

An Ordinance  
NO. 02-43

An Ordinance repealing Chapter 20A entitled Tree Planting and Protection and adopting a new Chapter 20A containing regulations for tree protection and planting requirements.

THE COUNCIL OF COLUMBUS, GEORGIA, HEREBY ORDAINS:

SECTION 1.

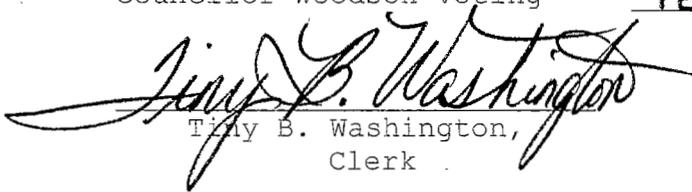
Chapter 20A of the Columbus Code (Tree Planting and Protection) is hereby repealed and the attached text is hereby adopted as a new Chapter 20A of the Columbus Code to be entitled Tree Preservation and Replacement. The attached text is hereby incorporated by reference and shall be codified as a new Chapter 20A of the Columbus Code.

SECTION 2.

All ordinances and parts of ordinances in conflict with this ordinance are hereby repealed.

Introduced at a regular meeting of the Council of Columbus, Georgia held on the 21<sup>st</sup> day of May, 2002; introduced a 4<sup>th</sup> second time at a regular meeting of said Council held on the 4<sup>th</sup> day of June, 2002, and adopted at said meeting by the affirmative vote of eight members of said Council.

Councilor Allen voting	<u>YES</u>
Councilor Henderson voting	<u>YES</u>
Councilor Hunter voting	<u>ABSENT</u>
Councilor McDaniel voting	<u>ABSENT</u>
Councilor Poydasheff voting	<u>YES</u>
Councilor Rodgers voting	<u>YES</u>
Councilor Smith voting	<u>YES</u>
Councilor Suber voting	<u>YES</u>
Councilor Pugh voting	<u>YES</u>
Councilor Woodson voting	<u>YES</u>

  
Tiny B. Washington,  
Clerk

  
Bobby G. Peters,  
Mayor

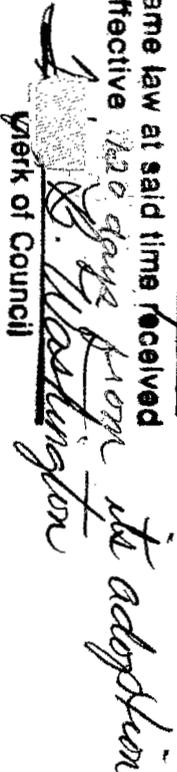
This is to certify that this ordinance was published in its entirety in the Columbus Ledger on the 21<sup>st</sup> day of June, 2002

Sec: 3-206(2) Tiny B. Washington Es.  
Clerk of Council

This ordinance submitted to the Mayor for his signature, this the 10<sup>th</sup> day of June, 2002  
Sec: 3-202 (1)

  
Clerk of Council

This ordinance received, signed by the Mayor at 2:45 P.M. on the 29<sup>th</sup> day of June, 2002, and became law at said time received and became effective 120 days from its adoption  
Sec: 3-202 (2)

  
Clerk of Council

# Tree Preservation and Replacement Ordinance

## Table of Contents

<u>Section</u>	<u>Page</u>
<b>Section 1:</b> Findings, Intent and Statement of Purpose	1
<b>Section 2:</b> Definitions	2
<b>Section 3:</b> City Arborist	10
<b>Section 4:</b> Tree Board	11
<b>Section 5:</b> Official Tree	13
<b>Section 6:</b> Applicability	13
<b>Section 7:</b> Density Requirements	15
<b>Section 8:</b> Additional Requirements	18
<b>Section 9:</b> Tree Protection & Planting Plan Requirements	23
<b>Section 10:</b> Tree Protection During Construction Standards	24
<b>Section 11:</b> Tree Planting Standards	26
<b>Section 12:</b> Alternative Compliance	27
<b>Section 13:</b> Inspections	30
<b>Section 14:</b> Variances	31
<b>Section 15:</b> Nuisances, Disease, Infection and Emergencies	33
<b>Section 16:</b> Enforcement & Administration	35

<u>Section</u>	<u>Page</u>
<b>Section 17:</b> Injunctive Relief	36
<b>Section 18:</b> Miscellaneous	37
<b>Section 19:</b> Serveability & Conflict	41
<b>Section 20:</b> Effective Date	41
<b><u>Tree Density Standards</u></b>	
<b>Table A</b> – Planted caliper size to unit value	42
<b>Table B-1</b> – Preserved trees – Small maturing species diameter size to unit value	43
<b>Table B-2</b> - Preserved trees – Large maturing species diameter size to unit value	44
<b>Appendix “A”</b> – Recommended Tree Planting List	45
<b>Appendix “B”</b> – Tree Planting Detail	47

## TREE PRESERVATION AND REPLACEMENT ORDINANCE

### Section 1: FINDINGS, INTENT AND STATEMENT OF PURPOSE

Columbus, Georgia, is situated in an area covered with a wide variety of deciduous and evergreen trees and shrubs which are a vital part of the heritage passed to us by nature and our forefathers.

Trees are recognized to be a valued asset providing a healthier and more beautiful environment in which to live. Trees are economically beneficial in attracting new residents and tourists. Tree preservation enhances the value and marketability of property and, thereby, promotes the stability of residential neighborhoods making them more livable and desirable, and thus helps prevent the emergence of blighted neighborhoods, slum conditions and urban sprawl.

Trees aid in preventing erosion, storm drainage, siltation of streams and reservoirs, and flash flood damage. Trees are valuable in providing shade and cooling effects, and in preventing air, noise, and visual pollution.

The purpose of this chapter is to:

- (a) Make Columbus, Georgia a more attractive and healthy environment in which to live, and better control stormwater runoff, noise, glare, heat, and soil erosion;
- (b) Provide the necessary information to facilitate development project design, plan review, and enforcement processes in order that the provisions of this Ordinance are administered in the most effective, efficient and economical manner;
- (c) Establish and maintain the maximum sustainable amount of tree cover on public and private lands in the city;
- (d) Maintain city trees in a healthy and non-hazardous condition; and
- (e) Establish and maintain appropriate diversity in tree species and age classes to provide a stable and sustainable urban forest.

## Section 2: DEFINITIONS

For the purpose of the administration and enforcement of this Ordinance and unless otherwise stated, the following words shall have the definitions indicated, and when used in the present tense shall include future tense; when stated in the plural shall include the singular; and the word "shall" is mandatory, not discretionary.

**Arborist:** One who is versed in the art of arboriculture, including tree surgery, the prevention and cure of tree diseases and the control of insect pests.

**Arterial Street:** See "street".

**Berm:** A mound of earth between two and six feet high used to buffer or screen a land use.

**Bona fide Agricultural Purpose:** Good faith commercial or domestic agricultural use of the land, any such determination of which shall be based upon, but not limited solely to, the following factors: (1) the length of time the land will be so utilized; (2) the productivity of land in its present use; (3) the relationship of the property to the comprehensive zoning plan; and (4) the current zoning classification of such lands as delineated on the official zoning map.

**Buffer:** Land area used to visibly separate one use from another through screening and distance.

**Caliper:** The diameter or thickness of the trunk of a nursery-grown tree as measured at six inches (6") above the top of the root mass.

**Canopy Trees:** Canopy tree species shall be a minimum of eight feet in height and have a caliper of at least two inches immediately after planting. These species shall have an average mature crown spread of at least 25 feet when grown in Columbus, Georgia. See Large Maturing Tree.

**Central Business District (CBD):** Areas zoned C-1 and CRD on the Official Zoning Atlas of Columbus, Georgia.

**City:** Governmentally, the Consolidated Government of Columbus, Georgia; or, the geographical area lying within the municipal boundaries of the Consolidated Government of Columbus, Georgia or Muscogee County, Georgia.

**City Arborist:** The Manager of the Landscape & Forestry Division of Columbus, Georgia or his or her designee.

**City Land Planner:** The individual employed within the Planning Division of the Department of Community and Economic Development charged with reviewing subdivision plats and site plans.

**Clearing:** Removal and proper disposal of exposed objectionable matter from an area. This may include but is not limited to trees, roots, grass, underbrush, rubble, any type of structures, etc.

**County:** Muscogee County, Georgia.

**Critical Establishment Period:** The first two years after a tree is planted.

**Critical Root Zone:** An area on the ground around a tree that is within the drip line of a tree.

**Cutting:** The detaching or separating of any limb, branch, or root from a tree.

**Day:** Except as otherwise provided in this ordinance, the word "day" shall mean a business day and shall not include weekends or holidays of the Consolidated Government.

**Dead Tree:** A tree that does not contain any live tissue, i.e., green leaves or live limbs.

**Deciduous:** A plant with foliage that drops or dies at the end of a growing season.

**Deciduous Tree:** Any tree which naturally loses its leaves in the Fall.

**Density Factor:** A unit of measure used to prescribe the calculated tree coverage on a site.

**Diameter Breast-Height (DBH):** The standard measure of tree size (for trees existing on a site). The tree trunk is measured at a height of four and one-half (4.5) feet above the ground. If a tree splits into multiple trunks below 4.5 feet, measure the trunk at its most narrow point beneath the split.

**Diameter, Tree:** The diameter of a tree measured as follows: 1) for existing preserved trees, at a point 4.5 feet above the ground; 2) for new replaced trees, at a point 6 inches above the ground. (For multi-trunk trees see Diameter Breast-Height (DBH) above.)

**Drip Line:** A vertical line extending from the outermost branches of a tree to the ground.

**Floodplain, 100 Year:** Per Section 11A-2 Floodplain Ordinance, as amended, land in the floodplain subject to a 1% or greater statistical occurrence probability of flooding in any given year.

**Freeway:** The highest type of arterial highway which has full control access giving preferential treatment to thru traffic. Typically, freeways are multi-lane roadways with medians, grade separations at cross streets, ramp connections & frontage roadways for access to adjoining properties.

**Grading:** Altering the shape of the ground surfaces to a predetermined condition; this includes stripping, cutting, filling, stockpiling & shaping or any combination thereof and shall include the land in its cut or filled condition.

**Green Space:** Any area retained as permanently vegetated land.

**Ground cover:** Grasses or other plants grown to keep soil from being blown or washed away.

**Land Disturbing Activity:** Any activity which may result in soil erosion from water or wind and the movement of sediments into state waters or onto lands within the state, including but not limited to clearing, dredging, grading, excess transportation and filling of land but not including agriculture practices as described in the Soil Erosion and Sedimentation Control Ordinance, Section 17C-4 of the Code of Ordinances.

**Large Maturing Tree:** Large maturing tree species shall be a minimum of eight feet in height and have a caliper of at least two inches immediately after planting. These species shall have an average mature crown spread of at least 25 feet when grown in Columbus, Georgia. See Canopy Tree.

**Lot:** A portion of a subdivision or any other parcel of land intended as a unit for transfer of ownership, or lease to, or separate use of, another, or for development. The word "lot" includes, but is not limited to, "plot" or "parcel."

**Lot Area:** The area contained within the property lines of a lot, excluding space within any street right-of-way, but including the area of any easement.

**Mature Tree:** is hereby defined to mean any tree which has attained the capability of flowering and reproducing.

**Modification:** A type of administrative appeal that may be granted by the City Arborist only where specifically authorized in this Ordinance.

**Mulch:** A layer of wood chips, pine straw, hay or other material placed on the surface of the soil around plants to retain moisture, prevent weeds from growing, hold soil in place and aid in plant growth.

**Natural Area:** An area of natural vegetation that is generally undisturbed, unmaintained, and is self-perpetuating. It includes not only trees, but also native shrubs, ground covers, wildflowers, vines, and grasses.

**Official Street Tree Planting Plan and Program:** A plan and program adopted for the planting of trees along public streets, parks and other public places.

**Ornamental Grass:** A grass planted primarily for its ornamental value or for screening purposes.

**Park:** All public land set aside for open space and recreation purposes.

**Parking Lot:** An impervious surface used for the parking, storage or display of motor vehicles, boats, recreational vehicles, etc.

**Perimeter Planting Strip:** Land area located within the boundary of a lot and required to be set aside and used for landscaping upon which only limited encroachments are authorized.

**Planting Season:** The time period or season during which newly planted trees will have the best opportunity for

survival. The planting season begins on November 1st and ends on March 31st.

**Private Tree:** Any tree located on private property.

**Pruning:** The elimination of live and dead branches from a tree's crown to improve tree structure, enhance vigor and/or maintain safety.

**Public Places:** All lands owned by the Consolidated Government of Columbus, Georgia.

**Public Tree:** Any tree located on property belonging to the Consolidated Government of Columbus, Georgia.

**Removal:** The physical removal of a tree.

**Replacement Tree:** A new tree planted on a site to meet minimum site density factor requirements (regardless of whether trees existed prior to any development).

**Residential Development Permit:** Permit issued giving authorization to begin land disturbing activities for a single family residential construction project as defined in Section 17C, Soil Erosion & Sedimentation Ordinance.

**Residential zones:** Areas zoned R-1, R-1A, R-2, R-3, R-3A, R-3B or R-4 on the Official Zoning Atlas of Columbus, Georgia.

**Right-of-way:** A strip of land over which Columbus has the right by ownership to construct a public street, sidewalk, or use for public utilities.

**Screening:** A method of shielding or obscuring one abutting or nearby structure or use from another by opaque fencing, walls, berms, densely planted vegetation, or the like.

**Self permitting:** A process permitted by Section 17C, Soil Erosion & Sedimentation Ordinance involving single family residential construction as defined in Section 17C, Soil Erosion & Sedimentation Ordinance.

**Shrub:** A woody plant, smaller than a tree, consisting of several small stems from the ground or small branches near the ground.

**Site Development Permit:** Permit issued giving authorization to begin land disturbing activities for all non-exempt land disturbing activities other than those requiring a Residential Development Permit (RDP) or UDP (Utility Development Permit) or MLD (Minor Land Disturbance Permit) as defined in Section 17C, Soil Erosion & Sedimentation Ordinance.

**Site Plan:** A plan provided that reflects existing and proposed conditions on a site that is intended for construction. This may include but is not limited to topography, structures and/or additions, grading, drainage, erosion control measures, trees to be saved or planted to comply with the requirements of this Ordinance, best management practices, parking requirements, streets and other type improvements.

**Small Maturing Tree:** Small maturing tree species shall have an average mature crown spread of at least 15 feet when grown in Columbus, Georgia. Small maturing tree species shall be a minimum of five feet in height and have a caliper of at least one and one-half inches immediately after planting. See Understory tree.

**Street:** A dedicated and accepted public right-of-way for vehicular and pedestrian circulation. The definition shall include but is not limited to the following:

(1) Arterial: A street which expedites movement of through traffic to major traffic generators and from community to community. Arterials collect and distribute traffic from freeways and expressways to less important streets or directly to traffic destinations.

(2) Collector street: A street which collects and distributes traffic from arterials to access streets or directly to traffic destinations. Collectors generally serve neighborhood traffic generators.

(3) Local streets: A street which provides vehicular access to the properties abutting it.

**Street Tree or Trees:** Any existing tree or any tree to be planted on the street right-of-way.

**Subdivision:** Division of a tract or parcel of land into two or more lots, building sites or other divisions for the purpose of either immediate or future sale, lease or

building development, including all divisions of land involving a new street or a change in existing streets. The term subdivision does not apply to the division of land into parcels of five or more acres where no new street is involved.

**Timber Harvesting:** The felling, loading and transporting of timber products (pulpwood, etc.). The term "timber harvesting" may include both clear cutting and selective cutting of timber.

**Topping:** The severe cutting back of branches to a stub, bud, or a lateral branch not large enough to assume the terminal role.

**Toxic Chemical:** Any chemical deemed by the City Arborist to be damaging to the tree or the soil on public lands.

**Tree:** A usually tall, woody plant, distinguished from a shrub by having comparatively greater height and, characteristically, defined as:

(1) Canopy (Large Maturing) - Single trunk whose height is greater than 35 feet at maturity, or

(2) Understory (Small Maturing) - Single trunk or multi-stem whose height is less than 35 feet at maturity.

**Tree Density Standard (TDS):** The minimum number of Tree Density Units per acre which must be achieved on a property.

**Tree Density Unit (TDU):** A credit assigned to a tree, based on the diameter of the tree, in accordance with tables contained in this Ordinance.

**Tree Permit:** That consent given in writing by the city arborist to a person or private firm or agency to maintain, remove or do any work requiring a permit involving any tree within the public right-of-way or other public property.

**Tree Planting Standards and Specifications:** The design standards and specifications adopted for the planting or maintenance of trees. See Section 11 of this Ordinance.

**Tree Protection and/or Planting Plan (TP/PP):** A plan that identifies Tree Protection Areas where existing trees are to be protected and preserved, and replacement trees

planted on a property to meet minimum requirements, as well as methods of tree protection to be undertaken on the site and other pertinent information.

**Tree Protection Area (TPA):** Any portion of a site wherein are located existing trees which are proposed to be preserved in order to comply with the requirements of this Ordinance. The Tree Protection Area shall include no less than the total area beneath the tree canopy as defined by the drip line of the tree or group of trees collectively.

**Tree Save Area:** All areas designated for the purpose of meeting tree density requirements and/or preserving natural buffers.

**Tree Thinning:** Selective cutting or thinning of trees only for the clear purpose of good forestry management in order to protect said forest from disease or infestation and in no way shall be construed as including clear cutting.

**Understory Tree:** Understory tree species used shall have an average mature crown spread of at least 15 feet when grown in Columbus, Georgia. Understory tree species shall be a minimum of five feet in height and have a caliper of at least one and one-half inches immediately after planting. See Small Maturing Tree.

**Use:** The purpose or activity for which land or buildings are designed, arranged, or intended or for which land or buildings are occupied or maintained.

**Utility Easement:** The right-of-way acquired by a utility or governmental agency or private agency to locate utilities, including all types of pipelines, television cable, telephone and electric cables.

**Zoning Buffer:** An area required by the Zoning Ordinance or as a condition of zoning, special use or variance approval for a specific property.

**Zoning Ordinance:** The action by the Council of Columbus, Georgia rezoning a property.

### Section 3: CITY ARBORIST

The Landscape & Forestry Division Manager, or his or her designee, shall serve as the City Arborist. The duties of the City Arborist shall be to:

(a) Review all plans required by this ordinance and approve or disapprove the same, consider and act upon requests for variances as allowed hereafter, and to conduct such inspections as are necessary to see that compliance with this Ordinance is achieved and maintained. The City Arborist shall take such action within fifteen (15) days of receipt of any such plans or requests for variances.

(b) Direct, regulate and control the planting, maintenance and removal of all trees growing now or hereafter in any public area of Columbus, Georgia;

(c) Make cases for violations of this chapter, to issue summons directed to the offenders and to appear in the Recorder's Court or such other court as shall have jurisdiction of the matter;

(d) Produce tree planting and maintenance standards and specifications to specify planting methods, maintenance and location of trees on public rights-of-way, in parks, and in public places within Columbus, Georgia;

(e) Prepare a street tree planting plan and program along all major arterial streets, collector streets, and publicly owned spaces. He or she shall further be responsible for preparing detailed plans and specifications for all areas covered by the tree planting plan;

(f) Cooperate closely with and assist the Public Services Department, the Community and Economic Development Department, the Engineering Department, the Parks and Recreation Department, the Development Authority and the Downtown Development Authority, and all other City departments of this government in a program to protect and maintain existing trees and green areas and all City owned and recreational lands and properties; and to review and comment on the proposed landscaping plans of all recreational lands and other public properties within the City;

(g) Review and make recommendations and/or comments on all proposed landscaping or development plans of any department of the Consolidated Government, or any plans of whatever nature which propose the planting or removal of any public trees;

(h) Monitor the impact of this Ordinance through canopy studies, tree inventories and other methods and report on the same to the Tree Board and Council; and

(i) Study and make recommendations to the Mayor and Council regarding the planting, maintenance and protection of trees on public property; or when requested by the Mayor and Council, to consider, investigate, make findings, report and recommend upon any special matter or question coming within the scope of its work.

#### **Section 4: TREE BOARD**

(a) A Tree Board is hereby established to be composed of eleven (11) members appointed by the Council of Columbus. All appointments shall be for a three-year term; except the initial appointments shall be as follows: four (4) members appointed for a three-year term to terminate December 31, 2004; four (4) members appointed for a two-year term to terminate December 31, 2003; and three (3) members shall be appointed for a one-year term to terminate July 1, 2003. The initial term shall be considered a full term under the provisions of "Sec. 2-1 Governing bodies, generally" of the Code of Ordinances.

(b) The Mayor and Council, when appointing members to the Tree Board, shall give consideration to those persons who have demonstrated an interest in the preservation and conservation of trees in the City. Appointments shall be made so that seven (7) members of the Tree Board consist of representatives from each of the following groups:

(1) A public utility providing service within the City;

(2) An educator employed by Columbus State University, the Muscogee County School District, or Columbus Technical College whose principal field of activity is science and/or the environment;

(3) The Director or a Commissioner of Keep Columbus Beautiful;

(4) A representative of the development or building community of the City working primarily in commercial and/or industrial development;

(5) A representative of the development or building community of the City working primarily in residential development;

(6) A representative of an environmental advocacy group headquartered in the City; and

(7) A representative who is a landscape or forestry professional.

The additional four (4) members of the Tree Board shall be appointed from the public at large. The City Arborist shall serve as an advisor to and as an ex-officio member of the Board, but shall not have the right to vote as a Board member.

(c) The Tree Board shall have the following responsibilities:

(1) The Board shall choose its own officers, make its own rules and regulations, establish meeting dates and keep minutes of its proceedings. The Board rules and regulations shall be approved by the City Attorney's Office and a copy shall be forwarded to the Clerk of Council. A majority of the total members shall be a quorum for the transaction of business.

(2) To prepare or update, annually, a written, City-wide "Tree Master Plan" that guides the care, preservation, pruning, planting, replanting, removal, or disposition of trees on public lands; such plan shall consider existing and future utility locations and environmental factors in relation to existing and future tree species on public lands or on private lands, as provided in this Ordinance or other Ordinances; such plan shall be recommended to the Mayor and Council and upon their acceptance and approval shall be implemented as the "Tree Master Plan."

(3) To grant appropriate variances and hear appeals from any decision of the City Arborist regarding the enforcement of this Ordinance.

(4) To make recommendations to the City Arborist and the Mayor and Council of Columbus, Georgia.

(5) To act on other matters designated by this chapter or by the Mayor and Council of Columbus, Georgia.

### **Section 5: OFFICIAL TREE**

The Muskogee Crape Myrtle shall be the official tree of Columbus, Georgia.

### **Section 6: APPLICABILITY**

This Ordinance shall apply to projects meeting at least one of the following criteria:

(a) All sites proposed for development, other than mere renovation of an existing building, shall require the application of the Ordinance.

(b) On sites 2 acres or smaller, additions or expansions greater than 5,000 square feet shall be subject to this Ordinance. This includes additions cumulatively totaling more than 5,000 square feet since the adoption of the Ordinance. On sites greater than 2 acres, additions or expansions greater than 10,000 square feet to an existing structure shall be subject to this Ordinance. This includes additions cumulatively totaling more than 10,000 square feet since the adoption of the Ordinance.

(1) Any site or development which falls under the provisions of this Ordinance by virtue of additions or expansions as defined in this subsection shall be required to meet the applicable Tree Density Unit (TDU) requirements as established hereafter only and without regard to any specified placement of trees contained in Section 8 (a), Parking Areas, and (b) (1) Perimeter Plantings.

(2) To determine the required number of TDU's specified in this sub-section, you may either:

(A) Calculate the total surface area of any proposed new impervious surface and/or improvements and plant new trees sufficient to meet the required TDU's for that area (existing trees elsewhere on the site may not be counted with this option;) or

(B) Calculate required TDU's for entire site area according to zoning classification and with this option, existing trees on the site may be counted to achieve required TDU's.

(c) For planned developments including the operations of clearing or grading, the Owner shall be required to follow at a minimum the standards set forth herein and the standards of stabilization as set forth in the Erosion Control Ordinance. Plantings shall not be required until a Certificate of Occupancy is requested for the developed parcels and at that time only the plantings for each developed parcel should be required. Plantings shall be completed prior to the issuance of a Certificate of Occupancy or performance of a Final Building Inspection. This shall ensure that the proper plantings are established for each use as well as provide for the appropriate timing of plant installation. (See Section 11, Tree Planting Standards, Subsection (b) Planting Specifications and Section (10) Out of Season Planting, for procedures providing for delayed plantings in the appropriate planting season.)

(d) Redevelopment of a site shall require the application of the Ordinance. Redevelopment is defined as the demolition and rebuilding or expansion of 50% or greater of the site's physical development (i.e.: square footage of buildings). Subsequent redevelopment cumulatively totaling more than a 50% expansion since the adoption of the Ordinance shall be subject to the Ordinance.

Any site or development which falls under the provisions of this Ordinance by virtue of redevelopment as defined in this subsection shall be required to meet the applicable Tree Density Unit (TDU) requirements only and without regard to any specified placement of trees contained in Section 8 (a), Parking Areas, and (b) (1) Perimeter Plantings.

(e) The provisions of this Ordinance shall apply to all public entities and owners of public property within Columbus, Georgia and it shall be unlawful for said owners to fail to comply with all provisions of this Ordinance.

## Section 7: DENSITY REQUIREMENTS

(a) How Site Density Requirements Are Calculated:

(1) Formula for Calculation. The Tree Density Units required by the Tree Preservation and Replacement Ordinance may be achieved by counting existing trees to be preserved, planting new trees, or some combination of the two as represented by the formula: Total Tree Density Units (TTDU) = Existing Tree Density Units (ETDU) + Replacement Tree Density Units (RTDU) (see below). The tree density requirement must be met whether or not a site had trees prior to development.

(2) Total Tree Density Units (TTDU) Requirements for a Site. The Total Tree Density Unit requirement for a site is the minimum Tree Density Units (TDU) required to be maintained on a developed site. It is calculated by multiplying the number of site acres by the appropriate Tree Density Unit (TDU) number for the applicable zoning classification. Determine the affected site acreage by starting with the area of the parcel(s) of land on which the project is located. Subtract the area of any utility easement and pond or lake and dam over one (1) acre in area.

(3) Existing Tree Density Units (ETDU). Existing Tree Density Units (ETDU) is the density of existing trees to be preserved on a site. Trees that exist in any utility easements cannot be counted toward meeting tree density requirements. The ETDU is calculated by converting the diameter of individual existing trees to density factor units. (See Tables B-1 and B-2 below.)

(4) Replacement Tree Density Units (RTDU). Replacement Tree Density Units (RTDU) is the density of new trees to be planted on a site, excluding utility easements. Calculate the RTDU by subtracting the ETDU from the TTDU. The density factor credit for each caliper size of replacement (new) trees is shown in Table A below.

(b) Low and Medium Density Single-Family Residential Lots and Subdivisions.

Prior to the issuance of a Site Development Permit or a Residential Development Permit for any property to be developed as a residential subdivision within a low density

single-family residential or agricultural zoning classification, a Tree Protection and/or Planting Plan shall be prepared and approved indicating compliance with the appropriate tree density standards of density units per acre which corresponds to the zoning classifications below:

<b>Zoning Classification Units</b>		<b>Tree Density</b>
<b>A-1</b>	<b>Agricultural</b>	<b>12</b>
<b>R-1</b>	<b>Low Density Residential</b>	<b>10</b>
<b>R-1A</b>	<b>Low Density Residential</b>	<b>8</b>
<b>R-2</b>	<b>Low Density Residential</b>	<b>6</b>
<b>R-3</b>	<b>Medium Density Residential</b>	<b>4</b>

Trees must be protected and preserved in accordance with the provisions of Section 10: Tree Protection During Construction Standards of this Ordinance and any trees required to be planted to meet the requirements herein shall be planted in accordance with the provisions of Section 11: Tree Planting Standards of this Ordinance and shall be a species listed on Appendix A, "Recommended Maturing or Small Maturing Tree Planting Lists" of this Ordinance.

All trees required by any required zoning buffer or on any individual lot as provided hereafter or by any other legal requirement shall be counted in calculating whether said property meets the required TDU standard.

Additionally, every residential lot containing 7,500 square feet area or greater shall have a minimum of two trees located thereon, one of which must be between the front set back line and the right-of-way. At least one of said trees on lots containing 7,500 square feet or greater area shall be a large maturing / canopy / shade tree. Lots containing less than 7,500 square feet of surface area shall have a minimum of one tree which may be located anywhere on the lot. These individual trees per lot may be counted as part of the required tree density units per acre for the development, but they may be an additional requirement if the appropriate units per acre requirement is met elsewhere on the site. This tree per lot requirement shall apply to the developer or home builder, whoever is responsible for obtaining the building permit for the individual lot, but if it is to be applied to the home builder, the developer will be given credit on the

whole project for the trees which will be required to be planted on the lots which may be built upon later.

In the event final planting of the one or two tree per lot requirement of Subsection 7 (b) or other required plantings cannot be accomplished on a single-family residential lot in a previously approved residential subdivision due to the planting season, inclement weather, or other exigent circumstances whereby the owner desires to move into said home prior to said planting, owners/developers may submit a "Request for Delay Affidavit" to the Arborist.

In the case of a single-family residential home being built on any lot or tract zoned as specified above in this subsection 7 (b) greater than two acres in surface area, the tree density units required to be met for said site shall be those applicable to two acres irrespective of the greater size of said lot or tract upon which said home is built.

(c) All Other Residential Lots and Subdivisions, Commercial and Industrial Developments.

Prior to the issuance of a Site Development Permit for any property to be developed within any zoning classification other than those specified for Low and Medium Density Single-Family Residential Lots and Subdivisions above, a Tree Protection and/or Planting Plan shall be prepared and approved indicating compliance with a tree density standard of ten (10) density units per acre.

All trees required by any required zoning buffer, street or perimeter trees and trees required to be planted in any parking lot as provided hereafter or by any other legal requirement shall be counted in calculating whether said property meets the required TDU standard.

Trees to be counted in arriving at required TDU standards must be protected and preserved in accordance with the provisions of Section 10: Tree Protection During Construction Standards of this Ordinance and any trees required to be planted to meet the requirements herein shall be planted in accordance with the provisions of Section 11: Tree Planting Standards of this Ordinance and shall be a species listed on Appendix A , "Recommended Large Maturing or Small Maturing Tree Planting Lists" of this Ordinance.

## Section 8: ADDITIONAL REQUIREMENTS

In addition to the provisions of Section 7, Density Requirements, above, the following requirements also apply:

### (a) PARKING AREAS

(1) For lots one and one-half (1 1/2) acres or less. Trees may be planted in the parking areas but are not required to be planted there. However, a minimum of seventy per cent (70%) of the required TDU's for said lots shall be either retained or planted as the case may be in the front or side yards of said lots, or adjacent to the city roadways.

(2) For lots larger than one and one-half (1 1/2) acres containing parking areas with a total of twenty (20) or less spaces. In parking areas of twenty (20) or less spaces, landscaping may be provided in landscaping islands and/or medians as provided below, but is not mandatory so long as every parking space is within 60 feet or less from a perimeter or "street" tree, or other large maturing canopy/shade tree retained or planted on the development.

(3) For lots larger than one and one-half (1 1/2) acres containing parking areas of twenty (21) or more spaces. In parking areas of twenty one (21) or more spaces, landscaping shall be provided in landscaping islands and/or medians. Landscaping islands shall be placed so that no line of more than sixteen (16) adjacent (side by side) parking spaces exists. All landscaping islands and medians shall have raised curbs or wheel stops around them, however the use of at-grade planting areas in parking lots to promote storm water runoff treatment and to supplement irrigation needs is encouraged.

Interior linear landscape medians. Interior linear landscape medians may be provided between parking bays. Landscape medians shall be a minimum eight (8) foot width, measured from back of curb to back of curb. Each tree planted in an interior landscape median is required to have a minimum of 200 square feet of planting area. When the landscape median extends to the end of a parking bay, a contiguous median end island, perpendicular to the landscape median, is required. Combination drainage swale/planting strips are permitted, in lieu of curbed and sloped islands, provided that adequate drainage is provided for the chosen species.

Interior landscape islands. Interior landscape islands may be provided within parking lots and other paved areas. The first tree planted in an interior landscape island is required to have a minimum of 200 square feet of planting area, with at least eight (8) feet in one direction, measured from back of curb to back of curb. If the landscape island contains more than one tree, eighty (80) square feet of planting space shall be added for each additional tree. The interior landscape islands may be contiguous with an interior landscape median or a perimeter planting strip.

Landscape end islands. Landscape end islands shall be provided at the end of a parking bay. Each tree planted in an end island is required to have a minimum of 200 square feet of planting area, with a minimum length equal to the length of the adjoining parking space, and a width of at least eight (8) feet, measured from back of curb to back of curb. If the landscape island contains more than one tree, eighty (80) square feet of planting space shall be added for each additional tree. The landscape end islands may be contiguous with an interior landscape median or a perimeter planting strip.

Required plantings. Interior and terminal landscape islands for a single row of parking spaces shall be planted with a least one (1) large maturing canopy/shade tree. Interior or terminal islands for a double row of parking spaces shall contain not less than two (2) large maturing canopy/shade trees.

Large maturing canopy/shade trees must be planted or retained within the landscape medians and/or islands so that each parking space is 80 feet or less from a tree in an interior planting area, median or island, or 60 feet or less from a perimeter or "street" tree, or other large maturing canopy/shade tree retained or planted on the development. If significant tree save areas or natural areas, or planned alternatives which exceed the requirements of this Ordinance as to numbers of trees and/or spacing distances exist within a parking area, the City Arborist may make such exceptions to these requirements, as he or she deems appropriate in their sole discretion.

Minimum planting area. The minimum unpaved landscape area per tree in said landscaping islands shall be 200 square feet with a minimum dimension of 8 feet. Understory trees

may be substituted for large maturing canopy/shade trees in any landscape median or island if such tree would be within 20 feet of an overhead utility line.

Curbs and wheel stops. Trees shall be planted a minimum of three (3) feet from any curb or wheel stop, so as to prevent injury to trees by vehicle bumpers. Where landscaped areas are located adjacent to vehicle overhangs, trees shall be planted in line with the striping between parking spaces in order to avoid injury to trees by vehicle bumpers.

Landscaping of islands and medians. All landscape islands within parking lots shall be one hundred percent (100%) landscaped with trees (as specified above), evergreen shrubs (not to exceed 30" in height at maturity), ground cover (excluding those requiring mowing), mulch, and/or flowers in mulched beds in the area within three (3) feet of the base of the tree. The same planting requirements shall apply to medians in parking lots. Grass may be used in landscape medians and islands so long as it stops three (3) feet from the base of the tree. Pedestrian traffic through landscape medians and islands should be directed away from the trees' critical root zones and toward appropriate pathways through appropriate landscaping.

Preplanting preparation of compacted soil. All landscape islands and medians where trees and shrubbery will be planted shall be prepared to a uniform depth of two and one-half (2.5) feet of uncompacted soil. The final soil in the landscape islands and medians shall be obtained on site or imported from a suitable source. Dumping of construction debris, trash, concrete residue, paint residue or other items toxic to trees and plants shall not be allowed in landscape islands and medians. No gravel, stone, or other impervious material greater than one (1) inch in diameter shall be allowed in the landscape islands or in a landscape median within eight (8) feet radius of a tree planted in an interior linear landscape median, unless it is used as mulch. Site-lighting standards should be coordinated for new planting locations or avoided in planting islands for Ordinance-required trees.

(4) Exceptions.

Multi-level or covered parking areas are exempt from the requirements of subparagraphs (1) , (2) AND (3) above. The provisions of sub-paragraphs (2) and (3) above relating to

landscape medians and islands and maximum distances between parking spaces and trees do not apply to areas used principally for motor vehicle, boat or mobile home sales, storage or display lots, and loading and shipping docks and areas of heavy truck traffic thereto, which shall be clearly delineated to separate them from employee and customer parking areas.

All other requirements of this Ordinance, including but not limited to perimeter planting and tree density requirements for the whole development, shall apply to such exempted areas, however.

(b) PERIMETER PLANTINGS.

(1) General: In all developments and substantial improvements on parcels excepted by the provisions of the Buffering, Screening and Landscaping Ordinance (Code of Ordinances Section 18A-71 et seq; Ord. No. 99-25, 4/29/99; Ord. No. 00-58, 6/13/00), other than areas zoned C-1 and CRD on the Official Zoning Atlas of Columbus, Georgia, the following provisions shall apply:

A continuous perimeter planting strip is required along the perimeter of the property. The perimeter planting strip shall be a minimum width of 10 feet.

Perimeter planting strips may occur within required buffers or yards. The minimum number of trees required in the perimeter planting strip shall be one (1) large maturing tree for every fifty (50) linear feet of perimeter, or portion thereof, or one (1) small maturing tree for every thirty (30) linear feet of perimeter, or portion thereof. If a small maturing tree is planted next to a large maturing tree, the maximum distance between the two trees shall be thirty (30) feet, subject to the grouping provision below. Existing trees to be preserved in the landscape strip may count toward perimeter planting.

At least fifty percent (50%) of the trees in the perimeter planting strip must consist of large maturing trees, except that no large maturing tree shall be planted within twenty (20) feet of an overhead utility line. Trees may be grouped or spaced to allow sight corridors. In the event of grouping of trees as permitted herein, a portion of said grouped trees may be planted inward of the perimeter planting strip if necessary to maintain a minimum distance between trees of 20 feet.

Where evenly spaced street trees exist within the public right-of-way, planted trees should be staggered to prevent conflict with existing trees and accommodate the full potential growth of the trees. Each tree planted in a perimeter planting strip is required to have a minimum of 200 square feet of planting area which may not be encroached upon by parking spaces or driveway surfaces.

(2) The provisions of this sub-section as to perimeter plantings also apply to the portions of those Low and Medium Density Single Family Residential Lots and Subdivisions specified in Section 7 (b) of this Ordinance where said subdivision or lot abuts the right of way of a public freeway, arterial or collector street as defined by the Ordinances of Columbus, Georgia.

(3) Storm Water Detention and Retention Facilities: In addition to the above requirements, a visual screen shall separate and screen all storm water detention and/or retention facilities adjacent to a public street or right-of-way from said public street or right-of-way, and any adjoining or contiguous property. The screen shall be a minimum of thirty six (36) inches in height within twenty-four (24) months after planting and may be formed through creation of a planted hedge, wall, earth berm or combination of such. When using an earth berm, the slope shall not exceed three to one (3:1) with a maximum crown width of two (2) feet, and shall be planted with turf or other landscaping materials. The visual screen may be included in the required perimeter planting strip.

(4) Non Residential Uses in Residential Zoned Areas: All provisions of this section apply to all non-residential uses on parcels zoned for residential purposes. (This includes but is not limited to clubhouses, public uses including buildings, structures and uses of land by a unit of government such as schools, libraries, parks, playgrounds, recreation centers and fire stations, public, private and parochial schools, churches and other places of worship, convents, monasteries, recreational/ meeting facilities constructed in connection with a residential development or owned and operated by a neighborhood association, utility substations and wireless communication facilities.

**Section 9: TREE PROTECTION AND PLANTING PLAN  
EQUIREMENTS**

(a) Tree Protection and Planting Plan Required - All applications for site development permits shall be accompanied by a Tree Protection and Planting Plan drawn to a standard scale and size which includes the following:

(1) A tree and root protection zone plan for:

(A) all existing trees on the public right-of-way;

(B) all trees to be retained for credit under any of the provisions of this Ordinance; and

(C) TDU and any applicable parking lot and/or perimeter planting requirements and attainment.

(2) A planting plan for all trees required to be planted under any of the provisions of this Ordinance on public and private property. Plans that are only for required street planting may be in written form. This plan shall be approved prior to construction where street trees may be effected.

(3) This Tree Protection and Planting Plan may be included on other required plans.

(4) For subdivisions, this plan may be in narrative form with sketch sufficient to identify tree save areas and how the project will meet the requirements of this Ordinance. For residential subdivisions, a copy of this plan shall be forwarded to the Building Inspections and Code Department. All proposed site plans for any development for which a planting plan has been approved shall make reference to the specified number of Tree Density Units (TDU's) or trees for that lot, and shall make reference to the builder's acknowledgement to meet these previously imposed requirements.

(b) Tree replacement and protection - When trees retained or planted as required by this Ordinance die or are removed for any reason, except in single family residential lots, they must be replaced during the next suitable planting season in a manner, quantity and size agreed upon by the owner and the Arborist. If they cannot agree, then the determination shall be made by the Tree Board, with right of appeal by any aggrieved party. Trees shall be allowed

to grow to their natural height and form. Topping of any tree necessary to attain compliance with any provision of this Ordinance is prohibited.

(c) At the time a tree protection and planting plan is submitted, the applicant must identify (1) the City Arborist or (2) a registered landscape architect or civil engineer or International Society of Arboriculture-certified arborist or registered forester on a list approved by the City Arborist who shall track and submit periodic reports and a final certification of compliance.

### **Section 10: TREE PROTECTION DURING CONSTRUCTION STANDARDS**

The following standards shall apply to trees proposed to be preserved for credit toward meeting the minimum required Tree Density Units on a property.

(a) Tree and Root Protection Zone.

The root system within the drip line is the Critical Root Zone (CRZ). To protect these critical root zones, a Tree Protection Area (TPA) shall be established around each tree or group of trees to be retained.

(1) The Tree Protection Area shall include no less than the total area beneath the tree canopy as defined by the drip line of the tree or group of trees collectively, unless prior approval is received from the City Arborist.

(2) Layout of the project site utility and grading plans shall avoid disturbance in the Tree Protection Area. Trenching shall not be allowed within the Tree Protection Areas, unless prior approval is received from the City Arborist.

(3) Construction site activities, including but not limited to parking, materials storage, concrete washout, burnhole placement, shall not be allowed within the Tree Protection Areas.

(4) Root disturbance due to cuts or fill shall not be allowed within the Tree Protection Areas. All exposed roots one (1) inch and greater in diameter at the edge of the Tree Protection Area shall be pruned with a clean cut flush to the soil edge.

(5) Soil compaction shall not be allowed within Tree Protection Areas.

(6) Erosion and sedimentation control measures shall be installed in a manner designed to prevent the accumulation of sediment within the Tree Protection Areas.

(b) Protective Barriers. Tree protection devices shall be installed as shown on the plans or otherwise completely surround the Tree Protection Areas.

(1) All tree protection fencing shall be installed prior to and maintained throughout the land disturbing and construction process, and shall not be removed until final landscaping is installed.

(2) Tree protection fencing shall consist of chain link, orange laminated plastic, wooden post and two rail fencing, or other equivalent restraining material.

(c) Extra TDU Credits: Any tree with a single-stem trunk diameter of 21" or greater (at DBH) that is shown on the plan will receive double the normal Tree Density Unit credit if appropriate tree protection standards are employed for a ground area equivalent to 1.5 feet in radius for each 1 inch in diameter (at DBH). These trees must be represented on the plan by a circle the size of the Protected Root Zone.

(d) Signage: Posting "Tree Save Area" signs is recommended in addition to the required tree protection fencing. Signs requesting subcontractor cooperation and compliance with the tree protection standards are recommended for site entrances.

(e) Pruning: Pruning of tree limbs to provide clearance for equipment and materials or for any other reason shall be done in accordance with standard arboricultural practices.

(f) Encroachment: If encroachment into a Tree Protection Area occurs which causes irreparable damage to one or more trees, based on the assessment of the City Arborist, the damaged tree(s) shall no longer count toward the required Tree Density Units for the property and must be replaced.

## Section 11: TREE PLANTING STANDARDS

The following standards shall apply to all trees and shrubs proposed to be planted for credit toward meeting the minimum required Tree Density Units on a property.

(a) Plant Material Specifications.

(1) All plant material shall meet American Standard of Nursery Stock standards.

(2) Trees selected for planting must be free from injury, pests, disease, nutritional disorders or root defects, and must be of good vigor in order to assure a reasonable expectation of survivability.

(3) Large Maturing (Canopy) Tree species shall be a minimum of eight (8) feet in height and have a caliper of at least two (2) inches immediately after planting. See Appendix A: Recommended Large Maturing and Small Maturing Tree Planting Lists for suitable species choices.

(4) Small Maturing (Understory) Tree species shall be a minimum of five (5) feet in height and have a caliper of at least one and one-half (1 1/2) inches immediately after planting. See Appendix A: Recommended Large Maturing and Small Maturing Tree Planting Lists for suitable species choices.

(5) No Large Maturing Tree species shall be planted within twenty (20) feet of overhead wires.

(6) All plantings that die or are destroyed must be replaced, except in single family residential lots, during the next suitable planting season. Trees which are planted on single family residential lots to meet the requirements of this Ordinance must be alive and in good vigor at the time of the sale of the property, or the developer or builder who planted the tree shall replace the same during the next suitable planting season.

(b) Planting Specifications.

Plantings shall be installed to current nursery industry standards. See Appendix B for an illustrative example.

(1) The diameter of the planting hole shall be a minimum of three (3) times the diameter of the root ball.

(2) The planting hole sidewalls shall be scored or roughened to eliminate the smooth, slick surface caused by the shovel or auger.

(3) If containerized material is to be planted, any circling roots shall be cut by slicing the root ball vertically from top to bottom in two to three well spaced lines around the root ball with a sharp knife.

(4) The root ball shall rest on undisturbed soil in the planting hole with the top of the root ball on level with the natural ground level or slightly raised (not to exceed a height of two (2) inches above the natural ground level).

(5) Any tree planted with the top of the root ball below natural ground level shall not be counted towards the required Tree Density Units for the property.

(6) The soil used to backfill around the root ball shall be uncompacted, native soil free of rocks, trash, or any construction debris.

(7) Stakes and guy wires should only be installed when absolutely necessary. Supporting devices shall not interfere with vehicular or pedestrian movement and shall be removed after twelve (12) months.

(8) Mulch in the form of pine straw, pine bark, or wood chips shall be evenly distributed over the planting hole to a settled depth of two (2) inches.

(9) Permanent built-in or temporary irrigation systems shall be installed to ensure the plants will survive the critical establishment period.

(10) Out-of-season planting is discouraged. Property Owners/Developers may submit a "Request for Delay Affidavit" to allow for plant installation to occur at a time which better coincides with the normal planting season (November 1st to March 31st).

## **Section 12: ALTERNATIVE COMPLIANCE**

The intent of this Tree Protection and Replacement Ordinance is to insure that a minimum density of trees is maintained on all developed sites. Occasionally, this intent cannot be met because a project site will not bear the required density of

trees. When the City Arborist makes a written finding that the project site will not bear the required density of trees, two methods of compliance are acceptable:

- (1) planting at a location on public property or an appropriate conservation easement remote from the project site; or,
- (2) contributing to the Columbus, Georgia Tree Replacement Fund.

The following standards have been established for administering these alternative compliance methods:

The City Arborist must review and act on all requests for alternative compliance within fifteen (15) days of receipt of such requests. In no instance, shall 100 percent of the required site density factor be met through alternative compliance. As many trees as can reasonably be expected to survive must be planted on the site in question.

The land disturbance permit will only be issued after the City Arborist has approved the request and received the necessary documentation and/or funds.

(a) Off-Site Planting.

If trees are to be planted at another location, the following criteria must be observed:

The off-site location should be in the same area of the City as the project site and will be selected by joint consultation between the developer and the City Arborist. If they are unable to agree upon a mutually acceptable site, then the Tree Board will select the site.

A Tree Planting Plan meeting all applicable standards required in Section 9 of this Ordinance must be reviewed and approved.

The following note must be shown on the approved plan:

"A Tree Planting Plan addendum for this project shall be submitted to the Columbus, Georgia City Arborist within 30 days from the date of this land disturbance permit. This plan shall include the species, size and location of trees to be planted off-site to meet the tree density deficit shown. Release of this project is subject to approval of

to be planted off-site to meet the tree density deficit shown. Release of this project is subject to approval of this plan as well as verification of the installation of the trees."

(b) Tree Replacement Fund.

As another method of alternative compliance, Columbus, Georgia will accept donations to the Columbus, Georgia Tree Replacement Fund, which will be used for the sole purpose of planting trees on public property in the same area of the City as the project site.

(1) Calculating Contribution Amounts:

Contribution calculations are based on two-inch caliper replacement trees with a value of \$220.00, representing the average size and cost of materials, labor and guarantee for trees planted in the Columbus, Georgia area.

To determine the appropriate contribution, first calculate the Density Factor Deficit (DFD) or unit value that cannot be planted on the site. Divide the DFD by .5 (the unit value of a 2" caliper replacement tree) and multiply by \$220.00.

EXAMPLE: A 2.2 acre site has a required Total Tree Density Units (TTDU) standard of 22.0, Existing Tree Density Units (ETDU) OF 11.4, and can only accommodate Replacement Tree Density Units (RTDU) of 9.0.

Determine the Density Unit Deficit (DUD) using the formula:

$$\text{DUD} = \text{TTDU} - \text{ETDU} - \text{RTDU}$$

In this example,  $\text{DFD} = 22.0 - 11.4 - 9.0 = 1.6$

Determine the acceptable contribution amount as follows:

$$1.6 \text{ divided by } .5 \text{ multiplied by } \$220.00 = \$704.00$$

(2) Fund Administration:

The Columbus, Georgia Tree Replacement Fund will be administered by the Landscape and Forestry Division. A quarterly report shall be submitted to the City Manager showing amounts collected, amounts spent, and the types and

locations of trees planted. The report will be made available to the Mayor and Council upon their request.

### **Section 13: INSPECTIONS**

#### (a) Certification and Inspections.

Inspections shall be performed at any time during the development process, and from time to time, as determined by the City Arborist. Said inspections shall be performed by the Arborist or one of her designees, which may include officials of the Building Inspections and Code Department for single-family residential lots. Prior to the release of the certificate of occupancy, final plat approval or final building inspection, an inspection and a report shall be made to assure compliance with the Tree Protection and Planting Plan. The inspection and report shall be made by (1) the City Arborist or his or her designee or (2) by a registered landscape architect or civil engineer or International Society of Arboriculture-certified arborist or registered forester on a list approved by the City Arborist. Any required irrigation must be operational at this time. Hose bibs and other watering devices specified on the plans will be verified, and all plantings and trees retained for TDU credit will be inspected. Any certificate of occupancy or final building inspection may be granted prior to any required plantings having been fully installed if a "Request for Delay Affidavit" has been filed and approved by the Arborist.

#### (b) Maintenance Inspection.

Any planted materials that are dead or missing at the time of that inspection must be replaced by the responsible party.

The City Arborist shall provide the responsible party with a written evaluation of what trees need to be replaced and the time frame within which replacement is to occur.

Any trees in a state of decline will be noted and subject to monitoring at later dates. If such trees die, they will become the responsibility of the current owner to replace.

## Section 14: VARIANCES

(a) Written requests for a variance, filed on forms prescribed by the City Arborist and sworn to by the owner of the property concerned, are required. The requests shall state clearly what adjustments or requirements are being requested and reasons such adjustments are warranted and such supplementary data as is deemed necessary to substantiate the adjustment shall accompany the request. The City Arborist shall have the authority to grant variances not to exceed twenty percent (20%) of the minimum or maximum standards of this Ordinance. Where requested variances exceed twenty percent of the minimum or maximum standards of this Ordinance, or if the applicant is dissatisfied with the action of the City Arborist on a request for a lesser variance or any other finding of the City Arborist, the application for variance or any appeal of a decision of the City Arborist shall be made to the Tree Board.

(b) Where the City Arborist, in the case of requests for variances not to exceed twenty percent (20%) of the minimum or maximum standards of this Ordinance, or the Tree Board, if the requested variance exceeds twenty percent of the minimum or maximum standards of this Ordinance, finds that extraordinary hardships or practical difficulties may result from strict compliance with these regulations and/or the purposes of these regulations may be served to a greater extent by an alternative proposal, the Board shall be authorized to grant a variance from the requirements of this Ordinance where such modification will not be contrary to the public interest where, due to special conditions, a literal enforcement of the provisions of this Ordinance will, in an individual case, result in unnecessary hardship provided that such variances shall not have the effect of nullifying the intent and purpose of the Ordinance. Such variances may be granted in such case of unnecessary hardship upon the finding of the Arborist or Tree Board as the case may be that:

(1) The granting of the variance will not cause substantial detriment to the public health, safety, or welfare; be injurious to other property; or impair the purpose and intent of this Ordinance.

(2) There are extraordinary and exceptional conditions pertaining to the property in question that would result in

a particular hardship to the owner, as distinguished from a mere inconvenience, if the strict letter of these regulations were carried out.

(3) The strict application of this Ordinance would deprive an applicant of reasonable use of the land, or would create an unnecessary hardship as distinguished from a mere inconvenience.

(4) Such special circumstances are not the result of actions of the applicant taken subsequently to the adoption or amendment of this ordinance.

(c) The City Arborist or Tree Board, as the case may be, may approve, modify or deny the requested adjustment, but shall approve or modify only if it determines that approval of any adjustments would not be contrary to the intent of this chapter, and that literal enforcement of the above standards would be impractical and would result in unreasonable and unnecessary hardships. The City Arborist shall act on all requests for variance within fifteen (15) days of receipt of the request. The Tree Board shall approve or reject any request for a variance of more than twenty percent (20%) of the minimum or maximum standards of this Ordinance, or affirm or reverse any appeal from a decision of the Arborist, within forty (40) days after the filing thereof. If a meeting of the Tree Board has not been scheduled within the next thirty (30) days of the filing of a request for variance of more than twenty percent (20%) or appeal, the Chair shall call a meeting. The decision of the Board shall be issued within ten (10) days of the consideration of the request or appeal. Notification of all actions on requests for variance or appeal, whether by the Arborist or Tree Board, shall be forwarded to the applicant by certified or registered mail, return receipt requested, and posted in a conspicuous place, or in the office of the City Arborist, in the form of a short, concise statement of the action taken. Within fourteen (14) days after posting of decision, but not thereafter, any decision of the City Arborist or Tree Board may be appealed by the applicant. The appeal of any decision by the City Arborist shall be to the Tree Board, and the appeal of any decision of the Tree Board shall be filed with the Clerk of Council for action by the Council of Columbus. The appeal to the Council of Columbus is a de novo appeal, and the Council may affirm, modify, or reverse the ruling of the Tree Board.

(d) Variances under this Ordinance shall be granted under the same procedures and conditions as set forth in Section 22-37 of the Columbus Code of Ordinances, excluding the notification of property owners, except that the Tree Board will be acting as the appellate body on all matters under this Chapter rather than the Board of Zoning Appeals. The Tree Board is granted the same powers for hearing appeals and granting variances involving this Chapter as the Board of Zoning Appeals is granted in hearing the appeals before it.

**Section 15: NUISANCES, DISEASE, INFECTION, AND EMERGENCIES**

(a) Public nuisances.

(1) The City Arborist has the authority to declare as a nuisance any tree or shrub or parts thereof growing on public or private property, and interfering or endangering the use of the public streets or sidewalks or obscuring sign distances and creating a traffic hazard on intersections or endangering the life, health, safety or property of the public. The City Arborist shall notify in writing the owner or interested parties of such tree or shrub of the existence of the nuisance and give a fifteen (15) day period of time for contracting for correction or removal of the nuisance or for requesting a hearing.

(2) If the owner or interested parties have not corrected or removed the nuisance or contracted for correction or removal of the nuisance within such fifteen (15) day period, the City Manager or his designated agent shall hold a hearing not less than fifteen (15) days nor more than thirty (30) days following the notice of the City Arborist, at a time and place certain within Columbus, Georgia. The owner or parties in interest shall be given the right to file an answer to the notice, to appear in person, or be represented by an attorney, and give testimony, at the time and place fixed, as to why he or she has not complied with the notice from the City Arborist. Rules of evidence prevailing in courts of law or equity shall not control in hearings before the City Manager or his designated agent. The City Manager or his designated agent shall determine at the hearing, on the basis of the evidence presented, whether or not the tree or shrub is a nuisance to the public of Columbus, Georgia and the owner's responsibility therefor.

(3) If the City Manager or his designated agent determines that the tree or shrub is a nuisance, he or she shall issue an order, which shall be served upon the owner or parties in interest, requiring them to remove or correct the nuisance within fifteen (15) days. If not corrected or removed within such period, the City Arborist shall cause the nuisance to be corrected or removed and the cost shall be assessed to the owner or interested parties.

(4) The cost of the correction or removal shall be a lien against the real property upon which the tree or shrub is or was situated. Said lien shall be prepared and entered by the Finance Department and recorded in the office of the Clerk of the Muscogee County Superior Court in the same manner which liens for costs for removal of weeds and other vegetation are filed.

(5) The owner or parties in interest shall pay the full amount due on such lien to the Director of Finance of Columbus, Georgia within thirty (30) days of perfection of such lien, and if such lien is not paid in full within thirty (30) days of the perfection of such lien, the owner or parties in interest shall pay twenty-five (25) percent of the total lien amount plus seven (7) percent interest within sixty (60) days of the perfection of such lien to the Director of Finance of Columbus, Georgia, with the remaining balance due on such lien to be paid in three equal annual installments with interest at the rate of seven (7) percent per annum, each of which shall become due and payable on the anniversary date of the initial payment made as hereinabove prescribed;

(6) Should the property upon which such lien is perfected be sold, transferred or conveyed by the owner or parties in interest at any time, then the entire balance due on such lien shall be due and payable to the Director of Finance of Columbus, Georgia; and,

(7) Should the amount due on such lien, or any portion thereof, be unpaid after the time for payment of the final annual installment prescribed in subsection (a), said amount shall continue as a lien together with interest at the rate of seven (7) percent per annum until paid in full.

(b) Transmittable Disease and Insect Infestations.

The Council of Columbus, Georgia shall have the authority to insist that all property owners treat or allow the City

inspection, or Building Permit or to withhold any Certificate of Occupancy or approval of a Final Plat, and shall have the authority to suspend all work on a site or any portion thereof, where tree removal or damage occurs in violation of this Ordinance or the provisions of the approved Tree Protection and Planting Plan for the site. The City Arborist's authority to suspend work on a site must have the concurrence of the Department Director.

(d) It shall be unlawful to falsify any information contained in any application, plan or report required by this ordinance. If the City Arborist makes a written determination that a person has falsified any application, plan or report required by this ordinance, such person shall not be permitted to certify compliance with this chapter for a period of five (5) years, such person shall submit and implement a revised tree protection and planting plan approved by the City Arborist, and such person shall be subject to a minimum fine of \$500.00 for violation of this subsection.

(e) Any person violating any of the provisions of this chapter, except subsection (d) of this Code section, shall be punished as provided in Section 1-8 of the Columbus Code. Each day of any violation of any provision of this Chapter shall constitute a separate offense. Any action which results in the death or destruction of a public tree located on City property shall be subject to fine in an amount equal to \$100.00 for each inch of diameter at breast height (DBH) or stump diameter if tree is no longer present, up to a maximum fine of \$1,000.00. All money collected from fines shall be deposited in the Columbus, Georgia Tree Replacement Fund.

### **Section 17: INJUNCTIVE RELIEF**

(a) Whenever the City has reasonable cause to believe that any person, firm, corporation or other entity is violating this Ordinance, or any term, condition or provision of an approved permit, it may, either before or after the institution of any other action or proceeding authorized by this Ordinance, institute a civil action in the name of the City for an injunction and order of abatement commanding the defendant to correct the unlawful condition or cease the unlawful use of the property.

(b) The institution of an action for injunctive relief under this Section shall not relieve any party to such

proceedings from any civil or criminal penalty prescribed for violation of this Chapter.

### Section 18: MISCELLANEOUS

(a) Trenching within the Critical Root Zone (CRZ) on City property:

Trenching within the Critical Root Zone of any tree on City property shall be prohibited. The Critical Root Zone is considered to be the root system within the drip line. Boring, auguring, or other alternative method may be employed which allows for the installation of underground utilities within the Critical Root Zone but stays three (3) feet or more below the surface of the ground.

(b) Damage by City Trees:

When, in the opinion of the City Arborist, roots of a tree on public property damage City curbs, gutters and sidewalks (including the portions of driveways on public right of way), the City shall be responsible for appropriate corrective measures which are least damaging to the tree. In the event the portion of the driveway on public right of way must be repaired or replaced, costs will be apportioned between the property owner and the City according to administrative policy set by the City Council.

(c) Required permits:

(1) No person or organization shall do any of the following acts to any public trees as determined by the City Arborist unless previously approved in a Site Development Permit without first obtaining the proper permit from the City Arborist:

(A) Cut, prune, climb with spikes, break, damage, remove, kill, or cause to be killed.

(B) Cut, disturb or interfere in any way with any root within the drip line.

(C) Place, or spray with, any toxic chemical as listed in the maintenance standards.

(D) Fasten any rope, wire, sign, or other device.

(E) Remove or damage any guard devices placed to protect any tree.

(F) Conduct razing, removal or renovation of any structures if deemed by the City Arborist to be damaging to neighboring trees.

(G) Maintain a stationary fire or device which vaporizes noxious fumes deleterious to tree health.

(H) Pave with concrete, asphalt or other impervious material within four (4) feet of a tree.

(I) The topping of any City tree for any purpose, including sight clearance for billboards, shall be prohibited and no permit issued for the same.

(2) A fee of thirty five dollars (\$35.00) shall be assessed for each permit and shall be applicable to the particular job as specified by the permit. A request for a permit to remove trees on City property may be submitted to the City Arborist, if accompanied by a proposed landscape plan. The landscape plan must show the number, size, and species of plants and must replace all removed trees at a 1:1 ratio. Proposed trees shall adhere to Section 11: TREE PLANTING STANDARDS. The City of Columbus, Georgia and public utility companies shall be exempted from acquiring individual job permits to perform necessary tree maintenance on public right-of-way or public lands.

(d) Public utility standards:

All work performed by public utilities involving maintenance of trees on public right-of-ways shall adhere to the following standards.

(1) The work shall be limited to the actual necessities required to maintain safe and reliable systems.

(2) Necessary maintenance shall be deemed the maintenance necessary to prevent re-growth into the wire zone during the established cycle length.

(3) All maintenance shall adhere to ANSI 300 standards as amended.

(4) During the event of a natural disaster, such as an ice storm, tornado or hurricane, the above shall be waived.

(5) The utility shall communicate and coordinate with the City Arborist when clearing or pruning the rights-of-way.

(e) Registration, tree experts:

To protect the public, the Council of Columbus, Georgia, shall require anyone who removes or maintains trees as a business on public or private lands to be examined by the City Arborist on his ability to carry out such work before he is granted a license to practice as a tree expert. Passage of the examination administered by the International Society of Arboriculture (ISA) for Certified Arborist or Certified Tree Worker may be accepted in lieu of said examination. A twenty-five dollar (\$25.00) fee shall be made payable to Columbus, Georgia to accompany the application for examination for each applicant. Employees of Columbus, Georgia responsible for maintaining public trees shall be examined in the field for their ability to properly prune, maintain, or remove trees but shall not be required to pay the registration fee.

(f) House moving permits:

No person shall move any building or other large objects which may injure any public tree or parts thereof along any street without first having obtained written permission from the City Arborist, and then having obtained a permit from the Inspections and Code Enforcement Division Chief.

(g) Land clearing, timber harvesting, speculative grading, etc.:

Land clearing for bona fide agricultural purposes within an A-1 Agricultural zoned district, including legitimate timber harvesting, plant or tree nurseries and orchards, is exempt from the provisions of this article. However, this exemption shall not be interpreted to include tree harvesting incidental to the development of land, or tree harvesting on land that is anticipated to be developed for non horticultural uses.

However, all legitimate timber harvesting on tracts of five (5) acres and greater shall be required to provide and maintain a fifty (50) foot wide undisturbed natural area adjacent to all paved public road frontages during harvesting and site preparation activities. A maximum of

two (2) access crossings will be allowed. The natural area is to be maintained for five (5) years.

For all other land disturbing activities in anticipation of development other than those specified above in this subsection, natural areas, thirty (30) feet wide, on average, shall be maintained abutting the rights of way of all adjoining paved public road frontages. Said average shall be calculated on the plans submitted and include for credit in said calculation only the first 60 feet of the site closest to the right-of-way. The natural area shall be maintained until the Tree Protection and/or Planting Plan is approved for the planting strip of such site adjacent to all the right of way of paved public road frontages, which plan, if only for said planting strip, may be in narrative form, and shall provide for planting as required by either the perimeter planting requirements of this Ordinance, or the requirements of the Buffering, Screening and Landscaping Ordinance (Code of Ordinances Section 18A-71 et seq; Ord. No. 99-25, 4/29/99; Ord. No. 00-58, 6/13/00), whichever applies to said property to be planted at the next planting season or seek a variance.

(h) Cooperation with other departments:

There shall be close cooperation between the City Arborist, the Public Services Department, the Community and Economic Development Department, the Engineering Department, the Parks and Recreation Department and all other City departments when their work affects the public trees. The City Arborist shall review and comment on the proposed landscaping plans of all recreational lands and other public properties within the City and any plan or project of any department of this City which requires the removal of any tree.

(i) Non-Liability of City.

Nothing in this Ordinance shall be deemed to impose any liability upon the City or upon any of its officers or employees, or to relieve the owner and occupant of any private property from the duty to keep trees and shrubs upon his private property or under his control in a safe condition.

## **Section 19: SEVERABILITY AND CONFLICT**

### (a) Severability.

This Ordinance, and its various parts, are hereby declared to be severable. If any section, clause, provision or portion of this Ordinance is declared invalid or unconstitutional by a court of competent jurisdiction, such decision shall not affect the validity of this Ordinance as a whole. All parts not declared invalid or unconstitutional shall remain in full force and effect.

### (b) Conflict.

If any part of this Ordinance is found to be in conflict with any other Ordinance or any other part of this Ordinance, the most restrictive or highest standard shall prevail. If any part of this Ordinance is explicitly prohibited by federal or state statute, it shall not be enforced.

## **Section 20: EFFECTIVE DATE**

This Ordinance shall become effective one hundred and twenty (120) calendar days from adoption of this Ordinance. This ordinance shall only apply to those applications for building, site development or residential development permits submitted after the effective date of this ordinance.

## TREE DENSITY UNIT STANDARDS

**Table A: Planted  
CALIPER SIZE TO UNIT VALUE  
For trees normally sold by caliper size**

Caliper Size	Unit Value
1 1/2 inches	0.375
2 - 2 1/2 inches	0.5
3 - 3 1/2 inches	0.75
4 - 4 1/2 inches	1.0
5 - 5 1/2 inches	1.25
6 - 6 1/2 inches	1.5
7 - 7 1/2 inches	1.75
8 - 8 1/2 inches	2.0

Caliper is typically measured on the trunk six (6) inches from the ground line. Caliper sizes different from the above shall be rounded to the closest inch. Minimum tree size for small maturing tree species is 1 1/2 inches immediately after planting. Minimum tree size for large maturing tree species is 2 inches immediately after planting.

**Table B-1: Preserved Trees**  
**SMALL MATURING SPECIES**  
**DIAMETER SIZE TO UNIT VALUE**  
**For existing trees to be preserved**

Diameter (DBH)	Unit Value
1 - 2 inches	0.5
3 - 4 inches	1.0
5 - 6 inches	1.5
7 - 8 inches	2.0
9 - 10 inches	2.5
11 - 12 inches	3.0

For examples of applicable species, see Recommended Tree Planting List. If it is determined to be undesirable to separately identify small maturing species, all tree credits shall be calculated using Table A-2. All diameter measurements shall be rounded to the closest inch.

**Table B-2: Preserved Trees  
 LARGE MATURING SPECIES  
 DIAMETER SIZE TO UNIT VALUE  
 For existing trees to be preserved**

Diameter (DBH)	Unit Value
4 - 8 inches	0.5
9 - 12 inches	1.0
13 - 16 inches	1.5
17 - 20 inches	2.0

Diameter (DBH)	Unit Value	Diameter (DBH)	Unit Value
21 inches	2.4	31 inches	5.2
22 inches	2.6	32 inches	5.6
23 inches	2.9	33 inches	5.9
24 inches	3.1	34 inches	6.3
25 inches	3.4	35 inches	6.7
26 inches	3.7	36 inches	7.1
27 inches	4.0	37 inches	7.5
28 inches	4.3	38 inches	7.8
29 inches	4.5	39 inches	8.3
30 inches	4.9	40 inches	8.7

Specimen trees greater than 40" can be calculated using the following formula:

$$(\text{diameter at DBH}) \times .7854 \div 144$$

Diameter at Breast Height (DBH) is typically measured at 4.5 feet above ground level. Diameter is calculated by measuring the tree's circumference, in inches, at 4.5 feet above the ground and dividing by 3.14 ( $\pi$ ). All diameter measurements shall be rounded to the closest inch.

### Columbus Consolidated Government Recommended Tree Planting List

LARGE MATURING TREES									
COMMON NAME / LATIN NAME	GROWTH RATE	HEIGHT	SHAPE	STREETSIDE	PLANTING LOCATIONS	PLANTING LOCATIONS	PLANTING LOCATIONS	PLANTING LOCATIONS	COMMENTS
Blackhack <i>Taxodium distichum</i>	M	60-80'	NP		X	X		A	Produces small leaves that do not need raking.
Beech, American <i>Fagus grandifolia</i>	M	60-80'	BP	X	X			L	Leaves persist through winter.
Birch, River <i>Betula nigra</i>	F	40-70'	S		X	X		P, L	Subject to drought problems
Blackgum <i>Nyssa sylvatica</i>	S-M	30-50'	SP	X				P, S, L	Early fall color change
Cedar, Atlantic White <i>Chamaecyparis spp.</i>	M	40-50'	BP	X			X	P	
Cedar, Decid. <i>Cedrus decedara</i>	M-F	40-70'	BP	X				L	Subject to winter injury up to age 18 years.
Cedar, Eastern Red <i>Juniperus virginiana</i>	M	40-80'	C	X				L	Living Christmas tree.
Chinese pistache <i>Pistacia chinensis</i>	M	45-90'	G	X	X			A	
Cypress, Arizona <i>Cupressus arizonica</i>	M	30-40'	C	X				L	Dry, full sun.
Elm, Lacebark <i>Ulmus parvifolia var.</i>	M	40-50'	G			X		A	Resistant to Dutch Elm Disease
Elm, Winged <i>Ulmus alata</i>	M	40-80'	V					A	Moderately resistant to Dutch Elm Disease, ok to American Elm Disease.
Ginkgo <i>Ginkgo biloba</i>	S	60-80'	NP	X			X	A	Plant grafted male only, pest free, tolerates pollution.
Gordonia Tree <i>Koeleria paniculata</i>	M-F	30-40'	G					A	Shiny golden fruit.
Hickory <i>Carya spp.</i>	S	50-80'	S	X	X			A	Dry, leaf color change in fall.
Holly <i>Ilex spp.</i>	S	20-40'	BP	X				A	Evergreen, red berries, leaves prickly.
Hopbroombeam <i>Osirea virginiana</i>	S	25-50'	S		X	X		A	Tolerates city conditions.
Hornbeam, American <i>Carpinus caroliniana</i>	S	20-50'	S		X	X		A	Pest free, tolerates city conditions.
Japanese Cydonia <i>Cydonia japonica</i>	M	50-60'	NP	X		X		A	
Magnolia, Southern <i>Magnolia grandiflora</i>	M-F	50-80'	BP	X	X			L	Drops large leaves in spring and summer.
Maple, Florida <i>Acer barbatum</i>	S-M	30-40'	BP	X				A	
Maple, Red <i>Acer rubrum var.</i>	F	40-60'	BP	X			X	A	
Maple, Trident <i>Acer buergerianum</i>	S-M	30-40'	G	X				A	May grow larger.
Oak, Bur <i>Quercus macrocarpa</i>	S	70-80'	S					A	Dry sites
Oak, Laurel <i>Quercus laurifolia</i>	M-F	60-80'	BP					A	High maintenance.
Oak, Live <i>Quercus virginiana</i>	S	40-80'	G	X				L	Surface roots.
Oak, Northern Red <i>Quercus rubra</i>	M-F	50-80'	BP	X			X	A	
Oak, Swamp <i>Quercus lyrata</i>	S-M	60-80'	S					A	Unusual acorn.
Oak, Sawtooth <i>Quercus acutissima</i>	F	35-70'	G					A	Holds leaves in winter, drops lots of nuts, toughest of the oaks.
Oak, Shumard <i>Quercus shumardii</i>	M-F	40-80'	BP	X			X	A	Good dark red fall color

NOTES AND LEGEND:

- Where cultivars or varieties are listed, only that type should be used for tree ordinance compliance.
- Growth rate: S = Slow, M = Medium, F = Fast
- Shape: BP = Broadly Pyramidal, G = Globular, S = Spreading, C = Columnar, NP = Narrowly Pyramidal, V = Vase Shaped
- Location: P = Penetration, S = Street, PL = Planting Lot, L = Longspace
- Other species may be used if approved in advance by City Arborist.
- The following species cannot be used because they perform poorly:  
 Bradford Pear (*Pyrus calleryana* "Bradford"),  
 Eastern White Pine (*Pinus strobus*),  
 Siberian Elm (*Ulmus pumila*),  
 Silver Maple (*Acer saccharinum*)

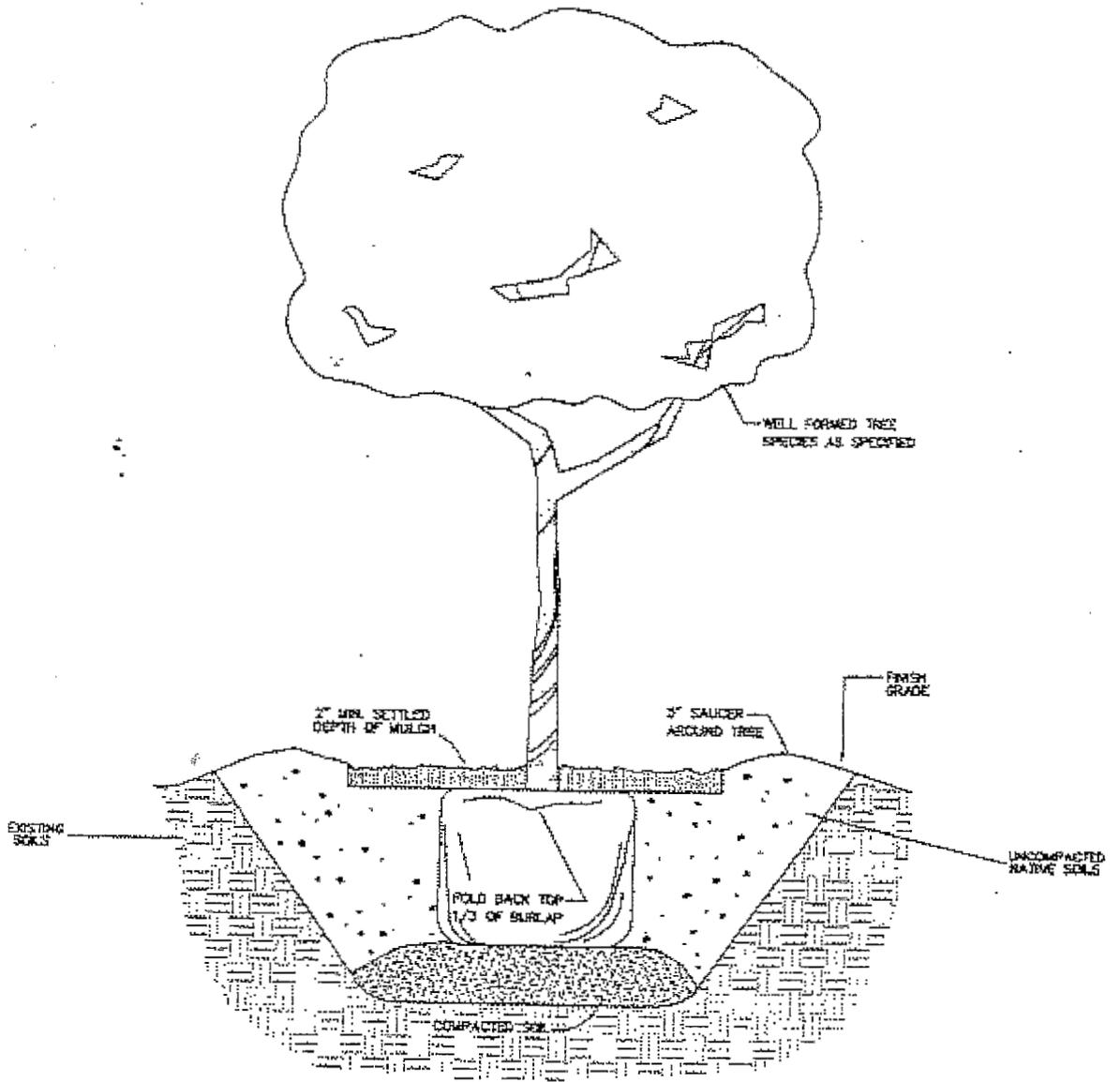
## Columbus Consolidated Government Recommended Tree Planting List

LARGE MATURING TREES									
COMMON NAME (LATIN NAME)									COMMENTS
Oak, Southern Red <i>Quercus falcata</i>	M	P	70-80'	BP		X		X	A
Oak, Swamp Chestnut <i>Quercus michauxii</i>	M		80-70'	S			X		A Pruned well.
Oak, White <i>Quercus alba</i>	S		70-80'	BP		X	X		A May hold leaves, very long lived, leaves red
Oak, Willow <i>Quercus phellos</i>	F		70-80'	BP					A Mesic tree, high maintenance, spider mites.
Pine, Loblolly <i>Pinus taeda</i>	F		40-60'	BP					A Susceptible to pine beetles if not kept healthy, generally improved var.
Pine, Longleaf <i>Pinus palustris</i>	S	M	80-100'	BP					A
Pine, Shortleaf <i>Pinus echinata</i>	M		80-100'	BP					A Holds cones.
Sourwood <i>Oxydendrum arboreum</i>	M		30-50'	BP		X	X		A
Sweetbay <i>Liquidambar virginiana</i>	M	P	10-40'	BP		X		X	A Semi evergreen deciduous.
Tulip Poplar (Yellow poplar) <i>Liriodendron tulipifera</i>	F		80-70'	BP		X			A Good soil preferred.
SMALL MATURING TREES									
COMMON NAME (LATIN NAME)									COMMENTS
Bottlebrush Buckeye <i>Aesculus parviflora</i>	S		8-12'	G		X	X		L Basal sprouts rapid growth.
Orange Tree <i>Evermannia coccinea</i>	M		8-20'	G			X		A Attracts bees.
Cherry, Yoshino <i>Prunus yedoensis</i>	M		20-35'	S					A Good soil preferred.
Chinese Lantern Tree <i>Koeleria laurata</i>	M		20-30'	G		X	X		A Full sun, flowers in fall.
Davidwood <i>Opuntia americana</i>	S	M	15-25'	G		X	X		A Evergreen.
Dogwood, Flowering <i>Cornus florida</i>	M	P	20-25'	S		X	X		L Needs partial shade, good soil preferred.
Dogwood, Kousa <i>Cornus kousa</i>	S	M	15-30'	S		X	X		L
Downy Serviceberry <i>Amelanchier arborea</i>	M		15-25'	G		X			A
Fringetree <i>Chionanthus virginica</i>	S		15-30'	G		X	X		A Tolerates poor air quality.
Holly <i>Ilex spp.</i>	S		20-40'	BP		X			A Evergreen and deciduous.
Magnolia, Little Gem <i>Magnolia grandiflora</i> var. <i>Little Gem</i>	S	M	20-30'	BP		X	X		A
Magnolia, Saucer <i>Magnolia soulangiana</i>	M		20-30'	G		X			L Landscape perimeter.
Maple, Japanese <i>Acer palmatum</i>	S		15-25'	S		X			L, S Needs shade.
Myrtle, Coade (Hybrid) <i>Lagerstroemia x</i>	M		15-45'	S		X	X	X	A Must be maintained in tree form.
Redbud, Eastern <i>Cercis canadensis</i>	M		20-30'	S		X			P, S, L Needs partial shade.
Wax Myrtle <i>Myrica carterii</i>	S	M	10-30'	S		X		X	A Evergreen.

**NOTES AND LEGEND:**

- Where cultivars or varieties are listed, only that type should be used for tree ordinance compliance.
- Growth rate: S = Slow, M = Medium, F = Fast
- Shape: BP = Broadly Pyramidal, G = Globular, S = Spreading, V = Vase Shaped, P = Panhandle, L = Landscape, A = Parking Lot
- Use: L = Landscape, A = All
- Other species may be used if approved in advance by City Arborist.
- The following species cannot be used because they perform poorly:  
Bradford Pear (*Pyrus calleryana* "Bradford")  
Eastern White Pine (*Pinus strobus*)  
Silver Elm (*Ulmus pumila*)  
Silver Maple (*Acer saccharinum*)

Appendix "B"



TREE PLANTING DETAIL

R.T.S.