APPROACHING CIVIC GREENERY: STREETSCAPE DESIGN GUIDELINES FOR THE CENTRAL BUSINESS DISTRICT OF ATHENS, GEORGIA

By

LEANNE WELLS

(Under the Direction of Brad Davis)

ABSTRACT

Downtown Athens, Georgia is comprised of a twenty city block area: north to south from Dougherty to Broad Street and east to west from Thomas to Pulaski Street. Commercially the area is comprised of more than 160 businesses and the majority of the county's government offices. The study area is home to 483 trees comprised of 26 different species. This project began with inventory and analysis in May of 2011. Over 450 parcels and adjacent right of way within the twenty block area were analyzed for existing tree placement and quality. Through inventory and analysis, streets in need of tree planting were identified and overall streetscape design guidelines were created for future planning and design of the Central Business District of Athens. The study revealed that 174 trees could be added to the study area. In addition, the guidelines illustrate streetscape designs that will improve tree health and contribute to planning for future urban trees. This study and resulting guidelines will ensure that the quality of the tree lined streets of downtown Athens will continue to persevere for future generations by securing the urban forest.

INDEX WORDS: Athens, Georgia, urban tree planning, urban trees, urban forest, tourism.

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DEDICATION

I dedicate this practicum to my grandfather Howard Wells whose love and knowledge of trees has been felt through the generations.

With much gratitude, thank you.

ACKNOWLEDGMENTS

First, I would like to thank my friends and family for their unwavering support. Second, I would like to thank all the participants who agreed to be available for this project. I appreciate your patience with my questions and fascinating knowledge of the urban tree and design industry. I would also like to thank my practicum committee, Brad Davis, Jack Crowley, Larry Morris and Roger Cauthen for your insights. Lastly, I would like to thank the University of Georgia and the College of Environment Design for my opportunity to obtain this masters degree, and for your belief in my creative ability.

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BACKGROUND AND LITERATURE REVIEW

In the interest of community, environmental health and economic well-being cities can be thought of as complex ecosystems just as intricate as those of a wilderness or a forested area (Svendsen and Campbell 2008). When approaching the city from an ecosystem viewpoint, one expands the role a city plays from economic contributor to a more holistic relationship that involves individuals, groups, culture and norms. Urban trees can play a significant role in that relationship by imparting biologic benefits on its citizens in their everyday life. The assets of a healthy and substantial urban forest are well documented. Ecological benefits include where increased shade which improves building cooling efficiency during summer months (Donovan and Butry 2009). Air quality can be enhanced by CO2 uptake from trees and storm water can be mitigated by tree water absorption (UVM 2009). Winter wind can be blocked by the correct placement of coniferous trees to enhance the heating efficiency of buildings and trees can assist in mitigation of the heat island effect experienced in urban centers (EPA 2011). Carbon sequestration—the ability of plant material to use carbon dioxide for its food chain cycle—is also a proven benefit not only for enhanced air quality but as a climate change deterrent (Lilly 2010). Socio-economically urban trees have been proven to increase the likelihood of a business district to be visited by shoppers thereby increasing the economic benefit of local economies (Wolf 2010). In addition urban trees have also been shown to increase tourism and create a calming effect on shoppers that guarantee return to the businesses of tree lined streets (Wolf 2010).

Athens, Georgia is an historic center of commerce and industry for the northeast Georgia region. Like many cities during the 1960's population migration to suburbs caused the Central Business District of Athens to struggle financially—merchants struggled to compete with new strip malls and regional malls. In response, The Athens Downtown Development Authority (ADDA) was created in 1977 to coordinate the Central Business District revitalization (Wolf 2004, 367). In 1980, Athens became one of several pilot cities of the National Main Street program. The Main Street program, an affiliate of the National Trust for Historic Preservation, advocates urban revitalization using architectural resources and grassroots economic development. Consistent with the Main Street program principles, ADDA has encouraged rehabilitation rather than demolition of downtown structures. A busy pedestrian population enjoys tree shaded streets of downtown Athens; the trees in turn have complemented the historic structures of the district.

Implementing trees has been an important part of downtown Athens planning. Today, large trees are a dominant element of the district's streets, encouraging use of sidewalk cafes and public spaces due to a tree program launched when Athens participated in the federal Model Cities program in the 1960s (Wolf 2004). The Model Cities mission entailed "(community) services that promote the physical, mental, spiritual, social and economic well being of individuals, families and communities and are rooted in the cultures of diverse communities (and human) services that carry out community-based development that improves the quality of life and contributes to the revitalization of urban communities" (ModelCities.org 2010). Part of that mission bore itself out as early tree plantings to include Bradford pear (*Pyrus calleryana* 'Bradford'), ginkgo (*Ginkgo biloba*), Darlington oak (*Quercus hemisphaerica*); Honeylocust (*Gleditsia triacanthos*) and zelkova (*Zelkova serrata*).

In addition to the Model Cities participation and ADDA commitment to the success of the downtown shopping district is the Landscape Management Program of Athens Clark County (ACC). The prime responsibility of this department is to provide landscaping services to public buildings, parks, and rights of way in Athens-Clarke County.

Inclusive to the Landscape Management Program is the Community Tree Program whose goal is vital to maintaining, replacing and increasing the county tree canopy of Athens. The Community Tree Program is designed to conserve and professionally manage publicly-owned trees while providing education and support for private tree owners and managers (AthensClarkeCounty.com). Another street tree oriented organization is the Athens-Clarke County Community Tree Council (CTC). Established on October 3, 2000 by ordinance of the Unified Government of Athens-Clarke County, their mission is to "provide the vehicle for broad-base community representation to interact with local Government, the private sector and citizen groups by advancing tree information and recommendations, and offering educational opportunities promoting the responsible stewardship of trees and the sustainability of current community forest resources while providing the option for future change" (athenstrees.com).

Because the city and county of Athens recognizes the importance of street trees, in 2005 Athens-Clarke County created the Community Tree Management Ordinance, Chapter 8-7. Its goal is to sustain and enhance the functions and benefits of trees and the community forest for the citizens of Athens. It is designed to utilize trees for their value and positive effects on air quality, water quality, stormwater runoff, local climate, environmental health, property values, business revenues, scenic quality, urban design, human health and well being, outdoor recreation, forest products, and wildlife. The ordinance strives to maintain at least 45% canopy cover in Athens-Clarke County. It works towards this goal by requiring the conservation and replanting of the trees on city streets and parking lot trees (AthensClarkeCounty.com).

Downtown Athens is a prime example of a Central Business District with tree lined streets. Home to 116,714 people (2010.Census.Gov), Athens boasts a thriving business center in the heart of its downtown corridor. The Central Business District consists of twenty city blocks that reach from Pulaski Street on the west end to Thomas Street on the east, Dougherty Street to the north and Broad Street to the south. Currently, the downtown area is host to 483 trees that includes 26 different species.

Figure 1.1 Vicinity map of the Central Business District, Athens, GA.

In keeping with the Athens-Clarke County Landscape Management Office goal to maintain and increase the urban tree canopy, the impetus for this document is to assist in future planning for new and replacement trees in the downtown corridor. Because urban development plays a significant role that can impact the environment, and recognizing that Athens is a community that strives for sustainability, this document will serve as a decision making tool for the administrator and community forester. It will also assist design professionals and decision makers in understanding the importance of trees in an urban setting.

The document contains objective data gathered during the summer and fall of 2011 that includes identification of areas in the Central Business District that are lacking street trees or may warrant the replacement of a tree. In addition, this document will provide design guidelines for tree placement in a given situation for the Central Business District. These guidelines can be used in new development conditions and can be applied throughout the Central Business District of Athens.

CHAPTER 2

METHODOLOGY

This project of planning for urban trees in the Central Business District of Athens, Georgia began during the late spring of 2011 when Andrew Saunders, Athens Clarke County (ACC) Community Forester gave a presentation to the University of Georgia's Urban Tree Management course. His talk led to a discussion regarding potential projects the county may be interested in having accomplished by a graduate student. Both Andrew and Roger Cauthen, the ACC County Landscape Division supervisor, expressed the desire to have a master plan with future tree planning and design recommendations performed for the downtown study area.

2.1 Inventory

Athens Clarke County is responsible for the care, planting and maintenance of the trees within the right of way in the downtown area known as the Central Business District. The county right of way can be defined as the space between existing parcels and is considered public property. For example, the right of way begins at the edge of one parcel property line. It contains the sidewalk, the street, the sidewalk across that particular street and stops at the opposite property line. This study takes into account only tree planning for areas within the county right of way. Existing greenery and potential for greenery on private parcels is a valid and worthy venture as both public and private property are symbiotic in nature. However, for purposes of fulfilling the forester's goal of a master tree plan, landscape enhancements for private parcels were not taken into consideration for this study. In addition, this document takes into account only above ground conditions where new tree placement is suggested. The reason for this is two fold. First, the document is meant to serve as a first phase for

identification and prioritization of new or replacement trees in the Central Business District. Second, when county design and construction decisions are made to install or replace new trees, an in depth analysis of those specific locations will be warranted on a tree by tree or block by block basis.

2.1.2 Photo Inventory

The photo inventory began in May 2011 and each of the eleven blocks in the study area were photographed on both sides of the street. The reason for the photo inventory was to assist as a design tool for existing conditions. In some instances, photos were used to create panoramic street views for Photoshop mock-ups to emulate desired streetscapes.

2.1.3 Map Creation

Combinations of fourteen 11" x 17" and 8.5" x 11" maps were created of each block in the study area. One large format map—48" x 36"—of the entire study area was also created. Each map contains GIS data provided by Athens-Clarke County. The map data is comprised of the following GIS layers: road to pavement, buildings, parcels, and existing trees. Each base map with the fore mentioned data was used to complete greenery suggestions for the right of way of each downtown block. This task was accomplished in Adobe Illustrator using a variety of symbology that depicts greenery suggestions.

2.1.4 Urban Greenery Tables

In conjunction with the maps, a table was prepared for each street that summarizes the inventory of the Central Business District right of way as it relates to each parcel on that street with recommendations for specific areas in the right of way based on analysis. The inventory consists of detailed data to include parcel name and address, a building description, the existing surface of the parcel, any existing greenery, the sidewalk width, adjacency of buildings to any prospective trees, miscellaneous structures such as light or electric poles and signs that might

impede the capacity to plant a tree, and the proximity of a potential new tree to travel lanes and parking spaces. All of the fore mentioned data was collected via onsite inventory and with the use of QPublic, the county website that contains public record of all parcels in Athens-Clarke County(http://qpublic7.qpublic.net). From the inventory data, recommendations were made regarding new tree additions, tree replacements (due to decline), and the use of one green wall on the Morton Theater south façade.

2.2 Analysis

The goal of the inventory and mapping exercises for the Central Business District of Athens was to help recognize patterns in this portion of the urban forest for the county. Three overarching patterns were revealed: the pattern of spaces for new trees, the pattern of tree replacement due to decline, and the pattern of private greenery in place for a given parcel not in the county right of way. In addition, the analysis informed the creation of design guidelines for the Central Business District.

2.2.1 Pattern for New Trees

The mapping exercise bore out three prime areas for trees to be planted where none currently exist: Dougherty Street, from College west to Pulaski Street; Hancock Street from Lumpkin west to Pulaski; and Thomas Street at its furthest north end from Dougherty Street south to Hancock as seen in Figures 2.1-2.3 below and on the following page.

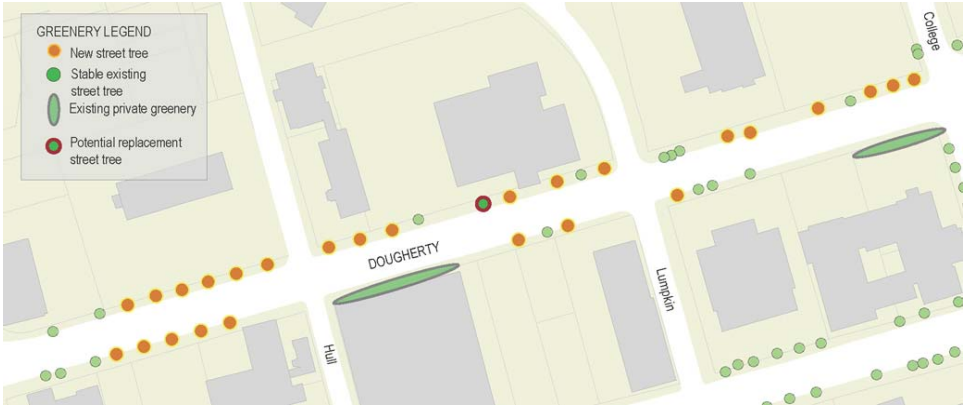


Figure 2.1. West end of Dougherty Street showing pattern of potential new street trees.

Figure 2.2. Before and after photos demonstrate how the intersection of Dougherty and Hull would appear if street trees were installed. Photo by author.

Figure 2.3. West end of Hancock Street (lower map) and north end of Thomas Street (upper map) showing pattern of potential new street trees.

2.2.2 Pattern of Tree Replacement

The criteria used to determine if a tree should be replaced was if 50% or more of the canopy had die back (canopy decline) or that a tree had completely failed to leaf out during the growing season (visual inventory was performed May – September 2011). Of the existing 483 trees, only eighteen trees warrant replacement. Of those eighteen, only one area in particular showed a pattern of replacement. That area is on Washington Street's north side between

Lumpkin and College Streets as shown on Figure 2.4. There exists a row of Green Ash (*Fraxinus americana*) of which seven of those trees are in rapid decline and exhibit roughly 50% canopy die back.

Figure 2.4. Washington Street displaying potential tree replacement.

2.2.3 Pattern of Private Greenery

One of the more interesting patterns discovered from analysis and the mapping exercise was the amount of private greenery that exists in the Central Business District. Private greenery can be defined as any plant material—turf, perennial, shrub or tree—planted and maintained by the property owner of a particular parcel. Almost exclusively, private greenery exists on the northern streets of downtown—except for the south side of Broad Street, where the University of Georgia maintains the north quad green. Primarily, the streets of Dougherty, Washington and just mentioned Broad have ample amounts of private greenery on those block parcels as shown in Figure 2.5 below.

Figure 2.5. Private greenery patterns seen on the northern blocks of the CBD.

The reason for this increase in private greenery as one moves north in the CBD is due to the amount available space increases allowing the potential of private greenery to develop. For example, on Hancock Street the First Presbyterian Church, First United Methodist Church and Athens Chamber of Commerce have private greenery because their buildings are set back from the right of way far enough to accommodate these plantings. In contrast, Clayton Street—whose buildings are all built to the county right of way—do not have an opportunity to plant private greenery. In this location, county street trees often serve as the only form of greenery, which are planted and maintained by the county.

2.2.4 Design Guidelines

The creation of design guidelines for future development or retrofit of existing conditions will be discussed at length in the next chapter. However, because of the crucial role

the inventory and analysis played in informing specific design suggestions, their mention in this section is warranted. With the use of the information gathered in the Urban Greenery Tables, each section of right of way in the study area was categorized by sidewalk width. After evaluating all rights of way and adjacent 487 parcels, four predominant categories of sidewalk widths exist in the CBD. These include: 5 - 9' wide sidewalks, 5-6' wide sidewalks with a 5-6' planting strip, 10' wide sidewalks, and 11-15' wide sidewalks. With this information, six design guidelines were developed to accommodate the Central Business District and these will be discussed in Chapter 3.

CHAPTER 3

STREETSCAPE DESIGN SUGGESTIONS AND DESIGN GUIDELINES

Designing a streetscape requires an understanding of the immediate surroundings the street will serve over a long period of time. If designed correctly—that is with the proper proportions, elements, shop keepers and pedestrians in mind—it will function as an enjoyable and sought out route for pedestrian traffic and foster return shoppers because their outdoor experience enhanced their indoor (shopping) experience. In 2004, Kathleen Wolf, social scientist researcher at the College of Forest Resources, University of Washington, performed a study of Athens, GA regarding shopping districts and consumer preference in relation to street trees and their benefit for the consumer (Wolf 2004). She found three themes. First, downtown trees are recognized for their contributions of environmental benefits. Second, shoppers commented that trees contributed to the comfort and beauty of the business district. And third, the role of trees in attitudes about the Athens Central Business District seemed inseparable—the urban forest contributed to a sense of place, and the positive experience had by shoppers. Wolf found that consumers preferred large trees with full canopies. In addition, she found that modern architecture buffered by trees has greater preference than historic architecture having no trees. Finally, clean and well maintained buildings are essential for creating a welcoming consumer environment; yet there is an inextricable balance to achieve in a shopping district between architecture and nature as amenities (Wolf 2004). Therefore, the goal of this study is to identify where new trees may be implemented in order to achieve downtown wide tree canopied streets.

On the following pages are streetscape design suggestions and design guidelines for the CBD of Athens, GA. The guidelines were developed based on the inventory and analysis of the eleven block shopping district. Two cities that are well known for their commitment to green infrastructure are Seattle and Chicago. Both municipalities have established guidelines and robust web sites that house their information regarding streetscape design. The guidelines proposed for the Athens CBD on the following pages were informed by those two cities.

3.1 Streetscape Design Suggestions

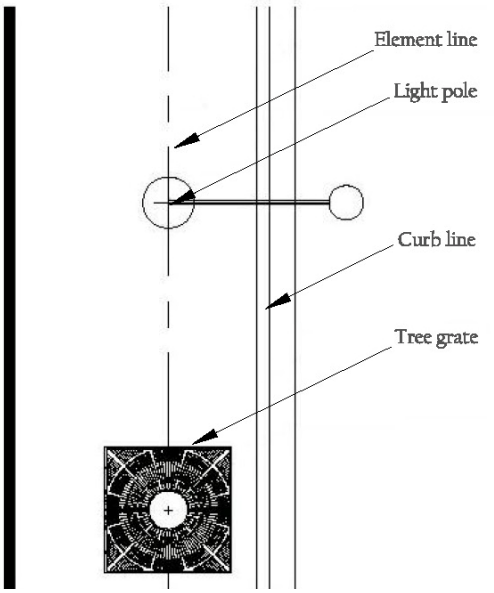
The following design suggestions are meant to offer assistance in the design process and take the mystery out of why a design 'works' or creates positive pedestrian flow along a given city block. A good streetscape design will achieve balance between all elements, with the location of each element being adjusted until a harmonious design is achieved. When various streetscape elements are repeated over a typical block, the streetscape creates a particular rhythm depending on the use, arrangement, and emphasis of different elements. For any block, there are many options for arranging elements. Given the highly varied widths of the sidewalks in the CBD of Athens, there are some basic guidelines to follow.

3.1.1 The Element Line

The nature of a streetscape has various elements that repeat on any given block. It is this repeating pattern that creates a rhythm of a street. The elements of street tree, planter, bench, parking meter, etc.—are arranged around an element line—an artificial line that typically runs parallel to the street curb. The element line does not always appear as the center line of individual street elements (Chicago 2003). Figures 3.1 and 3.2 on the following page illustrate this concept. The use of this concept allows for proper alignment of streetscape elements to foster pedestrian movement on any given city block.

3.1.2 Street Trees

For sidewalks with limited space, trees should be planted in tree grates, either 4' x 6' or 5' x 5' in size. Placement of the tree grate next to the curb on narrow sidewalks will create an element line 2'-3' from the face of the curb (in this case, the tree trunk is the element). Wider sidewalks can accommodate tree grate installation with a band of sidewalk (typically 1' wide) between the curb and the tree grate as seen in figure 3.2 below. This creates an extra setback for street trees that minimize conflicts with parked cars. Trees are generally planted 20-25' O.C. (on center) from another depending on species, existing street elements and building/parcel relationship.



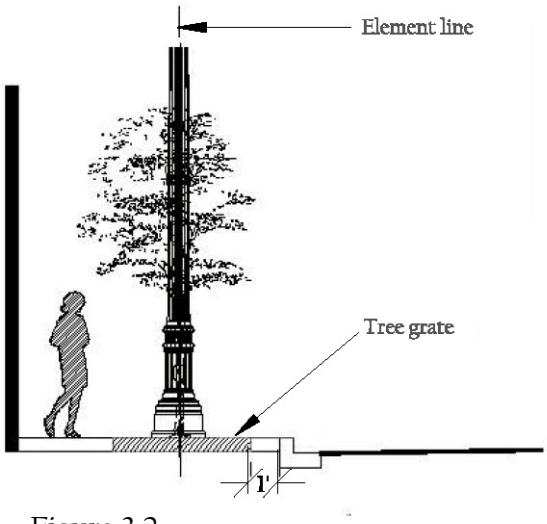


Figure 3.2

Figure 3.1 and 3.2: Element line with tree grate and light pole.

3.1.3 Planters

Where sidewalks allow for ample space, street trees may be planted in raised curb planters with a maximum height of 18". Planters should be set a minimum of 1' from the back of the curb and leave a minimum inside sidewalk width of 5'. Curbs form the edge of the planters and should be 6" wide. A low ornamental fence or railing may also be used in lieu of the raised

curb. These barriers can help protect the root zone of urban trees from soil compaction due to heavy pedestrian traffic.

3.1.4 Shy Zones

Traffic engineer John J. Fruin, translated road terminology into pedestrian travel in his seminal book, Pedestrian Planning and Design. One of the most useful concepts developed by Fruin is the shy zone (Fruin 1971). When a person walks along a city block, they instinctively maintain a distance from elements along the block. This distance is known as the shy zone. The zone can occur near any element including the curb line where pedestrians keep their distance unless crossing into parking spaces or at crosswalks. Therefore, objects placed along the street consume more space than their actual dimensions. For example, a sidewalk that is 10' wide from the curb face to the building face has a shy zone indicated in figure 3.3.

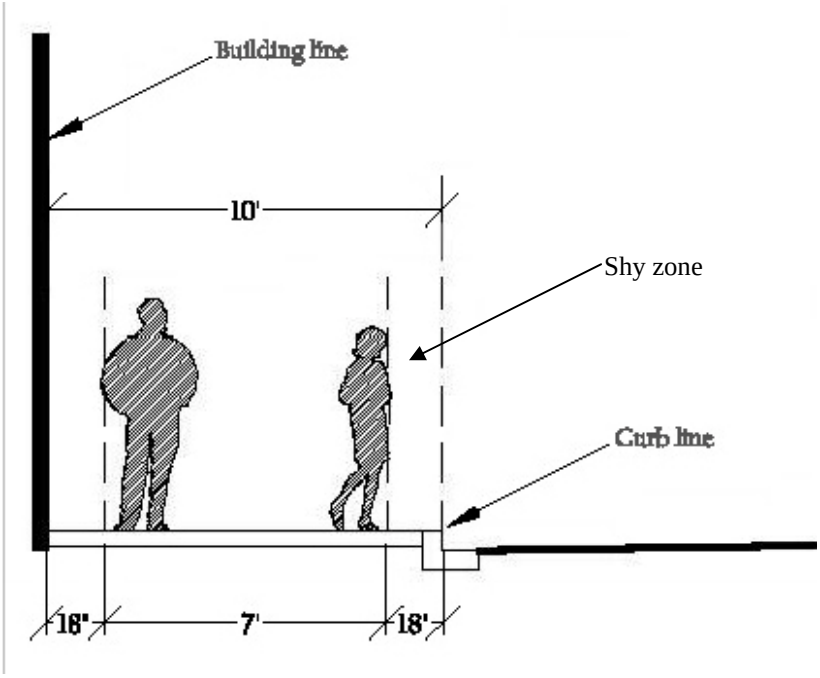


Figure 3.3. Shy zone on 10' sidewalk.

As shown above, the shy zone creates a 7' wide sidewalk where pedestrians feel comfortable walking. As the number of pedestrian's increase and space gets more crowded, personal space is

impacted. Due to crowding, pedestrians will move into the shy zone, in an effort to continue movement along a street. Because the overall goal in streetscape design is to create an environment in which pedestrians feel comfortable and issue their return, the shy zone effect must be taken into consideration during the design process. Considering the curb line, the element line, and building face, this will help distinguish what form the major elements take along any given street. Therefore, narrow sidewalks have more limitations on the amount and size of streetscape elements and what can be accommodated. The opposite is true for wide sidewalks, where greater variety of opportunities is available due to increased space.

3.1.5 Sight Triangle

The sight triangle is a design and safety concept meant to provide drivers with the greatest visual capacity possible when turning from one street on to another. In Athens-Clarke County, the elements allowed near the triangle differ depending on street element. Pertinent to this study, the triangle for street trees is 35' measured from the street intersection along the right of way of any given street and 25' feet toward the interior of the property (Commission 2005). The figure below on the right demonstrates this concept. The figure on the left is drawn to reflect how the sight triangle would appear if the curb line were used as the horizontal sight line of the triangle. Given the historic nature of the Central Business District, these guidelines are at

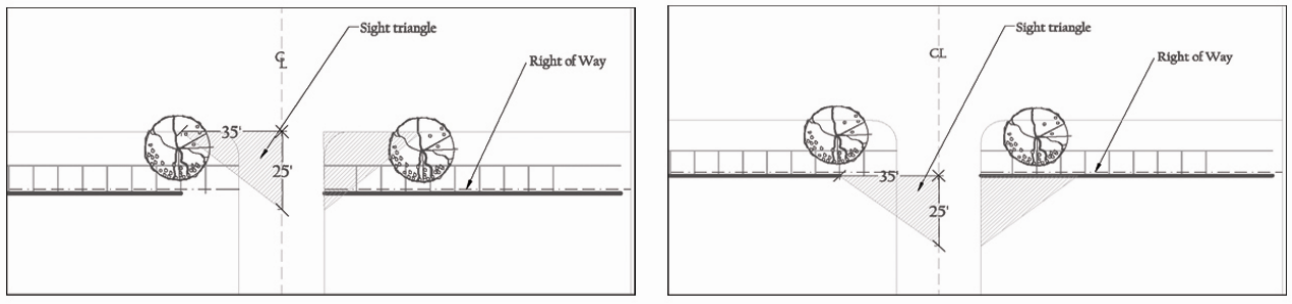


Figure 3.4. Sight triangle regulation for street trees.

times not followed. The ACC Traffic Engineers recommend following guidelines established by the American Association of State Highway and Transportation Officials (AASHTO) and these can be found at http://www.transportation.org/.

3.1.6 Plant Height

Working in conjunction with the sight triangle is plant height or vision clearance. According to ACC Ordinance 9-15-2, vision clearance in the right of way should contain no objects exceeding 2½ feet in height, measured from the top of the curb (see figure 3.5). Street trees exceeding this height may be located in the area, provided that all branches and foliage are removed to a height of eight feet above the grade (Commission 2010).

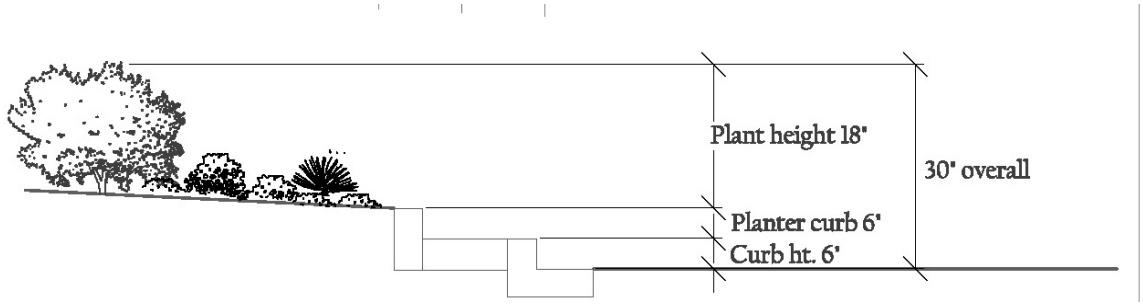


Figure 3.5. Plant height regulation.

3.2 Design Guidelines

The repetition of streetscape elements create the essence of the streetscape and define its overall feel. However, accommodating existing and special conditions are also an important part of the design. Therein lies the challenge and opportunity—to create solutions that harmonize the overall fabric of the streetscape, provide safety, accessibility, and functionality that are aesthetically pleasing. In this study, sidewalk width is the determining criteria for the streetscape. There are a variety of sidewalk widths in the CBD of Athens. The following guidelines and concepts have been developed to illustrate streetscape design based on sidewalk widths: 5 - 9' wide with no trees, 5-6' wide with 5-6' planting strip, 10' wide, and 11-15' wide.

Concept 1

Sidewalk Width: 5 - 9'

Sidewalks of 5 - 9' are the most challenging to design due to the limited amount of space available for pedestrians and street elements. This width of sidewalk generally appear on bidirectional streets with low-volume pedestrian traffic. In addition, the types of businesses are retail and office. These sidewalks cannot accommodate street trees. Therefore, parking meters and light poles are generally the only streetscape elements seen on these sidewalks. However, there is an opportunity for hanging baskets on the light poles in these narrow conditions. Another option could include awning placement on parcel building to provide shade relief and rain protection for pedestrians. Elements included in this concept are a double headed parking meter at the head of and on the center of the parking lines, a light pole in line with the center of the parking lines, a hanging basket and awning option.

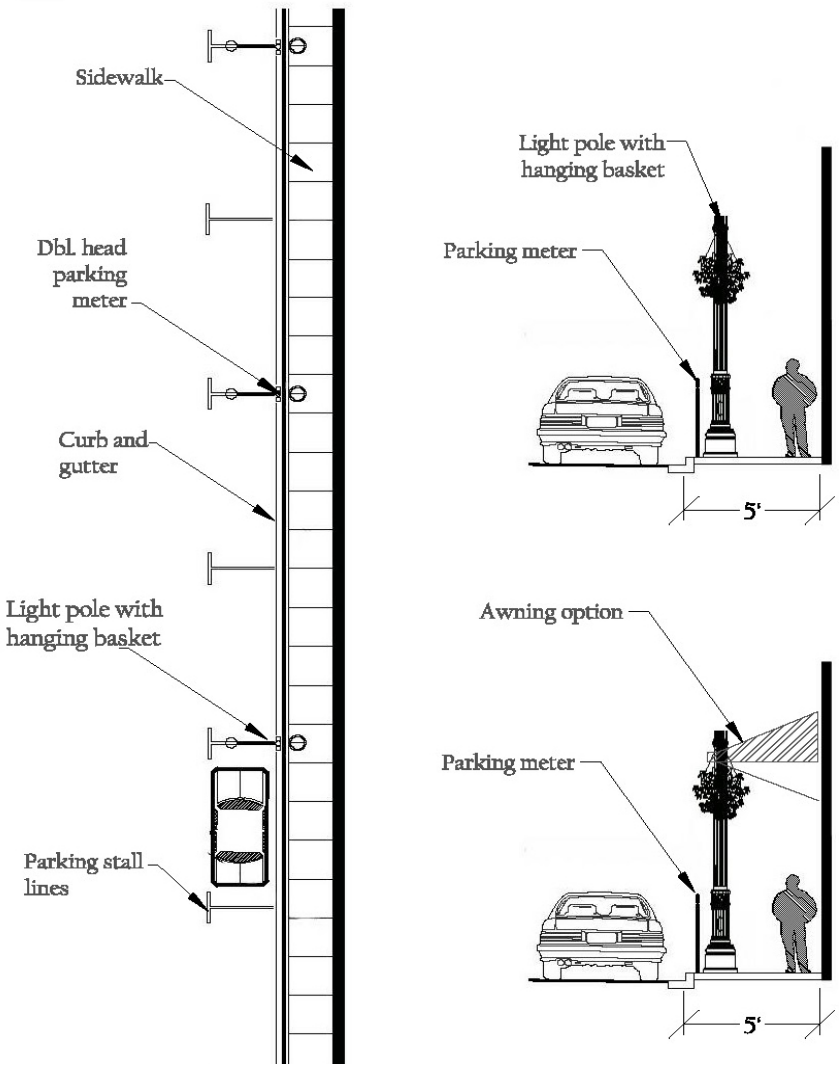


Figure 3.6. Concept 1 Plan and Sections.

3.2.1 Concept 2

Sidewalk Width: 5-6' Wide and Planting Strip 5-6' Wide

This concept illustrates the basic streetscape for 5-6' wide sidewalks and a 5-6' wide planting strip. This width of sidewalk generally appears on bidirectional streets with low to medium-volume pedestrian traffic. In addition, the types of businesses are retail, office and government buildings. Elements included in this concept are a double-headed parking meter with the post set at the head of and on the center of the parking lines. The planting strip holds the street trees also placed on the center of the parking lines to accommodate door swings of parked cars. Both the width of the sidewalk and the planting strip are determined where the right of way begins on the street.

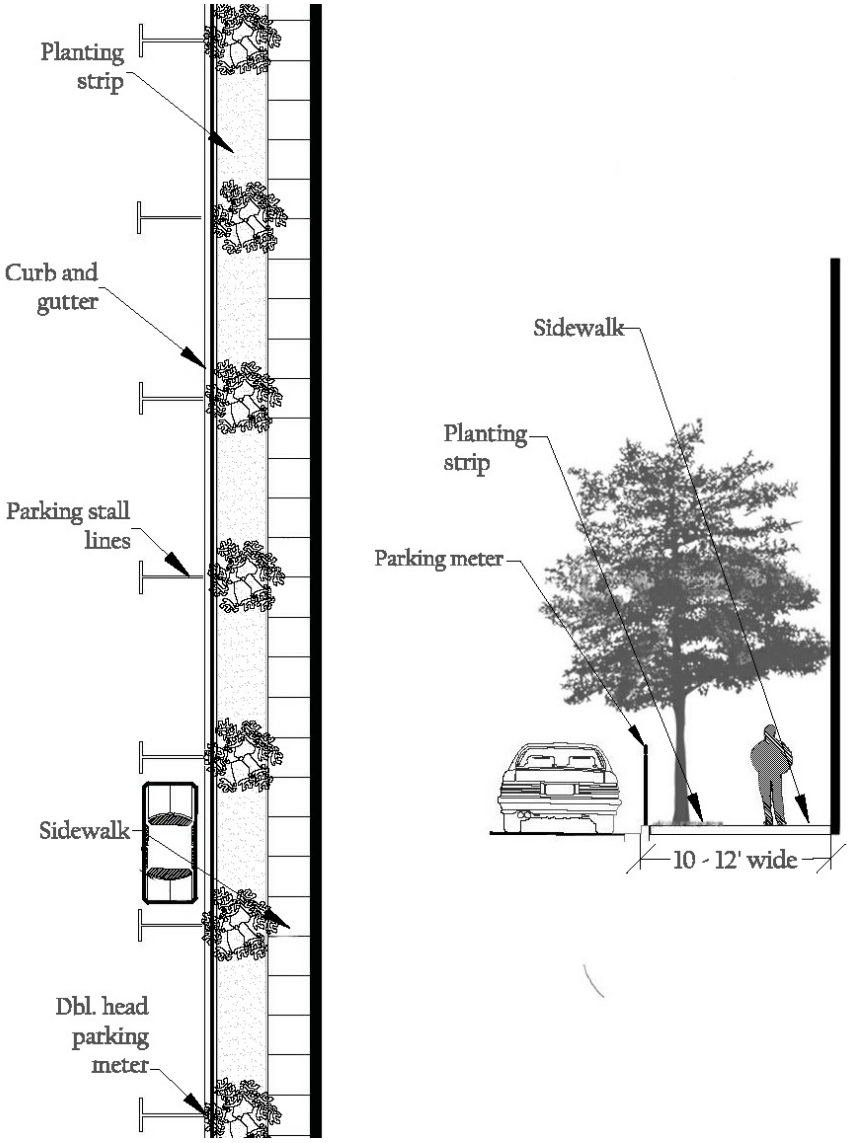


Figure 3.7. Concept 2 Plan and Section.

3.2.2 Concept 3A

Sidewalk Width: 10' Wide

This concept illustrates the basic streetscape for 10' wide sidewalks that includes 4' x 6' tree grate. This width of sidewalk generally appear on one way streets with medium to high volume pedestrian traffic. In addition, the types of businesses are restaurant, retail, and office. Elements included in this concept are a double-headed parking meter with the post set at the head of and on the center of the parking lines. Tree grates in 4' x 6' size are to be placed at the back of curb and set 2' from the center of the parking meter post. The tree grates have a 1' wide concrete band on four sides to give support to the tree grate. Sidewalk control joints are 6' apart and double-scored.

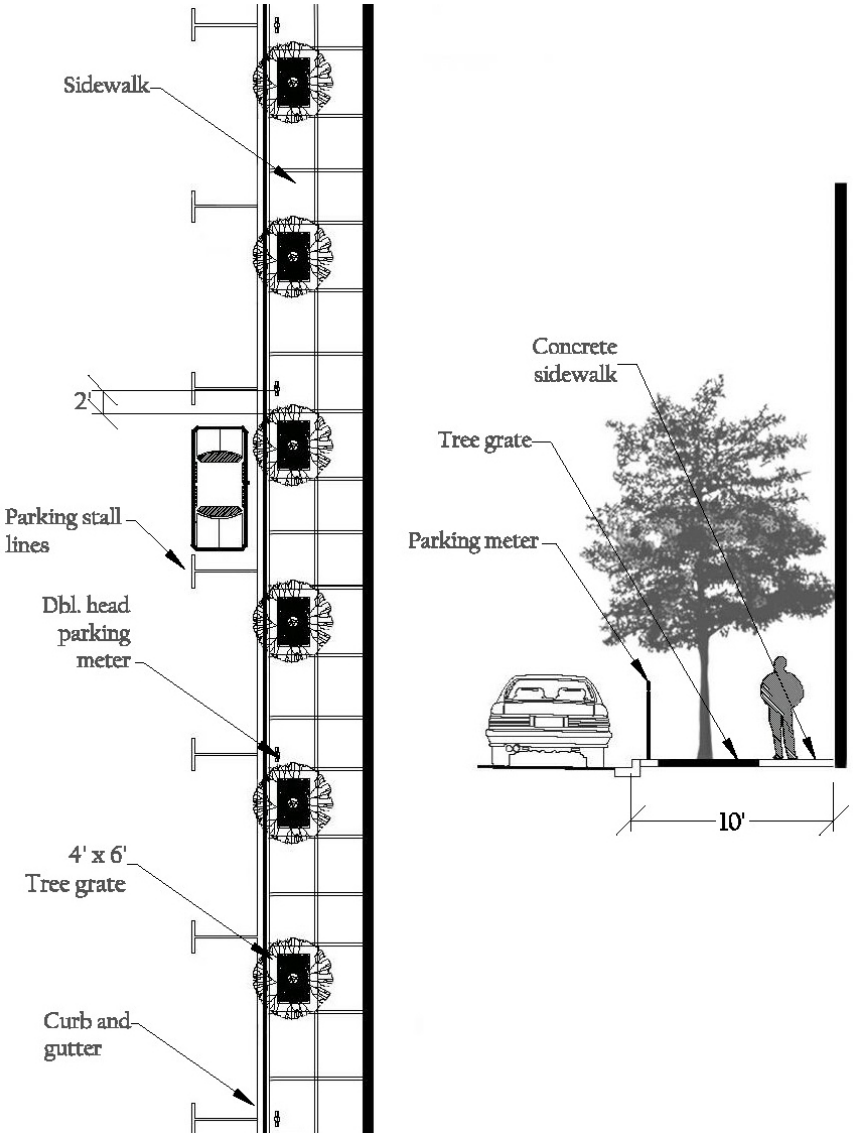


Figure 3.8. Concept 3A Plan and Section.

3.3.3 Concept 3B

Sidewalk Width: 10' Wide

This concept also illustrates the basic streetscape for 10' wide sidewalks that includes 4' x 6' tree grate. The main difference between Concepts 3A and 3B are in this concept pervious paving is used between the tree grates to mitigate stormwater runoff during rain storms. The pavers in conjunction with a continuous tree pit provides the best root zone for street trees. This type of sidewalk treatment has been shown to provide the best possible growing conditions for street trees in urban area while also meeting the needs of heavy pedestrian traffic. In Concepts 3A and B, the streetscape elements are located to accommodate door swing areas from parked cars. This width of sidewalk generally appear on one way streets with medium to high volume pedestrian traffic. In addition, the types of businesses are restaurant, retail, and office.

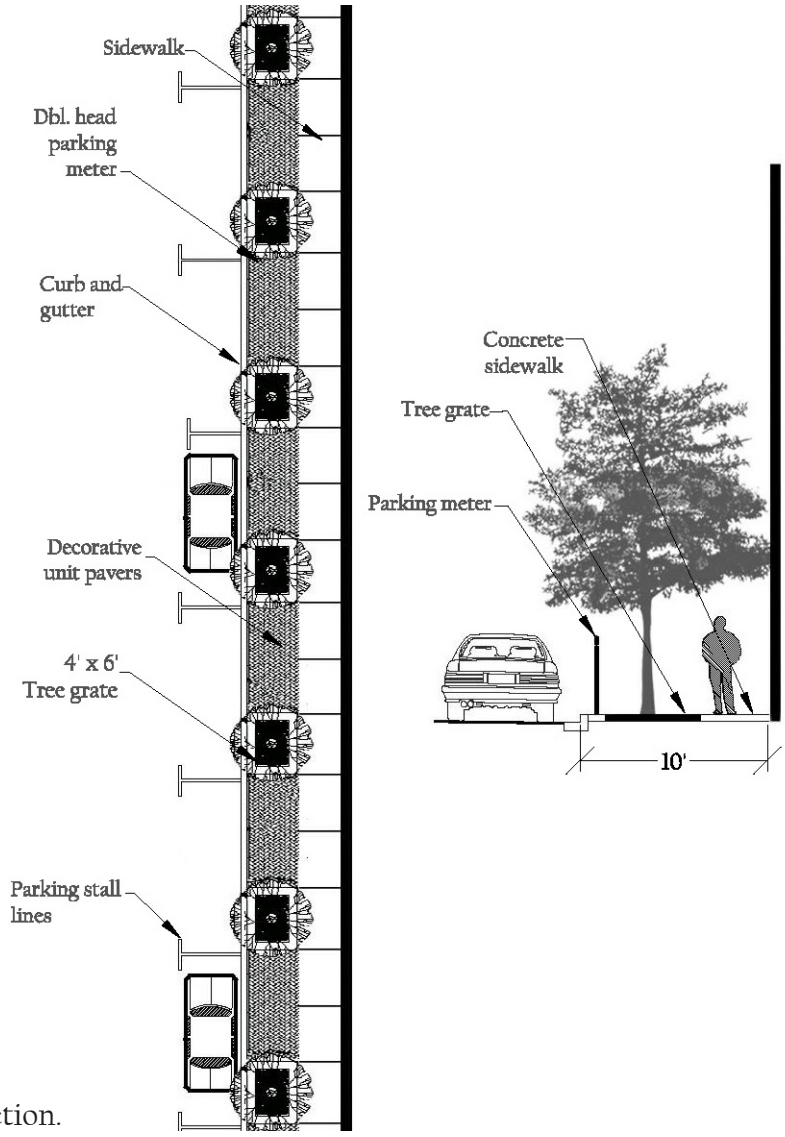


Figure 3.9. Concept 3B Plan and Section.

3.3.4 Concept 4A

Sidewalk Width: 11 - 15' Wide

This concept illustrates the basic streetscape for 11 - 15' wide sidewalks. This width of sidewalk can appear on one way or bidirectional streets with medium to high volume pedestrian traffic. In addition, the types of businesses are restaurant, retail, and office. The streetscape elements included are 5' wide planters with an 18" planting curb or a planting curb flush with grade surrounded with an 18" decorative fence. The planters are placed with 10' gaps between each. The gaps provide sidewalk access for parked drivers to feed parking meters as well as allow pedestrian pooling areas off the main sidewalk area.

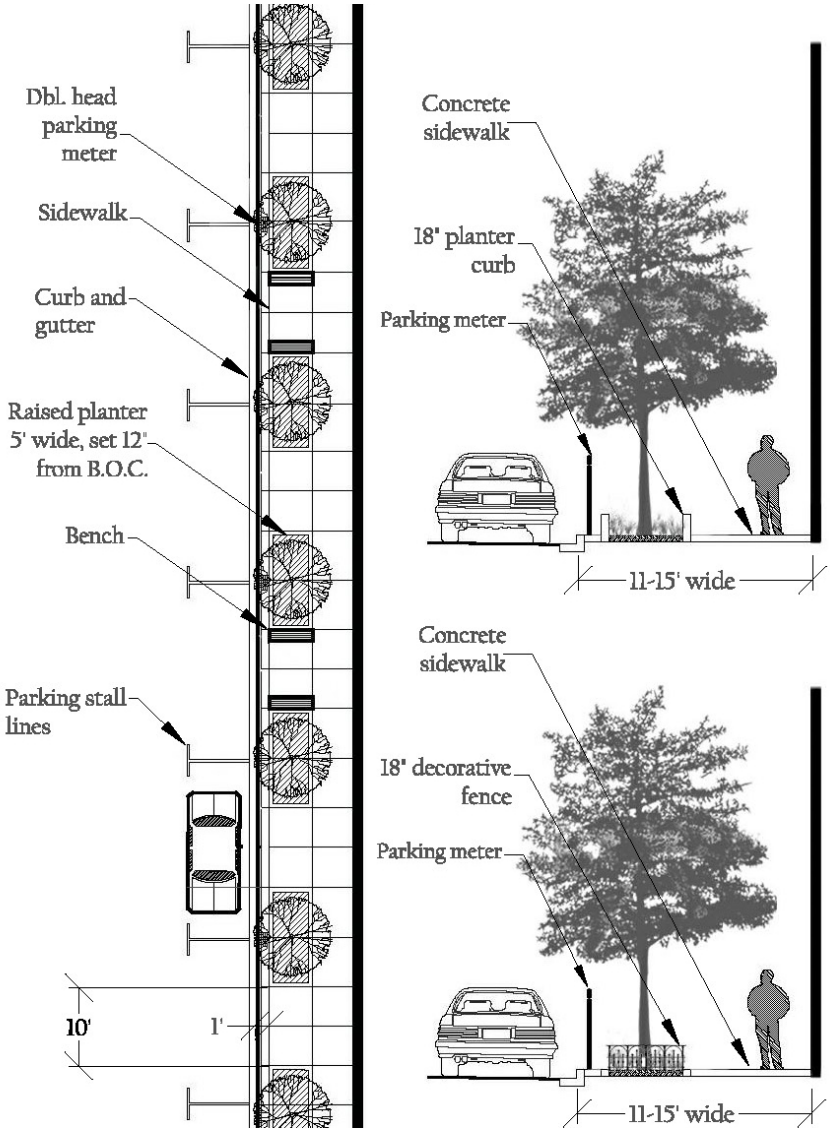


Figure 3.10. Concept 4A Plan and Sections.

3.3.5 Concept 4B

Sidewalk Width: 11 - 15' Wide

This concept also illustrates a streetscape for 11 - 15' wide sidewalks. The illustration on the lower right includes 5' wide planters with an 18" planting curb or a planting curb flush with grade surrounded with an 18" decorative fence. The planters and trees are set to accommodate car door swings. The planters in this example could vary from long to short.

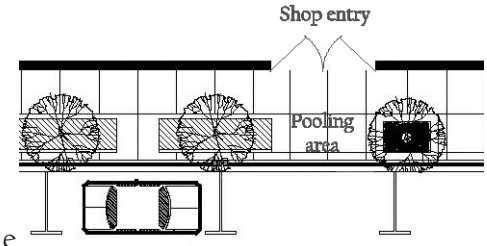


Figure 3.11 Shop entry and pooling.

The planters need careful placement to coordinate with shop entry and heavy pedestrian traffic (Figure 3.11). This width of sidewalk can appear on one way or bidirectional streets with medium to high volume pedestrian traffic. In addition, the types of businesses are restaurant, retail, and office.

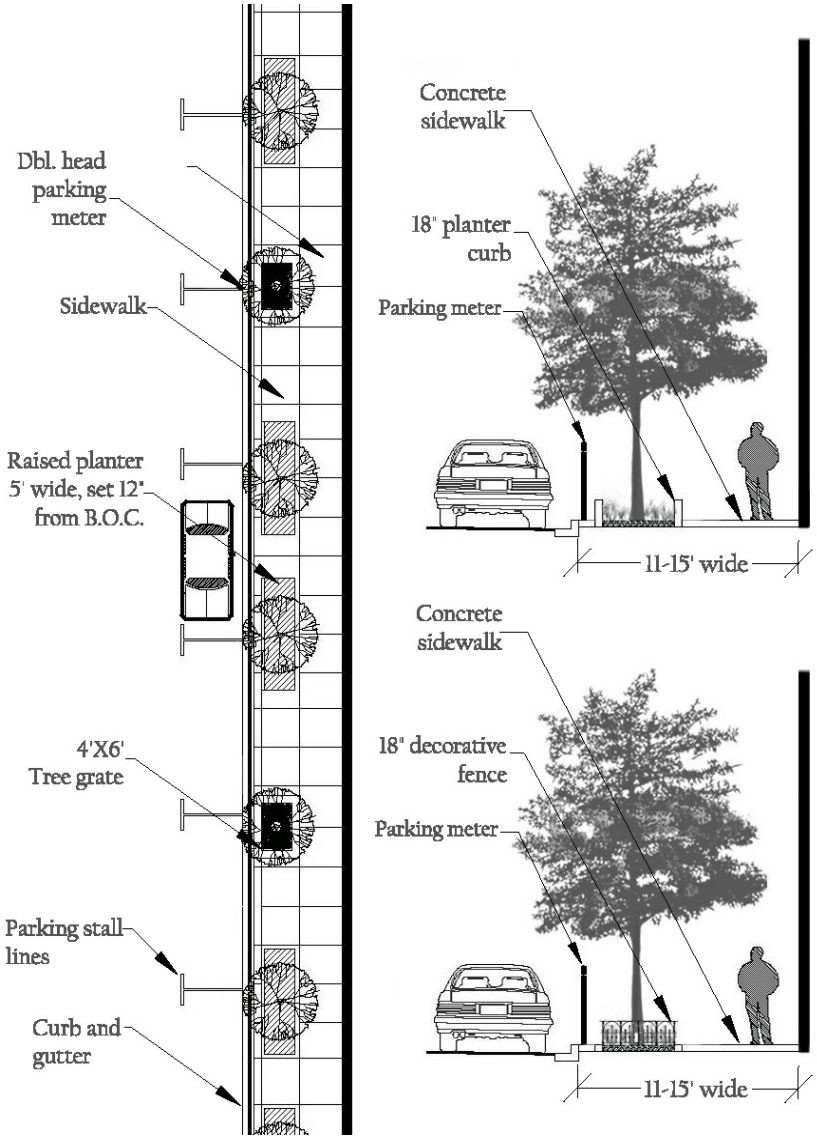


Figure 3.12. Concept 4B Plan and Sections.

The map on the following page is meant to give the reader a visual for where the concepts that were just presented would appear in the Central Business District. The premise of these guidelines is to assist with future streetscape design. Since future development is unknown for the downtown area, the map is shown according to existing conditions and illustrates streetscape designs that could be easily implemented. Four general scenarios are shown with the following sidewalk widths: 5 – 9', 5' sidewalk and planting strip, 10' sidewalk, and 11 – 15' sidewalks. If future downtown redevelopment occurs on a wider scale such as entire block redevelopment, these guidelines will help create cohesive streetscapes that accomplish the goal of tree canopied streets.

STREETSCAPE DESIGN KEY FOR THE CENTRAL BUSINESS DISTRICT
Athens, Georgia

Map is NTS

CHAPTER 4

MATERIALS

4.1 Materials

The selection and use of the correct materials for urban trees are of paramount importance to a trees survival. In addition, when conditions in an urban setting change, protection of existing trees becomes crucial for their survival. Using the proper soil structure, choosing the right tree species, selecting the proper support structures for a green wall and tree protection during construction all add to the insurance of healthy growing conditions in an urban setting. For the Central Business District of Athens the following materials will be discussed: structural soil, tree vaults, choice of tree, tree grates, tree protection during construction and green wall materials.

4.1.1 Structural Soil

Structure and pore space are two characteristics seen in every type of soil. They become important considerations when it comes to urban trees. Soil structure is the shape, size, strength and arrangement of soil aggregates. Pore space is the area between the aggregates that allow trees to obtain water, oxygen and nutrients from the soil mixture. Urban development generally leads to soil compaction due to the requirement for load-bearing structures such as sidewalk and roads. Unfortunately, this is in direct conflict with what a tree needs for survival. Structural soils are soils that can be compacted to meet engineering requirements yet allow for root growth and healthy tree development. Use of structural soil has been shown to increase survival and performance of urban trees. These types of soils range from sand mixes to aggregates of gravel, clay loam and hydrogels, which are added as a stabilizing agent. This

combination of 'ingredients' create perfect pore space to enhance and support root growth of city trees (Lilly 2010). The preferred growing medium used by Athens-Clarke County is CU-Soil, developed by Cornell University shown in the image below. CU Structural Soil satisfies the structural need of supporting a sidewalk by using a composition of 1½" crushed angular stone that is coated with a sandy loam soil. When the material is compacted the stones touch one another which gives the material it's strength. This maintains stone-to-stone contact and the soil component is suspended within the void space between the stones. The void space (pore space in native soil) allows for a much higher degree of oxygen and water flow throughout the soil providing a higher level of nutrients, oxygen and water to the roots. CU Soil also allows the roots to grow in a downward and horizontal direction, whereas in a traditional tree planting the roots follow the path of least resistance (www.cu-structuralsoil.com 2012).

Figure 4.1. Image of CU-Soil demonstrating large aggregate structure. Photo courtesy of JV Environmental, Austin, TX.

4.1.2 Tree Vaults

In addition to structural soil for urban tree survival, tree vaults provide adequate root space under paved areas in an urban setting. A tree vault is essentially a long continuous pit to allow rooting space for trees (see figure 4.2 below). Instead of a closed system where roots have little chance to escape, a longitudinal pit allows for more liberal growing conditions. The

combination of the structural soil added to the tree vault provides support for existing infrastructure and at the same time enhances tree development and growth (Saunders 2012). This system is most effective as illustrated in Concept 3B. It is important to note that this system could also be used in lieu of solid concrete for the other concepts in order to achieve the healthiest urban trees.

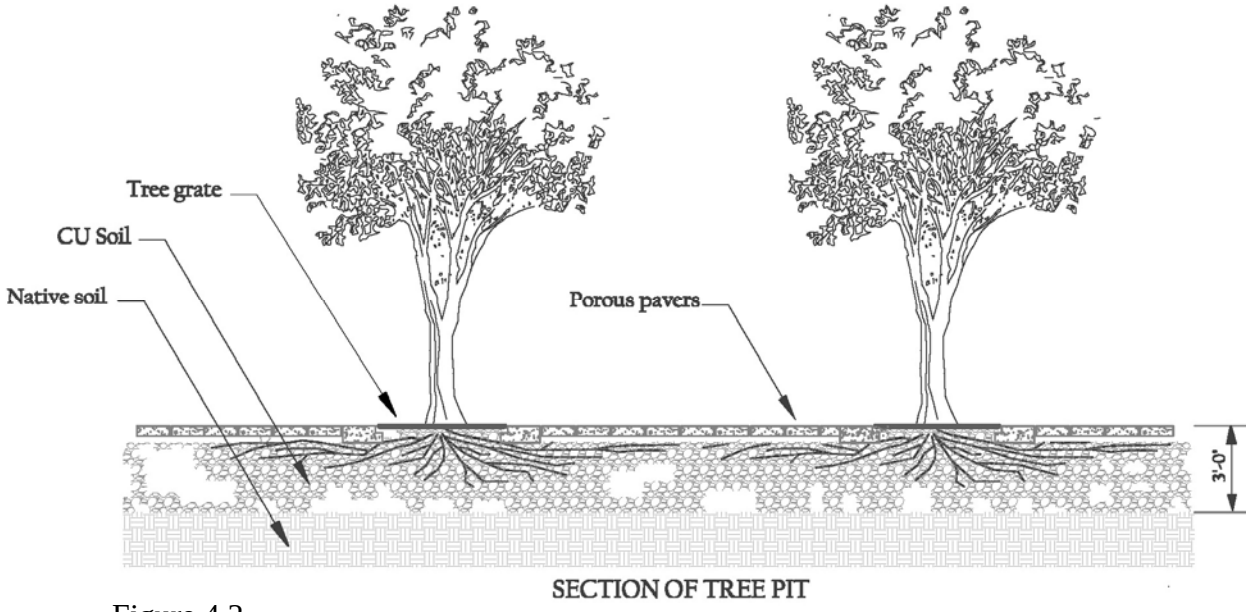


Figure 4.2.

4.1.3 Tree Habit—Choosing the correct street tree

Matching the correct tree to a site is one of the most important aspects in the design process. Every tree species has specific requirements for light, water, soil conditions, and growing space. However, when planting street trees, there in an increased importance in choosing the correct tree for the space to be planted. For example, factors such as pollution tolerance, tree diversity on a given block, and tree habit should all be considered. The Athens-Clarke County Community Tree Program provides a list of trees best used for urban conditions. The comprehensive list can be found in the Athens-Clarke County Tree Species List in the Community Forestry Best Management Practices at

http://athensclarkecounty.com/DocumentView.aspx?DID=702 and also exists as an Appendix C at the end of this document. Trees appropriate for the CBD can be found under the 'Recommended Uses' section under 'Plazas and Downtown Settings.'

4.1.4 Tree Grates

Athens-Clarke County uses four, five and six foot tree grates supplied by East Jordan Iron Works where products can be viewed at www.ejiw.com. Currently, the grates are placed flush with the top of the sidewalk. However, site issues in the Central Business District have caused the grates to raise and heave—primarily by roots. One possible solution is to place the grates on piered foundations (figure 4.3) to reduce the contact area of the grate on the open soil.

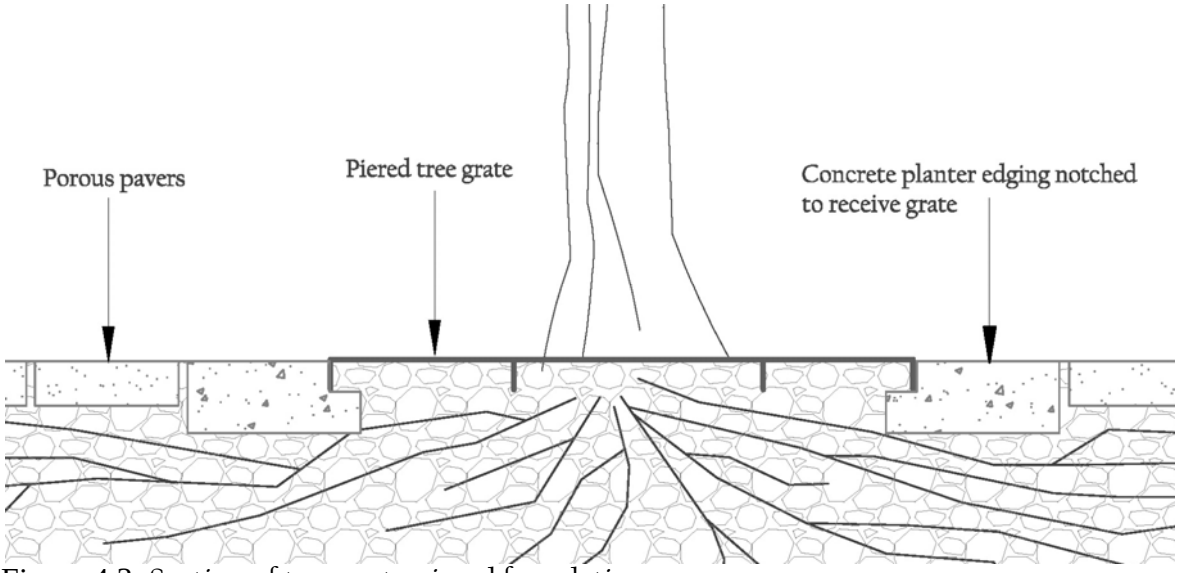


Figure 4.3. Section of tree grate piered foundation

4.2 Urban tree protection during construction

The purpose of this section is to assist the reader in understanding the physical barriers and their dimensions for street tree protection during a construction project. Protection before and during is paramount to a trees' survival after the project is over. If trees are to be preserved, planning for protection at the last minute during the project is likely to result in lost trees. The earlier in the project a tree professional is involved in working with contractors and developers,

the more likely the project will have minimal impact on existing street trees. Open communication with all professionals involved in the project will result in a positive outcome for all—including the trees.

Putting in writing the exact protection measures for street trees required by a contractor is the best practice for protection of street trees during a construction project. Treating trees once damage has occurred is limited in success; therefore protection is vital to success. Depending on the site, tree vitality prior to construction can mean the difference between moderate stress and death. Measures such as water management, mulching, and fertilization could go a long way prior to and result in healthy trees as the end result (Lilly 2010).

The most important action during a construction process is to create a barrier around the street trees to be protected prior to the project beginning. The root systems of any tree generally extend much further out than the drip line of the tree. The goal is to protect the root system as much as possible. Damage that occurs below the soil, generally appears in the canopy and is sometimes not exhibited for years after damage has occurred.

The following guidelines for urban tree protection measures are described and shown in the figures below. For trees planted in paved areas such as a sidewalk, a six foot high chain link fence should enclose the entire tree pit for any given street tree. It is important that the fence be free-standing, not anchored to the ground in order to avoid root damage. The existing paved surface should be maintained outside of the fence line to protect the roots as shown in figure 4.4.

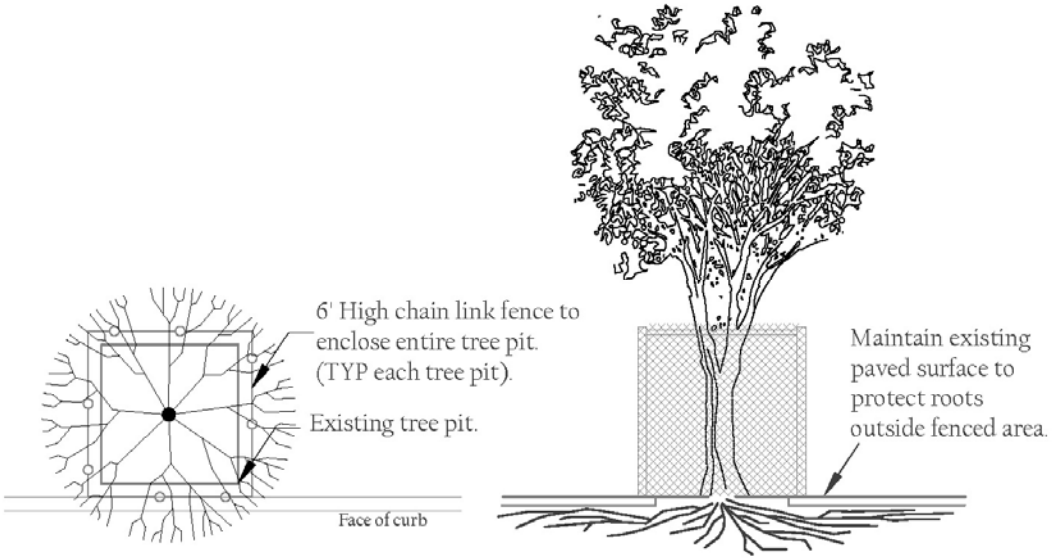


Figure 4.4. Protection fence requirements during construction projects. Image adapted from the City of Seattle.

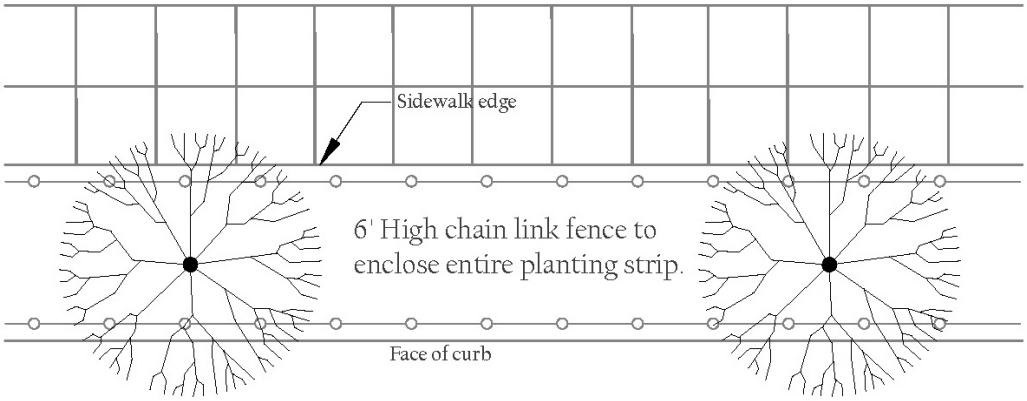


Figure 4.5. Option 1 tree protection for non-paved areas. Image adapted from the City of Seattle.

Two options are available for non-paved areas. The above image (figure 4.5) depicts root protection with a six foot high fence enclosing the entire planting strip. A second option for root protection in non-paved areas warrants providing six to eight inches of mulch covered with ¾" plywood and six foot fencing around individual trees (figure 4.6).

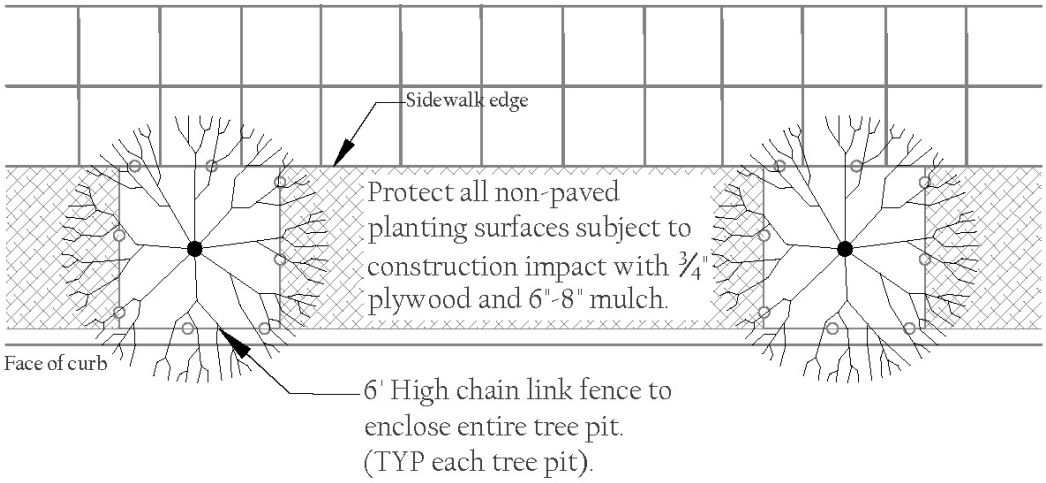
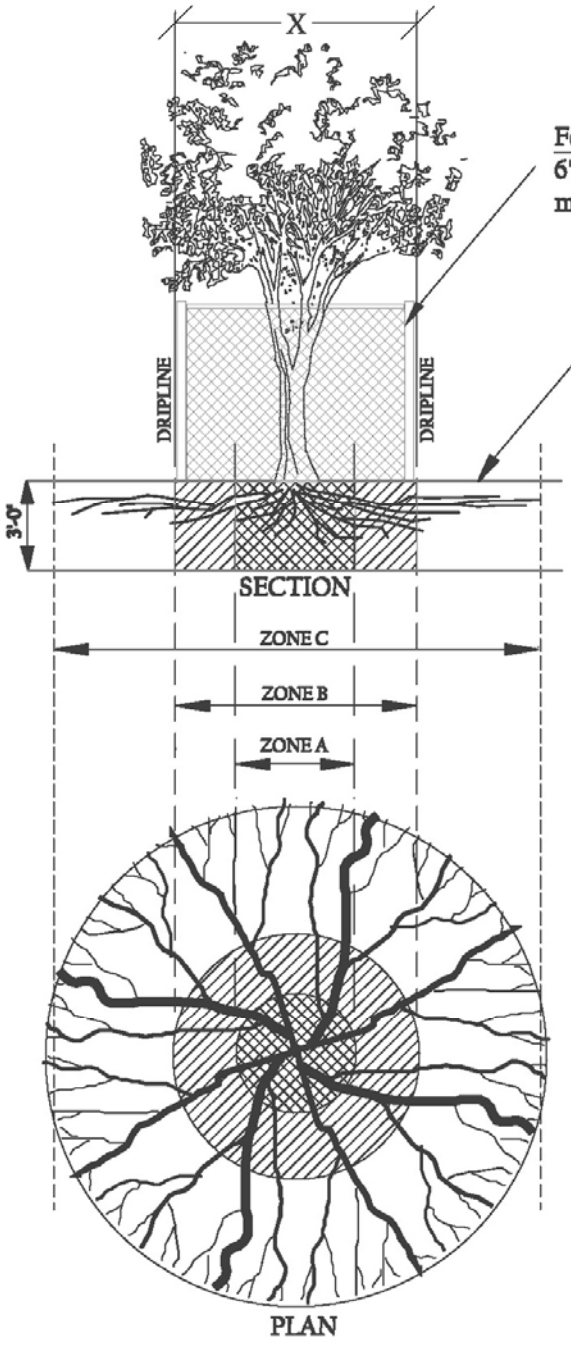


Figure 4.6. Option 2 tree protection for non-paved areas. Image adapted from the City of Seattle.

There are three tree zones of tree roots that need protection during a construction project. Zone A is the critical root zone, also known as the zone of rapid taper and the root plate. This zone is the stabilizing support for the tree and no disturbance should occur during construction to this area unless otherwise approved by the County arborist (see figure 4.7). Zone B is the dripline also referred to as transport or structural root zone. These roots as well as the feeder root zone generally extend 2 to 5x the height of tree. Operation of heavy equipment or stockpiling of construction debris is discouraged. If trenching is to take place, excavation by hand is recommended. For best practice, 2/3's of this zone should remain undisturbed (see figure 4.7). Lastly, Zone C extends furthest out from the tree trunk. This area is often referred to as the horizontal root fan or biologic area. These roots are responsible for nutrient exchange and water absorption. The same practice as noted for the dripline zone should be followed—operation of heavy equipment or stockpiling of construction debris is discouraged. If trenching is to take place, excavation by hand is recommended. Again, best practice warrants 2/3's of this zone should remain undisturbed as shown in figure 4.7 on the following page.



Fencing and Root Protection
6' chainlink fencing to be provided and maintained at dripline.

Surface Protection Measures if needed
- Mulch layer - 6-8" depth
- ¾" Plywood

ZONE C Feeder Root Zone
- Operation of heavy equipment and/or stockpiling of materials subject to engineers approval. Surface protection measures may be required.
- Trenching with heavy equipment allowed as follows:
  - Minimize trench width.
  - Maintain ⅔ or more or ZONE C in undisturbed condition.

ZONE B Dripline
- Operation of heavy equipment and/or stockpiling of materials subject to engineers approval. Surface protection measures may be required.
- Trenching allowed as follows:
  - Excavation by hand or with hand-driven trencher.
  - Limit trench width. Do not disturb ZONE A. Maintain ⅔ or more of ZONE B in undisturbed condition.
- Tunneling may be required for trenches deeper than 12" maximum.

ZONE A Critical Root Zone
- No disturbance allowed without site-specific inspection and approval of methods to minimize root damage.
- Severance of roots larger than 2 inches dia. requires engineers approval.
- Tunneling required to install lines 3 ft. below grade or deeper.

Figure 4.7. Tree protection of root zones during construction projects. Image adapted from the City of Seattle.

4.3 Green Wall Materials

While this document serves mainly as the Central Business District tree design guideline, a green wall has been proposed for the south façade of the Morton Theatre. The theatre is owned by Athens-Clarke County therefore the suggestion for greenery is relevant since it does not fall into the private property realm.

Green walls, if appropriately placed on the south or west façade of a building have been proven to not only provide aesthetic quality from planting design but also provide building protection from the elements and can provide energy savings up of up to 20% (Grey 2012). Because the Morton Theatre is considered an historic structure in the CBD (figure 4.8), protection of the exposed brick on the south façade would be beneficial, providing the additional energy savings for the County as well provide living art for the people of Athens.

Figure 4.8. Morton Theatre's south façade.

One of the most prominent vendors of green wall materials is Green Screen based in Los Angeles, California. The following images and information are courtesy of Green Screen. They are meant to act as guidelines only, not formalized specifications for a green wall on the Morton Theatre.

Due to the historic nature of the Morton Theatre, the green wall would need to be constructed so plants would not grow directly on the brick and mortar but on the wall trellis system instead. The section below displays the wall mounted unit resting 9" off the wall. The unit could rest up to 18" off the wall and still provide the beneficial attributes from the green wall as seen in figure 4.9 below.

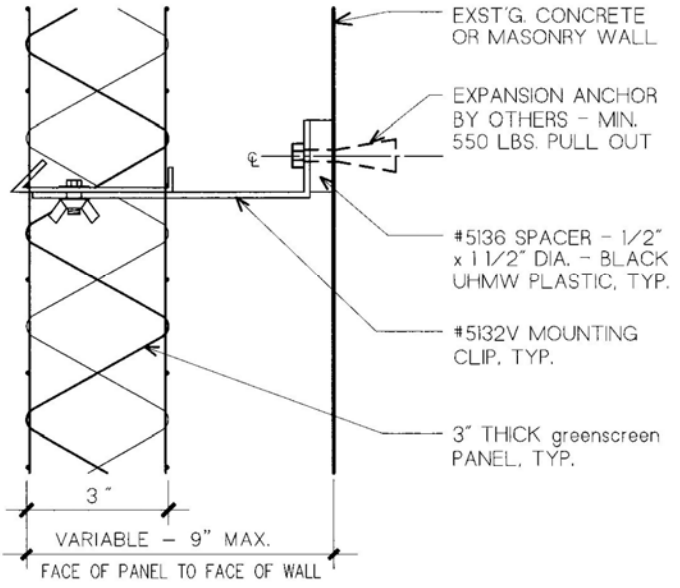


Figure 4.9. Section of green wall unit position distance from face of wall. Image courtesy of Green Screen.

The height of the Morton Theatre is about 40' overall. For purposes of the green wall to provide benefit, the entire south façade would not need to be covered. On average, 28-30' of the south facade could be utilized by the green wall and still obtain the benefits. The images on the following pages depict the elevation of the green wall material and a mock up of what the Morton Theatre might look like if the wall were to be constructed.

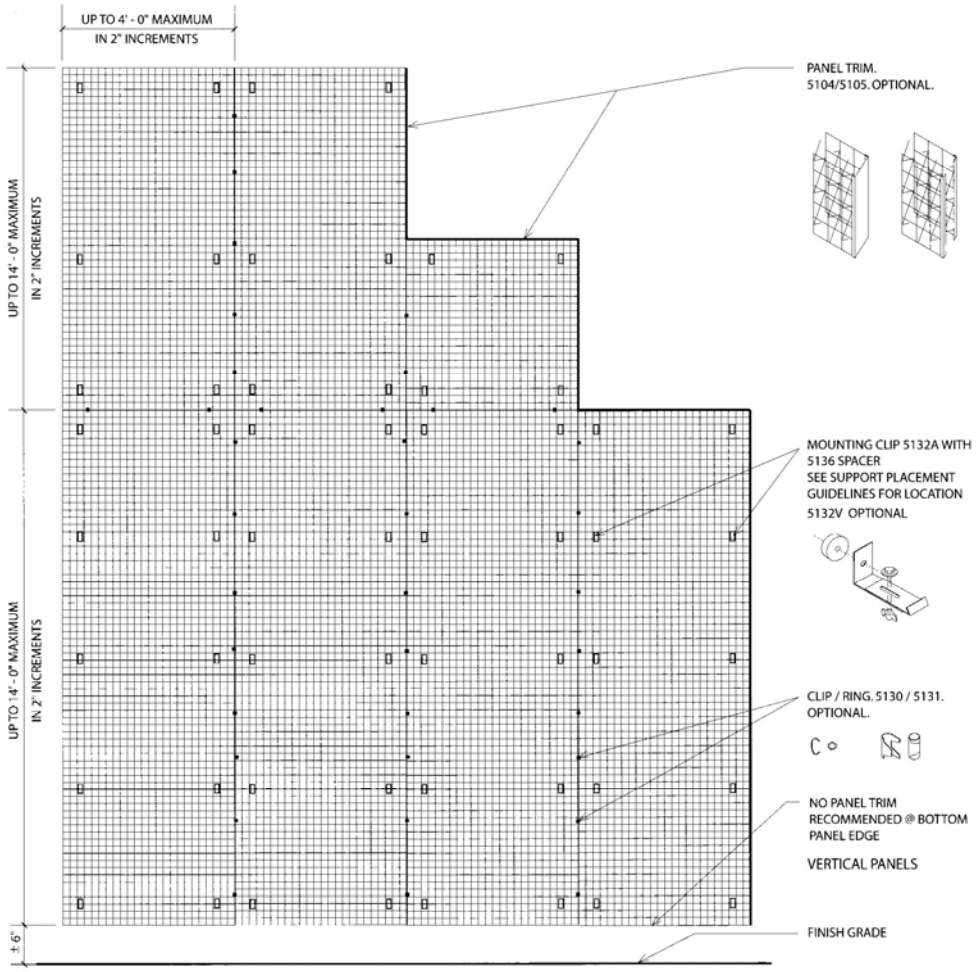


Figure 4.10. Elevation of green wall unit. Image courtesy of Green Screen.

Figure 4.11. Morton Theatre green wall mock-up. Photo by author.

CHAPTER 5

CONCLUSIONS AND FUTURE RESEARCH

5.1 Conclusions

Planning for future urban trees in the Central Business District of Athens was prompted by the desire of the Landscape Management Division to have a set of design recommendations and guidelines in place as the business district experiences change to its infrastructure over time. This study provided an in-depth inventory and analysis that resulted in design guidelines for the CBD. The guidelines are consistent with other city streetscape guidelines (see Cities of Seattle and Chicago).

Providing consistent, easy to interpret guidelines is imperative to assuring proper planting, cohesive design and aesthetically pleasing city blocks that appease both property owners and create desirable, pedestrian friendly environments for the general public.

The process of analysis and discovering where urban trees are lacking or in decline will help the Landscape Management Division prioritize for future urban tree projects. For example, Dougherty, Hancock and Thomas streets revealed opportunities for the potential of 60 tree placements. It is important to state that thorough investigation of underground utilities be conducted before moving forward with any construction project. That said if changes to existing infrastructure become warranted, these guidelines will also serve as templates for design and tree protection to hopefully alleviate erratic streetscape design and decrease tree damage, respectively.

5.2 Future Research

Urban tree technology continues to advance at a rapid pace in the tree care industry. In particular, is how to best accommodate the rooting space of urban trees and simultaneously support infrastructure for sidewalks and roadways. The advent of a product known as Silva Cell is a modular pavement system used to support large trees and urban infrastructure. This product could be used in lieu of engineered or CU-Soil that Athens Clarke County currently uses. Developed by Dr. Tom Smiley at the Bartlett Tree Laboratory in Charlotte, North Carolina, Dr. Smiley found that trees planted in Silva Cell conditions with a loam soil mixture out performed trees planted in an engineered soil substrate by overall size, number of leaves and leaf color (Smiley, 2010). While the Silva Cell system is an expensive investment—approximated at $10,000 per urban tree (Saunders, 2012), the benefits to the urban forest could potentially off set tree replacements over time in the Central Business District of Athens thereby saving the county money due to fewer tree replacements.

This study is the genesis of what could grow into a district or city wide decision making tool for future urban greenery and revealed the symbiotic relationship of urban street trees and businesses in the area. Collaboration from the Athens Downtown Development Authority and the County Landscape Management Division would ensure that relationship continues. The private realm relies on the altruistic nature of public tax dollars and planting urban trees—maintaining a healthy urban forest is truly for the greater good of the merchants, customers and the citizens of Athens. Kathleen Wolf stated that the "urban forest may be the streetscape equivalent of interior store atmospherics" (Wolf 2004). Urban trees are just the beginning of what could be a colorful, unified green tapestry in the Central Business District that could include hanging baskets, ground containers, and overhead structures for shade protection, green roof implementation, and green walls.

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APPENDIX A

CENTRAL BUSINESS DISTRICT INDIVIDUAL STREET MAPS

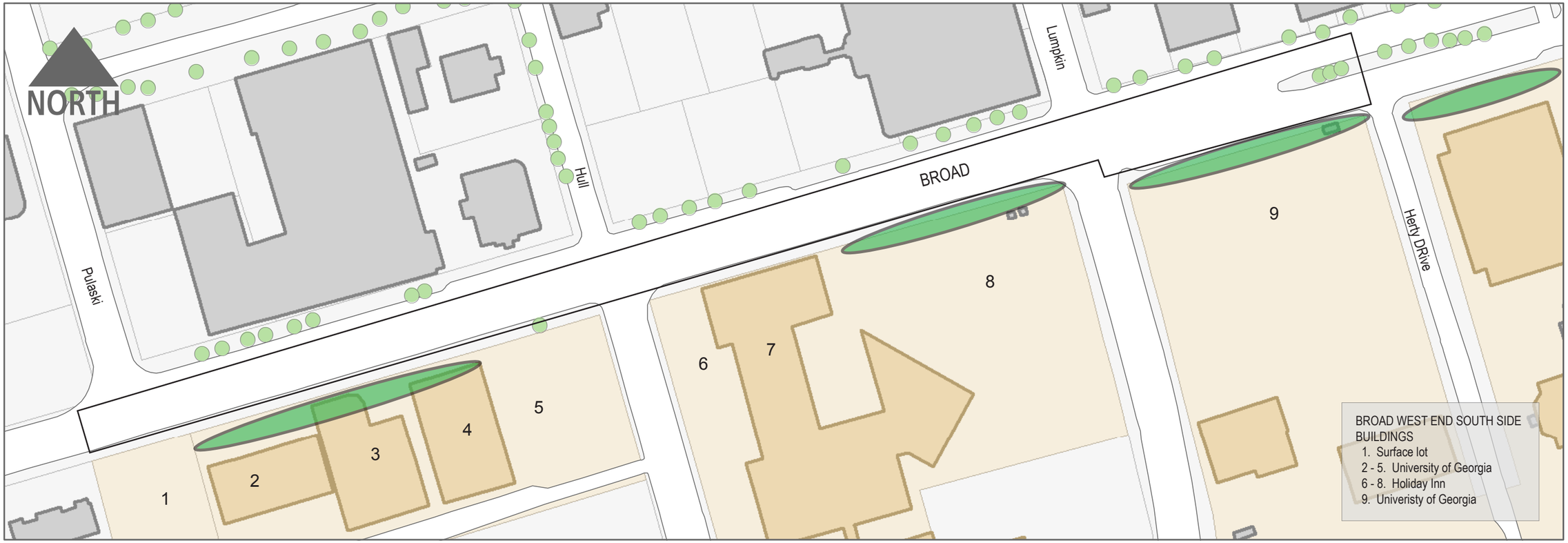
GREENERY LEGEND

- New street tree
- Stable existing street tree
- Existing private greenery
- Potential replacement street tree

BUILDING LEGEND

- Government buildings and lots
- Private property and lots

BROAD STREET-WEST END NORTH SIDE
1" = 100'



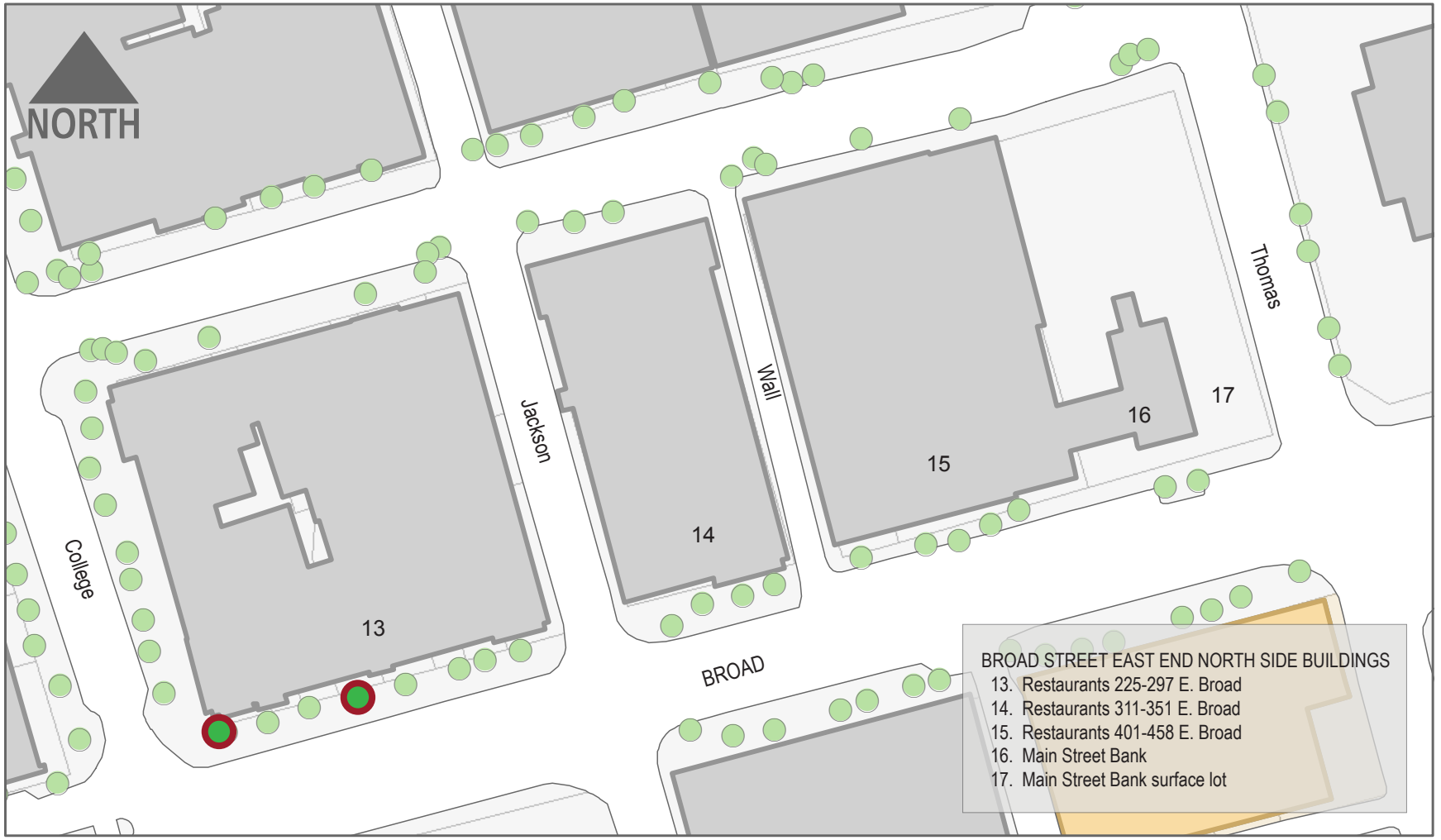
GREENERY LEGEND

- Stable existing street tree
- Existing private greenery

BUILDING LEGEND

- Government buildings and lots
- Private property and lots

BROAD STREET-WEST END SOUTH SIDE
1" = 100'



GREENERY LEGEND

- Stable existing street tree
- Existing private greenery
- Potential replacement street tree

BUILDING LEGEND

- Government buildings and lots
- Private property and lots

BROAD STREET- EAST END NORTH SIDE
1" = 100'

GREENERY LEGEND

- New street tree
- Stable existing street tree
- Existing private greenery
- Potential replacement street tree

BUILDING LEGEND

- Government buildings and lots
- Private property and lots

BROAD STREET- EAST END SOUTH SIDE
1" = 100'

GREENERY LEGEND

- Stable existing street tree
- Private greenery

BUILDING LEGEND

- Government buildings and lots
- Private property and lots

CLAYTON STREET - WEST END
1" = 100'

GREENERY LEGEND

- New street tree
- Stable existing street tree
- Private greenery

BUILDING LEGEND

- Government buildings and lots
- Private property and lots

CLAYTON STREET - EAST END
1" = 100'

COLLEGE AVENUE
1" = 100'

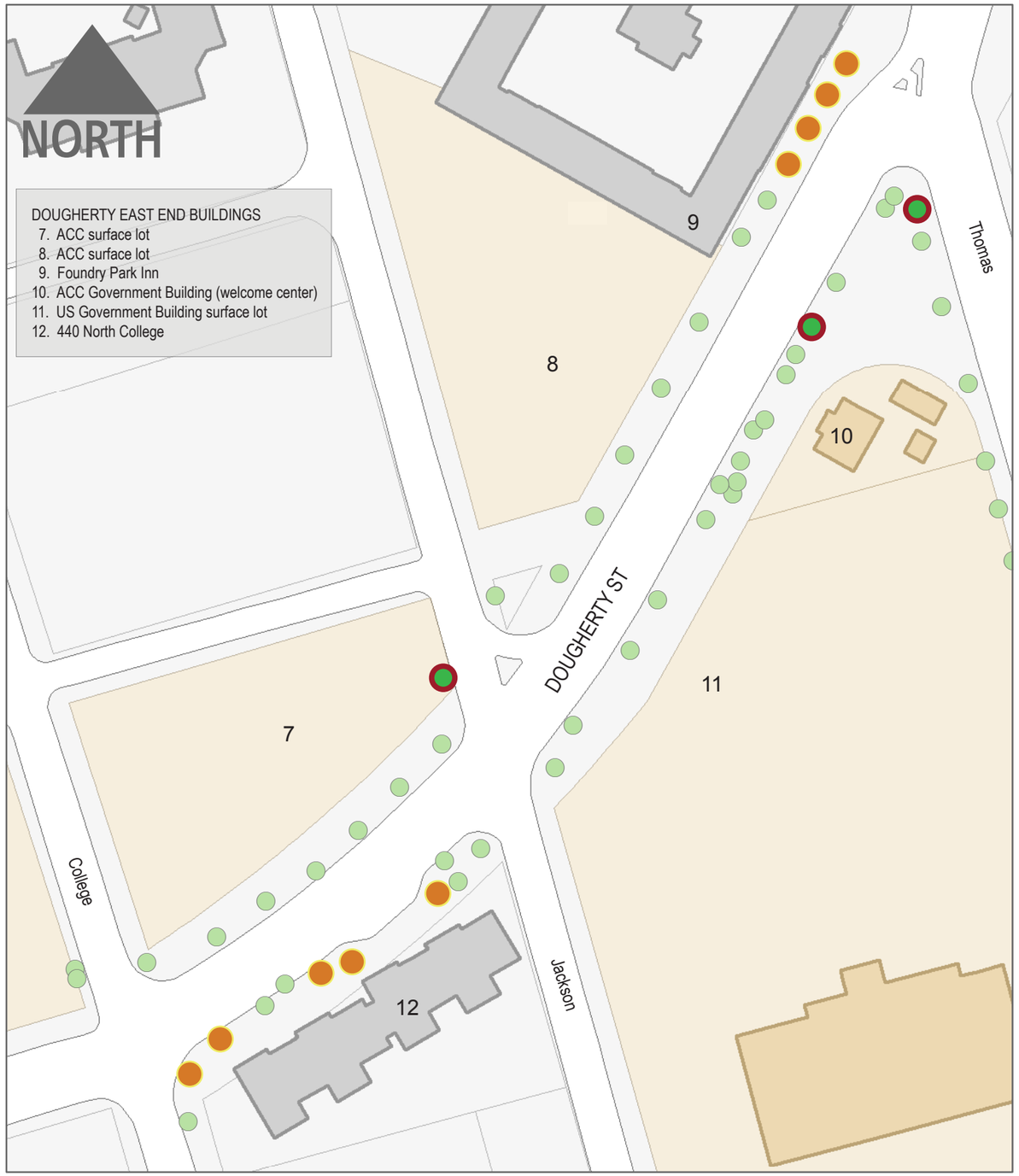
GREENERY LEGEND

- New street tree
- Stable existing street tree
- Existing private greenery
- Potential replacement street tree

BUILDING LEGEND

- Government buildings and lots
- Private property and lots

DOUGHERTY STREET - WEST END
1" = 100'



GREENERY LEGEND

- New street tree
- Stable existing street tree
- Potential replacement street tree

BUILDING LEGEND

- Government buildings and lots
- Private property and lots

DOUGHERTY STREET - EAST END
1" = 100'

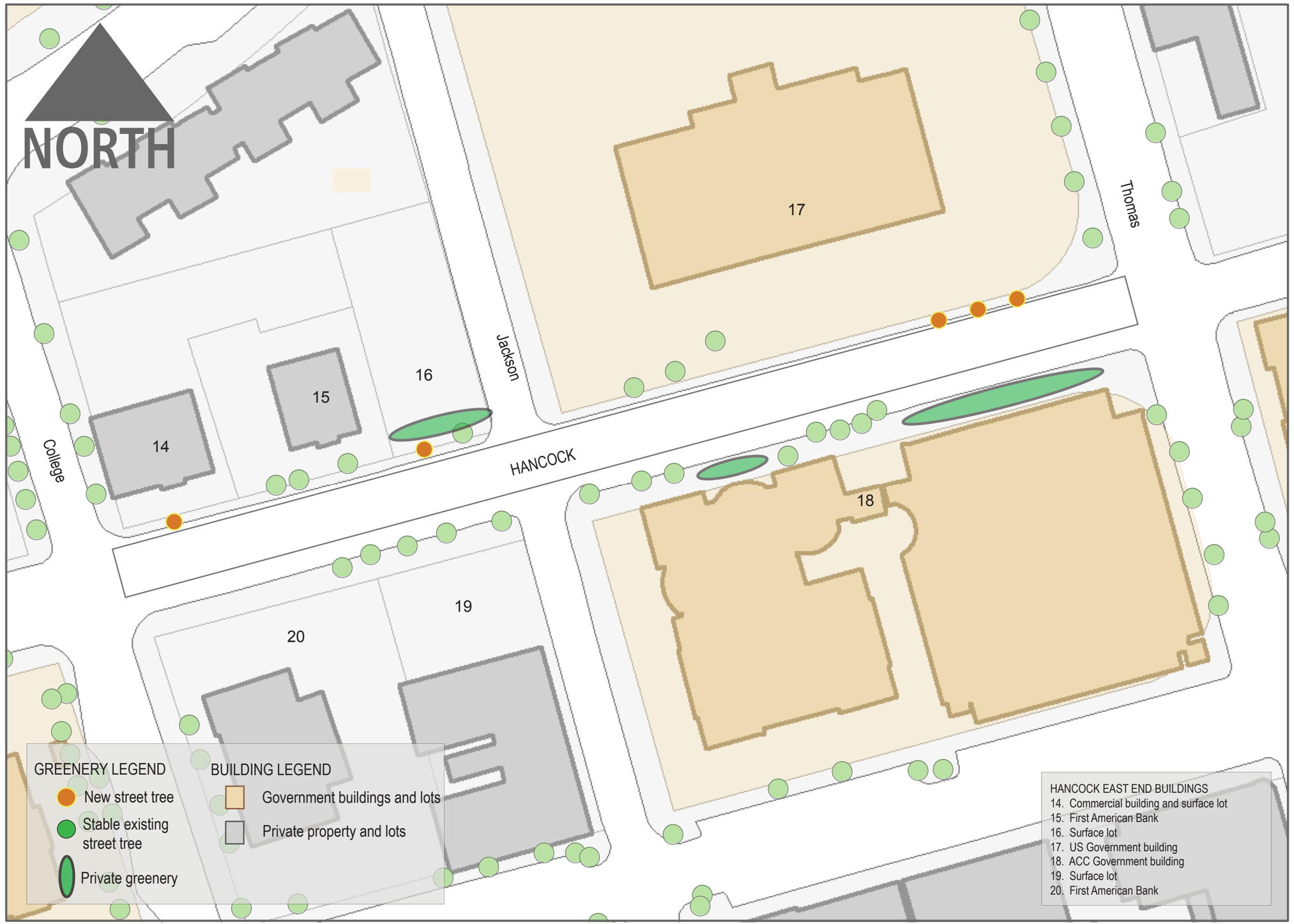
GREENERY LEGEND

- New street tree
- Stable existing street tree
- Private greenery

BUILDING LEGEND

- Government buildings and lots
- Private property and lots

HANCOCK STREET - WEST END
1" = 100'



HANCOCK STREET - EAST END
1" = 100'

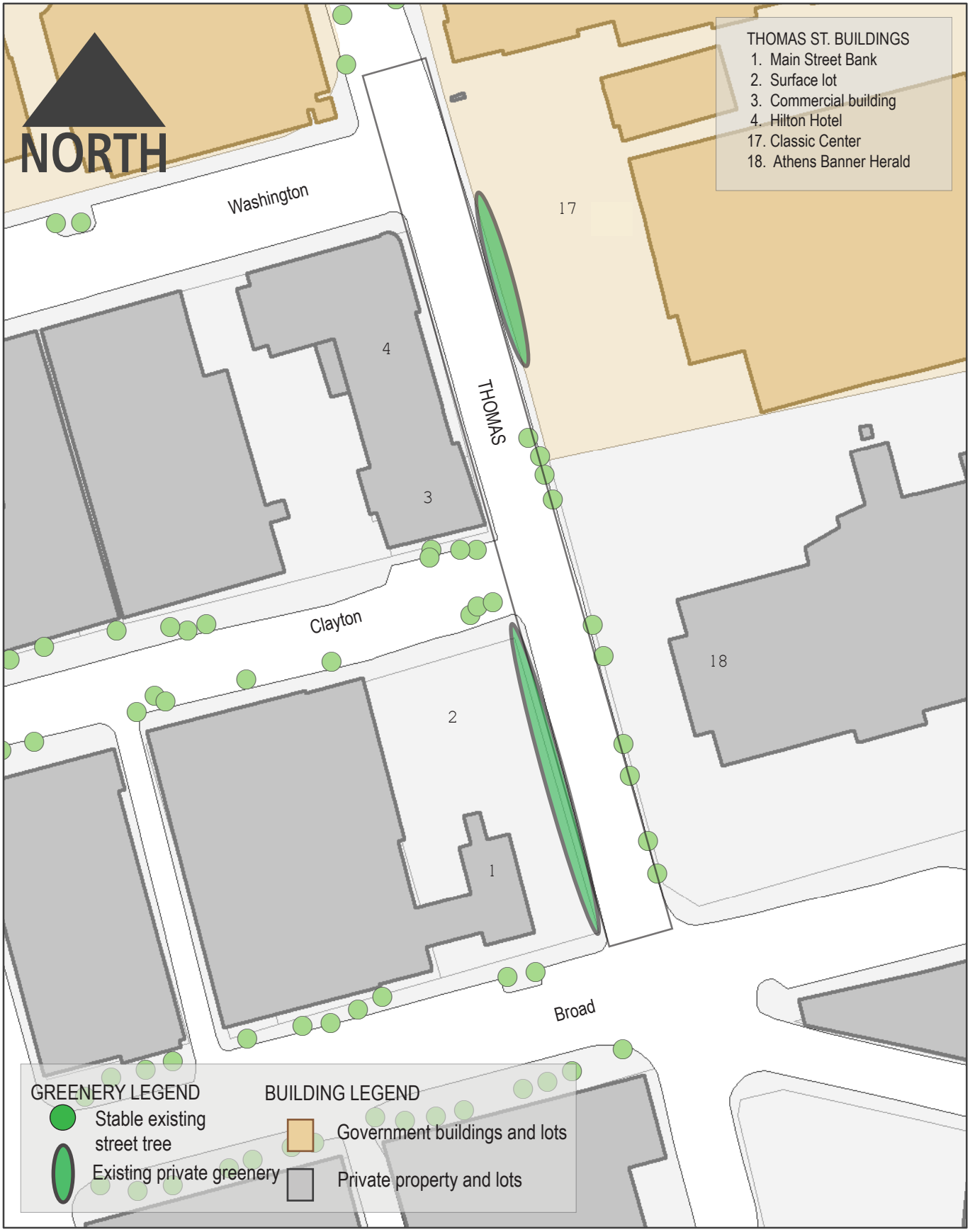
HULL STREET
1" = 100'

JACKSON STREET
1" = 100'

LUMPKIN STREET
1" = 100'

PULASKI STREET
1" = 100'

THOMAS STREET - NORTH END
1" = 100'



THOMAS STREET - SOUTH END
1" = 100'

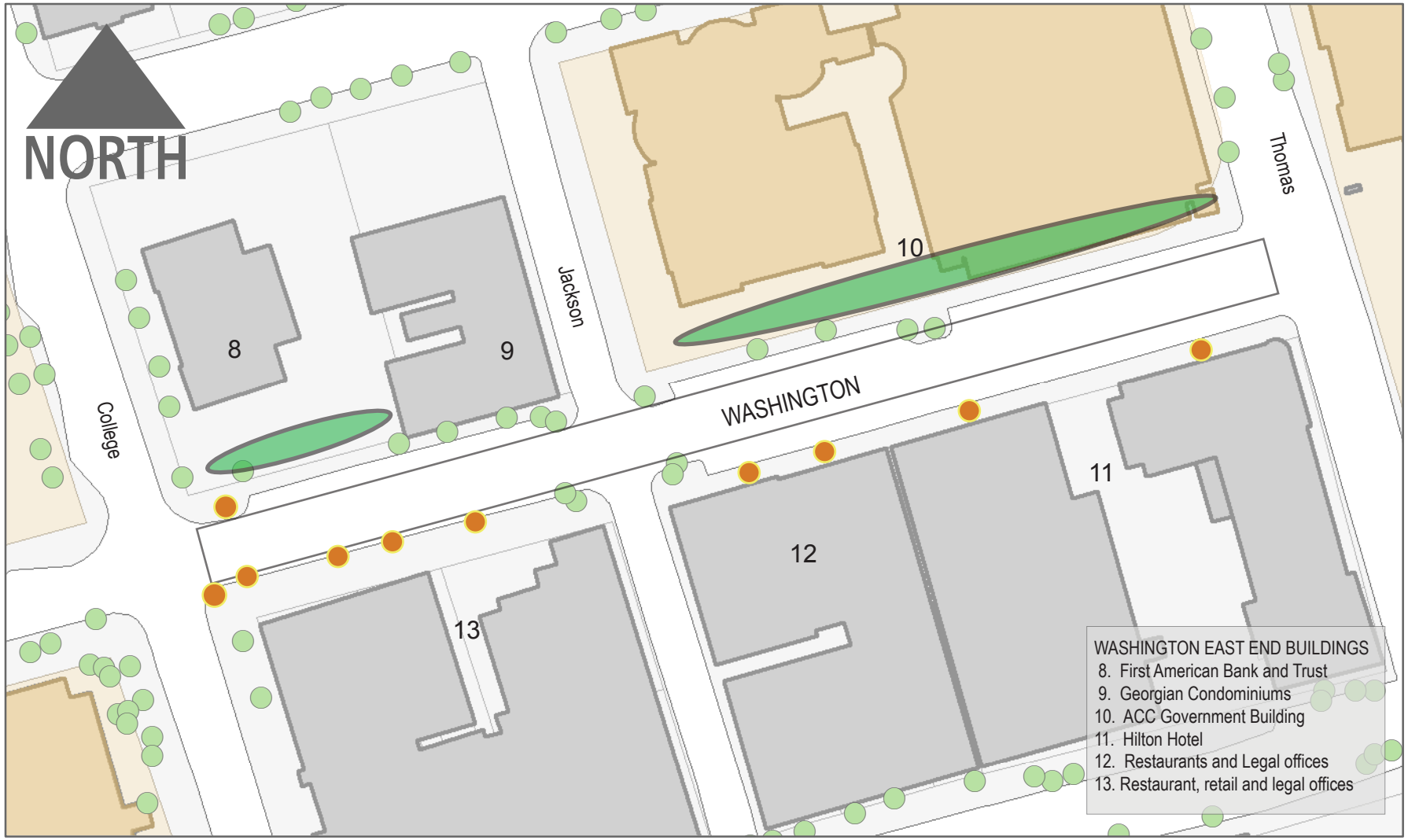
GREENERY LEGEND

- New street tree
- Stable existing street tree
- Private greenery

BUILDING LEGEND

- Government buildings and lots
- Private property and lots

WASHINGTON STREET - WEST END
1" = 100'



GREENERY LEGEND

- New street tree
- Stable existing street tree
- Private greenery

BUILDING LEGEND

- Government buildings and lots
- Private property and lots

WASHINGTON STREET - EAST END
1" = 100'

APPENDIX B

URBAN GREENERY TABLES

BROAD STREET URBAN GREENERY—North aspect										
Inventory									Tree Habit and Height*	General Analysis
Properties—Name and Address	*Building/parcel Description*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*		
1. Surface lot 296 W. Broad	Asphalt parking lot	Asphalt	PRIVATE GREENERY							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
2. 296 W Broad (multi-business structure)	1 story, strip-mall building with 4 businesses	Concrete sidewalk.	4 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
3. Gameday of Athens and retail shops 250 W. Broad	8 story condominium complex with street level retail	Concrete sidewalk.	4 street trees	Approx. 11’					▫ Upright ▫ Pyramidal ▫ Oval SMALL = 15-25’	2 STREET TREES ▫ Available space in existing site line of trees. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.
4. Surface lot 250 W Broad	Asphalt parking lot	Asphalt	N/A							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
5. Greyhound Bus Station 220 W. Broad	1 story blond brick	Concrete sidewalk.	PRIVATE GREENERY							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
6a-c. 3 Surface lots 186-150 W. Broad	Asphalt parking lot	Asphalt and concrete sidewalk.	6 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
7. Suntrust Bank 101 N. Lumpkin	2 story red brick	Concrete sidewalk.	5 street streets							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
8. Surface lot 115 E. Broad	Concrete surface lot	Red brick paver sidewalk	2 street trees	Approx. 11’	Approx. 40’	Approx. 13’	Street lamp and bike rack	5’ or less.	▫ Upright ▫ Pyramidal ▫ Oval SMALL = 15-25’	1 STREET TREE ▫ Available space in existing ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal. ▫ Would need to relocate existing bike rack.

Inventory - Broad Street. North Aspect									Tree Habit and Height*	General Analysis
Properties—Name and Address	*Building/parcel Description*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*		
9. Mixed use condo/retail 131 E.Broad	Multi story condo-apartment building with street level retail	Red brick paver sidewalk	2 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
10. Surface lot 141 E. Broad	Concrete surface lot.	Concrete drive and brick paver sidewalk.	1 street tree							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
11. Restaurant/Retail 151–167 E Broad	1-3 stories.	Red brick paver sidewalk	2 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
12. Restaurant/Retail 191 E. Broad	3 story	Red brick paver sidewalk	4 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
13. Restaurants 225-297 E. Broad (College to Jackson)	2-3 story historic facades	Red brick paver sidewalk	8 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
14. Restaurants 311-351 E. Broad (Jackson to Wall)	2 story historic	Red brick paver sidewalk	4 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
15. Restaurants 401-458 E. Broad	Multi story, some historic facades	Red brick paver sidewalk	5 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
16-17. Main Street Bank with surface lot	2 story new construction	Red brick paver sidewalk	2 street trees							N/A (Sidewalk contains other street elements – could conflict with street trees.)

Site notes—
Unless otherwise notes, all urban greenery recommendations and analysis do not consider BELOW ground infrastructure utilities such as water and sewer lines, existing street tree vaulting or other tree infrastructure, electrical or communication lines.
**See Appendix C.*

BROAD STREET—South aspect										
Inventory									Tree Habit and Height*	General Analysis
Properties—Name and Address	*Building/parcel Description (north to south)*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*		
1. Surface lot 297 W. Broad	Asphalt parking lot	Asphalt and concrete sidewalk	N/A							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
2-5. University of Georgia 251 W. Broad	One story new construction with stucco facade	Concrete sidewalk.	PRIVATE GREENERY							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
6-8. Holiday Inn 197 W. Broad	Multi-story red brick facade	Concrete sidewalk.	N/A							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
9. University of Georgia Lumpkin to College	North Campus University of Georgia buildings	Red brick pavers	PRIVATE GREENERY							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
10. University of Georgia College to Jackson	North Campus University of Georgia buildings	Red brick pavers	PRIVATE GREENERY							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
11. Restaurants/Retail 312-382 E. Broad	2 story retail	Concrete sidewalk.	7 street trees	Approx. 5-6’	Approx. 5-8’	Approx. 10’	Bike rack	5’ or less.	▫ Upright ▫ Pyramidal ▫ Oval SMALL = 15-25’	1 STREET TREES ▫ Available space within ROW and space between existing trees. ▫ Would need to relocate existing bike rack and cigarette station.
12. University of Georgia 434-456 E. Broad		Asphalt and concrete sidewalk.	4 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
13. Franklin House 464 E. Broad		Concrete sidewalk.	4 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)

Site notes—
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**See Appendix C.*

CLAYTON STREET URBAN GREENERY—North aspect										
Inventory									Tree Habit and Height*	General Analysis
Properties—Name and Address	*Building/parcel Description*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*		
1. Surface lot	Surface parking lot	Asphalt	4 street trees	1. Surface lot						N/A (ROW has sufficient street tree plantings)
2. 256 – 250 W. Clayton Restaurants and retail	1 -2 story brick	Concrete sidewalk to facade	3 street trees	2. 256 – 250 W. Clayton Restaurants and retail						N/A (ROW has sufficient street tree plantings)
3. 240 W. Clayton Restaurants and retail	1 -2 story brick	Concrete sidewalk to facade	2 street trees	3. 240 W. Clayton Restaurants and retail						N/A (ROW has sufficient street tree plantings)
4. Restaurant and retail	3 story brick	Concrete sidewalk to facade	4 street trees	4. Restaurant and retail						N/A (ROW has sufficient street tree plantings)
5. Surface lot	Surface parking lot	Asphalt	1 street tree	5. Surface lot						N/A (Sidewalk to narrow to accommodate street trees or other greenery)
6. 174 - 160 W. clayton		Concrete sidewalk to facade	5 street trees	6. 174 - 160 W. Clayton						N/A (ROW has sufficient street tree plantings)
7. Georgia Theatre	Multi story new construction	Concrete sidewalk to facade	10 street trees	7. Georgia Theatre						N/A (ROW has sufficient street tree plantings)
8. 101 – 165 W. Clayton Restaurants and retail	1 – 3 story brick	Concrete sidewalk to facade	3 street trees and PRIVATE GREENERY	8. 101 – 165 W. Clayton Restaurants and retail						N/A (ROW has sufficient street tree plantings)
9. 220 College Ave. – 223 E. Clayton Restaurants and retail	1 -3 story brick	Concrete sidewalk to facade	4 street trees	9. 220 College Ave. – 223 E. Clayton Restaurants and retail						N/A (ROW has sufficient street tree plantings)
10. 301 – 361 E. Clayton ACC parking deck	1 -3 story brick	Concrete sidewalk to facade	5 street trees PRIVATE GREENERY	10. 301 – 361 E. Clayton ACC parking deck						N/A (ROW has sufficient street tree plantings)
11. Hilton Hotel 390 E Washington	Multi story hotel	Concrete sidewalk to facade	3 street trees	Approx. 12’	N/A	N/A	Driveways	5’ or less	▫ Upright ▫ Pyramidal ▫ Oval MED. = 25-40’	2 STREET TREES ▫ Available space in ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.

12. 485 E. Clayton	1 story commercial	Concrete sidewalk to facade	5 street trees	Approx. 10'	Approx. 10'	Approx.30'	N/A	5' or less	▫ Upright ▫ Pyramidal ▫ Oval MED. = 25-40'	1 STREET TREE ▫ Available space in ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.
Clayton Street-South Aspect										
Inventory									Tree Habit and Height*	General Analysis
Properties—Name and Address	*Building/parcel Description*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*		
13. Surface lot	Surface parking lot	Asphalt	3 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
14. 458 – 450 E. Clayton Restaurants and retail	1 – 3 story brick	Concrete sidewalk to facade	5 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
15. 320 E. Clayton Restaurants and retail	1 – 3 story brick	Concrete sidewalk to facade	3 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
16. 262 – 220 E. Clayton Restaurants and retail	Varied heights and facades	Concrete sidewalk to facade	9 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
17. 195 College – 110 E. Clayton	Varied heights and facades	Concrete sidewalk to facade	11 street tree							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
18. 199 N. Lumpkin - 133 W. Clayton	Multi story mixed use	Concrete sidewalk to facade	5 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
19. Surface lot	Surface parking lot	Asphalt	1 street trees							N/A (Large concrete driveway in ROW)
20. Surface lot	Surface parking lot	Asphalt	3 street tree							N/A (Large concrete driveway in ROW)

Site notes—
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**See Appendix C.*

COLLEGE STREET URBAN GREENERY—West aspect										
Inventory									Tree Habit and Height*	General Analysis
Properties—Name and Address	*Building/parcel Description*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*		
1. Retail and Restaurants 191 E Broad – 195 College (Broad to Clayton)			9 street trees							N/A (Street scape established with mature trees and newly replaced trees in ground containers.)
2. Retail 165 E Clayton	2 story brick	Concrete sidewalk	2 street trees	Approx. 10’	Approx. 20’	Approx. 30’	Parking meters, street light	5’ or less	▫ Upright ▫ Pyramidal ▫ Oval MED. = 25-40’	1 STREET TREE ▫ ROW allows for 1 street tree. ▫ Continue aesthetic of tree lined street.
3. ACC Parking Deck 255 College	Multi story glass and steel parking deck with retail on main level.	Concrete sidewalk	13 street trees	Approx. 10’	Approx.30’	Approx. 70’?	Parking meters	5’ or less	▫ Upright ▫ Pyramidal ▫ Oval MED. = 25-40’	1 STREET TREE ▫ ROW allows for 1 street tree. ▫ Continue aesthetic of tree lined street.
4. ACC Government building (city hall) 301 College	Historic?	Brick pavers	10 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
5-6. First Presbyterian Church of Athens 185 E Hancock	2 story stucco	Concrete sidewalk	6 street trees PRIVATE GREENERY							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
East Aspect										
7. Commercial building 440 N College Ave	3 story brick	Concrete sidewalk with turf planting strip	1street tree PRIVATE GREENERY							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
8-9. Commercial building and surface lot 255 E Hancock			4 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
10. First American Bank 300 College			5 street trees PRIVATE GREENERY							N/A (Sidewalk to narrow to accommodate street trees or other greenery)

Inventory - College Street East Aspect									Tree Habit and Height*	General Analysis
Properties—Name and Address	*Building/parcel Description*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*		
11. Office-General 220 College – 262 College (Clayton to Washington)	Range from single to multi story historic..	Concrete sidewalk	6 street trees	Approx. 10’	Approx. 12’	N/A	Parking meters	5’ or less.	▫ Upright ▫ Pyramidal ▫ Oval MED. = 25-40’	3 STREET TREES ▫ ROW allows for about 3 street trees. ▫ Continue aesthetic of tree lined street.
12. Retail and restaurants 225 E Broad – 220 Clayton (Broad to Clayton)			9 street trees							N/A ▫ Street scape established with mature trees and newly replaced trees in ground containers. ▫ Outdoor café seating for restaurants

Site notes—
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*See Appendix C.

DOUGHERTY STREET URBAN GREENERY—North Aspect										
Inventory									Tree Habit and Height*	General Analysis
Properties—Name and Address	*Building/parcel Description*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*		
1. First Christian Church of Athens 268 West Dougherty Street	Greek revival church—2 story with large cupola.	Church surrounded by concrete sidewalks surface lot	1 street tree							N/A
2. Housing Authority 250 West Dougherty Street	10 story brick.	Building surrounded by turf and private trees.	N/A	5’	Approx. 75’ from sidewalk.	N/A	Street lights	8’ or less.	▫ Upright ▫ Pyramidal ▫ Oval SMALL = 15-25’	5-6 STREET TREES ▫ Available space in existing ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.
3. First AME Church 394 North Hull Street	2 story brick.	Small surface lot.	N/A	5’	Approx. 23’ from sidewalk.	N/A	Traffic signs, fire hydrant.	5’ or less.	▫ Upright ▫ Pyramidal ▫ Oval SMALL = 15-25’	3 STREET TREES ▫ Available space in existing ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.
4. ACC Government Building (planning offices) 120 West Dougherty	2 story brick.	Turf and sidewalk.	2 street trees	5’	Aprrox. 23-30’ from sidewalk depending on which part of façade.	Approx. 30’ to each tree.	Street light, power and street signs.	5’ or less.	▫ Upright ▫ Pyramidal ▫ Oval SMALL = 15-25’	3 STREET TREES ▫ Available space in existing ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.
5. 165 East Dougherty (COMMERCIAL)	1 story stucco	Turf and sidewalk.	5 street trees							N/A
6. ACC Surface lot	Surface lot	Asphalt parking lot.	1 street tree	5’	N/A	Approx. 30’ to tree.	Street lights	5’ or less.	▫ Upright ▫ Pyramidal ▫ Oval SMALL = 15-25’	4 STREET TREES ▫ Available space in existing ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.

Inventory – Dougherty Street North Aspect									Tree Habit and Height*	General Analysis
Properties—Name and Address	*Building/parcel Description*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*		
7. ACC Surface lot	Surface lot	Asphalt parking lot.	7 street trees and small shrubs.							N/A
8. ACC Surface lot	Surface lot	Asphalt parking lot.	6 street trees and small shrubs							N/A
9. Foundry Park Inn 295 East Dougherty	2 story colonial	Turf and sidewalk.	2 street trees	6-7’	Approx. 20’	Approx. 30’ to tree.	Street light.	12’ or less.	▫ Upright ▫ Pyramidal ▫ Oval SMALL = 15-25’ MED. = 25-40’	4 STREET TREES ▫ Available space in ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.
10. ACC Government building (welcome center) Dougherty and Thomas Streets	2 story colonial	Turf and sidewalk.	12 street trees							N/A
SOUTH ASPECT										
11. US Government Building large surface lot 355 East Hancock	Surface lot	Turf and sidewalk.	5 street trees							N/A
12. 440 North College (COMMERCIAL)	3 story new brick side by side—condo style.	Turf and sidewalk.	5 street trees	6’	Approx. 20’	Approx. 30’	Fire hydrant, street lights, power.	Approx. 20’	Small, medium and large. Any habit. CONSULT CO. ARBORIST	4 STREET TREES ▫ Available space in ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal
13. First Presbyterian Church of Athens 185 East Hancock	3 story gothic church	Concrete sidewalk and drive with small asphalt lot.	PRIVATE GREENERY							N/A
14. US Post Office 115 E Hancock	4 story Greek revival	Turf, concrete sidewalk and drive.	3 street trees							N/A

Inventory – Dougherty Street South Aspect									Tree Habit and Height*	General Analysis
Properties—Name and Address	*Building/parcel Description*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*		
15. First Methodist Church of Athens w/ surface lot to west 110 West Hancock	2 story grey stucco	Turf, concrete sidewalk and drive.	N/A	5’	Approx. 40’	N/A	N/A	5’ or less.	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	1 STREET TREES ▫ Available space in ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.
16. Surface lot 135 W Dougherty	Asphalt surface lot	Turf, concrete sidewalk and drive	1 street tree	5’	N/A	Approx. 20’	N/A	5’ or less.	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	1 STREET TREES ▫ Available space in ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.
17. Athens Federal Savings Bank w/ surface lot to east 150 West Hancock	5 story new construction red brick and blonde block stone	Turf and concrete sidewalk.	5 street trees							N/A
18. New Earth Music Hall 227 West Dougherty	Concrete sidewalks and small surface lot.	Concrete sidewalk	N/A							N/A
19. Athens Arthaus Surface lot 237 W Dougherty	Surface lot.	Asphalt parking lot	N/A	12-14’	Brick wall 12-14’ to street edge.	N/A	N/A	12’ or less.	▫ Upright ▫ Pyramidal ▫ Oval SMALL = 15-25’	2 STREET TREES ▫ Available space in existing ROW. ▫ Add trees where there were none, provide shade for pedestrian traffic during summer months and increase sidewalk appeal.
20. Chamber of Commerce Surface lot 246 W Hancock	Surface lot.	Asphalt parking lot	N/A	12-14’	Brick wall 12-14’ to street edge.	N/A	N/A	12’ or less.	▫ Upright ▫ Pyramidal ▫ Oval SMALL = 15-25’	2 STREET TREES ▫ Available space in existing ROW. ▫ Add trees where there were none, provide shade for pedestrian traffic during summer months and increase sidewalk appeal.
21. Surface lot 272 W Hancock	Surface lot.	Asphalt parking lot	N/A	12-14’	Brick wall 12-14’ to street edge.	N/A	N/A	12’ or less.	▫ Upright ▫ Pyramidal ▫ Oval SMALL = 15-25’	1 STREET TREE ▫ Available space in existing ROW. ▫ Add trees where there were none, provide shade for pedestrian traffic during summer months and increase sidewalk appeal.
22. Athens Blue Print Shop 296 West Dougherty	1 story modern stucco.	Turf, concrete sidewalk and small surface lot.	2 street trees							N/A

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*See Appendix C.

HANCOCK STREET URBAN GREENERY—North Aspect										
Inventory									Tree Habit and Height*	General Analysis
Properties—Name and Address	*Building/parcel Description*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*		
1. Surface lot 298 W Hancock	Asphalt parking lot	Asphalt	N/A							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
2. Office building 272 W Hancock	Multi story red brick construction	Planting strip and concrete sidewalk	PRIVATE GREENERY	Approx. 10-12’	Approx. 9-10’	N/A	Parking meters	5’ or less	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	3 STREET TREES ▫ Available space in ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.
3-4. Athens Chamber of Commerce and surface lot 246 W Hancock	Multi story red brick construction	Planting strip and concrete sidewalk	PRIVATE GREENERY	Approx. 10-12’	Approx. 9-10’	N/A	Parking meters	5’ or less	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	2 STREET TREES (in front of building not surface lot) ▫ Available space in ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.
5. Athens Arthaus 234 W Hancock	1 story	Concrete sidewalk	2 street trees							N/A (Sidewalk and driveway combined—cannot accommodate street trees or other greenery)
6. Retail shops 224 W Hancock	1 story	Concrete sidewalk	N/A	Approx. 10-12’	Approx. 9-10’	N/A	Parking meters	5’ or less	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	1 STREET TREE ▫ Available space in ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.
7. Athens Federal Savings Bank 150 W Hancock	Multi story new construction	Planting strip and concrete sidewalk	6 street trees							N/A (Sidewalk and driveway combined—cannot accommodate street trees or other greenery)
8. Surface lot 140 W Hancock	Asphalt parking lot	Planting strip and concrete sidewalk	PRIVATE GREENERY PLANTED INTERIORLY.	Approx. 10-12’	N/A	N/A	Parking meters	5’ or less	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	1 STREET TREE ▫ Available space in ROW. Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.

Inventory – Hancock Street North Aspect									Tree Habit and Height*	General Analysis
Properties—Name and Address	*Building/parcel Description*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*		
9. Surface lot 130 W Hancock	Asphalt parking lot	Planting strip and concrete sidewalk	PRIVATE GREENERY							N/A (Sidewalk and driveway combined—cannot accommodate street trees or other greenery)
10-11. First Methodist Church of Athens and surface lot 110 W Hancock	2 story church	Planting strip and concrete sidewalk	PRIVATE GREENERY	Approx. 10-12’	Approx. 9-10’	N/A	Parking meters	5’ or less	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	N/A – PARCEL 10. Parcel 11. 3 STREET TREES (in front of church not surface lot) ▫ Available space in ROW planting strip. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.
12. US Post Office and Courthouse 115 E Hancock	Multi story Greek revival	Planting strip and concrete sidewalk	5 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
13. First Presbyterian of Athens 185 E Hancock	2 story church	Planting strip and concrete sidewalk	3 street trees and PRIVATE GREENERY							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
14.Office building 255 E Hancock	1 story	Planting strip and concrete sidewalk	N/A	Approx. 5-6’	Approx. 20’	Approx.71’	Street lights	5’ or less	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	1 STREET TREE ▫ Available space in ROW planting strip. ▫ Shade for pedestrian traffic during summer months and increase sidewalk appeal.
15. First American Bank 265 E Hancock	1 story	Planting strip and concrete sidewalk	3 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
16. Surface lot 425 N Jackson	Asphalt parking lot	Planting strip and concrete sidewalk	1 street tree and PRIVATE GREENERY	Approx. 6-7’	N/A	Approx. 20-40’ depending on tree	Parking meters	5’ or less	▫ Upright ▫ Pyramidal ▫ Oval MED. = 25-40’	1 STREET TREE ▫ Available space in ROW planting strip. ▫ Shade for pedestrian traffic during summer months and increase sidewalk appeal.
17. US Government building 355 E Hancock	Multi story concrete building	Planting strip and concrete sidewalk	3 street trees	Approx. 6-7’	Approx. 50’	Approx. 50-100’ depending on tree	Parking meters	5’ or less	▫ Upright ▫ Pyramidal ▫ Oval SMALL = 15-25’	3 STREET TREES ▫ Available space in ROW planting strip. ▫ Shade for pedestrian traffic during summer months and increase sidewalk appeal.

Inventory – Hancock Street South Aspect									Tree Habit and Height*	General Analysis
Properties—Name and Address	*Building/parcel Description*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*		
18. ACC Government building 32 E Washington	Multi story	Concrete sidewalk	8 street trees and PRIVATE GREENERY							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
19. Surface lot 247 E Washington	Asphalt parking lot	Asphalt	5 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
20. First American Bank 300 College	Multi story red brick	Concrete driveway and sidewalk	N/A							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
21-22. ACC Government buildings 301 College and 124 E Hancock	Historic building, 1 story and Greek revival (respectively)		7 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
23-24. First United Methodist Church of Athens 325 N Lumpkin St.	2 story church	Planting strip and concrete sidewalk	PRIVATE GREENERY	Approx. 5-6’	Approx. 20-50’ depending on tree and building facade	N/A	Parking meters	5’ or less	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	8 STREET TREES ▫ Space in ROW planting strip. ▫ Shade for pedestrian traffic during summer months and increase sidewalk appeal.
25. Little Kings 223 W Hancock	1 story	Concrete sidewalk	N/A							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
26. Plasma Center 233 W Hancock	1 story	Planting strip and concrete sidewalk	PRIVATE GREENERY	Approx. 5-6’	Approx. 10-15’	N/A	Parking meters	5’ or less	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	2 STREET TREES ▫ Space in ROW planting strip. ▫ Shade for pedestrian traffic during summer months and increase sidewalk appeal.
27. Surface lot 261 W Hancock	Asphalt parking lot	Asphalt	N/A	Approx. 5-6’	N/A	N/A	Parking meters	5’ or less	▫ Upright ▫ Pyramidal ▫ Oval SMALL = 15-25’ MED. = 25-40’	1 STREET TREE ▫ Space in ROW planting strip. ▫ Shade for pedestrian traffic during summer months and increase sidewalk appeal.
28. Surface lot 271 W Hancock	Asphalt parking lot	Asphalt	N/A	Approx. 5-6’	N/A	N/A	Parking meters	5’ or less	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	1 STREET TREE ▫ Space in ROW planting strip. ▫ Shade for pedestrian traffic during summer months and increase sidewalk appeal.
29. Snow Tire 294 W Washington	1 story	Planting strip and concrete sidewalk	N/A	Approx. 5-6’	Approx. 8-10’	N/A	Parking meters	5’ or less	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	2 STREET TREES ▫ Space in ROW planting strip. ▫ Shade for pedestrian traffic during summer months and increase sidewalk appeal.

Site notes—
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*See Appendix C.

HULL STREET URBAN GREENERY—West Aspect										
Inventory									Tree Habit and Height*	General Analysis
Properties—Name and Address	*Building/parcel Description*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*		
1. Greyhound Bus Station 220 West Broad	1 story stucco	Small asphalt parking lot.	5 street trees.							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
2. 185 N Hull	1 story modern stucco	2 story house type structure	3 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
3. Casa Mia, etc. 269 North Hull	2 story brick, residential above 1 story modern stucco	Concrete sidewalk to façade.	2 street trees on corner							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
4. Manhattan, etc. 337 North Hull	1 story red brick	Concrete sidewalk to façade.	N/A							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
5. Little Kings Social Club 223 West Hancock	1 story blond brick	Concrete sidewalk to façade.	N/A							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
6. Gig Worn 224 West Hancock Street	1 story red brick	Concrete sidewalk to façade.	N/A	Approx. 10’	Building sits approx. 10’ to edge of sidewalk.	N/A	Street sign and traffic signal pole	5’ or less.	▫ Upright ▫ Pyramidal ▫ Oval SMALL = 15-25’	2 STREET TREES ▫ Available space in existing ROW. ▫ Add trees where there were none, provide shade for pedestrian traffic during summer months and increase sidewalk appeal.
7. Surface lot	N/A	Asphalt.	N/A							N/A (Driveway for small surface lot))
8. New Earth Music Hall 227 West Dougherty Street	1 story stucco	Concrete sidewalks and small surface lot.	N/A	Approx. 10’	Building sits off sidewalk approx. 40’. Small deck fronting sidewalk.	N/A	One utility pole.	5’ or less.	▫ Upright ▫ Pyramidal ▫ Oval SMALL = 15-25’	2 STREET TREES ▫ Available space in existing ROW. ▫ Add trees where there were none, provide shade for pedestrian traffic during summer months and increase sidewalk appeal.

Inventory – Hull Street East Aspect									Tree Habit and Height*	General Analysis
Properties—Name and Address	*Building/parcel Description*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*		
9. Athens Federal Savings Bank 150 W Hancock	5 story new construction red brick and blonde block stone	Concrete sidewalk	PRIVATE GRENNERY							
10. First United Methodist Church of Athens—SURFACE LOT 175 W Hancock	Church surface lot	Asphalt parking lot	PRIVATE GREENERY							
11. Morton Theater 195 West Washington	Historic building 2-3 stories	Concrete sidewalk	N/A	Approx. 8’	Building is flush with sidewalk	N/A	N/A	8’ or less.		GREEN WALL ▫ South façade of theater. ▫ Mitigate heat island effect. ▫ Increase greenery where none exists.
12. Last Resort SURFACE LOT 184 Clayton	N/A	Asphalt parking lot	N/A							
13. Hudson and Montgomery 183 W Clayton	2 story blonde brick	Concrete sidewalk	Hudson and Montgomery 183 W Clayton							
14-15. Suntrust Bank SURFACE LOT	Surface lot	Asphalt parking lot Small concrete retaining walls.	Suntrust Bank SURFACE LOT							

Site notes—
Unless otherwise notes, all urban greenery recommendations and analysis do not consider BELOW ground infrastructure utilities such as water and sewer lines, existing street tree vaulting or other tree infrastructure, electrical or communication lines.
*See Appendix C.

JACKSON STREET URBAN GREENERY—West Aspect										
Inventory									Tree Habit and Height*	General Analysis
Properties—Name and Address	*Building/parcel Description*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*		
1 -3. Retail and Restaurants 297 W. Broad – 282 E. Clayton (Broad to Clayton)	Multi-storied colored brick facades	Concrete sidewalk	N/A							
4. Retail 283 E Clayton	3 story painted brick	Concrete sidewalk	N/A							
5. Attorney offices 298 E Washington	2 story painted brick	Concrete sidewalk	N/A							
6-7. The Georgian Hotel and surface lot	Multi story historic brick hotel.	Concrete sidewalk	N/A							
8. Surface lot 425 N Jackson	Asphalt surface lot	Concrete sidewalk	PRIVATE GREENERY							
9. Commercial building 440 N College Ave	????	Concrete sidewalk	PRIVATE GREENERY							
East Aspect										
10. US Government building and surface lot 355 E Hancock	4 story post-modern building and asphalt parking lot	Concrete sidewalk with grass planting strip to east	PRIVATE GREENERY ON SOUTHERN PORTION OF PARCEL	Approx. 5’	Approx. 33’	Proximity to private single trees at northern and southern ends of parcel	N/A	13’ or less.	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	8 STREET TREES ▪ Space available in planting strip ▪ Add trees where none exist. ▪ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.
11. ACC Government building 325 E Washington			PRIVATE GREENERY							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
12. Attorney offices 304 E Washington	2 story painted brick	Concrete sidewalk	N/A							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
13. Jackson Street Books 264 Jackson St	2 story glass window store front	Concrete sidewalk	N/A							N/A (Sidewalk to narrow to accommodate street trees or other greenery)

Inventory – Jackson Street East Aspect									Tree Habit and Height*	General Analysis
Properties—Name and Address	*Building/parcel Description*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*		
14. 301 E Clayton	Multi story red brick façade.	Concrete sidewalk	N/A							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
15 - 16. Retail and Restaurants 320 E Clayton – 311 E Broad (Clayton to Broad)	Multi storied brick facades.	Concrete sidewalk	N/A							N/A (Sidewalk to narrow to accommodate street trees or other greenery)

Site notes—
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*See Appendix C.

LUMPKIN STREET URBAN GREENERY—West Aspect										
Inventory									Tree Habit and Height*	Recommendations and Analysis
Properties—Name and Address	*Building/parcel Description*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*	*Tree Habit and Mature Tree Height**	
1. Retail and Restaurants 101 N Lumpkin – 199 N Lumpkin College (Broad to Clayton)			N/A							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
2. Georgia Theater 215 N Lumpkin			1 street tree							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
3. ACC Parking Deck and retail 125 W. Washington	Multi story parking deck with retail on the main level.	Concrete sidewalk	4 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
4. First United Methodist Church 325 N Lumpkin	Historic?	Concrete sidewalk	1 street tree	Approx. 10’	Approx. 30’	Approx 160’	Parking meters, in ground planters	5’ or less	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	3 STREET TREES ▫ Available space in ROW – could utilize existing in-ground planters. ▫ Provide additional shade for pedestrian traffic during summer months.
5. First United Methodist Church 110 W Hancock	2 story stucco	Concrete sidewalk	N/A							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
East Aspect										
6. US Post Office and Courthouse 115 E Hancock			PRIVATE GREENERY							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
7-8. ACC government building and surface lot 124 E Hancock			PRIVATE GREENERY							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
9. Retail and restaurant 101-199 N Lumpkin (Clayton to Washington)			N/A							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
10-11. Bank of America building and surface lot 220-262 College (Broad to Clayton)	Multi story brick office building	Concrete sidewalk	N/A							N/A (Sidewalk to narrow to accommodate street trees or other greenery)

Site notes—
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*See Appendix C.

PULASKI STREET URBAN GREENERY—West Aspect										
Inventory									Tree Habit and Height*	Recommendations and Analysis
Properties—Name and Address	*Building/parcel Description*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*		
6. Athens Blueprint 269 Dougherty Street.	1 story modern stucco	Small asphalt parking lot.	1 street tree, turf and ground cover							N/A
7 - 8. 272 W Hancock	3 story modern stucco	Concrete sidewalk Small asphalt parking lot.	Small shrubs, turf and ground cover.	Approx. 5 - 6’	N/A surface lot to east of planting strip.	Approx. 10-15’	N/A	5’ or less.	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	2 STREET TREES ▫ Space available in ROW planting strip ▫ Adheres to existing planting aesthetic.
9. Snow Tire Co. 297 W Hancock Street	1 story painted brick	Concrete sidewalk	N/A	Approx. 6 - 8’	Structure to be placed 6” – 1’ away from west façade.	N/A	N/A	5’ or less.		OVERHEAD STRUCTURE ▫ Sidewalk constraint of 6-8’ can accommodate awning or other overhead structure.
10. Sunshine Cycle Shop 294 West Washington Street	1 story painted brick	Concrete sidewalk	N/A	Approx. 6 - 8’	Structure to be placed 6” – 1’ away from west façade.	N/A	N/A	5’ or less.		OVERHEAD STRUCTURE ▫ Sidewalk constraint of 6-8’ can accommodate awning or other overhead structure.
11. 40 Watt 285 West Washington Street	1 story red brick	Concrete sidewalk Small asphalt parking lot	2 street trees	Approx. 10’	Approx. 10-15’	Approx. 10’ or less.	N/A	5’ or less.	▫ Upright ▫ Pyramidal ▫ Oval SMALL = 15-25’	1 STREET TREE ▫ Space available in ROW planting strip ▫ Adheres to existing planting aesthetic.
12. Surface lot—Clayton and Pulaski 290 W Clayton	Asphalt surface lot.	Compacted open soil and asphalt.	N/A	Approx. 5’	N/A	N/A	N/A	5’ or less.	▫ Upright ▫ Pyramidal ▫ Oval SMALL = 15-25’	4 STREET TREES ▫ Space available in ROW planting strip ▫ Add trees where none exist. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.

East Aspect										
13. Professional building 295 W Clayton	2 story red brick modern colonial	Concrete sidewalk	PRIVATE GREENERY							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
14. Multi-business structure 296 W Broad	1 story, strip-mall building with 4 businesses	Concrete sidewalk Asphalt parking lot Mural retaining wall	PRIVATE GREENERY							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
Curb Extensions Pulaski and Washington NE and SE corners	Curb extensions	Brick pavers	1 street tree on each corner							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
15 - 16. Retail and Restaurants 320 E Clayton – 311 E Broad (Clayton to Broad)	Multi storied brick facades.	Concrete sidewalk	N/A							N/A (Sidewalk to narrow to accommodate street trees or other greenery)

Site notes—

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*See Appendix C.

THOMAS STREET URBAN GREENERY—West Aspect										
Inventory									Tree Habit and Height*	General Analysis
Properties—Name and Address	*Building/parcel Description*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*		
1.Main Street Bank 475 E. Broad	Asphalt surface lot and 2 st red brick	Concrete sidewalk and turf.	PRIVATE GREENERY							N/A
2.Surface lot Main Street Bank	Surface lot	Asphalt								N/A
3.Commercial building 485 E. Clayton	1 story stucco	Concrete sidewalk.								N/A
4.Hilton Hotel 390 E. Washington	7 story red brick	Concrete sidewalk.								N/A
5.ACC Government Building 325 E. Hancock	4 story parking deck	Concrete sidewalk and turf.	5 street trees							N/A
6 – 7.US Court House and surface lot 355 E. Hancock	Asphalt surface lot and 3 story concrete building	Concrete sidewalk and turf.	13 street trees							N/A
8.ACC Government Building (ACC Welcome Center) 325 E. Washington	Multiple buildings	Concrete sidewalk and turf.	4 street trees							N/A
East Aspect										
9.Athens Hardware Co. 600 N Thomas	1 story grey brick	Concrete sidewalk w/ minimal turf ROW.	Turf	Approx. 10’	Approx. 25’	NA/	Street lights and stop sign.	5’ or less.	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	5 STREET TREES ▫ Available space in ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal

Inventory – Thomas Street East Aspect									Tree Habit and Height*	General Analysis
Properties—Name and Address	*Building/parcel Description*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*		
10.Surface lot 570 N Thomas	Surface lot	Asphalt	Turf	Approx. 10’	N/A	N/A	N/A	5’ or less.	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	4 STREET TREES ▫ Available space in ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal
11-12. Good Dirt and surface lot 510 N Thomas	1 story red brick	Concrete sidewalk and turf.	3 street trees							N/A
13.Commercial building 480 N Thomas	2 story red brick	Concrete sidewalk and turf.	N/A	Approx. 6’ w 6’ planting strip.	Approx. 12’	N/A	Street light.	5’ or less.	▫ Upright ▫ Pyramidal ▫ Oval MED. = 25-40’	4 STREET TREES ▫ Available space in ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal
14. Square One Restaurant 414 N Thomas	2 story new construction	Concrete sidewalk and turf.	1 street tree	Approx. 6’ 6’ planting strip.	Approx. 12’	Approx. 35’	Street light	5’ or less.	▫ Upright ▫ Pyramidal ▫ Oval MED. = 25-40’	2 STREET TREES ▫ Available space in ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal
15. Surface lot 412 N Thomas	Surface lot.	Asphalt.	N/A							N/A
16-17. Classic Center 300 N Thomas	Multi story red brick modern construction	Concrete sidewalk.	4 street trees	Approx. 10 - 15’.	Approx. 15’	Approx. 10’	Street light	10’ or less.	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	4 STREET TREES ▫ Available space in ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal
18. Athens Banner Herald 548 E Clayton	Multi story red brick colonial style.	Concrete sidewalk.	6 street trees							N/A

Site notes—
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*See Appendix C.

WASHINGTON STREET URBAN GREENERY—North Aspect										
Inventory									Tree Habit and Height*	General Analysis
Properties—Name and Address	*Building/parcel Description*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*		
1. Sunshine Bike 294 W Washington	1 story office building	Concrete sidewalk to facade	1 street tree	1. Sunshine Bike 294 W Washington						N/A (Sidewalk to narrow to accommodate street trees or other greenery)
2. Alley way 271 W Washington	Concrete drive	Concrete	N/A	2. Alley way 271 W Washington						N/A (Sidewalk to narrow to accommodate street trees or other greenery)
3. Ted's Most Best Pizza 254 W Hancock	1 story new construction	Concrete sidewalk	PRIVATE GREENERY	3. Ted's Most Best Pizza 254 W Hancock						N/A (Sidewalk to narrow to accommodate street trees or other greenery)
4. Athens Federal Savings and Loan and surface lot 233 W Washington	3 story brick with asphalt surface lot	Concrete sidewalk and asphalt	2 street trees	4. Athens Federal Savings and Loan and surface lot 233 W Washington						N/A (Sidewalk and driveway combined—cannot accommodate street trees or other greenery)
5. BBQ Restaurant 224 W Hancock	1 story brick	Concrete sidewalk to facade	1 street tree	5. BBQ Restaurant 224 W Hancock						N/A (Sidewalk to narrow to accommodate street trees or other greenery)
6. First Methodist Church of Athens and surface lot 325 N Lumpkin	Multi story new construction	Planting strip and concrete sidewalk	4 street trees and PRIVATE GREENERY	Approx. 6-8' width varies	Approx. 20'	Approx. 15-20' depending on existing tree	Parking meters	5' or less	▫ Upright ▫ Pyramidal ▫ Oval MED. = 25-40'	3 STREET TREES ▫ Available space in ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.
7. ACC Government Building and surface lot 125 E Washington – 301 College	Church and asphalt parking lot	Asphalt parking lot with 3 government buildings that vary in facades	10 street trees and PRIVATE GREENERY	SIDEWALK WIDTH VARIES GREATLY DUE TO SHAPE OF SIDEWALK	Approx. 15-20' depending on placement of tree	20' or more	Parking meters and benches	5' or less	▫ Upright ▫ Pyramidal LARGE = 40' and taller	3 STREET TREES ▫ Available space in ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal. RECOMMEND 7 REPLACEMENT TREES ON WEST END OF PARCEL.
8. First American Bank and Trust 300 College	Multi story red brick commercial building	Private lawn space with concrete sidewalk	3 street trees and PRIVATE GREENERY	Approx. 10-12'	More than 20'	Approx. 10'	Other greenery	5' or less	▫ Upright ▫ Pyramidal LARGE = 40' and taller	1 STREET TREE ▫ Available space in ROW. Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.

Inventory – Washington Street North Aspect									Tree Habit and Height*	General Analysis
Properties—Name and Address	*Building/parcel Description*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*		
9. Georgian Condominiums and businesses on main 247 E Washington	Multi story condominium with retail on first floor	Concrete sidewalk	4 street trees	9. Georgian Condominiums and businesses on main 247 E Washington						N/A (Sidewalk to narrow to accommodate street trees or other greenery)
10. ACC Government Buildings 325 E Washington	Historic government building and parking deck	Concrete sidewalk	5 street trees PRIVATE GREENERY	10. ACC Government Buildings 325 E Washington						N/A (Sidewalk to narrow to accommodate street trees or other greenery)
South Aspect										
11. Hilton Hotel 390 E Washington	Multi story hotel	Concrete sidewalk	N/A	Approx. 10’	N/A	N/A	Driveways	5’ or less	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	2 STREET TREES ▫ Available space in ROW. ▫ Shade for pedestrian traffic during summer months and increase sidewalk appeal.
12. Restaurants and Legal offices respectively 312 and 301 E Washington	2-3 story brick	Concrete sidewalk to facade	2 street trees	Approx. 10’	Approx. 10’	Approx. 20’	Parking meters, bike racks	5’ or less	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	2 STREET TREES ▫ Available space in ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.
13. Restaurant, retail, legal offices (Jackson to College)	1 to 2 stories, varied facades	Concrete sidewalk to facade	2 street trees	Approx. 10’	Approx. 10’	Approx. 80’	Parking meters	5’ or less	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	2 STREET TREES ▫ Available space in ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.
14. ACC Parking Deck 255 College Ave	Multi story parking deck	Concrete sidewalk and pavers	8 street trees	Approx. 10’	Approx. 10’	Approx. 8-10’ depending on existing tree	Other greenery	5’ or less	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	2 REPLACEMENT STREET TREES (NEW) ▫ Available space in ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.
15. Restaurant and retail 160 E Washington to Lumpkin	Varied heights and facades	Concrete sidewalk and pavers	9 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
16. ACC Parking Deck 125 W Washington	Multi story parking deck with retail on first floor.	Concrete sidewalk	9 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
17. Surface lot 169 W Washington	Surface parking lot	Asphalt	1 street tree							N/A (Sidewalk to narrow to accommodate street trees or other greenery)

Site notes—
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*See Appendix C.

Inventory – Washington Street South Aspect									Tree Habit and Height*	General Analysis
Properties—Name and Address	*Building/parcel Description*	*Existing Surface*	*Existing Greenery*	*Parcel sidewalk width*	*Adjacency of buildings*	*Adjacency of existing trees*	*Miscellaneous structures e.g. poles, signs etc.*	*Proximity to travel lanes and parking spaces*		
13. Restaurant, retail, legal offices (Jackson to College)	1 to 2 stories, varied facades	Concrete sidewalk to facade	2 street trees	Approx. 10’	Approx. 10’	Approx. 80’	Parking meters	5’ or less		2 STREET TREES ▫ Available space in ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.
14. ACC Parking Deck 255 College Ave	Multi story parking deck	Concrete sidewalk and pavers	8 street trees	Approx. 10’	Approx. 10’	Approx. 8-10’ depending on existing tree	Other greenery	5’ or less	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	2 REPLACEMENT STREET TREES (NEW) ▫ Available space in ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.
15. Restaurant and retail 160 E Washington to Lumpkin	Varied heights and facades	Concrete sidewalk and pavers	9 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
16. ACC Parking Deck 125 W Washington	Multi story parking deck with retail on first floor.	Concrete sidewalk	9 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
17. Surface lot 169 W Washington	Surface parking lot	Asphalt	1 street tree							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
18. ACC Government Building 195 W Washington	3 story brick	Concrete sidewalk to facade	N/A	Approx.10 - 15’	Approx. 10’	N/A	Parking meter and bench	5’ or less	▫ Upright ▫ Pyramidal LARGE = 40’ and taller	2 STREET TREES ▫ Available space in ROW. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.
19. Trapeze 269 N Hull	1 story brick	Concrete sidewalk to facade	2 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
20. Max Canada 233 W Washington	1 story	Concrete sidewalk to façade	2 street tree	Approx. 10’	Approx. 10’	Approx. 15-20’	N/A	5’ or less	▫ Upright ▫ Pyramidal MED. = 25-40’	1 STREET TREES ▫ Available space in ROW.. ▫ Provide additional shade for pedestrian traffic during summer months and increase sidewalk appeal.
21. Restaurant and retail 265 W Washington	1 story varied facades	Concrete sidewalk to façade	1 street tree							N/A (Sidewalk to narrow to accommodate street trees or other greenery)
22. 40 Watt 285 W Washington	1 story brick	Concrete sidewalk to facade	3 street trees							N/A (Sidewalk to narrow to accommodate street trees or other greenery)

Site notes—
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*See Appendix C.

APPENDIX C

ATHENS-CLARKE COUNTY TREE SPECIES LIST

Athens-Clarke County Tree Species List, *as amended August 3, 2004*

SPECIES COMMON NAME	LATIN NAME	CANOPY AREA FOR DEVELOPMENT CODE: Square Feet of Canopy	Parking Lot Canopy Tree	Canopy Size Category	RECOMMENDED USES: Level of Use	Large Landscape Areas	Road Frontages - Street	Road Frontages - Yard	Parking Lots	Plazas and Downtown Settings	Buffers	Riparian Zones and Drainage Areas	Utility Corridors	PHYSICAL CHARACTERISTICS: Height Class in Urban Conditions	Crown Class in Urban Conditions	Mature Crown Form	Typical Range of Mature Tree Height	Typical Range of Mature Crown Width	Leaf Type	Leaf Texture	Fall Leaf Color	Flower Color	Flowering Time	Wildlife Value	Excessive Litter	ENVIRONMENTAL CHARACTERISTICS AND TOLERANCES: Native Tree to Athens-Clarke Co.	Growth Rate	Average Life Span	Net Effect on Air Quality	Soil Moisture	Drought Tolerance	Preferred Soil pH	Light Requirement	Construction Tolerance/Limitations	Urban Tolerant Tree
Alder, Hazel (Tag)	*Alnus serrulata*	150		Very Small	P	XX					x	XX	x	S	VS	Multi-Stemmed	10-20	10-20	DB	M	YE	I				Y	F	S	n/a	W	M	acidic	FS	G/	X
Ash, Green	*Fraxinus pennsylvanica*	1,600	2	Large	P	XX	x	XX	x	x		x		L	L	Rounded	60-100	40-50	DB	M	MU	I		X		Y	F	M	0.090	W	H	sl ac-sl alk	FS	G/	
Ash, White	*Fraxinus americana*	1,600	2	Large	P	XX	x	XX	x	x		x		L	L	Rounded	50-80	30-60	DB	M	MA	I		X		Y	M	M	0.100	M	L	sl ac-sl alk	FS	M/IS	
Baldcypress	*Taxodium distichum*	900	2	Medium	P	x		XX	x		XX	XX		L	M	Pyramidal	50-100	20-50	DC	F	BR	I		X		N	M	L	0.032	M	H	ac-sl alk	FS	G/	X
Basswood, American (Linden)	*Tilia americana*	1,600		Large	C	x						x		M	L	Irregular	60-100	35-50	DB	C	YE	Y	Summer	X		Y	F	M	0.144	M	L	ac-alk	PS	P/A	
Beech, American	*Fagus grandifolia*	1,600		Large	P	XX					0	x		L	L	Oval	80-100	50-70	DB	M	YE	I		X		Y	S	L	0.160	M	L	acidic	FS	P/A	
Birch, River	*Betula nigra*	900	2	Medium	P	XX	x	XX	x	XX	XX	XX	0	M	M	Pyramidal	50-90	40-60	DB	F/M	YE	I				Y	F	M	0.117	M	L	acidic	PS	G/	
Birch, River 'Heritage'	*Betula nigra* 'Heritage'	900	2	Medium	P	XX	x	XX	x	XX	XX	XX	0	M	M	Pyramidal	50-90	40-60	DB	F/M	YE	I				Y	F	M	n/a	M	L	acidic	PS	n/a	
Blackgum (Tupelo)	*Nyssa sylvatica*	900	2	Medium	P	XX	x	XX	x			x		M	M	Oval	50-100	20-35	DB	M	RE	I		X		Y	S	M	-0.053	M	M	sl ac-sl alk	FS	G/	X
Boxelder	*Acer negundo*	900		Medium	C	x						x	0	L	M	Rounded	50-75	40-50	DB	M	YE	I		X		Y	F	S	0.036	W	M	adapt	FS	G/	
Buckeye, Bottlebrush	*Aesculus parviflora*	150		Very Small	P								x	S	VS	Multi-Stemmed	15-20	10-15	DB	M	YE	W	Summer	X		N	M	S	n/a	M	L	ac-adapt	SH	n/a	
Buckeye, Painted	*Aesculus sylvatica*	150		Very Small	P	x						x	x	S	VS	Rounded	15-25	5-15	DB	M	YE	P/Y	Spring	X		Y	M	S	n/a	M	L	ac-adapt	SH	n/a	
Buckeye, Red	*Aesculus pavia*	150		Very Small	P								x	S	VS	Rounded	10-15	10-15	DB	M	YE	R	Spring	X		N	M	S	n/a	M	L	ac	PS	M/I	
Buckthorn, Carolina	*Rhamnus caroliniana*	900	1	Medium	P	x	x	x	x			x		M	M	Oval	30-40	10-30	DB	M	OR	I		X		Y	M	S	n/a	M	M	ac-alk	FS	M/IS	
Buckthorn, Common	*Rhamnus cathartica*	900	1	Medium	L				x				x	S	M	Rounded	20-25	20-25	DB	M	YE	I		X		N	M	S	n/a	M	H	adapt	FS	n/a	X
Buttonbush, Common	*Cephalanthus occidentalis*	150		Very Small	P	x						x	x	S	VS	Multi-Stemmed	10-15	10-15	DB	M	YE	W	Late Summer	X		Y	M	S	n/a	W	L	n/a	FS	G/I	
Catalpa, Southern	*Catalpa bignonioides*	900		Medium	C	x	0		0			x		M	M	Rounded	30-40	30-40	DB	C	YE	W	Spring	X	X	Y	F	S	0.014	M	M	sl ac-sl alk	FS	G/	
Cedar, Deodar	*Cedrus deodara*	900		Medium	L	x								L	M	Pyramidal	40-100	40-100	EC	F	EV	I				N	M	L	-0.031	D	H	ac-sl alk	FS	g	
Cedar, Japanese	*Cryptomeria japonica*	900		Medium	L	x		x			x			L	M	Pyramidal	40-60	15-20	EC	F	EV	I				N	S	M	0.084	M	H	ac	FS	n/a	X
Chastetree (Vitex)	*Vitex agnus-castus*	150		Very Small	P		x	x	x	x			x	S	VS	Multi-Stemmed	15-20	10-20	DB	M	I	B/L/W	Summer	X		N	M	S	n/a	D	H	ac-alk	FS	n/a	X
Cherry, Black	*Prunus serotina*	900		Medium	C	x		x				x		L	M	Oval	50-90	15-50	DB	M	YE	W	Early Spring	X		Y	F	M	0.083	M	M	sl ac	FS	M/I	
Cherrylaurel, Carolina	*Prunus caroliniana*	900		Medium	C		0	x	0	0	XX	0		M	M	Oval	20-40	15-25	EB	M	EV	W	Spring	X		N	M	M	n/a	M	H	ac-sl alk	FS	G/	X
Cherry, Japanese Flowering	*Prunus serrulata*	400		Small	L			x		x	XX		XX	S	S	Rounded	20-30	20-30	DB	M	OR	P	Spring			N	F	S	0.013	M	L	ac-alk	FS	n/a	
Cherry, Yoshino	*Prunes x yedoensis*	400		Small	L			XX		XX	XX		XX	S	S	Rounded	20-45	20-40	DB	M	YE	P/W	Spring	X		N	F	S	n/a	M	L	ac	FS	n/a	
Chestnut, American	*Castanea dentata*	1,600		Large	N	susceptible to chestnut blight								L	L	-	-	-	-							Y									
Chestnut, Chinese	*Castanea mollissima*	1,600		Large	P	x		x						L	L	Rounded	40-60	40-60	DB	M	BR	W	Summer	X		N	S	L	n/a	D	M	ac-sl alk	FS	n/a	X
Chinaberry	*Melia azedarach*	900		Medium	N	weed tree; brittle wood								M	M											N									
Chinquapin, Allegheny	*Castanea pumila*	400		Small	C	x							x	S	S	Rounded	10-25	10-25	DB	M	BR	I		X		Y	S	S	n/a	D	H	n/a	FS	P/P	
Cottonwood, Eastern	*Populus deltoides*	1,600	2	Large	C	x			x		0	x		L	L	Pyramidal	50-100	20-75	DB	C	YE	I		X	X	Y	F	M	-0.708	M	M	sl ac-sl alk	FS	G/	X
Crabapple, Japanese Flowering	*Malus floribunda*	400		Small	L		x	x		x	XX		XX	S	S	Rounded	15-25	15-25	DB	M	YE	P	Spring	X		N	M	S	n/a	M	L	sl ac-sl alk	FS	n/a	
Crabapple, Southern	*Malus angustifolia*	400		Small	C	x	x	x			x		XX	S	S	Spreading	20-25	10-20	DB	M	YE	P	Spring	X	X	Y	M	S	n/a	M	L	sl ac-sl alk	FS	M/ICP	
Crapemyrtle, Common	*Lagerstroemia indica*	150		Very Small	P		XX	XX	XX	XX	XX	0	XX	S	VS	Multi-Stemmed	15-30	10-25	DB	F	RE	M	Summer			N	F	M	0.004	M	H	ac-sl alk	FS	n/a	X
Cypress, Leyland	*Cupressocyparis leylandii*	400		Small	L	x	0	x	x		x		0	M	S	Pyramidal	50-60	20-30	EC	F	EV	I				N	F	M	0.053	M	M	ac-alk	FS	g	
Devil's Walking Stick	*Aralia spinosa*	150		Very Small	N	large thorns								S	VS											Y									
Devilwood	*Osmanthus americanus*	400		Small	C	x		x						S	S	Rounded	15-25	10-15	DB	M	YE	W	Spring	X		Y	M	M	n/a	M	M		PS	M/I	
Dogwood, Flowering	*Cornus florida*	400		Small	P	XX	XX	XX	0	0	XX		XX	S	S	Spreading	15-30	15-30	DB	M	RE	W	Spring	X		Y	M	M	0.021	M	L	ac-nu	PS	M/IP	
Dogwood, Flowering Pink	*Cornus florida var. rubra*	400		Small	P	XX	XX	XX	0	0	XX		x	S	S	Spreading	15-30	15-30	DB	M	RE	P	Spring	X		Y	M	M	n/a	M	L	n/a	PS	n/a	
Dogwood, Kousa	*Cornus kousa*	400		Small	P		x	x			x		x	S	S	Rounded	10-20	10-20	DB	M	RE	W	Spring	X		N	S	S	n/a	M	L	ac	PS	n/a	
Dogwood, Swamp	*Cornus stricta*	400		Small	C	x						x	x	S	S	Rounded	10-25	10-25	DB	M	RE	W	Spring	X		Y	S	S	n/a	W	L	n/a	PS	G/I	
Elm, American	*Ulmus americana*	1,600		Large	C	x		x				x		L	L	Upright	50-100	30-70	DB	M	YE	I		X		Y	M	M	0.143	M	H	sl ac-sl alk	FS	M/P	
Elm, Chinese (Lace Bark)	*Ulmus parvifolia*	900	1	Medium	L	0	XX	XX	XX	XX	0	0		M	M	Upright	40-60	30-50	DB	F/M	YE	I				N	F	M	0.058	M	H	sl ac-sl alk	FS	n/a	X
Elm, Siberian	*Ulmus pumila*	900		Medium	N	pest susceptible; weed tree								L	M											N									
Elm, Slippery	*Ulmus rubra*	1,600		Large	C	x	x	x				x		L	L	Upright	70-80	30-50	DB	M	YE	I		X		Y	F	M	0.086	M	M	sl ac-sl alk	FS	M/P	
Elm, Winged	*Ulmus alata*	1,600	1	Large	P	XX	XX	XX	XX		0	0		L	L	Upright	70-80	30-50	DB	F	YE	I				Y	M	M	0.034	M	H	sl ac-sl alk	FS	G/	X
Flametree, Chinese (Bougainvillea)	*Koelreuteria bipinnata*	400	1	Small	P			x						M	S	Rounded	20-40	20-40	DB	M	YE	Y	Summer			N	M	M	n/a	M	H	sl ac-sl alk	FS	n/a	X

Athens-Clarke County Tree Species List, *as amended August 3, 2004*

SPECIES COMMON NAME	LATIN NAME	CANOPY AREA FOR DEVELOPMENT CODE			RECOMMENDED USES									PHYSICAL CHARACTERISTICS												ENVIRONMENTAL CHARACTERISTICS AND TOLERANCES									
		Square Feet of Canopy	Parking Lot Canopy Tree	Canopy Size Category	Level of Use	Large Landscape Areas	Road Frontages - Street	Road Frontages - Yard	Parking Lots	Plazas and Downtown Settings	Buffers	Riparian Zones and Drainage Areas	Utility Corridors	Height Class in Urban Conditions	Crown Class in Urban Conditions	Mature Crown Form	Typical Range of Mature Tree Height	Typical Range of Mature Crown Width	Leaf Type	Leaf Texture	Fall Leaf Color	Flower Color	Flowering Time	Wildlife Value	Excessive Litter	Native Tree to Athens-Clarke Co.	Growth Rate	Average Life Span	Net Effect on Air Quality	Soil Moisture	Drought Tolerance	Preferred Soil pH	Light Requirement	Construction Tolerance/Limitations	Urban Tolerant Tree
Fringetree (Grancy Gray Beard)	*Chionanthus virginicus*	150		Very Small	P	x	x	x			x		x	S	VS	Oval	10-30	5-15	DB	M/C	YE	W	Spring	X		Y	M	S	n/a	M	L	acidic	PS	M/IS	
Fringetree, Chinese	*Chionanthus retusus*	150		Very Small	P		x	x			x		x	S	VS	Rounded	15-25	10-15	DB	M/C	YE	W	Spring	X		N	S	S	n/a	M	M	acidic	PS	n/a	
Ginkgo (Female)	*Ginkgo biloba*	1,600		Large	L	x	0	x	0	0	0			M	L	Pyramidal	50-75	30-60	DB	C	YE	I			X	N	S	L	0.108	M	H	sl ac	FS	g	X
Ginkgo (Male)	*Ginkgo biloba*	1,600	1	Large	P	x	XX	XX	x	XX	0			M	L	Pyramidal	50-75	30-60	DB	C	YE	I				N	S	L	0.108	M	H	sl ac	FS	g	X
Goldenraintree	*Koelreuteria paniculata*	400	1	Small	P		x	x	x	x	x			M	S	Rounded	20-40	20-40	DB	M	YE	Y	Summer			N	M	M	-0.087	M	H	sl ac-sl alk	FS	n/a	
Hackberry, Common	*Celtis occidentalis*	1,600		Large	C	x		x				x		L	L	Spreading	60-90	25-60	DB	F/M	YE	I		X		Y	M	M	0.060	M	H	sl ac-sl alk	FS	n/a	X
Hackberry, Georgia	*Celtis tenuifolia*	1,600		Large	C	x		x				x		M	L	Spreading	25-35	25-35	DB	F/M	YE	I		X		Y	S	M	n/a	D	H	sl ac-sl alk	FS	M/IS	
Hawthorne, Washington	*Crataegus phaenopyrum*	400		Small	P		x	x		x			x	S	S	Rounded	10-30	5-25	DB	F	MU	W	Late Spring	X		N	S	S	0.017	M	M	sl ac-sl alk	FS	g	
Hemlock, Eastern	*Tsuga canadensis*	1,600		Large	N	not heat tolerant; out of range								L	L											N									
Hickory, Bitternut	*Carya cordiformis*	1,600		Large	C	x	0	x	0	0				L	L	Oval	50-100	50-75	DB	M	YE	I		X		Y	F	L	0.069	M	L	acidic	FS	P/S	
Hickory, Mockernut	*Carya tomentosa*	1,600		Large	C	x	0	x	0	0				L	L	Oval	50-100	50-75	DB	M/C	YE	I		X	X	Y	S	L	0.059	D	H	sl ac	FS	MP/S	
Hickory, Pignut	*Carya glabra*	1,600		Large	C	x	0	x	0	0				L	L	Oval	50-100	50-75	DB	M	YE	I		X		Y	S	L	0.058	M	H	sl ac	FS	M/S	
Hickory, Sand	*Carya pallida*	1,600		Large	C	x	0	x	0	0				L	L	Oval	40-90	20-40	DB	M	YE	I		X		Y	S	M	n/a	D	H	sl ac	FS	M/	
Hickory, Shagbark	*Carya ovata*	1,600		Large	C	x	0	x	0	0				L	L	Oval	70-100	50-75	DB	M	YE	I		X		Y	S	L	0.064	M	M	sl ac	FS	P/S	
Hickory, Southern Shagbark	*Carya ovata var. australis*	1,600		Large	C	x	0	x	0	0				L	L	Oval	60-80	40-60	DB	M	YE	I		X		Y	S	L	n/a	M	M	sl ac	FS	n/a	
Holly, American	*Ilex opaca*	150		Very Small	P	x		XX	x		XX		0	M	VS	Pyramidal	20-70	15-25	EB	M	EV	I		X		Y	S	L	0.013	M	H	acidic	PS	G/	X
Holly, Deciduous (Possumhaw)	*Ilex decidua*	150		Very Small	C	x		x				x	x	S	VS	Rounded	10-20	10-20	DB	F	I	I		X		Y	M	S	n/a	W	H	ac-alk	PS	G/	
Holly, Fosters	*Ilex x attenuata* 'Fosteri'	150		Very Small	P			x	x	x	x			S	VS	Pyramidal	15-25	10-15	EB	F/M	EV	I		X		N	S	S	n/a	M	H	sl ac	FS	n/a	X
Holly, Ornamental Variety	*Ilex* species	150		Very Small	L			x	x	x	x		x	S	VS	Rounded	10-20	10-15	EB	M	EV	I				N	S	S	n/a	M	H	ac	FS	n/a	
Holly, Savannah	*Ilex x attenuata* `Savannah'	150		Very Small	P	x		x	x	x	x		0	M	VS	Pyramidal	30-45	10-15	EB	M	EV	I		X		N	M	S	n/a	M	H	ac-sl alk	FS	n/a	
Holly, Yaupon	*Ilex vomitoria*	150		Very Small	P		x	x	x	x			x	S	VS	Irregular	10-25	5-10	EB	F	EV	I		X		Y	S	S	n/a	D	H	ac-alk	FS	G/	X
Honeylocust	*Gleditsia triacanthos*	900		Medium	C	x		x	0	0				L	M	Irregular	60-80	30-50	DB	F	YE	I				Y	F	S	0.009	M	H	sl ac-sl alk	FS	G/	X
Hophornbeam, American	*Ostrya virginiana*	900	1	Medium	P	x		x	x			x		M	M	Oval	15-40	10-30	DB	F/M	YE	W	Summer	X		Y	S	M	0.032	M	H	ac-alk	SH	M/S	X
Hornbeam, Am. (Ironwood, Blue Beech)	*Carpinus caroliniana*	900	1	Medium	P	XX	XX	XX	x	XX	XX	XX		M	M	Oval	20-35	15-30	DB	F/M	YE	I		X		Y	S	M	0.009	M	M	sl ac-sl alk	PS	M/SC	
Hornbeam, European	*Carpinus betulus*	900	1	Medium	P		XX	XX	XX	XX	x			M	M	Oval	40-60	35-40	DB	F/M	YE	I		X		N	S	M	0.037	M	H	ac-alk	PS	n/a	X
Hornbeam, Japanese	*Carpinus japonica*	400		Small	L		x	x	x	x	x			M	S	Oval	20-30	20-30	DB	M	RE	I				N	S	M	n/a	M	M	adapt	PS	n/a	
Katsuratree	*Cercidiphyllym japonicum*	900	1	Medium	L	x		x	x					M	M	Spreading	40-60	35-60	DB	M	YE	I				N	F	L	n/a	M	L	ac-sl alk	FS	pm	
Locust, Black	*Robinia pseudoacacia*	900		Medium	C	x			0	0		x		L	M	Spreading	40-90	20-40	DB	F	YE	W	Spring	X		Y	F	M	-0.123	M	H	sl ac-sl alk	FS	G/P	X
Magnolia, Cucumber	*Magnolia acuminata*	1,600		Large	C	x		x	0			x		L	L	Upright	60-80	20-60	DB	C	YE	W	Spring	X		Y	F	M	n/a	M	L	acidic	PS	M/I	
Magnolia, Japanese (Saucer)	*Magnolia x soulangiana*	900		Medium	L			x	0				x	M	M	Upright	20-30	10-30	DB	C	YE	P	Late Winter			N	M	S	0.009	M	L	acidic	FS	n/a	
Magnolia, Southern	*Magnolia grandiflora*	1,600		Large	P	XX		XX	0		XX		0	L	L	Pyramidal	80-100	30-50	EB	C	EV	W	Late Spring	X	X	Y	M	L	0.002	M	M	acidic	FS	M/I	
Magnolia, Southern 'Little Gem'	*Magnolia grandiflora* 'Little Gem'	150		Very Small	P			x	0		x		XX	M	VS	Pyramidal	40-60	20-30	EB	C	EV	W	Late Spring	X	X	Y	S	M	n/a	M	L	acidic	FS	n/a	
Magnolia, Star	*Magnolia stellata*	150		Very Small	L		x	x				x		S	VS	Multi-Stemmed	15-20	15-20	DB	M	YE	W	Late Winter	X		N	S	S	n/a	M	M	acidic	PS	n/a	
Magnolia, Sweetbay	*Magnolia virginiana*	900	2	Medium	P	XX		x	x		XX	XX		M	M	Oval	30-60	20-40	EB	C	EV	W	Summer	X		Y	F	M	n/a	W	L	acidic	PS	G/	
Maple, Amur	*Acer ginnala*	400		Small	P		x	x					x	S	S	Rounded	15-25	15-25	DB	M	RE	W	Spring			N	M	M	0.008	M	M	adapt	FS	n/a	
Maple, Chalk	*Acer leucoderme*	900	1	Medium	P	x	x	x	x		x			M	M	Spreading	20-40	10-30	DB	M	I	I				Y	M	M	n/a	M	H	ac-sl alk	FS	P/A	X
Maple, Hedge	*Acer campestre*	900	1	Medium	P		x	x	x		x			M	M	Rounded	25-35	25-35	DB	M	YE	I				N	S	S	0.017	M	H	ac-alk	FS	n/a	X
Maple, Japanese	*Acer palmatum*	400		Small	L	0		x	0				x	S	S	Oval	15-25	10-25	DB	M	RE	I				N	S	S	0.008	M	L	sl ac-sl alk	PS	n/a	
Maple, Norway	*Acer platanoides*	900		Medium	N	pest susceptible								M	M											N									
Maple, Red	*Acer rubrum*	900	2	Medium	P	XX	XX	XX	x	XX	XX	XX	0	M	M	Rounded	40-90	20-35	DB	M	RE	R	Late Winter	X		Y	F	L	0.084	M	L	sl ac	FS	G/	
Maple, Silver	*Acer saccharinum*	1,600		Large	L	0		x	0	0				L	L	Rounded	50-80	40-60	DB	M	YE	I				N	F	S	0.084	M	H	ac	FS	P/A	
Maple, Southern Sugar (Florida Sugar)	*Acer barbatum*	900	1	Medium	P	XX	x	XX	x	XX	XX	x		M	M	Rounded	40-70	25-60	DB	M	OR	I				Y	M	M	n/a	M	H	ac	FS	M/IS	X
Maple, Sugar	*Acer saccharum*	1,600	2	Large	P	XX	XX	XX	x			x	0	L	L	Oval	60-80	30-50	DB	M	OR	I		X		Y	M	L	0.100	M	M	sl ac-sl alk	PS	pm	
Maple, Sugar 'Green Mountain'	*Acer saccharum* 'Green Mountain'	1,600	2	Large	P	XX	XX	XX	x				0	L	L	Oval	60-80	30-50	DB	M	OR	I		X		Y	F	L	0.100	M	M	sl ac-sl alk	PS	n/a	
Maple, Sugar 'Legacy'	*Acer saccharum* 'Legacy'	1,600	2	Large	P	XX	XX	XX	x				0	L	L	Oval	60-80	30-50	DB	M	OR	I		X		Y	F	L	0.100	M	M	sl ac-sl alk	PS	n/a	

Athens-Clarke County Tree Species List, *as amended August 3, 2004*

SPECIES COMMON NAME	LATIN NAME	CANOPY AREA FOR DEVELOPMENT CODE: Square Feet of Canopy	Parking Lot Canopy Tree	Canopy Size Category	RECOMMENDED USES: Level of Use	Large Landscape Areas	Road Frontages - Street	Road Frontages - Yard	Parking Lots	Plazas and Downtown Settings	Buffers	Riparian Zones and Drainage Areas	Utility Corridors	PHYSICAL CHARACTERISTICS: Height Class in Urban Conditions	Crown Class in Urban Conditions	Mature Crown Form	Typical Range of Mature Tree Height	Typical Range of Mature Crown Width	Leaf Type	Leaf Texture	Fall Leaf Color	Flower Color	Flowering Time	Wildlife Value	Excessive Litter	ENVIRONMENTAL CHARACTERISTICS AND TOLERANCES: Native Tree to Athens-Clarke Co.	Growth Rate	Average Life Span	Net Effect on Air Quality	Soil Moisture	Drought Tolerance	Preferred Soil pH	Light Requirement	Construction Tolerance/Limitations	Urban Tolerant Tree
Maple, Trident	*Acer buergeranum*	400	1	Small	P	0	XX	XX	XX	XX	XX		XX	S	S	Rounded	20-45	20-30	DB	M	MU	I				N	F	M	n/a	M	M	ac-alk	FS	n/a	X
Mimosa	*Albizia julibrissin*	900		Medium	N	pest susceptible; weed tree								M	M											N								
Mulberry, Red	*Morus rubra*	900		Medium	C	x	0		0	0		x		L	M	Rounded	40-70	20-50	DB	C	YE	I		X	X	Y	F	S	0.099	M	H	sl ac-sl alk	FS	G/	
Oak, Black	*Quercus velutina*	1,600	2	Large	C	x		x	x			x		L	L	Rounded	70-90	50-60	DB	M	RE	I		X		Y	M	L	-0.253	D	H	sl ac	FS	G/	
Oak, Cherrybark	*Quercus falcata var. pagodifolia*	1,600	2	Large	P	x		x	x			x		L	L	Rounded	60-100	30-50	DB	M	RE	I		X		Y	M	L	n/a	M	M	ac	FS	G/	
Oak, Chestnut	*Quercus prinus*	1,600		Large	P	x	0	XX	0	0		0		L	L	Rounded	50-80	30-60	DB	M	RE	I		X	X	Y	S	L	-0.342	D	H	acidic	FS	GM/S	
Oak, Diamond Leaf (Laurel)	*Quercus laurifolia*	1,600		Large	P	x	x	x						L	L	Rounded	60-80	50-60	DB	M	YE	I		X		N	M	L	n/a	M	M	ac-sl alk	FS	G/	
Oak, English	*Quercus robur*	1,600		Large	L		x	x						L	L	Rounded	40-60	40-60	DB	M	BR	I		X		N	S	M	-0.275	M	M	sl ac-sl alk	FS	n/a	
Oak, Georgia	*Quercus georgiana*	1,600		Large	C	x		x						L	L	Rounded	20-40	10-30	DB	M	BR	I		X		Y	M	M	n/a	D	H	ac-alk	FS	n/a	
Oak, Laurel	*Quercus hemisphaerica*	1,600	1	Large	P	x	x	x	x					L	L	Rounded	60-90	50-60	DB	M	BR	I		X		N	F	M	-0.314	D	H	adapt	FS	n/a	
Oak, Laurel 'Darlington'	*Quercus hemisphaerica* 'Darlington'	1,600	1	Large	P	x	XX	XX	x					L	L	Rounded	60-90	50-60	DB	F	BR	I		X		N	F	M	n/a	D	H	adapt	FS	n/a	
Oak, Live	*Quercus virginiana*	1,600		Large	N	out of range								L	L											N								
Oak, Northern Red	*Quercus rubra*	1,600	2	Large	P	XX	x	XX	x					L	L	Rounded	60-100	30-60	DB	M	RE	I		X		Y	F	L	-0.503	M	M	ac-sl ac	FS	GM/SC	
Oak, Nuttall	*Quercus nuttalli*	1,600	1	Large	P	x	x	x	x					L	L	Rounded	60-80	35-50	DB	M	RE	I		X		Y	M	L	n/a	M	M	ac	FS	n/a	
Oak, Oglethorpe	*Quercus oglethorpensis*	1,600		Large	C	x	x	x						M	L	Rounded	40-70	30-50	DB	M	RE	I		X		Y	S	M	n/a	W	M	n/a	FS	n/a	
Oak, Overcup	*Quercus lyrata*	1,600	2	Large	P	XX	XX	XX	x			x		L	L	Rounded	30-45	30-45	DB	M	BR	I		X		Y	M	L	-0.159	W	M	ac-sl alk	FS	G/	
Oak, Pin	*Quercus palustris*	1,600		Large	L	0	x	x	0	0		0		L	L	Pyramidal	40-100	20-50	DB	M	RE	I		X		N	M	M	-0.483	M	M	acidic	FS	mg	
Oak, Post	*Quercus stellata*	1,600		Large	C	x	x	XX						L	L	Rounded	40-50	35-40	DB	M/C	BR	I		X		Y	M	L	-0.327	D	H	ac-sl alk	FS	G/	
Oak, Sawtooth	*Quercus acutissima*	1,600		Large	L	0	0	x	0	0		0		M	L	Oval	50-60	30-60	DB	M	YE	I		X	X	N	F	M	-0.159	M	M	ac-sl alk	FS	n/a	
Oak, Scarlet	*Quercus coccinea*	1,600	2	Large	P	XX	XX	XX	x					L	L	Rounded	50-80	30-50	DB	M	RE	I		X		Y	M	L	-0.592	D	H	sl ac	FS	G/	
Oak, Shumard	*Quercus shumardii*	1,600	1	Large	P	XX	XX	XX	XX	XX				L	L	Rounded	60-100	30-70	DB	M	RE	I		X		Y	F	L	-0.265	M	H	ac-alk	FS	G/	
Oak, Southern Red	*Quercus falcata*	1,600	2	Large	P	XX	x	XX	x			x		L	L	Rounded	60-100	30-70	DB	M	OR	I		X		Y	M	L	-0.576	M	H	ac	FS	G/	
Oak, Swamp Chestnut	*Quercus michauxii*	1,600		Large	P	x	0	x	0	0		x		L	L	Oval	70-90	30-60	DB	M	YE	I		X		Y	M	L	-0.544	M	M	n/a	FS	G/	
Oak, Swamp White	*Quercus bicolor*	1,600		Large	P	x	x	x				x		L	L	Oval	70-90	30-60	DB	M	YE	I		X		Y	M	L	-0.457	M	M	n/a	FS	G/	
Oak, Water	*Quercus nigra*	1,600		Large	P	XX	x	XX				XX	0	L	L	Rounded	50-100	30-70	DB	M	YE	I		X		Y	F	M	-0.451	M	M	ac-sl alk	FS	G/	
Oak, White	*Quercus alba*	1,600		Large	P	XX	x	XX						L	L	Rounded	60-100	30-80	DB	M	RE	I		X		Y	S	L	-0.348	M	M	acidic	FS	GM/S	
Oak, Willow	*Quercus phellos*	1,600	1	Large	P	XX	XX	XX	XX	XX	0	XX	0	L	L	Rounded	40-100	30-60	DB	F/M	YE	I		X		Y	F	L	-0.314	M	H	acidic	FS	GM/S	X
Orange, Osage	*Maclura pomifera*	900		Medium	L	x	0	x	0	0		0		M	M	Spreading	30-40	30-40	DB	M/C	YE	I		X	X	N	F	L	0.000	D	H	sl ac-sl alk	FS	n/a	X
Parrotia	*Parrotia persica*	400		Small	L		x	x					x	S	S	Rounded	20-40	20-35	DB	M	OR	R	Spring			N	F	S	n/a	M	M	ac-sl alk		n/a	
Pear, Bradford	*Pyrus calleryana* `Bradford'	900		Medium	N	defective branch structure								M	M											N								
Pear, Callery Variety	*Pyrus calleryana*	900		Medium	N	defective branch structure								M	M											N								
Pecan	*Carya illinoensis*	1,600		Large	P	x	0	x	0	0	0			L	L	Upright	60-100	30-75	DB	M/C	YE	I		X	X	N	S	M	0.088	M	L	sl ac-sl alk	FS	mg	
Persimmon, Common	*Diospyros virginiana*	900		Medium	P	x	0	x	0	0		x		L	M	Oval	70-80	40-60	DB	M	RE	I		X	X	Y	M	S	0.058	M	H	ac-alk	FS	G/P	X
Pine, Eastern White	*Pinus strobus*	1,600		Large	N	pest susceptible; not heat tolerant								L	L											N								
Pine, Loblolly	*Pinus taeda*	1,600		Large	P	XX	x	x	XX		XX	x	0	L	L	Pyramidal	80-100	20-40	EC	F	EV	I		X		Y	F	M	0.016	M	M	acidic	FS	G/	
Pine, Longleaf	*Pinus palustris*	1,600		Large	C			x	x		x	0		L	L	Pyramidal	60-100	20-40	EC	F	EV	I		X		N	M	L	0.010	M	H	ac-sl alk	FS	GM/C	
Pine, Shortleaf	*Pinus echinata*	1,600		Large	P	XX	x	x	x		x	x	0	L	L	Pyramidal	60-100	20-40	EC	F	EV	I		X		Y	M	L	0.008	M	H	ac	PS	GM/P	
Pine, Slash	*Pinus elliotii*	1,600		Large	C			x	x		x	0		L	L	Pyramidal	60-100	20-50	EC	F	EV	I		X		N	F	M	0.010	M	M	ac-sl alk	FS	G/	
Pine, Virginia	*Pinus virginiana*	900		Medium	P	x		x	x		XX	x		M	M	Pyramidal	15-70	10-35	EC	F	EV	I		X		Y	F	S	0.003	M	H	ac	FS	G/	X
Pistache, Chinese	*Pistacia chinensis*	900	1	Medium	P		x	XX	XX	x	x	0		M	M	Rounded	60-80	40-50	DB	M	RE	G	Spring	X		N	M	M	n/a	M	H	ac-alk	FS	n/a	X
Planetree, London	*Platanus x acerifolia*	1,600	2	Large	P	x	XX	XX	XX					L	L	Irregular	60-100	20-80	DB	C	YE	I				N	F	M	-0.415	M	H	sl ac-sl alk	FS	pg	X
Plum, Chickasaw	*Prunus angustifolia*	150		Very Small	C	x	0	x			x		x	S	VS	Rounded	10-20	10-20	DB	F	I	W	Late Winter	X		Y	M	S	n/a	M	H	sl ac-sl alk	FS	M/IS	
Plum, Purpleleaf	*Prunus cerasifera*	400		Small	L		x	x			XX		x	S	S	Rounded	10-25	10-25	DB	F	RE	P/W	Spring	X		N	M	S	0.014	M	M	sl ac-sl alk	FS	mg	
Poplar, Lombardy	*Populus nigra var. italica*	900		Medium	N	not heat tolerant								L	M											N								
Poplar, White	*Populus alba*	900		Medium	C			x						L	M	Oval	40-100	20-60	DB	C	YE	I				N	F	M	-0.417	M	H	ac-alk	FS	n/a	

Athens-Clarke County Tree Species List, *as amended August 3, 2004*

SPECIES COMMON NAME	LATIN NAME	CANOPY AREA FOR DEVELOPMENT CODE: Square Feet of Canopy	Parking Lot Canopy Tree	Canopy Size Category	RECOMMENDED USES: Level of Use	Large Landscape Areas	Road Frontages - Street	Road Frontages - Yard	Parking Lots	Plazas and Downtown Settings	Buffers	Riparian Zones and Drainage Areas	Utility Corridors	PHYSICAL CHARACTERISTICS: Height Class in Urban Conditions	Crown Class in Urban Conditions	Mature Crown Form	Typical Range of Mature Tree Height	Typical Range of Mature Crown Width	Leaf Type	Leaf Texture	Fall Leaf Color	Flower Color	Flowering Time	Wildlife Value	Excessive Litter	ENVIRONMENTAL CHARACTERISTICS AND TOLERANCES: Native Tree to Athens-Clarke Co.	Growth Rate	Average Life Span	Net Effect on Air Quality	Soil Moisture	Drought Tolerance	Preferred Soil pH	Light Requirement	Construction Tolerance/Limitations	Urban Tolerant Tree
Poplar, Yellow (Tuliptree)	*Liriodendron tulipifera*	1,600	2	Large	P	XX		x	x			XX	0	L	L	Oval	80-150	30-60	DB	C	YE	Y	Spring	X		Y	M	L	0.171	M	L	sl ac	FS	P/IS	
Redbud, Eastern	*Cercis canadensis*	400		Small	P	XX	XX	XX		XX	XX	x	XX	S	S	Spreading	25-50	15-25	DB	M	YE	P	Spring	X		Y	F	S	0.012	M	M	ac-sl ac	PS	M/S	
Redbud, Eastern White	*Cercis canadensis var. alba*	400		Small	P	x	XX	XX		XX	x	x	XX	S	S	Spreading	20-30	15-25	DB	M	YE	W	Spring	X		Y	F	S	n/a	M	M	ac-sl ac	PS	n/a	
Redbud, 'Forest Pansy'	*Cercis canadensis* 'Forest Pansy'	400		Small	P	x	XX	XX		XX	x	x	XX	S	S	Spreading	20-30	15-25	DB	M	YE	P	Spring	X		Y	F	S	n/a	M	L	ac-sl ac	PS	n/a	
Redbud, 'Oklahoma'	*Cercis reniformis* 'Oklahoma'	400		Small	P		XX	XX	x	XX			XX	S	S	Rounded	20-25	15-20	DB	M	YE	P	Spring	X		N	M	S	n/a	D	H	ac-sl ac	FS	n/a	X
Redbud, 'Texas White'	*Cercis reniformis* 'Texas White'	400		Small	P		XX	XX	x	XX			XX	S	S	Rounded	20-25	15-20	DB	M	YE	W	Spring	X		N	M	S	n/a	D	H	ac-sl ac	FS	n/a	
Redcedar, Eastern	*Juniperus virginiana*	900		Medium	P	x		XX	x		XX	x	0	M	M	Pyramidal	40-60	10-20	EC	F	EV	I		X		Y	S	M	-0.010	M	H	ac-nu	FS	M/IS	
Redwood, Dawn	*Metasequoia glyptostroboides*	900		Medium	P	x		XX	x		XX			L	M	Pyramidal	75-100	25-30	DC	F	BR	I				N	F	L	0.163	M	M	n/a	FS	n/a	X
Royal Paulownia (Princess-Tree)	*Paulownia tomentosa*	900		Medium	L		0	x	0	0		0		M	M	Irregular	30-50	20-50	DB	C	YE	P	Spring		X	N	F	S	0.022	M	M	ac-sl alk	FS	g	
Sassafras	*Sassafras albidum*	900		Medium	C	x		x			x	x		M	M	Oval	30-60	20-40	DB	M	OR	Y	Spring	X		Y	M	M	0.069	M	H	sl ac	FS	G/	
Serviceberry, Downy	*Amelanchier arborea*	400		Small	P	XX	XX	XX		XX	XX	x	x	S	S	Irregular	15-40	10-20	DB	M	OR	W	Spring	X		Y	S	M	0.004	M	M	acidic	PS	M/IS	
Silverbell, Carolina	*Halesia carolina*	900	2	Medium	P	XX	x	x	x			x		M	M	Irregular	30-60	20-35	DB	M	YE	W	Spring			Y	M	M	n/a	M	L	ac-sl alk	PS	M/ISC	
Smoketree, American	*Cotinus obovatus*	150		Very Small	L			x					x	S	VS	Oval	15-30	10-25	DB	M	MU	P	Spring			Y	M	S	n/a	D	H	sl ac-sl alk	PS	n/a	X
Smoketree, Common	*Cotinus coggygria*	150		Very Small	L			x					x	S	VS	Oval	10-15	10-15	DB	M	MU	P	Late Spring			N	M	S	n/a	D	H	sl ac-sl alk	FS	n/a	X
Sourwood	*Oxydendrum arboreum*	900	2	Medium	C	XX		x	x					M	M	Spreading	30-60	20-30	DB	M	RE	W	Summer			Y	M	S	0.018	M	M	ac-sl ac	FS	P/A	
Sparkleberry, Tree	*Vaccinium arboreum*	150		Very Small	C			x				x	x	S	VS	Irregular	10-20	5-10	DB	F	RE	W	Late Spring	X		Y	S	S	n/a	M	M	ac-sl alk	S	M/A	
Spruce Varieties	*Picea* species	900		Medium	N	not heat tolerant								L	M											N									
Sugarberry	*Celtis laevigata*	1,600		Large	C	x		x			0	x		L	L	Spreading	60-80	25-60	DB	F/M	YE	I		X		Y	M	M	0.118	M	M	ac	FS	G/I	
Sweetgum	*Liquidambar styraciflua*	1,600		Large	C	x	0	x	0	0		x		L	L	Oval	60-80	40-60	DB	M	MU	I		X	X	Y	F	L	-0.488	M	L	sl ac	FS	G/	
Sweetgum, Fruitless	*Liquidambar styraciflua* 'Rotundiloba'	1,600	2	Large	P	x		x	x	x				L	L	Oval	50-70	35-45	DB	C	MU	I				Y	M	M	n/a	M	L	ac-sl alk	FS	n/a	
Sycamore	*Platanus occidentalis*	1,600	2	Large	P	x		x	x			x	0	L	L	Oval	70-100	30-70	DB	C	BR	I			X	Y	F	M	-0.789	M	M	sl ac-sl alk	FS	G/	
Tallowtree, Chinese	*Sapium sebiferum*	900		Medium	N	invasive								M	M											N									
Tree-of-Heaven (Ailanthus)	*Ailanthus altissima*	900		Medium	N	brittle wood; weed tree								M	M											N									
Walnut, Black	*Juglans nigra*	1,600		Large	C	x	0	x	0	0		x		L	L	Rounded	60-70	50-70	DB	M	YE	I		X	X	Y	M	L	0.086	M	L	acidic	FS	P/IS	
Waxmyrtle, Southern	*Myrica cerifera*	150		Very Small	P			x	x		x	0	x	S	VS	Multi-Stemmed	10-30	10-30	EB	F	EV	I		X		N	M	S	n/a	M	M	ac-alk	FS	G/	
Willow, Black	*Salix nigra*	900		Medium	C	x	0		0	0		x	0	M	M	Irregular	30-40	30-40	DB	F/M	YE	I				Y	F	S	-0.177	W	L	n/a	FS	G/	
Willow, Weeping	*Salix babylonica*	1,600		Large	L	x	0	x	0	0			0	L	L	Rounded	30-70	20-70	DB	F/M	YE	I				N	F	M	-0.096	W	M	acidic	FS	mg	
Winterberry, Common	*Ilex verticillata*	150		Very Small	P	x	x	x			x	x	x	S	VS	Multi-Stemmed	5-15	5-10	DB	M	I	I		X		Y	M	S	n/a	M	L	ac	FS	G/	
Witchhazel, Common	*Hamamelis virginiana*	400		Small	P	x		x		x		x	x	S	S	Spreading	20-35	20-35	DB	M/C	YE	Y	Fall			Y	M	M	-0.009	M	M	sl ac	PS	M/IS	
Yellowwood, American	*Cladrastis kentukea*	900	2	Medium	L	x		x	x					M	M	Upright	30-50	40-50	DB	M/C	YE	W	Spring			N	M	M	0.013	M	M	n/a	PS	P/A	
Zelkova, Japanese	*Zelkova serrata*	1,600	1	Large	L			x	x	x		0	0	L	L	Upright	40-80	30-75	DB	M	RE	I				N	M	M	0.084	M	H	ac-sl alk	FS	n/a	X

1 = trees that will project significant shade, intercept enough water, substantially filter out pollutants, and survive the conditions within a parking area to the extent they could be considered a "canopy" tree.
2 = same as 1, except that these trees are ONLY appropriate for large, expanded tree islands or landscape strips, swales, or moist soil conditions with plenty of rooting space.