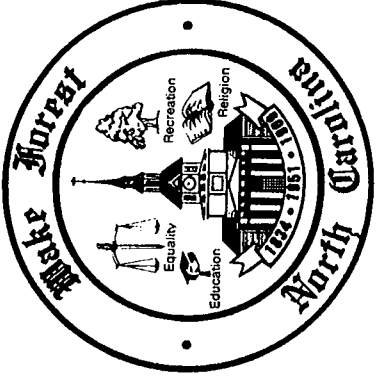


# *Wake Forest Cemetery*

Renovation and Management Guidelines



October, 2000



## ACKNOWLEDGMENTS

### Town of Wake Forest, North Carolina

#### Wake Forest Tree Board

Karen Diebolt  
Liz Ford  
Carolyn Holding  
Jonathan Kidder  
Hugh Norse

John Patterson  
Vincent Pudelski  
John Rich  
Shirley Wooten

#### Town of Wake Forest

Roe O'Donnell, Public Works Director  
Chad Sary, Town Planner  
Joyce Wilson, Town Clerk

#### Wake Forest Historians/Residents

Susan Brinkley  
Amy Pierce  
Pam Beck  
James Smith

This manual was created by The Gardener's Edge, Inc., 3410 Rock Creek Drive, Raleigh, NC 27609. (919) 789-0093, Sketches by Dick Wilkinson, Landscape Drawings by Amy Fahmy, Matt Roberts, and Edward Parker

## TABLE OF CONTENTS

<b>INTRODUCTION &amp; HISTORY</b> .....	1-3
<b>GOAL I: CREATE A SENSE OF UNITY THROUGH VISIBLE LINKS</b> .....	5
Unity Using Materials.....	5
Wrought Iron Fencing.....	5
Stone Columns and Walls.....	6
Edging.....	6,7
Lawns.....	8
Benches and Trash Receptacles.....	9
Signage.....	10
Unity Using New Design Elements.....	10
The Stone Circle.....	10
The North Taylor Street Connection.....	11
Entrance Connections.....	11
Signature Trees.....	11
Future Expansion.....	12
<b>GOAL II: DEVELOP THE CEMETERY AS AN ARBORETUM</b> .....	12
Preservation of Existing Plants.....	12
Prune and Fertilize Canopy Trees.....	12
Transplant Shrubs.....	13
New Plantings.....	13
Trees.....	14,15
Flowering Shrub Borders of Heirloom Plants.....	16,17
Memorial Planting Program.....	18
The Circle Garden.....	18
The Azalea Memorial Garden.....	18
Memorial Tree Program.....	18
<b>GOAL III: MOVE FROM NEGLECTED TO MANICURED – BASIC LANDSCAPE IMPROVEMENTS</b> .....	19
Drainage Repair.....	20
Road Edges.....	20
Paving, Parking Lot Repairs.....	21
Lawn Renovation and Maintenance.....	21
Garden Maintenance.....	22,23
<b>GOAL IV: INCREASE PUBLIC AWARENESS OF CEMETERY HISTORY</b> .....	24
Historic Walking Tour.....	24
Remembrance Day.....	25
Friends of Wake Forest Cemetery.....	25

## INTRODUCTION AND HISTORY

Old Cemeteries in the United States are becoming increasingly valued, like their counterparts in Europe, as quiet open space parks where people can walk out of the urban environment into a natural retreat. They are wonderful places to sit and reflect, see birds, watch the seasons change, and be present in nature. This dual role for cemeteries as burial ground and public open space is appropriate given that the earliest cemeteries in the United States served the purpose of public parks, and were typically where families gathered for picnics, as well as to visit and maintain family plots.

There are a number of models that serve as examples for the Wake Forest Cemetery, of historic cemeteries that function as active cemeteries and at the same time, encourage the use of the grounds as public open space. A cemetery that functions well in both these roles is the Mount Auburn Cemetery in Massachusetts. This cemetery, founded in 1831 by the Massachusetts Horticultural Society, was influential in the creation of America's public parks. It was the first landscaped cemetery in America. Today, it remains an active cemetery, but also serves as an arboretum, a museum of sculpture, and a wildlife sanctuary. The Cemetery offers guided birdwatching tours, and a Spring Migration Calendar listing the peak weeks to view certain birds at the Cemetery. In its literature it states simply, "Remember that Mount Auburn is a cemetery and not a public park and always act accordingly. No bikes or roller skating/blading allowed (there is a bike rack where you can lock your bike while you visit). Park with all wheels of your car on the road. Do not park on the roads with green lines. When walking stay on the roads and paths."

Crown Hill Cemetery in Indiana has served as a place to stroll, to picnic, and to show off to visitors since it was founded in the early 1800's. Today it further describes itself as a classroom, and several thousand students a year visit – to learn the history of famous people buried there, to study math using the geometrical shapes of plots, and to study its poets, authors, and epitaphs in language arts class. Through its Heritage Foundation it sponsors guided tours, the Race Through Hoosier History, Tour Fest, and Picnic at Sunset.

A third example of an active cemetery that thrives as a public open space is Elmwood Cemetery, in Memphis, Tennessee. Founded in the 1800's, it includes the Page Arboretum, and is a classic example of a garden style cemetery. It has recently dedicated three gardens that reflect the early 1900's. The Cemetery has 63 different species of trees, 400 of which are labeled with common name, botanic name, and plant family. The Cemetery encourages homeowners to visit the cemetery to observe plants for use in their own gardens. Docent-led tours are offered of their gardens which demonstrate shade plantings, the cottage garden style, and a butterfly garden. All gardens are maintained by their horticulturist who is a certified arborist.

As the town of Wake Forest grows, the Cemetery's value both as a historic site and arboretum becomes more significant. Its primary role should continue as a cemetery and place of remembrance. Its secondary role - as historic site and arboretum - should be highlighted through community projects, involving as many of Wake Forest's residents as possible. The cemetery's stories, once revealed, are fascinating, and the old trees are a solid base for an expanding arboretum. Volunteer involvement can spark broader interest and generate the community financial support needed for the Cemetery to achieve its highest and best use. The protection and enhancement of these three aspects of the Cemetery - burial place, historic site, and arboretum- are the keys to its continuation as one of Wake Forest's treasures.

Unlike many places in the United States, the history of Wake Forest can still be found intact in the landscape. The alignment of roads, the buildings and stonewalls, the railroad tracks, and the old neighborhoods are layer One - easily identified. Layer Two exists as well, and needs only to be made visible for those who don't know much about the areas history. In this second layer lies the Wake Forest Cemetery. Of all the historic sites, this one proves that the Town's fascinating history really existed - the colorful presidents and faculty of Wake Forest College are buried there, the man who built the stone walls around the seminary is there, the successful businessmen, and the old families are there. Along with the Town's successes, the Cemetery reveals the hard times of history - the legacy of slavery, the unmarked stones from the civil war, and the many graves of children.

The Cemetery was laid out and developed by students of the two literary societies at Wake Forest College. These literary societies, the Philomathesians and the Euzelians, were organized to offer their members intellectual improvement, public speaking, and English composition. But their activities extended well beyond this. They made up the student government, and were at the center of student's social life. They were involved in many joint projects for the improvement of the college and the community, including the beginning of the college library. Perhaps due to their active work in the community, the literary societies were asked for help when a woman named Mrs. Johnson died and there was no place to bury her. Together they laid out the Cemetery in its current location, on land belonging to the college. Some years later, the land was given to the town. The insignias of the literary societies can be seen on some of the student's headstones in the cemetery.

Concurrent with the early growth of the Wake Forest Cemetery was another burial ground just beyond the property boundary designated by the college. This was the segregated black cemetery, now called the Mangum Cemetery (Walnut Avenue). In the 1800's, slaves in rural areas were usually buried on the plantations and farms where they worked. Generally, slave burials took place in segregated graveyards near the family graveyards of the white owners. As community cemeteries developed, slaves and free people of color were commonly buried in segregated sections of public cemeteries or in cemeteries designated separate from those for white burials. The Wake Forest Cemetery was designated for white burials only and did not have a segregated section for black people. The history of the Mangum Cemetery is not

well known and is a worthwhile subject for research. The plots merge with those at Mt. Olive Baptist Church, which has served the black community since 1865. The Mangum Cemetery is still active and is now a part of the Wake Forest Cemetery.

As the original Cemetery filled, new land was purchased and plotted towards North White Street. These sections reflect the growth in population and the demand for space. Plots are laid out in tight geometric rows according to a pre-designed plan in contrast to the old section's organic growth along the boundaries of a gravel loop road. An additional section remains open and un-plotted.

Fortunately there have been few major changes made to the Cemetery, so the Cemetery entrance is intact, and the old gravel road alignment remains. Though the creek (Brickyard Branch) has been piped and filled over, the original topography exists, so we know that the early townspeople brought their wagons down the hill, over the creek and then up to the hilltop cemetery. Students may have come to the creek for picnics and remembered that the spot was special and worthy of a cemetery.

Over time, the Cemetery has seen periods of attention and neglect. Some of the oaks and cedars are dying of old age, but new trees have been planted by the Town. An old wire fence with concrete posts, which separated the black and white cemeteries, was removed in 2000. Eroded ditches, bare patches of dirt, neglected plots, and unkempt hedges are current detractions.

In August of 2000, the Wake Forest Tree Board recognized the Cemetery as one of the primary pieces of Wake Forest's historic landscape, and resolved to develop a master plan for its care. The Bertha Harris Fund provided the support for a Master Plan. The Master Plan's purpose is to highlight the Cemetery's horticultural and historical significance, recommend maintenance improvements, and locate new plantings of trees and shrubs, thereby ensuring that the Cemetery will continue its long-held purpose in Wake Forest as a place of remembrance and peaceful retreat.

The purpose of this manual is to serve as a guide to the Cemetery's landscape and maintenance improvements, and to provide additional information about the details drawn on the Landscape Master Plan, and Planting Plans.

The landscape Master Plan proposes four specific goals for improvement at the Cemetery:

**GOAL I: CREATE A SENSE OF UNITY THROUGH VISIBLE LINKS**

**GOAL II: DEVELOP THE CEMETERY AS AN ARBORETUM**

**GOAL III: MOVE FROM NEGLECTED TO MANICURED – BASIC LANDSCAPE IMPROVEMENTS**

**GOAL IV: INCREASE PUBLIC AWARENESS OF CEMETERY HISTORY**



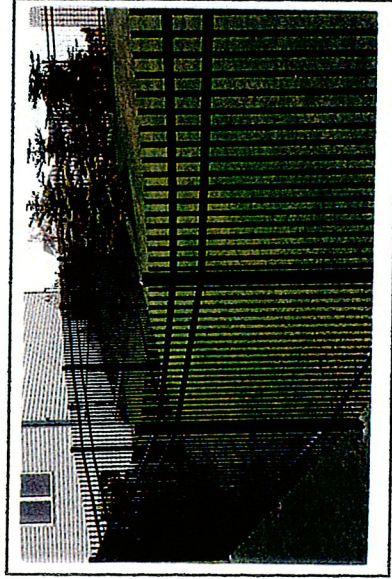
**GOAL I: CREATE A SENSE OF UNITY THROUGH VISIBLE LINKS**  
Connect the three distinctly different areas: the Mangum Cemetery, the Old Cemetery and the New Sections.

**Solution: Unity Using Materials**

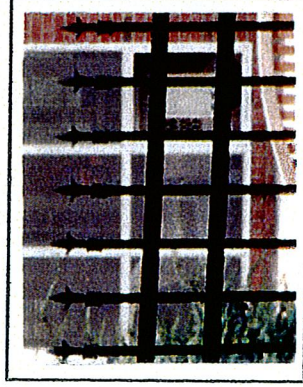
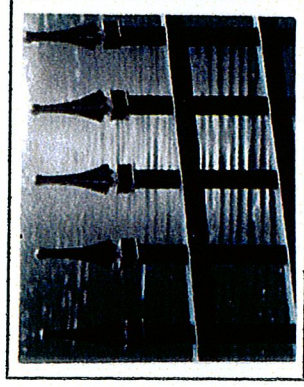
A basic principle in the design of landscapes is to create unity through a repetition of materials. This is why people choose to install a brick wall if they have a brick house, or a stone wall, if they have a stone house. Though the materials may be separated by some distance, the mind makes the connection and the pieces of that landscape are perceived as part of a whole. The following materials are proposed for repetition throughout the cemetery:

Wrought Iron Fencing

Wrought Iron Fences are functional works of art which have been used through history to define cemetery boundaries. The Cemetery's wrought iron entrance arch is a good example. Use of wrought iron fencing has two specific advantages for the Wake Forest Cemetery. One is that fencing, unlike shrub borders, can fit in the narrow space available along North Taylor Street where graves come right up to the curb. The second is that wrought iron fencing provides a distinctive look that is easily identified by people driving by the cemetery.



*New wrought iron fencing is made of manufactured galvanized steel, pre-formed, and high-temperature powder coated for corrosion resistance. It has the advantages of being available, affordable, and durable, with styles to match the ornamental detail of older fences.*



Wrought iron fencing for the cemetery should be 4' tall with ornamental black metal pickets on 4" spacing. Posts may be 6' to 8' on center and will vary based on the distances between stone columns. Standard spacing is proposed at 24' (three 8' sections) of fence, placed between stone columns. Location of fencing is shown on the Master Plan. Details for fencing are shown on the Conceptual Sketch and Details Map



### Stone Columns and Walls

The wonderful stonework used at the entrance of the Cemetery is the same as that used around the Seminary. The stone highlights the age of the Cemetery and its connection to Wake Forest College. Stone is a common material in the older parts of Wake Forest. Therefore, stone walls and columns should be used throughout the Cemetery to create a connection to the main entrance and the broader community. For historical accuracy, they should be constructed of similar stone and match existing wall and column dimensions. The Master Plan specifies these dimensions for proposed walls and columns on the Conceptual Sketch and Details Map. In keeping with tradition, no gates are needed at the Cemetery entrances. Column and wall locations are marked on the Master Plan.



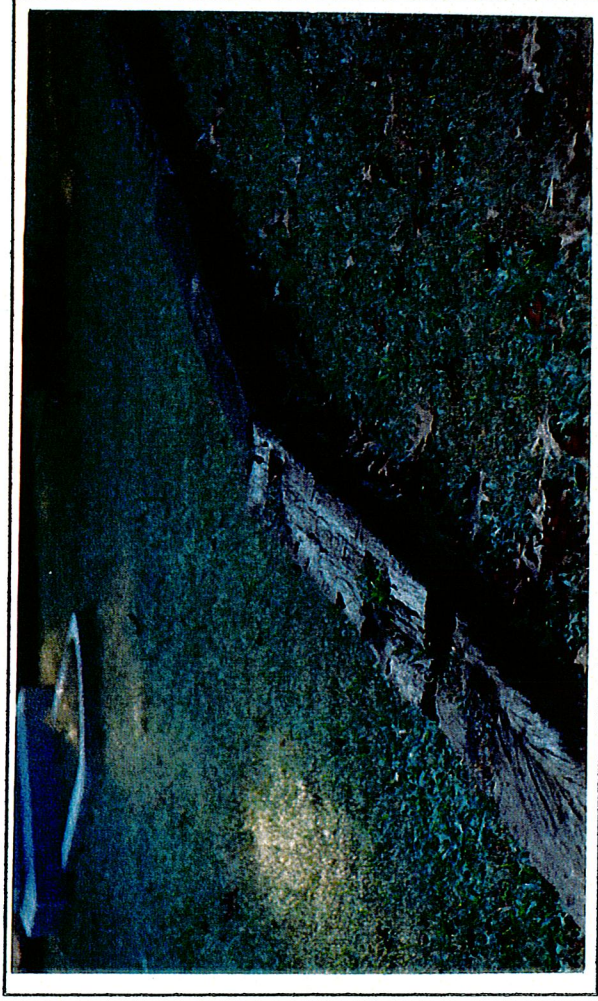
*Existing stone wall at the Cemetery entrance*

### Edging

Edging is the material set into the ground to define family plot boundaries. Simple as it seems, edging can enhance a cemetery. It adds both historical and physical order. Edging adds historical order by grouping parents and children, showing relations through marriage, and the collective life span of a family in the community. Edging adds physical order to the cemetery by defining walking space between plots.

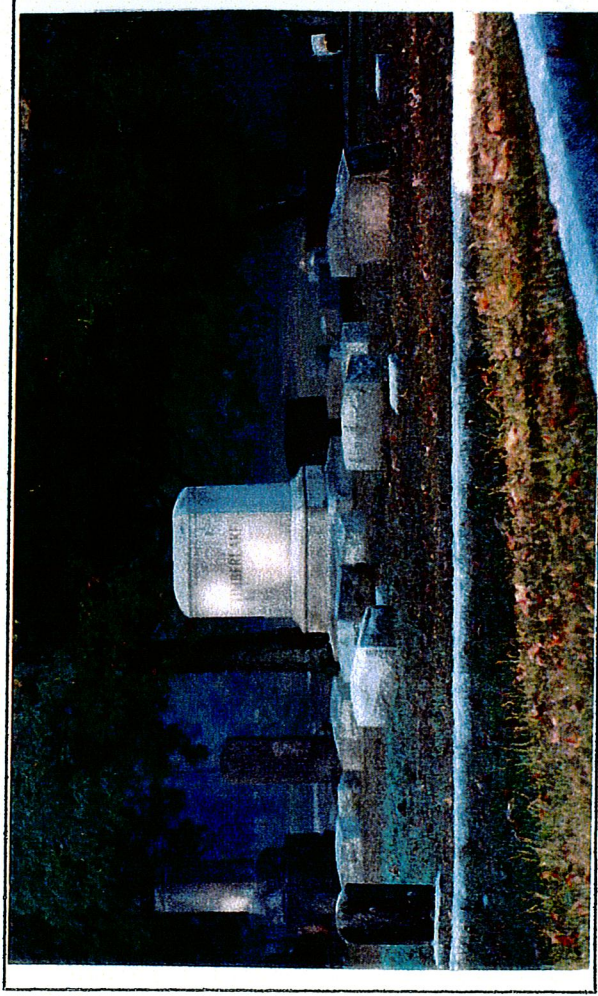
Many of the current materials used to edge plots in the cemetery are temporary. As they rust, decay, and fall apart, they cause a plot to look neglected. Uneven or partially buried edges, and loose or crumbling materials create maintenance problems. The secret to success with edging is to set guidelines for size,

shape, and longevity. As long as the edging follows these guidelines and is installed according to the maintenance requirements of the cemetery, the actual material used could be up to individual choice.



*Materials such as cinder blocks, posts and chains, wood timbers, loose gravel, or wire create maintenance difficulties.*

It is proposed that new and replacement edging be approximately 5" wide x 8" deep, 8' – 10' in length, and made of stone block, poured concrete, or other solid material that resists weathering. Edging should be set into the ground to reveal approximately 4" – enabling a mowing crew to see the edging as well as drive their equipment over it.



*Edging should resist weathering and be large enough for maintenance crews to see when set into the ground. Solid pieces discourage weed growth in joints.*

### Lawns

Grass is the single most effective material used to unify a Cemetery. It can be argued that the most serene and beautiful cemeteries are those defined simply by large canopy trees and thick green lawn. The treatment of the ground plane as one uninterrupted expanse allows one to experience the cemetery as a single space. Shrub borders and groundcovers stop the eye, and create visual breaks in the scene. Shrubs are best located along the perimeters where they define the boundaries and give shape to the lawn edges.



*There are sections where the grass looks great, thanks to soil preparation in the past.*

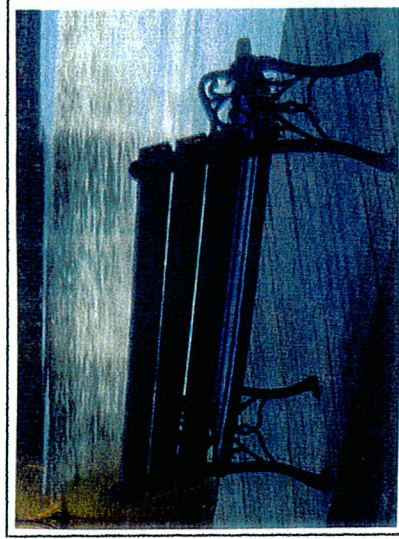


*These areas show the potential for improvements to compacted, weedy ground.*

It is proposed that all existing plants (with the exception of very old boxwoods) be transplanted to specified shrub borders, and attention should be focused on development and maintenance of a healthy, thick lawn.

### Benches and Trash Receptacles

Imagine the interior of two buildings – one a modern art museum, the other, Notre Dame Cathedral. Throughout the art museum you would likely find modern benches and trash receptacles – made of ergonomically designed modular stainless steel, with colorful corrosion resistant coating and brushed aluminum hardware. In the Cathedral the benches might be heavy wood, worn smooth and shiny from centuries of use, or cool marble, ornate and reminiscent of statues and pillars nearby. In both places, the benches are in harmony with their surroundings – they reflect the mood of the space, and help to define its character. Benches in a cemetery should be chosen to do the same.



*Cemetery benches should be timeless. One should believe that a great-great grandchild might be able to sit on the same bench, under the same tree.*

To achieve this, cemetery benches should be classic in both style and material, and resistant to weathering. They should be too heavy to steal, or should be anchored to underground concrete piers. It is proposed that new benches for the cemetery be of two types. One type is constructed of heavy stone slabs. These benches are intended for many generations of use, and are located on the Tree Map in places where visitors are likely to sit for short periods of time. The other type is black iron with decorative back and arm rests. These should be comfortable benches. They are located on the tree map in garden areas where people might spend more time sitting. The existing cemetery benches of brown aggregate have worn well, but are now out-dated in style, whereas simple stone-slab and decorative iron benches would have been available in the 1800's and would look equally appropriate today.

Trash receptacles, chosen to match the iron benches, should be located at the main entrance, and at the 4 pedestrian entrances. They are marked on the Master Plan.

### Signage

All signage at the Cemetery should match the standards set by the Town for historic areas. Currently there appear to be a variety of styles used to designate these areas in Wake Forest, including the orange-lettered wood signs on Main Street, and black lettering on white and wrought iron in the Mill Village area. It is recommended that the Town work with a graphic designer to develop graphic standards for historic signage. Consistent use of such signage will make all the historic areas of Wake Forest more recognizable.

Set into a stone column at the pedestrian entrances, and the main entrance are cast bronze plaques, with raised lettering stating:

Wake Forest Cemetery  
Established ...

Set into the entrance wall on the corner of Walnut Avenue and North Taylor Street is a plaque in the same style with engraved lettering stating:

Wake Forest Cemetery  
Mangum Section  
Established ....

Dates of establishment for both sections needs to be researched. Additional signage regarding Cemetery policy, and contact information should be limited to the parking/pedestrian entrance at North Taylor Street, and the main entrance. These signs and the Walking Tour Map Box should all have the same graphic standards set for Wake Forest Historic Signage. Sign locations are marked on the Master Plan.

### **Solution: Unity Using New Design Solutions**

#### The Stone Circle

The Cemetery lacks a central focal point. It needs a place where people can gather. Therefore a circular stone wall and steps is proposed at the junction of the new and old section of the Cemetery. Though not in the exact center of the property, the Stone Circle will serve as a conceptual center and a reference point. It provides three important functions:

1. A central focal point for the cemetery with paths leading outward
2. A divided road, to allow cars to pass more easily
3. A place for families and individual visitors to gather, hold memorial celebrations, or simply pause and look out over the cemetery.

Sketches are shown on the Detail Map.

### The North Taylor Street Connection

The current scene on North Taylor Street is one of two separate cemeteries – one on either side of the road. The design goal is to pull these two sides together and present this area as a single cemetery with a road passing through it. Stone columns, street trees, cobblestone pavers, and wrought iron fencing are shown on the Planting Plan–West End Map and on the Conceptual Sketch and Detail Map. The stone columns at either end signify entrance and exit of cemetery property. The wrought iron fencing stops at the columns, so that the view of the cemetery grounds continues uninterrupted across the street.

### Entrance Connections

Entrances represent transitions from one place to another. They also identify boundaries. If the same scheme is used at every entrance, a passerby can begin to identify Cemetery boundaries and develop a mental map of the shape of the entire Cemetery. Therefore:

- All pedestrian entrances to the Cemetery are constructed of simple stone columns as shown on the Detail Map.
- The existing entrance road should be the only vehicle entrance to the Cemetery on North White Street. A second vehicle entrance will be necessary if the Cemetery expands towards Spring Street. This entrance could be located on Brooks Street or Spring Street, and referred to as the 'back entrance'. The original entrance thus continues as the "main entrance" to the Cemetery.
- Future greenway entrances should match the stone columns at pedestrian entrances.

### Signature Trees

Existing trees visually divide the Cemetery into the haves and have-nots. The old section includes a magnificent collection of broadly spaced oak trees set between plots in vague association to the road. In contrast, Section 4 has no oaks, and no trees between plots, but features smaller canopied trees - pistache, elm, pear and pine. The unplotted section has only 2 trees. The Mangum (Walnut Avenue) section is much closer in character to the old section and this is primarily due to its canopy trees. It has a variety of interesting trees, primarily clustered towards the back of the cemetery.

A handful of carefully chosen locations for new White Oak trees will extend the special ambience of the old section to the entire Cemetery. These are marked on the Tree Map. The White Oak is proposed as the signature tree for the Cemetery

because it has a huge spreading canopy, and is distinctive from all other trees in the cemetery. It grows well over 100' in the wild, and the Wye Oak in Maryland is 400 years old. The White Oak is an integral part of the wonderful character of the old section. Visitors in future centuries will remember our era for its technological advances and environmental decline. The long-lived oaks will remind them that Wake Forest also recognized the value of trees.

### Future Expansion

The Town of Wake Forest Capitol Improvement Plan identifies for purchase, the properties adjacent to the cemetery all the way down to Spring Street. This additional land can seamlessly join with the existing cemetery property if a few basic design guidelines are followed.

- Develop a plan for the new property before any clearing is done -- existing trees and shrubs are a huge asset and can be protected.
- Do not add new vehicular entrances on North White Street
- Develop a gravel loop road and pedestrian entrances in the same style as the existing Cemetery.
- Continue the development of the Arboretum
- The Cemetery gardens form a central spine that can extend as a greenway along the length of new cemetery property
- Create visual balance between the sections to the left and right of the main entrance road, then make a gradual transition to any new landscape scenarios for the remainder of the new property.
- Adapt new cemetery design to changes in how our culture handles death, and burials. For example, space for cremation plots, or additional areas for informal family memorial gatherings may be required.

## **Goal II: DEVELOP THE CEMETERY AS AN ARBORETUM**

### **Solution: Preserve the existing plants in the Cemetery**

#### *Prune and Feed Canopy Trees that show signs of decline*

Approximately half of a tree's surface is below ground and thus its health and vigor is directly dependent on the soil. The Cemetery's trees are growing in urban soil conditions. These are very different from forest soils. Forest soils are well aerated and consist of layers of organic debris from decaying leaves. They are full of living organisms, are nutrient rich, and moisture retentive. Urban soils are compacted and contain low levels of oxygen. They are stripped of organic debris, nutrient depleted, and contain fewer of the microorganisms that condition the soil.

A number of older trees in the Cemetery are beginning to show signs of decay and deadwood. The lives of these trees can be prolonged through deep-root aeration and fertilization, and the addition of mycorrhizae ( a naturally occurring fungi that lives in association with tree roots and increases a tree ability to take up water and nutrients). Trees should be fertilized and pruned based on an evaluation by a certified arborist.

#### *Transplant shrubs into mulched borders*

The majority of existing shrubs in the cemetery are poorly sited. This creates maintenance problems which are compounded by difficult growing conditions. The shrubs grow in compacted soil and must compete with grass and tree roots for nutrients and water. They suffer damage from weed-eaters. Many must be pruned excessively to keep them from engulfing headstones. Most of the shrubs in the Cemetery are growing as single plants in haphazard locations between the plots. A few are clearly associated with plots.

It is proposed that all shrubs be removed from the plotted areas with the exception of boxwoods, and specified camellias. The boxwoods and camellias to remain are large, old, and difficult to move successfully. Furthermore, they are traditional cemetery plants that grow slowly and require minimal maintenance. Azaleas should be transplanted to the Memorial Azalea Garden (see the Planting Plan - East End Map).

#### **Solution: Add new plantings throughout the cemetery to ensure its continuation into the future as a quiet open space with large trees, and beautiful grounds**

The word Arboretum is defined as a place where trees, shrubs, and herbaceous plants are cultivated for scientific and educational purposes. Cemeteries have long been recognized by plantsmen as excellent places to conduct research, find large specimen trees, and rediscover old varieties of garden plants. This is because cemeteries offer a stable environment where plants have the space and time to grow to maturity.

The long-term goal for the Cemetery arboretum is to feature a wide variety of plants. As trees and shrubs inevitably die, the available spots can be replanted with new species not yet featured in the arboretum. Proposed plants for the cemetery have been located with their mature size in mind. Rather than spacing so that plants fill in quickly and provide a finished look, the spacing is set so that the plants can grow to their full size and natural form without pruning. The cemetery can showcase many of the shrubs that are typically pruned back in other landscapes. Wider spacing has a secondary advantage in that fewer plants are needed, so costs are reduced, and less labor will be required to care for them.



## Trees

There are 232 existing trees in the Cemetery, representing 29 different species. The Master Plan proposes adding 32 new species. Funding to label all trees and provide for their care can be raised through the Tree Memorial program. The Tree Map identifies existing trees, new trees, and trees for removal.

### Existing Tree Species

Acer palmatum	Japanese Maple
Acer rubrum	Red Maple
Camellia japonica	Camellia (large)
Carya illinoensis	Pecan
Cercis canadensis	Redbud
Cornus florida	Dogwood
Fraxinus pennsylvanica	Green Ash
Ilex opaca	American Holly
Juglans nigra	Black Walnut
Juniperus virginiana	Eastern Red Cedar
Lagerstroemia indica	Crepe Myrtle
Liquidambar styraciflua	Sweet Gum
Liriodendron tulipifera	Tulip Poplar
Magnolia grandiflora	Southern Magnolia
Morus alba	Common Mulberry
Oxydendron arboreum	Sourwood
Pinus strobus	Eastern White Pine
Pinus taeda	Loblolly Pine
Pistacia chinensis	Chinese Pistache
Prunus ssp.	Cherry species
Pyrus calleryana 'Bradford'	Bradford Pear
Quercus alba	White Oak
Quercus nigra	Water Oak
Quercus phellos	Willow Oak
Quercus ssp.	Oak species
Quercus stellata	Post Oak
Tsuga canadensis	Canadian Hemlock
Ulmus americana	American Elm
Ulmus parviflora	Chinese Elm
Ulmus ssp.	Elm species

Proposed Tree Species

Acer rubrum	Red Maple
Acer rubrum 'October Glory'	Red Maple
Acer saccharum 'Green Mtn.'	Sugar Maple
Aesculus pavia	Red Buckeye
Amelanchier arborea	Serviceberry
Cedrus deodora	Deodar Cedar
Celtis laevigata	Sugarberry
Cornus florida 'Cherokee Princess'	White Dogwood
Cornus kousa	Japanese Dogwood
Cornus mas	Cornelian Cherry
Cornus florida 'Rubra'	Pink Dogwood
Cotinus coggygia 'Purple Smoke'	Smoke Tree
Crataegus viridis 'Winter King'	Washington Hawthorne
Cryptomeria japonica	Japanese Cedar
Ginkgo biloba	Ginkgo Tree
Halesia carolina (H. tetraptera)	Carolina Silverbell
Halesia diptera	Two-winged Silverbell
Magnolia soulangiana	Saucer Magnolia
Magnolia stellata	Star Magnolia
Magnolia x loebneri 'Ballerina'	Loebner Magnolia
Magnolia x soulangiana 'Lennei'	Saucer Magnolia
Metasequoia glyptostroboides	Dawn Redwood
Nyssa sylvatica	Black Gum
Pinus thunbergii	Japanese Black Pine
Prunus x 'Okame'	Okame Cherry
Prunus x yedoensis	Yoshino Cherry
Quercus virginiana	Live Oak
Quercus nuttallii	Nuttall Oak
Styrax japonica	Japanese Snowbell
Styrax obassia	Fragrant Snowbell
Taxodium distichum	Bald Cypress
Thuja plicata	Giant Arborvitae
Tilia cordata	Littleleaf Linden
Vitex agnus-castus	Chaste Tree

### New Shrub Borders of Heirloom Plants

The purpose of using heirloom plants in the Cemetery is two-fold. One is to evoke the feeling of an earlier time, reinforcing the sense of history in the Cemetery. The other is toughness and longevity. Many heirloom plants are natives, and naturally suited to the periods of drought and excess rain that characterize our region. Others, introduced in the 1700's or 1800's, have been continuously grown by gardeners through the years due to their superior characteristics such as ease of cultivation, bloom or fragrance. These plants are often found in abandoned gardens of old homesteads, proving their ability to survive with little help. In the interest of developing the Cemetery as an arboretum, however, plantings need not be restricted exclusively to natives, and old garden varieties.

The following Proposed New Shrub List gives the date of a plant's introduction into cultivation. This can mean that they were found in southern gardens at that time, or that they were being grown elsewhere in the country, and would arrive sometime later as plant enthusiasts shared them. The 'cultivar' names listed beside some of the plants indicates that the plant has certain improved characteristics such as larger berries, earlier bloom date, better fall color, fragrance etc.

A few of these shrubs are difficult to find in the trade. Unusual magnolias can be located through Pat McCracken at Taylor's Nursery in Raleigh. Unusual shrubs may be available mail-order from Herronswood Nursery, (360)297-4172, [www.herronswood.com](http://www.herronswood.com).

### Proposed New Shrub Species

<u>Botanical Name</u>	<u>Date Introduced</u>	<u>Common Name</u>
<i>Aesculus parviflora</i>	native	Littleleaf Buckeye
Anenome 'Honorine Jobert'	1858	Anenome
Azalea (Satsuki) 'Hi Gasa'		Azalea
Azalea (Southern Indica) 'George Tabor'		Azalea
<i>Callicarpa americana</i>	native	American Beautyberry
<i>Callicarpa dichotoma</i>	1857	Purple Beautyberry
<i>Calycanthus floridus</i>	native	Sweetshrub, Sweet Bubby
<i>Camellia sasanqua</i>	1811	Sasanqua Camellia
<i>Camellia japonica</i>	1742	Japanese Camellia
<i>Cephalotaxus harringtonia</i> 'Drupacea'	1830	False Yew
<i>Chaenomeles speciosa</i>	1800	Quince
<i>Clethra alnifolia</i>	native	Summersweet Clethra
<i>Clethra alnifolia</i> 'Hummingbird'	native	Dwarf Summersweet Clethra
<i>Corylopsis spicata</i>	1863	Spike Winterhazel
<i>Daphne odora</i>	1790	Fragrant or Winter Daphne
<i>Enkianthus campanulatus</i>	1870	Redvein Enkianthus
<i>Euonymus alata</i> 'Compacta'	1860	Dwarf Burning Bush

Forsythia x intermedia	1875	Border Forsythia
Fothergilla major	native	Fothergilla
Hamamelis x intermedia 'Jelena'	1862	Chinese Witchhazel
Hydrangea macrophylla var. nor. 'Taube'	1790	Bigleaf Hydrangea
Hydrangea macrophylla 'Charm'	1790	Bigleaf Hydrangea
Hydrangea paniculata 'Tardiva'	1861	Peegee Hydrangea
Hydrangea quercifolia	native	Oakleaf Hydrangea
Ilex vomitoria 'Nana'	1744	Dwarf Yaupon Holly
Illicium parviflorum		Small Anise
Juniperus horizontalis 'Plumosa Compacta'	1836	Andorra Juniper
Juniperus chinensis procumbens 'Nana'	1843	Japanese Garden Juniper
Kalmia latifolia	1734	Mountain Laurel
Kerria japonica	1834	Japanese Kerria
Lantana 'Miss Huff'	1800	Lantana , Yellow Sage
Lespedeza thunbergii 'Pink Fountain'	1837	Thunberg Lespedeza
Loropetalum chinese	1880	Chinese Fringeflower
Mahonia aquifolium	1823	Oregon Grape Holly
Michelia figo	1789	Banana Shrub
Microbiota decussata	1921	Russian Sage
Nandina domestica 'Harbour Dwarf'		Dwarf Heavenly Bamboo
Osmanthus x fortunei	1856	Fortune's Osmanthus
Philadelphus x lemoinei 'Avalanche'	1896	LeMoine Mock Orange
Pieris japonica	1870	Japanese Andromeda
Prunus persica 'Wolfpack Red'		Dwarf Flowering Peach
Raphiolepis umbellata	1864	Indian Hawthorne
Rhododendron catawbiense	1819	Catawba Rhododendron
Rosa spinosissima 'Petite Pink'	1800	Scotch Rose
Spiraea nipponica 'Snowmound'	1882	Nippon Spirea
Stachyurus praecox 'Rubriflora'	1865	Stachyurus
Styrax americanus	native	American Snowbell
Syringa microphylla	1910	Littleleaf Lilac (Persian)
Verbena Homestead Purple'	1750	Verbena
Viburnum carlesii	1902	Korean Spice Viburnum
Viburnum macrocephalum 'Sterile'	1844	Chinese Snowball Viburnum
Viburnum plicatum v. tomentosum 'Mariesii'	1814	Japanese Snowball Viburnum
Viburnum plicatum 'Shasta'	1844	Doublefile Viburnum
Viburnum x burkwoodii	1924	Burkwood Viburnum
Weigela 'Java Red'	1845	Old Fashioned Weigela

### Memorial Planting Program

Planting a tree or special shrub is a popular and long-practiced way of honoring the memory of friends or relatives. The Master Plan proposes the following opportunities for memorial plantings at the cemetery:

The Circle Garden – This garden features two stone seat walls that curve around a small fountain at the base of the stone circle. The gardens around the circle feature special shrubs which can be purchased as memorial plants. The cost of the plant and its upkeep is a gift to the cemetery in memory of a person, whose name is engraved on a plaque set into the stone wall. Once the garden is complete, the plaques on the stone seat walls identify all those who made the garden possible. Further donations for the upkeep of the garden can be commemorated through plaques set into the stone around the base of the fountain. The interest from these donations could provide a perpetual care fund for the maintenance of the garden and new plantings over the years.

The Azalea Memorial Garden – This garden features Azaleas moved from other areas in the cemetery. Donations can be made for the development and upkeep of this garden in memory of family or friends. A plaque set into a large boulder at the entrance to this garden will list memorial names.

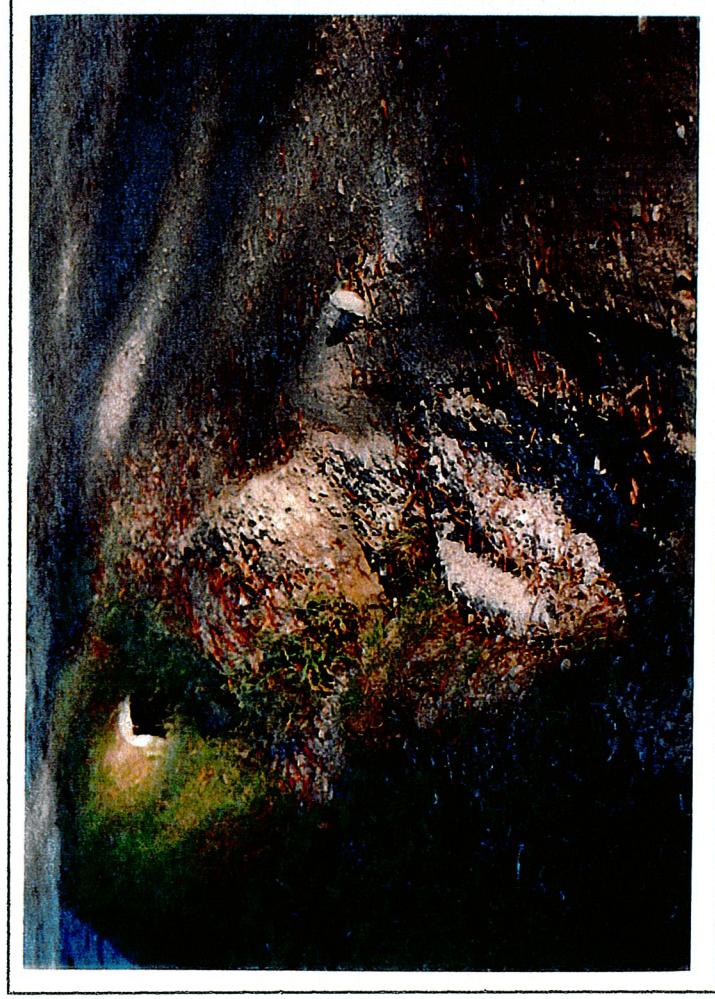
Memorial Tree Program – As an arboretum, the Cemetery should identify the wide variety of trees with their botanical and common name. Through the Memorial Tree Program a person could provide the funds for an identification plaque and the future care of a tree of their choosing. The plaque would list the tree's botanical and common name, with smaller lettering below saying, for example, "In memory of Samuel Wait, 1845".

### GOAL III. MOVE FROM NEGLECTED TO MANICURED – BASIC LANDSCAPE IMPROVEMENTS

#### Road Renovations

The gravel roads should be maintained in the Cemetery because they evoke a past era when all roads were gravel, and thus promote the historic feel of the cemetery. New gravel should be added as needed.

Erosion along the gravel roads is one of the most noticeable signs of neglect in the Cemetery and therefore one of the most rewarding areas for improvement. In the best scenario for handling water movement through the cemetery all drainage would be at the surface, sheeting across the natural contours of the ground and filtering into the soil. This method of drainage works well everywhere in the Cemetery except those few places where water movement is restricted by tree roots, plot edges, or road. In these areas, water is forced into channels that gradually erode the edges of the gravel road, forming ditches.



*Erosion along the gravel roads is one of the most noticeable signs of neglect in the Cemetery and therefore one of the most rewarding areas for improvement*

Drainage Repair - The following actions are recommended to promote sheet flow of water on the ground surface, and to allow maximum water infiltration into the soil:

- Existing grass swales that have filled in over time, and can no longer carry water away, need to be regraded as shallow swales for positive drainage, then reseeded with grass. These swales are identified on the Master Plan.
- Existing grass swales that have deepened into ditches through erosion, should be filled in to create shallow swales with positive drainage, and reseeded with grass. These swales are identified on the Master Plan.
- Existing pipes need repair, and catch basins should be added where the drainage area is too restricted by road and plot edges for swales. These are identified on the Master Plan.



*Functional grass swales carry storm water away and are easily mowed.*

Road Edges - As part of lawn renovations, topsoil will be added along all the edges of the road and seeded with grass. This new grass border creates a crisp edge that gives the road a neat look. A thick grass edge will also help prevent gravel from washing off the road.

### Paving

When existing pavement needs repair, repave using concrete with an exposed aggregate surface. Aggregate color should be grey granite to match the color of the gravel on the roads, and the cobblestone pavers. Cobblestone style interlocking concrete pavers for the Stone Circle and North Taylor Street Connection are shown on the Master Plan.

### Parking Lot Repairs

The existing parking lot on North Taylor Street is in an excellent location, but very rarely used. It is estimated that only 6-8 visitors come to the cemetery each day. As the Cemetery expands, and the community becomes aware of its merit as a quiet open space retreat, the parking spaces on North Taylor will see regular use by walk-in visitors. A new parking lot, adjacent pedestrian entrance, and plantings will radically change the perception of this area. It's current state of neglect encourages further build up of trash and debris. Once improved, the parking area will clearly be identified with the cemetery grounds and receive the same respect that the local community shows for the Mangum section across the street.

### Lawn Renovation and Maintenance

Lawn maintenance is a large part of the budget for cemetery upkeep, but it has many advantages. As a single groundcover used throughout, it is easier to maintain than a mixed variety of groundcovers that each need different tools or methods of care. It does not need mowing in winter. It can be walked on. It will not creep over graves or cover headstones. Many cemeteries contract with a lawn maintenance company exclusively to mow, edge, fertilize, and over seed. Grass grown under large trees requires extra effort, as would any other type of groundcover that must compete with the tree for nutrients, water, and sun. Careful choice of seed will make a difference in the success of the lawn.

Dr. Rich Cooper, expert in turf grass in the Crop Science Dept. at NCSU, states the following regarding the Cemetery's options for seed:

*"It is always difficult to give a solid recommendation without looking at the land, soil tests, etc. Even so, with no irrigation available, and in a low maintenance situation like a cemetery, the choices are somewhat limited. I would think that you are pretty much limited to either common bermudagrass or centipedegrass. Bermudagrass might not be such a good choice because it has a fairly high fertility requirement if it is to look halfway decent and, more importantly, it is not a good choice for even moderately shaded sites. Also, if you do get it growing well, it spreads vigorously and will require a good bit of mowing and trimming around the markers. Thus, centipedegrass seems like a good bet to me. We actually have primarily centipedegrass in the cemetery at the church I attend. It looks great, although the light green color is not favored by some people. It will do well in either sun or shade, so you shouldn't have to pick different mixes for different areas. I'd be happy to look at the site and help with specs."*



Centipede is planted in the spring. Dr. Cooper can be reached at 515-7600, or e-mail

In preparation for lawn renovation, representative soil samples need to be taken throughout the Cemetery grounds. Follow the N.C. Dept. of Agriculture Soil Testing Lab Instructions. Sample boxes, information sheets and instructions can be acquired at:

NCDA Agronomic Division  
4300 Reedy Creek Rd.  
Raleigh, NC 27606  
(919)733-2656

General guidelines for the Cemetery's lawn renovation are as follows:

- Grind old tree stumps
- Apply screened topsoil on an as-needed basis to all bare areas throughout the grounds. This includes all the roads that are to be grassed over
- Apply screened topsoil to all edges of the road and seed with grass
- Grade the topsoil to create a smooth even plane with positive drainage
- Core cultivate the grounds to reduce compaction and improve soil aeration
- Broadcast fertilizer and lime throughout based on soil sample test results

#### Garden Maintenance – Soil Prep, Prune, Fertilize, Mulch, Water

The basics of garden care in the south are well covered in the literature, and can be simplified to soil preparation, pruning, fertilizing, mulching and watering. The Planting Plans for the Cemetery are designed for low maintenance, and can survive on their own with the most basic maintenance. However, the difference between a landscape that simply gets by, and one that receives the care of a trained gardener is immediately obvious. It is the difference between a tough heirloom shrub that survives, but grows leggy and poorly branched with sporadic bloom, and the same shrub beautifully shaped and loaded with fragrant flowers, reblooming in the fall. The difference is worth the investment in a gardener.

An Arboretum Curator will be needed to coordinate community activities and maintain the Cemetery gardens. This could be a full-time volunteer, or a part-time paid position with volunteer help. The curator should have hands-on gardening experience, and/or a degree in horticulture, and be physically able to do garden work on a regular basis. The curator would supervise volunteer garden crews, as well as plan and install new plantings.

Some considerations for maintenance:

- New beds should be tilled and amended with a 50/50 compost/topsoil blend.
- For trees and shrubs planted individually (ie. not in a bed) holes should be dug twice the size of the rootball, and should be backfilled with existing soil.
- New plants are best planted between September and December of each year.
- Water - Regular water must be provided to new plants during the first 3 years to reduce plant loss, speed growth, and produce good form and disease resistance. Without irrigation, new plant borders should be watered with a water truck until they are established. Portable drip irrigation bags (Tree Gators is a brand name) can reduce hand watering of new trees.
- Mulch - Mulching with composted leaf mulch once a year will feed the soil and improve tilth. This should be done in addition to any top dressing of shredded hardwood mulch or pine straw used to reduce weeds.
- Pruning- Good pruning techniques can make or break a plant. The goal is to highlight the natural form of each shrub. Prune according to correct pruning techniques – ie. dead wood removed, rubbing branches removed, and branches headed back according to the blooms dates and growth habit of the plant. If an Arboretum Curator has not yet been found, organize a pruning workshop for landscape crews working in the cemetery.
  - Only the dwarf Burford hedges should be sheared.
  - Pruning every 3-4 years will be required on the camellia hedge to keep it from overlapping headstones.
  - No shrubs should be sheared into balls. With the exception of the above mentioned, all shrubs should be pruned minimally. The goal is to highlight the natural form of each shrub. Prune according to correct pruning techniques – ie. dead wood removed, rubbing branches removed, and branches headed back according to the blooms dates and growth habit of the plant.

#### IV. INCREASE PUBLIC AWARENESS OF THE HISTORY OF THE CEMETERY

The Wake Forest Cemetery is of extraordinary historic significance to Wake Forest. It offers evidence that the events of history are true. Walking through the cemetery, one headstone after another prompts story after story of people who worked to build Wake Forest College and the Town. It provides a chronology of significant events, such as the Civil War, WWI & II, and the Vietnam War. It shows changes in technology and income in the transition from rough stones to engraved granite. In short, it is a tremendous teaching tool for anyone who is curious about the past.

While a good deal is known about the College presidents and faculty, less is known about the evolution of the Cemetery grounds themselves, or the history of the Mangum Section and the people buried there. Interviews with elderly people who are life long residents of Wake Forest would be helpful, as would collection and interpretation of the various documents, and maps located at Town Hall. Chip Patterson, of Wake Forest University is currently researching the Cemetery, and his work will help to portray its rich history. Evelyn Jones, and James Smith, residents along Walnut Avenue, have lived in the area for many years and may be able to share memories about the cemetery.

The Cemetery cannot be appreciated without a visit. Thus, the more activities planned at the Cemetery that encourage community participation, the better. Community appreciation for the Cemetery will lead to support for its upkeep and future expansion. Funding needs to be raised for the following projects:

##### Historic Walking/Bicycling Tour

The Wake Forest College Birthplace Museum is an excellent place to visit before heading over to the Cemetery. It provides the context for appreciating the history of the cemetery. Once at the cemetery, a walking-tour map could describe the history of various people, and lead visitors to significant headstones. A cross walk leading from the Birthplace Museum across the railroad tracks, is shown on the Master Plan, as well as locations for the Walking Tour Map Box.

The cemetery is conveniently located within cycling distance of the Town's other significant historic landmarks – the Dubois School, White Street Shopping District, the Seminary, the Mill Village, and North and South Main Street. A bicycle rented from the Birthplace Museum would enable visitors to tour the entire area in an afternoon.

### Remembrance Day

Begin a tradition at the Wake Forest Cemetery that is celebrated in many European communities, called 'Remembrance Day'. On the designated date, families gather at the cemetery and spend the day weeding and grooming family plots, cleaning headstones, and visiting with each other. In the evening, votive candles are lit at the base of each headstone in remembrance of the deceased, so that the entire cemetery glows with light.

### Friends of Wake Forest Cemetery

Many cemeteries have a volunteer non-profit organization that assists with fund-raising, trains docents to lead history tours, organizes special events, and helps maintain the cemetery. Many of these organizations originated through specific interest clubs such as gardening, and bird watching. Friends of Wake Forest Cemetery could develop a web page, and organize events such as All Hallow's Eve Theatre, or Historic Headstone Day (cleaning stones and making rubbings of engravings) to promote further community support for the Cemetery.