Article 8. - Landscaping, Buffers and Tree Conservation

Sec. 801 - Purpose of Article 8.

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:

(1) Providing for quality and consistency in the design of landscaping and screening.

(2) Providing for the separation of incompatible types of land use.

(3) Providing for the conservation of existing trees and the planting of new trees in pace with the land development process.

Sec. 802 - Reserved.

Sec. 803 - Calculation of "tree units."

803 (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.

803 (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 8.1, or for a newly planted tree as shown on Table 8.2.

(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."

(2) Actual tree diameters or calipers are to be rounded to the nearest whole number for the calculation of tree unit values (e.g., 4.5 inches in diameter = 5 inches).

Table 8.1: Tree Units for Existing Trees

Tree Diameter (DBH) in inches	Tree Units	Tree Diameter (DBH) in inches	Tree Units
Seedlings	0.0	19	4.4
1	0.0	20	4.6
2	0.0	21	4.8
3	0.0	22	5.0
4	0.6	23	5.2

5	0.8	24	5.4
6	1.0	25	5.6
7	1.2	26	5.8
8	1.4	27	6.0
9	1.6	28	6.2
10	1.8	29	6.4
11	2.0	30	6.6
12	2.3	31	7.2
13	2.5	32	7.8
14	3.0	33	8.4
15	3.3	34	9.0
16	3.6	35	10.0
17	4.0	36	11.0
18	4.2	37 or greater	12.0 + 1.0 for each inch in diameter greater than 37

Table 8.2: Tree Units for New (Replacement) Trees

Tree Diameter caliper in inches	Tree Units	Tree Diameter caliper in inches	Tree Units
Seedlings	0.0	9	1.3

1	0.0	10	1.5
2	0.3	11	1.7
3	0.4	12	1.9
4	0.5	13	2.2
5	0.6	14	2.5
6	0.7	15	2.8
7	0.9	16	3.1
8	1.1	17 or greater	3.5 + 0.5 for each inch in diameter greater than 17

803 (c) Tree unit values for specimen trees or tree stands.

(1) Specimen trees and specimen tree stands; defined.

Specimen tree : Any tree which qualifies for special consideration for preservation due to size, type and condition, as follows

a. Any tree in fair or better condition which equals or exceeds the following diameter breast height (dbh) sizes:

1. 20-inch dbh—Overstory hardwoods such as oaks, hickories, yellow poplars, sweetgums, etc.
2. 24-inch dbh—Overstory softwoods such as sweetgums, deodar cedars, etc.
3. 4-inch dbh—Understory small trees such as dogwoods, redbuds, sourwoods, etc.
4. 30-inch dbh - Pine trees (all species)

b. A tree in fair or better condition must meet the following minimum standards:

1. A life expectancy of greater than 15 years.
2. A structurally sound trunk, not hollow and having no extensive decay, and less than 20 percent radial trunk dieback.
3. No more than one major and several minor dead limbs (hardwoods only).
4. No major insect or pathological problem.

c. A lesser sized tree can be considered a specimen tree if it is a rare or unusual species, of exceptional or unique quality, or of historical significance, subject to approval of the County Arborist.

d. A lesser size tree can be considered a specimen tree if it is specifically used by a builder, developer, or design professional as a focal point in a landscape project, subject to approval of the County Arborist.

Specimen tree stand: A contiguous grouping of trees which has been determined to be of high value in the opinion of the County Arborist. Determination is based upon the following criteria:

a. A relatively mature, even-aged stand.

b. A stand with purity of species composition or of a rare or unusual nature.

c. A stand of historical significance.

d. A stand with exceptional aesthetic quality.

(2) The tree unit values shown on Table 8.1 may be increased by 100% for an existing tree that meets the definition of a "specimen tree" or for a "specimen tree stand" as defined herein, provided that extraordinary measures as needed are taken to protect the tree and assure its survival. Such measures may include but are not limited to the provision of tree wells, retaining walls, aeration, or supplementary irrigation, as applicable to the site of the tree and as approved by the Director of Development Services.

DIVISION I. - LANDSCAPING OF PROJECTS IN GENERAL.

Sec. 804 - Landscaping; where required.

804 (a) Single-family and duplex residential uses.

(1) Applicability.

a. The tree conservation requirements under Division IV of this Article, apply to all developments, including residential subdivisions, but not to the construction of individual houses.

b. Stormwater detention ponds in a residential subdivision must be screened in accordance with Sec. 8089.

(2) Single-family and duplex residential lots.

a. Each single-family residential lot within a subdivision will be required to meet the buffer requirements listed below in Table 8.3 Residential Lot Buffers unless reduced or eliminated by the Director of Development Services based on the conditions on the property.

Table 8.3 Residential Lot Buffers

Lot Size	Minimum Buffer Width [1]	Minimum Understory Trees	Minimum Overstory Trees	Placement
10,000 SF	20′	1/250 SF	1/500SF	Every other property line
15,000 SF	20′	1/250 SF	1/500SF	Every other property line

32.670 SF	20′	1/250 SF	1/500SF	Every property line
1 acre	20′	1/250 SF	1/500SF	Every property line

[1] Each buffer width is 10′ on either side of the property line for a total of 20′.

b. If trees exist within the buffer that exceed 20' dbh, then the requirements of Table 8.3 may be modified upon the recommendation of the Douglas County Arborist.

c. If all criteria in Table 8.3 are met within the buffer area with existing trees, the buffer may remain undisturbed. Adequate undisturbed buffer means any combination of the requirements in Table 8.3.

1. All undisturbed buffers and trees must be shown on a tree survey indicating the root zone of each tree of a minimum of 1.5 times the dbh. No land disturbance shall be allowed within the root zone of any undisturbed tree.

d. All buffer areas that do not meet the criteria in Table 8.3 or those which must be cleared for lot development will meet the following:

1. All replanted buffers must be planted to 100% of the buffer area from an approved species list of trees.

2. All plantings will be required to be shown on the tree conservation and landscaping plans.

3. The developer will be required to submit a bond for any required plantings in the buffer at an amount specified in Section 825 of this development code.

e. All yard areas on a single-family residential lot not otherwise covered by impervious surface or within required buffer areas shall be planted in ground cover, trees, shrubs, grass or sodded prior to issuance of a Certificate of Occupancy.

f. Every single-family residential lot shall be provided with landscaping around the house consisting of shrubs and trees.

1. Shrubs are to be provided at the rate of 1 shrub for every 6' of length of house perimeter, or portion thereof. Shrubs must be at least 12" tall (1 gallon) at the time of planting, and be of a species that will normally exceed 2' in height at maturity.

2. Trees planted or retained on the lot shall achieve no less than 1.8 tree units per lot. See Table 8.4 for approved tree species.

(3) Single-family and duplex residential subdivisions.

a. All new subdivisions shall have required berms along existing county road frontage within a required landscape strip. The height of such berm shall be determined by the classification of the existing county road; local collector - 3'; minor arterial - 3'; major arterial - 6'. All minor subdivisions are exempt from the berm requirements.

1. All berms will have a maximum 3 to 1 slope.

2. All berms will be landscaped and all proposed landscaping will be included on the landscape plans and approved by the Douglas County Arborist.

b. All new subdivisions shall have landscape strips along existing county road frontage to residential lot buffer standards. The width of such landscape strip shall be determined by the classification of the existing county road; local collector - 10'; minor arterial - 20'; major arterial - 30'; minor subdivision - 10'.

1. If all criteria form Table 8.3 are met with existing trees, the landscape strip may remain undisturbed. (Adequate undisturbed landscape strip means any combination of the requirements of Table 8.3).

2. All replanted landscape strips must be planted to 100% of the buffer area from an approved species list of trees.

3. All replanted landscape strips must meet the criteria established in Table 8.3 regarding buffers.

804 (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 include the following:

(1) Within the yard areas and in landscape strips along the street frontages of certain properties, as required under this Division.

(2) Within parking lots containing 5 or more parking spaces, and between such parking lots (as well as loading areas) and streets from which they are visible, as required under Division II of this Article.

(3) As zoning buffers between incompatible land uses and zoning districts, as required under Division III of this Article.

(4) As replacement trees for those removed during construction, or as a supplement, in order to achieve tree density standards for tree conservation, as required under Division IV of this Article.

804 (c) Specific district or land use requirements.

Landscaping requirements for specific zoning districts or land uses are as follows:

(1) Telecommunications Towers.

a. Landscaping shall effectively screen the view of telecommunications facilities, equipment, equipment shelters or cabinets, associated buildings and fencing, where required, from adjacent public right-of-ways, public property and residential property.

b. Native vegetation and existing topography on the site shall be preserved or improved to the greatest practical extent. Disturbance of the existing topography shall only be permitted when, in the opinion of the Director of Development Services, it would result in less visual impact of the site to the surrounding area.

c. The Director of Development Services or Board of Commissioners may waive or modify the landscaping requirements where lesser requirements are desirable: for visibility or security purposes; for continued operation of existing bona fide agricultural or forest uses such as farms, nurseries and tree farms; other remote agricultural or rural locations; for placement of an antenna on an existing structure; or for developed heavy industrial areas.

(2) Multi-family, office and commercial districts (RHD, PRD, OI, CG and CH).

All multi-family, office and commercial development within the RHD, PRD, OI, CG and CH districts not located within the O-QGD District shall maintain a continuous 10-foot wide frontage landscape strip adjacent to all street rights-of-way. This landscaping area shall be landscaped in accordance with the requirements of this Division. The location and detail of all required

landscaping shall be depicted on the site landscaping plan (see the Procedures and Permits Article of this Code).

(3) Manufactured home developments (R-MH)

The landscaping requirements for properties located in the R-MH zoning district are found Restrictions on Particular Uses Article of this Code.

(4) Industrial districts (LI, LI-R and HI).

The location and detail of all required landscaping shall be depicted on the site landscaping plan (see the Procedures and Permits Article of this Code).

a. Frontage landscaping strip.

For all property located in the LI, LI-R and HI zoning districts, at least a 15-foot wide strip adjacent to the street right-of-way shall be landscaped in accordance with the requirements of this Division.

b. Side and rear yard landscaping.

Unless otherwise included within a zoning buffer required under Division III of this Article, all required side and rear yards shall be landscaped in accordance with the requirements of this Division.

c. Any driveways, walkways, or easements that utilize any of the required landscaped or planted strips shall be shown to be necessary and may not be installed unless approved by the Director of Development Services.

d. Other landscaping areas.

All land surfaces must be covered with buildings, paved, or covered with well-maintained grass, flowers, shrubs, or other suitable plant materials.

Sec. 805 - Frontage landscape strips; standards.

805 (a) Location of structures in frontage landscape strip.

(1) Single-family subdivisions and lots are exempt from the requirements of this Section.

(2) Where required under Sec. 804 or as a condition of zoning approval, frontage landscape strips shall meet or exceed the following standards:

805 (b) Location of structures in frontage landscape strip.

If a frontage landscape strip is required, it 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 and fire hydrants.

(4) Driveways required to access the property.

(5) Signs otherwise permitted by this Code.

805 (c) Landscaping required in frontage landscape strips.

(1) All portions of a required frontage landscape strip shall be planted in trees, shrubs, grass or ground cover, except for those ground areas that are covered by permitted structures. See Table 8. for approved tree species.

(2) Trees shall be provided within the frontage landscape strip at the rate of one tree unit for every 60 feet of length of street frontage, or portion thereof (excluding driveways). Such trees may be understory or overstory trees, but must be of a type that is suitable to local growing conditions. Trees may be clustered for decorative effect following professional landscaping standards for spacing, location, and design.

(3) Trees provided in a frontage landscape strip shall be credited toward the tree conservation requirements of this Article.

(4) 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.

(5) Trees and shrubs in the frontage landscape strip are not to extend into the street right-of-way, nor interfere with the sight visibility requirements of this Development Code.

(6) Shrubs are to be provided within the frontage landscape strip at the rate of 10 shrubs for every 60 feet of length of street frontage, or portion thereof (excluding driveways). 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 2 feet in height at maturity.

Sec. 806 - Side and rear yard landscape areas; standards.

806 (a) Location of structures in side or rear landscape area.

(1) Single-family residential subdivisions and individual lots are exempt from the requirements of this Section.

(2) Where required, side and rear yard landscape areas shall meet or exceed the following standards:

806 (b) Location of structures in side or rear landscape area.

If side and rear yard landscape areas are required, they 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 and fire hydrants.

(3) Driveways required to access neighboring property.

806 (c) Landscaping required in side and rear landscape areas.

(1) All portions of a side or rear yard landscape area shall be planted in trees, shrubs, grass or ground cover, except for those ground areas that are mulched or covered by permitted structures. See Table 8. for approved tree species.

(2) Trees shall be provided within the side or rear yard landscape area at the rate of at least 1 tree unit for every 60 feet of length or portion thereof, or the side yard landscape strip may be planted in a continuous hedge (penetrated only by approved access drives and utility easements).

(3) Trees provided in a side or rear yard landscape area shall be credited toward the tree conservation requirements of this Article.

Sec. 807 - Screening of trash storage containers.

All exterior commercial 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. All exterior commercial trash storage containers shall be screened so that they are not visible from any adjacent property or right-of-way. The screening must be a minimum of 8' in height on three sides and made of brick, granite, stone, marble or cementitious stucco

with a locking gate. All containers must be located behind the building which they serve. All containers shall be placed on a pad constructed with a minimum 3,000 psi concrete and being 12' wide × 20' deep × 6" thick. The concrete pad must extend to a minimum of 10' in front of the enclosure. 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. 808 - Screening of air conditioning units.

In any office/commercial or industrial zoning district (see Table 2.1), ground based and roof mounted heating and air conditioning units shall be screened from view from any street or adjoining residential property.

Sec. 809 - Screening of stormwater detention ponds.

A visual screen shall separate and screen all stormwater detention or retention facilities from view from any adjacent street and any adjoining or contiguous property, except for penetrations for required access. The fencing, vegetation, and/or berm used as a visual screen shall not block or obscure the required site line at driveways and intersections or diminish the sight distance required for visibility at those locations. The visual screen shall comply with the following standards:

(1) Minimum required screening.

Minimum required screening shall achieve an opaque visual screen to a height of 4 feet using the materials listed below.

(2) Materials.

The visual screen may be formed through the retention of existing vegetation, the planting of new vegetation, the creation of a planted hedge, the construction of a fence or wall or earthen berm, or any combination of these approaches.

a. Fencing or masonry walls.

Fences and masonry walls shall present a finished and decorative appearance where possible. Shrubs, ground covers, or other vegetation shall be provided in front of the fence or wall where slopes permit as determined by the Douglas County Arborist so as to provide a decorative effect, following professional landscaping standards for spacing, location and design. Wooden and woven-wire fences shall not be used; dark vinyl-coated chain-link fencing may be used for security; vinyl materials that simulate wooden fences in appearance may be used.

b. Planted materials or natural vegetation.

Any combination of existing and newly planted vegetation may be used that can reasonably be expected to create an opaque evergreen visual screen 4 feet high within two growing seasons.

c. Earthen berms.

When using an earthen berm, the maximum side slope shall not exceed 50% (1 foot of vertical rise to 2 feet of horizontal run) with a minimum crown width of two feet. The berm shall be planted with ground cover, shrubs, trees or other landscaping materials to achieve a total screening height of 4 feet.

DIVISION II. - PARKING LOT AND LOADING AREA LANDSCAPING.

Sec. 810 - Parking lot plantings.

Overstory trees shall be provided within or adjacent to any parking lot designed or intended to accommodate 5 cars or more for residents, employees, customers and visitors (meeting the Parking and Loading Requirements Article of this Code), in accordance with the requirements of this Section. In addition to trees, landscaping is required within such parking lots for 5 or more cars as provided in this Section, below.

810 (a) Parking areas exempt.

Parking lots for company-owned vehicles, vehicle sales lots and rental agency storage lots are exempt from the requirements of this Sec. 810.

810 (b) Landscape areas required.

The following applies to any parking lot designed or intended to accommodate 5 cars or more.

(1) Landscape islands, strips or other planting areas shall be located within the parking lot and shall constitute at least 8% of the entire area devoted to parking spaces, aisles and connecting driveways.

(2) Landscape islands, strips or other planting areas shall be landscaped with any combination of such plant materials as trees, shrubs, grass or ground cover. Such planting areas shall be well drained and contain suitable soil and natural irrigation characteristics for the planting materials they contain.

(3) 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 extend the length of the parking bay and shall be no less than 8 feet wide for at least two-thirds the length of the adjacent parking space.

(4) Landscape islands between side-by-side parking spaces shall be no less than 8 feet in width and extend for at least one-half the length of the adjacent parking space. Landscaping strips between head-to-head parking spaces shall be no less than 5 feet in width and provided with wheel stops in the parking spaces such that no vehicular overhang is permitted.

810 (c) Trees required.

The following applies to any parking lot designed or intended to accommodate 5 cars or more.

(1) Shade trees (deciduous overstory trees) shall be provided within or immediately adjacent to and surrounding the parking lot at a ratio of at least 0.3 tree units for every 8 parking spaces, or portion thereof. See Table 8. for approved tree species.

(2) Trees must be placed in or around the parking lot such that every parking space is within 40 feet of a shade tree. The 40-foot distance is measured from the center of the tree to any point within the parking space.

(3) New trees shall have a caliper of no less than 2 inches upon planting, and shall be maintained in good condition. Trees that must be removed as a result of disease, damage or death, must be replaced.

(4) All trees retained or provided under this Section may be counted toward the minimum tree conservation provisions of this Article.

810 (d) Tree planting areas.

Tree planting areas shall be no less than 11 feet in width at their widest point and shall provide at least 160 square feet of useable planting area per tree. No tree shall be located less than 5 feet from the back of curb. All parking lot landscape islands, strips or other planting areas shall be curbed in accordance with County specifications.

810 (e) Parking lot lighting.

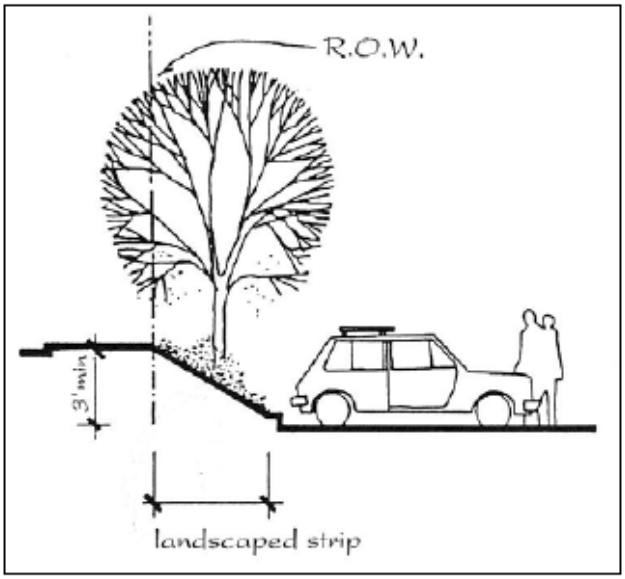
Lighting standards in and surrounding parking lots shall not conflict with tree locations, considering the height and breadth of the trees normally achieved at maturity and their root systems. Only non-spill lighting shall be allowed.

Sec. 811 - Parking lot screening.

Any parking lot designed or intended to accommodate 5 cars or more for any purpose, or to accommodate the parking of any number of trucks or vans, which is visible from a street right-of-way, must provide a landscaped visual screen of the parking lot that meets the requirements of this Section. Truck loading areas shall be screened in accordance with the requirements of Sec. 812.

811 (a) Visual screening required.

(1) Decorative visual screening shall be provided to a height of 3 feet above the elevation of the parking/loading area or the street, whichever is highest. If the parking/loading area is 3 feet or more below the street shoulder, no screening is required.



(2) The screening may be included within any frontage landscape strip required by this Article.

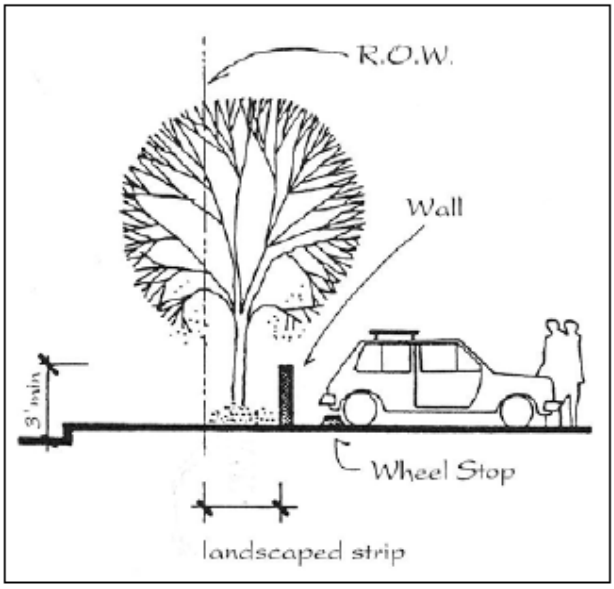
811 (b) Screening alternatives.

The decorative visual screening may be provided in any of the following ways:

(1) *Planted only* . A hedge consisting of at least a single row of shrubs planted 3 feet on center that will spread into a continuous visual screen within 2 growing seasons. Shrubs must be at least 12 inches tall (1 gallon) at the time of planting, and be certified by a registered Landscape Architect to be of a species that will normally exceed 3 feet in height at maturity and are suitable for the parking lot application. The hedge must be set back at least 4 feet from the street right-of-way line.

(2) *Earthen berm* . An earthen berm constructed to a height of 3 feet above the adjacent elevation of the street or parking/loading area, whichever is highest, shall not exceed a slope of 50% (1 foot of vertical rise for every 2 feet of horizontal run) and shall have a crown of at least 2 feet. The berm shall be planted in ground covers and other plant materials to achieve a decorative effect to the reasonable satisfaction of the Development Services Director.

(3) *Wall* . A wall of brick, stone or finished and textured concrete may be constructed to the required height, and landscaped with plant material to achieve a decorative effect to the reasonable satisfaction of the Development Services Director. The wall must be set back at least 4 feet from the street right-of-way line.



(4) *Decorative fence* . A fence constructed of imitation-wood vinyl pickets, or of wrought iron with masonry columns, may be constructed to the required height, and landscaped with plant material to achieve a decorative effect to the reasonable satisfaction of the Development Services Director. The fence must be set back at least 4 feet from the street right-of-way line.

(5) *Combination* . Any combination of hedge, berm, wall or fence that effectively provides a visual screen of the parking lot or loading area to a height of 3 feet and achieves a decorative effect through appropriate use of landscaping and plant material.

811 (c) Obstructions to sight distance.

All landscaping and other screening devices placed along street rights-of-way and driveways must be designed and installed in a manner consistent with the requirements of this Development Code regarding visibility clearance.

Sec. 812 - Screening of truck loading areas.

812 (a) Visual screening required.

All truck loading areas shall be effectively screened from any adjacent residential property and from all streets or highways. The location and detail of all zoning buffers and screening shall be depicted on the required landscaping, buffers and tree conservation plan.

812 (b) Screening alternatives.

(1) All loading areas shall be screened from street or adjacent property view by an attractive solid masonry wall finished on the exterior side by the same material used for the facade of the building. One exception shall be the location of such areas adjoining the same or similar area of a common or adjoining property. Such wall shall be not less than five feet in height and no more than eight feet in height. Specific height shall be determined by the Development Services Director during the site plan review process.

(2) A portion of the required wall screening not to exceed 25 percent may be substituted in the form of a natural or structural zoning buffer meeting the requirements of Sec. 815 if conditions warrant as determined by the Development Services Director.

DIVISION III. - ZONING BUFFERS BETWEEN INCOMPATIBLE LAND USES.

The purpose of this Division is to protect the atmosphere and tranquility of the residential community and to create an aesthetically pleasing environment.

Sec. 813 - Zoning buffers; where required.

813 (a) Nonresidential zoning districts.

(1) When any commercial, industrial or office zoning district (as identified on Table 2.1) abuts a residential district, a natural zoning buffer 50 feet deep at a line where the two districts abut will be required. Natural buffers shall be supplemented with native plantings when the natural buffer does not provide a minimum of 80% opacity between the proposed use and the adjacent residential district. These plantings shall include a mixture of canopy trees (50% must be evergreen), understory trees, evergreen coniferous trees and shrubs. Canopy trees shall be no less than 3 inches in caliper and no less than 15 feet in height at the time of planting with a mature height of no less than 25 feet.

(2) When a natural zoning buffer is impossible or undesirable, a 50-foot wide structural zoning buffer meeting the requirements of this Division may be allowed by the Director of Development Services.

813 (b)Townhouse Condominium Residential Development

(1) Whenever any townhome property abuts an R-A Residential-Agricultural or R-LD Low Density Single-family Residential zoning district, a zoning buffer at least 40 feet deep at the line where the two districts abut will be required.

(2) In addition, an attractive solid masonry wall finished on the exterior side by the same material used for the facade of the building at least 6 feet in height shall be required along any drive, parking area, or recreation area adjacent to said required zoning buffers.

813 (c) Multi-family Residential Development

(1) Whenever any multi-family property abuts an R-A Residential-Agricultural or R-LD Low Density Single-family Residential zoning district, a zoning buffer at least 50 feet deep at the line where the two districts abut will be required.

(2) In addition, an attractive solid masonry wall finished on the exterior side by the same material used for the facade of the building at least 6 feet in height shall be required along any drive, parking area, or recreation area adjacent to said required zoning buffers.

813 (d) R-MH Manufactured Home Residential District.

(1) A zoning buffer at least 30 feet deep along all exterior property lines will be required on any property developed in the R-MH zoning district.

(2) In addition, a chain link or better fence at least 6 feet in height shall be required along every exterior property line.

(3) Each development shall be landscaped with overstory trees, preferably with suitable mature trees that were established on the site prior to development.

Sec. 814 - Zoning buffers; when required.

Zoning buffers are required to be provided or created at the time of construction of any new development.

Sec. 815 - Zoning buffer design standards.

815 (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 an approved 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 or Special Use approval by the Board of Commissioners.

815 (b) Width of Zoning buffer.

(1) Zoning buffers required along any lot line shall be no less than the minimum required under Sec. 813.

(2) When a proposed development adjoins an existing development but the full width of the required zoning buffer does not exist, the new development shall provide a zoning buffer of adequate width to meet the full width required under Sec. 813 when considered in combination with any existing zoning buffer on the property of the adjoining development.

815 (c) Minimum Required Screening.

Minimum required screening shall consist of a natural zoning buffer or a structural zoning buffer, whichever provides an opaque evergreen 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.

815 (d) Natural zoning buffers.

(1) 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.

(2) If there are not sufficient trees to adequately screen the development from the residential district in both summer and winter, additional evergreen trees and/or shrubs such as Deodar Cedar, Nellie R. Stevens Holly, Leyland Cypress, or Loblolly Pine, at least 5 feet tall at the time of planting shall be planted to create a dense buffer. Other evergreen trees may be selected from Table 8..

815 (e) Structural zoning buffers.

Structural zoning buffers shall meet the following criteria:

(1) Structural zoning buffers shall be vegetated throughout the minimum area required for the zoning 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 of 50% (1 foot of vertical rise to 2 feet of horizontal run). 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 zoning buffer at a density of no less than one tree unit for each 30 feet of buffer length or portion thereof. New deciduous trees shall have a caliper of no less than 2 inches upon planting, and new evergreens shall be at least 5 feet tall when planted. Trees may be clustered for decorative effect following professional landscaping standards for spacing, location, and design.

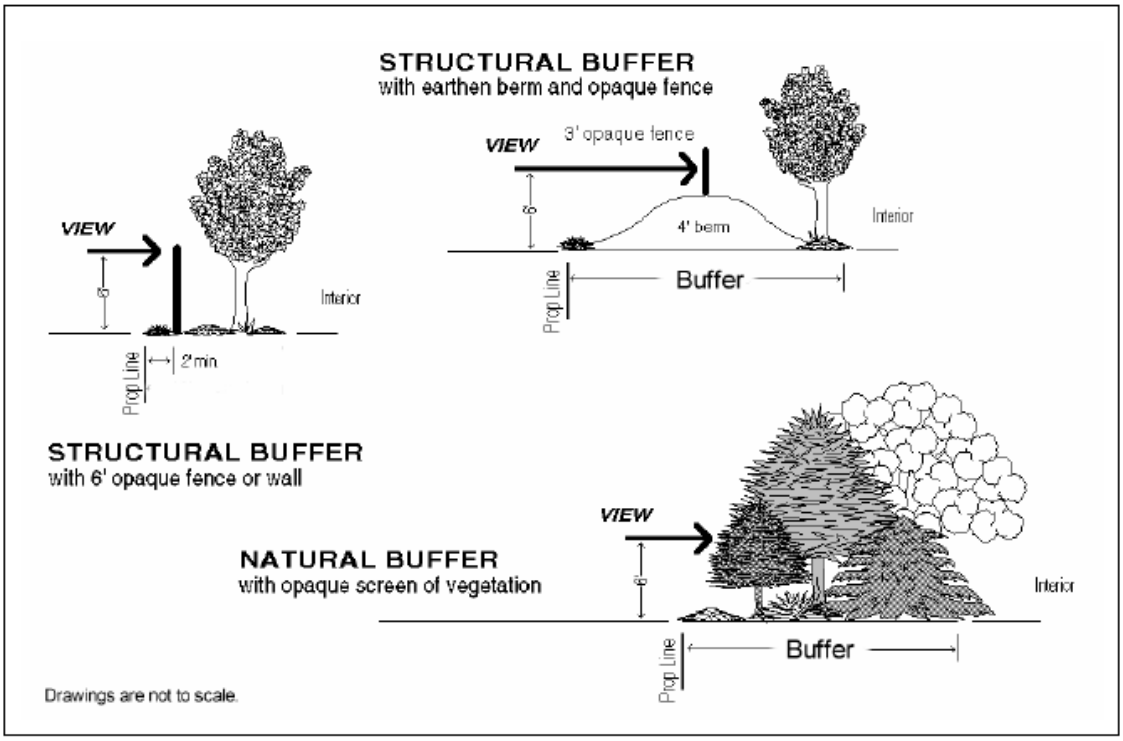
(4) Freestanding walls shall present a finished and decorative appearance to the abutting property, and shall be located no closer to the property line than 2 feet. Shrubs, ground covers, or other

vegetation shall be provided between the wall and the property line so as to provide a decorative effect, following professional landscaping standards for spacing, location and design.

(5) Wooden and woven-wire fences shall not be used in structural zoning buffers. Vinyl materials that simulate wooden fences in appearance may be used.

Examples of Zoning Buffers.

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



Sec. 816 - Maintenance of zoning buffers.

816 (a) Responsibility.

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.

816 (b) Inspection of required zoning buffers.

In the event a screen, wall, fence, planted dividing strip or any other type of zoning buffer is required by these regulations for any use or is required by the board of appeals, such screen, wall, etc., will be subjected to periodic inspections by the zoning department to determine that such required walls, fences, etc., are being properly maintained. After a lot is rezoned and a zoning buffer is required, the lot shall not be used unless and until the required buffer is in place and is the required height and width. Failure to maintain such required walls, fences, etc., to an acceptable standard may be deemed a violation of these regulations.

Sec. 817 - Zoning buffer modifications.

817 (a) Automatic reduction in zoning buffer width.

If a structural zoning 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 60% of the buffer width otherwise required, but no less than 20 feet.

817 (b) Location of zoning buffers.

Zoning buffers may be relocated on the site to best achieve the screening required, depending on the topography of the site and visibility from the adjoining property.

817 (c) Waiver for unnecessary zoning buffers.

The Board of Commissioners may waive a zoning buffer requirement or reduce its extent to a temporarily appropriate level of screening as a special use approval 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.

DIVISION IV. - TREE CONSERVATION.

Sec. 818 - Tree conservation; intent and findings.

818 (a) Intent.

The intent of this Division is to provide standards for the protection or replacement of trees as part of the land development and building construction process within Douglas County; to make the County an attractive place to live and to provide a healthy living environment; to better maintain control of storm water runoff, noise, glare, and soil erosion; and to preserve, protect, and promote the general health, welfare, and safety of the public.

818 (b) Findings.

(1) Trees provide food and shelter for wildlife.

(2) Trees reduce noise, glare and provide wind breaks.

(3) Trees, through transpiration, purify the air.

(4) Trees intercept airborne particulate matter and reduce some air pollutants.

(5) Trees provide oxygen and reduce the level of carbon monoxide in the air.

(6) Trees are vital in erosion control, soil conservation, and the reduction in stormwater runoff.

(7) Trees moderate the climate.

(8) Trees increase property value.

(9) Trees provide aesthetic amenity.

(10) Trees improve the quality of water.

Sec. 819 - Tree conservation; where required.

Tree conservation in accordance with the provisions of this Division shall be applied to every activity that requires the issuance of a land disturbance permit under this Development Code, except for activities otherwise exempted under this Section.

819 (a) Application to new development or disturbed areas.

The terms and provisions of this Development Code shall apply to any activity on real property within unincorporated Douglas County, including, but not limited to, the following:

(1) All new commercial, industrial, and/or manufacturing development and expansion of existing commercial, industrial, and/or manufacturing development into undisturbed areas;

(2) All new residential subdivisions and expansion of existing subdivisions (new units and/or phases);

(3) All new planned unit developments and expansion of existing planned unit developments into undisturbed areas;

(4) All new multi-family developments and expansion of existing multi-family developments into undisturbed areas; and

(5) All new townhouse developments and expansion of existing townhouse developments into undisturbed areas.

(6) Residential subdivisions.

Residential subdivisions shall achieve the total tree density required under this Division upon completion of infrastructure construction. At a minimum, the subdivider must fully meet the tree density requirements of this Division prior to approval of a final plat, or commit to such achievement through performance surety for tree planting in accordance with the provisions of Section 825 (a)(3) of this Article. Trees to be planted on individual lots in accordance with Section 804 (a)(2) may be counted toward achieving the tree density requirement for the subdivision as a whole.

(7) Nonresidential subdivisions.

New commercial and industrial subdivisions are subject to a two-staged review process by the Director of Development Services (for the infrastructure and later for each individual lot). For this reason, these subdivisions may base density calculations on the net disturbed site area defined by the limits of clearance and construction) The phase 1 plan shall address the method and timing of ultimate compliance with this Division.

(8) Nonresidential out-lots.

Out-lots and separate parcels of a phased-unit development must collectively meet minimum requirements for site density; however, in no case may an individual out-lot have less than 14 tree units per acre.

(9) Additions to Existing Projects.

For additions to existing projects, the density requirements may be met in one of the following ways:

a. Calculate the area of any new land disturbance and/or improvements and add replacement trees based on that area (existing trees elsewhere on the site may not be counted with this option); or,

b. Base density requirements on the total site area and count any existing trees on the site (subject to the restrictions of the next Section).

(10) Phased Projects and Reduced Net Site Areas.

a. Where development is going to occur in phases (by design or by implication), density calculations must be based on a site area defined by an established or estimated phase line.

b. Similarly, a reduced net site area may be achieved by using only the area of actual site disturbance (new projects only), provided that a limits of construction line is clearly shown on the plan (existing trees elsewhere on the site may not be counted with this option).

c. In both instances, the following criteria are applied regarding existing trees:

1. Existing trees to be counted toward meeting the density requirements should be within the phase line or limits of construction.
2. If the tree save areas must be established outside these areas, they must be located where future development will not impact them.
3. The trees in areas outside the phase line or limits of construction may not be counted toward the density requirement of subsequent phases or new projects.

819 (b) Exemptions from tree conservation requirements.

The tree conservation requirements shall not apply to the following:

(1) Agricultural operations.

Property in use for agricultural tree harvesting (as defined by this Code) or other agricultural activities (as defined by this Code) are exempt.

a. Timber Harvesting Activity may only be conducted upon submission to the Department of Development Services the completed form for *Notice of Timber Harvesting Activity, Official Code of Georgia Annotated, Section 12-6-24, Georgia Forestry Commission*, as may be updated from time to time.

b. If a property is clear-cut for any purpose other than a bona fide agricultural use, or the timber is harvested without complying with the requirements of this subsection, a building permit or project approval may not be approved on the property for a period of 3 years. This restriction may only be waived by the Board of Commissioners as a special use by majority vote. Such waiver may be based on a valid excuse for the clear-cutting, or on remedial action such as the replanting of trees.

(2) Diseased trees.

Removal of diseased or infested trees, after verification by the Douglas County Extension Agent or other qualified forestry professional acceptable to the Director of Development Services, is exempt.

(3) Utility construction.

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, are exempt.

(4) Roadway construction.

Land clearing for designated roadway projects of the Georgia Department of Transportation and the Douglas County Board of Commissioners is exempt.

819 (c) Clearing and/or Grading only Permits.

(1) When seeking a limited land disturbance permit (i.e. clearing, clearing and grading, or grading only), it is necessary for applicants to show compliance with the required tree density standard.

(2) If trees exist on the site, the required tree density standard should be met with those trees. If this cannot be done, replacement trees are required. A replacement tree plan must be a part of the approved clearing and/or grading plan.

Sec. 820 - Trees to be provided or retained.

820 (a) Tree Conservation Plan required.

(1) A Tree Conservation Plan must be submitted along with the other required documents for the issuance of a land disturbance, construction, or other applicable permit by the Department of Development Services. Tree Conservation Plans must be prepared by a professional Landscape Architect, Urban Forester, Arborist, Registered Land Surveyor, or Professional Engineer in accordance with the Procedures and Permits Article of this Development Code.

(2) The Tree Conservation Plan must be shown on a copy of the preliminary plat or site plan, drawn to the same scale as the other plan documents prepared for a land disturbance permit on the property, and shall cover the same area.

(3) The Tree Conservation Plan shall comply with the *Community Planting and Establishment Guidelines* of the Georgia Forestry Commission, current edition, as applicable.

(4) Application Requirements:

a. Pre-application Conference. Prior to submission of an application for development, the applicant must meet with the County Arborist to discuss the tree protection ordinance as it relates to the applicant's property. The purpose of the pre-application conference is to clarify the provisions and procedures of the tree ordinance and review applicable standards and guidelines for the submittal of documents and required tree protections, replacement and maintenance.

b. Tree Survey. Except as provided elsewhere in this section, a tree survey shall be required as part of any application for a land disturbance permit, building permit, or preliminary subdivision plat. Except as provided elsewhere in this section, all trees eighteen (18) inches (DBH) and larger shall be identified. Specimen trees shall be identified by size, species and location. Trees larger than four (4) inches (DBH) may be identified and counted for unit credit on tree plan. With prior approval of the County Arborist, sampling methods may be used to determine tree densities for forested areas.

(5) Tree Protection Plan.

A tree protection plan shall be submitted with other permit drawings as part of the development process. This plan may either be a separate drawing, or part of a landscape plan, and shall include the following information:

a. Definition of Spatial Limits:

1. Limits of land disturbance, clearing, grading and trenching;
2. Tree save areas;
3. Specimen trees;
4. Areas of re-vegetation.

b. Detailed drawings of tree protection measures and their location:

1. Location, species, size (DBH) of existing significant trees and an indication of which trees will remain on site;
2. Tree protection fences;
3. Erosion control fences;
4. Tree protection signs;
5. Tree wells;
6. Aeration systems;
7. Transplanting specifications;
8. Staking specifications; and
9. Other applicable drawings as determined by the County Arborist.

c. The tree protection plan shall show all utility lines existing and proposed, including irrigation and electric lighting lines. The applicant shall coordinate the location of these utility lines with the utility companies in order to prevent root damage within the critical root zones of protected trees, and to minimize damage to trees located in protected zones.

d. Procedures and schedules for the implementation, installation and maintenance of tree protection measures.

e. Tree protection inspection. Following the receipt of a complete application, the County Arborist shall schedule an inspection of the proposed development site. The applicant or applicant's designee shall be advised as to the date and time of the inspection and given an opportunity to participate.

f. Following inspection, said plans shall be reviewed by the Arborist for conformance with applicable zoning conditions, the tree protection ordinance and any applicable administrative guidelines, and will either be approved or denied. Reasons for denial shall be noted on the tree protection plan or otherwise stated in writing.

g. No development or building permit shall be issued until the tree protection plan has been approved by the County Arborist.

h. All tree protection measures shall be installed prior to land disturbance.

i. Final Inspection. No certificate of occupancy or final plat shall be approved by the Director until the County Arborist has inspected the site and confirmed that all existing trees to remain are in healthy condition and all replacement trees have been planted in accordance with this section.

j. Issuance of a building or land disturbance permit shall be conditioned on the approved tree protection plan and conformance to the provisions of these regulations. Any permit may be voided if its terms are violated.

820 (b) Number of tree units upon completion of development.

(1) Minimum standards.

a. On each property for which a Tree Conservation Plan is required by this Development Code, existing trees may be retained and new trees shall be planted so that the property shall attain or exceed the required tree density standard for the proposed use, exclusive of any acreage within a zoning buffer area (as required under this Article) or a stream buffer (as required under the Environmental Protection Article of this Code). Existing tree retention, as opposed to tree clearing and replanting, is encouraged by this Development Code.

b. The minimum required tree density standard shall be as follows:

1. Residential—18 tree units per acre.

2. Office/Commercial—20 tree units per acre.

3. Industrial—15 tree units per acre.

(2) Proposed project's tree density calculation.

The proposed project's tree density shall be calculated by summing the credits for trees to be retained and trees to be planted, and dividing that number by total acreage of the project (excluding zoning buffer and stream buffer acreage).

(3) Achieving tree density required.

Every reasonable effort must be made to achieve the minimum required tree density standard on each development site. However, this Development Code contemplates that, due to topographic or other conditions, the exact number of tree units required by the proposed project's tree density calculation may not be able to be planted and still meet professional

standards for spacing and survival. A method of alternative compliance, therefore, is provided under Sec. 822 of this Article.

Example
Calculation of Tree Units Required

Example: 24.6 acre commercial project with 3.2 acres in zoning buffers and 2.6 acres in stream buffers on the site.	
Total Property	24.6 acres
Area in Zoning Buffers	-3.2 acres
Area in Stream Buffers	-2.6 acres
Net Area subject to Tree Conservation	18.8 acres
Times minimum units per acre	× 20.0
Total Tree Units Required	376.0 units

820 (c) Specimen trees.

Douglas County strongly advocates the preservation of specimen trees. In order to encourage the preservation of specimen trees and the incorporation of these trees into the design of projects, the following shall apply:

(1) All specimen trees shall be located on the grading plan or the landscaping, buffers and tree conservation plans, whether or not the trees are proposed to be retained.

(2) Additional density credit will be given for specimen trees that are successfully saved by a design feature specifically designated for such purpose. Credit for any specimen tree thus saved would be 2 times the assigned unit value shown in Table 8.1 when using the extraordinary measures associated with protecting and assuring the survival of such trees.

(3) If a specimen tree is to be removed, a landscaping or tree conservation plan indicating such removal and a written document indicating the reason for the removal must be submitted to the Arborist during plan review.

(4) If the removal of a specimen tree is approved on the construction plans it shall be replaced with three times the unit value and must be replaced by species with potential for comparable size and quality.

(5) Any specimen tree which is removed without the appropriate review and approval of the arborist must be replaced by trees with a total density eight (8) times the unit value of the tree removed. There will be a misdemeanor charge wit h a fine up to $1,000 for each offense. 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.

(6) A lesser sized tree can be considered a specimen tree if:

a. It is a rare or unusual species or of historical significance.

b. It is specifically used by a builder, developer or design professional as a focal point in a project or landscape.

c. It is a tree of exceptional aesthetic quality.

(7) The County Arborist may identify and require the preservation of a tree stand if it contains one (1) or more specimen trees and the specimen trees are interlocked with other members of the stand in such a way as to imperil the specimen tree if other members of the stand were to be removed.

(8) Any specimen tree removed from a parcel shall be replace by eight (8) time the equivalent inches (dbh) of replacement tree units or existing trees in the excess of the requirements of the tree preservation and replacement requirements, using species with potential for comparable size, quality and maturity.

820 (d) Tree replacement standards.

(1) Introduction.

a. The following section establishes standards by which plans and field conditions are to be evaluated to determine compliance with the tree replacement intent of this Development Code.

b. Tree replacement plans should be prepared with appropriate consideration given to the function of trees in the urban landscape. Every effort should be made to maximize the environmental benefit of the plant material.

(2) Planting specifications.

a. All new trees must be planted before the Certificate of Occupancy or Final Plat Approval, whichever is applicable, is approved by Douglas County. If, due to harsh weather conditions, the trees cannot be planted prior to the Certificate of Occupancy or Final Plat Approval, the permittee shall post an irrevocable letter of credit to the Department of Development Services in the amount of one hundred ten percent (110%) of the purchase price and installation costs of the new trees.

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

c. Standards for transplanting shall be in keeping with those established in the International Society of Arboriculture publication *Tree and Shrub Transplanting Manual* or similar publication. Reference may also be made to the American Association of Nurserymen publication *American Standard for Nursery Stock* (ANS1260.1, 1996 or latest edition) for plant material quality specifications. Reference may also be made to the *Manual of Woody Landscape Plants* (Michael Dirr, 1983, Castle Books) or similar publication for information on tree species site requirements.

d. All balled and burlapped trees shall be dug with a mechanical tree spade in a wire basket with minimum 1-inch nylon strapping.

e. The permittee shall warrant the new trees and provide for the replacement of those that do not survive for a period or no less than 2 years.

(3) Species.

a. Credit for proposed new trees will only be awarded for trees that are listed in *Recommended Tree Species Selections for Urban and Community Forest Sustainability* published by the Georgia Forestry Commission in 2020, and may be amended from time to time. Substitutions

that are approved, in advance, by the Development Services Director or his/her appointed County Arborist based on the recommendation of a Georgia registered Landscape Architect.

b. Credit will not be given for the trees that are not listed in *Recommended Tree Species Selections for Urban and Community Forest Sustainability* published by the Georgia Forestry Commission in 2020,and may be amended from time to time.

c. Species selected as replacement trees must be quality specimens, and must be ecologically compatible with the intended growing site. To insure diversity, a minimum of 4 species of tree shall be used. Sites requiring limited replacement shall be evaluated by the Director of Development Services to allow use of fewer species.

d. Flowering ornamental species if not listed on Table 8. are not acceptable for use in meeting tree density requirements under this Division.

e. Where trees must be added to achieve the required tree units per acre for the site, pines may not comprise more than 30 percent of the required units. Where existing pines already comprise 30 percent or more of the required units, no more pines may be credited toward the required units.

f. Trees shall only be awarded credit toward the required tree units on the site when situated in areas where they may grow to mature height without pruning.

(4) Irrigation.

Newly planted trees and existing trees subjected to construction impacts typically need supplemental watering when rainfall is inadequate. Applicants should be prepared to discuss how trees are to be watered during their establishment or transition period, and shall note on the plan the method of irrigation that is proposed and attendant facilities. For hand watering, for instance, the location of hose bibs must be indicated.

(5) Placement of trees.

The replacement trees on a property shall be placed reasonably uniformly throughout the disturbed area, subject to professional standards of design and in keeping with the layout of the development.

(6) Removal of support wires.

Tree support wires are to be removed within one year of planting.

Sec. 821 - 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:

821 (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 that 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.

821 (b) Construction standards.

(1) Tree Protection Area

a. The tree protection area shall include, as a minimum, the total area of the critical root zone (CRZ). All construction activities are prohibited from the tree protection area. Protective tree fencing shall be installed between tree protection areas and areas proposed to be disturbed prior to any land disturbance, and shall remain in place during the complete construction period. Signs shall be posted at least every 100 feet around the perimeter of each tree protection area stating "Tree Protection Area - No Construction or Equipment Encroachment." All tree protection areas must be protected from soil erosion and sedimentation through the use of silt screens and other acceptable measures placed up-slope from the tree protection area

b. If encroachment into a tree protection area occurs which causes irreparable damage to the trees, the Tree Conservation Plan shall be revised by the permittee to compensate for the loss, and the revised plan must be acceptable to the Development Services Department.

(2) Purpose of tree protection devices.

Tree protection devices are necessary to eliminate activities detrimental to trees including but not limited to:

a. Soil compaction in the tree protection area resulting from heavy equipment, vehicular or excessive pedestrian traffic, or storage of equipment or materials;

b. Root disturbance due to cuts, fills or trenching,

c. Wounds to exposed roots, trunks or limbs by mechanical equipment; -

d. Other activities such as chemical storage, cement truck cleaning, fire, or other activities that will damage the critical root zone.

(3) Location and types of tree protection devices.

a. Tree protection devices are to be installed as shown on the plan or otherwise completely surrounding the tree protection area.

b. The plan shall indicate whether the tree protection device is to be active or passive.

c. Active protection (see Materials section below) is required where tree protection areas are located in proximity to construction activity.

d. The locations of all tree protection devices will be verified prior to the issuance of the construction permit for clearing and/or grading.

e. Once tree protection areas are established and approved, any changes are subject to Development Services Department review.

(4) Materials.

Active tree protection shall consist of chain link, orange laminated plastic, wooden post and rail fencing or other equivalent restraining material.

(5) Sequence of installation and removal.

All tree protection devices shall be installed prior to any clearing, grubbing or grading. The Development Services Department must inspect the installation of tree protection and erosion and sedimentation control devices prior to the issuance of the Development Permit. Tree protection must remain in functioning condition throughout all phases of development, but is to be removed prior to issuance of a Certificate of Occupancy.

(6) Other specifications.

a. Clearing - Where clearing has been approved, trees shall be removed in a manner which does not adversely impact the trees to be preserved. Avoid felling trees into tree protection

areas or disturbing roots inside the protection areas. Roots shall be cut cleanly before tree removal.

b. Erosion and Sedimentation Control - All erosion and sedimentation control measures shall be installed in a manner which will not result in the accumulation of sediment in a tree protection area.

c. Signage - All tree protection areas shall be designated as such with "Tree Protection Area" signs posted visibly on all sides of the fenced-in area at least every 100 feet. These signs are intended to inform subcontractors of the tree protection process. Such signs shall be a minimum of 16 square feet in sign face area and shall state with minimum thee inch lettering "Attention Subcontractors. You must observe Tree Protection Area—No Construction or Equipment Encroachment. You are responsible for damages" or similar wording.

d. Signs requiring subcontractor cooperation and compliance with the tree protection standards shall be posted at site entrances.

821 (c) Prohibited activities.

(1) 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 tree protection area. Where a limited amount of encroachment is unavoidable, the tree protection area shall first be cut cleanly, then immediately mulched with a 4 inch layer of processed bark or wood chips or a 6 inch layer of straw.

(2) Grade change prohibited.

There shall be no raising or lowering of the ground level within the tree protection area. Stripping of topsoil in the tree protection area 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 tree protection area shall be prevented by placement of sediment barriers, which shall be backed by 2 × 4 inch wire mesh in areas of steep slope.

(3) Ditches prohibited.

No person shall excavate any ditch or trench within the tree protection area. Where such encroachment is unavoidable, ditches or trenches shall be so located as to minimize root damage. If roots must be cut, they must be cut cleanly and immediately mulched.

(4) Paving prohibited.

No person shall pave with concrete, asphalt, or other impervious material within the tree protection area.

Sec. 822 - Alternative compliance.

822 (a) Overview.

(1) The intent of the tree conservation requirements is to insure that the required density of trees is maintained on all developed sites. Occasionally, this intent cannot be met because a project site will not bear the required density of trees. To provide a viable alternative for such cases, the developer may be allowed to contribute to the Douglas County Tree Replacement Fund with the concurrence of the Director of Development Services.

COUNTY TREE REPLACEMENT FUND

Calculating Contribution Amounts

EXAMPLE: A 4.0-acre commercial development project site has the following:

- ✓ A required Tree Density Factor of 80.0 (20 units per acre x 4.0 acres).
- ✓ Existing trees that will remain, totaling 36.0 tree units.
- ✓ Enough room on the property to accommodate some new trees only 32.0 tree units.

1. Determine the Tree Density Deficit as follows:

80.0 tree units required minus 36.0 existing tree units on site minus 32.0 new tree units = a deficit of 12.0 tree units

2. Determine the acceptable contribution amount as follows:

deficit of 12.0 tree units / *2-inch tree units (0.3)* x *$FEE**

In this example, (12.0 ÷ 0.3) x $FEE =

40 x $FEE

*Estimated cost of purchase, delivery, installation and 2-year warranty of a 2-inch caliper tree, times 125%.

(2) The Director of Development Services must review and approve all requests for alternative compliance. As many trees as can reasonably be expected to survive must be planted on the site in question. In no case shall more than 90% of the required tree density be met through alternative compliance.

(3) The number of newly planted trees that can reasonably be expected to survive on a site shall be determined from the following criteria:

a. Overstory trees—200 square feet of pervious root zone.

b. Understory trees—75 square feet of pervious root zone.

(4) The land disturbance permit will only be issued after the Development Services Department has approved the request and received the necessary documentation and/or funds.

822 (b) County tree replacement fund.

If, in the opinion of the Department of Development Services, conditions do not allow for the planting of the required tree units on site due to lot size, visibility, restrictions, etc., the permit holder may pay the County 125% of the total cost of purchase, delivery, and installation (including a 2-year warranty) of trees at 2-inch caliper, and the County will use this money for landscape design, installation of plants and landscape materials, and maintenance on public property. Actual fees shall be set by the Board of Commissioners from time to time pursuant to the Administration and Enforcement Article of this Code regarding schedules and fees.

822 (c) Fund administration.

The Douglas County Tree Replacement Fund will be administered by the Development Services Department. A report for the Douglas County Tree Replacement Fund will be made available to the Board of Commissioners by the Finance Department as part of the County's annual audit.

DIVISION V. - LANDSCAPING PLANS, INSTALLATION AND MAINTENANCE.

Sec. 823 - Site landscaping plans.

823 (a) Site landscaping plans; where required.

(1) For development within the O-QGD District, the location and detail of all zoning buffers and screening shall be depicted on the required landscaping/Tree Conservation Plan.

(2) For telecommunication towers, a landscape plan is required that indicates size, spacing, and type of plantings required in 804(c)(1). The plan shall indicate significant vegetation to be removed and vegetation to be replanted to replace any vegetation lost.

(3) 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.

(4) In cases where approval of the landscaping, buffer and tree conservation plans would cause harmful delay to the start of construction, the Development Services Director may issue footing and foundation permits for the project so that construction may proceed.

(5) 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.

823 (b) Site landscaping plans; criteria.

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

823 (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. 824 - Plant materials; standards.

824 (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, zoning buffers and tree replacement shall be as approved by a Georgia registered Landscape Architect or certified Arborist, or (for replacement trees), as

shown in the *Recommended Tree Species Selections for Urban and Community Forest Sustainability* published by the Georgia Forestry Commission in 2020, and as may be amended from time to time, subject to approval by the development Services Director or his/her designated County Arborist.

(1) New plant materials

a. Medium shrubs (those having a mature height of 4 feet or less), 18 x 24 inch balled and burlapped or 2-gallon container. One gallon container (12 inch plant height) may be used where allowed in this Article.

b. Large shrubs (those having a mature height greater than 4 feet), 24 x 30 inch balled and burlapped or 3-gallon container.

c. Ground cover, 2½ inch pot.

d. Trees, minimum 2-inch caliper.

(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. Trees shall be free from mechanical and natural injuries, insect infestations and disease.

b. 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.

824 (b) Approval of plant materials.

Approval of a proposal to use a specific landscaping or buffer material shall be subject to a recommendation by a Georgia registered Landscape Architect and approval by the Director of Development Services or his/her designated County Arborist 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. 825 - Installation and maintenance of plant materials.

825 (a) Installation of plant materials.

(1) Plant materials, as required by the provisions of this Article, shall be installed prior to issuance of a Certificate of Occupancy. The Development Services Director may allow one planting season in a twelve month period in which the installation of plant materials shall be completed, subject to the performance security requirements, below.

(2) Zoning buffers, if required, shall be installed before a Certificate of Occupancy is granted; except where the weather is not suitable for planting, and escrow provisions are made in accordance with the requirements of this Section.

(3) Performance surety.

a. In such cases as when planting stock availability is low or weather conditions are not appropriate for planting new trees, the project owner may postpone planting for up to 6 months; provided that performance security in accordance with Section 1027 is posted with Douglas County. Security shall be provided in an amount equal to 110 percent of the cost of materials, installation and 2-year guarantee as demonstrated by a signed contract between

the owner and a qualified landscape contractor, and as approved by the Development Services Director.

b. An inspection shall be made by the Development Services Department of all tree plantings to assure compliance with plan requirements prior to release of the performance security. The performance security will be drawn upon by Douglas County at the time of expiration if the planting requirements have not been fulfilled, or if the owner has not requested an extension. One 6-month extension may be permitted with documented justification acceptable to the Director of Development Services. Any inspections performed after the final inspection (for project release) are subject to reinspection fee schedules.

(4) Maintenance bond.

a. Prior to approval of a final subdivision plat or issuance of a certificate of occupancy, or prior to release of a performance surety provided under this Section (whichever last occurs), a maintenance bond, letter of credit or escrow account in accordance with Section 1027 is required for all plant materials installed as a result of the requirements of this Article. The developer shall be responsible for maintenance of all such plant materials for 2 years from the date of acceptance of the maintenance bond.

b. The value of the Maintenance Bond shall be equal to 25 percent of the actual cost of installation of the plant materials. The cost of installation shall be evidenced by copies of contractor agreements or actual invoices paid, or as otherwise determined by the Development Services Director.

825 (b) Maintenance of required plant materials.

(1) The owner, tenant and their agent, if any, and their successors and assigns shall be jointly and severally 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. This responsibility is in addition to and survives the release of any maintenance bond provided for the property by the developer.

(2) Plants that are diseased, unsurvivably damaged or are dead shall be removed and replaced with a plant of the same species, variety or cultivar, as acceptable to the Director of Development Services.

(3) Other landscape materials shall be maintained in proper repair and shall be kept clear of refuse and debris.