

CHAPTER 1

INTRODUCTION

Purpose and Scope

Since its incorporation in 1980, the Town of Farragut has endeavored to promote the livability of the community. The success of these efforts has paid off as the Town has been and continues to be one of the fastest growing in the state. Central to the Town's livability is its promotion of tree cover as an essential element of the landscape. The Town's tree protection ordinance and landscaping requirements, in particular, have been instrumental in helping to fulfill significant landscape related objectives. The Town has also committed, through its annual budget, substantial resources toward beautifying public properties with the planting of trees.

The Tree Planting Plan for Selected Public Properties is an extension of all of these efforts. The purpose of the plan, in particular, is to serve as a reference source for the placement, selection, and maintenance of plant material, namely trees, on selected public properties. The primary focus or scope of this plan will be on traditional parks and greenways because of their usage and high visual impact to the community.

Benefits of Trees

In addition to the obvious aesthetic value, trees provide a wealth of benefits that can greatly enhance any community, but particularly those, like Farragut, which are experiencing significant growth and development. Trees help improve air quality by intercepting particulate matter and absorbing harmful pollutants, such as carbon dioxide, sulfur dioxide, ozone, and carbon monoxide. Trees help improve water quality by capturing significant amounts of rainfall that can cause erosion and by filtering out harmful pollutants before such pollutants enter water bodies. Trees help reduce the cost of heating and cooling and aid in efforts to minimize noise pollution. And, trees provide biological diversity while at the same time aid in softening the urban landscape which, in turn, helps to make a community more marketable as a place to live and work.

Tree planting on public properties is particularly important because it establishes a standard for the remainder of the community. Public properties are an extension of the overall community and, within the community, are often the most visible, most visited, and most identifiable.

CHAPTER 2

INVENTORY OF SELECTED PUBLIC PROPERTIES

Excluding public rights-of-ways, the Town of Farragut has approximately 165 acres of public properties (Illustration 1). From this rather significant base, the focus of this plan will be primarily on those properties that typically have space enough to provide for tree plantings and that have a high visual impact and/or receive significant public use. The areas that will receive the most attention will be the Town's traditional parks and greenways. In this context, the term "greenways" refers to linear parks or corridors of protected open space that connect neighborhoods, traditional parks, commercial centers, government buildings and churches to each other with walking, bicycling, and/or nature trails.

Traditional Parks

The Town currently has three traditional parks. These include Mayor Bob Leonard Park, Anchor Park, and Campbell Station Park.

Mayor Bob Leonard Park (Illustration 2)

Mayor Bob Leonard Park is an approximately 50 acre multi-use facility located in the far west portion of Farragut and which provides both passive (e.g. walking trails and picnic areas) and active (e.g. ball fields and playgrounds) recreational opportunities.

The park's centerpiece is a wetland encircled by a walking trail. In addition, there are multiple soccer, baseball, and softball fields, a playground, and one of the area's premiere outdoor volleyball facilities. Existing landscaping at the park is significant in some sections. For example, the wetland area generally has significant tree cover around its periphery. In addition, over the years the Town has provided, in selected locations, a noticeable amount of supplemental plant material.

Additional planting opportunities do exist. The selection and placement of material, however, are particularly critical in this park given the largely active recreation component that requires sizable expanses of open areas for both playing and viewing. Specific priority areas where plant material may be appropriate will be addressed in Chapter 3.

Anchor Park (Illustration 3)

Anchor Park is located on approximately 15 acres in the southern portion of Town and is sandwiched between Turkey Creek Road and Fort Loudon Lake. Partly resulting from its physical configuration, Anchor Park, in comparison with Mayor Bob Leonard Park, has a proportionally greater passive recreation component. The park has only one soccer field and one softball field, a basketball court, and grass volleyball court. There are several playgrounds and picnic areas, a horseshoe pit, and a fishing pond. Similar to Bob Leonard Park, Anchor Park has some areas with notable tree cover, particularly around certain sections of the fishing pond.

In addition, supplemental plant material has been added over the years in various sections of the park. Planting opportunities do exist, however, and will be discussed in the next chapter.

Campbell Station Park (Illustration 4)

Campbell Station Park, unlike Mayor Bob Leonard Park and Anchor Park, is entirely devoted to passive recreation. The park is located just to the south of the Farragut Branch of the Knox County Library and is accessed from N. Campbell Station Road. The existing portion of the park has approximately 9 acres. However, construction on an additional 5. acres just south of the existing park has been initiated.

The existing park features both a lighted paved walking trail and an additional unlighted paved trail and mulched trail. There are also open play areas, a picnic pavilion, and an outdoor classroom.

Proposed improvements associated with the construction that has been initiated south of the existing park include the construction of a restroom building, additional parking, and additional walking trails. Opportunities to provide supplemental plant material in the existing completed portion of the park are somewhat limited because much of the area is located within existing wooded land and because a significant amount of landscaping has already been provided in association with this park phase.

Some substantial planting opportunities will likely exist, however, with the area currently under construction. The extent of what would be recommended at this point is uncertain and will depend on what will need to be removed and the general quality of the surrounding wooded areas associated with this new phase.

Pocket Park

The pocket park is a proposed park located on a 1.3 acre tract south of the N. Campbell Station Road entrance to the Farragut High School. Although it is not contiguous to Campbell Station Park, the pocket park is considered as an extension of Campbell Station Park because of its proximity and interconnectedness with the main Campbell Station Park.

Although the pocket park site is largely devoid of tree cover at this point, as part of the site plan that has been approved for the development of the park, a significant amount of landscape material is included.

In fact, because of the nature of this park, plant material will comprise a significant component. The park will be entirely passive. It will only be accessible by sidewalk with parking provided at the main Campbell Station Park. The pocket park will feature decorative sidewalks, sculpture areas, theme lighting, and mounted landscaped areas. Additional landscaping beyond what is included as part of the landscape plan associated with the development of the park will be very limited at best.

As of the date of this plan, the Pocket Park construction is on hold and thus will not be discussed in remaining portions of this plan.

Summary

The Town's traditional parks each have their own unique characteristics which will affect the degree and type of additional landscaping that could be provided. In general, the parks have a solid base of tree cover resulting from a mixture of both planted material and material that was in existence prior to park development. This does not mean, however, that planting opportunities have been exhausted. In varying degrees, there are areas within each of the parks where additional tree plantings could be suggested. In Chapter 3, these specific priority areas will be noted.

Greenways

As part of the Town's recognized livability, a central element has been its focus on providing for a network of pedestrian and recreational biking opportunities. In 1997, the Pedestrian Circulation Plan was approved for the primary purpose of providing guidance in determining the most efficient locations for pedestrian facilities. The Town's Land Use and Transportation Policy Plan, which was approved in 2001, also provides numerous policy statements which reflect the community's commitment to the continued development of the pedestrian network.

One of the primary pedestrian elements in the Town is its greenway system. Greenways provide numerous functions ranging from alternate modes of transportation to recreational opportunities for walking, running, and recreational biking. At this point, within the Town limits there are three major greenways. These are referenced as the Grigsby Chapel Greenway, the Turkey Creek Road Greenway, and the Parkside Drive Greenway.

For purposes of this plan, greenways rather than sidewalks have been chosen as a focus area because, unlike most sidewalk environments, there is more available planting space and, consequently, generally fewer planting related constraints.

This does not mean that greenways are free from planting limitations. Greenways within the Town are, for the most part, confined to linear Town owned properties or greenway easements that are between 20 and 30 feet in width. The greenway easements are in favor of the Town and reserved for public use. The Town accepts maintenance and liability for the use of these easements. In addition, much of the Town's greenway properties or easements are within or bisected by overhead utility easements that, in some cases, place obvious limitations on the selection and placement of plant material.

Since, in most cases, greenway sections are continuously being amended as opportunities for linkages and additional sections develop, the general planting opportunities discussed in Chapter 3 will need to be periodically re-assessed and updated to reflect the potential needs of additional sections. An overview of existing tree resources associated with the major greenway sections is

provided below.

Grigsby Chapel Greenway (Illustration 5)

The Grigsby Chapel Greenway runs largely parallel to Grigsby Chapel Road in the north part of the Town. The trail is asphalt and is currently about 2.2 miles. It runs through numerous residential developments and also includes a section on the south side of Grigsby Chapel Road which provides convenient access to N. Campbell Station Road and which runs to the west of St. Mary's and the Farragut Primary School. Consequently, this greenway is heavily used and provides, in many cases, alternate means of accessing key activity centers, such as the Farragut public schools, the St. John Neumann Catholic School, the Farragut Branch Library, and businesses and other popular destinations concentrated in the N. Campbell Station Road/Grigsby Chapel Road/Parkside Drive area.

Much of the Grigsby Chapel Greenway is within or bisected by a 100 foot wide TVA overhead utility easement. Though this is a planting related consideration, opportunities for additional tree plantings are numerous and will be specifically discussed in Chapter 3.

Turkey Creek Greenway (Illustration 5)

Similar to the Grigsby Chapel Greenway, the Turkey Creek Greenway is named after the road that it largely parallels. This greenway is constructed of asphalt and is approximately 1.6 miles with a .3 mile spur to the Turkey Creek Woods Subdivision between the Sailview and Brixworth Subdivisions. The greenway is heavily used and provides a safe and convenient non-vehicular means of accessing Anchor Park. Existing landscaping is provided along sections of this greenway but additional landscaping opportunities do exist.

Like the Grigsby Chapel Greenway, much of the Turkey Creek Greenway is located within a TVA overhead utility easement. This condition along with visibility issues and lakefront view considerations will largely dictate the selection, placement, and density of additional plant material.

Parkside Drive Greenway (Illustration 5)

The Parkside Drive Greenway is a 2.6 mile asphalt path which is located within both the Town of Farragut and the City of Knoxville and which runs parallel to I40/75 from Lovell Road to a point near the western terminus of Parkside Drive. This greenway is relatively new and, at this point, the Town has not yet taken over maintenance responsibilities for its section.

Similar to the Grigsby Chapel and Turkey Creek Greenways, much of the Town's portion of the Parkside Drive Greenway is placed within an overhead utility easement. Unlike the other greenways, however, the Parkside Drive Greenway, because of its proximity to the interstate and the rather sparse amount of existing tree cover, is particularly vulnerable to the impact of the interstate environment. Consequently, much of this greenway could benefit greatly from an intensive tree planting effort.

Other Smaller Greenway Segments

In addition to the main greenway systems noted above, other smaller greenway segments, some of which could, in time, be incorporated into one of the main greenways, exist in numerous locations. These smaller existing sections include Wentworth (from Old Stage Road to the Wentworth Clubhouse), Dixon Road/Rockwell Farm (bisecting Rockwell Farm and running along the Rockwell Farm frontage of Dixon Road and Old Stage Road), Woodland Trace/Sweet Briar (from Woodland Trace Drive to Gates Mill Drive), NHC/Sugarwood (between Sugarwood Drive and Virtue Road), Fox Run (from Serenity Lane to undeveloped property to the west), and Orchid Grove and Sedgefield Unit 2 (from Lady Slipper Lane and Sedgefield Road to abutting undeveloped properties).

As will be discussed in Chapter 3, although some limited tree planting opportunities exist, because these smaller segments have, at least at this point, a generally more limited and localized use, tree plantings here would be a lower priority as compared to areas along the main greenway systems.

Selected Rights-of-ways

Although the focus of this plan is on the Town's traditional parks and greenways, it will also address some selected rights-of-ways where, because of location, surrounding physical characteristics, impact to community aesthetics, and/or other site specific conditions, would benefit greatly from the provision of tree plantings.

I40/75 Interchange at Campbell Station Road

The I40/75 interchange at Campbell Station Road, which is Tennessee Department of Transportation (TDOT) right of way, is a focus because it is the main access point into the Town of Farragut. The interchange is, in essence, the gateway to the Town of Farragut.

Although some existing tree cover is located in different sections of this interchange area, a need exists for additional tree plantings similar to what the City of Knoxville has done in some of its interchange areas. This, of course, would have to be coordinated with TDOT and also with the future realignment of this interchange. In fact, because of the realignment issue, any proposed tree plantings for the current interchange would likely be minimal with the main focus being to provide at least some seasonal color and interest in the most open portions.

Road Projects

Similar to many communities, the Town usually has a number of road related projects that are ongoing. Oftentimes, such projects unavoidably involve the removal of tree cover that, in some cases, had provided a desired effect for adjacent residents. One example of this would be along the Old Stage Road frontage of the Rockwell Farm Subdivision where a dense row of Red Cedar trees which provided a buffer between the subdivision and the road was removed. Where such

unique or special conditions are present, opportunities for some replacement tree plantings exist.

Railroad Right of Way

In September of 2002, a train derailment occurred along a section of rail line abutting Turkey Creek Road and to the west of the fence/storage yard at Anchor Park. This derailment took out some dense sections of tree cover that had helped to provide a noise and visual buffer between the rail line and nearby residents. Tree plantings along this affected section would help to re-establish the buffer that had been unavoidably removed.

Summary

Aside from its traditional parks, the Town has a substantial greenway network that receives heavy use. In many areas, this greenway network is limited in terms of tree cover. Thus, opportunities for additional tree plantings in appropriate locations exist. Such tree plantings will not only further enhance the enjoyment of these areas but also will promote the overall community aesthetics.

Other public properties also exist where tree plantings could be provided. These areas include the I40/75 interchange at Campbell Station Road and selected areas where tree cover has been removed in association with road/sidewalk improvement projects.

CHAPTER 3

TREE PLANTING PRESCRIPTIONS ASSOCIATED WITH SELECTED PUBLIC PROPERTIES

General Priority Areas

Given the acreages encompassed by the public properties examined in this plan, the process of prioritizing those general locations or features that would typically most benefit from tree plantings is a key objective of this plan and is an essential element of this chapter. Prioritizing helps to greatly simplify and facilitate the process of deciding on tree selection and placement.

With this in mind, based on a thorough review of the public properties involved, the general areas or features listed below would be considered as desirable for tree plantings. This does not necessarily mean that tree cover would be needed wherever these priority areas or features exist. Planting considerations would always need to take into account the specific circumstances associated with each area in question and reference given to the general plant selection and planting principles discussed in Chapter 4.

Trailheads

Trailheads are the visual entranceways to different features, particularly greenways. They are typically easy to access for planting and maintenance purposes and, when landscaped, can provide a powerful visual enhancement that will be seen by a relatively large public. A well landscaped and attractive trailhead invites the user to the property and helps market the area and/or feature. The following photographs show how plant material has improved trailheads at Campbell Station Park and the Grigsby Chapel Greenway.



Some specific considerations that would typically be associated with trailheads would be ensuring that overall visibility and trailhead related signage is not impeded and that the material chosen is appropriate for the surrounding conditions.

Path Intersections

Similar to trailheads, path intersections are typically easy to access for planting and maintenance purposes and, because of their scale and location, when landscaped, can provide a high visual impact. Again, similar to trailheads, visibility considerations and the selection of appropriate

plant material for the individual context are important factors. Below are examples in Campbell Station Park of where path intersections are visually improved with plant material.



Benches and Bleachers

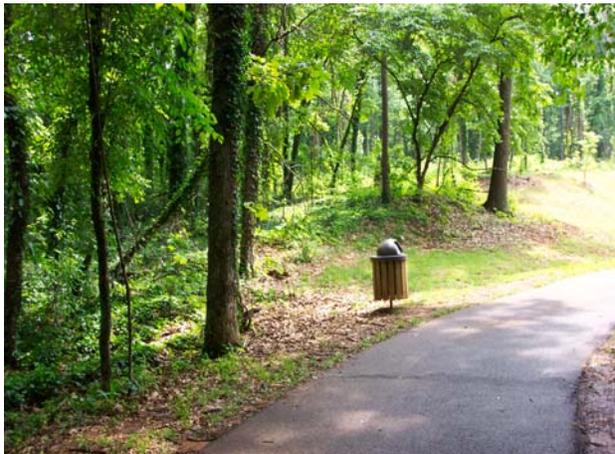
Benches and bleachers are included here due to the fact that some shading and/or visual variety nearby can provide for a more enjoyable use of such structures. Typical considerations with plant material around benches include general maintenance related issues, such the ability to easily access these structures for repair purposes and ensuring that trees are placed far enough away so that leaves and other tree related deposits can be minimized and visibility around such structures will not be impeded.

Typical considerations associated with landscaping near bleachers include ensuring that visibility will not be impeded, that plant material is selected and placed so that maintenance problems can be avoided, and ensuring that plant material fits within the larger context of the activities occurring in the nearby area. Below are examples of benches in Campbell Station Park where nearby trees help with shading and overall aesthetic enjoyment.



Trash Receptacles and Garbage Dumpsters

Trash receptacles and garbage dumpsters are mainly associated with parks and provide an obvious and essential function. Appropriately selected and placed tree plantings can help to soften these structures, particularly when such structures are located in a relatively large open area. Typical considerations with plant material around trash receptacles is that the area adjacent to or nearby the structure is softened without compromising the ability of the user to find such facilities. In the case of dumpsters, however, a screening effect would typically be suggested since these features are less dependent on public visibility and are substantially larger than trash receptacles. The following are examples of where plant material at Campbell Station Park help to soften nearby trash receptacles.



Utility and Drainage Structures, Detention Basins, Retaining Walls

Utility and drainage structures, detention basins, and retaining walls are features in the landscape that oftentimes can be visually improved with the incorporation of tree plantings. In addition, tree plantings can also help to mitigate stormwater runoff and assist with localized stabilization in areas with drainage-related erosion. Important planting considerations for these features would be to ensure that access and maintenance is not impeded and that such plant material does not create problems in terms of how such features are designed to function. For example, tree plantings should not be planted abutting and surrounding utility structures where access would be compromised. Tree plantings also should be placed far enough away from drainage related structures so that there is no interference with the free flow of stormwater. The photographs below demonstrate where utility structures and drainage related features have been visually improved with plant material.



Storage Buildings

Similar to many of the structures/features discussed above, tree plantings can help visually improve and soften areas adjacent to storage buildings. In most cases because storage buildings are relatively noticeable and do not provide for general public access, a screening element would be appropriate similar to what would be suggested for garbage dumpster enclosures.

Other Areas With Special Needs

In addition to the priority areas/features noted above, some other areas where tree plantings would be a priority include the following:

- Large open areas that are not used for playgrounds or viewing;
- Areas, such as along the interstate or where buffer trees have been removed in association with road projects, where an environment exists where tree plantings would provide a special benefit; and
- Sections of tree planting arrangements where an existing landscape theme has been initiated but not completed.

Specific planting related considerations for these other areas with special needs would be dependant upon the context of the individual situation. The general plant selection and planting principles covered in Chapter 4 would be an appropriate reference source.

Some selected examples of where tree cover has been used in special need environments are as follows.



The above photograph on the left demonstrates where an otherwise relatively open section of walking path has been enhanced with the planting of Crabapple trees at Mayor Bob Leonard Park. The photograph on the right demonstrates where a theme of Dogwood tree plantings along Harrison Road at Mayor Bob Leonard Park has been completed as part of an annual tree planting program. The photographs below show where relatively open areas at Campbell Station Park have been improved with tree plantings.



General Low-Priority Areas/Features

In contrast to the general priority areas discussed above, the following low priority areas/features are specifically included to help further aid in the decision making process associated with tree planting efforts. Keep in mind that the areas listed below are general and that, in some cases, an area(s) with one or more of the low priority conditions may, because of some unique condition or need, be considered a priority area.

The general low priority areas/features are as follows:

- Areas with limited public use/visual contribution;
- Areas that would be very difficult to access for planting and maintenance purposes;
- Areas that have nearby an existing and substantial tree cover that is unlikely to be disturbed;
- Areas located adjacent to the rear of homeowner lots and where tree plantings in such areas would clearly block visibility to commonly recognized desirable features, such as lakes and golf courses;
- Areas where tree plantings would, either at planting or in the future, create safety related visibility problems;
- Areas where tree plantings would, either at planting or in the future, impede wayfinding, such as in front of subdivision entrance signs, traffic control/street name signs, and/or trail head signs;
- Areas where tree plantings would, either at planting or in the future, create problems with nearby overhead and/or underground utilities, including stormwater related structures;
- Areas where tree plantings would, either at planting or in the future, compromise or create maintenance problems associated with external site lighting;
- Areas where tree plantings would, either at planting or in the future, interfere with or not be consistent with known future plans, and/or development/use; and
- Areas where tree plantings, because of the material selected or arrangement, would create a perception of security related concerns.

Priority Areas Applied to Selected Public Properties

Within the context of the priority areas established above, the remainder of this chapter will provide a review, primarily in the form of digital photographs, of those individual public properties examined in this plan. For each property, examples will be shown of where plant material could be applied for the applicable priority areas/features. At the end of the discussion of each property, specific issues related to that particular property will be noted.

Mayor Bob Leonard Park

Mayor Bob Leonard Park (MBLP) is by far the largest park in the Town. Consequently, many of the priority areas noted earlier in this chapter are found in the park. However, as noted in Chapter 2, unlike Anchor Park and Campbell Station Park, MBLP is largely an active park where large expanses of open space for playing and viewing are part of the design. With this specific consideration in mind, the photographs below show priority areas as applied to MBLP.

Trailheads and Path Intersections



Benches/Bleachers



Trash Receptacles and Garbage Dumpsters



Utility, Drainage Structures, Retaining Walls (next four photographs)



Storage Buildings



Other Areas With Special Needs





The four photographs above demonstrate where some tree plantings could provide additional interest in relatively large open areas and/or provide separation between abutting uses/activities.

Specific Issues Associated With Mayor Bob Leonard Park:

- The substantially active recreational character and design of this park will require significant coordination with the Leisure Services Department to ensure compatibility with park usage and future plans for different park sections; and
- In areas of different active recreational uses, such as between the volleyball courts and the soccer field, tree plantings could be added help to provide a visual separation.

Anchor Park

Though much smaller than Mayor Bob Leonard Park, Anchor Park embodies a number of the priority areas/features noted earlier in this chapter. The following photographs demonstrate this.

Trailheads



Benches/Bleachers



Trash Receptacles/Garbage Dumpsters

Trash Receptacles and Garbage Dumpsters



Utility and Drainage Structures



Other Areas With Special Needs



The above photograph on the left demonstrates where erosion on the pond bank could be improved with properly located tree plantings. The photograph on the right conveys where additional tree plantings could be used to continue an existing planting theme along Turkey Creek Road.

Specific Issues:

- Keep tree plantings well spaced around pond so as not to inhibit views and/or fishing opportunities;
- Since this park abuts Fort Loudon Lake, consideration should be given to the placement of tree plantings so as to ensure that desired vistas are not impeded; and
- A primary objective for tree plantings at this park would be to help stabilize selected areas along the pond that are currently experiencing significant erosion. Tree plantings, however, should be planted far enough up the pond bank so that they will not be under water and possibly washed away during periods of heavy rainfall.

Campbell Station Park (existing phase)

As noted in Chapter 2, the existing phase of Campbell Station Park has significant tree cover and numerous examples of where tree plantings and arrangements around existing trees have been used to provide a high quality visual experience. There are, however, some priority areas in the existing phase where the incorporation of tree plantings could help to further enhance the attractiveness of this park. Some examples are as follows:

Trailheads and Path Intersections



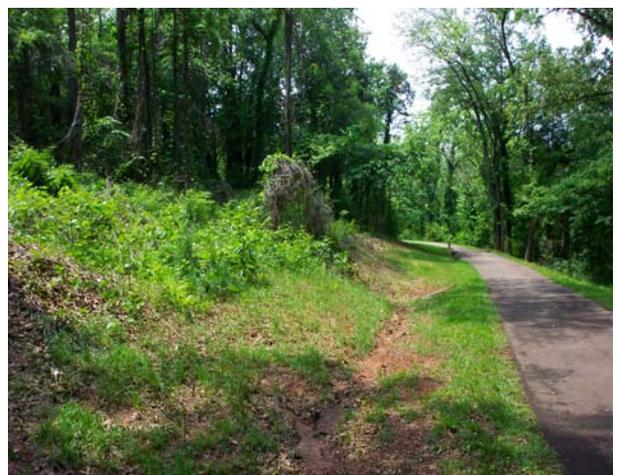
Benches/Seating Areas



Utility and Drainage Related Structures and Features



Other Areas With Special Needs



The two photographs above show areas where Kudzu is being eradicated and where, once complete, opportunities for some tree plantings could exist. The photographs below show where

a tree planting effort could be continued in a relatively open area.



Specific Issues:

- Selected plant material could be used as part of a tree identification program that could become an additional passive recreational element for this park;
- Some of the park has Kudzu areas that are being eradicated. Once this eradication is completed, tree plantings could be provided to help fill in these open areas; and
- Opportunities for tree plantings will likely be numerous with the new phase under construction. Careful coordination will be needed with the Leisure Services Department.

Greenways

Grigsby Chapel Greenway

The Grigsby Chapel Greenway has numerous priority areas/features. Some examples are demonstrated in the photographs below.

Trailheads and Path Intersections



Trailheads and Path Intersections (continued)



Benches



Drainage Structures/Detention Basins



Other Areas With Special Needs



The two photographs above show examples of relatively open areas where tree plantings could be added with consideration being given to the nearby overhead utility lines.

Specific Issues:

- In many sections, this greenway bisects residential developments. Consequently, safety and visibility considerations are important in terms of the selection and arrangement of tree plantings; and
- Overhead utility lines are a factor along some sections but available planting space is typically provided on the side of the greenway opposite the power lines and poles.

Turkey Creek Greenway

Similar to the Grigsby Chapel Greenway, the Turkey Creek Greenway contains a number of priority areas/features. Specific examples are demonstrated in the photographs below.

Trailheads



Path Intersections



Benches



Other Areas With Special Needs



The two photographs above show examples of where tree plantings could be supplemented to help fill in open sections.

Specific Issues:

- Careful consideration must be given to the placement of tree plantings so as not to impede lake front views for residents north of the greenway;
- Overhead utility lines are a factor but available space for planting is typically provided on the side of the greenway opposite the power lines and poles;

- Due largely to this greenway's proximity to Turkey Creek Road, visibility is a major consideration for tree plantings, particularly along curves and at locations where the greenway intersects roadways;
- The proximity to Turkey Creek Road also is important in terms of ensuring that visibility is not impeded to subdivision entrance, traffic control, and street name signs; and
- The placement of tree plantings must be coordinated with the likely location of future access points onto Turkey Creek Road so as to avoid replanting and visibility problems.

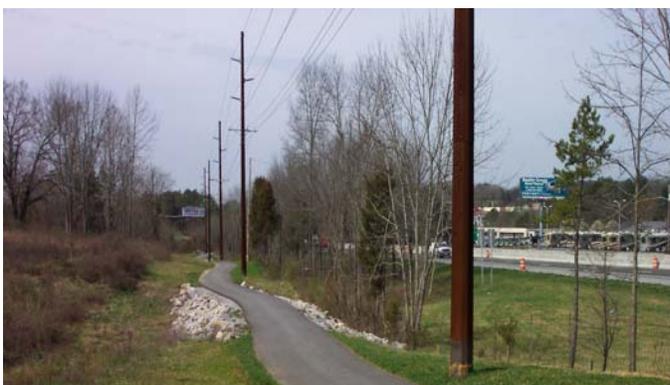
Parkside Drive Greenway

Unlike the other greenways, Parkside Drive Greenway has special planting needs resulting primarily from its proximity to the Interstate 40/75 right-of-way. Though much of the greenway, particularly along the interstate, would be considered a general priority area, some specific examples are demonstrated in the photographs below.

Trailheads/Path Intersections



Drainage Related Features



Other Areas With Special Needs



The two photographs above show examples of where tree plantings could be suggested along the interstate and within large, relatively open areas.

Specific Issues:

- Overhead utilities are primarily a factor on the north side of the greenway. Consequently, tree planting opportunities are more numerous along the south side of the greenway;
- The greenway section abutting the interstate would benefit greatly with primarily linear sections of plant material with a screening component. The selection of tree species would be largely governed by the proximity to the overhead utility lines; and
- Where screening material is used, such material should be arranged to provide gaps of visibility so that future businesses that would back up to the greenway could be seen from the interstate.

Other Walking Path Sections

As noted earlier, the Town has a number of greenway sections that are not currently part of the three main greenway systems. Because these smaller sections generally have a more localized use, tree plantings associated with these areas would generally be less desirable than along the main greenway systems. However, should tree plantings be provided in relation to these smaller sections, trailheads would be a good choice because they are easy to access and tree plantings could provide an immediate visual impact. Some examples are shown in the photographs below.

Sweet Briar/Woodland Trace Subdivision segment



Rockwell Farm Subdivision segment



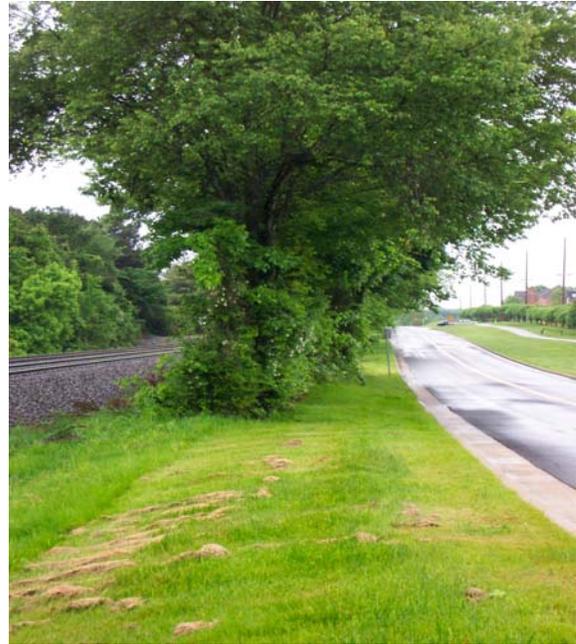
Specific Issues:

- Since these smaller greenway sections are generally lower priority tree planting areas, any tree planting efforts here should be focused primarily in areas that are easily accessible and/or have unusual and/or extraordinary tree planting needs;

Selected Rights of Ways

Although parks and greenways are the primary focus of tree plantings associated with this plan, some other public areas where tree plantings could provide a substantial benefit are demonstrated in the photographs below.

Railroad right-of-way (where screen trees were removed in association with a train derailment)



I40/75 Interchange at Campbell Station Road (large, relatively open areas)



CHAPTER 4

PLANT SELECTION AND PLANTING PRINCIPLES

As noted earlier, because of the multi-functional element of traditional parks and the fact that sizable sections of the Town's greenways are located within overhead utility easements, the selection, placement, arrangement, and density of plant material are essential decisions. In this regard, the goals of this chapter are to review some common limitations and considerations that must be addressed as part of any tree planting undertaking.

Overhead Utility Lines

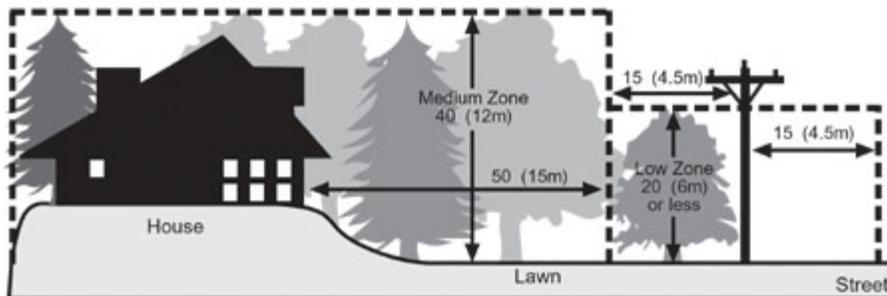
For many of the areas reviewed in this plan, the presence of overhead utility lines would be the single greatest factor determining proper plant selection and placement.

Where overhead utilities are involved, an initial determination is whether the proposed plantings would fall within a low, medium, or tall tree height zone (Figure 1). The low zone would extend fifteen (15) feet to either side of utility lines. Species planted in this low zone should not exceed a mature height of 20 feet. Such plant material could include Kousa Dogwoods, Redbuds (depending on placement), Fringe Trees, Serviceberrys, Little Gem Magnolias, Crepe Myrtles (depending on placement), Amur Maples, and Nellie Stevens Hollies.

Beyond the low tree zone, a medium tree zone would begin at least 15 feet from all utility lines. Trees within this medium tree zone should not exceed a mature height of 40 feet. Such plant material could include Redbuds, Golden Rain Trees, River Birch, Flowering Dogwoods, Foster Hollies, Sawtooth Oak, and Chinese Elm.

The tall tree zone would begin at least 65 feet from utility lines. Within the tall tree zone, tree plantings would basically be unaffected by overhead utility line considerations.

Figure 1.



Street/Field Lights

Another important consideration associated with tree plantings is the presence of street/field lights. Depending on the height and location of such lights, in most cases only understory plant material should be used nearby and should be spaced at least 15 feet from the light poles so as to decrease the chance of interference with illumination. This is particularly important in terms of field lighting used for recreational activities. Trees that interfere with light illumination could

create obvious problems of reduced visibility that could, in turn, compromise the enjoyment and/or safety of the recreational event.

Underground Utilities

Similar to overhead utilities and lights, the location and approximate depth of underground utilities should always be established prior to tree planting. This is important not only to avoid damaging utilities during installation but also to ensure that such material will not create long term maintenance related problems. In most cases, because tree roots are largely concentrated no more than 2 feet below the surface, interference with underground utilities is not a major issue. This is because most non-lateral utilities are buried more than 2 feet below the surface. Trees that have highly invasive root systems, such as Silver Maples, Willows, and Sweet Gums, should be avoided where underground utilities are nearby.

Visibility Concerns

In this context, visibility is primarily related to the proper selection and placement of plant material so that such material does not block or otherwise inhibit important information or desired features and so that a clear line of sight is provided in areas where there could be pedestrian and/or vehicular conflicts. Another important element of visibility is to ensure that, in association with play areas, visibility for spectators is not impeded.

Safety Considerations

Unless certain circumstances warrant a screening component, such as around storage buildings or along portions of the interstate, tree plantings should generally be arranged in such a manner as to provide gaps or openings for visibility so that the perception of a “hiding place” is not created which may inhibit use of certain public facilities.

Maintenance Considerations

The Town has a significant amount of public property that must be maintained. In most cases, the incorporation of tree plantings increases maintenance requirements. For this reason, the species selection and the location and placement of trees are important considerations. This is one of the reasons why this plan focuses solely on trees rather than shrubs and seasonal flowers. Shrubs and flowers typically require significantly greater maintenance than trees.

In general, for maintenance purposes, tree plantings with the following characteristics should be avoided:

- Trees that produce excessive fruit;
- Trees that are brittle or create an unusual amount of leaf litter;
- Trees that require periodic pruning; and
- Trees that are particularly susceptible to disease and/or unfavorable local weather conditions.

Other General Planting Considerations

- Evergreen trees should be used in selected areas for year round effect and to provide continuous screening and better noise abatement in the winter;

- A variety of species should be planted to provide for a natural look and to guard against a substantial loss of plant material resulting from a species inherent disease or terminal condition associated with a species;
- Unless a linear effect is desired, tree plantings should be arranged so that they look natural and blend in with the surrounding landscape;
- Where possible, native species should be used. These species not only provide a more natural look but also are typically more tolerant of local conditions and thus need less maintenance; and
- In most cases, unless a cluster effect is desired, trees should be spaced based on their anticipated sizes at maturity. For example, most understory trees should be spaced at least 15 feet apart. Larger canopy sized trees should be spaced at least 25 feet apart. Such spacing will typically help promote more rapid growth and long term success.

CHAPTER 5

IMPLEMENTATION

As with any plan, an essential element of its success is how well it is implemented. For purposes of the material covered in this plan, the following implementation measures would apply.

Grants

Grants are often a source for some tree planting money. Examples that could be pursued include the Urban Forestry Grant Assistance Program, grants related to Parks and Recreation, such as the Local Parks and Recreation Fund (LPRF), the Land and Water Conservation Fund (LWCF), and Transportation Efficiency Act Funds (TEA 21). In addition, grants may also be available through organizations such as the Arbor Day Foundation and the National Tree Trust.

Donations

Donations could be from a number of sources ranging from individuals, homeowner associations, community/civic/school groups, and businesses. Another avenue where donations could be provided is through the Town's tree protection ordinance in cases where replacement trees are needed for trees removed and the owner cannot or does not wish to place such replacement trees on the affected property. Such donations have already resulted in a significant number of trees planted on numerous public properties and are likely to be a very significant source of tree plantings in the future.

Annual Tree Planting/Replacement Program

Each year, usually in the fall, new and replacement trees are planted on public properties from monies provided primarily in the Leisure Services General Fund Account. Such planting has been largely responsible for a vast majority of the trees that have been planted on public properties. This is likely to continue to be the case in the future.

Town Projects

As part of grant applications and planning for major capital improvement projects, the protection of existing and/or provision of new trees should be a significant consideration. As noted above, some grants, such as TEA-21, which may be used to help fund capital improvements, may also provide monies for tree plantings in association with such projects.