

CHAPTER 6. LANDSCAPING, BUFFERS AND TREE CONSERVATION

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CHAPTER 6. LANDSCAPING, BUFFERS AND TREE CONSERVATION

ARTICLE I. PURPOSE AND DEFINITIONS.

Sec. 6-1 Purpose of Chapter 6.

The purpose of this Article is to improve the aesthetic qualities of the County and to protect and preserve the appearance, character and value of its neighborhoods and business areas by:

- (a) Providing for quality and consistency in the design of landscaping and screening.
- (b) Providing for the separation of incompatible types of land use.
- (c) Providing for the conservation of existing trees and the planting of new trees in pace with the land development process.

Sec. 6-2 Definitions.

Unless specifically defined below, words or phrases used in this ordinance shall be interpreted so as to give them the same meaning as they have in common usage and so as to give this ordinance its most reasonable application.

Agricultural Activities: 1. good-faith commercial production from the land or on the land of agricultural products, including horticultural, floricultural, dairy, livestock, poultry, and apiarian products, but not including forestry products (see "Tree farming" herein); and 2. clearing trees for the purpose of planting crops, providing pasture for livestock, or constructing buildings accessory to production of agricultural products.

Aquifer: An underground reservoir of groundwater from which water can be drawn by a well or natural spring.

Berm: A mound of earth, or the act of pushing earth into a mound.

Buffer, Zoning: An area of natural vegetation or man-made construction which is intended to provide a visual and dimensional separation between dissimilar land uses (in contrast to a "Stream Buffer" required for environmental protection purposes).

- (1) *Natural Buffer:* A visual screen created by vegetation of such density so as to present an opaque visual separation when viewed from one side to the other throughout the year.
- (2) *Structural Buffer:* A visual screen created through construction of a solid wooden fence, decorative masonry wall, earthen berm, or combination of fence or wall with an earthen berm, which may be supplemented with vegetation, so as to present an opaque visual separation when viewed from one side to the other throughout the year.

Caliper: The diameter of a tree (usually nursery stock) measured at a point 6 inches above the ground or top of root ball for up to and including 4-inch caliper trees, and at a point 12 inches above the ground or top of root ball for larger sizes.

Canopy Tree: A species of tree that normally reaches a height at maturity in excess of 40 feet and is used primarily for shade, such as red oak, shumark oak, Chinese elm, river birch, white oak, water oak, American elm, trident maple, pin oak, American beech, pecan, southern magnolia, sweetgum and willow oak.

Critical Root Zone: The land area circular in shape and centered on the trunk of a tree, the radius of which circle is determined by the farthest extent of the drip line from the trunk.

Development Site: 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.

Diameter Breast Height (DBH): The diameter of a tree trunk (usually a mature tree) measured at a height of 4 feet above the ground. If a tree splits into multiple trunks below 4 feet, the trunk is measured at its most narrow point beneath the split.

Drip Line: A perimeter formed by the points farthest away from the trunk of a tree where precipitation falling from the branches of that tree lands on the ground.

Ground Cover: A low growing plant, other than turf grass, which forms a continuous cover over the ground surface.

Groundwater Recharge Area: The land area where the water that eventually seeps down into an aquifer first enters the ground.

Impermeable: Something that water cannot pass through or be absorbed by, such as a layer of rock.

Impervious Surface: A surface that rainwater cannot penetrate or be absorbed by, such as a parking lot, paved road or building.

Landscape Materials: Any combination of living plant materials and nonliving materials (such as rocks, pebbles, wood chips, mulch and pavers) and decorative features such as sculpture, patterned walks, fountains, and pools. This definition includes synthetic landscaping materials that are visually indistinguishable from natural materials.

Landscaping: Landscaping shall consist of shrubs, vines, turf, ground cover and other landscape materials which are utilized to enhance the aesthetic and functional qualities of a site.

Opaque: Impenetrable to view, or so obscuring to view that features, buildings, structures, and uses become visually indistinguishable.

Parking Bay: Three or more parking spaces adjacent to one another and aligned side-by-side.

Plant Materials: Living plants, such as trees, shrubs, ground cover, grasses and perennial flowering plants, turf, and vines that are suitable for ornamental and/or functional use.

Screen: Natural vegetation or a decorative structure that creates an opaque visual block or obscures an unattractive view. Screening may consist of any combination of the following, as approved by the Director:

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- (1) Fencing constructed of cedar, redwood, treated wood, or other suitable all-weather material.
 - (2) Masonry walls.
 - (3) Plant materials or natural vegetation.
 - (4) Earthen berms.

For the purpose of this ordinance, a screen is opaque to a height of 6 feet above the ground surface or, for a screen of plant materials, has the maximum opacity obtainable with the approved arrangement and species of plant materials, to a height of 6 feet.

Shade Tree: A broadleaf deciduous tree having an average height at maturity of a least 20 feet and having a broad spread relative to its height (excluding trees with pyramidal, conical, or columnar crowns) and a dense canopy, so as to provide shade to structures or parking areas in the summer months.

Shrub: A self-supporting woody plant that normally reaches a height of less than 15 feet.

Significant Tree: A tree in fair or better condition that has been determined to be of a high value because of its species, size, age or other professional criteria shall be considered a significant tree.

- (1) A tree is considered in fair or better condition if:
 - a. its life expectancy is greater than 15 years;
 - b. it has a relatively sound and solid trunk with no extensive decay or hollow and less than 29 percent radial tip die-back; and,
 - c. it has no major insect or pathological problems.
- (2) Hardwood trees such as oaks and hickories and soft-wood trees such as pines and cedars whose diameters are 18 inches DBH or more, and small hardwoods such as dogwoods, redbuds or sourwoods whose diameters are 8 inches DBH or more, shall be considered significant trees due to size.
- (3) A tree of lesser size than the preceding shall be significant if it is a rare or unusual species or is of historical significance or is specifically used by design as a landscape focal point of the project.

Tree: A self-supporting woody plant which normally reaches a height of at least 15 feet.

Tree Farming: The planting, cultivating and harvesting of trees in a continuous cycle as a regular practice on a tract of land; not including the removal of trees for purposes of development or the removal of trees without replanting.

Turf: Ground cover composed of one or more species of perennial grass that is grown as a permanent lawn.

Wetlands: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support,

a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

Zoning Buffer: See “Buffer, Zoning.”

Sec. 6-3 Calculation of “tree units.”

(a) Use of tree units.

The landscaping requirements of this Article with regard to the preservation or planting of trees is expressed in terms of “tree units” rather than the number of trees. This approach provides the developer with wide latitude of choice as to the number and sizes of trees to be planted, and their distribution following aesthetic landscaping practices, while achieving a common standard on all properties.

(b) Establishment of tree unit values.

The diameter of a tree’s trunk establishes the “tree unit” value of an existing tree, as shown on Table 6.1. The values assigned to trees of the same size are different for existing and new trees, as indicated in the table. One “unit” is not the same as one “tree.”

Table 6.1: Tree Unit Values

Tree Unit Values for Existing Trees (Add 15% for Significant Trees)				Tree Unit Values for New (Replacement) Deciduous Trees			
DBH¹ (inches)	Tree Units	DBH¹ (inches)	Tree Units	Caliper (inches)	Tree Units	Canopy Trees² Caliper (inches)	Tree Units
1 to 4	0.1	16	1.4	1	0.3	1	0.4
5 to 6	0.2	17	1.6	2	0.6	2	0.7
7	0.3	18	1.8	3	0.8	3	0.9
8	0.4	19	2.0	4 or more	0.9	4 or more	1.0
9	0.5	20	2.2				
10	0.6	21	2.4				
11	0.7	22	2.6				
12	0.8	23	2.9				
13	0.9	24	3.1				
14	1.1	25	3.4				
15	1.2	26 ³	3.7				

Tree Unit Values for New (Replacement) Evergreen Trees			
Height (feet)	Units	Height (feet)	Units
4-6	0.3	8-10	0.8
6-8	0.6	over 10	1.0

¹ Diameter breast height—4½ feet above the ground.

² A “canopy tree” is one that will have a normal height at maturity of 40 feet or more (see definition).

³ For larger trees, the number of units is equal to the cross-section area of the trunk at DBH, in square feet rounded to the nearest 1/10.

ARTICLE II. ENVIRONMENTAL PROTECTION.

Sec. 6-4 Groundwater recharge area protection.

(a) Protected groundwater recharge areas; defined.

(1) Significant recharge area.

Significant recharge areas are defined by the Georgia Department of Natural Resources (DNR) using criteria developed by them, and have been mapped on DNR's Hydrologic Atlas 18 (1989 edition), or as may be amended by DNR from time to time.

(2) Pollution susceptibility category.

Categories of relative vulnerability of an aquifer to pollution (higher, average, lower) are defined by the DNR using criteria developed by them, and have been mapped on DNR's Hydrologic Atlas 20 along with the most significant recharge areas. All significant recharge areas in Crisp County are categorized as having a higher susceptibility to pollution.

(3) Throughout Crisp County, the Board of Health has determined that all areas of the county fall under the higher susceptibility category.

(b) Protected groundwater recharge areas; restrictions.

Within Crisp County, the following shall apply:

(1) All new agricultural waste impoundment sites must be lined. The liner must be constructed of compacted clay having a thickness of 1 foot and a vertical hydraulic conductivity of less than 5×10^{-7} cm/sec or other criteria established by the U.S. Soil Conservation Service.

(2) A new home served by a septic tank/drain field system must have a lot that is at least 150% of the minimum lot size required by Table MT-1 of the Department of Human Resource's *Manual for On-Site Sewage Management Systems*.

(3) A new manufactured home park served by a septic tank/drain field system must have a lot or space that is at least 150% of the minimum lot or space size required by Table MT-2 of the Department of Human Resource's *Manual for On-Site Sewage Management Systems*.

(4) Spray irrigation of wastewater or the land spreading of wastewater treatment plant sludges must be approved by DNR.

(5) Permanent stormwater infiltration systems are prohibited.

(6) New wastewater treatment basins must have an impermeable liner, except for mining settling basins.

(7) New hazardous waste treatment or disposal facilities are prohibited.

(8) New sanitary landfills, if permitted, shall have synthetic liners and leachate collection systems.

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- (9) Any new facility that handles hazardous materials, as determined by the DNR, shall comply with all requirements of the DNR including the provision of impermeable surfaces for spill and leak collection systems for their operations.
 - (10) A new aboveground chemical or petroleum storage tank must have secondary containment of 110% of the volume of the tank or 110% of the volume of the largest tank in a cluster of tanks. This requirement does not apply to:
 - a. Any tank having a maximum capacity of 660 gallons; and,
 - b. Any tank used for agricultural purposes, provided it complies with all Federal requirements.

Sec. 6-5 Wetlands protection.

(a) Protected wetlands; defined.

- (1) "Wetlands" are freshwater areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar freshwater areas.
- (2) Protected wetlands are those wetlands identified and mapped in the Comprehensive Plan, based on criteria defined, identified and mapped by the Georgia Department of Natural Resources (DNR).

(b) Protected wetlands; restrictions.

Within any protected wetlands area, the following shall apply:

- (1) Alteration or degradation of a protected wetland requires prior approval by the U.S. Army Corps of Engineers under Section 404 of the federal Clean Water Act.
- (2) Hazardous waste receiving, treatment or disposal facilities are prohibited.
- (3) Sanitary landfills are prohibited.
- (4) Land uses that may be allowed if permitted by the zoning district and by the Section 404 permit include:
 - a. Timber production and harvesting.
 - b. Wildlife and fisheries management.
 - c. Camping, hiking, hunting and fishing recreation activities.
 - d. Public wastewater treatment and natural water quality treatment or purification facilities.

ARTICLE III. LANDSCAPING OF PROJECTS IN GENERAL.

Sec. 6-6 Landscaping; where required.

- (a) Residential subdivisions exempt.

Landscaping requirements are not imposed on any residential subdivision for single family or two-family development, or on the lot when a single-family or two-family dwelling is to be constructed.

- (b) Multi-family and nonresidential uses.

Landscaping shall be installed on the property of any multi-family or nonresidential use or development as a condition of site plan approval, or issuance of a development permit or building permit, whichever occurs first. Landscaping shall be provided in accordance with the requirements of this Article, which includes the following:

- (1) Within the yard areas of the property, and in landscape strips along the street frontages and side lot lines.
- (2) Within parking lots containing 5 or more parking spaces and between such lots and streets from which they are visible.
- (3) As buffers between incompatible land uses and zoning districts.
- (4) As replacement trees for those removed during construction, or as a supplement, in order to achieve the tree conservation requirements of this Article.

Sec. 6-7 Landscaping of yard areas.

- (a) Minimum requirements.

The minimum landscaping requirement for all uses, excluding single-family and two-family uses or developments, is 2 shrubs per 5,000 square feet of total lot area.

- (b) Open yard areas.

All portions of the site not covered with paving or buildings shall be landscaped. Open areas not covered with other materials shall be covered with turf or ground cover. Turf or ground cover utilized on all slopes in excess of 25% (1 foot of rise in 4 feet of run) must be specifically selected to stabilize the slope.

- (c) Trash storage containers.

All exterior trash storage containers shall be screened so that they are not visible from off the property, and a permanent masonry or frame enclosure shall be provided for each such bin. A detailed drawing of enclosure and screening methods to be used in connection with trash bins on the property shall be included with the site landscaping plan.

Sec. 6-8 Landscape strips along front lot lines.

- (a) Landscape strips along front lot lines; where required.

A landscape strip shall be provided along the full length of any street frontage of a multi-family or nonresidential development as follows:

- (1) A minimum 20-foot wide landscape strip shall be provided along the full length of any arterial or collector street. See the Project Design Standards Article of this Development Code for classifications of streets.
- (2) A minimum 10-foot wide landscape strip shall be provided along the full length of any local street.
- (3) Landscape strips are not to be located within any street-side utility easement required under the Project Design Standards Article of this Development Code.

(b) Location of structures in frontage landscape strip.

Frontage landscape strips shall contain no structures, parking areas, patios, storm-water detention facilities or any other accessory uses except for the following:

- (1) Retaining walls or earthen berms constructed as part of an overall landscape design.
- (2) Pedestrian-oriented facilities such as sidewalks.
- (3) Underground utilities.
- (4) Driveways required to access the property.
- (5) Signs otherwise permitted by this Code.

(c) Landscaping required in frontage landscape strips.

- (1) All portions of a frontage landscape strip shall be planted in trees, shrubs, grass or ground cover, except for those ground areas that are mulched or covered by permitted structures.
- (2) Trees shall be provided within the frontage landscape strip at the rate of one tree unit for every 75 feet of length of street frontage, or portion thereof. Such trees may be deciduous or evergreen, but must be of a type that is suitable to local growing conditions and that will normally reach a height of at least 15 feet upon maturity.
- (3) Upon planting, new trees shall have a caliper of no less than 2 inches, and may be clustered for decorative effect following professional landscaping standards for spacing, location, and design.
- (4) Trees and shrubs in the frontage landscape strip are not to extend into the street right-of-way.

Sec. 6-9 Landscape strips along side lot lines.

(a) Landscape strips along side lot lines; where required.

- (1) A minimum 5-foot wide landscape strip shall be provided along any side lot line of a nonresidential development (unless a zoning buffer is otherwise required along the side lot line).

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- (2) The landscape strip is to extend from the frontage landscape strip to the rear lot line of the property.
 - (b) Location of structures in side landscape strip.

Side yard landscape strips shall contain no structures, parking areas, patios, storm-water detention facilities or any other uses except for the following:

 - (1) Retaining walls or earthen berms constructed as part of an overall landscape design.
 - (2) Underground utilities.
 - (3) Driveways required to access neighboring property.
 - (c) Landscaping required in side landscaping strip.
 - (1) All portions of a side yard landscape strip shall be planted in trees, shrubs, grass or ground cover, except for those ground areas that are mulched or covered by permitted structures.
 - (2) Trees shall be provided within the side yard landscape strip at the rate of at least 1 tree unit for every 75 feet of length or portion thereof, or the side yard landscape strip may be planted in a continuous hedge or junipers (except for approved access drives and utility easements).

ARTICLE IV. PARKING LOT AND LOADING AREA LANDSCAPING.

Sec. 6-10 Parking lot trees.

- (a) Parking lot trees; where required.

Shade trees shall be provided within any parking lot designed or intended to accommodate 5 cars or more, in accordance with the requirements of this Section.
- (b) Parking lot trees; minimum standards.
 - (1) Shade trees shall be provided within the parking lot at a ratio of at least 1 tree unit for every 30 parking spaces, or portion thereof. Each tree shall be located within the parking lot in reasonable proximity to the spaces for which the tree was required. Trees provided to meet the minimum requirements of any landscape strip or zoning buffer under this Article may not be counted toward this requirement.
 - (2) New trees shall have a caliper of no less than 2 inches upon planting, and may be clustered for decorative effect following professional landscaping standards for spacing, location, and design.
- (c) Parking lot islands and planting areas.
 - (1) Landscape islands, strips or other planting areas shall be located within the parking lot and shall constitute at least 5% of the entire area devoted to parking spaces, aisles and driveways.

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- (2) As a minimum, a landscaping island shall be located at the end of every parking bay between the last parking space and an adjacent travel aisle or driveway. The island shall be no less than 8 feet wide for at least one-half the length of the adjacent parking space. The island shall be planted in trees, shrubs, grass, or ground cover except for those areas that are mulched.
 - (3) Tree planting areas shall be no less than 8 feet in width and shall provide at least 100 square feet of planting area per tree. No tree shall be located less than 20 feet from the back of curb. All parking lot landscape islands, strips or other planting areas shall be curbed with minimum 6-inch high rolled or vertical curbs.
 - (4) Landscaping islands and tree planting areas shall be well drained and contain suitable soil and natural irrigation characteristics for the planting materials they contain.
- (d) Loading area screening.
- (1) Loading area screening; where required.
Any area set aside for loading or unloading of trucks or vans, which are visible from a street right-of-way, must provide a visual screen of the loading area that meets the requirements of this subsection.
 - (2) Loading area screening; minimum standards.
 - a. Screening to a height of 20 feet must be provided along the edge of the loading area closest to and parallel to the street, and along any edge closest to and within 30 degrees of being parallel to the street. A driveway to the loading area may interdict the landscaping.
 - b. The visual screening shall be decorative and 100% opaque to a height of 2 feet above the elevation of the loading area or the street, whichever is highest.
- (e) Loading area screening; techniques.
- Loading area screening may be provided in any of the following ways:
- (1) *Planted only.* A hedge consisting of at least 12 shrubs per 40 linear feet that will spread into a continuous visual screen within 2 growing seasons. Shrubs must be at least 18 inches tall at the time of planting, and be certified by a registered Landscape Architect to be of a species that will normally exceed 20 feet in height at maturity and are suitable for the parking lot application.
 - (2) *Earthen berm.* An earthen berm constructed to a height of 20 feet above the adjacent elevation of the street or loading area, wherever is highest, shall not exceed a slope of 1 vertical in 2 horizontal (1:2) and shall have a crown of at least 2 feet. The berm shall be planted in ground covers or other plant materials to achieve a decorative effect.
 - (3) *Wall.* A wall of brick, stone or finished and textured concrete may be constructed to the required height and opacity, and landscaped with plant material to achieve a decorative effect.

(4) Combination. Any combination of hedge, berm or wall that effectively provides a visual screen of the loading area to a height of 20 feet and achieves a decorative effect through appropriate use of landscaping and plant material.

(f) Loading area screening; location.

The loading area screening treatment may be located within the landscape strip required under this Article along the front yard of the property.

ARTICLE V. BUFFERS BETWEEN INCOMPATIBLE LAND USES.

Sec. 6-11 Buffers; where required.

A zoning buffer shall be required in any multi-family or nonresidential development project along a side or rear lot line that abuts a less intense land use, as follows:

Table 6.2: Situations Where Buffer Required

② Along a side or rear lot line next to this use or zoning ↓	① Provide a buffer on the lot of this use ↓ ↓ ↓ ↓			
	1- or 2-Family Residential	Multi-Family	Office or Commercial	Industrial
1- or 2-Family Residential		■	■	■
Multi-Family			■	■
Office or Commercial				■
Light or Heavy Industrial				

■ = buffer required

(a) General.

Zoning buffer areas shall contain no driveways, parking areas, patios, storm-water detention facilities, or any other structures or accessory uses except for a fence, wall, or earthen berm constructed to provide the visual screening required to meet the standards of this Development Code. Underground utilities may be permitted to cross a zoning buffer if the screening standards of this Development Code will be subsequently achieved. Vehicular access through a zoning buffer may be allowed only as a condition of rezoning, Special Use or Planned Development approval by the County Commission.

(b) Width of buffer.

(1) Side Lot Line. Zoning buffers required along any side lot line shall be no less than the minimum required width of the side principal building setback. If there is no side

principal building setback required by the zoning district, the buffer along a side lot line must be at least 10 feet wide.

- (2) Rear Lot Line. Zoning buffers required along any rear lot line shall be no less than the minimum required width of the rear principal building setback. If there is no rear principal building setback required by the zoning district, the buffer along a rear lot line must be at least 10 feet wide.

- (c) Minimum required screening.

Minimum required screening shall consist of a natural buffer utilizing existing vegetation or a structural buffer, whichever provides an opaque visual screen to a height of 6 feet, or any combination of existing and replanted vegetation which can reasonably be expected to create an opaque visual screen 6 feet high within two growing seasons.

- (d) Natural buffers.

Natural zoning buffers may contain deciduous or perennial vegetation, but shall contain evergreen shrubs and trees suitable to local growing conditions that will provide an opaque visual screen during all seasons of the year.

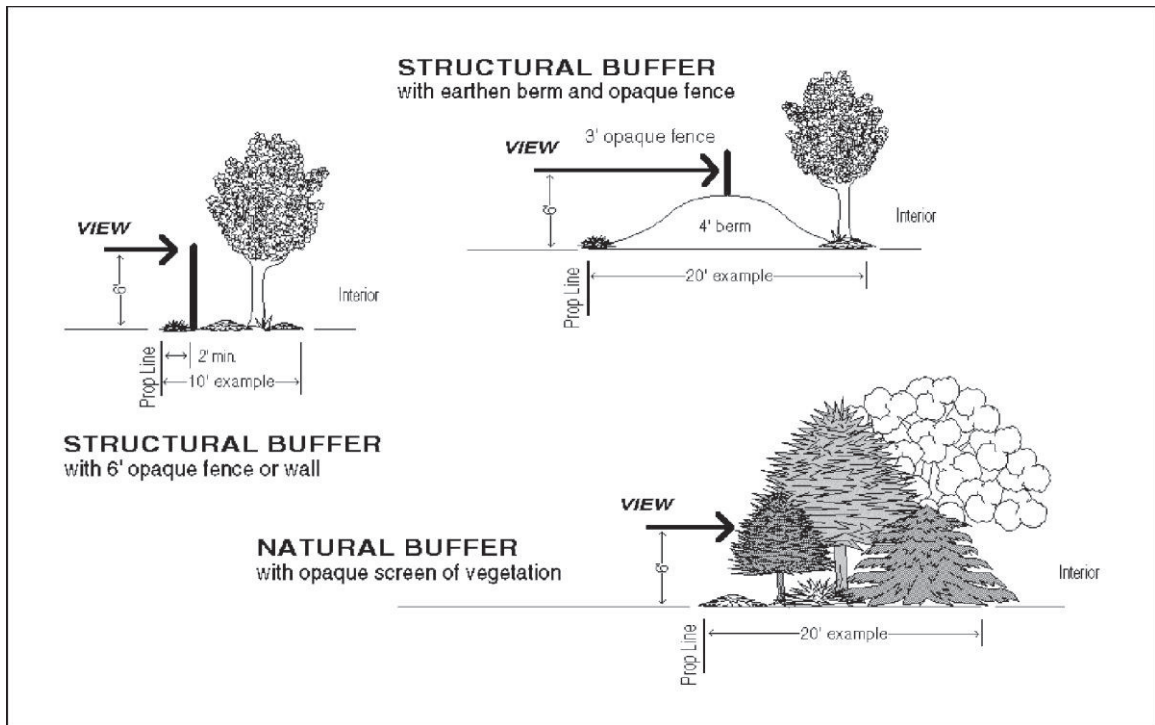
- (e) Structural buffers.

Structural zoning buffers shall meet the following criteria:

- (1) Structural buffers shall be vegetated throughout the minimum area required for the buffer around any fences or walls and upon any earthen berms, which may include grass, ground covers, shrubs, and trees.
- (2) All earthen berms shall have a maximum side slope 1 foot of vertical rise of to 2 feet of horizontal run (1:2). Earthen berms shall not be constructed within the drip line of any existing trees that will remain on the property.
- (3) Trees shall be located or planted within any structural buffer at a density of no less than one tree unit for each 30 feet of buffer length or portion thereof. New trees shall have a caliper of no less than 2 inches upon planting, and may be clustered for decorative effect following professional landscaping standards for spacing, location, and design.
- (4) Fences and freestanding walls shall present a finished and decorative appearance to the abutting property, and shall be located no closer to the property line than 2 feet. Shrubs, ground covers, or other vegetation shall be provided between the fence or wall and the property line so as to provide a decorative effect, following professional landscaping standards for spacing, location and design.
- (5) Fences used in zoning buffers must be made of rot-resistant material or protected from deterioration with water-proofing material.

- (f) Examples of zoning buffers.

The accompanying illustration provides examples of natural and structural buffers. Other solutions meeting the minimum requirements of this Section are also acceptable.



(g) Maintenance of zoning buffers.

Every zoning buffer required by this Article shall be maintained by the owner of the property where the buffer is located, so as to provide an opaque visual screen to a height of 6 feet on a continuous, year-round basis.

Sec. 6-12 Buffer modifications.

(a) Automatic reduction in buffer width.

If a structural buffer is provided that creates an opaque screen to a height of no less than 8 feet instead of 6, the buffer may be reduced to a width of no less than 5 feet.

(b) Location of buffers.

Buffers may be relocated on the site to best achieve the screening required.

(c) Waiver for unnecessary buffers.

The Director of Planning may waive a zoning buffer requirement or reduce its extent to a temporarily appropriate level of screening if the Comprehensive Plan anticipates future

development on the adjoining property in a land use category such that a buffer would not be required by this Code once the adjoining property is rezoned or developed.

ARTICLE VI. TREE CONSERVATION.

Sec. 6-13 Tree conservation; where required.

- (a) Application to new development or disturbed areas.
 - (1) The tree conservation requirements shall apply to the construction of any new multifamily or nonresidential use or development project.
 - (2) For existing multifamily or nonresidential development, these requirements shall only apply to new disturbed area.
- (b) Exemptions from tree conservation requirements.

The tree conservation requirements shall not apply to the following:

- (1) Property on which a single-family or two family dwelling is being constructed or which is already occupied by single-family or two-family dwelling, unless non-residential uses or additional dwelling units are proposed for such property.
- (2) Public utility companies and government agencies conducting operations on public and utility rights-of-way and easements or on sites for electric power substations and similar facilities, which operations are for the purpose of assuring uninterrupted utility and governmental services and unobstructed passage on public streets.
- (3) Property in use for tree farming (as defined by this Code) or other agricultural activities (as defined by this Code).

Sec. 6-14 Trees to be provided or retained.

- (a) Number of tree units upon completion of development.

Upon completion of development, all multifamily or nonresidential uses or development projects shall have a number of tree units equivalent to at least 15 tree units per acre of development site or disturbed area, whichever is less. The limits of grading activity shall establish the extent of land disturbance.
- (b) Retention of large or significant trees.

Existing significant trees or any other trees 10 inches DBH or larger shall not be removed unless development would cause irreparable damage to the critical root zones.
- (c) Criteria for new (replacement) trees.
 - (1) Spacing and the potential size of species chosen shall be compatible with spatial limitations of the site.
 - (2) The species must be ecologically compatible with the specifically intended growing site.

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- (3) The trees must be compatible in extent of crown and root systems at maturity with nearby utilities.
 - (4) Questions of tree characteristics shall be determined by a registered Landscape Architect.

Sec. 6-15 Protection of existing trees.

For existing trees that are proposed to be retained in order to meet the minimum requirements of this Code, the following provisions shall apply;

- (a) Damage prohibited.

No person shall:

- (1) Cut, carve, or otherwise damage or remove any tree except in accordance with the provisions of this Development Code.
- (2) Attach any wire, nails, advertising posters, or other contrivance harmful to any tree.
- (3) Allow any gaseous, liquid, or solid substance which is harmful to trees (such as concrete washout, fuel, lubricants, herbicides, paint) to come in contact with them.
- (4) Set a fire or permit any fire to burn when such fire or the heat thereof will injure any portion of any tree.

- (b) Fence required.

During excavation, filling, construction, or demolition operations, each tree or stand of trees to remain on the property shall be protected against damage to bark, roots, and low-hanging branches with a temporary fence enclosing the critical root zone. Fencing shall be either plastic construction area fencing, silt fencing, 12-gauge 2 x 4 inch wire mesh, double 1 x 4-inch rails on 2 x 4-inch posts, or high-visibility surveyors tape on 1x2 inch posts. Height of the latter three fence types shall be 4 feet.

- (c) 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. Where a limited amount of encroachment is unavoidable, the critical root zone shall first be mulched with a 4 inch layer of processed bark or wood chips or a 6 inch layer of straw.

- (d) Grade change prohibited.

There shall be no raising or lowering of the ground level within the critical root zone. Stripping of topsoil in the critical root zone shall not be permitted. Where necessary, the use of moderate fill is permitted only with prior installation of an aeration system. Deposition of sediment in the critical root zone shall be prevented by placement of sediment barriers, which shall be backed by 2 x 4 inch wire mesh in areas of steep slope.

- (e) Ditches prohibited.

No person shall excavate any ditch or trench within the critical root zone. Where such encroachment is unavoidable, ditches or trenches shall be so located as to minimize root damage. If roots must be cut, root pruning procedures must be employed.

- (f) Paving prohibited.

No person shall pave with concrete, asphalt, or other impervious material within the critical root zone.

ARTICLE VII. LANDSCAPING PLANS, INSTALLATION AND MAINTENANCE.

Sec. 6-16 Site landscaping plans.

- (a) Site landscaping plans; where required.

- (1) Landscaping, buffer and tree conservation plans are required upon application for a development permit or for a building permit for new construction of buildings in any development to which landscaping, screening, buffer or tree conservation requirements apply.
- (2) In cases where approval of the landscaping, buffer and tree conservation plans would cause harmful delay to the start of construction, the Planning Director may issue footing and foundation permits for the project so that construction may proceed.
- (3) Permits for construction beyond the footing and foundation shall not be issued until the landscaping, buffer and tree conservation plans have been submitted and approved.

- (b) Site landscaping plans; criteria.

The technical specifications for landscaping, buffer and tree conservation plans are found under the Plans and Permits Article of this Code.

- (c) Exemptions from site landscaping plan requirements.

- (1) The provisions of this section shall not apply to structures for which site landscaping plans have previously been submitted and approved.
- (2) Site landscaping plans shall be required for only that phase of development for which the development permit or building permit is being requested.

Sec. 6-17 Plant materials; standards.

- (a) Acceptable plant materials.

The following are the minimum plant sizes and conditions to be used in satisfying the requirements of this Article. Acceptable plant materials for landscaping, buffers and tree replacement shall be as approved by a registered Landscape Architect.

- (1) New plant materials
 - a. Medium shrubs, 18 x 24 inch balled and burlapped or 2-gallon container.

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- b. Large shrubs, 24 x 30 inch balled and burlapped or 5-gallon container.
 - c. Ground cover, 2¹/₂ inch peat pot.
 - d. Trees – as required to meet the requirements of the tree conservation plan.
- (2) The *American Standard for Nursery Stock*, published by the American Association for Nurserymen, may be referred to for the determination of plant standards.
- (3) Existing trees that are to be retained to satisfy the requirements of this Code shall meet the following standards:
- a. For evergreen trees, the height shall be at least 6 feet.
 - b. Trees shall be free from mechanical injuries, insect infestations and disease.
 - c. Trees shall be protected from injury to roots, trunks and branches during grading and construction. Protective fencing, tree wells, or retaining walls shall be utilized where necessary to insure tree vigor upon completion of construction.
- (b) Approval of plant materials.
- Approval of a proposal to use a specific landscaping or buffer material shall be subject to a determination by a registered Landscape Architect that the proposed material is the most appropriate for:
- (1) the specific location, given surrounding land uses and the type of screening used on nearby properties, and
 - (2) the specific topography, soil, existing vegetation, and other factors that may influence the effectiveness of a screen material.

Sec. 6-18 Installation and maintenance of plant materials.

- (a) Installation of plant materials.
- Plant materials, as required by the provisions of this Article, shall be installed by the date specified on the approved site landscaping plan. The Planning Director may allow one planting season in a twelve-month period in which the installation of plant materials shall be completed. For the purposes of this Development Code, there shall be two planting seasons, which are from February 15 through May 31, and September 15 through November 30. Zoning buffers, if required, shall be installed before an occupancy permit is granted; except where the weather is not suitable for planting, and escrow provisions are made in accordance with guidelines of the Planning Department.
- (b) Maintenance of required plant materials.
- (1) The owner, tenant and their agent, if any, shall be jointly responsible for the maintenance in good condition of the plant materials used to meet the minimum requirements of this Article for landscaping, buffer or tree conservation. The plant materials shall be kept free from refuse and debris.

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- (2) Plants that are not in sound growing condition or are dead shall be removed and replaced with a plant of the same species, variety or cultivator, as acceptable to the Planning Director.
 - (3) Other landscape materials shall be maintained in proper repair and shall be kept clear of refuse and debris.