inappropriate for historic stone.

Appropriate conservation treatment will usually involve drilling and pinning, carefully aligning the two fragments. Threaded 316 stainless steel rod (or occasionally nylon) and epoxy adhesives formulated for the specific stone are used in this type of repair. Diameters and lengths of pins vary with the individual application, depending on the nature of the break, the thickness of the stone, its condition, and its expected post-repair treatment.

Sometimes pins are not used in a misguided or misinformed effort to save time and money. Instead the pieces are simply joined using a continuous bead of epoxy or some other adhesive. Experience indicates that for a long-lasting repair, particularly in structural applications, use of pins is usually necessary. Moreover, most adhesives are far stronger than the stone itself, meaning that failure of the repair is likely to cause additional damage to the stone.

At times mechanical repairs also involve dismantling intact elements and ensuring that a sound foundation is present. Foundation work may involve filling in depressions, establishing a concrete footing, or taking other measures to ensure that subsidence is minimized. Then the entire structure is repaired as it is reassembled.

Several stones were noted with ferrous pins (we observed three). These should be given a high treatment priority since, left untreated, the corrosion will cause significant spalling, cracking, and breakage of the stones. In these cases it will be necessary to use diamond core drills to remove the ferrous pins. They will then need to be replaced with stainless steel pins.

After many such repairs it will be necessary to fill the voids with a natural cementitious composite stone material resembling the original as closely as possible in texture, color, porosity, and strength. This type of repair may be used to fill gaps or losses in marble and is often used to help slow scaling of bedded sandstone exposed to the elements.

Under no circumstances should latex or acrylic modified materials be used in composite stone repair. These additives may help the workability of the product, but they have the potential to cause long-term problems. Such products are not appropriately matched in terms of strength or vapor permeability.

More suitable materials are materials such as Jahn (distributed by Cathedral Stone) or the lime-based mortars of U.S. Heritage. These closely resemble the natural strength of the original stone, contain no synthetic polymers, exhibit good adhesion, and can be color matched if necessary.

All infill work should be conducted by a trained conservator. The Jahn products, in fact, require certification in their use through Cathedral Stone.

A number of stones are either leaning or out of the ground (we estimate about 20). Stones should never be reset using concrete, but rather should be set in pea gravel. This approach allows the stone some movement should it be accidentally impacted by lawn maintenance activities. The pea gravel will also promote drainage away from the stone, helping the stone resist the uptake of soluble salts.

Figure 109. Example of a warped ledger showing water ponding on it.

A final problem observed is damage to and collapse of ledgers. We observed approximately 30 damaged ledgers.

Repair of these monuments will require removal of the ledger, correcting foundation problems, possibly installing a secondary Portland cement ledger, repairing the ledger, and resetting.

Some of the ledgers are warping under their own weight (there was no interior support). This has caused them to collect water and this water has further exacerbated the deterioration of the marble, causing sugaring (this is the loss of natural binders between the calcium carbonate crystals; acid rain is the primary cause). Treatment may consist of consolidation and/or support of the ledgers as described above.

Cleaning of Monuments

A significant amount of damage may result from inappropriate cleaning techniques. The most common cleaning technique is the use of a bleach product – probably because bleach (either sodium hypochlorite or calcium hypochlorite) is widely available and inexpensive. It is, nevertheless, unacceptable for historic monuments.

Table 2 discusses problems with a variety of "common" stone cleaning processes widely used by commercial firms and the public. Providing this sort of information to families who have loved ones buried at the city cemeteries may help deter abusive cleaning.

Cleaning is largely an aesthetic issue – we saw few examples where soil or biologicals were actually causing damage to the monuments. Consequently, the city should embark on an educational program to discourage inappropriate cleaning – explaining not only the dangers of bleach and other commercial methods, but also pointing out that such activities diminish the historical value and ambience of the cemeteries. These cleaning methods remove not only soil, but also the patina of age – leaving monuments that no longer appear historic.

This educational program should point out that cleaning – even when done correctly – will gradually erode monuments, making them susceptible to more soiling and damage. Consequently, cleaning should be conducted no more frequently than perhaps once every 5 years.

The safest product for cleaning is simply low pressure (less than 90 psi) water and a soft bristle brush. When some other assistance is needed a product that has been found safe for most stones is D/2 Architectural Antimicrobial distributed by Cathedral Stone.

Brick Pointing

There is relatively little brick work in the cemetery, but it is worth noting that at least one plot does have some brick requiring repointing. We estimate that 100 linear feet of brick wall requires attention.

Brick repair, however, is not simple and should not be entrusted to just any mason.

Figure 110. Examples of incorrect cleaning are found throughout Laurel Hill and these practices are causing significant damage and disfigurement. From upper left to lower right: monument cleaned using acid, resulting in surface erosion (this monument is also set too high, on a mass of Portland cement); ledger inappropriately cleaned with acid; entire plot cleaned with acid which destroys the historic patina and makes it appear as though the stones were set yesterday; monument cleaned with sodium hypochlorite leaving a yellow stain.

Figure 111. Soiling easily removed with just water.

Repairs should always begin with photographing the structure as it exists in order to completely document the original fabric and construction details. Only the unsound brickwork should be removed, stopping as soon as sound material is encountered. Repair should, as far as possible, use similar brick, mortar, joints, and tooling.

Figure 112. Brick plot that requires repointing.

Historic bricks are often far softer than modern examples. The use of a modern hard cement mortar will cause extensive damage to this soft brick as one expands more rapidly than the other. Mortar should always be designed to deteriorate more quickly (it should be sacrificial, meaning the use of high lime mortars) than the brick since it can be readily replaced through pointing.

All repointing should minimally meet or exceed the specifications established by *Preservation Briefs 2: Repointing Mortar Joints in Historic Masonry Buildings*.

New mortar must conform to the following criteria: (1) it must match the historic mortar in color, texture, and tooling, (2) it must have greater vapor permeability and be softer than the masonry units, and (3) it must be as vapor permeable and as soft as the original mortar.

To achieve these criteria it may be necessary to have a conservator conduct a mortar analysis. However, in general, the mortar should be high in lime and low in compressive strength. A natural hydraulic lime (NHL) or air lime would generally be specified for such work. For example, an air lime or NHL 3.5 might be mixed at the ratio of 0:1:3 for much repointing work. The sand selection would be especially critical since that additive would primarily determine the final color (and texture) of the mortar.

Existing joints would need to be raked out to a depth 2.5 times their width. Thus, a 3/8-inch joint would need to be raked out to a minimum depth of 15/16-inch (typically expressed as 1-inch). The repointing mortar, generally mixed somewhat dry to minimize shrinkage and reduce cleaning efforts, would be firmly packed in the thoroughly cleaned and

moistened joint using lifts no deeper than 1¼-inches.

The specifications are more detailed than this brief overview, but this should serve to indicate the care required.

Recommendations

Circulation

The absence of a "main" entrance detracts from the cemetery's visual impression. This may be ameliorated by improving the existing entrance into the old section and the use of appropriate signage.
The cemetery boundaries are open, with several ungated entrances. We recommend that Hadley Drive be blocked and not allowed to enter the cemetery property. We also recommend that the road leading to Remington Drive be permanently closed. This will leave two entrances, off Jackson, for the cemetery and will improve security and reduce drive-through traffic.

No change in the circulation patterns of Laurel Hill Cemetery is recommended. The historic patterns should be maintained and are adequate for safety and convenience of the low usage.

The paved roads are in fair condition, although many areas require repair. Asphalt rubber or rubberized asphalt used as either a flush-fill or overband configuration should be considered.

There are several areas where the paving has completely deteriorated and extensive repairs, consisting of grading, compacting, establishing a new base course, and application of a new asphalt wear course are necessary.

The dirt roads in the cemetery are satisfactory, but should be inspected for maintenance needs. In particular, several areas of rutting from heavy use during wet weather were observed.

The paved roads require edging on a monthly basis and cleaning on a weekly basis.

The metal guardrail along the cemetery road parallel to Jackson Street is visually intrusive to the cemetery landscape. This problem could have been avoided by using a timber barrier or even reduced by using a Corten steel barrier. The current plantings are entirely ineffective at softening this harsh element and we recommend new landscaping.

Security Issues

Laurel Hill Cemetery must have a more routine police presence, with patrols in the evening prior to closing the gates. We also recommend periodic patrols during daylight hours.

The City must provide more visible maintenance staff to ensure the safety of the cemetery and better collect litter.

We recommend that the Hadley Drive and Remington Street entrances to Laurel Hill be permanently closed. This will eliminate through traffic and better secure the grounds.

Existing fence lines, while not continuous, should be periodically cleaned and repaired by the city. All cleaning should be by hand – no herbicides should be used.

The city should develop a mechanism to identify, record, and report vandalism in the cemetery.

Fixtures and Furnishings

The one remaining bench in the old section should either be repaired or removed.

Landscape Maintenance

Tree maintenance has been neglected. Of the ca. 28 trees in the old section (not including the dogwoods) 13 are healthy and require only minimal pruning or thinning. An additional six trees require pruning of dead or diseased limbs. All pruning must comply with ANSI

A300 (Part 1) - 2001 standards and the ISA standards of practice. We strongly recommend that the work be performed by an ISA Certified Arborist, preferably one who is also an ISA Certified Tree Worker/Climber Specialist.

Approximately nine trees in the old section should be entirely removed as they are either dead, dying, or planted incorrectly. Some of these are small enough and so located to allow in-house removals. Others should be removed by an ISA Certified Arborist.

Virtually all of the dogwood in the old section (and many in the new section) are in poor health, the result of their planting in full sun. These should be removed and replaced with trees suitable for exposed, full-sun conditions, such as weeping yaupon holly.

All of the removed trees in the old section should be replaced, primarily with Eastern red cedars, although occasional Florida maple and weeping yaupon hollies may be used as specimen trees to provide interest and diversity.

Shrubbery throughout the cemetery is in poor condition. Much has been incorrectly pruned and much is planted in inappropriate locations. In the future special care must be exercised to ensure that those entrusted with pruning are knowledgeable and appropriately trained. This incorrect pruning will be an expensive error for the city to correct. The city must also closely regulate plantings by private lot holders.

The azaleas, camellias, ligustrum, and boxwood require rejuvenation pruning. If this is not successful, these shrubs will need to be removed and replaced. It is not acceptable to simply remove the plants since this would dramatically alter the cemetery landscape.

The inappropriately pruned arborvitae cannot be rejuvenated. They must be removed and replaced with new arborvitae.

We are more supportive of replacing the bahiagrass with centipede or buffalo grass than in chemical seedhead suppression. The effect of the chemicals on the stones in the cemetery is undocumented.

Although many sections of Laurel Hill can be mowed with large deck equipment, there are many other sections where coping and the density of monuments make this practice ill-advised. We identified many damaged stones as a result of not using proper sized equipment. We recommend that much of the old section be mowed with 21-inch mowers.

We recommend that all of the old section be core aerated to help reduce compaction and thatch build-up.

The sweeping, or blowing, of grass off graves should be standard practice in all cemeteries operated by the city.

It should be standard practice to reseed or resod all new graves.

Nylon line used in trimmers should be reduced from 0.095 to 0.065 inch thickness in order to prevent trimmer damage to the soft marble.

Fire ants are a significant liability to the city should treat Magnolia Cemetery with a broadcast bait on a yearly schedule.

It is unacceptable to drive across graves and the practice should cease immediately. If absolutely necessary, plywood mud tracks or commercially available equivalents should be used.

Other Maintenance Issues

Identification and regulatory signage should be erected at the eastern and western entrances to the cemetery.

The cemetery must be walked at least three times a week by crews to collect any trash that has accumulated.

The city's own maintenance yard is especially unkempt, with overflowing trash cans, scattered debris, stockpiled materials not needed in the cemetery, and other materials. The area is in public view and the city should takes pains to ensure that it is always neat, clean, and well organized. This requires immediate attention.

The city must take more proactive involvement to ensure that graves are correctly handled. The use of cones may be acceptable – if the cones are collected prior to the funeral. We found them sitting on graves weeks after the funerals. In addition, the city should inspect grave openings to ensure that the correct grave has been opened, the grave shaft is excavated to the correct depth, that the grave is safely covered, and that there has been no damage to the landscape or other graves.

The city should similarly ensure that all graves are correctly backfilled and adequately compacted to prevent collapse. This is critical to minimize liability for injury in the cemetery. Likewise, the city must ensure that stones are correctly and securely set.

Grave spoil must be either removed from the cemetery or the city should appropriately screen the soil area using fencing or vegetation. Its current open display detracts from the beauty and dignity of the cemetery setting.

The city should adopt flower regulations for Laurel Hill Cemetery that will limit the length of time that flowers – whether natural or artificial – may be left on graves. Then the city must uniformly enforce this regulation. There should also be regulations concerning the container, both to protect the cemetery and its workers.

The city should also adopt regulations that limit the "temporary materials" that may be placed on or around graves in Laurel Hill. The proliferation of ceramic figurines, toys, and other items requires some degree of control.

The use of gravel in plots should be discouraged. Where present, incentives should be offered to convert to grass, which is more historically appropriate and easier to maintain.

Conservation

We estimate that monument work will involve about 60 stones to be blind pin repaired, three stones have ferrous pins, 20 stones require resetting, and about 30 are collapsing ledgers.

There are few brickwork problems in Laurel Hill, but we did indentify one plot that requires repointing on about 100 linear feet of brickwork.

Cleaning is a very low priority and the city should not allow cleaning of stones in the old section of Laurel Hill cemetery.

PEACEFUL REST CEMETERY

The Cemetery Location, Setting, and Context

The final property is Peaceful Rest, a relatively new African American cemetery developed as Magnolia was sold out. The tract includes 40 acres, although currently only 12 acres are developed (TMS 013 004002). An additional 8 acres to the east are open, but lacking roads or other infrastructure. The remaining 20 acres to the west are in woods; Oquina Creek runs north-south through this wooded portion, reducing the total acreage suitable for future cemetery expansion.

The cemetery is bounded to the north by North Pinetree Boulevard and to the east by Glenwood Drive. To the west is the Seaboard Coast Line Railroad. To the southeast is a small community known as the Birdland/Forest Hill subdivision. To the south of the cemetery is an ice plant. Across the road to the north are several wooded tracts. The city anticipates that this area will remain low density residential, although at present there is significant variability in land uses.

Although the cemetery contains abundant three dimensional markers, its design and layout most closely matches the typical memorial park. There are two wide entrance roads off Pinetree Boulevard at the east and west ends of the developed tract, each about 22 feet in width. Connecting these main arteries are a series of smaller, single lane roads (about 11 feet in width), creating a formalized network similar to the design of the other municipal cemeteries in Thomasville. The cemetery is nevertheless rather stark in its appearance. Landscaping is limited to a few arborvitae. There are no significant trees on the property except for a row along the western most entrance drive.

Figure 113. Aerial view of Peaceful Rest cemetery.

Figure 114. View of Peaceful Rest Cemetery, note also the deteriorating road condition.

Like the location of the other cemeteries, Peaceful Rest is situated at an interface between an area of relatively high African American population to the southwest, and areas of lower black population to the north and east. Median family incomes also vary – with lower levels to the southwest and northeast and higher levels to the northwest and southeast.

Because Peaceful Rest is a modern cemetery, it was not included in this detailed assessment. We did, however, visit the cemetery on three separate occasions to determine if issues found in other Thomasville cemeteries were also present here. Our hope is that if concerns can be corrected now, the cemetery will not present preservation issues to future generations. Improvements in management will help minimize long-term costs to the city.

Consequently, we provide below brief recommendations, supplemented with photographs, rather than detailed discussions.

Recommendations

Circulation

The roads in the cemetery are in only fair condition and require repair. At this point asphalt rubber or rubberized asphalt used as either flush-fill or overband configuration should be considered.

The paved roads should be edged on a monthly basis.

Security Issues

The cemetery is in a remote, almost rural location. It is critical that the city ensure there are routine police patrols, both during daylight when visitors are present, and at night when the cemetery is closed.

As with the other cemeteries, the city should have a more visible presence at the cemetery. This would improve security and help make family members feel more secure.

The city should develop a mechanism to identify, record, and report vandalism in the cemetery.

Landscape Maintenance

The city's maintenance suffers from inadequate crew size and inadequate training. Additional staff, properly trained, is an absolute necessity.

The most significant shrubbery issue in the cemetery is the inappropriate pruning of the arborvitae. The damage to these trees is extensive and there is no option but to remove the trees and replace them with new arborvitae, correctly positioned so as not to cover graves.

Since this is a new and relatively small cemetery, it offers a perfect opportunity to explore a more suitable grass than bahiagrass, perhaps centipede.

Other Maintenance Issues

Identification and regulator signage similar to that recommended for the other cemeteries

Figure 115. Landscaping issues at Peaceful Rest. The first five photos show a variety of arborvitae mutilated by inappropriate pruning. Several of the photos also show arborvitae with deadwood which should have been pruned out, but that was untouched. The lower right photo shows a sago palm damaged by the cold. It was badly pruned, exposing the heart of the palm. The arborvitae must all be removed and replaced with new plantings – damage this severe cannot be repaired. It is critical that the city ensure its employees are adequately trained to care for the cemetery landscape.

Figure 116. Concerns at Peaceful Rest. The first four photos show a variety of trash piles situated around the cemetery. These must be collected on a routine basis and at least twice a week. The bottom row left photo shows several graves with dense flowers that impede lawn care. The cemetery must have regulations regarding how long temporary decorations may remain. The lower right photo shows a grave digging company dumping soil and debris in the spoil pile. These debris should either be removed from the cemetery or screed from public view. Currently the pile is immediately on the right as one enters the cemetery.

should be installed at both entrances to Peaceful Rest.

We observed piles of trash across the cemetery. All remained uncollected for the three days we were on-site. The city should collect trash in a timely fashion – at least twice a week.

The city should take a more proactive involvement to ensure that graves are correctly handled. Grave locations must be verified. All open graves must be covered. Graves should be inspected for appropriate compaction and to verify no damage to adjacent graves.

Grave spoil is located immediately at the entrance to the cemetery. This is not the image the city wishes to give of its property. The grave spoil should either be removed from the cemetery or screened using fencing and/or vegetation.

As for Laurel Hill and Magnolia, the city should adopt flower regulations that will limit the length of time that flowers – whether natural or artificial – may be left on graves. Then the city must uniformly enforce this regulation. There should also be regulations concerning the container, both to protect the cemetery and its workers.

MANAGING CEMETERY DATA

Existing City Records

We did not spend any significant amount of time examining the existing city records – such an analysis was beyond the scope of the cemetery assessment.

We understand, however, that the records for Peaceful Rest are complete. Those for Laurel Hill and Magnolia are incomplete. No records exist for Old or Flipper cemeteries. We are told that some older records were destroyed by a fire at city hall.

The records consist of a series of notebooks which include an alphabetical list of plot owners (not burials), with schematic maps showing the plots and burials. These notebooks are maintained by Sexton and are housed in his office. We are impressed with the thoroughness and care with which these records have been prepared and maintained. The city is fortunate to have a sexton who realizes the importance of good record keeping.

The records are duplicated, in a sense, by card files maintained by the city. These cards also indicate plot owners, not individual burials. Recently, the city has converted its documents to a propriety digital format known as Laserfiche (a division of Compulink Management Center, Inc.).

Other than the schematic maps in the notebooks, there are no maps of any of the city cemeteries – no maps showing hose bibb locations, vegetation or plantings, roadways, or other features, as well as no overall maps of the cemeteries and burial plots. There is also no simplified index of burials.

Laserfiche is often adopted by governmental agencies since it offers an easy method to quickly import electronic data into the system. The system also provides an easy method to transfer images to microfilm. Once documents have been scanned into the system, the images can be copied onto CDs which can be sent out for transfer onto microfilm.

Nevertheless, Laserfiche is a digital archiving technique. As such, information can be lost for many reasons, including changes in organization, context reorganization, cession of sponsorship/budget cuts, technology obsolescence, content format obsolescence, hacking and sabotage, and disaster.

There is no question that digital techniques, such as Laserfiche, allow unsurpassed access to records that previously were painfully difficult to index and sort. It cannot, in spite of claims made by the manufacturer, be considered an "archivally stable" media.

In fact, the claim made by Laserfiche that it is "archivable to CDs" is meaningless since compact discs themselves are not a stable archival media. Likewise, their claim that microfilm "erodes if not properly stored and maintained" is meaningless, since it applies to virtually all media – even human memory.

Thus, while it is not our intention to criticize the decision to use this product – and we are even supportive of the technique in terms of ease of conversion and access – it is not archival and the city should understand that data loss is still a real possibility.

In addition, the data as it exists currently is not readily available to the public – those searching for a family member, for example. The system also does not allow for

easy inclusion of other information, such as conservation needs, photographs, or a transcription of the gravestone. Nor does it provide a level of mapping that either the city or researchers need.

We understand the card file is housed in the city's fireproof vault. We recommend that photocopies of the notebooks maintained by the sexton also be stored in this facility.

Other Data Sources

There is at least one published source that provides data on Thomas County, Joe E. Craigmiles' *The Cemeteries of Thomas County, Georgia*.

Surprisingly, we found relatively few online sources. There is a partial list of Laurel Hill burials, limited to Confederate veterans at http://ftp.rootsweb.com/pub/usgenweb/ga/thomas/cemeteries/csalaure.txt and a partial index of Laurel Hill burials at http://ftp.rootsweb.com/pub/usgenweb/ga/thomas/cemeteries/laurel.txt. A list of burials at Old Cemetery is found at http://ftp.rootsweb.com/pub/usgenweb/ga/thomas/cemeteries/oldcem.txt. There is not, however, any information available electronically concerning any of Thomasville's African American cemeteries.

Certainly there are a variety of sources available for reconstructing at least significant portions of the missing data. Georgia required death certificates beginning 1919, although compliance is not considered full until 1928. Scanning death certificates and looking for burials in Laurel Hill, Magnolia, and perhaps even other Thomasville cemeteries is a means of quickly filling in at least part of the existing data gap.

There are also newspaper obituaries. Again, this requires intensive efforts to scan period papers and collate information, but it is another source of further compiling missing data for all three cemeteries.

It is crucial that whatever records may exist be identified and compiled into one central database. It is not acceptable to continue to claim that no records exist when, to at least some extent, these records can be recovered or created. Whether done by volunteers or the city, this is an effort that should not be further delayed. A reasonable time frame for completion of such a study is a year (assuming there is either a contract issued or enthusiastic volunteer support).

Data Presentation Options

How the data are presented depends on the goal of the presentation – what the city wishes to accomplish.

Simple Genealogical Presentation

Presentation of "who's buried" in a particular cemetery need be no more complex than a Microsoft Excel spreadsheet converted to a webpage. While entirely lacking in frills, it has the potential to very quickly present basic information in a format that almost anyone with a computer can use.

The downside of such a site is that it is limited in information. For example, one of the most troubling aspects is that it fails to provide a complete transcription of the stone. Without a complete transcription much important data is lost or at least accessible. Such a system also typically lacks the ability to post a photograph of the monument – and these visual graphics may provide critical information.

An alternative is to either develop a comprehensive Microsoft Access database or to use a proprietary one, such as Cem-Editor from OVS-Genealogy (Figure 117). The Cem-Editor is based on Access, but the work of design is already done. The program allows entry of complete transcriptions, photographs of the

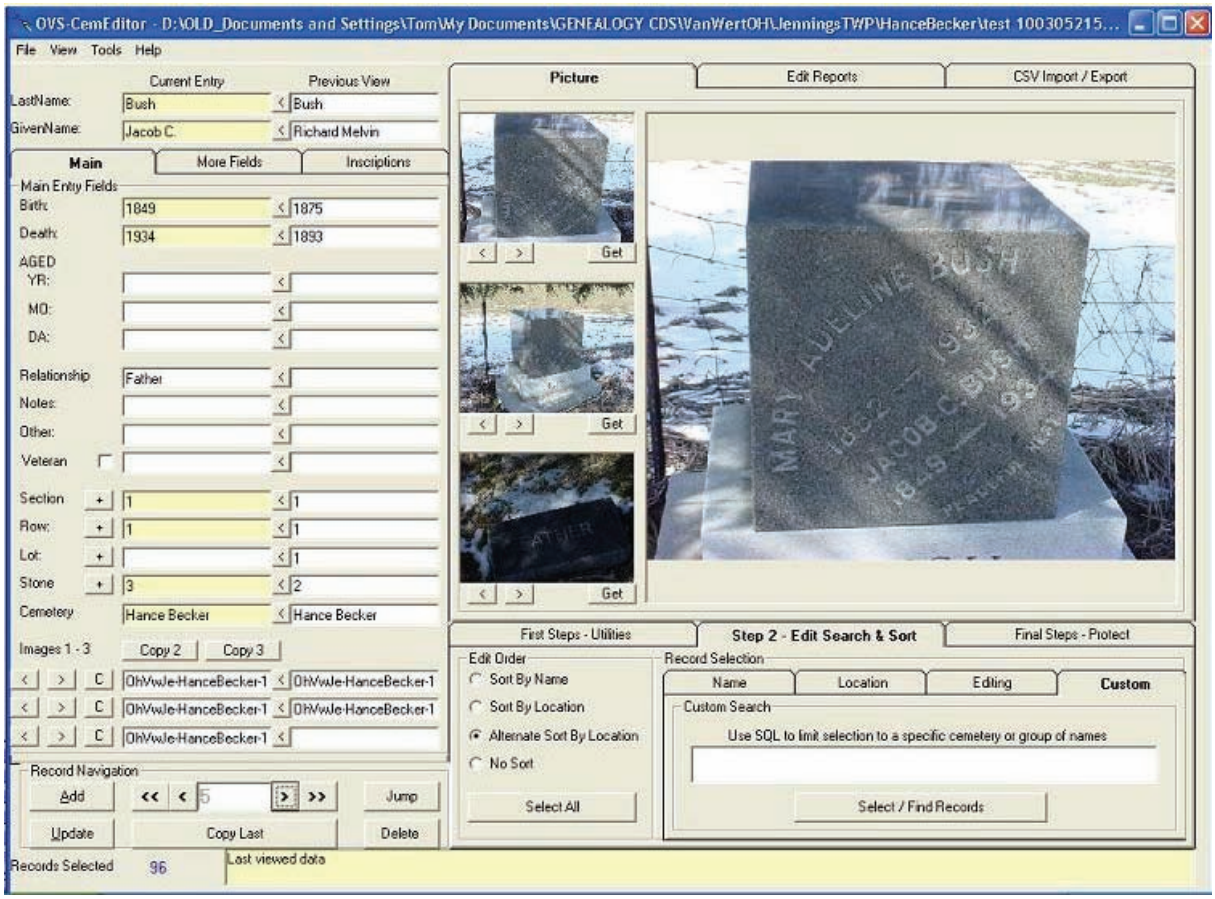


Figure 117. Screen shot of the OVS-Genealogy Cem-Editor program.

monument (perhaps combining a modern photograph with the historic photograph), brief condition information (once an assessment is complete), and custom fields for cemetery specific data. An add-on allows the data to be converted to web pages for publication. Another add-on allows the creation of very simple maps. This likely provides the quickest (and least expensive at less than $150) route for the city to provide basic information and photography.

Cemetery Management Software

There are far more cemetery management software options, although the costs are considerably greater since the programs are designed for the for-profit or commercial cemetery. Table 3 lists several of the more popular commercial products and some of the various capabilities. The cost of each ranges from $1,000 up.

Because these products are intended for the commercial cemetery they typically have the ability to track trust or perpetual care funds. Most have the ability to produce checks, providing a complete accounting system. Many have the ability to integrate a variety of services, including funeral director services. As a result virtually all have capabilities that are in excess of what the city needs.

On the other hand, several of the companies provide turn-key work, taking maps, digitizing them and, if desired, integrating them with GIS databases. Several companies provide on-site instruction in the use of the programs.

Table 3.
Some Commercial Cemetery Management Software Programs

Name	Web Site	Capabilities
Cemetery Management Max	www.cemeterydatabase.com/	full accounting, audit data entry with unparalleled sort & search of interred. Record companies your cemetery does business with, purchase and post transactions, protect data entry, view invoices, statements and account balances. Enter and view hundreds of types of data entry for Owner's, Interred and Next of Kin. Include maps, automate Work Order entry, multiple family grave purchases, standard & amount protection deeds, all on-screen and by report.
CIMS eCIMS (allows on-line posting)	www.cimscemeterysoftware.com/	CIMS™ links all of your cemetery data to actual computerized maps of your cemetery. This cemetery mapping allows access to data through map interaction and allows queries not possible with standard database tools.
Charon	www.charon.com.au/index.html	A fully integrated suite of functions including Accounting & Financials, Records & Resource Management, Property Mapping, Web Applications, PDA Applications, Point of Sale, and Touch Screen Kiosks.
HMIS	www.hmisinc.com/index.php	Fully integrated cemetery, mortuary and crematory software solution.

There are certainly benefits to these programs and we are inclined to look at the eCIMS software as a potentially good choice – if the city desires a more complex system than OVS-Genealogy Cem-Editor. Designed for web-based access, the City could determine precisely the information it wishes to be on-line, as opposed to available on in-house computers (thus avoiding family privacy issues).

Although the CIMS Light provides may of the features appropriate to the management needs of the Thomasville cemeteries – including virtually all of the simple genealogical topics covered by Cem-Editor, it does not incorporate interactive digital maps. This feature requires the more elaborate CIMS program.

The Need for Mapping and Recordation

Regardless of the solution, the city has a clear need for detailed mapping at each of the cemeteries, coupled with stone-by-stone transcriptions. These two steps would acquire the data that the city needs to begin data entry and establish an on-line presence.

We envision combining mapping and stone-by-stone recordation – and provide a budget for this work at the two oldest cemeteries, Old and Flipper. The recordation would use a form to collect a complete transcription and combine that information with other pertinent information (either in the field or during data entry). Each stone would have one or more digital photographs taken. The location of marked graves, depressions, coping, roads, paths, boundaries, and historic features in the cemetery would be collected using a total station. We favor this approach over GPS, especially for Old and Flipper cemeteries, because of the heavy tree cover and the difficulty that GPS has in such circumstances.

All paper record information would be converted into a Microsoft Access database that mirrored the paper form.

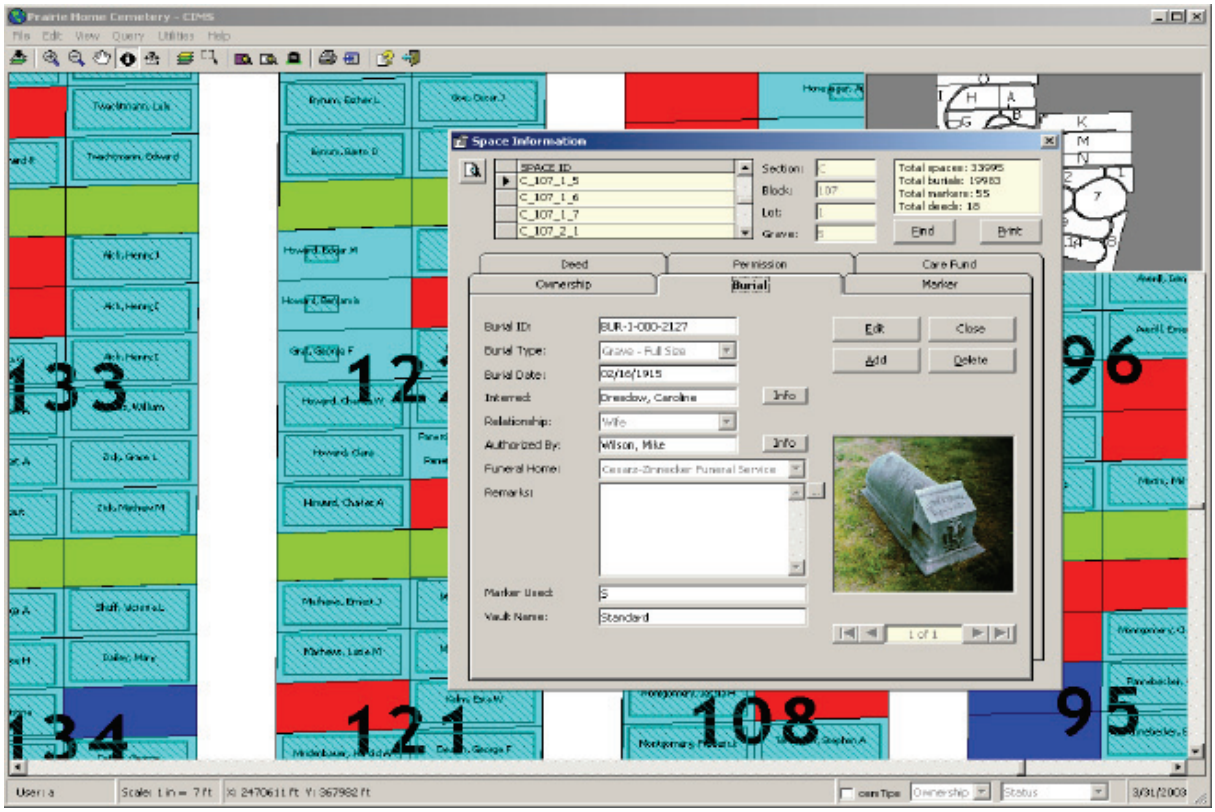


Figure 118. Screen shot of the CIMS software showing the created map and space (i.e., plot) information. The map shows plots that are occupied, available, and contracted for. This screen is then broken down into deed information, permission, care fund, ownership, burial, and marker. The latter can be used for condition and other data. The burial screen can be used for complete transcription.

The city could merge the attribute information contained in the Access database with the mapped locations to produce an ESRI shapefile. This shapefile could contain all attribute as well as location information for all features collected for that particular cemetery. Integrating the geographic and attribute data into shapefile format will enable for increased capability for analysis and mapping of the information. Digital photographs could be hyperlinked to the shapefile.

By integrating with an internet map server application, it would be possible to display the cemetery data via an internet web browser. It would be possible to have an interactive map of the cemetery that would enable the symbolization and mapping of each of the various data layers collected from the cemetery.

Recommendations

It is critical that the city's data concerning its cemeteries currently housed in the Sexton's office be photocopied and stored in the city's vault.

The city should contract for the cemeteries to be mapped and have stone-by-stone recordation completed as soon as possible.

A simple, first step to provide public access through web access is a program such as Cem-Editor from OVS-Genealogy. This would fulfill the bulk of the city's immediate

interests in a simple and cost-effective manner, allowing an immediate on-line presence.

In the long run, it is appropriate to consider cemetery management software. A system such as CIMs offers both business tracking capability as well as genealogical data access.

PRIORITIES AND FUNDING

Funding

Funding sources for cemetery work are limited and there are no secret sources. In particular, federal budgets for cultural resources – such as historic cemeteries – have been dramatically reduced as a result of efforts to reduce taxes and sustain a war effort. This means that funding must largely come from local government and those using the city's cemeteries. We will briefly outline a few of the sources that the city may wish to explore, but we are not funding consultants and there are likely other possible sources we have not mentioned.

Federal Funds – Survey and Planning Grants

These are National Park Service funds that are administered by the Georgia Department of Natural Resource, Historic Preservation Division. They are available for use by government agencies and non-profits on a 50-50 match basis. Eligible projects typically include Identifying, Recording, and Recognizing Historic Properties; Planning for Historic Districts and Multiple Historic Properties; Strengthening Local Government Historic Preservation Programs; Preservation Education ; and Planning for Individual Properties.

A portion of the NPS funds are allocated to National Register listed buildings requiring stabilization projects. If Thomasville is a Certified Local Government (CLG), it would be eligible for this funding, allocated as a 60-40 match.

The individual responsible for these programs at the Historic Preservation Division is Ms. Carole Moore, Grants Coordinator, who can be reached at 404-463-8434 or by email at carole_moore@dnr.state.ga.us.

Federal Funds – Transportation Enhancement Grants

These are Department of Transportation funds administered by the Georgia Department of Transportation. All historic preservation projects must be directly related to the transportation system and involve properties that are listed in or eligible for the National Register.

More information is available at http://www.dot.state.ga.us/dot/plan-prog/planning/projects/te/compete_for_TE_project.pdf.

Federal Funds – National Trust for Historic Preservation Grants

The National Trust offers small (typically less than $5,000) seed or starter grants to non-profits for planning and education projects. Also available is the Johanna Favrot Fund for Historic Preservation, although this will not fund repair and rehabilitation work (although grant amounts are up to $10,000).

For more information, contact the Southern Office of the National Trust for Historic Preservation at 843-722-8552 or soro@nthp.org and the National Trust website at http://www.nationaltrust.org/help/grants.html.

Federal Grants – National Endowment for the Humanities Challenge Grants

These grants are intended to subsidize or create endowments to support such projects as the maintenance of facilities and conservation. Thomasville's original cemeteries might fall into this category and the grant funds

projects from $20,000 up to $1,000,000. Competition, however, is very strong.

For additional information go to www.neh.fed.us/grants/guidelines/challenge.html.

Federal Grants – Community Forestry Grants

These are U.S. Forest Service grants administered by the Georgia Forestry Commission in cooperation with the Georgia Urban Forest Council. They are designed specifically to promote various urban forestry issues. One current funding program is to provide training and assistance to allow staff to become certified arborists. This is certainly a program that would assist Thomasville's cemeteries and this grant may assist the city in hiring, training, and retaining the staff they need to deal with tree issues in the cemeteries.

For additional information visit http://www.gfc.state.ga.us/CommunityForests/Grants.cfm.

Private and Foundation Grants

In this category are grants offered by such organizations as:

- American Express Foundation – Cultural Heritage Program – http://home3.americanexpress.com/corp/giving_back.asp
- Bank of America Foundation – www.bankofamerica.com/foundation
- Hampton Hotel's Save-A-Landmark Program – www.hamptonlandmarks.com

There are possibly other private foundations whose stated interests might include cemeteries, historic preservation, or conservation. These might include the Robert W. Woodruff Foundation, the William I. H. and Lula E. Pitts Foundation, the Tull Charitable Foundation and the Turner Foundation. Corporate foundations might include the Coca-Cola Foundation, the Georgia Power Foundation, and the UPS Foundation. It may also be useful to contact the Community Foundation of South Georgia, Inc. in Thomasville for additional information.

Non-Grant Funding

Ultimately, however, it will be necessary for much of the needed work to be funded by the City of Thomasville. These are, after all, city owned and operated cemeteries and the city ultimately has responsibility for their care and maintenance.

Recommended Priorities

Table 4 lists the recommendations offered throughout this assessment, classifying them first by cemetery (with the first category being those recommendations that are not cemetery specific), then by priority.

Table 5 presents the same information, but lists it not by cemetery, but by priority, allowing the city to view all items of the same urgency together, regardless of the cemetery. The reason for this is that in some cases there may be an economy of scale if items are combined.

For each we have attempted to specify a projected cost. Some costs are based on our experience (such as costs associated with conservation tasks). Other costs are based on the estimates provides by Means. For some tasks, which we assume will be performed by existing city worker, we have indicated "n/c" for "no cost." We realize, of course, that everything has a cost, but for these tasks, there will be no *additional* cost, since these city workers are already being paid.

Priorities are identified here as First, Second, or Third:

First priorities are those we recommend undertaking during the current fiscal or calendar year. Some are issues that have the potential to affect the public health and safety and consequently require immediate attention. Most, however, are planning issues that require immediate attention to "set the stage" for future actions. We strongly believe that most cemetery projects fail through inadequate or inappropriate planning – thus, we recommend in the strongest possible terms that the city engage in the necessary planning to help ensure success.

Second priorities are those which should be budgeted for over the next 2 to 3 years. They represent urgent issues that, if ignored, will result in both significant and noticeable deterioration of the city cemeteries as historic resources.

Third priorities are those that may be postponed for 3 to 5 years. They are issues that can wait for appropriations to build up to allow action. Some are also less significant undertakings or actions that require other stages to be in place in order to make them feasible or likely to be successful. Because they are given this lower priority, however, they should not be dismissed as trivial or unimportant.

Budget estimates are offered only for direct conservation issues and reflect 2008FY costs. Many actions can be completed with the city's own in-house staff; if these resources are not available as needed, then outside consultants should be retained.

Just as parks or water service or police protection have yearly costs, so too do historic resources. Preservation costs must be continuous. The cemeteries must receive constant and on-going care and preservation efforts.

Table 4.
Prioritization of Recommendations by Cemetery

Priority	Task	Cemetery	Budget Estimate	
1	Adopt flower and temporary decoration regulations	All	n/c	
1	Advertise and fill the Assistant Sexton position	All	$25,000	
1	Become familiar with Secretary of Interior Standards for Preservation	All	n/c	
1	Blow off all graves after mowing	All	n/c	
1	Change trimmer line from 0.095 to 0.065 inch	All	n/c	
1	Develop basic histories for five city cemeteries	All	$5,000	
1	Discourage cleaning of stones through educational campaign and requirement that work be approved by Sexton	All	n/c	
1	Establish information for families on correct cleaning methods	All	n/c	
1	Establish policy that no graves will be driven over by heavy equipment (trucks, backhoes, bobcats)	All	n/c	
1	Formalize process to always consider Secretary of Interior Standards for Preservation	All	n/c	
1	Formalize that all conservation work will be performed by trained conservator who subscribes to the AIC Code of Ethics and Standards of Practice	All	n/c	
1	Formalize that all landscaping decisions will consider low water usage	All	n/c	
1	Increase cemetery-specific maintenance budget to adequately fund adequate staff, equipment, and supplies	All	$350,000	
1	Increase police presence at cemeteries with daily and nightly patrols	All	n/c	
1	Re-emphasize policy that all work in cemeteries must be conducted under Public Works Division	All	n/c	
1	Reseed or, preferably, resod all new graves	All	n/c	
1	Treat cemetery for fire ants (2.18, 2.34, 40, 82 acres)	All	$1,500	
2	Begin inspection of all contracted work in the cemetery, such as excavation, backfilling, and setting of monuments.	All	n/c	
2	Establish specifications for setting of monuments	All	n/c	
2	Increase sale price of cemetery lots to $350/each	All	n/c	
2	Provide more visible staff at cemeteries	All	n/c	$381,500

Priority	Task	Cemetery	Budget Estimate	
1	Apply mulch to shaded sections (1.3 acre)	Flipper	$22,000	
1	Clean prune 12 trees	Flipper	$6,600	
1	Collect trash from cemetery 2 times a week	Flipper	n/c	
1	Daily check entrance for trash	Flipper	n/c	
1	Erect identification and regulatory signage (1 set)	Flipper	$800	
1	Map cemetery and record complete inscriptions, all monuments	Flipper	$9,000	
1	Prune crepe myrtle	Flipper	$500	
1	Rejuvenate prune shrubbery	Flipper	$750	
1	Remove 10 trees	Flipper	$15,000	
1	Thin prune 20 trees	Flipper	$11,000	
2	Conservation of stones (25 repair, 15 reset)	Flipper	$24,750	
2	Create brochure of monuments (after mapping and research)	Flipper	$1,500	
2	Create designated parking on Jerger (ca. 3 spots, 1 handicapped)	Flipper	$3,500	
2	Expand history to broaden appeal and include local accounts	Flipper	$2,500	
2	Improve landscaping at entrance	Flipper	$8,000	
2	Once mapped, fill sinking graves with clean sand	Flipper	$100	
2	Repair of brickwork	Flipper	$6,000	
2	Replace bahiagrass with centipede (1.04 acre)	Flipper	$68,000	
3	Complile historical information in heritage tourism products	Flipper	$6,000	
3	Replace juniper along fence line (400 linear feet) with dwarf yaupon holly	Flipper	$3,100	$189,100

Table 4, cont.
Prioritization of Recommendations by Cemetery

Priority	Task	Cemetery	Budget Estimate	
1	Clean prune 6 trees (old section)	Laurel Hill	$3,300	
1	Clean up maintenance yard; remove all debris, trash, and other unnecessary items	Laurel Hill	n/c	
1	Collect trash from cemetery 3 times a week	Laurel Hill	n/c	
1	Discourage use of gravel in plots	Laurel Hill	n/c	
1	Edge paved roads monthly	Laurel Hill	n/c	
1	Erect identification and regulatory signage (2 sets)	Laurel Hill	$1,600	
1	Mow old section primarily with 21-inch mowers, followed by nylon trimmers	Laurel Hill	n/c	
1	Rejuvenate prune shrubbery	Laurel Hill	$5,000	
1	Repair bench	Laurel Hill	$500	
1	Replaced two areas of heavily damaged roads in the new section	Laurel Hill	$4,100	
1	Thin prune 13 trees (old section)	Laurel Hill	$7,150	
2	Block Hadley Drive and unnamed road leading to Remington Drive with bollards	Laurel Hill	$2,550	
2	Conservation of stones (60 repair, 20 reset, 30 ledgers)	Laurel Hill	$114,000	
2	Core aerate old section	Laurel Hill	$2,100	
2	Inspect and repair dirt roads as needed	Laurel Hill	n/c	
2	Install privacy slats on chain link fence at maintenance yard	Laurel Hill	$1,200	
2	Landscape "main" entrance to make more attractive	Laurel Hill	$25,000	
2	Remove 29 trees (old section)	Laurel Hill	$17,200	
2	Remove and replace incorrectly pruned arborvitae	Laurel Hill	$5,500	
2	Repair paved roads in Laurel Hill using flush-fill or overband	Laurel Hill	$5,800	
2	Replace 29 trees (old section)	Laurel Hill	$11,600	
2	Screen area of grave fill with wood fence	Laurel Hill	$4,400	
2	Yearly clear fence lines by hand (using no pesticide)	Laurel Hill	n/c	
3	Replace bahiagrass with centipede (82 acres)	Laurel Hill	not determined	
3	Replace landscaping along Jackson to better hide metal guardrail	Laurel Hill	$5,650	
3	Repoint brickwork	Laurel Hill	$9,000	$225,650

Table 4, cont.
Prioritization of Recommendations by Cemetery

Priority	Task	Cemetery	Budget Estimate	
1	Clean abandoned road east of cemetery	Magnolia	n/c	
1	Clean Oquina Creek drainage in cemetery	Magnolia	n/c	
1	Clean prune 3 trees (old section)	Magnolia	$1,650	
1	Collect trash from cemetery 3 times a week	Magnolia	n/c	
1	Edge paved roads monthly	Magnolia	n/c	
1	Erect identification and regulatory signage (3 sets)	Magnolia	$2,400	
1	Rejuvenate prune shrubbery	Magnolia	$1,500	
1	Remove 34 trees (old section)	Magnolia	$51,000	
1	Repair and paint remaining fence in old section	Magnolia	$1,200	
1	Replace 20 trees (old section)	Magnolia	$8,000	
1	Thin prune 5 trees (old section)	Magnolia	$2,750	
2	Close Oquina Creek drainage roadway	Magnolia	$2,000	
2	Conservation of stones (32 repair, 20 reset, 45 ledgers)	Magnolia	$99,800	
2	Inspect drains and unclog as necessary	Magnolia	n/c	
2	Monitor and trim cane along eastern boundary	Magnolia	n/c	
2	Remove and replace incorrectly pruned arborvitae	Magnolia	$5,500	
2	Remove ca. 20 trees (new section)	Magnolia	$30,000	
2	Replace ca. 20 trees (new section)	Magnolia	$8,000	
2	Screen area of grave fill with wood fence	Magnolia	$3,500	
3	Pave road in old section, install bollards if necessary to prevent off road driving	Magnolia	43,500	
3	Repair of concrete coping	Magnolia	$35,000	
3	Repair paved roads in Magnolia using flush-fill or overband	Magnolia	$1,200	
3	Replace bahiagrass with centipede (40 acres)	Magnolia	not determined	$297,000

Table 4, cont.
Prioritization of Recommendations by Cemetery

Priority	Task	Cemetery	Budget Estimate	
1	Clean northern and southern fencing (500 linear feet)	Old	$850	
1	Clean prune 24 trees	Old	$13,200	
1	Collect trash from cemetery 3 times a week	Old	n/c	
1	Daily check entrance for trash	Old	n/c	
1	Erect identification and regulatory signage (2 sets)	Old	$1,600	
1	Formalize that no additional monuments will be allowed to be erected where existing monuments are present and legible; no new memorials will be erected.	Old	n/c	
1	Map cemetery and record complete inscriptions, all monuments	Old	$14,600	
1	Mow primarily with 21-inch mowers, followed by nylon trimmers	Old	n/c	
1	Place trash cans at entrances (2)	Old	$1,470	
1	Remove 18 trees	Old	$27,000	
1	Replace 9 trees	Old	$3,600	
1	Secure all loose ironwork	Old	$250	
1	Thin prune 16 trees	Old	$8,800	
1	Thin prune shrubbery	Old	$2,500	
2	Apply mulch to shaded sections (0.38 acre)	Old	$6,500	
2	Conduct maintenance and painting of boundary fence	Old	$95,000	
2	Conduct maintenance and painting of iron plot fences	Old	$50,000	
2	Conservation of stones (12 repair, 25 reset)	Old	$14,550	
2	Create brochure of monuments (after mapping and research)	Old	$1,500	
2	Expand histories to broaden appeal and include local accounts	Old	$2,500	
2	Move Confederate memorial to another location	Old	$1,500	
2	Obtain a detailed preservation assessment on the gazebo	Old	$5,000	
2	Replace fence along northern boundary (250 linear feet)	Old	$1,850	
3	Repair of brickwork	Old	$110,000	
3	Replace bahiagrass with centipede (1.8 acre)	Old	$117,000	
3	Compile historical information in heritage tourism products	Old	$8,000	$487,270

Table 5.
Prioritization of Recommendations by Priority

Priority	Task	Cemetery	Budget Estimate	
1	Adopt flower and temporary decoration regulations	All	n/c	
1	Advertise and fill the Assistant Sexton position	All	$25,000	
1	Apply mulch to shaded sections (1.3 acre)	Flipper	$22,000	
1	Become familiar with Secretary of Interior Standards for Preservation	All	n/c	
1	Blow off all graves after mowing	All	n/c	
1	Change trimmer line from 0.095 to 0.065 inch	All	n/c	
1	Clean abandoned road east of cemetery	Magnolia	n/c	
1	Clean northern and southern fencing (500 linear feet)	Old	$850	
1	Clean Oquina Creek drainage in cemetery	Magnolia	n/c	
1	Clean prune 12 trees	Flipper	$6,600	
1	Clean prune 24 trees	Old	$13,200	
1	Clean prune 3 trees (old section)	Magnolia	$1,650	
1	Clean prune 6 trees (old section)	Laurel Hill	$3,300	
1	Clean up maintenance yard; remove all debris, trash, and other unnecessary items	Laurel Hill	n/c	
1	Collect trash from cemetery 2 times a week	Flipper	n/c	
1	Collect trash from cemetery 3 times a week	Laurel Hill	n/c	
1	Collect trash from cemetery 3 times a week	Magnolia	n/c	
1	Collect trash from cemetery 3 times a week	Old	n/c	
1	Daily check entrance for trash	Flipper	n/c	
1	Daily check entrance for trash	Old	n/c	
1	Develop basic histories for five city cemeteries	All	$5,000	
1	Discourage cleaning of stones through educational campaign and requirement that work be approved by Sexton	All	n/c	
1	Discourage use of gravel in plots	Laurel Hill	n/c	
1	Edge paved roads monthly	Laurel Hill	n/c	
1	Edge paved roads monthly	Magnolia	n/c	
1	Erect identification and regulatory signage (1 set)	Flipper	$800	
1	Erect identification and regulatory signage (2 sets)	Laurel Hill	$1,600	
1	Erect identification and regulatory signage (2 sets)	Old	$1,600	
1	Erect identification and regulatory signage (3 sets)	Magnolia	$2,400	
1	Establish information for families on correct cleaning methods	All	n/c	
1	Establish policy that no graves will be driven over by heavy equipment (trucks, backhoes, bobcats)	All	n/c	
1	Formalize process to always consider Secretary of Interior Standards for Preservation	All	n/c	
1	Formalize that all conservation work will be performed by trained conservator who subscribes to the AIC Code of Ethics and Standards of Practice	All	n/c	
1	Formalize that all landscaping decisions will consider low water usage	All	n/c	
1	Formalize that no additional monuments will be allowed to be erected where existing monuments are present and legible; no new memorials will be erected.	Old	n/c	
1	Increase cemetery-specific maintenance budget to adequately fund adequate staff, equipment, and supplies	All	$350,000	
1	Increase police presence at cemeteries with daily and nightly patrols	All	n/c	
1	Map cemetery and record complete inscriptions, all monuments	Flipper	$9,000	
1	Map cemetery and record complete inscriptions, all monuments	Old	$14,600	
1	Mow old section primarily with 21-inch mowers, followed by nylon trimmers	Laurel Hill	n/c	
1	Mow primarily with 21-inch mowers, followed by nylon trimmers	Old	n/c	
1	Place trash cans at entrances (2)	Old	$1,470	
1	Prune crepe myrtle	Flipper	$500	
1	Re-emphasize policy that all work in cemeteries must be conducted under Public Works Division	All	n/c	
1	Rejuvenate prune shrubbery	Flipper	$750	
1	Rejuvenate prune shrubbery	Laurel Hill	$5,000	
1	Rejuvenate prune shrubbery	Magnolia	$1,500	
1	Remove 10 trees	Flipper	$15,000	
1	Remove 18 trees	Old	$27,000	
1	Remove 34 trees (old section)	Magnolia	$51,000	
1	Repair and paint remaining fence in old section	Magnolia	$1,200	
1	Repair bench	Laurel Hill	$500	
1	Replace 20 trees (old section)	Magnolia	$8,000	
1	Replace 9 trees	Old	$3,600	
1	Replaced two areas of heavily damaged roads in the new section	Laurel Hill	$4,100	
1	Reseed or, preferably, resod all new graves	All	n/c	
1	Secure all loose ironwork	Old	$250	
1	Thin prune 13 trees (old section)	Laurel Hill	$7,150	
1	Thin prune 16 trees	Old	$8,800	
1	Thin prune 20 trees	Flipper	$11,000	
1	Thin prune 5 trees (old section)	Magnolia	$2,750	
1	Thin prune shrubbery	Old	$2,500	
1	Treat cemetery for fire ants (2.18, 2.34, 40, 82 acres)	All	$1,500	$611,170

Table 5, cont.
Prioritization of Recommendations by Priority

Priority	Task	Cemetery	Budget Estimate	
2	Apply mulch to shaded sections (0.38 acre)	Old	$6,500	
2	Begin inspection of all contracted work in the cemetery, such as excavation, backfilling, and setting of monuments.	All	n/c	
2	Block Hadley Drive and unnamed road leading to Remington Drive with bollards	Laurel Hill	$2,550	
2	Close Oquina Creek drainage roadway	Magnolia	$2,000	
2	Conduct maintenance and painting of boundary fence	Old	$95,000	
2	Conduct maintenance and painting of iron plot fences	Old	$50,000	
2	Conservation of stones (12 repair, 25 reset)	Old	$14,550	
2	Conservation of stones (25 repair, 15 reset)	Flipper	$24,750	
2	Conservation of stones (32 repair, 20 reset, 45 ledgers)	Magnolia	$99,800	
2	Conservation of stones (60 repair, 20 reset, 30 ledgers)	Laurel Hill	$114,000	
2	Core aerate old section	Laurel Hill	$2,100	
2	Create brochure of monuments (after mapping and research)	Flipper	$1,500	
2	Create brochure of monuments (after mapping and research)	Old	$1,500	
2	Create designated parking on Jerger (ca. 3 spots, 1 handicapped)	Flipper	$3,500	
2	Establish specifications for setting of monuments	All	n/c	
2	Expand histories to broaden appeal and include local accounts	Old	$2,500	
2	Expand history to broaden appeal and include local accounts	Flipper	$2,500	
2	Improve landscaping at entrance	Flipper	$8,000	
2	Increase sale price of cemetery lots to $350/each	All	n/c	
2	Inspect and repair dirt roads as needed	Laurel Hill	n/c	
2	Inspect drains and unclog as necessary	Magnolia	n/c	
2	Install privacy slats on chain link fence at maintenance yard	Laurel Hill	$1,200	
2	Landscape "main" entrance to make more attractive	Laurel Hill	$25,000	
2	Monitor and trim cane along eastern boundary	Magnolia	n/c	
2	Move Confederate memorial to another location	Old	$1,500	
2	Obtain a detailed preservation assessment on the gazebo	Old	$5,000	
2	Once mapped, fill sinking graves with clean sand	Flipper	$100	
2	Provide more visible staff at cemeteries	All	n/c	
2	Remove 29 trees (old section)	Laurel Hill	$17,200	
2	Remove and replace incorrectly pruned arborvitae	Laurel Hill	$5,500	
2	Remove and replace incorrectly pruned arborvitae	Magnolia	$5,500	
2	Remove ca. 20 trees (new section)	Magnolia	$30,000	
2	Repair of brickwork	Flipper	$6,000	
2	Repair paved roads in Laurel Hill using flush-fill or overband	Laurel Hill	$5,800	
2	Replace 29 trees (old section)	Laurel Hill	$11,600	
2	Replace bahiagrass with centipede (1.04 acre)	Flipper	$68,000	
2	Replace ca. 20 trees (new section)	Magnolia	$8,000	
2	Replace fence along northern boundary (250 linear feet)	Old	$1,850	
2	Screen area of grave fill with wood fence	Laurel Hill	$4,400	
2	Screen area of grave fill with wood fence	Magnolia	$3,500	
2	Yearly clear fence lines by hand (using no pesticide)	Laurel Hill	n/c	$630,900

Table 5, cont.
Prioritization of Recommendations by Priority

Priority	Task	Cemetery	Budget Estimate	
3	Compile historical information in heritage tourism products	Old	$8,000	
3	Complile historical information in heritage tourism products	Flipper	$6,000	
3	Pave road in old section, install bollards if necessary to prevent off road driving	Magnoli	$43,500	
3	Repair of brickwork	Old	$110,000	
3	Repair of concrete coping	Magnolia	$35,000	
3	Repair paved roads in Magnolia using flush-fill or overband	Magnolia	$1,200	
3	Replace bahiagrass with centipede (1.8 acre)	Old	$117,000	
3	Replace bahiagrass with centipede (40 acres)	Magnolia	not determined	
3	Replace bahiagrass with centipede (82 acres)	Laurel Hill	not determined	
3	Replace juniper along fence line (400 linear feet) with dwarf yaupon holly	Flipper	$3,100	
3	Replace landscaping along Jackson to better hide metal guardrail	Laurel Hill	$5,650	
3	Repoint brickwork	Laurel Hill	$9,000	$338,450

APPENDIX 1. RESUME FOR MICHAEL TRINKLEY

MICHAEL TRINKLEY

Chicora Foundation, Inc.
P.O. Box 8664 • 861 Arbutus Drive
Columbia, South Carolina 29202
803/787-6910

Education/Training

1974	B.A., Anthropology, University of South Carolina, Columbia
1976	M.A., Anthropology, University of North Carolina, Chapel Hill
1980	Ph.D., Anthropology, University of North Carolina, Chapel Hill
1997	Non-Destructive Investigative Techniques for Cultural Resource Management, NPS Workshop, Fort Scott National Historic Site, Fort Scott, Kansas (geophysical techniques)
1999	Jahn Installer Workshop, Cathedral Stone Products, Inc., Jessup, Maryland (3 days) (certified installer 9906811-SC)
2001	Preservation & Care of Brownstone Buildings, Technology & Conservation Conference, Boston, Massachusetts
2003	Lime Mortar Workshop, U.S. Heritage, Chicago, Illinois
2004	Preservation Masonry Workshop, School for the Building Arts, Charleston, SC (2 days)
2005	International Lime Conference, Orlando, Florida
2005	Edison Coatings Workshop, Richmond, Virginia (1 day)
2005	Historic Masonry Preservation Workshop, John Lambert, Campbell Center for Historic Preservation Studies, Mt. Carroll, Illinois (1 week)
2005	Preservation Masonry Workshop, College for the Building Arts, Charleston, SC (2 days)

2005	Masonry Analysis & Testing Workshop, Berkowitz and Jablonski, Campbell Center for Historic Preservation Studies, Mt. Carroll, Illinois (1 week)
2005	Jahn 4-Hour Workshop, Cathedral Stone Products, Columbia, SC
2006	Stone Carving and Restoration Workshop, Traditional Building Skills Institute, Snow College, Ephraim, Utah (3 days)

Memberships

American Institute for Conservation of Historic and Artistic Works
US/ICOMOS – Brick, Masonry & Ceramics Committee
Association of Preservation Technology
Preservation Trades Network
National Trust for Historic Preservation
Association of Gravestone Studies

Abstract of Cemetery Conservation/Preservation Experience (not inclusive of legal/archaeological experience):

1992	Reviewer of National Trust for Historic Preservation publication on historic cemeteries publication by Lynette Strangstad.
1998-99	Principal Investigator, Survey and Documentation of African-American cemeteries in Petersburg, Virginia. Including mapping, grave location, and development of historic context. (with Preservation Consultants, Charleston, SC).
1998-99	Conservation activities, Maple Grove Cemetery, Maple Grove United Methodist Church, Waynesville, North Carolina.
1999	Instructor, Cemetery Preservation: Making Good Choices Workshop, Virginia Association of Museums, Petersburg, Virginia.
1999	Instructor, Cemetery Preservation: Making Good Choices Workshop, Georgia Local History Conference, Augusta, Georgia.
2000	Consultation regarding maintenance and clearing of Ricefield's Woodville Cemetery, Georgetown County, South Carolina.
2000	Invited Speaker, Cemetery Conservation Techniques, Historic Cemetery Preservation Workshop, Maryland Historical Trust, Annapolis, Maryland.
2000	Preservation assessment, Summerville Cemetery, Augusta, Georgia.
2001	Assessment and preservation plan for Glenwood Cemetery, Thomaston, Georgia.
2001	Reconnaissance survey of cemeteries in Richland County, South Carolina.

2001	Preservation guidelines for St. Paul's Cemetery, Augusta, Georgia.
2001	Instructor, Cemetery Preservation: Making Good Choices Workshop, Restoration International Trade Event, New Orleans, La.
2001	Instructor, Cemetery Preservation: Making Good Choices Workshop, National Preservation Institute, Washington, D.C.
2002-2003	Conservation program, Old Waxhaws Presbyterian Cemetery, Lancaster County, South Carolina.
2003	Treatment of markers at the Vardeman Cemetery, Lincoln County, Kentucky.
2003	Consultation concerning cemetery walls and pathways, Maple Grove Cemetery, Waynesville, North Carolina.
2003	Invited Speaker, Preservation of African American Cemeteries Conference, 2003, Helena, Arkansas.
2003	Instructor, Cemetery Preservation: Making Good Choices Workshop, Washington County, Georgia Historical Society, Sandersville, Georgia.
2003	Preservation assessment, Old City Cemetery, Sandersville, Georgia
2003	Instructor, Cemetery Preservation: Making Good Choices Workshop, National Preservation Institute, Washington, D.C.
2003	Treatment of markers at Oakview and Riverside cemeteries; examination of burial vaults in white and African American sections, City of Albany, Georgia (FEMA funded).
2003	Preservation assessment, Historic Cemeteries at Five Cemeteries, Bannack State Park, Bannack, Montana
2003	Instructor, Cemetery Preservation: Making Good Choices Workshop, Bannack State Park, Bannack, Montana
2003	Consultation concerning cemetery brick wall, Midway Church, Midway, Georgia.
2004	Treatment of markers at Richardson Cemetery, Clarendon County, South Carolina.
2004	Instructor, Cemetery Preservation: Making Good Choices Workshop, National Preservation Institute, Washington, D.C.
2004	Treatment of markers at Maple Grove Cemetery, Waynesville, North Carolina.
2004	Consultation regarding State Historical Marker, Roseville Cemetery, Florence County, South Carolina.

2004	Consultation regarding the Mary Musgrove Monument, Musgrove Mill State Park, Laurens County, South Carolina.
2004	Invited Speaker, Cemetery Preservation Workshop, SC Genealogical Society Annual Meeting, Walterboro, South Carolina.
2004	Treatment of markers at Wrightsboro Cemetery, Thomson, Georgia.
2005	Treatment of markers at Pon Pon Cemetery, Colleton County, South Carolina.
2005	Treatment of markers at Walnut Grove Plantation, Spartanburg County, South Carolina.
2005	Consultant on cemetery fence theft, Save Austin's Cemeteries, Austin, Texas.
2005	Treatment of markers at Richardson Cemetery (Second Phase), Clarendon County, South Carolina.
2005	Instructor, Cemetery Preservation: Making Good Choices Workshop, National Preservation Institute, Washington, D.C.
2005	Treatment of marker in Oakview Cemetery, Albany, Georgia.
2005	Treatment of markers at Trinity Cathedral, Columbia, SC.
2005	Preliminary preservation recommendations, Randolph Cemetery, Columbia, SC.
2005	Treatment of markers in Presbyterian Cemetery, Union, SC.
2005	Instructor, Cemetery Preservation: Making Good Choices Workshop, Save Oklahoma's Cemeteries, Muskogee, Oklahoma.
2005	Instructor, Cemetery Preservation: Making Good Choices Workshop, National Preservation Institute, Las Vegas, New Mexico.
2005	Treatment of marker, Reynolds Homestead, Critz, Virginia.
2005	Assessment and preservation plan for Lewis Cemetery, King and Queen County, Virginia. King and Queen County Historical Society.
2006	Treatment of markers in Presbyterian Cemetery, Union, SC (second phase).
2006	Assessment and preservation plan for Pine Lawn Memorial Gardens, Aiken, South Carolina. SC Department of Archives and History, Columbia.
2006	Assessment of Unadilla Cemetery, Unadilla, Georgia.

2006	Invited Speaker, Planning a Cemetery Preservation Project, People and Places: South Carolina's Seventh Annual Statewide Historic Preservation Conference, SC Department of Archives and History, Columbia, South Carolina.
2006	Assessment and Preservation Plan, Memory Hill Cemetery, Milledgeville, Georgia.
2006	Assessment and Preservation Plan, Springwood Cemetery, City of Greenville & Friends of Springwood Cemetery, Greenville, South Carolina.
2006	Invited Speaker, Cemetery Rehab, South Carolina Landmark Conference, SC Department of Archives and History, Aiken, South Carolina.
2006	Assessment, Town of Dedham, MA cemetery, Vollmer Associates, Boston.
2006	Assessment and Preservation Plan, Naval Medical Cemetery Portsmouth Cemetery, Portsmouth, Virginia.
2006	Instructor, Cemetery Preservation: Making Good Choices Workshop, National Preservation Institute, Washington, D.C.
2006	Invited Speaker, Preservation Needs at Greenville's Springwood Cemetery, Greenville Chapter of SC Genealogical Society, Greenville, South Carolina.
2006	Preparation of landscape plan, Randolph Cemetery, Columbia, South Carolina.
2006	Treatment of markers in the Cason Plot, Long Creek Baptist Church, Warrenton, Georgia.
2006	Treatment of markers in the Watson Plot, Thomson City Cemetery, Thomson, Georgia.
2006	Treatment of markers at Trinity Cathedral, Columbia, South Carolina (second phase).
2006	Assessment and Preservation Plan, Old Athens Cemetery, University of Georgia, Athens, Georgia.
2006	Preparation of Treatment Plan, Terrell Tomb, Sparta, Georgia.
2006	Emergency conservation treatment, Settler's Cemetery, City of Charlotte, North Carolina.
2006-2007	Preservation Assessment and Recordation, St. Elizabeth's Cemetery, Washington, DC (for General Services Administration).
2006-2007	Preservation Assessment, three Raleigh Cemeteries, Raleigh, North Carolina.
2007	Historic research, Randolph Cemetery, Columbia, South Carolina.
2007	Treatment of Monuments at Laurelwood Cemetery, Rock Hill, South Carolina.
2007	Assessment of markers, Machpelah Cemetery, Lincoln County, North Carolina.

2007	Assessment of Moss Family Cemetery, Stanly County, North Carolina.
2007	Treatment of Monuments at the Old Athens Cemetery, University of Georgia, Athens, Georgia.
2007	Treatment of markers at Trinity Cathedral, Columbia, South Carolina (third phase).
2007	Invited Speaker, Annual Conference of the South Carolina African American Heritage Commission, Mars Bluff, South Carolina.
2007	Instructor, Cemetery Preservation: Making Good Choices Workshop, National Preservation Institute, Greensboro, North Carolina.
2007	Treatment of markers at Machpelah Cemetery, Lincoln County, North Carolina.
2007	Assessment of markers, St. Johns Cemetery, Richmond, Virginia.
2007	Preservation Assessment, Village Cemetery, Newberry, South Carolina.
2007	Instructor, Cemetery Preservation: Making Good Choices Workshop, Lincolnton Historical Society, Lincolnton, North Carolina.
2007	Treatment of markers, Settler's Cemetery, Charlotte, North Carolina.
2007	Assessment of markers, Unitarian Church Cemetery, Charleston, South Carolina.
2007	Preparation of Conservation Scope of Work, Chalmette National Cemetery, Louisiana (for Lord, Aeck & Sargent, Ann Arbor, Michigan).
2007	Preservation Assessment and Assessment of markers, Mann Family Cemetery, North Attleboro, Massachusetts.
2007	Treatment of the Pringle Vault, City Cemetery, Sandersville, Georgia.
2007	Assessment of the Plunk Family Cemetery, Lincolnton, North Carolina.
2007	Assessment of City Cemetery, South Bend, Indiana.
2007	Assessment of Magnolia Cemetery, Mobile, Alabama.
2007	Treatment of the Middleton family vault, Middleton Plantation, Dorchester County, South Carolina.
2007	Treatment of ledgers in family cemetery, Augusta, Georgia.
2007-2008	Treatment of markers at Richardson Cemetery, Clarendon County, South Carolina (third phase).

2008 Assessment of the Coleman-Leigh-Warren Family Cemetery, Augusta, Georgia.

2008 Assessment of three city cemeteries, Thomasville, Georgia.

National Register Nominations of Cemeteries

1999 Preliminary Multi-Property Nomination, African American Cemeteries of Petersburg, Virginia. Submitted to Virginia Department of Historic Resources, Richmond, Virginia (with Sarah Fick, Preservation Consultants).

2000 National Register Nomination, King Cemetery, Charleston County, South Carolina. Submitted to South Carolina State Historic Preservation Office, SC Department of Archives and History, Columbia.

2002 National Register Nomination, Scanlonville or Remley Point Cemetery, Charleston County, South Carolina. Submitted to South Carolina State Historic Preservation Office, SC Department of Archives and History, Columbia.

2005 Preliminary Information Form – Hopkins Family Cemetery, Richland County, South Carolina. Submitted to South Carolina State Historic Preservation Office, SC Department of Archives and History, Columbia.

2007 Preliminary Information Form – Harts Bluff African American Cemetery, Wadmalaw Island, Charleston County, South Carolina. Submitted to South Carolina State Historic Preservation Office, SC Department of Archives and History, Columbia.

APPENDIX 2. ADDITIONAL CEMETERY STAFF

The Thomasville city cemeteries are understaffed. The appropriate level of care typically involves two workers (plus supervision) per 10 acres. This is based on the Boston Historic Burying Grounds Initiative (Atwood et al. 1989) and is particularly suitable for Thomasville's situation since it is estimated that mowing old cemeteries with three-dimensional monuments requires six-times the labor of modern lawn park cemeteries (Klupar 1962:239; Llewellyn 1998:100).

Thus, the 170 acres of city cemeteries requires a full-time staff of 34.

This may sound astonishing, especially to departments that are chronically understaffed and underfunded. It may also appear to be a very large staff if maintenance is misunderstood to include only mowing the grass.

The current staffing level of one supervisor and 12 untrained prisoners is impossibly low and affects the ability of the city to have an adequate presence in the five cemeteries, perform the necessary maintenance, and help ensure the long-term viability of the cemeteries. The higher level of staffing would help minimize vandalism and inappropriate activities in the cemeteries.

Appropriate maintenance established by good practice includes weed control, tree trimming, pruning, seasonal cleanup, maintaining the roads, conducting section inspections, survey of monuments for maintenance needs, maintenance of shrub beds, maintaining section signs, maintaining water lines, rehabilitation of barren areas, raking, resetting stones as needed, inspecting and repairing fences, watering newly planted areas, sodding as necessary, identification of trees for removal, removal of flowers and grave decorations, removal of wild growth, and inspection and cleaning of catch basins (see, for example, Klupar 1962:226-228). The importance of maintenance was clearly stated in the early twentieth century by West, "one thing is certain, the cemetery must be maintained in a proper manner or public confidence will suffer" (West 1917:26).

This larger crew would also allow the city to train certain employees in the appropriate way to reset monuments, as well as make simple repairs. It would be possible to undertake, for example, an appropriate level of fence maintenance at Old Cemetery. It is important that these employees be assigned exclusively to the cemeteries, allowing them to develop a sense of ownership and continuity. Shifting employees from cemeteries to rights of way fails to encourage this sense of continuity and self worth.

In addition to these maintenance efforts, efficient cemetery operation also depends on management activities that Llewellyn describes as ranging from "land use (master planning), road maintenance, utility operation (backbone utilities like water), budget balancing (sales to cover expenses), long-term financial concerns, community relations, enforcement of rules and regulations, and so on" (Llewellyn 1998:206). In fact, he spends an entire chapter on administrative responsibilities of the cemetery manager.

Staff Training

Sadly, professional training in the landscape industry, at least among the public, is undervalued. This contributes to rapid turn-over and inappropriate maintenance activities.

Given the large number of trees on the cemeteries, the importance of these trees to the vistas and historic landscapes, and the potential damage that improper tree care can create, ideally at least one of the supervisory level staff should be an International Society of Arboriculture (ISA) Certified Arborist.

Certified arborists have a minimum of three years experience in some aspect of tree care and have passed an exam developed by an international panel of experts. The exam extensively covers every aspect of tree care and the individuals must have an acceptable level of knowledge in all areas of arboriculture.

In 2005 the Associated Landscape Contractors of America (ALCA) and the Professional Lawn Care Association of America (PLCAA) merged to form the Professional Landcare Network (PLANET). This organization offers three certification programs.

The first is the Certified Landscape Technician – Exterior. The exam for this certification is a hands-on field test and candidates can be tested in Installation, Maintenance, or Irrigation.

The second is Certified Turfgrass Professional – a comprehensive study of both warm and cool-season turfgrasses developed by the University of Georgia Center for Continuing Education. Certification in this area demonstrates a mastery of weed, insect and disease identification/control, as well as diagnosis of common turfgrass problems. The material supports Integrated Pest Management concepts and pesticide safety – significantly reducing the City's liability for operations.

The third is Certified Ornamental Landscape Professional. This certification emphasizes tree and shrub maintenance procedures with candidates concentrating on landscape trees and ornamental woody plant physiology, health care management, and establishment.

There are also local programs. For example, the Georgia Green Industry Association offers certification in both landscape and plants.

We understand that much of the focus has traditionally been on the turfgrass at athletic and park facilities. Public Works should not assume that the problems of grass growing are the same, regardless of where the turf is situated.

An excellent publication on cemetery lawns notes that, "there are peculiar problems which confront only the person responsible for the development and care of cemetery lawns." These include the age of cemetery grounds and the fact that rarely were cemetery choices made on the basis of appropriate soils (Anonymous 1932:4).

The city should provide opportunities for its staff to become certified in different areas. Such efforts would improve the level of care and maintenance and develop a greater sense of stewardship. Eventually this core of trained individuals could also provide in-house training to other staff.

The Quality of Supervision

Regardless of the credentials or certification, the complexities of the Thomasville cemeteries require that the technicians are well supervised and are held accountable for their performance. It is especially important, therefore, that the two supervisory positions be carefully defined. The selected individuals must not only be well trained and knowledgeable, but also possess demonstrated supervisory experience. The supervisors must be expected to work alongside the crews on a daily basis – this means that the city must not burden these individuals with administrative duties.

Continuity of the Staff

Maintaining the continuity of a maintenance staff with a commitment to the preservation of a historic cemetery is critical. It not only serves to help ensure the highest possible quality of care, but also allows the specialized knowledge that accrues to be transferred to new staff members over time.

Obtaining this continuity, of course, demands that the city provide a reasonable pay scale for new workers and ensure that staff does not feel trapped in a dead-end job.

Cemetery Maintenance

Cemetery maintenance may be broken into several inter-related tasks:

Maintenance of the cemetery itself. This would include section maintenance; road maintenance to include not only repair of roads, but also their periodic cleaning; special attention to the maintenance of entrance areas and fences, areas that immediately attract public attention; cemetery protection, by which we mean providing a visible presence.

Building Maintenance. This involves the care and repair of all buildings on the cemetery property. In the case of Thomasville, this is a minimal task since buildings are only present at Laurel Hill.

Landscape Maintenance. This includes clearly seasonal tasks, as well as on-going activities. Most critical aspects include the establishment and maintenance of turf (seeding, sodding, maintenance of established turf – such as filling depressions, lawn clean-up, lawn rolling if necessary, lawn aeration, fertilization, spot watering, and weed control), grass cutting, and dealing with seasonal decorations and flowers.

General Cemetery Maintenance. Into this category fall all of the other chores not specifically categorized above. Examples include periodic survey of monuments for damage, tree trimming and removal, conducting section inspections for special problems, trash collection, pruning (not shearing) shrubs, checking section signs, repair of sections after storm damage, inspecting fences and gates on a regular basis, raising sunken markers (preventing damage to both the markers and lawn care equipment), draining water lines during winter months, maintenance of culverts and drains, and re-sodding road edges where damaged by funeral traffic. Also included in this category would be the maintenance of the equipment itself. Many commercial land care companies have seen the wisdom in having a full-time small engine mechanic on-staff for the constant cleaning, repair, tuning, and maintenance of mowers, nylon trimmers, interment equipment, lowering devices, and so forth.

Supervisory Functions

Supervisory functions are complex – as evidenced from just the maintenance issues above. These functions may generally be broken into several categories also:

Interments. This would include grave layout, inspection of sod removal, grave excavation and related pre-burial issues, as well as backfilling, tamping, and seeding or sodding after the burial.

Grass Cutting. This would include scheduling and quality control checks of cutting in open and monument areas, as well as subsequent trimming.

Landscaping. In this category are issues such as the oversight required for trees and shrubs, any flower beds planted at entrances (and these dramatically improve appearances), weed control, and fertilization.

Operation and Maintenance of Equipment. This task includes the selection and specification of new equipment, the retirement of old

equipment, and the scheduled or preventative maintenance of existing equipment.

Memorials. In this broad category are included monument layout, foundations, and marker setting. Even if these tasks are handled by outside monument firms, the superintendent must establish quality control checks and oversee general operations. Also in this task may be included assisting families who wish to have monuments cleaned. The superintendent should also be responsible for ensuring that the cemetery's flower policy is enforced and retiring flowers when necessary.

Cemetery Maintenance. This task parallels that previously discussed. It involves overseeing the adequacy of weeding and watering efforts, including the determination when (and how) to do both. It involves determining which plantings should be removed or renovated; the cleanup of roads and sections; scheduling the cleaning of catch basins, as well as the maintenance of sewers and water lines. The superintendent should schedule and oversee tree pruning and removal. The individual must conduct or oversee fence inspections. He or she must be responsible for the maintenance of the entrances, ensuring that trash is removed, and that the grounds are always in shape.

Building Maintenance. The Superintendent is responsible for the care, maintenance, and appearance of all buildings on cemetery property.

Health and Safety Issues. Cemetery staff must comply with all OSHA safety practices, ranging from the choice and use of appropriate personal protective equipment to safely dispensing fuel to ladder safety.

Training. The Superintendent must be responsible not only for safety training on a regular and continuing basis, but also in the performance of assigned work. This may include training in the recognition of weeds, training in appropriate plant pruning techniques, and even training in the appropriate use of nylon trimmers.

Management Issues. The superintendent must also meet the various management expectations of the Public Works Division. These likely include issues from handling time sheets, to rating and appraisal of employees, to various weekly reports. While clerical assistance can be provided at off-site locations, this does not relieve the superintendent from making appropriate contacts, providing information, reviewing that information, and following through.

Disaster Planning. The superintendent should be responsible for the development of disaster plans for the properties. Covering typical weather emergencies ranging from hurricanes to tornadoes, these plans should outline before, during, and after actions in order to minimize damage to the cemetery, its grounds, and markers and ensure speedy recovery.

Customer Care. It appears that traditionally in the Thomasville cemeteries the Superintendent has also been the primary representative of the city to potential customers and lot owners. The individual is responsible for maintaining all associated paperwork (with little automation), coordinating with other agencies, and resolving problems as they arise. The superintendent is also the contact person for the funeral homes, monument companies, and flower shops.

Allocation of Staff

There are no doubts that multiple allocations are possible. We present here only one possible version for the city's consideration.

Cemetery Superintendent

Minimum Requirements: 3 years of experience in cemetery operation and maintenance; HS graduate. Valid Georgia Commercial Driver's License (CDL). One or more certification by organizations such as the Georgia Green

Industry Association (Certified Landscape Professional, Certified Plant Professional) or PLANET (Certified Landscape Technician – Exterior, Certified Turfgrass Professional, or Certified Ornamental Landscape Professional).

Position Duties: Duties include, but are not limited to, the following: Works with funeral directors and the public in carrying out funeral arrangements; ensures compliance with all relevant state codes concerning the burial of human remains; keeps detailed records and maps of burials, grave locations, cremations and utility lines; assists in preparation of cemetery budget (including Capitol Improvement Projects, outlay, and equipment replacement); supervises the planting, landscaping and maintenance of grounds, the operation and maintenance of power equipment, the opening and closing of graves, the setting of headstones and markers and masonry work; prepare accurate and thorough reports of all cemetery activities. Must be available for work on weekends and after normal working hours as required. Must have knowledge of: Methods and techniques of burials, interments and cremations; grounds maintenance methods, equipment and materials; planting, landscaping and care of lawns, trees and shrubs; light power equipment operation and maintenance; financial arrangements and practices in connection with purchases of graves and niches; safety methods. Must have the ability to: Operate maintenance equipment; plan and organize daily, weekly, and seasonal operations and activities; supervise work of others, including Lead Service Workers; inspect all work done by work crews; deal effectively and sympathetically the more difficult patron contacts (i.e., irate, frustrated, etc.); establish and maintain effective relationships with others.

Staff Support Specialist

Minimum Requirements: 1 year of related experience; HS graduate. Basic working knowledge of spreadsheet software and Word Processing software, and MS Windows software. A Valid Georgia Driver's License.

Position Duties: Answers the telephone and responds to questions from fellow staff members, citizens, and other third-party callers. Routes calls to other staff members, as appropriate, and takes messages. Performs basic data entry into spreadsheets and/or using departmental specific software. Maintains payroll and expense records; composes and/or types routine correspondence for approval by other staff members. Types correspondence from written or verbal instructions, including letters, memos, reports, forms, purchase orders, and presentations. Prepares outgoing mail and correspondence, including e-mail and faxes. Orders and maintains supplies, and arranges for equipment maintenance. Transports mail and payroll information to applicable departments. Responsible for handling all funeral arrangements and dealing effectively and sympathetically with bereaved public on a daily basis.

Lead Service Worker

Minimum Requirements: 3 years of relevant experience in the landscape industry; at least one year of the required work experience must have included coordinating or providing technical supervision to others. Knowledge of standards, methods, materials, tools, and equipment utilized in the maintenance of cemeteries. Knowledge of associated work hazards and applicable safety precautions. Ability to plan, assign, supervise, inspect and track the work of a large number of personnel. Valid Georgia Commercial Driver's License (CDL) or the ability to acquire within 45 days of employment. May be required to perform special tasks during emergency and disaster events. Ability to work in extreme weather conditions. Certification by at least one organization such as the Georgia Green Industry Association or PLANET, or the ability to become certified within 1 year of hiring.

Position Duties: Serves as a hands-on crew leader for all operations, including sod installation, seeding, fertilizing, watering, mowing, grave and foundation layout and services. Leads, coordinates, and participates in the activities of crews engaged in maintenance and improvement tasks including mowing, edging, trimming, litter removal, and general clean-up. Trains new employees. Prepares required reports and maintains work records. Assists Cemetery Supervisor in assuring that the grounds crew staff member's uniforms, personal appearance, actions, and demeanor present an appropriate image to client families and general public. Maintains proper inventories of equipment, supplies and merchandise and safety equipment. Assures equipment is maintained and in proper working order. Assures the cleanliness and safety of work areas. Maintains the cemetery by operating a variety of equipment such as, dump trucks, tractors, skip loaders, riding mowers, push mowers, edgers, line trimmers, brush chippers, sweepers, forklifts, soil shredders, outboard equipment, jackhammer, compressors, tampers, weed-eaters, and hand and power tools. Leads, coordinates and participates in the work of crews engaged in maintaining the grounds of the cemetery including but not limited to grass cutting, hedge trimming, marker edging and the maintenance and repair of the irrigation system. Leads, coordinates and assists in the landscaping of the cemetery including but not limited to the planting and trimming of trees, plants, flowers and vines, and the removal of tree roots.

Service Worker

Minimum Requirements: 1 year of relevant experience. HS diploma or equivalent. May work overtime during emergency situations. A valid Georgia Driver's License required. A Valid Georgia Commercial Driver's License (CDL) preferred. Ability to work in extreme weather conditions.

Position Duties: Must have knowledge of common gardening methods, tools and supplies; practices in planting and cultivating; use of fertilizers; materials and tools used in maintenance; skill in the use of hand tools; physical fitness and endurance to perform required tasks. Duties include, but are not limited to, the following: Plants, cultivates, waters, mows, trims hedges, lawns, trees, and shrubs in cemetery areas; operates a light tractor, pickup, gang mower, power sweeper and turf equipment; eradicates garden pests and weeds mechanically and chemically; hauls materials by trucks or dump trailer; picks up paper and trash; makes minor repairs to irrigation systems; applies fertilizer and top dress to turf; rakes leaves; operates light mechanical equipment; assists with cemetery sales and services; assists with grave setups; performs masonry work on markers. Assists in the following: Works with funeral directors and the public; assists in keeping the records of maps of burials; gives directions to public for grave locations; participates in the planting, landscaping and maintenance of grounds.

Cemetery Preservation Plans

Historical Research

Identification of Grave Locations and Mapping

Condition Assessments

Treatment of Stone and Ironwork

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