ARTICLE VI. TREE RETENTION, PROTECTION AND REPLACEMENT

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Sec. 104-150. Introduction.

It is hereby determined that:

- (1) Trees are a valuable asset to the rural/urban environment of the county and can generate such benefits as: the purification of air; moderation of the microclimate; reduction of noise and glare; conservation of energy in terms of heating and cooling; prevention of soil erosion; reduced stormwater management costs; minimization of flood potential; improved water quality; enhancement and stabilization of property values; increased aesthetics; and preservation of the rural character of the unincorporated county.
- (2) Therefore, the county adopts this article to provide requirements to protect the rural and wooded character of unincorporated the county through the preservation and replanting of trees when new development occurs.

(Code 1992, § 8-176; Ord. No. 2012-02, § 1, 3-22-2012; Ord. No. 2012-12, § 1, 12-13-2012)

Sec. 104-151. Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Certified arborist means an arborist certified by the international society of arboriculture (ISA).

Clearing means an activity that removes or disturbs the vegetative cover including trees.

Critical root zone (CRZ) means the minimum area beneath a tree which must be left undisturbed. The critical root zone shall be equal to 1½ feet of radial distance for every inch of the tree's DBH, with a minimum of eight feet.

Deciduous tree means any tree which drops its leaves at the end of the growing season or a tree that annually loses leaves.

Diameter-at-breast-height (DBH) means standard measure of existing tree size and is the trunk diameter measured in inches at height of 4½ feet above the ground. If a tree splits into multiple trunks below 4½ feet, then the trunk is measured at its most narrow point beneath the split. A tree that splits into multiple trunk above 4½ feet is measured as a single tree at 4½ feet.

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Dripline means a line on the ground established by a vertical plane extending from a tree's outermost branch tips down to the ground; i.e., the line enclosing the area directly beneath the tree's crown from which rainfall would drip.

Erosion, sedimentation and pollution control plan means a plan required by the Erosion, Sedimentation and Pollution Control Act, O.C.G.A. § 12-7-1 et seq., that includes, at a minimum, protections at least as stringent as this article.

Evergreen tree means tree that retains its green foliage throughout the year.

Existing density unit (EDU) means a tree density unit assigned for the preservation of existing trees that will remain on site and protected during construction and where EDU is equivalent to inch of DBH when the DBH is a minimum size of four inches.

Land disturbance permit means authorization to conduct a land disturbing activity under the provisions of article IX of this chapter, soil erosion, sedimentation and pollution control.

Land disturbing activity means any land change which may result in soil erosion from water or wind and the movement of sediment into state water or onto lands within the state, including, but not limited to, clearing, dredging, grading, excavating, transporting and filling of land, other than federal lands.

Landscape areas means an area set aside for the installation and maintenance of ornamental planting materials.

Landscaping means any additions to the natural features of a plot of ground to restore construction disturbance and to make an area more attractive.

Overstory (canopy) tree means any tree that, under normal forest conditions, will compose the top layer or canopy of vegetation and generally will reach a mature height of greater than 40 feet. Examples include: oak, maple, elm, bald cypress, cryptomeria.

Replacement density unit (RDU) means a tree density unit assigned to a new tree planted to achieve the site density unit (SDU) and is equivalent to the number of inches of trunk diameter measures at six inches above the ground.

Shrub means a plant with persistent woody stems and a relatively low growth habit, distinguished from a tree by producing several basal stems instead of a single trunk.

Site means that portion of a tract of land that will be dedicated to a proposed development, including the land containing trees that will be counted toward satisfying the requirements of these provisions.

Site density unit (SDU) means the minimum number of tree density units which must be achieved on a nonresidential site after development and is equal to existing density units (EDU) plus replacement density units (RDU).

Specimen tree or stand means any tree or grouping of trees that is determined to be of high value and qualifies for special consideration for preservation because of its species, size, or historical significance.

Tree means a self-supporting woody perennial plant that, at maturity, has one or more stems or trunks that attain a diameter of at least three inches; a more or less definitely formed crown of foliage; and a height of ten feet or more.

Tree density units (TDU) means a unit of measurement for tree density based on the diameter of the tree.

Tree protection area means a barrier constructed around trees at construction sites sufficient to prevent damage or injury to tree trunks, limbs, and roots. The tree protection area shall be either the dripline of the tree or the critical root zone of a tree or clusters of trees to be retained, whichever is greater.

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Understory tree means a tree that, under normal forest conditions, grows to maturity beneath overstory trees and will generally reach a mature height of at least ten feet, but less than 40 feet. Examples include dogwood, red bud, fringe tree, lusterleaf holly, and red cedar.

Utility means public or private water or sewer piping systems, water or sewer pumping stations, electric power lines, fuel pipelines, telephone lines, roads, driveways, bridges, river/lake access facilities, stormwater systems, railroads, or other utilities identified by a local government.

Variance means a grant of relief from the CRZ requirements of this article that permits construction in a manner otherwise prohibited by this article.

(Code 1992, § 8-177; Code 1992, § 8-177; Ord. No. 2000-02, 1-27-2000; Ord. No. 2012-02, § 1, 3-22-2012; Ord. No. 2012-12, § 1, 12-13-2012)

Sec. 104-152. General provisions.

- (a) Purpose and intent. The purpose of this article is to establish minimum requirements for tree retention, protection and replacement in the county and to protect the rural and wooded character of the county through the preservation and replanting of trees when new development occurs. It is the intent of this article that all site planning and design for development of land be undertaken with a survey of trees on the property and that the grading, final placement of buildings, structures, and roads, utilities, and other features minimizes the removal of existing trees, and insures aesthetic replacement and distribution.
- (b) Applicability. This article shall apply to any activity that requires a preliminary plat, erosion, sedimentation, and pollution control plan or site plan as defined in article II of this chapter. Residential subdivisions without common infrastructure are still required to submit a tree protection plan but are not required to submit tree density units.
- (c) Exemptions.
 - (1) Trees determined to be dead, diseased, or infested as determined by the state forestry commission or a certified arborist and approved by the stormwater management department.
 - (2) Orchards and tree nurseries in active commercial operation.
 - (3) Agricultural operation as defined in article IX of this chapter.
 - (4) Nonresidential subdivisions development projects without common infrastructure.
 - (5) Public roads as exempted in section 104-266.
 - (6) Public utilities, as exempted in section 104-266(10) and (11), including telecommunication towers.
 - (7) Commercial forestry operations, including timber harvesting.
 - (8) Residential and nonresidential subdivision development projects are exempt from tree density requirements, but are required to submit a TPP.
- (d) Designation of article administrator. The county stormwater management department shall administer this article.
- (e) Compatibility with other regulations. This article is not intended to modify or repeal any other ordinance, rule, regulation, statute, easement, covenant, deed restriction or other provision of law. The requirements of this article are in addition to the requirements of any other ordinance, rule, regulation or other provision of law, and where any provision of this article imposes restrictions different from those imposed by any other ordinance, rule, regulation or other provision of law,

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whichever provision is more restrictive or impose higher protective standards for human health or the environmental shall control.

- (f) Technical standards. Standards for plant selection and installation listed below are incorporated by reference:
 - (1) "American Standard for Nursery Stock" (ANSI Z60.1-2004).
 - (2) "Manual for Woody Landscape Plants" (Michael Dirr, 2009, Stipes)."
 - (3) "Principles and Practices of Planting Trees and Shrubs" (Watson and Himelick, 1997, ISA).
 - (4) "American National Standards for Tree Care Operations" (ANSI A300).
 - (5) University of Georgia Cooperative Extension Service Bulletin No. 625 Landscape Plants for Georgia.

(Code 1992, § 8-178; Ord. No. 2012-02, § 1, 3-22-2012; Ord. No. 2012-12, § 1, 12-13-2012)

Sec. 104-153. Tree retention, protection and replacement requirements.

For all sites with three acres or less, all trees used in the SDU calculation shall be individually inventoried. For all sites over three acres industry standard sampling methods may be used to prepare a tree survey when trees are of such density to make individual tree identification impractical. In such cases the tree surveyor shall show tree stands and provide estimates of size and species on the tree protection plan.

- (1) Site density requirements. The required tree density for each nonresidential site is referred to as the site density unit (SDU). Each property subject to this article shall have a minimum required SDU based on total number of disturbed acres on the project site.
 - The total SDU required equals existing density units (EDU) plus replacement density units (RDU).
 - b. Property subject to this article that is greater than or equal to three acres shall have or exceed an average SDU of 100 TDUs per acre.
 - c. Property subject to this article that is less than three acres shall have or exceed an average SDU of 50 TDUs per acre.
 - d. Credit will be given to trees retained on a property having a DBH of four inches or more.
 - e. At least 50 percent of the EDUs per acre must be located outside of any zoning or watershed protection buffers as referenced in articles V and VII of this chapter.
 - f. Palm trees are not acceptable for SDU credit.
- (2) Specimen trees.
 - a. Criteria for determination of specimen trees or stands are as follows:
 - 1. Any deciduous canopy tree whose DBH equals or exceeds 24 inches.
 - 2. Any evergreen canopy tree whose DBH equals or exceeds 30 inches.
 - 3. Any understory tree whose DBH equals or exceeds ten inches.
 - 4. Any tree which has significant historical value and can be documented through historical records or otherwise.
 - Removal. Any specimen tree removed without prior approval of the stormwater management department will be replaced by trees equaling two times an inch-for inch

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replacement of the tree removed. 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. Such action may result in a stop work order issued by the stormwater management department.

- c. Written justification must be given for any specimen tree designated for removal. The county stormwater management department may require additional information including, but not limited to, a certified arborist's appraisal of the tree's viability and anticipated life span.
- d. Any specimen tree may be removed if it is shown that at least one of the following conditions is met:
 - The location of the tree prevents the opening of reasonable and necessary vehicular traffic lanes.
 - 2. The location of the tree prevents the construction of utility lines or drainage facilities which may not feasibly be relocated.
 - 3. The location of the tree prevents reasonable access to the property, if no alternate exists.
 - 4. The tree is diseased, dead, or dying to the point that repair or restoration is not practical or the disease may be transmitted to other trees.
 - 5. There is no reasonable assurance that if the tree is saved with proper construction precautions, it will continue to live as an asset to the site.
- e. Preservation. All reasonable efforts should be made to preserve specimen trees and incorporate them into the design of the project. Specimen trees saved by a specifically designed feature of the building, hardscape, or utilities shall be given EDU credit of two inches per inch of DBH.
- (3) Replacement tree requirements. All trees selected for replacement density units must meet the following requirements:
 - a. Trees must be free of disease, injury, or infestation, and must be ecologically compatible with the specifically intended growing area, and planted in accordance with standards established by the international society of arboriculture.
 - b. At a minimum, four species mixture of different trees, with at least three being deciduous hardwoods should be utilized.
 - c. No more than 30 percent of replacement trees may be of a single species.
 - d. A 50 percent mix of overstory and understory trees shall be maintained.
 - e. Trees shall have a minimum caliper requirement of 2½ inches in diameter as measured at six inches above the ground at time of planting.
 - f. All trees planted to fulfill the replacement tree requirements shall be in place before a certificate of occupancy is granted. In the event that the requirements of this article cannot be met at the time a certificate of occupancy is otherwise granted, refer to "buffer and landscape areas," section 104-117 performance surety, in these development regulations.
 - g. All trees planted under the requirements of this article which do not survive for 24 months after issuance of a certificate of occupancy will be replaced as a condition of occupancy. Trees shall be bonded via a maintenance agreement in the amount of 100 percent of their replacement cost. Bonds will be released after the 24-month period has passed, and the

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health of the trees have been certified and accepted by the county. Refer to section 104-118, pertaining to general maintenance.

h. See sections 104-115(d)(2) and 104-116 for suggested tree species. For additional tree species, especially understory (small) trees, see University of Georgia Cooperative Extension Service Bulletin No. 625 Landscape Plants for Georgia.

(4) Tree protection requirements.

- a. A tree protection area shall be maintained around all trees and stands of trees to be retained throughout the duration of construction by tree protection fencing.
- b. The tree protection area of stand-alone trees and stands of trees shall be marked with standard tree protection fencing (orange), chainlink fencing, stakes, and/or continuous engineering tape and "Tree Protection Area" signs. At least two "Tree Protection Area" signs shall be posted at each individual tree protection area.
- c. All tree protection fencing shall be inspected for proper installation by the stormwater management department during the initial erosion and sediment control inspection.
- d. During subdivision street construction, land disturbance allowed by a development permit shall be limited to areas needed for street right-of-way, drainage easements, erosion and sediment control practices and utilities. All other areas shall remain undisturbed for tree protection purposes.
- e. If utilities must run through the tree protection area and the running of those utilities will encroach into the critical root zone CRZ of any trees to be saved, the utility must be tunneled at a depth of 24 inches. When feasible, utilities will run along streets, roadways, driveways, or sidewalks. Reasonable efforts shall be made to save as many trees as possible.

If it is determined that irreparable damage has occurred to a tree or trees within a designated tree protection area, as determined by the county stormwater management department, the state forestry commission, or a certified arborist, it shall be the responsibility of the developer/builder to remove and replace the tree or trees and guarantee survival after the issuance of the certificate of occupancy as references in subsection (3)(g) of this section and article V of this chapter.

(5) Tree protection plan.

a. Procedures.

- 1. The TPP shall be submitted with the preliminary plat, erosion, sedimentation and pollution control plan or the site plan, whichever is the first submittal required by the county planning and zoning department.
- The tree protection plan shall be prepared by either a licensed landscape architect or forester, certified arborist, or other licensed professional of similar design discipline licensed in the state.
- 3. The stormwater management department shall have a maximum of 14 calendar days from the submittal date, or each resubmittal date, for plan review. If the plan is not approved a deficiency checklist will be submitted back to the applicant.
- b. Submittal. The tree protection plan shall be submitted on a scale of no less than one inch to 100 feet and shall include project name, design professional's name and contact information, north arrow, graphic scale, and date. The plan should clearly show and label the following:

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- Tree save areas noting the location, size, DBH, dripline, CRZ, and species name (common name) of each tree that will be retained to fulfill the SDU requirements. Five or more trees whose dripline and CRZ combine into one tree protection area may be outlined as a group with the exception of specimen trees.
- Summary table listing the DBH and species name of each RDU and EDU tree used to obtain the required SDU under "Notes."
- 3. If a group of trees is outlined on the plan as a tree save area, include a summary table listing the size, DBH and species name of each tree within that group under "Notes."
- 4. Location of all new replacement trees including species name and DBH that fulfill RDU requirements.
- 5. Location of any specimen tree designated in a tree protection area including the DBH, CRZ and species name even if contained in a group. If construction is limited to streets, drainage easements and utilities the TPP only needs to show all specimen trees located within 100 feet of the centerline of any right-of-way, or drainage/utility easements.
- 6. Location of any specimen trees designated for removal during construction including the size, DBH and species name.
- 7. Location, depth and height of all existing and proposed utility lines.
- 8. Boundaries of property, buffer and landscaped areas, buildings and structures, vehicle use areas, and other impervious areas.
- Calculations for meeting all required site density units under "notes." If a scientific
 method is used to determine the site density units, label all sample areas and provide
 estimates of trees by size and species as based on sampling method requirements.
- 10. Under "notes" state the following: "No land disturbance, construction processes, or storage of equipment or materials shall take place within a designated tree protection area in order to prevent direct physical root damage that occurs during site clearing and grading and can cause transport or feeder roots to be cut, torn, or removed; indirect root damage caused from grade changes; and trunk and crown damage caused by direct contact with land clearing machinery or galling of adjacent trees."

(Code 1992, § 8-179; Ord. No. 2000-02, 1-27-2000; Ord. No. 2012-02, § 1, 3-22-2012; Ord. No. 2012-12, § 1, 12-13-2012)

Sec. 104-154. Appeals and variances.

- (a) The following variance and appeals procedures shall apply to an applicant who has been denied a permit for a development activity or to an owner or developer who has not applied for a permit because it is clear that the proposed development activity would be inconsistent with the provisions of this article:
 - (1) Requests for variances shall only be given for a reduction in the critical root zone (CRZ).
 - (2) Requests for a variance from the CRZ requirements of this article shall be submitted to the stormwater management department. All such requests shall be heard and decided in accordance with procedures to be published in writing by the stormwater management department.
 - (3) Any person adversely affected by any decision of the stormwater management department shall have the right to appeal such decision to the county zoning board of appeals as established by

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the county in accordance with article IX of chapter 110, zoning. At a minimum, such procedures shall include notice to all affected parties and the opportunity to be heard.

- (4) Any person aggrieved by the decision of the county zoning board of appeals may appeal such decision to the county state court, as provided in O.C.G.A. § 5-4-1.
- (5) In reviewing such requests, the stormwater management department and the county zoning board of appeals shall consider all technical evaluations, relevant factors, and all standards specified in this and other sections of this article.
- (6) Variances shall only be considered based on the follow criteria:
 - Disturbance of the CRZ of less than 30 percent;
 - b. A reduction in the CRZ based on industry standards less stringent than outlined in this article.
- (7) Conditions for variances:
 - a. A variance shall be issued only when all of the following conditions are met:
 - 1. A finding of good and sufficient cause; and
 - 2. A determination that failure to grant the variance would result in exceptional hardship.
 - b. Any person to whom a variance is granted shall be given written notice specifying the difference between the current CRZs requirements and the CRZs requested in the variance.
 - The county stormwater management department shall maintain the records of all appeal actions.
 - d. Any person requesting a variance shall, from the time of the request until the time the request is acted upon, submit such information and documentation as the county stormwater management department and the county zoning board of appeals shall deem necessary to the consideration of the request including, but not limited to, a certified arborist's appraisal of the tree's viability and anticipated life span.
 - e. Upon consideration of the factors listed above and the purposes of this chapter, the county stormwater management department and the county zoning board of appeals may attach such conditions to the granting of variances as they deem necessary or appropriate, consistent with the purposes of this chapter.
 - 1. Variances shall not be issued "after the fact."
 - 2. At a minimum, a variance request shall include the following information:
 - (i) A site map that includes locations of all streams, wetlands, floodplain boundaries and other natural features, as determined by field survey;
 - (ii) A description of the shape, size, topography, slope, soils, vegetation and other physical characteristics of the property;
 - (iii) A detailed site plan that shows the locations of all existing and proposed structures and other impervious cover, the limits of all existing and proposed land disturbance, both inside and outside CRZ. The exact area of the CRZ to be affected shall be accurately and clearly indicated;
 - (iv) Documentation of unusual hardship should the CRZ be maintained:
 - (v) At least one alternative plan, which does not include CRZ disturbance or reduction, or an explanation of why such a site plan is not possible;

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- (vi) A calculation of the total area and length of the proposed intrusion;
- (vii) Proposed mitigation, for the intrusion. If mitigation is not proposed, the request must explain why.
- f. The following factors may be considered in determining whether to issue a variance:
 - 1. The shape, size, topography, slope, soils, vegetation and other physical characteristics of the property;
 - 2. The location and extent of the proposed CRZ intrusion;
 - 3. Whether alternative designs are possible which require less intrusion or no intrusion;
 - 4. The long-term impacts of the proposed variance; and
 - Whether issuance of the variance is at least as protective of natural resources and the environment.
- (b) Any applicant who is aggrieved by any decision of the county stormwater management department relating to the application of this article shall have the right to appeal as provided under article IX of chapter 110, zoning.

(Code 1992, § 8-180; Ord. No. 2012-02, § 1, 3-22-2012; Ord. No. 2012-12, § 1, 12-13-2012)

Sec. 104-155. Violations, enforcement and penalties.

- (a) Violation of application. Any action or inaction which violates the provisions of this article or the requirements of an approved stormwater management application may be subject to the enforcement actions outlines in this section. Any such action or inaction, which is continuous with respect to time, is deemed to be a public nuisance and may be abated by injunctive or other equitable relief. The imposition of any of the penalties described in subsection (c) of this section shall not prevent such equitable relief.
- (b) Notice of violation. If the stormwater management department determines that an applicant or other responsible person has failed to comply with the terms and conditions of a permit, an approved stormwater management plan or the provisions of this article, it shall issue a written notice of violation to such applicant or other responsible person. Where a person is engaged in activity covered by this article without having first secured a permit, the notice of violation shall be served on the owner of the responsible person in charge of the activity being conducted on the site. The notice of violation shall contain:
 - The name and address of the owner or the applicant or the responsible person;
 - (2) The address or description of the site upon which the violation is occurring;
 - (3) A statement specifying the nature of the violation;
 - (4) A description of the remedial measures necessary to bring the action or inaction into compliance with the permit, the stormwater management action plan or this article and the date for the completion of such remedial action; and
 - (5) A statement of the penalties that may be assessed against the person to whom the notice of violation is directed.
- (c) Penalties. In the event the remedial measures described in the notice of violation have not been completed by the date set forth for such completion in the notice of violation, any one or more of the following actions or penalties may be taken or assessed against the person to whom the notice of violation was directed. Before taking any of the following actions or imposing any of the following penalties, the stormwater management department shall first notify the applicant or other responsible

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person in writing of its intended action, and shall provide a reasonable opportunity, of not less than ten days (except, that in the event the violation constitutes an immediate danger to public health or public safety, 24-hours notice shall be sufficient) to cure such violation. In the event the applicant or other responsible person fails to cure such violation after such notice and cure period, the stormwater management department may take one or more of the following action or impose any one or more of the following penalties:

- (1) Stop work order. The stormwater management department may issue a stop work order that shall be served on the applicant or other responsible person. The stop work order shall remain in effect until the applicant other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise cured the violations described therein, provided the stop work order may be withdrawn or modified to enable the applicant or other responsible person to take the necessary remedial measures to cure such violations.
- (2) Withhold certificate of occupancy. The stormwater management department may recommend that the county permits and inspection department refuse to issue a certificate of occupancy for the building other improvements constructed or being constructed on the site until the applicant or other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise cured the violations described therein.
- (3) Suspension, revocation or modification of permit. The stormwater management department may suspend, revoke or modify the permit authorizing the land development project. A suspended, revoked or modified permit may be reinstated after the applicant or other responsible person has taken the remedial measures set forth in the notice of violations or has otherwise cured the violations described therein, provided such permit may be reinstated (upon such conditions as the stormwater management department may deem necessary) to enable the applicant or other responsible person to take the necessary remedial measures to cure such violations.
- (4) Citations. For intentional and flagrant violations of this article, or in the event the applicant or other responsible person fails to take the remedial measures set forth in previously issued notice of violations or otherwise fails to cure the violations within ten days, the stormwater management department may issue a citation to the applicant or other responsible person, requiring such person to appear in state court of the county to answer charges of such violation. Upon conviction, such person shall be punished by a fine not to exceed \$1,000.00 or imprisonment for 60 days or both. Each act of violation and each day upon which any violation shall occur shall constitute a separate offense.

(Code 1992, § 8-181; Ord. No. 2012-02, § 1, 3-22-2012; Ord. No. 2012-12, § 1, 12-13-2012)

Secs. 104-156—104-178. Reserved.