

ARTICLE XXIX
TREE CONSERVATION

Section 2901 Intent.

This article shall apply to all properties or portions hereof located within the corporate boundaries of the City. The Mayor and Council of the city find that: the conservation and protection of trees; the planting of new trees of the species and quality recommended herein; and the protection of stream buffers as a part of the land development process serve the public interest and promote public health and general welfare.

Section 2902 Purpose, Terms and Provisions.

- a) *Purpose.* The purpose of this article is to conserve and enhance the City's natural environment through tree conservation, protection, and/or replacement. This article regulates the planting and removal of trees and landscape material, as well as other land disturbing activities. This article is further intended to provide for penalties for violations hereof, to provide for the protection of trees from abuse and mutilation, to repeal conflicting ordinances, and for other purposes set forth herein.
- b) *Terms and provisions.* This section applies to all real property located within the city, except as excluded in other sections in this article. Article XXII of the Zoning Ordinance addresses specific tree, buffer and landscaping requirements for properties located within the specially recognized areas.

Section 2903 Appeals and Variances.

- a) Any person who disagrees with a decision regarding the enforcement and/or interpretation of this Chapter XXIX may appeal such decision in accordance with Appendix D of the Zoning Procedures.

Section 2904 Penalties for the Violation of this Ordinance.

- a) Any property owner or other person, landscape contractor or other firm or corporation violating the provisions of this Ordinance or who fails to comply with any notice issued pursuant to the provision of this Ordinance, upon conviction or plea of guilty, shall be subject to a fine of not less than \$100 nor to exceed \$1,000 for each separate offense, and in addition hereto may be enjoined from continuing the violation. Each tree cut, damaged or poisoned and each violation of this ordinance shall constitute a separate offense.
- b) The City may withhold the issuance of a Certificate of Occupancy, permits or inspections for any construction activity until the provision of this Ordinance have been fully met.

Section 2905 Definitions.

In construing the provisions hereof and the meaning of each and every word, term, phrase, or part thereof where the context will permit, the definition of terms as contained in this Code, supplemented by the following, shall apply:

Berm – An earthen ledge or shoulder sometimes located along the edge of a road or sidewalk.

Buffer – A landscaped open space and/or screen located between incompatible land uses for the purpose of visibly separating uses through distance and to shield or block noise, light, glare, visual or other nuisances; that portion of a given lot, not covered by buildings, pavement, parking, access and service areas, established for the purpose of screening and separating properties with incompatible land uses, the width of which is measured from the common property line and extending the developed portion of the common property line. A buffer consists of trees, shrubs and other natural vegetation undisturbed by grading or site development and replanted where sparsely vegetated or where disturbed for approved access and utility crossings.

Caliper – American Association of Nurserymen standard for trunk measurement of the outside diameter of nursery stock. Caliper of the trunk shall be taken 6 inches above the ground for up to and including 4 inch caliper size and 12 inches above the ground for larger sizes.

Canopy Tree – A tree that, under normal conditions, will compose the upper most layer of vegetation and generally will reach mature height of greater than 40 feet.

Certified Arborist – An individual certified as an Arborist by the International Society of Arboriculture.

City – City of Clarkesville, Georgia.

Clearing – The removal of vegetation from a property that is being developed, whether by clear cutting or other means.

Conservation – The protection, preservation, management, or restoration of natural resources to prevent exploitation, destruction or neglect.

County – Habersham County.

Critical Root Zone (CRZ) – The minimum area beneath a tree that must be left undisturbed in order to preserve a sufficient root mass to give the tree a reasonable chance to survive. The CRZ will typically be represented by a concentric circle centered on the trunk of the tree with a radius equal in feet to 1.5 times the number of inches of the diameter of the trunk. For example: The CRZ radius of a 20 inch tree is 30 feet.

Development Regulations – The ordinances regulating the development and subdivision of real property within the City.

Diameter at Breast Height (DBH) – A standard measure of tree size – a tree trunk, measured in inches at a height of 4 feet 6 inches above the forest floor on the uphill side of the tree. If a tree

splits into multiple trunks below 4 feet 6 inches, then the DBH is measurement of the largest trunk plus 60% of the sum total of remaining trunks.

Drip Line – A vertical line extending from the outermost portion of a tree canopy or a tree's branch tips down to the ground.

Floodplain, 100 year – Lands subject to flooding, which have at least a one percent probability of a flooding occurrence in any calendar year and which is shown on the flood boundary and floodway map as prepared by the Federal Emergency Management agency (FEMA).

Grading – The placement, removal, or movement of earth by use of mechanical equipment on a property.

Grubbing – The removal of tree stumps and roots.

Hedge – A row of closely planted shrubs or plants that produce a dense continuous vegetative screen or barrier.

Land Disturbance – Clearing, grading or grubbing activities on a site or portion of a site.

Land Disturbance Permit (LDP) – A permit issued by the City that authorizes clearing, grading or grubbing activities on a site or portion of a site. A development permit may include activities as defined by a LDP.

Landscape – The visible features of an area of land, including physical elements such as landforms, living elements of flora and fauna, and abstract elements such as light, weather conditions and human elements.

Landscape Strip – Land area located within the boundary of a lot and designated to be used for landscape.

Ordinance Enforcement Officer (OEO) – An employee or designee of the City properly designated and charged with the responsibility of enforcing ordinances within the corporate limits of the City.

Public – A word describing government owned or government operated such as Public Park, public right-of-way, or public property.

Radial Trunk Dieback – Progressive death of the tree tissue from the extremities inward.

Screening – A method of shielding or obscuring one abutting or nearby structure or property from another by means of opaque fencing, walls berms, densely planted vegetation or other means.

Shrub – A woody plant of relatively low height, typically distinguished from a tree by having multiple stems and being of lower height.

Significant Tree – Any existing, healthy, living tree (8) inches DBH or greater in size.

Specimen Tree or Specimen Tree Stand – Any tree or group of trees which has been determined to be of high value because of its species, size, age or other definable criteria and so designated by the

City. General criteria for the determination of specimen trees or stands of trees are provided in Section 2908.

Stream Buffer – An undisturbed buffer on each side of the stream, the minimum width of which is determined by the Georgia Environmental Protection Division or by local ordinance or condition of zoning, whichever is greater.

Structure – Anything constructed or erected, the use of which requires more or less a permanent or semi-permanent location on the ground, or attached to something having a location on the ground.

Surety Bond – A bond given to ensure the timely performance of a contract or compliance with a provision of this article.

Tree – Any self supporting woody perennial plant, usually having a single woody trunk of 2 inches or more when measured at a point 6 inches above ground level and which normally grows at maturity to an overall height of a minimum of fifteen (15) feet.

Tree Damage – Destruction caused, either intentionally or unintentionally to a tree.

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

Tree protection/Tree Replacement Plan – A plan that identifies tree protection areas and shows existing trees to be retained and proposed trees to be planted on a project site or property to meet minimum requirements as well as methods of tree preservation to be undertaken on the site.

Tree Survey – A site survey and documentation of existing trees within a proposed area to be developed.

Understory Tree – A tree that, under normal forest conditions, grows to maturity beneath canopy trees and will generally reach a mature height of ten to forty feet.

Undisturbed Buffer – An area of land on public or private property that has been designated on a plat as a do not disturb, undisturbed or natural buffer.

Xeriscaping – A method of landscaping using planting materials that are efficient in the use of water.

Zoning Buffer – A buffer or stream buffer that is required by the Zoning Ordinance.

Zoning Ordinance – The Zoning Ordinance as adopted by the City of Clarkesville, Georgia.

Section 2906 Tree Care and Maintenance.

All property owners and occupants shall be responsible for the normal and ordinary care of trees located on their property. No person shall willfully damage healthy trees including but not limited to the following:

- a) Pouring of harmful materials on trees which could harm them;
- b) Causing or encouraging a fire or burning near trees;
- c) Causing serious damage to the trunks, limbs or roots of trees.

Section 2907 Specimen Tree Removal Limitations.

Existing specimen trees, including those of rare or historical significance, shall not be removed without a permit. A permit shall not be denied if the removal will enhance the value of the property, the tree is determined to be diseased, dead or to present a hazard to life or property.

Section 2908 Determination of Specimen Trees.

A specimen tree is any tree in fair or better condition which equal or exceeds the following diameter sizes:

- a) Large Deciduous (LD) of 30" DBH or greater, e.g. oaks, hickories, yellow poplars, sweet gums, etc.
- b) Large Evergreens (LE) of 36" DBH or greater, e.g. pines, cedars, hemlocks, etc.
- c) Small tree species (small deciduous (SD) and small evergreen (SE)) of 12" DBH or greater, e.g. dogwoods, redbuds, sourwoods, etc.

A tree in fair or better condition must meet the following guidelines:

- a) A life expectancy of 15 years or longer from the time of determination.
- b) A relatively sound and solid trunk with no extensive decay or hollows and less than 20 percent radial trunk dieback.
- c) No more than one major and several minor dead limbs (hardwoods only).

Section 2909 Removal of Obscuring or Hazardous Limbs and Trees.

The City shall removal all branches that obscure the light from City owned streets or that obstruct the view of any intersection. The City shall maintain a fourteen foot clear space above all City owned streets and an eight foot clear space above the surface of the City owned sidewalks. Property owners shall remove trees or limbs on their property that are hazardous to people or other property.

Upon notification by the City to property owners to remove trees or limbs which are hazardous to people or others property, the property owner shall have 60 days to remove the hazardous trees or

limbs. If the owner fails to comply, the City may have the tree or limbs removed at the property owner's expense.

If a tree or limb poses an immediate safety hazard to persons or property, the City may have the hazard removed as deemed necessary.

Section 2910 Land Disturbance Requirements.

The provisions of sections 2912, 2913, 2914, 2915, 2916 and 2921 of this Article shall apply to any activity on real property which requires the issuance of a Development Permit or Land Disturbance Permit within the incorporated City of Clarkesville.

Section 2911 Exemptions.

- a) Development permits and land disturbance permits are not required on lots that are to be developed with a single family dwelling or related accessory buildings and are less than one acre in area.
- b) A tree protection and replacement plan is not required for the removal of dead, hazardous or dangerous trees.

Section 2912 Tree Replacement Guarantee & Maintenance.

In order to protect the City, residents, and prospective purchases in a subdivision, the Developer shall provide to the City one of the financial securities as set forth in Section 2808 of the Subdivision Regulations in order to guarantee compliance with the tree protection plan and the installation of replacement trees and buffers.

The guarantee shall be an amount to secure the full costs of installation of completion of landscaping and tree replacement requirements and improvements per the approved tree protection plan. Irrespective of the above, the City may establish the amount of financial guarantee required based upon landscaping estimates.

All replacement trees and landscaping shall be maintained in a healthy condition for a minimum of two (2) years from the date of project completion. Any replacement trees that die or become damaged or diseased within the two (2) year period shall be replaced by the property owner or developer.

Section 2913 Tree Retention Priorities.

The retention of existing healthy trees is the highest priority and shall take precedence over the removal of trees and replacement with smaller trees. Emphasis shall be given to the conservation of

specimen and significant trees over the retention of others. Tree protection and replacement plans shall be reviewed for compliance with the following provisions:

- a) Existing trees in required landscape strips and buffers shall be retained as much as practical while meeting the overall goals of the strips and buffers.
- b) Existing trees between building and streets shall be retained to the maximum extent possible.
- c) Where existing trees are located on land proposed for parking areas, such trees shall be integrated into the design of the parking lot planting islands to the maximum extent practical and where there is a good chance for tree survival.
- d) All other existing trees located on site shall be retained to the maximum extent practical.

Noncompliance with this Section may be grounds for the disapproval of tree protection and replacement plans.

Section 2914 Tree Protection Plan Requirements and Specifications.

Tree protection and replacement plans shall be prepared by a professional landscape architect, urban forester, certified arborist, engineer or other professional designee. The plan shall be drawn to scale and may be combined with the buffer, landscape and parking plans.

The tree preservation and/or replacement plan shall contain the following, as a minimum:

- 1) Project name, land district, land lot and parcel number, north arrow and scale;
- 2) Owner and Developer's name, address and telephone number;
- 3) Name, address and telephone number of the professional landscape architect, urban forester, certified arborist or person responsible for preparation of the plan and the seal or statement of professional's qualifications;
- 4) Delineation of all minimum yard areas and landscape areas as required by the zoning ordinance or conditions of zoning approval;
- 5) Total acreage of site and total acreage exclusive of all zoning buffer areas;
- 6) Designation of required landscape, stream buffers and tree protection zones;
- 7) Survey of all trees to be retained in tree protection area with tree location and DBH shown.
- 8) Location of all overhead and underground utilities.
- 9) Location of all easements.
- 10) Tree protection details:
 - a. A detail or description of the protective tree fencing to be installed and the location of such measures. The details shall include the CRZ and, as a minimum, shall follow the drip line of all trees to be retained. Proposed type and location of tree save area signs.
 - b. Measures to be taken to avoid soil sedimentation into tree protection areas.
 - c. Proposed location of temporary construction equipment, parking locations, material storage, etc.

- 11) A summary table of the number of existing trees to remain and the new trees to be planted, including species and DBH, and the total TDUs proposed on site.

Section 2915 Tree Protection Fencing.

- a) Prior to the commencement of land disturbance or development, each tree or stands of trees located within a project site's tree protection zone shall be protected against damage to the bark, roots, and branches with no less than the required fencing.
- b) Fencing shall be either plastic construction area fencing, chain link, hog wire or other approved fencing no less than four (4) feet in height. The fencing shall be secured in such a manner that more than minimum effort is required to alter or remove it.
- c) Tree save area signage with language similar to "Tree Protection Area – Do Not Disturb" shall be required to designate tree protection areas.

Section 2916 Tree Protection Requirements.

- a) Compaction prohibited. All building materials, vehicles, construction equipment, dirt, debris or other objects likely to cause soil compaction or above-ground damage shall be kept outside the critical root zone of trees within tree protection zones or other trees to be protected. Where a limited amount of encroachment is unavoidable and is approved by the City, the critical root zone shall first be mulched with a 4" layer of processed bark or wood chips.
- b) Grade change prohibited. There shall be no raising or lowering of the ground level within the critical root zone of the trees within tree protection zones or other trees to be protected. Removal of topsoil within critical root zones shall not be permitted. The deposit of sediment in critical root zones shall be prevented by the placement of wire reinforced (Type C) sediment barriers.
- c) Ditches prohibited. No person shall excavate any ditch or trench within the critical root zone of trees within tree protection zones or other trees to be protected. Limited boring may be permitted, when deemed necessary, as approved by the City.
- d) Paving prohibited. No person shall pave with concrete, asphalt, or other impervious material within any critical root zone, tree protection zones or other trees to be protected.
- e) Encroachment in critical root zones. Encroachment on the critical root zone of a tree is permitted where necessary to the development (e.g. construction of a driveway), provided the tree is not counted toward the required minimum tree units per acre of development site.

Section 2917 Minimum Tree Units Required.

The tree protection and/or replacement plan shall provide for a minimum of 16 TDUs (tree density units) for each acre of development. All specimen trees and their critical root zones shall be protected

and remain on site unless removal is approved by the City. Mandatory street trees may be included in the minimum 16 TDU requirement. **Existing trees located within required buffers shall not be counted toward meeting this requirement for any given site.**

Flowering ornamental trees shall not be counted in terms of compliance with minimum tree unit requirements, unless listed in Article XXII, Section 2214, Native Plant List.

Section 2918 Determining Tree Units of Existing Trees.

The diameter of an existing tree trunk will be measured at breast height and assigned a diameter at breast height (DBH). The tree unit values assigned to the corresponding DBH is listed in Table 29-01. When an existing tree meets the definition of “specimen tree” as provided in this Article, the value assigned is 1.5 times the value shown in Table 29-10.

**TABLE 29-01
TREE VALUES FOR EXISTING TREES**

DBH (inches)	Tree Units	DBH (inches)	Tree Units
3 to 4	.2	28	4.3
5 to 6	.4	29	4.6
7	.7	30	4.9
8	.8	31	5.2
9	.9	32	5.6
10	1.0	33	5.9
11	1.1	34	6.3
12	1.2	35	6.7
13	1.3	36	7.1
14	1.4	37	7.5
15	1.5	38	7.9
16	1.6	39	8.3
17	1.7	40	8.7
18	1.8	41	9.1
19	1.9	42	9.6
20	2.0	43	10.1
21	2.4	44	10.6
22	2.6	45	11.0
23	2.9	46	11.5
24	3.1	47	12.0
25	3.4	48	12.6
26	3.7	49	13.1
27	4.0	50	13.6

Section 2919 Determining Tree Units of Replacement Trees.

The caliper of the trunk of a replaced tree will be measured and a value assigned in tree units in accordance with Table 29-02.

**TABLE 29-02
TREE UNIT VALUES FOR REPLACEMENT TREES**

Caliper	Tree Units	Caliper	Tree Units
		8	1.3
2	.5	9	1.5
3	.6	10	1.7
4	.7	11	1.9
5	.9	12	2.1
6	1.0	13	2.3
7	1.2	14	2.5

Section 2920 Criteria for Replacement Trees.

- a) A minimum caliper size of two shall be used for replacement trees.
- b) The spacing and potential size of species chosen shall be compatible with the spatial and other limitations of the site. The Arbor Day Foundation guidelines shall be used as a guide when determining the distance between trees planted and their proximity to overhead utility lines, buildings and structures.
- c) The species shall not be flowering ornamental trees, unless listed in Article XXII, Section 2214, Native Plant List. Selected species shall be compatible and reasonably able to thrive with limited care in the chosen planting location.
- d) The trees shall have the potential to reach the same or greater size and quality of those removed.
- e) The trees shall have crowns and root systems at maturity that not disrupt utilities, sidewalks or public right-of-way infrastructure.
- f) Where trees must be added to achieve the minimum required tree units per acre of development site, the following shall apply:
 - 1. Pines may only be used where replacing removed pines and shall not compromise more than 25 percent of the required tree units.
 - 2. Where existing pines already comprise 25 percent or more of the required units, no more pines may be credited toward the required tree units.
 - 3. No more than 30 percent of the required tree units can consist of a single tree species.
 - 4. At least 25 percent of the replacement tree units must be canopy trees.

Section 2921 Landscape Regulations for Parking Lots.

Minimum Tree and Shrub Densities

Parking lot landscaping and deciduous shade trees shall be provided in accordance with this section within any parking lot designated to accommodate five (5) cars or more, with the exception of properties zoned single family residential (R).

- a) Trees required within parking lots by this Section may be included in determining compliance with the minimum tree density units specified in Section 2917.
- b) Parking lot landscaping shall consist of a minimum of 5% of the total parking area plus a ratio of one tree for each fifteen (15) parking spaces, or portions thereof. When possible, parking areas should incorporate existing trees.
- c) Each tree shall be located within the parking lot in reasonable proximity to the parking spaces.
- d) Selected tree species shall be appropriate large canopied shade trees with a minimum caliper of 2 inches and shall be selected from the Clarkesville Native Plant List (see section 2214).
- e) The landscaped area shall be planted with shrubs and/or groundcover to assure 80% coverage of the ground within five years. Landscaped areas shall be evenly distributed throughout the parking area and parking perimeter at the required ratio.
- f) All replacement trees and landscaping shall be maintained in a healthy condition for a minimum of two (2) years from the date of the project completion. Any replacement trees that die or become damaged or diseased within the two (2) year period shall be replaced by the property owner.

Properties located within the Clarkesville Perseveration District corridor overlay zone shall comply with the landscaping requirements in Article XXII.

Section 2922 Street Tree Requirements.

Street Trees shall be planted in accordance with Article XXII of Zoning Ordinance.

Fee Schedule Regarding Buffers, Trees and Landscape

Plan Review for project area up to 5 acres:	\$200
Re-inspection when Final Inspection has failed for project area up to 4 acres:	\$75
Plan Review for project area over 5 acres:	\$350

Re-inspection when Final Inspection has failed for project area over 5 acres: \$125

Tree Removal Permit Application not requiring a plan review: No Fee

Tree Removal Permit Application requiring a plan review: \$50