

Clayton County's Tree Protection Ordinance



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CLAYTON COUNTY TREE PROTECTION ORDINANCE
TABLE OF CONTENTS

TREE PROTECTON ORDINANCE

ARTICLE 1

1.1	Purpose	1
1.2	Intent	1
1.3	Boundaries	1
1.4	Findings	2
1.5	Definitions	2
1.6	Tree Bank and Fund	8
1.7	County Arborist	8
1.8	Greenspace Trust Board	10
1.9	Applicability	10
1.10	Exemptions	11
1.11	Permits	12
1.12	Tree Density Unit (TDU) Requirements	14
1.13	Tree Preservation Planting Requirements	15
1.14	Development Plan Specifications	16
1.15	Enforcement	17
1.16	Non-Liability of County	17
1.17	Violation and Penalties	18
1.18	Severability	19
1.19	Effective Date	19

APPENDICES

Appendix A: Tree List	20
Appendix B: Specimen Trees	23
Appendix C: Timber Harvesting	24
Appendix D: Tree Protection and Replacement Standards	27

TABLES

Table A	28
Table B	30

ACKNOWLEDGMENT

Tree Protection

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Article One: Tree Protection Ordinance

1.1 Purpose

The purpose of this Article is to:

- A. Provide standards for the conservation or replacement of trees as part of the land development and building construction process within the County.
- B. Make the County an attractive place to live.
- C. Provide a healthy living environment.
- D. Protect and enhance the aesthetic qualities of the community and reduce the loss of aesthetic quality provided by the natural tree cover on tracts of land being converted to urban development.
- E. Minimize increases in air pollution and carbon dioxide levels in the air.
- F. Minimize increases in temperature on lands with natural tree cover.
- G. Minimize soil erosion and storm-water runoff and maintain water quality.
- H. Provide the necessary information to facilitate development project design, plan review, and enforcement processes in order that the standards and requirements of this Article are administered in the most effective, efficient and economical manner;
- I. Establish and maintain the maximum sustainable amount of tree cover on public and private lands in the County.
- J. Maintain County trees in a healthy and non-hazardous condition.
- K. Establish and maintain appropriate diversity in tree species and age classes to provide a stable and sustainable urban forest in developed and developing areas of the County and a stable and sustainable rural forest in undeveloped areas.

1.2 Intent

The Tree Protection Ordinance is intended to implement the policies of the Board of Commissioners adopted in the Clayton County Comprehensive Plan.

1.3 Boundaries

The provisions of the Tree Protection Ordinance shall apply to all lands, or portions thereof, and right-of-ways within the unincorporated areas of the County. The boundaries of the unincorporated areas of the County are shown on the Official Zoning Map.

- A. This Tree Protection Ordinance is supplemental to the underlying zoning district classifications established in the Zoning Ordinance governing all properties. The

provisions of the Tree Protection Ordinance apply to all applications for rezoning, variances, land disturbance permits, tree removal permits, driveway permits, plan review, plat approval, building permits and utility permits for all property and rights-of-ways in the unincorporated areas of the County.

- B. All plan reviews, road and utility projects, plat approvals, and permits for parcels located within the County shall meet all of the requirements of the base zoning district in which it is located and, in addition, shall meet the requirements of the Tree Protection Ordinance applicable to the parcel.
- C. The standards and requirements of the Tree Protection Ordinance shall govern in any case where standards and requirements of the Tree Protection Ordinance conflict with those of the base zoning district or other provisions of the zoning ordinance including but not limited to Subdivision Regulations, Landscape Standards, and Buffer Yard Standards.

1.4 Findings

- A. Trees are recognized to be a valued asset providing a healthier and more beautiful environment in which to live.
- B. Trees are economically beneficial in attracting new residents and tourists.
- C. 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.
- D. Trees aid in preventing erosion, storm drainage, siltation of streams and reservoirs, and flash flood damage.
- E. Trees are valuable in providing shade and cooling effects, and in preventing air, noise, and visual pollution.

1.5 Definitions

For the purpose of these regulations, certain words or terms used shall be defined as follows:

Administrative Approval: Zoning approval that the Zoning Administrator is authorized to grant after an internal review of submitted document, site plan, or application.

Administrator: The individual or group responsible for the implementation and enforcement of the Ordinance. The Zoning Administrator, or his/her designee, shall be the administrator for the Zoning Ordinance, Tree Protection Ordinance, and Subdivision Regulations.

Applicant: The owner, owners, or legal representative of real estate who makes application to Clayton County for action affecting the real estate owned thereby.

Application: The application for and all accompanying documents and exhibits required of a petitioner by an approving authority for a development review process.

Basal Area: The cross-sectional area expressed in square inches, of a tree trunk at diameter breast height expressed herein in terms of "units" per acre.

Best Management Practices (BMPs): A collection of structural measures and vegetative practices which, when properly designed, installed

and maintained, will provide effective erosion and sedimentation control. The term "properly designed" means designed in accordance with the hydraulic design specifications contained in the "*Manual for Erosion and Sediment Control in Georgia*" specified in O.C.G.A. § 12-7-6(b).

- Bona Fide Agricultural Purpose:** A 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.
- Caliper:** The diameter or thickness of the trunk of a young tree or sapling as measured at six inches above the top of the root mass. This measurement is used for nursery-grown trees having a diameter of less than six inches.
- Clearing:** The removal of vegetation from a property by any means.
- County Arborist:** The person appointed by the County Commission to administer the Tree Protection Ordinance (this Article). Person should be versed in the art of arboriculture, including tree surgery, the prevention and cure of tree diseases and the control of insect pests.
- Critical Establishment Period:** The first two years after a tree is planted.
- Critical Root Zone (CRZ):** The minimum area beneath a tree which must be left undisturbed in order to preserve a sufficient root mass to give a tree a reasonable chance of survival. The critical root zone will typically be represented by a concentric circle centering on the tree's trunk with a radius equal in feet to one and three-tenths (1.3) times the number of inches of the trunk diameter.
- Cutting:** the detaching or separating of any limb, branch, or root from a tree; for the purpose of erosion control, the removal of any soil or other solid material from a natural ground surface.
- 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.
- Density Factor:** A unit of measure used to prescribe the calculated tree coverage of a site.
- Development Plan:** A plan and supporting documentation which describes a particular site which is to be disturbed or developed. This plan should indicate all structures, hard surface features, utilities, landscaping areas, tree preservation zones and tree replacement areas.
- Diameter Breast Height (DBH):** The standard measure of tree size for trees six inches

or greater in caliper existing on a site. The tree trunk is measured at a height of four and one-half feet above the ground, and if a tree splits into multiple trunks below that point, the trunk is measured 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 four and one-half feet above the ground;
 2. for new replaced trees, at a point six inches above ground; and
 3. for multiple trunk trees, as provided in the measure of diameter at breast height.
- Drip Line:** a vertical line extending from the outermost branches of a tree to the ground.
- Ds1:** disturbed area stabilization with mulch only per “The Manual for Erosion & Sediment Control in Georgia”
- Ds2:** disturbed area stabilization with temporary vegetation per “The Manual for Erosion & Sediment Control in Georgia”
- Ds3:** disturbed area stabilization with permanent vegetation per “The Manual for Erosion & Sediment Control in Georgia.”
- Erosion:** The process by which land surface is worn away by the action of wind, water, ice, or gravity.
- Evergreen:** A plant with foliage that remains green year-round.
- Forestry:** The science, business and art of creating, conserving and managing forests on a continuous basis for both commodity and non-commodity purposes.
- Grading:** Any land-disturbing activity, including clearing, grubbing, stripping, cutting, filling, stockpiling, or any combination thereof, and shall include the land in its cut or filled condition.
- Greenspace Trust Board:** A citizen group appointed by the Board to oversee administration and management of the County Tree Fund and to assist the County Arborist in annually reviewing the Clayton County Tree Protection Ordinance.
- Ground Cover:** Grasses or other plants grown to keep soil from being blown or washed away.
- Impervious Surface:** Any material that prevents absorption of stormwater into the ground.
- Land Development Permit:** The authorization necessary to begin a land disturbing activity under the provisions of this ordinance. See also "site development permit."
- 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, excavating, transporting, and filling of land.
- Large Maturing Tree:** A tree species that 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 twenty-five (25) feet and a height of thirty-five (35) feet when grown in Clayton County, Georgia.

- Lost Tree:** A tree subjected to unauthorized damage and/or tree removal despite designation in the development plan as a protected or preserved tree.
- Mature Tree:** An existing hardwood, pine or other valuable tree that is at least four inches in diameter as measured four feet above grade and has attained the capability of flowering and reproducing
- 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 developed by the County Arborist and adopted by the Board for the planting of trees along public streets, parks and other public places.
- Overstory Tree:** Trees which, at maturity, are generally greater than fifty feet at mature height comprise the canopy of a natural forest.
- Planting Season:** The time period or season during which newly planted trees will have the best opportunity for survival, and consisting of that period from November 1st of any year to March 31st of the following year.
- Post Development Conditions:** The conditions that exist following the completion of the development activity in terms of topography, vegetation, land use and rate, volume and direction of stormwater runoff.
- Pre-Development Conditions:** Those land use conditions that existed prior to the initiation of the development activity in terms of topography, vegetation, land use and rate, volume and direction of stormwater runoff.
- 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 maintain safety.
- Public Tree:** Any tree located on property belonging to the County.
- Public Sewerage System:** A community sewer system including collection and treatment facilities owned and maintained by a local government or an authority.
- 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.

- Sedimentation:** The process by which eroded material is transported and deposited by the action of water, wind, ice, or gravity.
- Shrub:** A woody plant, smaller than a tree, consisting of several small stems from the ground or small branches near the ground.
- Small Maturing Tree:** A tree species that shall be a minimum of five (5) feet in height and have a caliper of at least one and one-half inches immediately after planting. These species shall have an average mature crown spread of at least fifteen (15) feet and a height of twenty-five (25) feet when grown.
- Specimen Tree:** Any tree determined by the County Arborist to be of notable historic interest, high aesthetic value or of unique character because of species, type, age, size, location or health. See Appendix B of this Ordinance.
- Stabilization:** The process of establishing an enduring cover of vegetation by the installation of temporary or permanent structures for the purpose of reducing to a minimum the erosion process and the resultant transport of sediment by wind, water, ice or gravity.
- Street Tree:** Any existing tree or any tree to be planted on the street right-of-way.
- Timber Harvesting:** A timber management activity as part of a demonstrated ongoing agricultural land use. See Appendix C of this Ordinance.
- 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 County Arborist to be damaging to the tree or the soil on public lands. A written list of chemicals deemed as such shall be made publicly available and maintained by the County Arborist with review by the Tree Commission.
- Tree:** Any living, self-supporting woody or fibrous plant which normally obtains a diameter breast height of at least three (3) inches, and typically has one (1) main stem or trunk and many branches.
- Tree Bank:** A site such as a school or public park, where the owner/developer shall donate and plant the required trees when it is not feasible to plant the required trees within their site's project area.
- Tree Bank Fund:** A fund created to receive and hold monies paid by tree removal permit holder(s) in lieu of relocating or replacing trees when it is not feasible or desirable to do so on or off-site.
- 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 basal diameter of the tree, in accordance with tables contained in Appendix D.
- Tree Master Plan:** A plan prepared by the County Arborist that guides the care, preservation, pruning, planting, replanting, removal, or

disposition of trees on public lands.

- Tree Permit:** Consent given in writing by the County Arborist to a person, 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 List:** The recommended species of trees listed in Appendix A.
- Tree Planting Standards and Specifications:** The design standards and specifications adopted for the planting or maintenance of trees.
- Tree Protection or Planting Plan:** 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 applicable requirements of these land development regulations, and shall include nothing less than the total area of the CRZ of the tree or group of trees collectively.
- Tree Preservation Area:** The total critical root zone surrounding a preserved or planted tree or trees that is essential to that tree's health and survival, and is protected within the guidelines of this Article.
- Tree Removal:** Any act which causes a tree to die within two (2) years after commission of the act, including but not limited to damage inflicted upon the root system in the critical root zone or trunk as the result of:
1. the improper use of machinery on the trees;
 2. the storage of materials in or around the trees;
 3. soil compaction;
 4. altering the natural grade to expose the roots or to cover the tree's root system with more than four (4) inches of soil;
 5. causing the infection or infestation of the tree by pests, fungus or harmful bacteria;
 6. pruning judged to be excessive by the administrator or not in accordance with the standard set forth by the International Society of Arboriculture (ISA);
 7. removal of more than twenty (20) percent of the critical root zone;
 8. paving with concrete, asphalt or other impervious surface within such proximity as to be harmful to the tree or its root system; and
 9. the application of herbicides or defoliant to any tree without first obtaining a permit.
- Tree Replacement Area:** The area designated for a tree or trees to be planted in order to meet tree density requirements.
- Tree Save Area:** All areas designated for the purpose of meeting tree density requirements, saving natural trees, and/or preserving natural

buffers.

Tree Thinning: The 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.

Undisturbed Vegetation: The natural vegetation in a generally untouched, maintenance free, self-perpetuating stand comprised of indigenous trees, shrubs, herbs, flowers or grasses.

Understory Tree: Trees which, at maturity, comprise the sub-canopy of a natural forest. These are generally twenty (20) to forty (40) feet at mature height.

1.6 Tree Bank and Tree Fund

- A. **Designation.** The Tree Bank and Tree Bank Fund are hereby established for Clayton County.
- B. **Oversight and Administration.** The Tree Bank and Tree Bank Fund shall be overseen and administered by the Clayton County Greenspace Trust Board.
- C. **Applicability.** If the County Arborist determines that it is not feasible to relocate or replace trees on-site, the tree removal permit holder may satisfy the tree replacement requirement by paying into the hereby established Tree Bank or Tree Bank Fund.
- D. **Tree Bank.** The Tree Bank refers to areas (typically public land, parks, etc.) set aside as permanent receiver sites for tree plantings. Planting may be carried out directly by the developer/landowner.
- E. **Tree Bank Fund.** The Tree Bank Fund refers to a fund created to receive and hold monies paid by tree removal permit holder(s) in lieu of relocating or replacing trees when it is not feasible or desirable to do so on or off-site. Funds accumulated herein shall be used for the planting and installation of trees on public property, parks, and other approved property within the County only.
- F. **Value.** The value for monies paid into the Tree Bank Fund shall be a sum of money reflecting the current market price of both materials and planting costs plus an additional ten (10) percent of that price for maintenance, with the exception of lost trees as noted in Article 1.14.

1.7 County Arborist

- A. **Designation.** The County Arborist shall be employed by the County.
- B. **Duties.** The duties of the County Arborist shall include those duties listed below.
 - 1. **Review and Approval.** Review and approve or disapprove all plans required by this Ordinance based on the guidelines established herein.
 - 2. **Variiances.** The County Arborist shall consider and act upon requests for variances as provided within fifteen (15) business days of receipt of any such plans or requests for variance.
 - 3. **Inspections and Compliance.** Conduct such inspections as are necessary to see that compliance with the applicable Articles of this Ordinance is achieved and maintained.
 - 4. **Trees in Public Areas.** Direct, regulate, and control the planting, maintenance, and removal of all trees growing now or hereafter in any public area of the County, excluding the right-of ways.

5. **Violations.** Make cases for violations of applicable portions of this Ordinance, 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.
6. **Preparation of Standards and Specifications.** Produce tree planting and maintenance standards and specifications to specify planting methods, maintenance and location of trees outside of the public rights-of-way and clear zones, in parks and in public places within the County. Produce and maintain list of chemicals toxic to trees.
7. **Tree Protection Ordinance Revisions.** In cooperation with the Tree Commission, the County Arborist shall maintain and annually review the Tree Protection Ordinance. Proposed changes to the Article shall be recommended for adoption by resolution of the Board of Commissioners. Upon adoption, the changes shall become part of this Article.
8. **Tree List Revisions.** In cooperation with the Tree Commission, the County Arborist shall maintain and annually review the Clayton County Tree List (Appendix A). Proposed changes to the designation of species of trees shall be recommended for adoption by resolution of the Board of Commissioners. Upon adoption, the changes shall become part of this Article.
9. **Street Trees.** Prepare the Official Street Tree Planting Plan and Program, with the Board of Commissioners approval, along all major arterial streets, collector streets, and publicly owned spaces, including the preparation of detailed plans and specifications for all areas covered by the tree planting plan. All trees must be planted outside of the clear zone as specified by Article 6.27 of the Zoning Ordinance
10. **Cooperation with Other Agencies.**
 - a. **Cooperation.** Cooperate closely with and assist the Community Development Department, the Economic Development Department, the Parks and Recreation Department, the Transportation and Development Department, and all other County departments of this government in a program to protect and maintain existing trees and green areas and all County-owned and recreational lands and properties.
 - b. **Review and Comment.** Review and comment on the proposed landscaping plans of all recreation lands and other public properties within the County.
11. **Proposed Landscape Plans.** Review and make recommendations or comments on all proposed landscaping or development plans of any department of the County except County authorized roadway projects, or any plans of whatever nature which propose the planting or removal of any public trees.
12. **Monitoring.** Monitor the impact of the requirements of this Ordinance through canopy studies, tree inventories and other methods, and report on the same to the Board of Commissioners.
13. **Recommendations to the Board of Commissioners.**
 - a. **Recommendations.** Study and make recommendations to the Board of Commissioners regarding the planting, maintenance and protection of trees on public property.
 - b. **Special Matters or Questions.** Consider, investigate, make findings, report and recommend on any special matter or question coming within the scope of its work.

1.8 Greenspace Trust Board

- A. **Designation.** The Board of Commissioners of Clayton County shall appoint a Greenspace Trust Board by resolution.
- B. **Duties.** The duties of the Greenspace Trust Board as delineated under this Tree Protection Ordinance shall include.
 - 1. **Tree Protection Ordinance Revisions.** In cooperation with the County Arborist, the Greenspace Trust Board shall annually review this Article. Proposed changes to the Article shall be recommended for adoption and approval by resolution of the Board of Commissioners. Upon adoption, the changes shall become part of this Article.
 - 2. **Tree List Revisions.** In cooperation with the County Arborist, the Greenspace Trust Board shall annually review the Clayton County Tree List (Appendix A of this Article). Proposed changes to the designation of species of trees shall be recommended for adoption and approval by resolution of the Board of Commissioners. Upon adoption, the changes shall become part of this Article.
 - 3. **Administration & Management of Tree Bank and Tree Bank Fund.** The Greenspace Trust Board shall oversee the administration and management of the Tree Bank and Tree Bank Fund.
 - 4. **Representation.** It is recommended the members of the Greenspace Trust Board include representation from each of the following demographics: suburban residents, rural residents, building/construction profession, landscape architecture profession, horticulture/arbiculture profession, agriculture profession, and/ or education profession.
 - 5. **Education.** In cooperation with the County Arborist, the Greenspace Trust Board shall provide the education of citizens about the benefits of trees.

1.9 Applicability

The provisions of the Tree Protection Ordinance shall not limit the applicability of the buffering and open space provisions of the Clayton County Zoning Ordinance. The terms and provisions of the Tree Protection Ordinance shall be consistent with any requirements imposed by state law or by the Georgia Department of Transportation in connection with any state-owned or maintained right-of-way. The standards of the Tree Protection Ordinance shall apply to any development, redevelopment, alteration, expansion, or tree removal as indicated below.

- A. **Compliance by Development.** All sites proposed for development, other than mere renovation of an existing building, shall comply with the requirements of this Ordinance.
- B. **Expansions or Additions.**
 - 1. **Sites Two Acres or Less.**
 - a. **Compliance.** On sites two acres or smaller, additions or expansions greater than 5,000 square feet shall comply with the standards of this Ordinance.
 - b. **Cumulative Effect.** The standards shall apply to additions cumulatively totaling more than 5,000 square feet since the effective date of the Tree Protection Ordinance.
 - 2. **Sites Greater than Two (2) Acres.**
 - a. **Additions or Expansion.** On sites greater, than two acres, additions or expansions greater than 10,000 square feet shall comply with the standards of this Ordinance.

- b. **Cumulative Effect.** The standards shall apply to additions cumulatively totaling more than 10,000 square feet since the effective date of this Ordinance.
- 3. **Application of Tree Density Unit (TDU) Requirements.**
 - a. 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 comply with the applicable TDU requested as established hereafter only.
 - b. To determine the required number of TDUs that are required by this Ordinance, two options are available.
 - i. **Option 1.** Calculate the total surface area of any proposed new impervious surface or improvements and plant new trees sufficient to meet the required TDUs for that area. Existing trees elsewhere on the site shall be excluded in the calculation of TDUs.
 - ii. **Option 2.** Calculate required TDUs for entire site area according to zoning classification. Existing trees on the site may be counted to achieve required TDUs.
- 4. **Redevelopment.** Redevelopment of a site shall require compliance with the requirements of this Ordinance.
 - a. **Definition.** For the purposes of this Ordinance, redevelopment is defined as one or more of the following:
 - i. Demolition of an existing building and rebuilding on the site;
 - ii. Expansion of the gross square feet of buildings on a site by fifty (50) percent or greater; or
 - iii. An expansion of the gross square feet of buildings on site that cumulatively totals more than fifty (50) percent of the gross square feet following the effective date of this Article.
 - b. **Redevelopment.** Any site or development subject to this Ordinance due to redevelopment as specified herein shall be required only to comply with the applicable TDU requirements.
- 5. **Applicability to Public Land.** The provisions of this Article shall apply to all public entities and owners of public property within the County and it shall be unlawful for the owners to fail to comply with all provisions and requirements of this Article.
- C. **Tree Removal.** The provisions of this Article shall apply to the removal of any tree with a diameter breast height of six (6) inches or greater, or the removal of three (3) or more trees with individual diameter breast height of less than six (6) inches for all other properties within the Tree Protection Ordinance jurisdiction.

1.10 Exemptions

The following developments are exempted from compliance with the clearing and tree provisions of these regulations:

- A. **Single-family residential.** The removal of five (5) or fewer under thirty (30) inches diameter breast height on any single-family residential property, within a single calendar year, unless such action is subject to a building permit that would allow land disturbance. However, no homeowner can remove trees within two (2) years from the issuance of the certificate of occupancy for a residence when such trees have been preserved or planted by the developer or builder in order to meet the tree density requirements of this ordinance.

- B. **Private septic system and drainage filed.** Upon proper documentation from the Board of Health noting that exemption is warranted, if and when the undisturbed radius cannot be achieved due to a necessary reserve line or absorption field.
- C. **Rights-of-way.** The development of street rights-of-way or clear zones within a proposed subdivision or subdivision expansion provided that all other areas within such subdivision comply with the provisions of this Article.
- D. **County Authorized.** State and County roadway projects.
- E. **Easements.** Utility easements for power lines, pipelines, etc.
- F. **Grandfathered projects.**
 - 1. This Article shall not apply to any portion of a property included within the limits of a valid land disturbance permit issued prior to the effective date of this Article, provided that all time constraints relating to the permit are observed.
 - 2. In no event shall any grandfathered project be extended for more than twelve (12) months from the date of enactment of this Article.
- E. **Horticulture.** Active horticultural operations, including:
 - 1. All active plant or tree nurseries and botanical gardens only in relation to those trees which are being grown for relocation and continued growth in the ordinary course of business, or for some public purpose.
 - 2. All orchards of trees in active commercial operation.
 - 3. This exception shall not be interpreted to include timber-harvesting incidental to development of the land
- F. **Removal of disease or infestation.** Upon the advice of a Certified Arborist and/or the state forestry commission in accordance with commonly accepted forestry practices and a finding of tree disease or infestation, the removal of trees may be authorized to prevent the transmission of disease or infestation, to prevent the danger of these trees falling, or to prevent potential injury to life and property. The owner/developer, prior to removal of the diseased trees, shall notify the county arborist with the department of community development, identifying the location of the infested property, and shall submit the written finding of the State Forestry Commission.
 - 1. Removed trees shall be replaced with species resistant to the particular disease or infestation, as appropriate.
- G. **Zoning buffer areas.** Existing trees proposed to be retained and new trees proposed to be planted in order to meet the buffer requirements of the zoning ordinance or conditions of zoning approval shall not be considered in fulfilling the requirements of this Article. Trees or other vegetation shall not be removed from a zoning buffer area except under the provisions as established by the zoning ordinance.
- H. Notwithstanding the foregoing, all reasonable efforts shall be made to save specimen trees.

1.11 Permits

- A. Land disturbance activities shall not commence until they have been authorized by the Department of Transportation and Development and the Department of Community Development under the provisions of this Article, and by issuance of an appropriate land disturbance permit under the provisions of the development regulations. Applications for a land disturbance permit must include:
 - 1. A survey or survey using a sampling method as approved by the County Arborist, of trees with a diameter breast height of six inches and larger shall be made within the area to be modified from its natural state. The survey shall be conducted and certified by a registered land surveyor, professional engineer,

- registered forester, certified arborist or landscape architect and include the type and size of trees. Tree surveys shall extend twenty-five (25) feet beyond either side of the proposed street right-of-way lines.
2. Applications for residential, commercial, and industrial subdivision approval must also include an estimate of existing tree cover on each lot of the proposed subdivision indicating tree types, average size and density of trees per acre. Additionally, applications for residential, commercial, and industrial subdivision approval must include a landscape plan for the completed project.
- B. Land disturbance activities shall not commence until a development plan for the property, indicating tree preservation areas have been submitted for zoning review and approval by the County Arborist. Furthermore, land disturbance activities shall not commence until a development plan for the property, indicating compliance with the Soil Erosion and Sedimentation Control requirements have been approved and issued a permit by the Clayton County Department of Transportation and Development.
1. A minimum of ten existing trees, or ten percent of the existing trees, per acre of disturbed area shall remain on the site after the grading occurs. Each tree with a trunk diameter of twenty-four (24) inches diameter breast height or larger may count as two (2) trees toward meeting the minimum allowable coverage. If the current condition of the property does not include sufficient trees to meet the standards of this Article then twenty percent of the remaining trees, six (6) inches diameter breast height or greater shall be saved.
 2. Land disturbance activities shall conform in all respects with the approved development plan. If any revisions are necessary, a revised development plan indicating the tree replacement area must be submitted to the zoning administrator for review and approval. This plan must show the location of the trees to be planted, their species, size, and tree unit points. If an insufficient number of trees are left on the site following the land disturbance activities, each tree less than the amount required shall be considered a lost tree and applicable penalties enforced. Specimen tree replacement penalties shall apply when appropriate as well.
 3. If twenty-five (25) percent or more of the trees required to remain are removed, in addition to the lost tree penalties, a penalty of one thousand dollars (\$1,000.00) per tree, shall be assessed for each tree less than the amount required to be retained on-site. In any event, the total site density factor as established in the standards of practice of this Article must be met prior to issuance of a certificate of occupancy or final plat approval.
 4. An as-built plan must be submitted and approved by the Department of Community Development prior to the issuance of a certificate of occupancy or final plat approval. A development plan may be submitted as an as-built plan if no revisions or changes have been made to that plan.
- C. **Master plans.** It is recognized that certain large tracts of land are planned for residential development or planned unit developments, and are developed in phases over many years. Large portions of these planned developments remain forest lands for many years and periodically require removal of certain trees to grow better. For those residential lands of ten acres or more, silviculture or selective thinning may be allowed subject to the following conditions:
1. An approved preliminary plan or master plan on file with the Clayton County Zoning office.
 2. An application for selective timber harvesting must be filed with the department of Community Development, which must include a map or plat of the property

indicating the area to be harvested together with a silviculture plan prepared by a registered forester, engineer, or landscape architect. The silviculture (The Timber Management Plan) plan must contain methods for protection of hardwoods from damage during the timber operation.

3. Only pine, yellow poplar, and sweet gum trees may be harvested and only to the extent that there remains in the harvest area the minimum total site density coverage as required in the tree replacement and protection standards.
- D. Clear cutting is strictly prohibited.
1. See Article 1.17 for penalties.
- G. Timber harvesting.
1. See Appendix C.
- H. Tree Removal Permit
1. A Tree Removal Permit shall be required for the removal of any tree with a diameter breast height of six (6) inches or greater.
 2. A Tree Removal Permit shall be required for the removal of three (3) or more trees with individual diameter breast heights of less than six (6) inches.

1.12 Tree Density Unit (TDU) Requirements

- A. **TDU Requirements.** TDU Requirements are outlined in Appendix D.
- B. **Minimum standards.** On any site or development for which a development plan is required by this Article, a combination of existing trees to be retained and/or new trees to be planted shall meet or exceed the required TDU standard per acre, exclusive of any acreage within a buffer area and any trees needed to meet buffer requirements of the zoning ordinance or conditions of zoning approval. The trees, both existing and new, shall be reasonably distributed through the site, with emphasis on tree groupings and trees visible from the roadways, to achieve aesthetic results following professional landscaping standards. Trees shall not be retained or planted for credit within a public right-of-way or clear zone without approval by the director of the Department of Transportation and Development.
- C. **Additions or expansions.** Site development which falls under the provisions of this Article by virtue of additions or expansions as defined in this subsection shall be required to comply with the applicable TDU requested as established hereafter only and without regard to any specific placement of trees contained in the Ordinance regarding parking areas and regarding perimeter plantings.
- D. **TDU standard calculation.** The tree density standard shall be calculated by summing the following credits and dividing by the total acreage of the project included within the limits of the permit application. To determine the required number of TDUs that are required by this Article, two options are available.
1. **Option 1.** Calculate the total surface area of any proposed new impervious surface or improvements and plant new trees sufficient to meet the required TDUs for that area. Existing trees elsewhere on the site shall be excluded in the calculation of TDUs.
 2. **Option 2.** Calculate required TDUs for entire site area according to zoning classification. Existing trees on the site may be counted to achieve required TDUs.
- E. **Tree Credits.** Tree credits shall be calculated as follows:
1. Credit for existing trees to be retained shall be calculated by multiplying the number of trees (by diameter) by the units assigned in Table A of Appendix D. Credit shall be given to all trees retained on a property having a diameter of four inches or more.

2. Credit for new trees proposed on the site shall be calculated by multiplying the number of trees (by diameter) by the units assigned in Table B of Appendix D. Credit shall be given to all new trees on a property, except for new trees of less than two inches in diameter.
3. Additional credits shall be granted under the following circumstances:
 - a. Additional tree density credit may be granted by the Department of Community Development for existing trees to be retained which have greater value as specimen, as defined herein.
 - b. Existing trees to be preserved within a minimum yard area (as required by the applicable zoning district) or within a 100-year flood plain shall be granted a bonus credit of fifty (50) percent of the units assigned in Appendix D unless the tree is located within a required zoning buffer.

1.13 Tree Preservation Planting Requirements

The following requirements shall apply to trees proposed to be retained for credit toward meeting the minimum required tree density standards on a property. Mechanisms for compliance are defined within Appendix D.

- A. **Tree preservation area.** A tree preservation area shall be established around each tree or group of trees to be retained.
 1. The tree preservation area shall include no less than the total area of the critical root zone of a tree or group of trees collectively.
 2. Layout of the utility and grading plans shall avoid disturbance of the tree preservation areas.
 3. Construction site activities, such as parking, materials storage, concrete washout, burnhole placement, etc., shall be arranged so as to prevent disturbances within the tree preservation areas.
- B. **Protective barriers.**
 1. Protective tree fencing, staking or continuous ribbon shall be installed between tree preservation areas and areas proposed to be cleared, graded or otherwise disturbed on the site, prior to any land disturbance. All protective barriers shall be installed according to the County standards of practice as determined from time to time by the Tree Commission.
 2. All tree preservation areas are to be designated as such with "tree save area" signs posted in addition to the required protection fencing, staking, or continuous ribbon. Signs requesting subcontractor cooperation and compliance with tree preservation standards are recommended for site entrances.
 3. All tree preservation areas must be protected from soil sedimentation intrusion through the use of silt screens or other acceptable measures placed up-slope from the tree preservation area.
 4. All protective tree fencing, staking or continuous ribbon and all erosion control barriers must be installed prior to and maintained throughout the land disturbance and construction process, and should not be removed until final landscaping is installed.
- C. **Encroachment.** If encroachment into a tree preservation area causes irreparable damage to the trees, as determined by the County Arborist, the development plan shall be revised to compensate for the loss in tree density. The irreparably damaged trees shall be designated "lost trees" and lost tree penalties shall be enforced. Under no circumstances shall the developer be relieved of responsibility for compliance with the provisions of the Article, nor shall plan revision activities stop the department from instituting action for violation of this Article.

1. New trees proposed to be planted for credit toward meeting the minimum required tree density standard in a property shall comply with the following guidelines and the County standards of practice:
 - a. The spacing of new trees must be compatible with site limitations and with responsible consideration towards species size when mature.
 - b. Species selected for planting must be ecologically compatible with the specifically intended growing site.
 - c. Species selected for planting must comply with the species recommended or allowed in Appendix A. Native/indigenous species are preferred.
 - d. Trees selected for planting must be free from injury, pests, disease, nutritional disorders or root defects, and must be of good vigor, so as to assure a reasonable expectation of survivability.
 - e. In the event that new trees proposed to be planted to achieve the tree density standard are not installed or likewise compensated to the County Tree Bank or Tree Bank Fund upon application for a certificate of occupancy or final plat approval (as appropriate), then a performance bond or other acceptable surety in an amount equal to one hundred ten (110) percent of the value of the new trees and their installation shall be posted in accordance with the performance bonding requirements and provisions of the land development regulations.
 - f. Upon final installation of new trees planted under the requirements of the Article, and following acceptance by the Department of Community Development, the owner shall warrant the new trees and provide for the replacement of those which do not survive for a period of no less than two years as determined by the Department of Community Development.
- D. **Removal.** Anytime a tree is cut within the County, the stump shall be removed and the land regraded where the tree was located.

1.14 Development Plan Specifications

Development plans shall be prepared in accordance with the specifications for such plans contained herein.

- A. The development plan shall be shown on a copy of a preliminary plat or site plan, as appropriate to the proposed development, drawn to the same scale as the other plan documents prepared for a land disturbance permit application on the property, and shall cover the same area.
- B. The development plan shall provide sufficient information and detail to clearly demonstrate that all applicable requirements and standards of this Article will be fully satisfied.
- C. The development plan shall contain, but need not be limited to, the following:
 1. Project name; land district, land lot and parcel number; north arrow and scale.
 2. Developer's name, address and telephone number.
 3. The name, address and telephone number of the landscape architect, urban forester, arborist or individual responsible for preparation of the tree protection portion of the plan.
 4. Delineation of all minimum yard areas, buffers and landscape areas as required by the zoning ordinance or conditions of zoning approval.
 5. Total acreage of the site and total acreage exclusive of all zoning buffer areas.

6. Delineation of all areas located within a 100-year floodplain.
7. Existing trees to be retained in the tree preservation areas: Trunk location, size and species (to the nearest inch in diameter at four and one-half feet above the ground) of individual trees four inches or greater diameter breast height proposed to remain for credit toward meeting the tree density standard on the property. Groups of three or more trees whose CRZs combine into a single tree preservation area may be outlined as a group and their species, number, by diameter, shown in the summary table. If the number and size of all existing trees to remain on the site exceeds the required tree density standard for the entire site, only those trees required to meet the minimum tree density standard must be shown. All tree preservation areas are to be outlined and labeled.
8. Tree preservation measures.
 - a. A detail or description of the protective tree fencing, staking or continuous ribbon to be installed, and the location of such measures, which at a minimum shall follow the CRZ of all trees to be retained along adjoining areas of clearing, grading or other construction activity.
 - b. Measures to be taken to avoid soil sedimentation intrusion into tree preservation areas and the location of such devices.
 - c. Proposed location of temporary construction activities, such as equipment or worker parking, materials storage, burnholes, equipment washdown areas and entrance pads.
 - d. Proposed type and location of any tree save area signs or other pertinent signage.
9. If new trees are proposed to be planted in order for the property to achieve the required tree density standard, the new trees shall be identified, and their spacing and diameter identified, to the extent needed to achieve the minimum requirements. Trees grouped together in tree planting areas may be listed on the summary table by total number in the grouping, by size.
10. A summary table of the number of existing trees to remain and new trees to be planted by diameter to the nearest inch shall be shown, along with calculations showing the tree density achieved for the site. Additional credits shall be noted where applicable. Groupings of trees in tree preservation areas and areas for new tree planting may be keyed to the summary table by area rather than having each tree individually labeled on the plan.
11. Specimen trees to be identified and located.

1.15 Enforcement

It shall be the responsibility of the Department of Community Development to enforce the Tree Protection Ordinance. The Director of the Department of Community Development or his/her designee shall have the authority to revoke, suspend, or void any development or building permit, to withhold issuance of a certificate of occupancy, and to request the director of the Department of Transportation and Development to revoke any clearing or grading permit. The director of Community Development shall also have the authority to suspend all work on a site or any portion thereof and assess fines and penalties where tree removal or damage occurs in violation of this Article or the provisions of the approved as-built plan for the site.

1.16 Non-liability of County

Nothing in this Article shall be deemed to impose any liability upon the County 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 private property or under his control in a safe condition.

1.17 Violation & Penalties

Any person violating a provision of this Article shall be guilty of violating a duly adopted ordinance of the County, and, upon conviction by a court of competent jurisdiction, may be punished either by a fine not to exceed one thousand dollars (\$1,000.00) per day, or confinement in the County jail not to exceed six months, or both. The court shall have the power and authority to place any person found guilty of a violation of this Article on probation and to suspend or modify any fine or sentence. The owner of any property wherein a violation exists, and any builder, contractor or agent, who may have assisted in the commission of any such violation, may be guilty of a separate offense.

- A. A violation of this Article shall constitute a misdemeanor punishable by a fine of up to one thousand dollars (\$1,000.00) per day and/or a sentence of up to thirty (30) calendar days incarceration per day per occurrence. Nothing herein shall prevent the County from taking such other lawful action as is necessary to prevent or remedy any violations. Replacement shall also be required.
- B. In the event that a tree originally designated for preservation/protection is damaged and/or removed in violation of this Article, said tree shall be designated a "lost tree" and violators shall be subject to replace the lost tree with trees having a total density equal to three (3) times the unit value of the tree removed with a minimum four (4) inch tree caliper or an equivalent payment to the Tree Bank Fund. Furthermore, the location and extent of the tree's critical root zone shall permanently remain in a pervious state with no structures or buildings placed on it.
- C. In the event that a specimen tree is damaged and/or removed in violation of this Article, violators shall be subject to replace the specimen tree with trees having a total density equal to eight (8) times the unit value of the tree removed with a minimum four (4) inch tree caliper or an equivalent payment to the Tree Bank Fund. Furthermore, the location and extent of the tree's critical root zone shall permanently remain in a pervious state with no structures or buildings placed on it.
- D. In addition to the foregoing remedies, upon notice from the zoning administrator, work on any development that is being done contrary to the provisions of this Article shall immediately cease. The stop-work notice shall be in writing and shall go to the owner of the property, or to his agent, or to the person doing the work, and shall state the conditions under which work may be resumed. When an emergency exists, the administrator shall not be required to give written notice prior to stopping the work. Further, in the event that work on any development is being done contrary to the provisions of this Article, the administrator may revoke any permit previously issued by the County or any department of the County pertaining to the development activity for which the land disturbance permit has been issued, and may refuse to issue any further permit until, at the discretion of the administrator, the work on the development is brought into compliance with the provisions of this Article.
- E. In lieu of or in addition to the other remedies herein, the County Attorney is authorized to file a petition seeking injunctive or other equitable relief to secure compliance with the provisions of this ordinance. The County shall be entitled to its attorney's fees for any action through which relief is awarded.

1.18 Severability

Should any part of this Article be declared by a court of competent jurisdiction to be invalid, the same shall not affect the validity of the Article as a whole, or any part thereof other than the part declared to be invalid.

1.19 Effective Date

This shall become effective on June 26, 2008 and shall become a part of the Code of Clayton County, Georgia. Notwithstanding the adoption of this Article, tree removal activities which are undertaken pursuant to a validly issued, non-expired development permit in effect on the date of the adoption of this Article shall be subject to the regulations in effect at the time of the issuance of the permit; provided, however, that if the permit was issued only with respect to a portion or phase of a multi-phased development project, all further development of the project shall be subject to the provisions of this Article.

Appendix A: Tree List

Some trees on a site warrant special consideration and protection for conservation. These trees are referred to as specimen trees.

The following criteria are used by the administrator to identify specimen trees. Both the size and condition criteria must be met for a tree to qualify, with the exception of trees designated as specimen trees for historic or cultural purposes.

The following list contains overstory and understory trees which are found in the Piedmont region and are recommended for use in meeting the tree requirements of the Tree Protection Ordinance of Clayton County. In selecting plant materials the standard for an overstory tree is that it attains a mature height in excess of 40 feet. An understory tree is one that does not reach 30 feet in height at maturity.

The majority of the planting should be large canopy trees. Understory trees and ornamentals should be used as accents or in places with limited space for larger crown development. Species diversity and use of native plantings are highly recommended and preferred. Constraints of urban sites may limit the use of diverse and less-suited native trees; however, use of varied and native species should be practiced whenever possible.

CLAYTON TREE / LANDSCAPING SELECTION LIST SUMMARY			
Species / Botanical Name	Common Name	Characteristics	
		Mature Height (ft)**	Spread (ft)**
<i>Acer floridanum</i>	Florida Maple or Southern Sugar Maple	40-50	25-35
<i>Acer rubrum</i>	Red Maple	40-50	25-35
* <i>Acer saccharum</i>	Sugar Maple	50-60	25-40
* <i>Betula nigra</i>	River Birch	40-50	30-40
* <i>Carya species</i>	Hickories, Pecans	50-60	30-40
* <i>Castanea mollissima</i>	Chinese Chestnut	35-40	45-50
<i>Cercidiphyllum japonicum</i>	Katsura Tree	40-60	30-40
<i>Cladrastis lutea</i>	American Yellowwood	30-45	40-45
* <i>Cunninghamia lanceolata</i>	Common Chinafir	30-75	20-30
<i>Fagus grandifolia</i>	American Beech	60-80	35-45
<i>Fraxinus americana</i>	White Ash	60-80	50-75
<i>Fraxinus pennsylvanica</i>	Green Ash	50-60	25-30
<i>Ginkgo biloba</i>	Ginkgo	50-70	30-40
<i>Gleditsia triacanthos</i>	Thornless Honeylocust	30-70	30-40
* <i>Juniperus virginiana</i>	Eastern Red Cedar	25-40	15-20
* <i>Liquidambar styraciflua</i>	Sweetgum	60-80	40-50
* <i>Liriodendrom tulipifera</i>	Yellow Poplar, Tulip Poplar	80-100	30-40
<i>Metaseguoia glyptostroboides</i>	Dawn Redwood	80-100	25-30
<i>Nyssa sylvatica</i>	Black Gum, Black Tupelo	40-50	25-30

CLAYTON TREE / LANDSCAPING SELECTION LIST SUMMARY			
Species / Botanical Name	Common Name	Characteristics	
		Mature Height (ft)**	Spread (ft)**
Pinus elliottii	Slash Pine	80-100	15-20
*Pinus strobus	White Pine	50-80	20-40
*Pinus taeda	Loblolly Pine	60-80	20-30
*Pinus virginiana	Virginia Pine	15-40	10-30
*Platanus occidentalis	Sycamore	70-100	60-80
Quercus species	Oaks, except Live Oaks	60-80	30-40
Robinia pseudoacacia	Black Locust	30-50	-
Sophora japonica	Japanese Pagodatree	50-70	50
Taxodium disticum	Bald Cypress	50-70	20-30
Ulmus parvifolia	Chinese Elm	40-60	30-40
Acer buergerianum	Trident Maple	25-30	15-25
Acer palmatum	Japanese Maple	15-20	10-15
Amelanchier arborea	Serviceberry	30-40	15-20
Carpinus caroliniana	American Hornbeam	20-30	15-20
Cercis canadensis	Eastern Redbud	20-30	18-20
Chionanthus virginicus	Fringe Tree, Grancy Graybeard	12-20	10-15
Cornus species	Dogwoods	15-25	15-20
Cotinus coggygria	Smoketree	10-15	8-14
Crataegus phaenopyrum	Washington Hawthorne	25-30	15-20
Cryptomeria japonica	Japanese Cryptomeria	50-60	20-30
Halesia carolinia	Silverbell	20-30	15-20
Ilex x attenuata	Savannah Holly	10-40	6-15
Ilex x deciduas	Deciduous Hollies	6-12	8-10
Ilex x Nellie R. Stevens	Nellie R. Stevens Holly	10-20	8-10
Ilex x opaca	American Holly	20-50	15-30
Ilex vomitoria	Yaupon Holly	15-20	8-10
Koelreuteria bipinnata	Bougainvillea Goldenraintree	20-30	15-20
Koelreuteria paniculata	Panicled Goldenraintree	20-30	10-15
Lagerstroemia hybrids	Crape Myrtle Improved Hybrids	15-30	10-15
Maclura pomiera	Osage-orange	20-40	20-40
Magnolia virginiana	Sweetbay Magnolia	15-20	10-20
Magnolia x soulangiana	Saucer Magnolia	15-25	15-25
Magnolia stellata	Star Magnolia	12-20	10-15
Myrica cerifera	Wax Myrtle	25-30	15-20
Ostrya Virginia	Ironwood, Carolina Hornbeam	40	-
Oxydendrum aboreum	Sourwood	20-30	10-15
Pistachia chinensis	Chinese Pistache	30-40	20-30
Prunus cerasifera	Kwanzan Cherry	20-30	15-20
Prunus x yedoensis	Yoshino Cherry	30-40	15-20
Sassafras albidum	Sassafras	30-60	25-40
Vitex cagnus-castus	Chastetree	10-15	10-15

* Indicates not suitable for parking lot islands

**Information for most of the trees was found on <http://pubs.caes.uga.edu/caespubs/pubcd/B625.htm> and http://www.ces.ncsu.edu/depts/hort/consumer/factsheets/trees-new/common_namesq_t.html

Please note: There is no set caliper for each type of tree as they vary in size (per contacts at landscape supply stores and nurseries). Root ball estimate: for a 2- to 2 1/2 inch in diameter tree, the root ball might be approximately 30 inch in diameter.

Appendix B: Specimen Trees

Some trees on a site warrant special consideration and protection for conservation. These trees are referred to as specimen trees.

The following criteria are used by the administrator to identify specimen trees. Both the size and condition criteria must be met for a tree to qualify, with the exception of trees designated as specimen trees for historic or cultural purposes.

Size Criteria

- Large Hardwoods Trees: 24-inch (24") DBH or larger - such as oaks, hickories, yellow poplars, sweetgums, etc.
- Large Softwoods Trees: 30-inch (30") DBH or larger - such as pines, deodar cedars, etc.
- Understory Trees: 4-inch (4") DBH or larger- such as dogwoods, redbuds, sourwoods, etc.

Condition Criteria

- At least ten (10) years life expectancy.
- Trunk is relatively sound and solid with no extensive decay.
- No more than one (1) major and several minor dead limbs (hardwoods only).
- No major insect or pathological problem.

Note: A lesser-sized tree can be considered a specimen tree if it is a rare or unusual species, of exceptional or unique quality, or of historical significance.

In order to encourage the conservation of specimen trees and the incorporation of these trees into the design of projects, additional density credit will be given for specimen trees, which are successfully saved by a design feature specifically designated for such purpose. Credit for any specimen tree thus saved would be two (2) times the assigned unit value shown in Appendix D. The CRZ of specimen trees will be protected with hog-back/wire-back tree save fencing with metal support posts.

If a specimen tree is requested to be removed, a plan or written documentation indicating the reason for the removal must be submitted to the administrator for approval.

Specimen trees that cannot be saved must be replaced with trees having three (3) times the unit value of the tree removed with a minimum 4-inch (4") tree caliper by species with potentials for comparable size and quality.

Any specimen tree which is removed without the appropriate review and approval of the administrator must be replaced by trees with a total density equal to eight (8) times the unit value of the tree removed with a minimum 4-inch tree caliper or an equivalent payment to the Tree Bank Fund. Size alone will determine whether a tree was of specimen quality if the tree is removed without approval and there is no evidence of its condition. Violations will be subject to the applicable penalties as described in Article 14.1 of this Ordinance.

Appendix C: Timber Harvesting

Applications for tree cutting shall be in accordance with current Timber Harvesting plan review procedures. Approval of the Timber Harvesting Permit shall be made by the Zoning Administrator based on the timber harvesting plan that shall be submitted by a registered forester, civil engineer, or landscape architect. Plans and other supportive documents submitted for a Timber Harvesting Permit for tree cutting in areas greater than five (5) acres shall bear the signature of a registered forester.

Tree cutting, clearing, or clearing and grubbing projects, which result in the sale of timber, shall conform to state law regarding payment of taxes. A Georgia Department of Revenue Form PT-283T, along with the required payment, must be submitted to the Clayton County Tax Assessor's Office within the time frame prescribed by state law. Failure to do so shall be considered a violation of the tax law. Call the Clayton County Tax Assessor's Office for more information (P.K. Dixon Building, Annex 2, 121 South McDonough Street, Jonesboro, GA 30236. Phone 770-477-3285).

Documentation regarding the type of timber sale, estimated date of purchase, and estimated PT-283T submittal date shall be provided when submitting plans to the Department of Community Development for review.

The minimum size of plans shall be eleven (11) by fourteen (14) inches. The maximum size shall be twenty-four (24) by thirty-six (36) inches.

Plans shall include the following information:

- Owner's name, address and phone number
- Consultant's and contractor's names, addresses and phone numbers
- Location/vicinity map
- Land lot(s) and district(s)
- Parcel ID Number
- North arrow
- Scale (minimum 1" = 100')
- Closed property boundary showing bearings and distances of all property lines
- Current zoning of property
- Current zoning of adjacent properties
- Total acreage of property and approximate acreage of area to be disturbed
- 24-hour emergency contact name and phone number(s) in bold type (no smaller than twenty (20) point type)
- Names of adjoining roadways
- Location of and detail for the truck exit (co or crushed stone pad)
- Approximate location of the following land features:
 - All state waters
 - Topography at 20-foot intervals (U.S.G.S. Quadrangle Map)
 - Forest cover areas
 - 100-year floodplain
 - Wetlands
 - Limits of land disturbance activity
 - Approximate locations and dimensions of any logging decks
 - Location of any state water buffers (dimension twenty-five (25) feet undisturbed zones from the top of each bank)

- Location of the streamside management zone (dimension required width)
- Approximate locations of any haul roads
- Approximate locations of any stream crossings showing approximate width of crossing (bank to bank) and method of sediment control (rock riprap or culvert)
- Approximate locations of any historical features including cemeteries; or, a note indicating the absence of such on the site
- Delineation and labeling of any required buffer zones around the perimeter of the property
- A detail of the method to be used to delineate all buffers on the site
- Expected time frame in which the operation will occur
- Any additional information as may be required by Clayton County staff to perform a proper review of the project

The following notes:

- Erosion control measures shall be utilized as determined to be necessary to insure the minimization of any potential impacts on surrounding properties by the Department of Transportation & Development. The Clayton County Transportation & Development Department reserves the right to require additional erosion and sedimentation control measures deemed necessary.
- The contractor shall implement all best management practices for forestry as prescribed by the Georgia Forestry Commission and the U.S. Environmental Protection Agency.
- At the minimum a 25-foot wide undisturbed buffer shall be maintained along all property lines to reduce the impact or the harvesting on surrounding properties. Where a greater width buffer is required by the zoning ordinance, the more restrictive buffer shall be enforced.
- No trees may be cut in buffer zones marked "undisturbed." Tree cutting shall be limited to the non-mechanical removal of pine, sweet gum, or yellow-poplar trees with stump diameters greater than fifteen (15) inches; provided, that a minimum of fifty (50) square feet of basal area remains in good condition in the buffer area at completion of the project. The non-mechanical removal of dead, diseased or insect infested trees is also allowed in this buffer (subject to verification by the Clayton County Arborist).
- A minimum of ten (10) trees per acre at six (6) inch diameter breast height shall be saved in addition to any required buffers. **(No clear cutting will be allowed)**
- All buffers of state waters shall remain undisturbed except for haul road crossing points.
- Projects, which are restricted to a "residential thinning," must leave a minimum density of thirty (30) square feet of basal area throughout all areas not designated as buffers or logging decks. Trees to be preserved to meet this requirement must be identifiable both before and after the harvest either by species or by a continuous marking around the trunk at 4.5 feet and at .5 feet above the ground. These trees must be left in good condition with no injuries to the trunk, crown or root system, which would predispose them to disease or pest infestation.
- All pine logging slash with stems larger than five (5) inches in diameter shall be chipped and returned to the site or removed from the site to reduce the possibility of insect infestation.
- Logging decks, temporary haul roads, skid trails and any other disturbed areas left idle for two (2) to four (4) weeks will be restored to their contours and established to temporary vegetation (Ds2). These disturbed areas left idle for four (4) weeks or more will be established to permanent vegetation (Ds3). All areas remaining at the end of the project will be established to permanent vegetation within two (2) weeks.
- When hand planting, mulch (hay or straw) should be uniformly spread over seeded area within twenty-four (24) hours of seeding.

- During unsuitable growing seasons, mulch will be used as a temporary cover (Ds1). On slopes that are 4:1 or steeper, mulch will be anchored.
- The Clayton County Timber Harvesting Permit must be displayed on site at all times during the project operation and in plain view from an adjacent county road or street.
- Fees shall be assessed as delineated by the Department of Community Development's Fee Schedule.

Before any activity can begin an inspection must be performed for basal area confirmation, erosion control devices and buffer area delineation. At this time, the contractor must show a current Clayton County business license or registration certificate. At completion of the project, a final inspection must be performed.

Appendix D: Tree Protection and Replacement Standards

The objective of the Tree Protection and Replacement Standards is to delineate the required methods of providing tree protection and replacement as determined by the Tree Protection Ordinance.

A basic requirement of the Tree Protection Ordinance is that all applicable sites maintain a minimum tree density of twenty (20) units per acre. The term "unit" is an expression of Basal area (a standard forest inventory measurement), and is not synonymous with "tree."

This density requirement must be met whether or not a site had trees prior to development. The density may be achieved by counting existing trees to be preserved, planting new trees, or some combination of the two as represented by the formula:

$$\text{SDF} - \text{EDF} = \text{RDF}$$

SDF (Site Density Factor) = The minimum tree density required to be maintained on a developed site (units per acre).

EDF (Existing Density Factor) = Density of existing trees to be preserved on a site.

RDF (Replacement Density Factor) = Density of new trees to be planted on a site.

The SDF is calculated by multiplying the number of site acres by the desired density (minimum of 20 units per acre or greater)

The EDF is calculated by converting the diameter of individual trees to density factor units. Using Table A below does this.

The RDF is calculated by subtracting the EDF from the SDF.

The density factor credit for each caliper size of replacement (new) trees is shown in Table B.

Example: A 2.2 acre site has a SDF of $2.2 \times 20 = 44$

A total of 15 trees will remain on the 2.2-acre site. The tree inventory is as follows:

- 7 - 12 inch diameter pines
- 3 - 14 inch diameter pines
- 3 - 18 inch diameter oaks
- 1 - 21 inch diameter hickory
- 1 - 30 inch diameter oak

Converting diameters (DBH) to density units, the EDF is determined as follows:

DBH	Units		No. of Trees		Totals
12 inches	0.8	X	7	=	5.6
14 inches	1.2	X	3	=	3.6
18 inches	1.8	X	3	=	5.4
21 inches	2.6	X	1	=	2.6
30 inches	4.4	X	1	=	4.4
					21.6

$$\text{RDF} = 44 - 21.6 = 22.4$$

TABLE A*Conversion of Existing Tree Diameters (DBH) to Density Factor Units*

Tree Size (DBH)	Unit Value
2"-4"	2.0
5"-7"	2.3
8"-9"	2.5
10"	2.6
11"	2.7
12"	2.8
13"	2.9
14"	3.1
15"	3.2
16"	3.4
17"	3.6
18"	3.8
19"	4.0
20"	4.2
21"	4.4
22"	4.6
23"	4.9
24"	5.1
25"	5.4
26"	5.7
27"	6.0
28"	6.3
29"	6.6
30"	6.9
31"	8.2
32"	8.6
33"	8.9
34"	9.3
35"	9.7
36"	10.1

Tree Size (DBH)	Unit Value
37"	10.5
38"	10.9
39"	11.3
40"	11.7
41"	12.2
42"	12.6
43"	13.1
44"	13.6
45"	14.0
46"	14.5
47"	15.0
48"	15.6
49"	16.1
50" or greater	16.6

Note: DBH is rounded to nearest inch (.5 and higher to next full inch, .4 and lower is truncated to lower inch).

Note: Values for tree sizes twenty-four (24) inch and greater are for trees that do not qualify as specimen trees and are not subject to specimen tree designation under Appendix B. Trees qualifying as specimen trees are subject to the benefits and restrictions note in the previously cited section.

Note: Multi-trunked trees shall be given credit by measuring the single largest trunk only. Tree-form shrubs shall not be given credit.

TABLE B*Conversion of Replacement Tree Caliper to Density Factor Units*

Caliper Size (at twelve (12) inches height)	Density Credit	Number of Trees Required to Meet Twenty (20) Units/Acre Standard (1)
2 “	.8	25
3“	1.6	13
4”	1.7	12
5 “	1.9	11
6 “	2.0	10
7”	2.2	10
8”	2.3	9
9”	2.5	8
10”	2.7	8
11”	2.9	7
12”	3.1	7
13”	3.3	7
14” and greater	3.5	6

Note: This column represents the number of trees that would need to be replanted if all one-size tree was used. This is provided for information purposes only, as it is likely that a variety of tree sizes would be used.

Tree Planting Standards

Tree Planting Standards shall follow the requirements outlined in Article 1.13 of this Ordinance. Additionally, the following guidelines shall be followed:

1. No more than thirty (30) percent of all trees planted for replacement density credit may be of any one (1) species.
2. Seven (7) gallon pine trees to be planted to meet required replacement densities must be a least one (1) inch in caliper and greater than or equal to four (4) feet tall.
3. Specimen tree replacement/recompense trees must be at least four (4) inch caliper.
4. No more than twenty (20) percent of all trees planted for replacement density credit may be under two (2) inch caliper.
5. The spacing of replacement trees must be compatible with the spatial site limitations and with responsible consideration toward species size when mature.
6. Trees selected for planting shall be a species listed in Appendix B

7. Trees selected for planting must be free from injury, pests, disease, nutritional disorders or root defects, and must be of good vigor, so as to assure a reasonable expectation of survivability.

The planting of materials shall conform to the standardized landscape specifications as identified in the most recent edition of the American Nursery and Landscape Association (“ANLA”), *The American Standard For Nursery Stock*, (2004), which document is hereby incorporated by reference as if set forth in its entirety herein (said document may be obtained by contacting ANLA at 1000 Vermont Ave NW, Suite 300, Washington, D.C. 20005 (202/789-2900). All trees shall have tops which display a natural growing shape or condition. Trunks shall be healthy and free of defects or mutations such as, but not limited to, over guying.

A secondary reference for tree planting and maintenance may be the best-practice recommendations of the International Society of Arboriculture (www.treesaregood.com).

It is also noted (per the Georgia Model Urban Forest Book):

1. Using a pneumatic excavating tool for excavation work that must happen inside the CRZ greatly reduces tree damage. This tool can remove soil around the tree’s roots without harming them.
2. Pre-construction preparation and post-construction follow-up are essential to tree success, especially for larger trees. The older the tree the longer the post-operation care period.
3. When developing adjacent to or within existing forest, the shape and size of the resulting forest remnant is important to its success. Long narrow shapes with larger perimeters but small interior areas make it harder to develop successful tree preservation schemes but may be successful as buffers or wild life corridors. Rounder shapes make tree preservation easier.
4. Trees transplant better when they are dormant and the environmental conditions are not going to be a stress factor. This would be October until bud break. The fall is considered optimal because the earth is still warm and roots can grow somewhat before cold winter temperatures.

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