

**ORDINANCE SUMMARY**

Lake County Comprehensive Plan requires the landscape code be updated on a periodic basis. In 2006, the Board of County Commissioners requested that the Landscape and Tree Protection Regulations be updated. The changes indicated herein have involved several meetings with representatives of the County, City of Clermont, Cooperative Extension Service, Water Management District, Water Authority and the landscaping community.

Summary of Changes to Section 9.01.00 development design and improvement standards:

1. Clarifying applicability to existing development;
2. Requiring revegetation if development has not occurred within six months of development approval;
3. Providing that damage or destruction of each tree constitutes a separate violation;
4. Increasing the standard height, caliper and size of required vegetation;
5. Changing requirements for landscaped buffer zones; ~~;~~ Allowing some wall heights to be eight feet (8') wall height (such as in heavy industrial sites) Allowing ornamental fencing for other landscape buffers.
6. Banning St. Augustine sod.
7. Proposing certain limitations to the type of irrigation zones; high, medium and low water use zones.
8. Proposing more landscape islands in parking lots; requiring landscape islands for every ten rather than fifteen parking spaces.
9. Requiring a certain number of trees based upon square feet of lot; and

Summary of changes to Section 9.02.00 Protected Trees:

1. Providing for a list of protected and recommended trees, shrubs and other plants;
2. Amending the list of prohibited trees;
3. Clarifying the silviculture exemption to tree removal permits; and
4. Providing for alternative tree replacement requirements;

Changes are shown as follows: ~~Strikethrough~~ for deletions, Underline for additions.

Notations showing “\* \* \*” indicate that no changes are proposed between modified sections.

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**AN ORDINANCE OF THE BOARD OF COUNTY COMMISSIONERS OF LAKE COUNTY, FLORIDA; AMENDING CHAPTER II, LAKE COUNTY CODE, APPENDIX E, LAND DEVELOPMENT REGULATIONS, ENTITLED DEFINITIONS; AMENDING CHAPTER IX, LAKE COUNTY CODE, APPENDIX E, LAND DEVELOPMENT REGULATIONS ENTITLED DEVELOPMENT DESIGN AND IMPROVEMENT STANDARDS; AMENDING SECTION 9.01.00, LAKE COUNTY CODE, APPENDIX E, LAND DEVELOPMENT REGULATIONS, ENTITLED LANDSCAPING STANDARDS; AMENDING SECTION 9.02.00, LAKE COUNTY CODE, APPENDIX E, LAND DEVELOPMENT REGULATIONS, ENTITLED PROTECTED TREES; PROVIDING FOR SEVERABILITY; PROVIDING FOR INCLUSION IN THE CODE; AND PROVIDING FOR AN EFFECTIVE DATE.**

**WHEREAS**, Chapter IX, Lake County Code, Appendix E, Land Development Regulations, entitled Development Design and Improvement Standards, sets forth the design and improvement standards for landscaping and Tree Protection; and[b1]



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2 **9.01.01 Purpose and Protection Standards.** The purpose of this section is to provide minimum  
3 standards for landscaping, buffering and tree protection within the unincorporated Area of Lake County.  
4 This section shall be implemented so as to promote the preservation of native plant species and to provide  
5 for aesthetic landscaping complements to proposed development and encourage the use of plants that are  
6 Florida Friendly Landscaping.

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8  
9 ~~A. The purpose of this Section is to provide minimum standards for Landscaping, Buffering~~  
10 ~~and tree protection within the unincorporated Area of Lake County. This Section~~  
11 ~~Shall be implemented so as to promote the preservation of native plant species~~  
12 ~~and to provide for aesthetic Landscaping complements to proposed Development~~  
13 ~~and encourage the Use of plants that are drought tolerant.~~

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15 ~~B. Tree Protection Standards. The protection measures described in this Subsection are~~  
16 ~~based on those described in the Tree City USA Bulletins published by The~~  
17 ~~National Arbor Day Foundation: How to Save Trees During Construction (No. 8,~~  
18 ~~1998), A Systematic Approach to Building with Trees (No. 20, 1998), and How to~~  
19 ~~Protect Trees During Underground Work (No. 35, 1998). These publications are~~  
20 ~~hereby adopted and included by reference herein. A copy of such publications is~~  
21 ~~available from the County Manager or designee. This publication should~~shall  
22 be used to supplement the required protection measures. It also provides information  
23 on the economic value of trees to developments and their incorporation into  
24 designs as well as guidelines on professional tree care, tree planting and tree  
25 transplanting. The Lake County Tree Protection Standards are detailed in  
26 Subsection 9.01.10.A.

27  
28 **9.01.02 Applicability and Additions to Existing Development.**

29  
30 A. *Applicability.* It shall be unlawful for any person to clear, develop or increase the  
31 developed Area of any Lot, Parcel, Plot or Tract of Land unless in compliance  
32 with the terms of ~~this~~ Section 9.01.00 and Section 9.02.00, ~~or unless~~ otherwise  
33 exempted by these regulations. this Section.

34  
35 B. Additions to Existing Development. As a condition of approval for ~~such any~~  
36 addition, the owner Shall comply with the requirements of this Section upon the  
37 following:

- 38  
39 1. ~~should~~shall-aAny addition made to a Structure and/or parking Area  
40 existing as of the effective date of this Section which exceeds a twenty-  
41 five (25) percent cumulative increase in the size of the existing  
42 Structure(s) floor area and/or parking area(s). ~~or~~  
43 2. Additions of less than twenty-five (25) percent shall only be responsible  
44 for buffering the new structure; or  
45 3. Additions of 4,000 square feet of impervious area;

1 C. It shall be the responsibility of the newly approved most recent development use  
2 or development to provide the required landscaping and buffering and not the  
3 previously existing land use or development.

4  
5 **Section 9.01.02A Prohibition, Separate Violations and Revegetation.**

6 A. *Separate Violations.* Each tree damaged or destroyed without a permit required under  
7 Section 9.01.00 or Section 9.02.00 shall be considered a separate violation punishable as  
8 provided by law and also listed by these sections. Determinations of the number of  
9 cleared trees shall be based on best available data that may include surveys of adjacent  
10 property or aerial photographs taken prior to clearing.

11  
12 B. *Re-vegetation Required.* If a property has not been developed within six (6) months of  
13 receiving development approval, re-vegetation shall be required.:

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15  
16 **9.01.03 General Requirements**

17  
18 A. *Landscaping.* All ground surface Areas of any Lot, Plot, Tract or Parcel of Land,  
19 however designated, must maintain Landscaped Areas to eliminate Erosion,  
20 reduce the generation of dust particles and other windborne particles, provide  
21 aesthetic relief, and further the objectives of this Section.

22  
23 B. *Monoculture.* In order to guard against disease susceptibility,

24 a. *If 10 or more canopy trees are required then a minimum two (2) species*  
25 *shall be required; a minimum of 35% shall be any one species.*

26 b. *If 30 or more canopy trees are required then a minimum three (3) species*  
27 *shall shall be required; -a minimum of 25% shall be any one species.*

28 c. *If 50 or more canopy trees are required, then a minimum four (4) species*  
29 *shall be required; -a minimum- of 15% shall be any one species.*

30 d. *Shrub Diversity: For all **required** shrubs in the landscape plan, the*  
31 *developer shall meet the following diversity requirements:*

32 i. *For Plans requiring 350-699 shrubs, then a minimum of two (2)*  
33 *different species shall be used with a minimum of 30% for any one*  
34 *species.*

35 ii. *For Plans requiring 700-999 shrubs, then a minimum of three (3)*  
36 *different species shall be used with a minimum of 20% for any one*  
37 *species.*

38 iii. *For Plans requiring 1000 shrubs or more, then a minimum of four*  
39 *(4) different species shall be used with a minimum of 15% for any*  
40 *one species.*

41 e. *The County Manager or designee may Permit exceptions to this subsection*  
42 *where trees are used as a design element such as Bosques or Allees or*  
43 *based on Landscape design intent including but not limited to shrubs*  
44 *massed for the purposes of creating a unifying effect for color, texture, and*  
45 *shape or erosion control.*

46  
47 C. *Plant Substitutions: The Applicant may make plant substitutions from any*

1 approved plan with approved plants that are on the Lake County approved plant  
2 list or designated as Florida Friendly with approval by the County Manager or  
3 designee as follows:

4 1) Significant changes require the resubmittal of a Landscape Plan and the  
5 appropriate fee. If any other changes have taken place that affects the landscape  
6 redesign, then a site plan amendment shall be needed. Significant changes are  
7 considered when a buffer is relocated or if 5% or more of the percentage of the  
8 landscape is changed in any one site.

9 2) Minor changes may be allowed to an approved Landscape Plan as follows:  
10 changing 10 or fewer trees, moving a buffer less than 20' feet or making other  
11 minor plant changes with written permission from the County Manager or  
12 designee.

13  
14 D. *Installation.* All Landscaping Shall be installed according to "Selecting and  
15 Planting Trees and Shrubs," published by the University of Florida/Florida  
16 Cooperative Extension Service (Institute of Food and Agricultural Sciences,  
17 Circular 858, June 1990 and subsequent editions). This publication is hereby  
18 adopted and included by reference herein. A copy of this publication is available  
19 from the County Manager or designee [b3].

20  
21 E. *Maintenance.* The owner of a Property Shall be responsible for the maintenance  
22 of all Landscaping so as to present a neat, healthy, and orderly appearance free of  
23 refuse and debris. All required Landscaping, pursuant to Site Plan approval, Shall  
24 be maintained in perpetuity. All required Landscaped Areas Shall contain an  
25 automatic irrigation system in accordance with Subsection 9.01.03(I), except for  
26 waterwise landscapes and/or Florida Friendly Xeriscape Landscapes per Section  
27 9.01.03.II, and as approved by the County Manager or designee.

28  
29 F. *Pruning.* Vegetation and trees required by these regulations shall only be pruned  
30 to maintain health and vigor. Pruning shall be in accordance with Standard  
31 Practice for Trees, Shrubs and Other Woody Plant Maintenance, ANSI 300 of the  
32 National Tree Care Association. Trees shall not be severely pruned in order to  
33 permanently maintain growth at a reduced height or spread. A tree's natural  
34 growth habit shall be considered in advance of conflicts which might arise (i.e.  
35 view, signage, lighting and similar conflicts). Excessive pruning (hat racking,  
36 topping, etc.) Shall be considered tree abuse and a violation of these regulations.  
37 These regulations apply to newly installed trees as well as established trees.

38  
39 G. *Staking.* Staking may be required and will be determined on a site-by-site basis.  
40 All staking shall be in accordance with "Selecting and Planting Trees and  
41 Shrubs", published by the University of Florida/Florida Cooperative Extension  
42 Service (Institute of Food and Agricultural Sciences, Circular 858, June 1990 and  
43 subsequent editions).

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45 H. *Plant Materials*  
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1 | 1. *Quality.* Plant materials used in conformance with the provisions of this Section  
2 | Shall conform to the standards for Florida No. 1 or better as given in Grades and  
3 | Standards for Nursery Plants, State of Florida, Department of Agriculture and  
4 | Consumer Services, Tallahassee (97T-05, second edition, February 1998), which  
5 | is hereby adopted and included by reference herein. A copy of such publication is  
6 | available from the County Manager or designee. All plant material shall be  
7 | planted in suitable soil ~~or soil that has been amended~~ to Permit its survival. Plant  
8 | materials listed for the site should~~shall be found planted successfully within sixty~~  
9 | (60) miles of Lake County.

10 |  
11 | 2. *Native Plants.* A minimum of 75% of the required plants shall be native species  
12 | suitable for the site. Landscaping installed in addition to this requirement is not  
13 | subject to this provision. ~~The preservation and Use of native material is~~  
14 | ~~encouraged and recommended.~~

15 |  
16 | 3. *Canopy Trees.* To meet the minimum requirements, trees planted under this  
17 | Section Shall be a minimum of 2.5~~two (2)~~ inches caliper and in a thirty (30)  
18 | fifteen (15) gallon container or greater. Equivalent ball and burlap trees may be  
19 | used; but container trees shall be preferred. The minimum height of trees is eight  
20 | (8) feet and the minimum spread is four ~~-(4)~~ feet. Trees planted voluntarily may  
21 | be of any size. ~~Palms are measured by height of clear trunk. The minimum size~~  
22 | ~~for palms is four (4) feet of clear trunk for tree form palms or five (5) feet from~~  
23 | ~~the ground surface to the apical bud for shrub form palms.~~ A list of recommended  
24 | Landscaping trees is provided in The Recommended Plants for Lake  
25 | County Landscape Manual, Subsection 9.01.10.B. New tree calipers shall be  
26 | measured six inch (6") above grade for trees that are under four inch (4") caliper  
27 | and measured twelve inch (12") above grade for trees that are larger than four  
28 | inch (4") tree caliper. Existing tree calipers are measured at Diameter at Breast  
29 | Height (DBH) or fifty four inch (54") height from grade.

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33 | A. Tree Credits for new Canopy Trees planted:

- 34 | 1) Minimum 2.5-inch-2-1/2" Caliper x 8-foot Height x 4-foot Spread = 1  
35 | Canopy Tree Credit  
36 | 2) Minimum 4-inch Caliper x 12-foot Height x 5-foot Spread = 2 Canopy

37 | Tree Credits

- 38 | 3) Minimum 6-inch" Caliper x 14<sup>2</sup>foot Height x 6-foot<sup>2</sup> Spread = 3

39 | Canopy Tree Credits

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42 | 4. *Ornamental trees.* Ornamental trees set forth in The Recommended Plants of  
43 | Lake County .Shall be used as ornamental or accent trees when required,  
44 | and may be used in place of canopy trees in situations where height  
45 | restrictions or root zone intrusion issues are shown to be a concern , such  
46 | as under power lines, or for a unique design concept to meet the minimum

1 requirements. Ornamental trees shall be a minimum of two (2) inches in  
2 caliper and be in a thirty (30) gallon container or greater. The minimum  
3 height of an ornamental tree is eight (8) feet and the minimum spread is  
4 four (4) feet. For multi-trunk trees, trunks shall have an average  
5 cumulative caliper of two (2)-inches.

6  
7 A. Tree Credits for new Ornamental trees planted:

- 8 1. Minimum 2-inch Caliper x 8-feet Height x 4-feet Spread = 1 Ornamental  
9 Tree Credit  
10 2. Minimum 3-inch Caliper x 10-feet Height x 5-feet Spread = 2 Ornamental  
11 Tree Credits  
12 3. Minimum 4-inch Caliper x 14-feet Height x 6-feet Spread = 3 Ornamental  
13 Tree Credits

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16 5. Ornamental Trees and Palms. In addition to protected trees, ornamental trees and  
17 Palms set out in The Recommended Plants for Lake County Landscape Manual  
18 may also be used to meet the minimum requirements. In no case shall  
19 the total number of trees-palms of all species combined from The Recommended  
20 Plants for Lake County Landscape Manual Subsection 9.01.10.C account for more  
21 than twenty-five (20%5) percent of the required Landscape trees. The minimum  
22 size of palms is four (4) feet of clear trunk for tree form palms. Palm trees may be  
23 used in lieu for canopy trees the following ratios applies:

- 24  
25  
26 A. Two (2) palm trees count as one (1) canopy tree unless it is a large specimen  
27 palm tree such as Medjool or Date Palms which may be counted as one (1)  
28 palm tree to one (1) canopy tree.  
29 B. Palm Trees shall not exceed twenty percent (20%) of the required canopy tree  
30 requirement.

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33 6. Shrubs. The shrubs listed in The Recommended Plants for Lake  
34 County Landscape Manual shall be used for all visual screens that are required  
35 pursuant to the provisions of this Section and shall be planted on the minimum  
36 centers listed in The Recommended Plants for Lake County Landscape Manual.  
37 The minimum installed height of shrubs shall be twenty-four (24") height by  
38 eighteen inches spread (18") table. The County Manager or designee may permit  
39 exceptions to the minimum centers, based on Landscape design intent including  
40 but not limited to massing for color, texture, and effect or Erosion control. The  
41 following standard applies:

- 42  
43 A. In Type A, B, or C landscape buffer, shrubs shall be a minimum of two (2)  
44 feet tall at the time of planting and in a minimum of a three (3) gallon  
45 container Shrubs planted to fulfill the requirements of the Type A, B, or C

Buffer Shall be able to obtain a height of three (3) feet within twelve to eighteen (12-18) months of planting under normal growing conditions

B. Type D and E landscape buffer, a minimum of four (4) feet tall at the time of planting and in a minimum of a five (5) gallon container. Their spread shall be appropriate for their size and species. Small or shrub-form palms shall be three (3) feet from the ground surface to the apical bud. Shrubs planted to fulfill the requirement of a Type D buffer shall be able to obtain a height of five to six (5-6) feet in twelve (12) months and be maintained at a height of at least six (6) feet.

7. Lawn Grass. Grass Areas Shall be planted in species normally grown as permanent lawns in the vicinity of the County. Grass Areas may be sodded, plugged, sprigged, or seeded and shall provide complete coverage planted to industry standards. Drought tolerant species are outlined in Subsection 9.01.10.E. Complete coverage Shall mean that not more than ten (10) square feet cumulative of bare ground per one-quarter (1/4) acre of grass Area are exposed.

8. Slopes. Solid sod shall be used on slopes greater than fifteen (15) percent (15%). Complete coverage Shall mean that not more than ten (10) square feet cumulative of bare ground per one-quarter (1/4) acre of grass Area are exposed.

9. Synthetic Lawns and Plants. Synthetic or artificial turf and plants may Shall be used prohibited from Use in lieu of required Landscape material on a case by case basis and with approval by the County Manager or designee.

10. Architectural Planters. The Use of permanent or moveable architectural planters may be permitted in fulfillment of Landscape requirements upon approval of the County Manager or designee. The planters shall be adequately sized for palms or trees and shrubs, shall not cause the roots to bind and shall permit water to drain through the base of the planter. The base of the planter shall be wide enough that it does not blow over in mild to moderate winds.

11.10. Existing Trees. Existing trees may be counted for tree requirements in Section 9.01.00 and 9.02.00 pursuant to the following criteria:

- a. The tree shall be in very good health and free of pests, disease, or injury.
- b. The tree can be deciduous, coniferous, or evergreen, but no more than twenty-five (25) percent of the existing native palm species Shall shall count toward the tree requirement. One (1) native palm Shall count as one (1) tree.
- c. The minimum size of an existing canopy tree to count toward a tree requirement is two (2) inches diameter at breast height (DBH) with a minimum height of eight feet (8'), and a minimum spread of four (4') feet for trees and four (4') feet of clear trunk (tree-form). The trees used

for tree credits shall be on The Recommended Plants for Lake County Landscape Manual.

d. The tree ~~Shall~~shall not be a prohibited species ~~as outlined in Subsection 9.02.02.B.1.~~

e. The tree may count toward the ~~replacement requirements for the Lake County Tree Removal Permit~~ or required Landscaping for Site Plan or Residential development. To count for buffering or interior landscape requirements; the existing tree must be located within the appropriate corresponding area. The tree Shall not count toward both requirements simultaneously.

f. ~~The caliper of the existing tree Shall count toward required trees as follows~~ Tree credits given for existing qualifying canopy trees:

<u>Existing Tree Size based on DBH</u>	<u>Number of Trees Credited for required landscape – (not used for replacement trees)</u>
<u>2-6"</u>	<u>1 Canopy</u>
<u>7"-12"</u>	<u>2 Canopy</u>
<u>13"-18" or greater</u>	<u>3 Canopy</u>

- 1. Ornamental trees meeting a minimum cumulative caliper shall be credited as one (1) existing ornamental tree = 1 replacement [Minimum two inch (2") Caliper x eight feet (8') height x four feet (4') spread].

<u>Caliper of Existing Tree</u>	<u>Number of Trees Credited</u>
<u>2-6</u>	<u>1</u>
<u>7-12</u>	<u>2</u>
<u>13-18</u>	<u>3</u>
<u>19-24</u>	<u>4</u>
<u>25-30</u>	<u>5</u>
<u>36-41</u>	<u>6</u>
<u>42 and greater</u>	<u>7</u>

~~11~~12. All Landscape material Shall be suited to soil and climate conditions of the site ~~Central Florida~~ in order to conserve water.

I. *Irrigation.*

1 | 1. ~~For a~~In all required landscaped areas, irrigation shall be used in order to establish  
2 | and maintain optimal growth of plant material. Temporary irrigation may be  
3 | utilized, if approved by the County Manager or designee, with a provided a  
4 | Maintenance Plan by the applicantis submitted. Installed irrigation shall be noted  
5 | on the landscape plan as; "All required landscape material shall be irrigated with  
6 | an automatic irrigation system with a rain sensor shut off". ~~or separate irrigation~~  
7 | plans shall be provided for review. The irrigation system shall be in compliance  
8 | with The Florida Building Code and ~~State Statue~~ 373.62 F.S. for rain sensor shut-  
9 | off devices. Micro-irrigation may be utilized to conserve water resources  
10 | provided it is in compliance with the Florida Building Code.  
11 | \_\_\_\_\_

12 | a. Irrigation shall be limited to two days a week before 10:00 a.m. and after 4:00  
13 | p.m.as required by the applicable Water Management District.

14 | b. Watering for new landscapes shall comply with the applicable ~~St Johns or~~  
15 | Southwest Florida Water Management District Guidelines.

16 | 2. In order to conserve potable Groundwater, Brightwater, Reclaimed wWater,  
17 | reclaimed water, and Rainwater from cistern collection are recommended as  
18 | primary irrigation sources. ~~s~~Storm water ponds and cistern collection may be  
19 | utilized for irrigation water if the water quality will meet the needs of the  
20 | landscape. Any reuse irrigation water or storm water used for irrigation shall be  
21 | marked with appropriate signage to let the public know about the non-potable  
22 | nature of the water source in conformance with the Florida Building Code. Purple  
23 | pipe and irrigation heads shall be used in conformance with the Florida Building  
24 | Code. Developments seeking to use water from designated wetlands, retention  
25 | ponds or natural lakes shall comply with all requirements of the St. Johns Water  
26 | Management District or regionally applicable water management authority.  
27 |

28 | 3. An automated irrigation system is required for Commercial buildings with over  
29 | one thousand (1,000) square feet of Landscape area, and shall ~~be:~~

30 | a. Be zoned to reflect different levels of water usage. For the most efficient  
31 | Use of irrigation, plants with similar water Use requirements ~~should~~shall  
32 | be grouped together. ~~such as low with medium water requirements or~~  
33 | medium with high water requirements. Turf and shrub beds shall- be on a  
34 | separate zone.

35 | b. Be on a 24-hour automatic timer with a Backflow Prevention Device.

36 | c. Be keyed to topography and soil type as to avoid runoff and promote  
37 | optimal percolation.

38 | d. Have a rain sensor per Section 373.62 of the Florida Statutes and shall be  
39 | required to restrict the irrigation system from operating when adequate  
40 | rainfall has occurred. ~~soil is saturated.~~  
41 |

1 [b5]

- 2 4. In situations where irrigation is not required in small commercial or Community  
3 Facility Districts such as billboards, communication towers, or antennae array  
4 areas, drought-tolerant species of turfgrassturf grass shall be used in remote  
5 Commercial installation. Refer to Subsection 9.01.10.F The Recommended Plants  
6 for Lake County Landscape Manual for types of recommended turfgrassturf grass.  
7  
8 5. When a permanent system is not required, a temporary system is allowed and  
9 encouraged for establishment of Landscape material.  
10  
11 6. Pop-up irrigation heads shall be no shorter than six (6) inches when fully  
12 extended for turf grass irrigation.  
13  
14 7. Landscaped Areas that are irrigated shall not be less than five (5) feet in width.  
15 Areas less than five (5) feet in width shall incorporate micro-irrigation.  
16  
17

18 J. ~~Voluntary Mandatory Waterwise or Florida Friendly Landscape Measures. Site Appropriate~~  
19 Plants~~Voluntary Xeriscaping Measures.~~ The purpose of this Subsection is to establish  
20 minimum standards for the development, installation, and maintenance of Landscaped  
21 Areas on a Site with water Use efficiency as a goal without inhibiting the Use of creative  
22 Landscape design. Waterwise and/or Florida Friendly landscaping, promotes encourages  
23 specific water conservation measures including the re-establishment of native plant  
24 communities, the Use of Site specific plant materials, and the Use of native vegetation.  
25 The intent of this Subsection is to recognize the need for the protection of groundwater as  
26 a Natural Resource through the application of enhanced Landscape practices, that water-  
27 efficient Landscaping maximizes the conservation of water by using Site adapted plants  
28 and efficient watering methods that will generally result in a reduction of irrigation  
29 requirements, costs, energy and maintenance. Irrigation shall follow Florida Irrigation  
30 Society standards and Florida Water Star standards maintained by the St. Johns Water  
31 Management District and comply with the Florida Building Code.  
32  
33

- 34 1. Applicants for Site Plan approval for development, redevelopment, and  
35 rehabilitation of all Parcels within unincorporated Lake County shall follow the  
36 guidelines of this Subsection.  
37  
38 2. In addition to the Landscape plan approval in Subsection 9.01.067-A, the  
39 following items will be required as a part of the submittal when water-efficient  
40 and waterwise principles are used.  
41  
42 a. Illustrate and label the water Zone requirements.  
43  
44 b. Illustrate and label all areas of the Site to be preserved.  
45  
46 c. Illustrate and label all turf grass and shrub areas.  
47

- ~~d. Provide a maintenance schedule and management plan.~~  
~~d. Irrigation Plan in accordance with site requirements.~~

3.  
Any construction or Development activity requiring planting within Buffers or other Landscaping is encouraged to be consistent with water-efficient Landscaping standards established herein. To achieve the objectives of this Subsection, the seven (7) basic principles of water-efficient Landscaping are incorporated. These principles are:

a. ~~Good design. Preservation of existing vegetation Areas when possible. Installation of plant material in groups according to the water needs of the genus and species. The plants shouldshall be grouped as follows:~~

~~1. High water Use zones. Plant material that is associated with moist soils and require supplemental water in addition to natural rainfall to survive. The high water Use Zone plant material be limited to less than fifty (50) percent of the total Landscaped Area of the site~~

~~2. Moderate water Use zones. Plant material that can survive on natural rainfall with supplemental water during seasonal dry periods.~~

~~3. Low water Use zone. Plant material that can survive on natural rainfall with no supplemental water.~~

Ab. ~~Soil improvement. The existing soils on the Site shouldshall be analyzed to help determine the appropriate plant types for the site. The soils shouldshall be enhanced if needed to give the soils more moisture retention capabilities~~

Be. ~~Use of mulch. Organic mulches shouldshall be used and maintained around all trees located in turf grass areas, in Landscaped Areas not planted or not appropriate for growing turf grass or groundcover, and in all planted areas. Due to slow growth rate, low renewability as a natural resource, and impacts to wetlands, cypress mulch shall not be used. Generally, mulch shall be installed two (2) inches deep and kept five to six inches (5" to 6") away from the base of a tree trunk and a minimum of two feet (2') away from the foundation of any structure.~~

Cd. ~~Limit lawn areas. The use, type, and location of lawn Area in the Landscape Shall be selected in a planned manner and not used as a fill-in material. Low water use groundcovers are encouraged to cover areas reserved for turf. Since most lawn varieties used in the Landscape require supplemental watering more frequently than other types of Landscape plants, turf shall be placed so that it can be irrigated separately. Bahia~~

1 | grass, Zoysia Grass or other drought tolerant turf, shall be used. St.  
2 | Augustine sodgrass shall not be permitted.

3 |  
4 | De. Use of low water use plants. Plants ~~should~~shall be selected based on the  
5 | plant's adaptability to the site, desired effect, color, texture, and mature  
6 | size. The Landscape ~~should~~shall be designed to give the desired aesthetic  
7 | effect and plants ~~should~~shall be grouped in accordance with their  
8 | respective water needs. The Use of native plants is encouraged whenever  
9 | possible. A list of recommended plant material is listed in- The  
10 | Recommended Plants for Lake County Landscape Manual.

11 |  
12 | Ef. Efficient irrigation and good design. The irrigation system shall be  
13 | designed to correlate to the water Use plant zones established in the  
14 | Landscape design. The following criteria for irrigating the Site ~~should~~shall  
15 | be used in the design of the system.

16 |  
17 | 1. High water Use zones. Plant material that is associated with moist  
18 | soils and require supplemental water in addition to natural rainfall  
19 | to survive. Generally watering is limited to twice a week or as  
20 | determined by the appropriate Water Management District.  
21 | Watering shall not exceed three quarter (3/4") of an inch of water  
22 | per application. The high water Use Zone plant material shall be  
23 | limited to less than -twenty (20%) percent of the total Landscaped  
24 | Area of the site. This high water use zone includes- turf areas and  
25 | annual beds. Golf Courses, greenhouses, landscape nurseries, retail  
26 | nurseries and agricultural production systems are exempt from this  
27 | requirement.

28 | ~~In the high water Use zones all portions of the Zone Shall be~~  
29 | ~~provided with an automatic irrigation system with low volume~~  
30 | ~~heads that are timed to produce no more than (2) inches of water~~  
31 | ~~per week in established Landscapes .~~

32 |  
33 | 2. Moderate water Use zones. Plant material that can survive on  
34 | natural rainfall with supplemental water during seasonal dry  
35 | periods. Forty percent (40%) maximum of the landscape area shall  
36 | be of the moderate water use zone. Generally, watering will not  
37 | exceed once per week with a maximum of three quarter (3/4") of  
38 | an inch per week.

39 | ~~In the moderate water Use zone, all portions of the Zone Shall be~~  
40 | ~~provided with a readily available water supply within twenty five~~  
41 | ~~(25) feet to supplement natural rainfall when needed and to help~~  
42 | ~~ensure that watering will take place until the plant material is~~  
43 | ~~established.~~

44 |  
45 | 3. Low water Use zone. Plant material that can survive on natural  
46 | rainfall with no supplemental water. Forty percent (40%) minimum

1 of the landscape area shall be of the low water use zone. Generally,  
2 watering will not exceed once every two to four weeks with a  
3 maximum of three quarter (3/4") of an inch per application. This  
4 zone is also characterized by low flow irrigation heads or micro-  
5 irrigation systems.

6 ~~In low water Use zones, all portions of the Zone Shall be provided  
7 with a readily available water supply within fifty (50) feet to  
8 supplement natural rainfall when needed and to help ensure that  
9 watering will take place until the plant material is established.~~

10  
11 4. Rain sensor devices shall be required on all automatic irrigation  
12 systems to avoid irrigation during periods of sufficient rainfall.

13  
14 5. The irrigation system shall be designed to minimize irrigation  
15 overthrow onto impervious surfaces and to negate any ponding  
16 effects.

17  
18 6. Required minimum size canopy trees shall have tree bubblers or  
19 micro-irrigation on a separate zone to ensure survival. Hand  
20 watering or a temporary irrigation system may be allowed as long  
21 as the owner is liable for all required landscape to live and thrive in  
22 perpetuity.

23  
24  
25 Eg. Appropriate maintenance. Proper maintenance will preserve and  
26 enhance the quality of the Landscape. Included in the maintenance  
27 schedule ~~should~~shall be the time periods for the following: the checking,  
28 adjusting, and repairing of the irrigation system, resetting of the  
29 irrigation schedule according to the season, mulching, fertilizing,  
30 weeding, and pruning.

#### 31 32 **9.01.04 Landscape Requirements:**

33  
34 A. All Lots, Plots, Tracts or Parcels of Land Shall maintain Landscaping in Areas  
35 specifically authorized as a developed area. The developed Area includes open  
36 space and water retention areas. Areas that have not been affected by  
37 Development and are illustrated on the Landscape Site plan, including clearing,  
38 grading, grubbing, or construction of Landscape or structural elements, are  
39 exempt from requirements of this Subsection. Landscape buffers shall be  
40 required to screen uses that are viewed as incompatible or required by this code.

41  
42 B. Required Landscaping adjacent to public rights of way for commercial,  
43 industrial, multi-family, condominium, institutional and community facility sites.

44  
45 1. Minimum Buffer widths are addressed in Table 9.01.04.B.a. See Subsection  
46 9.01.10.H.1-2 that depict illustrated examples of the following standards.

1  
2  
3  
4 1. The following Landscape plant materials Shall be required for the different  
5 Buffer types per one hundred (100) linear feet, the number shall be rounded to the  
6 next whole number: ~~(Existing native or indigenous vegetation may be used to~~  
7 meet the buffering requirements as long as it meets the minimum sizes set forth  
8 herein and is labeled and depicted on the Landscape Plan)  
9

10  
11  
12 **Table 9.01.04.B.2.A**  
13 **Landscape Buffers between Zoning Types**

14 \*Indicates that no landscape buffer is required.  
15  
16

	Agr	RA	AR	R1	R2	R3	R4	R5	R6	R7	RP	RMRP	RM	C1	C2	CP	LM	HM	MP	CFD	RV	PUD
Agr	*	*	*	*	*	*	*	*	*	*	A	<del>A</del>	<del>A</del>	C	C	C	D	D	D	A	B	B
RA	*	*	*	*	*	*	*	*	*	*	A	<del>A</del>	<del>A</del>	C	C	C	D	D	D	A	B	B
AR	*	*	*	*	*	*	*	*	*	*	A	<del>A</del>	<del>A</del>	C	C	C	D	D	D	A	B	B
R1	*	*	*	*	*	*	*	*	*	*	A	<del>A</del>	<del>A</del>	C	C	C	<del>ED</del>	<del>ED</del>	<del>ED</del>	A	B	B
R2	*	*	*	*	*	*	*	*	*	*	A	<del>A</del>	<del>A</del>	C	C	C	<del>ED</del>	<del>ED</del>	<del>ED</del>	A	B	B
R3	*	*	*	*	*	*	*	*	*	*	A	<del>A</del>	<del>A</del>	C	C	C	<del>ED</del>	<del>ED</del>	<del>ED</del>	A	B	B
R4	*	*	*	*	*	*	*	*	*	*	A	<del>A</del>	<del>A</del>	C	C	C	<del>ED</del>	<del>ED</del>	<del>ED</del>	A	B	B
R5	*	*	*	*	*	*	*	*	*	*	A	<del>A</del>	<del>A</del>	B	B	B	<del>ED</del>	<del>ED</del>	<del>ED</del>	A	B	B
R6	*	*	*	*	*	*	*	*	*	*	A	<del>A</del>	<del>A</del>	B	B	B	<del>ED</del>	<del>ED</del>	<del>ED</del>	A	B	B
R7	*	*	*	*	*	*	*	*	*	*	A	<del>A</del>	<del>A</del>	B	B	B	<del>ED</del>	<del>ED</del>	<del>ED</del>	A	B	B
RP	A	A	A	A	A	A	A	A	A	A	A	<del>A</del>	<del>A</del>	B	B	B	<del>ED</del>	<del>ED</del>	<del>ED</del>	A	A	B
RMRP	<del>A</del>	B	B	B	<del>ED</del>	<del>ED</del>	<del>ED</del>	A	A	B												
RM	<del>A</del>	C	C	C	<del>ED</del>	<del>ED</del>	<del>ED</del>	A	B	B												
C1	C	C	C	C	C	C	C	B	B	B	B	B	C	B	B	B	<del>ED</del>	<del>ED</del>	<del>ED</del>	B	B	B
C2	C	C	C	C	C	C	C	B	B	B	B	B	C	B	B	B	B	B	B	B	B	B
CP	C	C	C	C	C	C	C	B	B	B	B	B	C	B	B	B	B	B	B	B	B	B
LM	D	D	D	<del>E</del>	<del>ED</del>	<del>ED</del>	B	B	B	B	B	C	D	B								
HM	D	D	D	<del>E</del>	<del>ED</del>	<del>ED</del>	B	B	B	B	B	C	D	B								
MP	D	D	D	<del>E</del>	<del>ED</del>	<del>ED</del>	B	B	B	B	B	C	D	B								
CFD	A	A	A	A	A	A	A	A	A	A	A	A	A	B	B	B	C	C	C	B	B	B
RV	B	B	B	B	B	B	B	B	B	B	A	A	B	B	B	B	D	D	D	B	B	B
PUD	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B

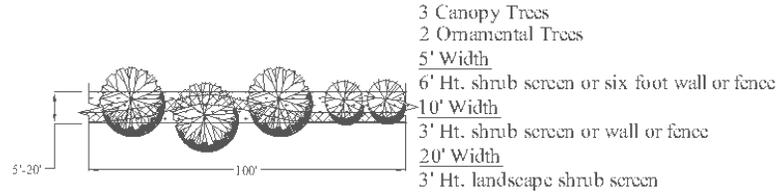
17  
18  
19 **Table 9.01.04.B.2.B**  
20 **Land Use Buffer Area Requirements and Options**

<u>Buffer Area Type</u> <u>(See Table 9.01.04.B.2.A)</u>	<u>Width Options</u> <u>(All options available unless restricted)</u>	<u>Landscape/Hardscape Requirements</u> <u>(per 100 linear feet of Buffer Area)</u>
---	--	--

<b>A</b>	1. <u>20 Feet</u>	Three (3) canopy trees with (2) <u>ornamental trees</u> plus two (2) <u>foot height landscape shrub screen</u>
	2. <u>10 Feet</u>	Three (3) canopy trees with (2) <u>ornamental trees</u> plus two (2) <u>foot height landscape shrub screen or wall or fence</u>
	3. <u>5 Feet</u>	Three (3) canopy trees with (2) <u>ornamental trees</u> plus six (6) <u>foot height landscape shrub screen or six (6) foot wall or fence</u>
<b>B</b>	1. <u>20 Feet</u>	Four (4) canopy trees plus three (3) <u>ornamental trees</u> and two (2) <u>foot landscape screen</u>
	2. <u>15 Feet</u>	Four (4) canopy trees plus three (3) <u>ornamental trees</u> and two (2) <u>foot landscape shrub screen or same height wall or fence</u>
	3. <u>10 Feet</u>	Four (4) canopy trees plus three (3) <u>ornamental trees</u> and two (2) <u>foot landscape shrub screen plus six (6) foot wall or fence</u>
<b>C</b>	<u>50 Feet</u>	Five (5) canopy trees plus four (4) <u>ornamental trees</u> plus double row of a two (2) <u>foot height landscape shrub screen</u>
	<u>25 Feet</u>	Five (5) canopy trees plus four (4) <u>ornamental trees</u> plus double row of a two (2) <u>foot height landscape shrub screen plus six (6) foot wall or fence. An additional 300 SF of landscape groundcover other than turf is required</u>
	<u>15 Feet</u>	Five (5) canopy trees plus four (4) <u>ornamental trees</u> plus double row of a <u>three (3) foot height landscape shrub screen plus eight (8) foot wall or fence. An additional 300 SF of landscape groundcover other than turf is required.</u>
<b>D</b>	<u>100 Feet</u>	Six (6) canopy trees plus (5) <u>ornamental trees</u> with a two (2) <u>foot height shrub planted in a double row with optional three (3) foot high berm. An additional 300 SF of landscape groundcover other than turf is required</u>
	<u>50 Feet</u>	Six (6) canopy trees plus (5) <u>ornamental trees</u> with a two (2) <u>foot height shrub planted in a double row with optional (3) foot high berm plus six (6) foot wall or fence. An additional 300 SF feet of landscape groundcover other than turf is required</u>
<b>E</b>	<u>50 Feet</u> <u>Varies</u>	Ten (10) canopy trees plus (8) <u>ornamental trees</u> with a two (2) <u>foot height shrub planted in a double row- with (4) foot high berm</u>

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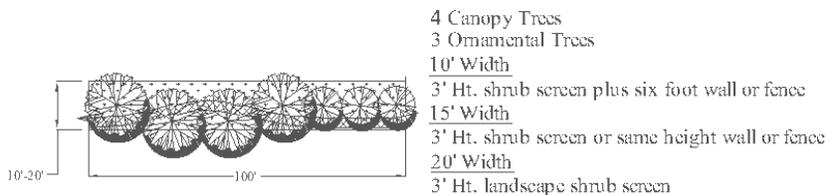
1  
2



**Buffer A**

Layout is schematic - owner is free to adjust design as needed to meet the minimum requirements.

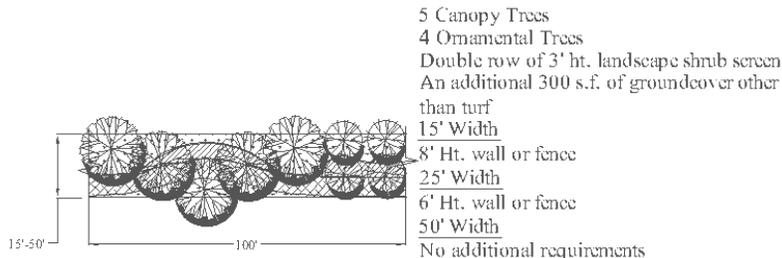
- 3 Canopy Trees
- 2 Ornamental Trees
- 5' Width
- 6' Ht. shrub screen or six foot wall or fence
- 10' Width
- 3' Ht. shrub screen or wall or fence
- 20' Width
- 3' Ht. landscape shrub screen



**Buffer B**

Layout is schematic - owner is free to adjust design as needed to meet the minimum requirements.

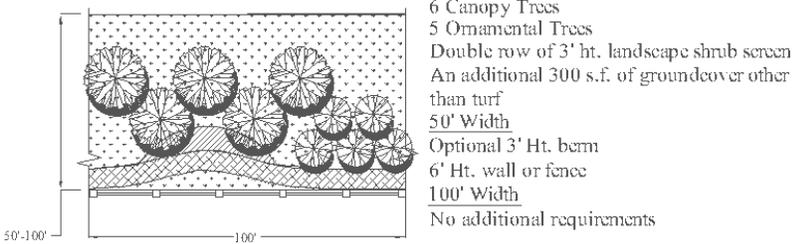
- 4 Canopy Trees
- 3 Ornamental Trees
- 10' Width
- 3' Ht. shrub screen plus six foot wall or fence
- 15' Width
- 3' Ht. shrub screen or same height wall or fence
- 20' Width
- 3' Ht. landscape shrub screen



**Buffer C**

Layout is schematic - owner is free to adjust design as needed to meet the minimum requirements.

- 5 Canopy Trees
- 4 Ornamental Trees
- Double row of 3' ht. landscape shrub screen
- An additional 300 s.f. of groundcover other than turf
- 15' Width
- 8' Ht. wall or fence
- 25' Width
- 6' Ht. wall or fence
- 50' Width
- No additional requirements



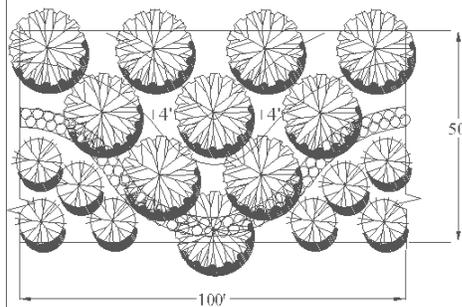
**Buffer D**

Layout is schematic - owner is free to adjust design as needed to meet the minimum requirements.

- 6 Canopy Trees
- 5 Ornamental Trees
- Double row of 3' ht. landscape shrub screen
- An additional 300 s.f. of groundcover other than turf
- 50' Width
- Optional 3' Ht. berm
- 6' Ht. wall or fence
- 100' Width
- No additional requirements

3

### Buffer Type E



- 10 Canopy Trees
- 8 Ornamental Trees
- 2 Rows of shrubs
- 4' Berm

Layout is schematic - owner is allowed to adjust design as needed to meet the minimum requirements as shown above.

#### Zoning Based Buffering and Landscape Requirements:

- 1) Multi-use sites most intensive use shall determine buffering provisions.
- 2) “One-sided” wood fences shall be installed with wood posts to the inside of the property that is installing the fence. Any wood fence along a private or public right of way shall be painted.
- 3) The landscape material shall be maintained in perpetuity.
- Separately platted or phased developments will require a landscape shared buffer pursuant to the Zoning Buffer area requirements.
- 4) Allowed wall types include EFIS with stucco, stucco, brick, finished or textured block and poured-in-place concrete wall with a finished surface. Disallowed wall types include any type of wall that has an unfinished surface such as unfinished concrete or an unfinished (CMU) concrete masonry unit wall. Allowed fence types for fences or screens 3’ or less include ornamental metal, opaque wood or other similar material. For fences or screens 6’ or taller an opaque material shall be used. Chain link fencing is not allowed along any public right of ways or adjacent to any residential use areas as a required screening material. Chain link fencing may be allowed around certain utility areas towers as allowed by the Lake County Land Development Code.
- 5) Required canopy trees shall generally not be spaced more than 50-feet apart; however, clustering may be utilized if desired for design intent. Required ornamental trees shall have a maximum spacing of 50-feet however; clustering may be utilized for design intent. Spacing of tree groupings shall not exceed 150-feet to allow for views and or sign placement.
- 6) The buffer may be shared for similar zoned properties. The first developed use shall be responsible for installing the buffer. . The buffer width may be split between two similar use properties such as commercial to commercial.

1  
2  
3  
4 *Table 9.01.04.B.2.a: Landscape Plants for Required Buffers Between Lots and Rights-of-Way*  
5  
6  
7  
8

Buffer Type	Minimum Width	Minimum Number of Canopy Trees		Number of Ornamental Trees*	Shrub Reqt
A	10	3	AND	2	1 single row of shrubs
B	15	4	AND	3	1 single row of shrubs
C	20	6	AND	5	Double (2 rows) of shrubs
D	30	10	AND	8	Double (2 rows) shrubs AND a min 6 high wall

9  
10  
11 ~~—————\*Ornamental Trees are optional and in addition to the minimum number of~~  
12 ~~canopy trees for Buffer types "A" and "B" only.~~  
13

14 ~~—————Notes for Table 9.01.04.B.2.a~~  
15

16 ~~—————\*Indicates that no Landscape Buffer is required.~~  
17

18 7.

19 The developed Parcel Shall have a Landscape Buffer along its right-of-way that reflects the  
20 zoning category across the road/street, unless the Parcel is located along a road classified as

1 an arterial roadway as designated the County, then the minimum buffer shall be Type C  
2 Landscape Buffer unless the adjacent zoning requires a more intense buffer.  
3 along the Arterials in Subsection 9.01.04.2.a. Then, the minimum Buffer Shall be 20',  
4 unless the "D" category Buffer is greater.

5  
6  
7 8. One (1) Landscape Buffer is required between adjacent Parcels. If the commercial  
8 parcels are part of a master planned commercial center or mixed use Planned Unit  
9 Development (PUD) the adjacent lots may share the installation with each providing fifty  
10 percent (50%) of the required minimum buffer. Individually developed commercial sites,  
11 not part of a master planned commercial center, shall install full buffers.

12  
13  
14 9. For commercial, industrial, PUD, single-family subdivisions and multi-family  
15 subdivisions-, all areas set aside as pervious area, including but not limited to retention  
16 ponds and parks, shall have ten (10) Canopy trees per acre minimum. Some parts of the site  
17 may be left as open space but the average number of trees shall average 10 canopy trees per  
18 acre. Other landscape requirements of this Ordinance may be used to meet this  
19 requirement. This rule does not apply to the yards of a single-family home, whose tree  
20 requirements are listed in Section 9.01.05 of this code. Other protected lands such as  
21 wetlands do not have to meet the ten (10) trees per acre requirement. Permanent water  
22 bodies, wetlands and wet retention ponds shall be excluded in calculating the amount of  
23 open space requiring ten (10) canopy trees per acre.

24  
25 10. Where residential developments abut other residential developments, the landscape  
26 buffer in the area where the properties adjoin shall be a separate tract that is maintained by  
27 a homeowners association, or a portion of a yard that is owned and maintained by an  
28 individual homeowner. The buffer shall be shown on the plans. In instances where the  
29 landscape buffer is a portion of an individual back yard, deviations from the required  
30 number of trees and shrubs may be permitted. Per the approval of the County Manager or  
31 designee.

32  
33 117. Within single-family and multi-family residential developments, a buffer shall be  
34 provided along all external roadways to reduce noise generated by traffic and create a  
35 visual barrier. Unless otherwise noted, the buffer shall be as required by the adjacent land  
36 use or a Type A buffer at a minimum. If the road is an arterial road then the buffer shall be  
37 a type C buffer.

38  
39 128. In areas where dual access is an issue, a ten (10) foot wide landscape tract shall be  
40 provided. The tract shall be dedicated to the homeowners association with covenants and  
41 restrictions precluding the construction or placement of any structures within the tract with  
42 the exception of a fence or a wall. Unless otherwise required, this tract may be solely  
43 vegetated with groundcover or turf. The tract shall be indicated on the plans.

44  
45 13. Existing native or non-invasive trees and vegetation may be retained and used to  
46 meet landscape buffering requirements. The existing material must be located and called  
47 out on the Landscape Plan and shall meet the minimum sizes listed under trees and shrubs

1 to be utilized.

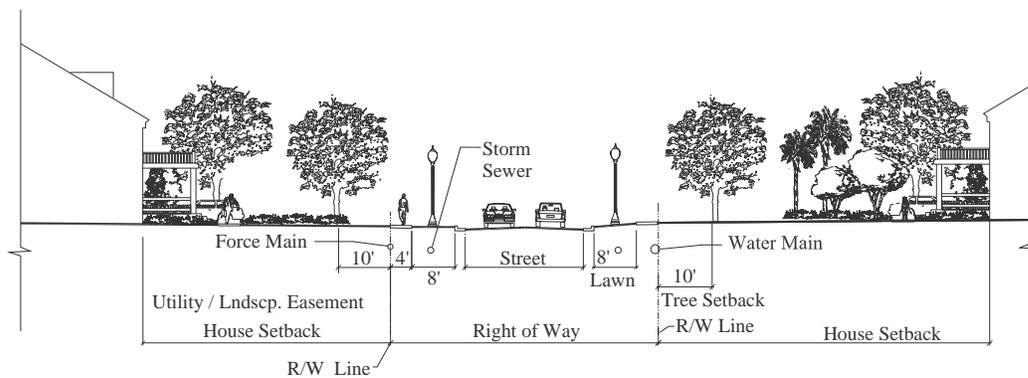
2  
3  
4  
5 a. ~~A minimum twenty (20) foot wide Buffer is required along the following rights-~~  
6 ~~of way:~~

7  
8 1. ~~All existing Arterial Roads.~~

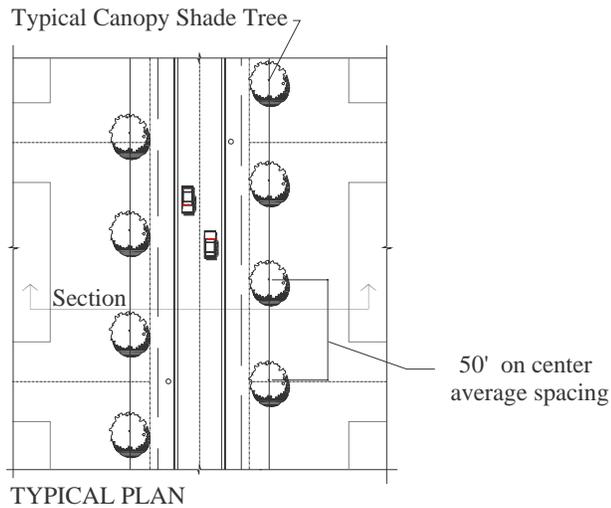
9  
10 2. ~~Any new major Arterial construction.~~

11  
12 b. ~~New single family and multi family Residential Development of more than~~  
13 ~~twenty (20) units Shall provide a treed boulevard along the length of the Development along the~~  
14 ~~all rights of way. The Buffer Shall be ten (10) feet in width unless it is along one (1) of the roads~~  
15 ~~in Subsection 9.01.04.B.1.a.1-6.~~

16  
17 14.9. All roads in single family and multi-family developments shall provide internal  
18 tree lined roads that shall have street trees, from the canopy tree list, at an average spacing  
19 of 50-feet on center along both side of roads. The canopy trees required for residential lots  
20 may also be used as required street trees. It is recommended that trees are planted a  
21 minimum of 10-feet just outside the right-of-way (R.O.W.) with an alternating pattern on  
22 each side of the road. Developments may plant trees in the right of way, with permission  
23 from the Lake County Department of Public Works. Any tree planted within the R.O.W.  
24 shall comply with the latest F.D.O.T. Green Book Standards. It is required that trees are  
25 planted as far from utilities as possible but not less than 10-foot horizontal or as required by  
26 the utility provider. Canopy trees must be planted a minimum of 5-foot distance from  
27 public sidewalks although a minimum of 8-foot is preferred. [b6]



TYPICAL SECTION



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29



150. Landscape materials within Buffers along all rights-of-way ~~shall~~ be designed to display variety, color, form, and texture, by utilizing native and drought tolerant plants, and exotic species. Such variety and color may be accomplished by using a combination of shrubs, ~~and~~ ornamentals, and accent plant from the plant lists in Subsection 9.01.10.C & D The Recommended Plant List for Lake County maintained by the County Manager or designee. The placement of Landscape materials within Landscape Buffers shall have a rational relationship to the existing patterns and densities of adjoining Areas which have been designed or preserved. Arrangements shall replicate natural conditions and shall not be linear unless dimensional limitations necessitate such an arrangement or linear arrangement is part of a formal Landscape directly related to the architecture of the building(s). ~~Landscape materials shall be clustered into groupings that simulate a natural, rather than man-made appearance~~

164. When cross access is required, the landscape buffer shall terminate at the pavement's edge or the edge of the easement.

173. *Trees:*

a. ~~Unless specified by the Landscape Buffer requirements in Table 9.03.04.B, a minimum, three (3) canopy trees or five (5) understory or ornamental trees shall be provided within the Landscaped Buffer for every one hundred (100) feet of public right-of-way. A combination of two (2)~~

1 canopy and three (3) understory or three (3) canopy and two (2)  
2 understory may be used to fulfill this requirement.

3  
4 a. Generally, understory ornamental trees shall be spaced a minimum  
5 twelve twenty\_ (2012) feet apart and canopy trees a minimum of twenty  
6 (20) maximum forty (40) feet apart. However, eClusters of trees and non-  
7 linear alignments within the Landscaped Buffer may be used to meet the  
8 above requirement. Adequate spacing shall be maintained to protect and  
9 allow for the growth of the root systems of each tree. Special precautions  
10 shall be taken in to not locating locate canopy trees under or near utility  
11 easements. Generally, maximum spacing of trees shall not exceed 150' to  
12 allow for views and sign placement.

13  
14 b. Each canopy tree shall be provided with a minimum fifty twenty-five  
15 (5025) square foot planting Area around the trunk with a minimum  
16 dimension of seven five (75) feet. Each planting Area Shall be landscaped  
17 with a mulch ring, groundcover, or other Landscape material, excluding  
18 lawn grass, in addition to the required tree. See Subsection 9.01.10.H.12  
19 for an illustrated example of a tree planting area.

20  
21  
22 cd. No understory ornamental or canopy tree shall be planted within the  
23 Visibility Triangle.

24  
25 de. No Certificate of Occupancy Shall be issued by the Building Official  
26 County Manager or designee on the types of construction indicated below  
27 unless the underlying Parcel has the following minimum number of  
28 protected trees in Subsection 9.02.02.:

- 29  
30 1. For any multifamily, or non-Residential Development requiring  
31 Site Plan Approval under the Lake County Land Development  
32 Regulations, tensix canopy (106) trees per acre.
- 33  
34 2. Existing trees may be used to meet these provisions in Subsection  
35 9.01.03.E.10. Trees shall be maintained in excellent condition and  
36 protected during development of the site. for one (1) year during  
37 which survival is guaranteed by the Property owner pursuant to  
38 Subsection 9.02.06 below.
- 39  
40 3. One (1) or more of the required canopy trees Shall be planted  
41 within ten (10) feet Landward of the right-of-way for residential  
42 Lots less than or equal to one-half (1/2) acre. More canopy trees  
43 may need to be planted outside but parallel to the road right of way  
44 based on the street tree requirements as listed in 9.01.04.B.14.

45  
46 184. *Shrubs.*

- 1
- 2 a. A visual screen Shall include shrubs or berm(s) with shrubs. The shrubs
- 3 shall have an average height at time of planting of at least ~~three (3) gallon~~
- 4 ~~or two to two and one-half (2' 2 1/2)~~ feet or greater planted at the
- 5 minimum centers provided in Subsection 9.01.10.D. The Recommended
- 6 Plants of Lake County. Their spread ~~should~~shall be appropriate for size
- 7 and species. They shall be able to obtain a height of three (3) feet within
- 8 twelve (12) months of planting under normal growing conditions.
- 9
- 10 b. The shrubs with or without berm(s) shall be located within the Landscaped
- 11 Buffer between the planting Areas of the required trees.
- 12

13 | C. *Internal Landscaping*

14

15 | 1. *Generally.* All ground surface Areas used on commercial, institutional,

16 community facility, industrial, condominium, recreational vehicle parks,

17 or multifamily sites -shall have internal Landscaping to provide visual and

18 climatic relief from broad expanses of pavement and channelize and

19 define logical Areas for pedestrian and vehicular circulation.

20

21 | 2. *Interior areas.*

22

23 | a. Interior portions of Off-Street parking facilities, which

24 are not specifically designed as parking spaces or maneuvering areas,

25 Shall not be paved for vehicle use.

26

27

28 | b. One landscaped area, a minimum of 300 square feet shall be provided

29 at each end of a parking row as measured from inside the curb or edge of

30 impervious surface, where installed. -Unless specifically designated as

31 open space or green area, all designated, planted and permanently

32 maintained Landscaped Areas Shall have at least one (1) canopy tree two

33 (2) inches in caliper and ~~fifteen (15)~~thirty (30) gallon container or greater

34 at time of planting for every ~~two hundred (200)~~three-hundred (300)

35 square feet with two canopy trees per 600 landscape island for a double

36 row of parking. The minimum size of the tree is eight (8) feet in height

37 with a spread of four-(4) feet. These Areas Shall have curbing, wheel

38 stops, bollards or other control measure to prevent vehicles from driving

39 near or under the trees.

40

41 | c. All trees in the parking lots shall be from the Canopy Tree List. A

42 maximum of 20% of the required canopy trees in the parking lots may be

43 palm trees. Palm trees used in parking lots need to be planted at a 2:1 ratio

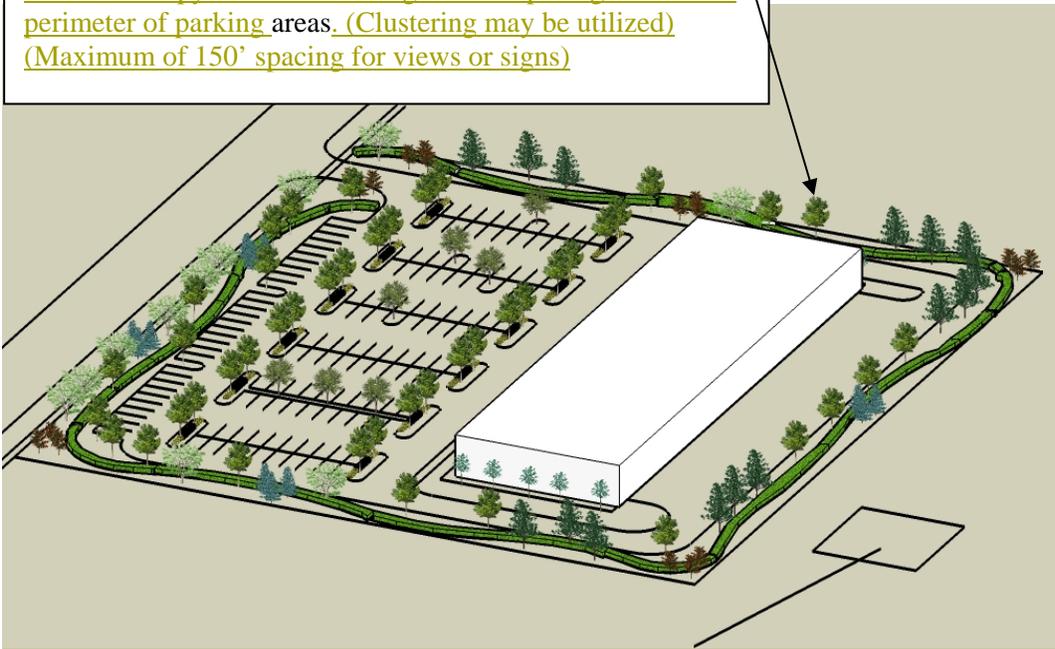
44 (Cabbage Palms, Washingtonia Palms and Windmill Palms) in relation to

45 canopy trees with the exception of Canary Island Palms, Date Palms and

46 Paurotis Palms which may be planted at a 1:1 ratio.

1  
2 d. Canopy trees shall be required to be planted on average at 50-foot<sup>2</sup>  
3 centers around the total perimeter of the parking lot and all vehicular  
4 service areas. Clustering may be utilized but spacing shall not exceed  
5 150<sup>2</sup>-foot spacing maximum. The canopy trees shall be planted within 30-  
6 foot<sup>2</sup> from the edge of –pavement. Canopy trees falling within the  
7 landscape buffers may be used if they fall within 30 feet<sup>2</sup> from the edge of  
8 paving or vehicular service area.  
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Provide canopy trees at an average of 50' spacing around the  
perimeter of parking areas. (Clustering may be utilized)  
(Maximum of 150' spacing for views or signs)



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16  
17 Note:

18 Commercial, industrial, institutional, and multi-family buildings shall have a 3 feet wide  
19 landscape area around a minimum of 40% of the total building perimeter. Landscape perimeter  
20 shall occur adjacent to or within 25 feet of the building perimeter walls. Breaks are allowed for  
21 accessways, plazas or other building design feature.  
22

23 e. An additional interior landscape island shall be provided with a minimum  
24 three hundred (300) square feet area known as an “intermediate” landscape  
25 island for every twenty (20) parking spaces required for parking lots that are  
26 over eighty (80) spaces for a single use. The owner shall provide separate  
27 landscape islands OR provide a minimum seven (7) feet wide landscape strip  
28 between head to head parking. The parking landscape strip may be counted as

1 a required intermediate landscape island for every three hundred (300) square  
2 feet and one (1) canopy tree provided.

3  
4 f. ~~Owners shall provide~~ The following **landscape areas** shall be provided in  
5 shrubs or groundcover; **other than sod**, for the following uses: The below  
6 uses are determined by calculating the square footage of the **first floor**  
7 **footprint** and not in multiple story buildings. Minimum shrubs shall be  
8 provided so that shrub spacing does not exceed ~~three~~ (3')-foot on center  
9 spacing. Minimum one-gallon ~~or three gallon~~ shrubs shall be used. One  
10 canopy tree or three ornamental trees shall be required in addition to any other  
11 tree requirements for every 350 square feet of required "building" landscape  
12 area.

- 13 1) Single Family Residential = 20% of the 1<sup>st</sup> floor footprint<sup>[b7]</sup>
- 14 2) Townhouse with or without vehicular use **area** = 350 square feet per  
15 dwelling unit
- 16 3) Multi-family, **other than townhouses**, with vehicular use **area** = 350  
17 square feet per dwelling unit or twenty percent (~~35~~20%) of all the  
18 ground floor units, whichever is greater.
- 19 4) Commercial, Retail and Restaurant = 25% of the 1<sup>st</sup> floor footprint
- 20 5) Office = 30% of the 1<sup>st</sup> floor footprint
- 21 6) Mixed Use Buildings = 25% of the 1<sup>st</sup> floor footprint
- 22 7) Developments occurring in "new urbanism" or "traditional town  
23 centers" may request for less landscape areas than noted above.

24  
25 Alternate language

26  
27 **(f) Appropriate Plant Selection, Location, and Arrangement**

28 Plants shall be grouped in accordance with their respective water and maintenance needs. Plants  
29 with similar water and cultural (soil, climate, sun, and light) requirements shall be grouped  
30 together. The high water use zones (hydrozones) shall be shown on the irrigation, layout, and  
31 planting plans (where required). Where natural conditions are such that irrigation is not required,  
32 the presence of site appropriate plants shall not be considered a hydrozone. The combined size of  
33 all hydrozones shall be limited to **25% of the total landscaped area**. In landscapes irrigated with  
34 recycled water, the allowable size of all high water-use zones shall be increased to not more **than**  
35 **50% of the total landscaped area**. These high water-use limits do not apply to landscaped areas  
36 requiring large amounts of turf for their primary functions, e.g., ball fields and playgrounds.

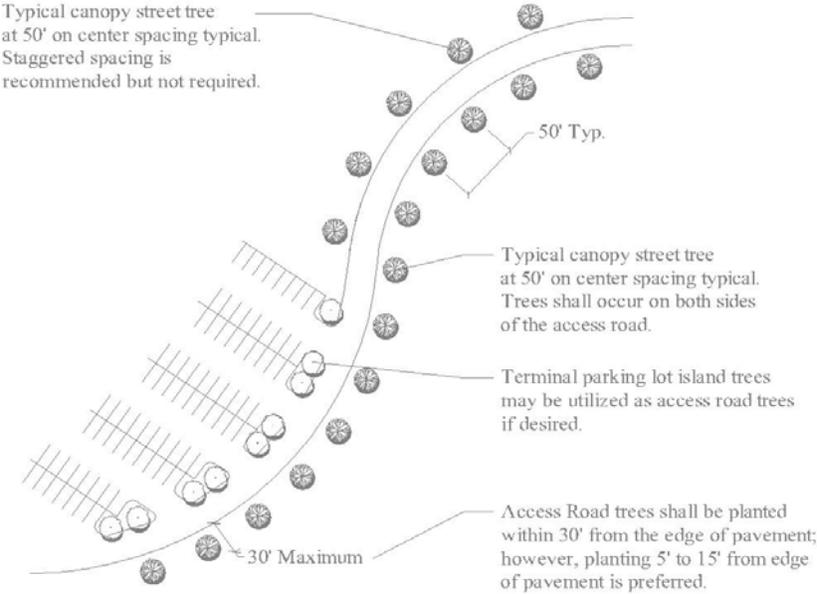
37  
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40 g. The owner may provide pervious parking if not otherwise prohibited by other  
41 provisions of the Lake County Code in the following areas:

- 42 1) Adjacent to parking lot landscape islands to allow for the percolation  
43 of water and the exchange of oxygen for the tree roots.
- 44 2) Grass paving or turf block areas may be utilized in low impact areas or  
45 infrequent use areas such as churches or the outlying parking areas of  
46 malls or other shopping areas.

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h. Commercial site plans having an internal access road shall be required to plant an average of one (1) canopy tree on each side of the road for every 50 feet of the road deemed an internal access road for both sides of the roadway. An internal access road is a collector road that occurs within any development either at the perimeter or internal to the development. Parking lot island trees may be used to meet this requirement if they fall within 30-feet from the edge of the pavement along the internal access road.

Typical Plantings Required at commercial center access roads



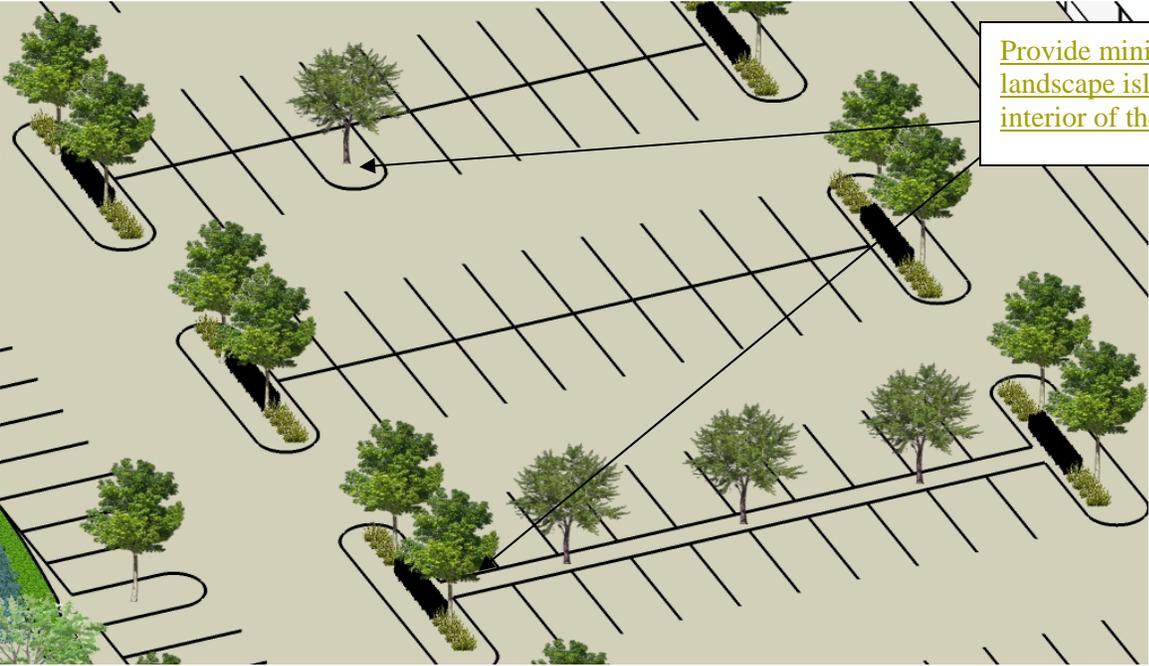
- Notes:
- 1) Access roads are considered perimeter "collector" type roads within a planned commercial center. The roads immediately in front of the commercial stores do not have to meet the 50' on center tree planting requirement but do have to meet other parking lot landscape requirements such as providing terminal parking landscape islands with a canopy tree..
  - 2) Palm trees may be utilized as a substitute for canopy trees at a 2:1 ratio for required access road trees (2 palms for every 1 canopy tree; see tree list for specific palm tree ratios) Palm trees shall not exceed 20% of the required canopy trees for any parking lot or vehicular use areas.
  - 3) Safety and sight distance requirements take priority over tree requirements.

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**Intermediate Landscape Islands in Parking Lots** - Required for parking lots that have eighty (80) or more parking spaces for a single user and are required for every additional twenty (20) parking spaces above and beyond eighty (80) spaces.  
 Provide minimum 7-foot wide landscape strip between head to head parking.  
 Provide 1 canopy tree equally spaced in the ‘intermediate area’



10  
11

- i. Owner is required to place parking lot lighting within the parking lots and not in the landscape islands when the lights placement would conflict with the tree locations.
- j. Rain Gardens – Parking lot islands are encouraged to use curb breaks and create swale or depression areas to allow for the percolation of rainwater and parking storm water. Owner shall be careful in the selection, placement and durability of landscape material within rain garden areas. Any proposed rain garden areas must comply and meet all storm water requirements.

Rain Garden Photo Example



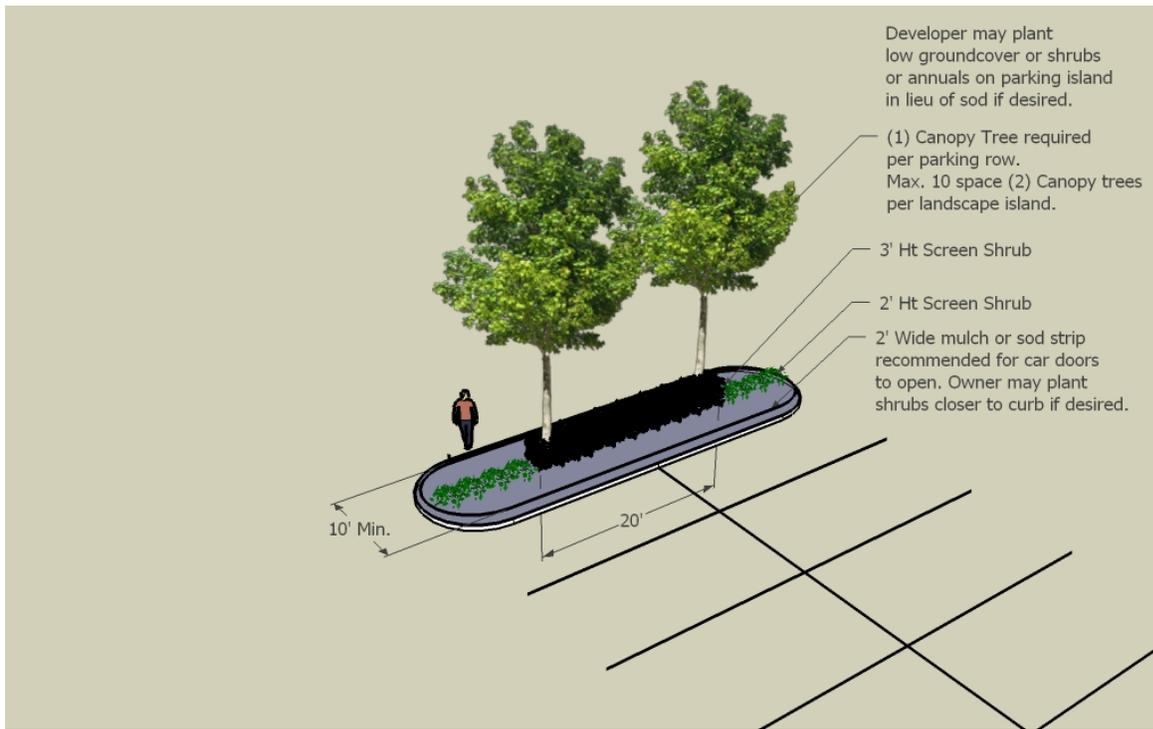
Developments are required to place parking lot lights within the parking lots and not in the landscape islands when conflict with landscape material would occur.



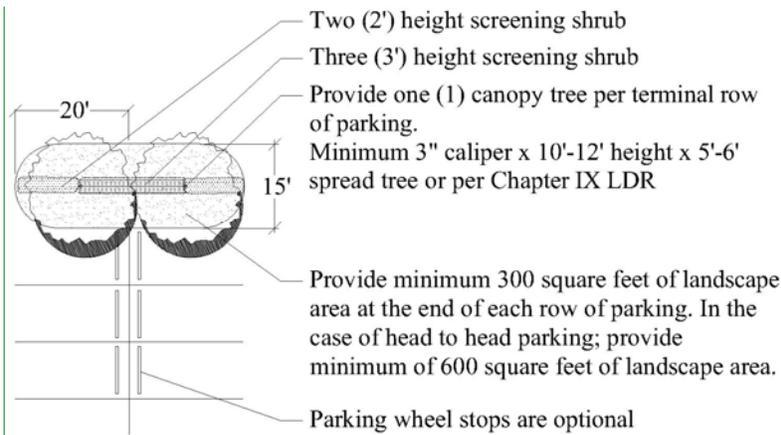
- 3. Maximum number of continuous parking spaces. Landscaping Areas with a minimum width of ten (10) feet and a minimum total Area of ~~two hundred (200)~~ three hundred (300)-square feet shall be provided to break up excessively long, continuous runs of parking spaces. A parking bay Shall not contain more than

~~fifteen (15)~~ ten (10) continuous parking spaces or extend more than ~~one hundred sixty (160)~~ one-hundred and twenty (120) feet maximum, whichever is more restrictive, without being broken up by a min. 300 sq ft landscaped area and 600 square feet for islands that have head-to-head parking. These Landscaped Areas must have one (1) canopy tree to meet the minimum size canopy tree requirements, see Figure 14. The landscape termination islands shall contain one canopy tree at the end of each row of parking unless there is a restrictive condition such as a fire hydrant or unavoidable light pole in the landscape island. The restrictive conditions that prohibit the planting of a tree shall only be allowed in 15% of the landscape islands. (When a fire hydrant or necessary light pole is placed in the terminal parking rows.)  
with a two (2) inch caliper and 15 gallon container or greater at time of planting. The minimum size of the tree is eight (8) feet in height with a spread of four (4) feet. See illustrated figure in Subsection 9.01.10.H.14.

4. ~~Termination of parking rows. Each row of interior parking spaces which contains more than 15 continuous parking spaces or extend more than 160 feet, which ever is more restrictive, shall be terminated at each end by a Landscaping Area which shall be a minimum of two hundred (200) square feet.~~



**Figure 14 – Landscaped parking island at end of rows.**



[b8]

**Terminal Landscape Island – Plan View**

45. *Curbing or wheel stops.* All interior Landscaping Area Shall be curbed or provided with wheel stops to prevent vehicular encroachment, as appropriate. Curbs may terminate to allow for swales- if desired in landscape areas. The intermediate landscape islands are not required when the parking lot is less than 15,000 square feet. Terminal landscape islands are required at the ends of all parking rows with a minimum- Three hundred (300) square feet of -landscape areas.

56. *Exceptions.* Interior Landscaping is not required when the paved (impervious) portion of a Lot is five thousand (5,000) square feet or less.

6. Guardhouses - Shall Fifty percent (50%) of the footprint shall be landscaped immediately adjacent to the guardhouse to create an aesthetic landscape. The landscape shall be planted in the median if space is provided. Clear zones and clear sight lines must be maintained for any landscape within the road right of way. The clear zone shall consist of an area between two--feet (2') and eight--feet (8') height from the road elevation. The landscape area shall consist of shrubs, flowers and trees. Sod or other ornamental landscaping may be utilized in the remaining areas around the guardhouse as long as 50% of the guardhouse has been landscaped as described.

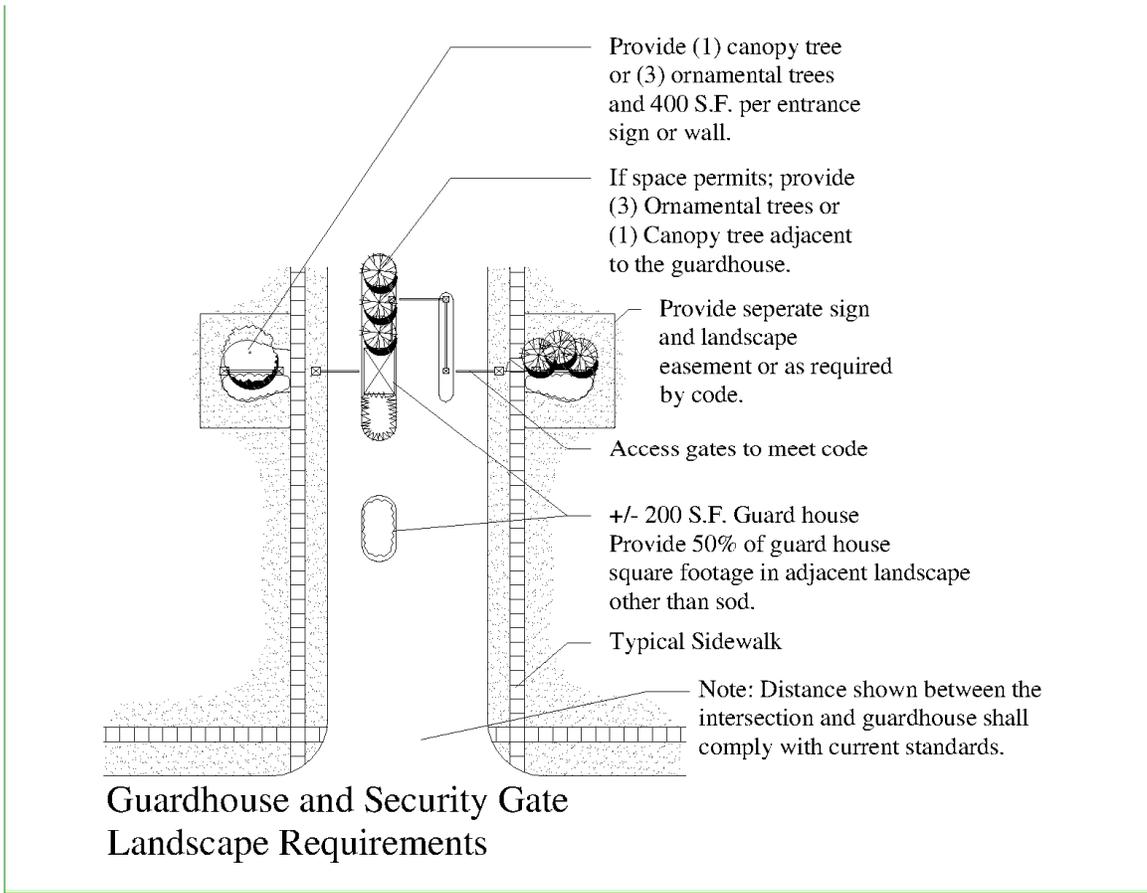
7. Vehicular Gates and associated security walls - shall provide landscape on the entrance side of gates and walls.

1) A minimum of 400 square feet of landscape area shall be provided on each side of an entrance road (800 square feet total) to a neighborhood or commercial area.

2) Within each entrance area of 400 square feet; one canopy tree or three ornamental trees shall be provided.

3) The landscape area shall have shrubs, flowers, vines or other ornamental plantings other than sod. If a utility easement or other restrictive condition restricts the use of trees then this requirement may be waived or limited by the County Manager or designee.

1



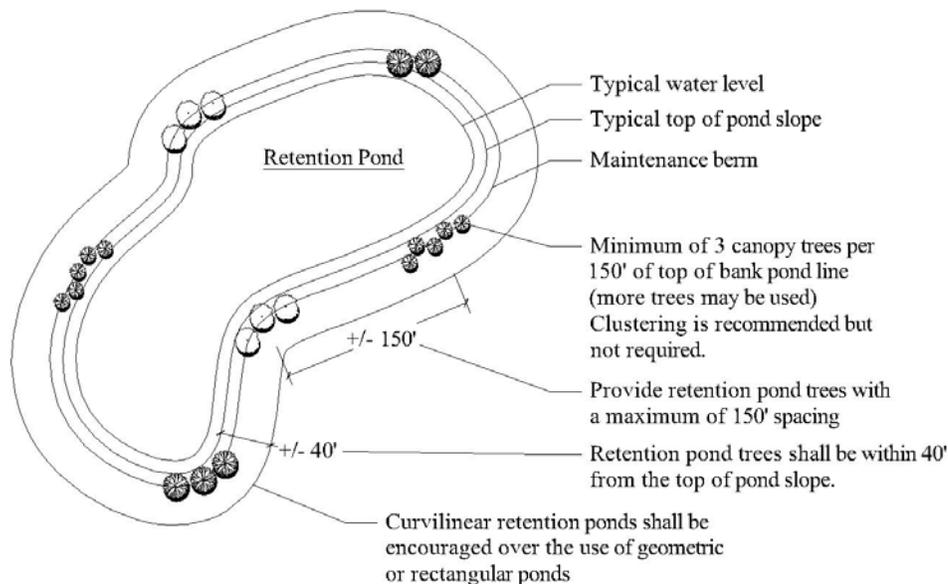
[b9]

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10. Retention Ponds: Shall be planted at a minimum of three (3) canopy trees for every 150 linear feet of pond bank determined by measuring the top of pond bank. The trees shall be planted within forty (40) feet from the top of bank line. No less than three (3) canopy trees shall be required at retention ponds.

~~Please see~~ The Recommended Plant List for Lake County contains for a listing of the recommended lake edge and retention pond plantings.

## Typical Plantings Required at retention ponds

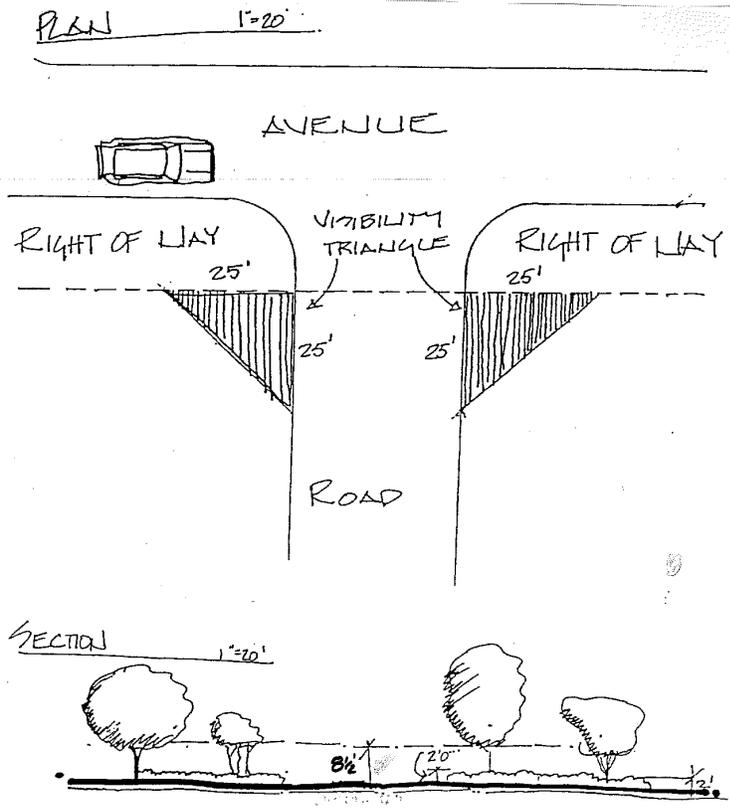


### Notes:

- 1) Tree requirements are for retention ponds and do not apply to any existing wetland that are protected under other ordinances.
- 2) Proposed or existing canopy trees meeting the minimum canopy tree size may be used to meet the 10 canopy trees required per acre for non-residential land use. The required retention pond trees may be used to meet the required 10 canopy trees required per acre non single-family residential land use.

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5 DE. — Intersection Visibility (See Figure 13). Where an accessway intersects a public  
6 right-of-way on a Commercial, Industrial, Multifamily, Institutional, or Community  
7 Facility Site, Landscaping shall be used to define the intersection, provided, however,  
8 that all Landscaping within the triangular Areas described below Shall provide  
9 unobstructed cross visibility at a level between eighteen (18) inches and six (6) feet  
10 measured from road grade. Trees having limbs and foliage extending into cross visibility  
11 Shall be allowed provided they do not create a traffic hazard. Landscaping, except  
12 grass and ground cover, Shall not be located closer than three (3) feet from the edge of  
13 any accessway pavement. The triangular Areas are: the Areas of Property on  
14 both sides of an accessway and the public right-of-way pavement line with  
15 two (2) sides of each triangle being twenty-five (25) feet in length from the point of  
16 intersection and the third side being a line connecting the ends of the other sides.  
17 Visibility triangles shall be provided at all intersections of public rights-of-way. See  
18 illustrated Subsection 9.01.10.H.13 for diagram. And shall meet the site distance  
19 requirements per Chapter Three, Geometric Design of the Florida Green Book.  
20  
21  
22  
23

1  
2 **Figure 13 – Required landscape heights and setbacks in visibility triangles.**  
3



4  
5  
6 **E. Natural Vegetation Preservation Credit.** Where the preservation and incorporation of  
7 the existing natural vegetation exceeds twenty-five (25) percent of the total Land Area of  
8 Development and where preservation and incorporation of the existing natural vegetation  
9 meets the aesthetic intent of this Section, the Development may be eligible for credit  
10 from any Landscape requirements of this Section. However, in order to meet the aesthetic  
11 intent of this Section, compliance with all applicable Buffering provisions within parking  
12 areas, along rights-of-way, and between Land uses as set out in Subsection 9.01.04 shall  
13 be required. Any preserved trees in areas requiring Landscaping shall be subtracted from  
14 the total tree requirements. Any trees preserved on the Site that meet dimensional and  
15 species type shall count toward number of trees required. Receiving credits toward the  
16 requirements of this Section does not exempt the Development from normal horticultural  
17 maintenance that is necessary to maintain the desirable aesthetic appeal required to meet  
18 the intent of this Section. All other attempts at preservation and incorporation of the  
19 existing natural vegetation less than twenty-five (25) percent of the total Land Area of  
20 Development will be evaluated and awarded credit on a Site specific basis. All areas that  
21 will remain in natural vegetation to be awarded a credit shall be duly noted and  
22 designated on all site plans submitted for Development approval.  
23

24 **FG. Screening of Heating/Ventilation/Air Conditioning Units.** Where  
25 heating/ventilation/air conditioning units are located on the ground surface area, they

1 | shall be screened from view. A combination of a fence and a berm or shrubs shall be  
2 | required. The shrubs may be selected from the suggested shrub list The Recommended  
3 | Plant List for Lake County. ~~in Subsection 9.01.10.D~~ and planted at the minimum center  
4 | requirement.

5 |  
6 | **9.01.05 Single-Family Residential (including mobile homes), Condominium, Institutional**  
7 | **and Public Facility Areas.**  
8 |

9 | A. No certificate of occupancy for a single-family residence shall be issued by the Building  
10 | Official ~~County Manager or designee~~ unless the subject Parcel has the following: ~~tree~~  
11 | ~~regimen:~~

- 12 |  
13 | 1. A minimum of two (2) canopy trees for Lots 6,000 square feet or less;  
14 |  
15 | 2. A minimum of three (3) canopy trees for Lots between 6,001 and 10,000 square feet;  
16 |  
17 | 3. A minimum of five (5) canopy trees for Lots ~~greater than~~ between 10,001 square feet  
18 | to 43,560 square feet (1 Acre);  
19 |  
20 | 4. A minimum of eight (8) trees for lots between 43,561 and 87,120 square feet (2  
21 | acres).  
22 |  
23 | 5. A minimum of eleven (11) canopy trees for lots between 87,121 square feet and  
24 | 130,680 square feet (3 acres).  
25 |  
26 | 6. A minimum of fifteen (15) trees for lots 130,681 square feet (3 acres) or greater with  
27 | three (3) additional canopy trees required for each acre after the first 3 acres  
28 | ~~Three (3) trees for each additional acre in excess of one (1) acre, with a maximum number of~~  
29 | ~~trees not to exceed fifteen (15) for the total acreage;~~  
30 |  
31 | 7. Existing trees may be used to meet the provisions in Subsection 9.01.054.B.2.  
32 | Trees shall be in very good health and maintained in good condition in perpetuity  
33 | ~~for one (1) year~~ during which survival is guaranteed by the Property owner  
34 | pursuant to Subsection 9.02.06;  
35 |  
36 | 8. One (1) or more of the required trees shall be planted within ten (10) feet  
37 | Landward of the right-of-way for residential Lots less than or equal to one-half  
38 | (1/2) acre. More canopy trees may need to be planted outside but parallel to the  
39 | road right of way based on the street tree requirements as listed in 9.01.04.B.14  
40 |

41 | B. For single-family Lots within a new subdivision, additional trees may be required  
42 | pursuant to the replacement requirements in Subsection 9.02.05.D. In such cases, the  
43 | required number of replacement trees shall be divided by the number of Lots approved  
44 | for the subdivision. The resulting number shall be added to the minimum tree  
45 | requirements for each Lot as set out in ~~Subsection 9.01.05.A~~ above. The number of trees  
46 | required shall be indicated on the plans.

1  
2 | C. All protected trees listed in Subsection 9.02.02 ~~A~~ are prohibited from being removed  
3 from Residential Lots of any size without an approved tree removal Permit.

- 4  
5 | 1. The replacement requirements of Subsections 9.02.03 and 9.02.04 shall apply  
6 here.  
7  
8 2. Systematic clearing of a single family Residential Lot is prohibited. Groups of  
9 trees smaller than four (4) inches caliper are encouraged to be preserved.  
10

11 | **9.01.06 Plan Approval.**

12 A. An appropriate Landscape Plan shall be submitted to the County Manager or designee at  
13 the time an application for Site Plan or Development approval is submitted.  
14

15 1. The Landscape plan shall be prepared by a Landscape architect if the following  
16 apply:  
17

18 | \_\_\_\_\_ a. Single family Residential Development over ten (10) ~~one hundred (100)~~  
19 | acres or a multi family Development over five (5) ~~fifteen (15)~~ acres; or  
20

21 b. Commercial, industrial, community facility projects exceeding a Parcel  
22 size of one-half (1/2) acre or twenty-one thousand seven hundred and  
23 eighty (21,780) square feet.  
24

25 | 2. If the Landscape plan is prepared by a Landscape architect, it shall be signed,  
26 dated, and sealed by a Landscape architect registered pursuant to the provisions of  
27 Chapter 481, Florida Statutes, Part II.  
28

29 | B. The Landscape and irrigation plans shall be drawn at an appropriate scale (generally  
30 | drawn at 20 or 30 scale or a scale that is legible) and shall include:  
31

32 | 1. All property line dimensions, north arrows, scale distances, and plan information  
33 | required by the Site Plan review process. All easements shall be shown and  
34 | labeled, all existing and proposed structures and address of the owners and plan  
35 | preparers, label topographic contours and spot elevations.  
36

37 | 2. Delineation of proposed parking spaces, other vehicular areas, access drives,  
38 | aisles;  
39

40 | 3. A detailed plan, illustrating ~~an~~ the automatic irrigation system shall be installed  
41 | to that Shall meet the requirements of Subsection 9.01.03. ~~IF~~, prior to issuance of a  
42 | Certificate of Occupancy;  
43

44 | \_\_\_\_\_ 4. Designation by common and botanical (scientific) name, including applicable  
45 | cultivar name, and location of plant material to be installed or preserved in  
46 | accordance with the requirements of this Section;

1  
2 | 5. Location of buildings; location of existing and proposed utilities.

3  
4 | 6. Use or zoning classification of adjacent properties;

5  
6 | 7. Statement that the owner shall install the landscape according to the landscape  
7 | plan and maintain the landscape according to the Landscape Plan.

8  
9 | 8. A tabulation of all information necessary for evaluation of the plan, including  
10 | gross acreage, Area in square feet of paved areas; and other information that may  
11 | be reasonably required to determine that the plan will meet requirements of this  
12 | Section. A Table with the required buffer type(s), width and number of required  
13 | trees shall be provided for each buffer. A tree removal matrix shall be shown, if  
14 | applicable, on the landscape plan depicting how the removed trees will be  
15 | mitigated.

16  
17 | 9. Location of preserved trees or clusters of trees -may be used to count as landscape  
18 | credit with the species and DBH Caliper called out or a note stating that a group  
19 | of trees will meet the minimum size canopy or ornamental trees.

20  
21 | 10. Removed trees that are required to be mitigated may be submitted. There must be  
22 | a mitigation table on either the tree removal plan or the landscape plan that  
23 | depicts how the trees will be mitigated.

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25  
26 | C. Individual single-family and duplex (two-family) Residential Property  
27 | Shall be exempted from having a Landscape architect sign and seal Landscape and  
28 | irrigation plans.

29  
30  
31 | 9.01.07 Reserved.

32  
33  
34 | **9.01.08 Certificate Of Occupancy.**

35  
36 | A. No certificate of occupancy shall be issued by the County Building Department until the  
37 | requirements of this Section are met.

38  
39 | B. ~~The County Manager or designee~~ Lake County Building Official can issue a Certificate  
40 | of Occupancy if the ~~requirements~~ of this Section are not met, provided the developer or  
41 | owner submits a performance bond to the County Manager or designee in the amount of  
42 | one hundred and ten (110) percent of the costs to bring the Property into compliance with  
43 | the requirements of this Section. The required landscaping shall be installed no later than  
44 | one (1) year after issuance of the Certificate of Occupancy. The developer or owner shall  
45 | pay reinspection fees for subsequent reinspections of the property.

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**9.01.09 Administration and Enforcement.**

A. The County Manager or designee shall be charged with the duty of administering the provisions of this section and securing compliance therewith. In furtherance of this responsibility, the County Manager or designee shall:

1.          Make such inspections as may be necessary to carry out the purposes and intent of this section.

2.          Site conditions may prohibit the owner or developer from complying with the requirements of this section. The County Manager or designee may use discretion and waive and/or alter certain requirements while maintaining the intent of Subsections 9.01.02 and 9.01.03. ~~9.01.01.A&B, 9.01.01A-d, and 9.02.01.~~

(Ord. No. 2004-15, § 14, 3-16-04)

**9.01.10 Standards and Tables.**

A. *Lake County Tree Protection Standards.*

1. The protection measures described in this Subsection are based on those in the Tree City USA Bulletins published by The National Arbor Day Foundation: How to Save Trees During Construction (No. 8, 1998), A Systematic Approach to Building with Trees (No. 20, 1998), and How to Protect Trees During Underground Work (No. 35, 1998). These publications are hereby adopted and included by reference herein. Copies of such publications are available from the County Manager or designee. These publications ~~should~~shall be used to supplement the required protection measures. They also provide information on the economic value of trees to developments and their incorporation into designs as well as guidelines on professional tree care, tree planting and tree transplanting.

2. The applicable protection measures in this Subsection Shall be implemented for:

         a. Any exempt tree that will not be removed; and

         b. Any non-exempt tree that has not been Permitted for removal; and

1 | \_\_\_\_\_ c. \_\_\_\_\_ All trees that are retained or replaced pursuant to Subsection  
2 | 9.02.05.D of the Lake County Land Development Regulations  
3 | Chapter IX – Sections 9.01 and 9.02.  
4 |

5 | 3. It shall be unlawful for any person, during the construction of any Structures or  
6 | other improvements, to place solvents, materials, construction machinery or  
7 | temporary soil deposits within the drip line of any protected tree. This includes  
8 | soil that is placed in the drip-line permanently for the purpose of a grade change,  
9 | unless the grade is changed according to the standards described in Subsection  
10 | 9.01.10.A.6.a&b below.  
11 |

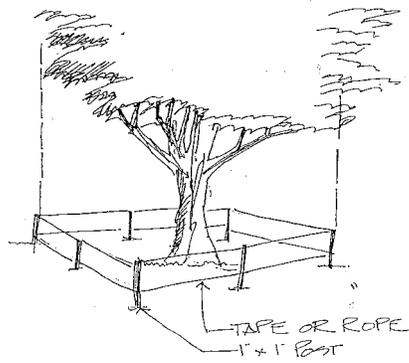
12 | 4. Avoiding mechanical injuries. In order to protect against mechanical injuries to  
13 | roots, trunks and branches, and injuries by chemical poisoning, grade changes,  
14 | excavations, paving, and attachments or wires, the applicable protection measures  
15 | set out below Shall be implemented prior to commencement of Permitted  
16 | construction.  
17 |

18 | a. A protective barrier (~~Illustration Subsection 9.01.10.H.3~~ See Figure 3) shall  
19 | be placed around all protected trees prior to any Land preparation or  
20 | construction of Structures or other improvements in accordance with the  
21 | following measures:  
22 |

23 | 1. Posts shall be placed at points not closer than the drip-line of the  
24 | tree unless the Structure or improvement has been permitted by the  
25 | County Manager or designee through the Development Review  
26 | Staff process or special staff review to be erected within the drip-  
27 | line of the tree with a wide canopy. The Structure or improvement  
28 | may be placed within the drip-line of the tree only if the tree has  
29 | been root pruned, as supervised by a licensed Landscape architect  
30 | or arborist certified by the International Society of Arboriculture.  
31 | For palm trees, the posts shall be placed at points not closer than  
32 | six (6) feet from the trunk.  
33 |

34 | 2. The posts shall be connected with clearly visible plastic- tape or  
35 | ribbon, or rope  
36 |  
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38 |

39 | Figure 3 – Properly constructed barricade protects the total area at the tree drip line.  
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- b. No attachments, wires, signs, nails, or Permits Shall be fastened to a protected tree other than supportive wires if applicable which Shall be attached in compliance with the guidelines set forth in the Tree City USA Bulletins published by The National Arbor Day Foundation: How to Save Trees During Construction (No. 8, 1998), A Systematic Approach to Building with Trees (No. 20, 1998), and How to Protect Trees During Underground Work (No. 35, 1998).
  - c. No equipment, construction materials or debris of any kind shall be placed within a protective barrier.
  - d. Landscaping activities within the bounds of the protective barrier (before and after it is removed) shall be accomplished with light machinery (such as, aerators and mowers) or manual labor. No grubbing or similar activities are permitted.
  - e. In lieu of constructing the barriers required above in Subsection ~~9.10.10.A.4.a.1~~, above large Areas containing protected trees where no Land preparation or other Development activities of any kind will occur may be designated on a tree removal application. The designated Area Shall be protected by placing stakes a maximum of twenty-five (25) feet apart along the outside perimeter of the Area and tying clearly visible plastic tape or ribbon, or rope, from stake to stake. The perimeter line shall be outside of the drip line of any protected tree within the designated area.
  - f. Protective barriers and perimeter lines shall remain in place until all construction activity is terminated, except for Landscaping.
5. Avoiding injuries due to chemical poisoning
- a. No fuel, paint, solvent, oil, thinner, asphalt, cement, grout or any other construction chemical or other material or tools of any kind Shall be stored, or allowed in any manner to enter, within a protective barrier or perimeter line during the construction process.

1 | \_\_\_\_\_ b. No equipment shall be cleaned within a protective barrier or perimeter  
2 | line.

3 |  
4 | 6. Avoiding injuries due to grade changes. Because changes in soil grade within the  
5 | drip line of a protected tree commonly cause extensive root damage or death of  
6 | the tree within one (1) to two (2) years, grade changes shall not be made within  
7 | the drip line unless the following protective measures are taken:

8 |  
9 | a. Raising the Grade.

10 |  
11 | 1. Preparing the ground.

12 |  
13 | a. Within the drip line, existing sod, vegetation and leaf litter  
14 | shall be removed ~~and the soil loosened without injuring the~~  
15 | ~~roots.~~

16 |  
17 | b. The Area within the drip line shall be properly watered and  
18 | protected fertilized to improve the vigor and growth of the  
19 | roots.

20 |  
21 | 2. Installing tile drains.

22 |  
23 | a. Porous, four (4) inch agriculture drain tiles or perforated  
24 | piping shall be laid over the soil to drain liquids away from  
25 | the trunk. A drop of at least one-eighth (1/8) inch per foot  
26 | shall be provided. The drain field shall be designed to  
27 | provide adequate drainage of the existing configuration of  
28 | the trees. (Illustration in Subsection 9.01.10. AH.64-5). See  
29 | Figures 4, 5, 6 and 7

30 |  
31 | b. The number of drains shall depend upon the soil material;  
32 | lighter sandy soils and porous gravelly material require  
33 | fewer drains than heavy non-porous soils.

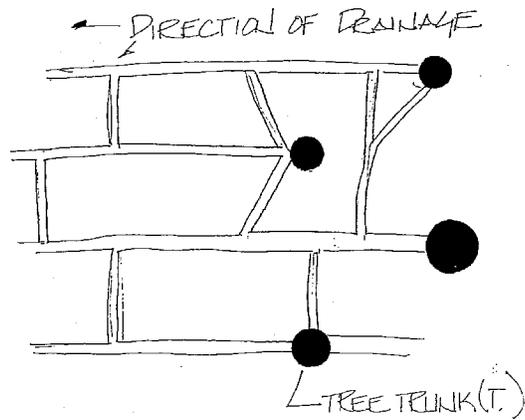
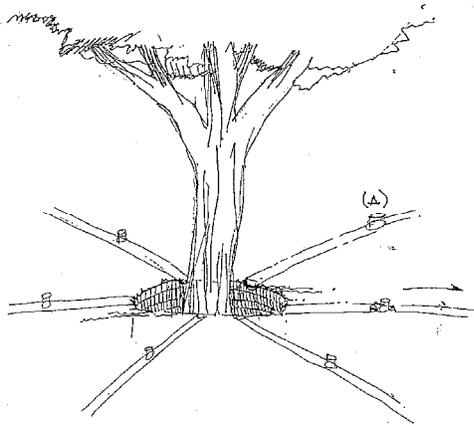
34 |  
35 | c. Installing vertical tiles along the system shall provide  
36 | aeration. The vertical tiles shall be filled with gravel and  
37 | capped with a heavy-duty mesh to keep out trash and  
38 | debris.

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41 | Figure 4 – A dry well around a tree  
42 | permits air and water circulation.

Figure 5 – Grid pattern of tiles for  
draining a stand of trees.

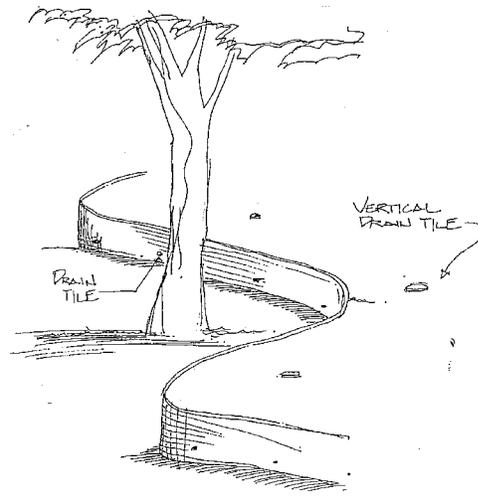
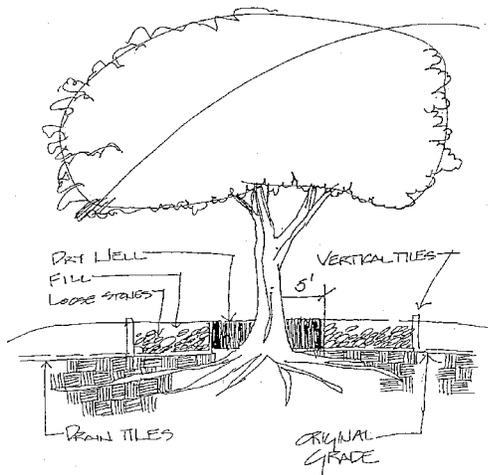
43 | Tiles on the ground are sloped to  
44 | drain away from the trunk and off  
45 | roots (arrow) Vertical tiles (A) are  
46 | connected with drain to permit additional

1 air circulation; the one on the extreme  
2 right is held erect by loose stones.  
3



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7 **Figure 6 – Section illustrating fill in**  
8 **over tiles.**

9  
10 **Figure 7 – Open dry well at the edge**  
11 **of a filled slope provides air and water**  
12 **circulation over part of the root system**  
13 **covered by fill. Extending the upper side of**  
14 **the wall a few inches above the fill prevents**  
15 **debris from washing into the well.**



14  
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16  
17 3. Dry well construction (Illustration in Subsection 9.01.10.A.6.a.3H.6). See  
18 Figure 4.

- 19  
20 a. Dry wells shall be large enough to allow for maximum  
21 growth of the tree trunk. Most large shade trees require at  
22 least a sixty (60) inch diameter well. For slow growing  
23 mature trees, a space of twelve (12) to eighteen (18) inches

1 shall be provided between the trunk and the side of the well  
2 at every point.

- 3
- 4 b. To prevent washing of material into the well, the dry well  
5 casing walls shall be high enough to bring the coping just  
6 above the level of the proposed fill.  
7
- 8 c. Dry well walls shall be constructed of materials that Permit  
9 passage of air and water. Concrete blocks backed with  
10 galvanized screening may be used for the sides of the well.  
11
- 12 d. Gratings of barriers shall be used around openings that are  
13 large enough to present a hazard to pedestrians.  
14
- 15 e. Open wells ~~(Illustration in Subsection 9.01.10.A.6.a.3H.7)~~  
16 (See Figure 7) shall be cleaned regularly to remove  
17 sediment, leaves, and debris that might interfere with the  
18 free passage of air.  
19

20 4. Filling (Illustration in Subsection 9.01.10.A.6.a.3H.6). (See Figure 6)  
21

- 22 a. Large stones, except for those made from limestone or  
23 marble chips, shall be placed over the drainage tiles and a  
24 layer of smaller stones shall be placed over the remainder  
25 of the ground within the drip line.  
26
- 27 b. A layer of gravel shall be placed over the stones.  
28
- 29 c. A layer of geotextile, including filter fabric or woven  
30 polystyrene, that prevents fill but allows water to pass  
31 through shall be placed over the gravel.  
32
- 33 d. The fill shall be completed with a layer of porous soil.  
34

35 b. Lowering the Grade.  
36

37 1. Methods. When lowering the grade of the soil surrounding a protected  
38 tree, using any of the following methods shall preserve the maximum  
39 number of tree roots within the drip line:  
40

- 41 a. Terracing. The Area within the drip line left at the original  
42 grade by terracing ~~(Illustration in Subsection 9.01.10.H.8)~~.  
43 See Figure 8  
44
- 45 b. Retaining wall. The Area within the drip line is left at the  
46 original grade by constructing a dry retaining wall. The

retaining wall shall be porous to allow for aeration-  
(~~Illustration in Subsection 9.01.10.H.9~~) See Figure 9

- c. Terracing and retaining wall. The Area within the drip line is left at the original grade by the combined Use of terracing and dry retaining wall.

2. Precaution. In addition to the above, the following precaution shall be taken when lowering the grade around a protected tree:

Roots Shall be cut cleanly and retrimmed after excavation using equipment such as axes, shovels, chainsaws, and other similar root pruning instruments. No bulldozers, root rakes, or other such equipment shall be used.

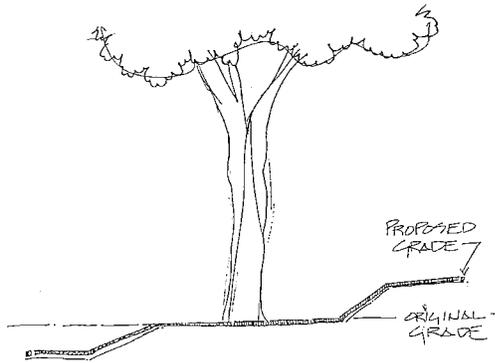
- a. Minor Changes in Grade. When the change in grade is minor, two (2) inch to four (4) inch maximum, protective measures may be taken as shown in Subsection 9.01.10.H.10 in lieu of the above requirements. See Figure 10
- b. The County Manager or designee shall approve the Use of these methods where their Use will not endanger the health of the protected tree.

7. *Avoiding injuries due to excavations.*

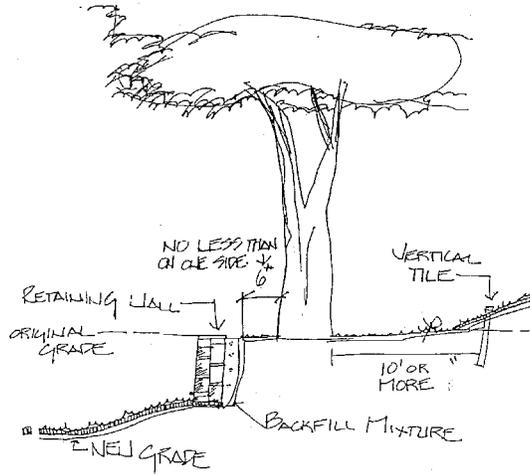
- a. To avoid damage to protected trees, water, sewer, and other utility-lines ~~should~~shall be routed around the drip lines.
- b. If a utility line cannot reasonably be routed around the drip line the utility line shall be tunneled beneath the Area within the drip line. The tunnel shall be offset to one (1) side of the trunk to prevent damage to the main taproots. (~~Illustration in Subsection 9.01.10.H.11~~). See Figure 11

8. *Avoiding injuries by paving within the drip line.* Paving may be placed within the drip line but outside the tree protection Zone of a protected tree, so long as no damage is inflicted to the tree by grade change, compaction of soil, or any other cause, if approved by the County Manager or designee.

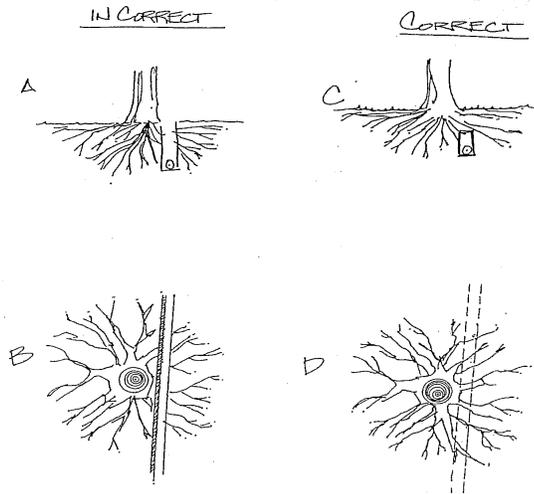
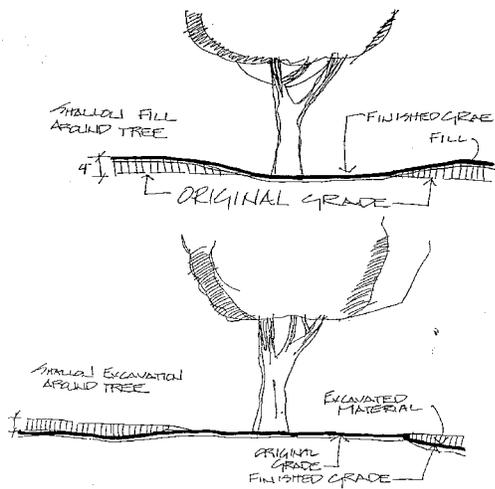
Figure 8 – Lowering the grade by terracing. Figure 9 – Lowering the grade with a retaining wall.



**Figure 10** – Protection measures for minor changes in grade.



**Figure 11** – Excavations within the drip line. Trenching to close to the (A & B) severs roots. Tunneling under the base of the tree (C & D) destroys fewer roots.



**9..01.10B.** Table 1. List of recommended Landscaping trees.

<b>Understory Ornamental Trees</b>	
<i>Common Name</i>	<i>Botanical Name</i>

Redbud	<i>Cercis canadensis</i>
Anise	<i>Illicium spp.</i>
Southern red cedar	<i>Juniperus silicicola</i>
Drake/"Chinese" elm	<i>Ulmus parvifolia</i>
Walter's viburnum	<i>Viburnum obovatum</i>
Flowering dogwood	<i>Cornus florida</i> (partial sun only)
Wax myrtle	<i>Myrica cerifera</i>
Fringe tree	<i>Chionanthus virginica</i>
Yaupon holly	<i>Ilex vomitoria</i>
Loblolly bay	<i>Gordonia lasianthus</i>

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Canopy Trees	
Common Name	Botanical Name
American elm	<i>Ulmus americana</i>
American holly	<i>Ilex opaca</i>
Live oak	<i>Quercus virginiana</i>
Loblolly bay	<i>Gordonia lasianthus</i>

Bald cypress	<i>Taxodium distichum</i>
Loblolly pine	<i>Pinus taeda</i>
Cabbage palm	<i>Sabal palmetto</i>
Longleaf pine	<i>Pinus palustris</i>
Palatka holly	<i>Hex attenuata</i>
Savannah holly	<i>Hex opaca x attenuata "Savannah"</i>
Persimmon	<i>Diospyros virginiana</i>
Slash pine	<i>Pinus elliottii</i>
Red bay	<i>Persea borbonia</i>
Southern magnolia	<i>Magnolia grandiflora</i>
Red maple	<i>Acer rubrum</i>
Oct. Glory maple & cult.	<i>Acer rubrum "October Glory" &amp; cultivars (FL flame)</i>
Sugarberry	<i>Celtis laevigata</i>
Sand pine	<i>Pinus clausa</i>
Swamp black gum	<i>Nyssa sylvatica</i>
Sweet bay magnolia	<i>Magnolia virginiana</i>
Dahoon holly	<i>Hex coccinea</i>
Sweetgum	<i>Liquidambar styraciflua</i>

Hornbeam/Bluebeech	<i>Carpinus caroliniana</i>
American sycamore	<i>Platanus occidentalis</i>
Laurel oak	<i>Quercus laurifolia</i>
Tuliptree	<i>Liriodendron tulipifera</i>
Water ash/Pop ash	<i>Fraxinus caroliniana</i>

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C. Table 2. List of ornamental Landscaping trees.

Small Trees	
Common Name	Botanical Name
Crape myrtle	<i>Lagerstroemia x fauriei</i> and cultivars
Rusty pittosporum	<i>Pittosporum ferrugineum</i>
Wax myrtle	<i>Myrica cerifera</i>
Podocarpus	<i>Podocarpus macrophyllus</i>
Loblolly bay	<i>Gordonia lasianthus</i>
Red holly	<i>Ilex</i> spp. including "EP", "Savi", "Nellie Stevens"
Junipers	<i>Juniperus</i> "Torulosa" and "Spartan"

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<b>Large Ornamental Trees and Palms</b>	
<b>Common Name</b>	<b>Botanical Name</b>
Winged elm	Ulmus alata
Heritage river birch	Betula nigra "Heritage"
Washingtonia palm	Washingtonia robusta
Chinese fan palm	Livistona chinensis
Date palm	Phoenix dactylifera
Canary Island date palm	Phoenix canariensis
Windmill palm	Trachycarpus fortunei
European fan palm	C. humilis
Pindo palm	Butra capitate

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D. Table 3. List of suggested shrubs and minimum center requirements for visual screens.

<b>Common Name</b>	<b>Botanical Name</b>	<b>Minimum Center (in feet)</b>
Glossy abelia	Abelia spp.	2.0
Pampas grass	Cortaderia selloana	4.0

Allamanda, Pineland	Angadenia berterii	2.5
Pineapple guava	Feijoa sellowiana	3.0
Anise	Illicium floridanum	2.5
Pittosporum	Pittosporum tobira	3.0
Azalea	Rhododendron hybrids	3.0
Plumbago	Plumbago capensis	2.0
Banana shrub	Michelia fuscata	3.0
Primrose jasmine	Jasminum mesnyi	3.0
Boxwood	Buxus microphylla	2.0
Viburnum	Viburnum hybrids	3.0
Chinese juniper	Juniperus chinensis	3.0
Silverthorn	Elaeagnus philippensis	3.0
Podocarpus	Podocarpus macrophyllus	2.0
Holly	Hex spp.	2.0-3.0
Indian hawthorne	Raphiolepis indica	2.5

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E. Table 4: List of Recommended Lawn Grass

Common Name
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Centipede
Bahia
St. Augustine "Palmetto"
St. Augustine "Bitter Blue"
St. Augustine "Florata"
Annual Ryegrass
Perennial Ryegrass

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~~F. Table 5: List of Recommended Xeriscape Plants~~

~~From *Drought Tolerant Plant Guide for Lake County* published by the Lake County Water Authority and Xeriscape plant list from St. John's Water Management District.~~

~~—+ = Low drought tolerance~~

~~—++ = Moderate drought tolerance~~

~~—+++ = High drought tolerance~~

~~—\*Indicates species is native to North America~~

<del>Canopy Trees</del>	<del>Botanical Name</del>	<del>Drought Tolerance</del>
<del>*Bald cypress</del>	<del>Taxodium distichum</del>	<del>+++</del>
<del>*Pond cypress</del>	<del>Taxodium ascendens</del>	<del>+++</del>

*Pignut hickory	<i>Carya glabra</i>	+++
*Laurel oak	<i>Quercus laurifolia</i>	++
*Live oak	<i>Quercus virginiana</i>	+++
*Shumard oak	<i>Quercus shumardii</i>	+++
*Longleaf pine	<i>Pinus palustris</i>	+++
*Sand pine	<i>Pinus clausa</i>	+++
*Slash pine	<i>Pinus elliottii</i>	+++
*Redbay	<i>Persea borbonia</i>	+++
*Sweetgum	<i>Liquidambar styraciflua</i>	++

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<b>Understory Ornamental and Palm Trees</b>		
<b>Common Name</b>	<b>Botanical Name</b>	<b>Drought Tolerance</b>
*Myrtle oak	<i>Quercus myrtifolia</i>	+++
*Cabbage palm	<i>Sabal palmetto</i>	+++
*Chickasaw plum	<i>Prunus angustifolia</i>	+++
Chinese fan palm	<i>Livistona chinensis</i>	++
Crape myrtle	<i>Lagerstroemia indica</i>	+++
Winged elm	<i>Ulmus alata</i>	+++

European fan palm	<i>Chamerops humilis</i>	++
*East Palatka holly	<i>Hex x attenuata</i>	+++
*Yaupon holly	<i>Hex vomitoria</i>	+++
Loquat	<i>Eriobotrya japonica</i>	++
Redbud	<i>Cereis canadensis</i>	++
*Southern red cedar	<i>Juniperus silicicola</i>	+++
*Sugarberry	<i>Celtis laevigata</i>	++
Purple tabebuia	<i>Tabebuia heterophylla</i>	+++
Washington palm	<i>Washingtonia robusta</i>	+++
Windmill palm	<i>Trachycarpus fortunei</i>	+++

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Shrubs		
Common Name	Botanical Name	Drought Tolerance
Japanese anise	<i>Illicium anisatum</i>	++
*Florida anise	<i>Illicium floridavum</i>	++
*Beautyberry	<i>Callicarpa americana</i>	+++
Butterfly bush	<i>Buddlea davidii</i> spp.	+++
Japanese camellia	<i>Camellia japonica</i>	++

Sasanqua camellia	Camellia sasanqua	++
Cape honeysuckle	Tecomaria capensis	++
Croton	Codiaeum variegatum	+++
Firecracker plant	Crossandra infundibuliformis	+++
Firethorn	Crataegus spp.	+++
*Florida privet	Forestiera segregata	+++
*Gallberry	Hex coriacea	+++
Chinese holly	Hex chinensis	+++
Japanese holly	Hex japonica	++
*Schillings holly	Hex x 'Schilling'	+++
Indian hawthorn	Raphiolepis indica	+++
Japanese boxwood	Buxus sempervirens	+++
Juniper family	Juniperus spp.	+++
Leatherleaf mahonia	Mahonia bealei	++
Natal plum	Carissa macrocarpa	+++
Orange jasmine	Murraya paniculata	++
*Saw palmetto	Serenoa repens	+++
Pampas grass	Cortaderia selloana	+++
Pineapple guava	Psidium L. spp.	+++

Pittosporum family	Pittosporum spp.	++
Maki podocarpus	Podocarpus macrophyllus 'Maki'	+++
Yew podocarpus	Podocarpus macrophyllus	+++
*Viburnum family	Viburnum spp.	++
*Wax myrtle	Myrica cerifera	+++
*Prickley pear cactus	Opuntia humifusa	+++
*Spanish bayonette	Yucca filamentosa	+++

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Vines		
Common Name	Botanical Name	Drought Tolerance
*Coral honeysuckle	Lonicera sempervirens	+++
Creeping fig	Ficus repens	+++
*Carolina jessamine	Gelsemium sempervirens	+++
*Grape	Vitis rotundifolia	++
*Virginia creeper	Parthenocissus quinquefolia	+++

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Groundcover		
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Common Name	Botanical Name	Drought Tolerance
*Beargrass	<i>Nolina brittoniana</i>	++
*Blue-eyed grass	<i>Sisyrinchium angustifolium</i> or <i>S. atlanticum</i>	++
*Coontie	<i>Zamia pumila</i>	++
*Crinum lily	<i>Crinum amabile</i> 'Purple Leaf' or <i>C. asiaticum</i>	++
Dwarf nandina	<i>Nandina domestica</i> 'compacta'	++
*Gopher apple	<i>Liciana michauxii</i>	++
Holly fern	<i>Crytomium falcatum</i>	++
Algerian ivy	<i>Hedera canariensis</i>	++
English ivy	<i>Hedera helix</i>	++
Confederate jasmine	<i>Trachelospermum</i> <i>jasminoides</i>	+++
Creeping juniper(s)	<i>Juniperus</i> spp.	+++
Liriope	<i>Liriope muscari</i>	+++
Mondo grass	<i>Ophiopogon japonicus</i>	+++
*Cord grass	<i>Spartina</i> spp.	+++
Society garlic	<i>Tulbaghia violacea</i>	+++
*Wiregrass	<i>Aristida stricta</i>	++

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Annuals and Perennials		
Common Name	Botanical Name	Drought Tolerance
Aloe	Aloe vera	+++
*Blanket flower	Gallardia grandiflora	+++
Daylilly	Hermocallis spp.	++
False heather	Cuphea hyssopifolia spp.	++
Kalanchoe	Kalanchoe spp.	+++
Perwinkle	Catharanthus roseus	+++
Moss rose	Portulaca grandiflora	+++
Innocence	Hedyotis spp.	++
Sun rose	Helianthemum spp.	++
Piriqueta	Piriqueta caroliniana	++
Stylisma	Stylisma patens	++
Pentas	Penta spp.	+++

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G. Table 6: List of Xeric Oak and Sand Pine Community Plants

Trees and Palms	
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Common Name	Botanical Name
Myrtle oak	<i>Quercus myrtlefolia</i>
Scrub oak	<i>Quercus inopina</i>
Saw palmetto	<i>Serona repens</i>
Chapman's oak	<i>Quercus chapmanii</i>
Dwarf red bay	<i>Persea borbonia humilis</i>
Bluejack oak	<i>Quercus incana</i>
Live oak	<i>Quercus virginiana</i>
Dwarf live oak	<i>Quercus minima</i>
Ground oak	<i>Licania michauxii</i>
Scrub hickory	<i>Carya floridana</i>
Scrub holly	<i>Hex opaca var. arenicola</i>
Scrub palmetto	<i>Sabal etonia</i>
Scrub plum	<i>Prunus geniculata</i> (Endangered/endemic to scrub habitat)

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Shrubs	
Common Name	Botanical Name

Prickly-pear cactus	<i>Opuntia</i> spp./compressa
Rusty-lyonia	<i>Lyonia ferruginea</i>
Blueberry	<i>Vaccinium</i> spp.
Winged-sumac	<i>Rhus copallina</i>
Dwarf huckleberry	<i>Gaylussacia dumosa</i>
Paw-paw	<i>Asimina reticulata</i>
Florida rosemary	<i>Ceratiola ericoides</i>

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Vines	
Common Name	Botanical Name
Calusa grapevine	<i>Vitis shuttleworthii</i>
Cat-greenbriar	<i>Smilax glauca</i>
Greenbriar	<i>Smilax auriculata/laurifolia</i>
Muscadine grapevine	<i>Vitis rotundifolia</i>
Passion-vine	<i>Cassytha filiformes</i>

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Annuals and Perennials	
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Common Name	Botanical Name
Bluestems	<del>Andropogon spp.</del>
Beak-rush	Rynchospora spp.
Blazing-star	Liatris tenuifolia
Britton's beargrass	Nolina brittonia
Queen's delight	Stillingia sylvatica
Wiregrass	Aristida stricta
Clasping-warea	Warea amplexifolia (Extremely endangered/endemic to scrub)
Brown-haired snoutbean	Rynchosia cinerea
Frostweed	Helianthemum spp.
Panic grass	Dicanthelium sabulorem
Yellow indiagrass	Sorghastrum nutana

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9.01.10.I. Prohibited Species. The control and elimination of invasive, nonnative species shall protect the natural vegetative communities existing within Lake County. The trees set forth below are prohibited from being counted toward the required number of trees, as replacements to removed trees, and shall not be voluntarily planted.

1. These trees are prohibited from being planted or counted toward minimum tree requirements. These trees do not require an approved Lake County tree removal permit for removal.
2. Removal of these trees from a commercial, industrial, community facility, or multi-family Site that is being developed shall be completed as a requirement for approval of the final Permit inspection and prior to issuance of a certificate of occupancy. Single-family residences of new construction shall comply with this requirement.
3. Designers and land owners shall also not plant vegetation that is listed in the following websites:
  - a. Florida Exotic Pest Plant Council website: [www.fleppc.org/](http://www.fleppc.org/)

b. Center for Aquatic and Invasive Plants, University of Florida, IFAS:  
<http://aquat1.ifas.ufl.edu/photos.html/>

<b><u>PROHIBITED SPECIES</u></b>	
<u>Common Name</u>	<u>Botanical Name</u>
<u>Australian Pine</u>	<u>Casuarina spp.</u>
<u>Brazilian Pepper</u>	<u>Schinus terbinthifolius</u>
<u>California Privet (Tree form)</u>	<u>Ligustrum ovalifolium</u>
<u>California Privet (Shrub form)</u>	<u>Ligustrum ovalifolium</u>
<u>Camphor</u>	<u>Cinnamomum camphora</u>
<u>Cedar Gum</u>	<u>Eucalyptus gunnii</u>
<u>Chinaberry</u>	<u>Melia azedarch</u>
<u>Chinese Tallow Tree</u>	<u>Sapium sebiferum</u>
<u>Ear Tree</u>	<u>Enterlobium cyclocarpum</u>
<u>Empress Tree</u>	<u>Paulownia tomentosa</u>
<u>Eucalyptus species</u>	<u>Eucalyptus spp.</u>
<u>Jacaranda</u>	<u>Grevillea robusta</u>
<u>Japanese Tallow Tree</u>	<u>Sapium japonicum</u>
<u>Melaleuca</u>	<u>Melaleuca quinquenervia</u>
<u>Mimosa</u>	<u>Albizzia julibrissin</u>
<u>Paper Mulberry</u>	<u>Broussonetia papyrifolia</u>
<u>Silk Oak</u>	<u>Grevillea robusta</u>
<u>Tree of Heaven</u>	<u>Ailanthus altissima</u>

2. Removal of these trees from any site that is being developed shall be completed as a requirement for approval of the final permit inspection and prior to issuance of a certificate of occupancy. Removal of any plant, native or invasive from a jurisdictional water body such as wetlands and lakes shall first be permitted by the corresponding agency such as the St. Johns Water Management District.

3. A phasing plan may be submitted for the removal of prohibited species.

H. Figures 1–13 [14].

**9.02.00 Protected Trees.**

1  
2 **9.02.01 Purpose.** The purpose of this Section:

- 3 1. Is to establish rules and regulations governing the protection of trees and  
4 vegetative cover within unincorporated Lake County  
5 2. To encourage the proliferation of trees and vegetation within unincorporated Lake  
6 County as well as their replacement  
7 3. To recognize their importance and their meaningful contribution to a healthy,  
8 beautiful, and safer community attributable to their carbon dioxide absorption,  
9 oxygen production, dust filtration, wind and noise reduction, soil erosion  
10 prevention, lakeshore erosion protection, wildlife habitat, surface drainage  
11 improvement, beautification and aesthetic enhancement of improved and vacant  
12 lands; and the general promotion of the health, safety, welfare and well-being of  
13 the community

14  
15 ~~1.) is to establish rules and regulations governing the protection of trees and vegetative cover~~  
16 ~~within unincorporated Lake County;~~

17 ~~2.) to encourage the proliferation of trees and vegetation within unincorporated Lake County as~~  
18 ~~well as their replacement; to recognize their importance and their meaningful contribution to a~~  
19 ~~healthy, beautiful, and safer community attributable to their carbon dioxide absorption, oxygen~~  
20 ~~production, dust filtration, wind and noise reduction, soil Erosion prevention, lakeshore Erosion~~  
21 ~~protection, wildlife habitat, surface drainage improvement, beautification and aesthetic~~  
22 ~~enhancement of improved and vacant Lands; and the general promotion of the health, safety,~~  
23 ~~welfare and well-being of the community.~~

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25  
26  
27 **9.02.02 Tree Protection.**

28  
29 A. *Protected Trees.* All trees native to Florida including, but not limited to, the types of trees  
30 set forth below are protected ~~and as contained in:~~ The Recommended Plant for Lake  
31 County (separate document) and Vascular Plants of Florida by Richard P. Wunderlin.  
32 The protected palm trees listed below may not be used for more than twenty-five (20%5)  
33 percent of the ~~required replacement~~ trees ~~required pursuant to Subsections 9.01.03.E.4.~~  
34 These trees require an approved Lake County Tree Removal Permit for removal.  
35 Subsection 9.02.089 specifically addresses the designation of Historic Specimen Trees.

36  
37  
38 \*\* Note: The Lake County Recommended Plants for Lake County Landscape Manual shall apply  
39 for trees that are required to be preserved in Lake County.

40

<del>CEDAR</del>	
<del>(1) Atlantic White Cedar</del>	<del>(Chamaecyparis thyoides)</del>

CYPRESS	
(2) Bald Cypress	( <i>Taxodium distichum</i> )
(3) Pond Cypress	( <i>Taxodium ascendens</i> )
ELM	
(4) American Elm; White Elm*	( <i>Ulmus americana</i> )
(5) Winged Elm; Cork Elm	( <i>Ulmus alata</i> )
*Or other engineered <i>U. americana</i> cultivars	
HICKORY	
(6) Mockernut Hickory	( <i>Carya tomentosa</i> Nutt.)
(7) Pignut Hickory	( <i>Carya glabra</i> )
(8) Scrub Hickory	( <i>Carya floridana</i> )
(9) Water Hickory	( <i>Carya aquatica</i> )
HOLLY	
(10) American Holly	( <i>Ilex opaca</i> )
(11) Dahoon Holly	( <i>Ilex cassine</i> )
(12) Palatka Holly	( <i>Ilex attenuata</i> )
MAPLE	
(13) Florida Maple	( <i>Acer barbatum</i> Mich.)
(14) Red Maple	( <i>Acer rubrum</i> )

<b>MAGNOLIA</b>	
(15) Sweet Bay	( <i>Magnolia virginiana</i> )
(16) Southern Magnolia	( <i>Magnolia grandiflora</i> )
<b>OAK</b>	
(17) Bluejack Oak	( <i>Quercus incana</i> )
(18) Chapman Oak	( <i>Quercus chapmanii</i> )
(19) Laurel Oak	( <i>Quercus laurifolia</i> )
(20) Live Oak	( <i>Quercus virginiana</i> )
(21) Myrtle Oak	( <i>Quercus myrtifolia</i> )
(22) Post Oak	( <i>Quercus stellata</i> )
(23) Sand Live Oak	( <i>Quercus geminata</i> )
(24) Turkey Oak	( <i>Quercus laevis</i> )
(25) Water Oak	( <i>Quercus nigra</i> )
<b>PALM</b>	
(26) Sabal Palm; Cabbage Palm	( <i>Sabal palmetto</i> )
(27) Silver Palm	( <i>Coccothrinax argentata</i> )
<b>PINE</b>	
(28) Loblolly Pine	( <i>Pinus taeda</i> )
(29) Longleaf Pine	( <i>Pinus palustris</i> )

<del>(30) Pond Pine</del>	<del>(Pinus serotina Michx.)</del>
<del>(31) Sand Pine</del>	<del>(Pinus clausa)</del>
<del>(32) Slash Pine</del>	<del>(Pinus elliottii)</del>
<del>RED CEDAR</del>	
<del>(33) Southern Red Cedar</del>	<del>(Juniperus silicicola)</del>
<del>OTHERS</del>	
<del>(34) Basswood</del>	<del>(Tilia americana)</del>
<del>(35) Blackgum</del>	<del>(Nyssa sylvatica)</del>
<del>(36) Chickasaw Plum</del>	<del>(Prunus angustifolia)</del>
<del>(37) Fringe Tree</del>	<del>(Chionanthus virginica)</del>
<del>(38) Hackberry</del>	<del>(Celtis canadensis)</del>
<del>(39) Sugarberry</del>	<del>(Celtis laevigata)</del>
<del>(40) Hornbeam</del>	<del>(Carpinus caroliniana)</del>
<del>(41) Loblolly Bay</del>	<del>(Gordonia lasianthus)</del>
<del>(42) Persimmon</del>	<del>(Diospyros virginiana)</del>
<del>(43) Red Bay</del>	<del>(Persea borbonia)</del>
<del>(44) Redbud</del>	<del>(Cereis canadensis)</del>
<del>(45) Red Mulberry</del>	<del>(Morus rubra)</del>
<del>(46) Sparkleberry</del>	<del>(Vaccinium arboreum)</del>

<del>(47) Sweetgum</del>	<del>(Liquidambar styraciflua)</del>
<del>(48) Tulip Tree</del>	<del>(Liriodendron tulipifera)</del>
<del>(49) Walter's Viburnum</del>	<del>(Viburnum obovatum)</del>
<del>(50) Wax Myrtle</del>	<del>(Myrica cerifera)</del>
<del>(51) Wild Olive Devilwood</del>	<del>(Osmanthus americanus)</del>
<del>(52) River Birch</del>	<del>(Betula nigra)</del>
<del>(53) Flowering Dogwood</del>	<del>(Cornus florida)</del>

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~~B. Prohibited Species. The control and elimination of invasive, nonnative species shall protect the natural vegetative communities existing within Lake County. The trees set forth below are prohibited from being counted toward the required number of trees, as replacements to removed trees, and shall not be voluntarily planted.~~

~~1. These trees are prohibited from being planted or counted toward minimum tree requirements. These trees do not require an approved Lake County Tree Removal Permit for removal.~~

<del>(1)</del>	<del>Australian Pine</del>	<del>(Casuarina spp.)</del>
<del>(2)</del>	<del>Melaleuca</del>	<del>(Melaleuca quinquenervia)</del>
<del>(3)</del>	<del>Chinaberry</del>	<del>(Melia azedarch)</del>
<del>(4)</del>	<del>Ear Tree</del>	<del>(Enterlobium cyclocarpum)</del>
<del>(5)</del>	<del>Eucalyptus species</del>	<del>(Eucalyptus spp.)</del>

(6)	Brazilian Pepper	(Schinus terbinthifolius)
(7)	Paper Mulberry	(Broussonetia papyrifolia)
(8)	Silk Oak	(Grevillea robusta)
(9)	Empress Tree	(Paulownia tomentosa)
(10)	Tree of Heaven	(Ailanthus altissima)
(11)	Chinese Tallow Tree	(Sapium sebiferum)
(12)	Japanese Tallow Tree	(Sapium japonicum)
(13)	Camphor	(Cinnamomum camphora)
(14)	California Privet*	(Ligustrum ovalifolium)
	*both shrub and tree forms	
(15)	Cedar Gum	(Eucalyptus gunnii)

2. ~~Removal of these trees from a commercial, industrial, community facility, or multi-family Site that is being developed shall be completed as a requirement for approval of the final Permit inspection and prior to issuance of a certificate of occupancy. Single-family residences of new construction are not exempt from this requirement.~~

**9.02.03 Removal of Trees Requires Permit.** Unless exempt pursuant to Subsection 9.02.04, the following provisions shall apply to the removal of trees:

A. It shall be unlawful and a violation of this Section to clear or remove a tree by any method without first submitting a Permit application and fee and securing a tree removal Permit in accordance with Section 14.14.04 of the Land Development Regulations ~~from the County Manager or designee.~~ If protected trees are removed intentionally or

1 | unintentionally without a Permit, then the real Property owner shall take the **following**  
2 | **remedial actions:**

3 |  
4 | 1. ~~Restore the Property consistent with a restoration and monitoring plan submitted~~  
5 | ~~by the real Property owner and approved by the County Manager or designee. A~~  
6 | ~~restoration plan must be prepared and submitted within 30 days by the property~~  
7 | ~~owner, developer, contractor, or agent for approval by the County Manager or~~  
8 | ~~designee. All trees and vegetation shown on the approved site restoration plan~~  
9 | ~~must be installed on the property and the site grade restored.~~

10 |  
11 | 2. The restoration plan shall include tree replacement in accordance with the  
12 | following standards:

13 |  
14 | a. Each canopy tree replacement tree shall be a minimum ~~two three (23)~~  
15 | inches caliper, ~~eight feet height (8')~~ x four feet (4') spread. Each  
16 | ornamental tree shall be a minimum one-and-one-half inch (1-1/2) caliper  
17 | six to eight foot height (6'-8') height x two to three feet (2'-3') feet spread  
18 | minimum. Ornamental tree credits shall not exceed twenty percent (20%)  
19 | of the total caliper inches of required replacement.

20 |  
21 | b. The total caliper of all the replacement trees shall be 1:1 (100%) equal the  
22 | total caliper of the trees removed or damaged for those trees that are not  
23 | historic or specimen trees.

24 |  
25 | c. The total caliper of all the replacement trees shall be 1:1.25 (125%) the  
26 | total caliper of the trees removed or damaged for those trees that are  
27 | historic or specimen trees.

28 |  
29 | 3. Removal of a Historical tree, as defined in this section and 9.02.09 requires  
30 | approval by the Lake County Board of County Commissioners

31 |  
32 | B. When the removal of trees is associated with a Development project, the removal of trees  
33 | authorized pursuant to the Lake County Tree Removal Permit Shall not commence until  
34 | one (1) of the following has been approved or issued or unless otherwise authorized  
35 | within the tree removal Permit:

36 |  
37 | a. Subdivision construction plan;

38 |  
39 | b. PUD or MUQD final Development plan;

40 |  
41 | ~~c. MUQD final Development plan;~~

42 |  
43 | cd. Final Site plan;

44 |  
45 | de. Master park plan; or

1 ef. Building Permit.

2  
3 f. Lot grading / site alteration plan submitted as part of a Master Site Plan.

4  
5 g. Landowners wishing to clear their property for Agricultural Purposes shall first  
6 seek zoning approval if needed. These cases shall be reviewed on a case by case  
7 basis and shall comply with other provisions of the Lake County Land  
8 Development Code.

9  
10 C. Approval of a preliminary plat Development plan does not authorize approval for the  
11 removal of trees or other vegetation. A separate Lake County Tree Removal Permit is  
12 required by the Landowner.

13  
14 D. If trees have been approved for removal in the aforementioned plans in Subsections  
15 9.02.03.B.(a)--(gf), and the subject Property has not been developed within twelve (12)  
16 months of approval of the Development Order, then the Property owner Shall submit a  
17 Landscape plan to the County Manager or designee for revegetating the subject Property,  
18 which shall provide for:

19  
20 a. A stabilizing vegetative groundcover of grasses, forbs, or legumes;

21  
22 b. Canopy and understoryornamental trees at half the required number for approved  
23 development, ten three (103) trees per acre. The trees may be grouped together;  
24 and

25  
26 c. Masses of Landscape shrubs to complement the canopy and understoryornamental  
27 trees.

28  
29 E. Tree Removal Permits.

30  
31 1. Application for Permit. An application for tree removal shall be filed on official  
32 forms provided by the County Manager or designee. Completed applications shall  
33 be returned to the Department of Growth Management along with the appropriate  
34 Permit fee as set by resolution of the Board of County Commissioners.

35  
36  
37 ~~F. Tree Protection in Rural Village. When the removal of trees are associated with a~~  
38 ~~Development project in a Rural Village, a tree removal Permit Shall~~~~be~~  
39 ~~required. Removal of trees Shall~~~~not~~ commence until the final Development  
40 approval has been authorized. Regulation of tree removal Shall be as  
41 follows:

42  
43 ~~a.~~ Tree removal Permits authorize, but do not require, removal of trees specified  
44 herein. At least twenty five (25) percent of the total number of trees Permitted for  
45 removal pursuant to any one (1) Permit Shall be replaced on site by the  
46 Permittee.

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~~b. Trees that are prohibited as replacement to removed trees are:~~

<del>(1)</del>	<del>Australian Pine</del>	<del>(Casuarina species)</del>
<del>(2)</del>	<del>Cajeput or Punk Tree</del>	<del>(Melaluca quinquenervia)</del>
<del>(3)</del>	<del>Chinaberry</del>	<del>(Melia azedareh)</del>
<del>(4)</del>	<del>Ear Tree</del>	<del>(Enterlobium cyclocarpum)</del>
<del>(5)</del>	<del>Eucalyptus species</del>	<del>(Eucalyptus spp.)</del>
<del>(6)</del>	<del>Brazilian Pepper</del>	<del>(Schinus terebinthifolius)</del>
<del>(7)</del>	<del>Paper Mulberry</del>	<del>(Broussonetia papyrifora)</del>
<del>(8)</del>	<del>Silk Oak</del>	<del>(Grevillea robusta)</del>

6

7

~~c. Replacement size. A replacement tree Shall be an approved tree at least one (1) inch DBH, Florida number 1 grade or better.~~

8

9

10

11

~~d. Exceptions to the requirements of this policy Shall be allowed for the following:~~

12

13

14

~~(1) Trees within road or drainage rights-of-way and easements which are to be removed as part of an approved project of the Board of County Commissioners.~~

15

16

17

18

~~(2) Trees of less than six (6) inches DBH, unless a wetland tree or a tree that is part of a Sand Pine (Scrub) community.~~

19

20

21

~~(3) Trees which pose an immediate and direct threat to persons or Property.~~

22

~~(4) Trees existing on Lots of five (5) acres or less upon which one (1) or more single family or duplex dwellings exist unless such trees are being cleared to construct any other residence, or Commercial or industrial Structure regardless of when or by whom construction is planned.~~

~~(5) Trees that are located on Land zoned for agriculture and taxed and used for bona fide agricultural or silvicultural purposes.~~

#### 9.02.04 Exemptions to Tree Removal Requirements.

The following are exempted from the requirements of this Section.

    A. Prohibited trees listed in Subsection ~~9.01.10.I.19.02.02.B~~ or citrus trees of any species.

    B. Trees located within existing recorded or prescriptive public road or drainage rights-of-way and easements that are to be removed as part of a Board approved project. However, all protected trees that are removed under this exemption shall be relocated or replaced either within the project Site or at a public Offsite location (e.g., other right-of-way, parks, governmental buildings, or tree farms). All replacement canopy trees shall be at least two to two and one-half (2 to 2 1/2) inch caliper, Florida number 1 grade or better.

    C. For the purposes of this exemption, trees located within new rights-of-ways along existing roads which are to be removed as part of a Board approved project shall also be exempt from the Permitting requirements of this Section provided:

        1. The rights-of-way are necessary to meet minimum County width standards, up to a total right-of-way width of eighty (80) feet;

        2. The existing number of roadway lanes will not be increased;

        3. A notice of all such activities is submitted to the County Manager or designee within ten (10) working days prior to the activity; and

        4. The trees removed are relocated or replaced as required above.

    D. Trees less than ~~four (4)~~ three (3) inches caliper, unless a wetland tree or a tree that is part of a Sand Pine (Scrub) or Xeric Oak community. ~~as listed in Subsection 9.01.10.B.-1-3G.~~ Xeric (Sand) Pine and Xeric Oak community's trees less than 2" caliper are exempt from this requirement.

    E. Trees of any size existing on Lots of one (1) acre or less upon which one (1) or more single-family or duplex dwellings exist unless such trees:

1 | 1. Are being cleared in order to construct a second residence on the Property, or  
2 | Development associated with a Commercial or industrial Structure regardless of  
3 | when or by whom construction is planned; or association with development or a  
4 | building permit.

5 |  
6 | 2. Are trees planted to fulfill the tree replacement requirements set out in  
7 | Subsection 9.02.05(D); or

8 |  
9 | 3. Are trees planted to fulfill the minimum tree requirements set out in  
10 | Subsection 9.01.04; or

11 |  
12 | 4. Are wetland trees or protected trees that are part of a Sand Pine (Scrub) or  
13 | Xeric Oak community as listed in Subsection 9.01.10. as listed in the Protected  
14 | Tree List in the Lake County Tree Removal Permit.

15 |  
16 | F. If any tree is determined to be in a hazardous or dangerous condition so as to  
17 | endanger the public health, welfare, or safety, and requires immediate removal  
18 | without delay, written authorization may be given by the County Manager or  
19 | designee and the trees removed without obtaining a written Permit as herein  
20 | required:

21 |  
22 | 1. Photo documentation of hazardous tree by Pproperty owner is required prior  
23 | to removal and shall be submitted to the County Manager or designee.

24 |  
25 | 2. Replacement requirements herein required apply to any tree or group of trees  
26 | deemed hazardous and removed.

27 |  
28 | 3. If the tree, due to immediate danger, is removed prior to obtaining written  
29 | authorization, a letter and photo documentation proving that there was immediate  
30 | danger shall be submitted to the County Manager or designee within 15 days after  
31 | removal.

32 |  
33 |  
34 | G. Greenbelt Exemption. Any tree that is in a documented Lake County designated  
35 | Greenbelt is exempt from the tree removal requirements.

36 |  
37 | GH. Agriculture and Silviculture.

38 |  
39 | 1. Trees located on Land zoned agriculture ("A, RA or R-1"), taxed and used for  
40 | bona fide agricultural purposes, such as field crops, citrus, nurseries, forest crops,  
41 | animal husbandry, or greenhouses, except trees removed in order to construct  
42 | improvements not reasonably related to bona fide agricultural and silvicultural  
43 | purposes regardless of when or by whom construction is planned, are exempt  
44 | from the provisions of Subsection 9.02.03.  
45 |

1 | ~~2. Trees located on Land zoned Ranchette District ("RA") or Rural Residential ("R-~~  
2 | ~~1") are also exempt from the provisions of Subsection 9.02.03 for those~~  
3 | ~~agricultural uses that are allowed within these zoning districts.~~

4 |  
5 | 23. Stands of Pine (*Pinus spp.*) planted or occurring naturally which would be used in  
6 | a silvicultural activity and are subject to compliance with the Florida Department  
7 | of Agriculture and Consumer Services silvicultural best management practices  
8 | (BMP's) described in Silviculture Best Management Practices published by the  
9 | Florida Department of Agriculture and Consumer Services (1993 edition). This  
10 | publication is hereby adopted and included by reference herein. A copy of such  
11 | publication is available from the County Manager or designee.

12 |  
13 | 3. To be recognized as a Silviculture or viable forestry operation, the removal of the  
14 | trees shall be:  
15 | a. -Part of a bona-fide agricultural operation.

16 |  
17 | H. Mining operations that have an approved Lake County Mining Site Plan and  
18 | Operating Permit.

19 |  
20 | **9.02.05 Criteria for Issuance of Tree Removal Permit.**

- 21 |  
22 | A. A tree removal Permit Shall be issued when one (1) or more of the following  
23 | circumstances exist:  
24 |  
25 | 1. Street opening. The location of a tree restricts the opening of a street or right-of-  
26 | way;  
27 |  
28 | 2. Utilities and drainage. The location of the tree restricts the construction of utility  
29 | lines or drainage facilities;  
30 |  
31 | 3. Property access. The location of the tree restricts access to the Property;  
32 |  
33 | 4. Property use. The location of the tree restricts use of the property consistent with  
34 | all other County and state codes, statutes, ordinances, and resolutions, and site  
35 | location modifications are not feasible or reasonable and which a variance would  
36 | otherwise have to be granted;  
37 |  
38 | 5. Hazards. The tree constitutes a potential hazard to life or Property that cannot be  
39 | mitigated without removing the tree;  
40 |  
41 | 6. Poor tree health. The tree is dying or dead so that its restoration to sound  
42 | condition is not practical, or it has a disease which can be expected to be  
43 | transmitted to other trees and to endanger their health;  
44 |  
45 | 7. Thinning of trees. In order to increase light and air circulation for the purpose of  
46 | improving poor health conditions of a group of trees or preventing disease of a

1 group of trees, the selective removal of up to twenty-five (25) percent of the  
2 group of trees may be Permitted. Silviculture best management practices (BMP's)  
3 described in the Silviculture Best Management Practices published by the Florida  
4 Department of Agriculture and Consumer Services (1993) Shall apply.  
5

- 6 | B.        The tree removal Permit, when issued, Shall specifically identify which trees Shall be  
7 Permitted to be removed. Each tree Permitted for removal Shall be physically marked  
8 with an "X" using brightly colored paint or surveyor's tape, or if a group of trees are  
9 Permitted for removal, the outside perimeter trees of the group may be designated with  
10 brightly-colored rope or tape in lieu of each tree. Such Permit Shall automatically expire  
11 twelve (12) months after issuance. Trees not removed during the life of the Permit may  
12 not be removed without the issuance of a new Permit based upon a new application.  
13
- 14 | C.        Removal not required. Tree removal Permits merely authorize the removal of trees  
15 specified therein. Nothing in this Section Shall be construed to require the removal of  
16 such trees by the Permittee.  
17

18  
19 9.02.06 Replacement Requirements  
20

21 A1. Amount of replacement. At least thirty-three (33) percent of the total number of  
22 trees caliper inches at diameter at breast height (DBH) of qualifying  
23 trees Permitted for removal pursuant to any one (1) Permit shall be replaced  
24 onsite by the Permittee. (For trees that are not designated historic or specimen.)  
25 Removed historic and specimen trees shall replace fifty percent (50%) of the  
26 DBH caliper inches removed. More than one tree may be used to replace a tree or  
27 trees that are removed, but the minimum caliper of the replacement canopy trees  
28 shall be no less than two (2") inches and one-and-one-half inches (1-1/2") for  
29 ornamental trees.

- 30 1) Minimum of fifty percent (50%) of the replacement trees shall be  
31 Canopy Trees. The replacement Canopy Trees shall meet the  
32 minimum size requirements as listed within this section.  
33 2) Twenty-five (25%) maximum of the replacement trees shall be  
34 Ornamental Trees or those trees that have an installed caliper of one-  
35 and-one-half (1-1/2) inches.  
36 3) Palm trees and pine trees may be used but shall not exceed four inches  
37 credit given as replacement regardless of their installed size. Pine trees  
38 will be given credit based on their installed size but shall not exceed  
39 four inches credit given.  
40

41 B. **Tree Sampling Method:** Sites that are over 5 acres may perform sample plots  
42 and extrapolate tree calipers to be removed as follows:

- 43 1) Minimum of 5 acres impacted by development shall be surveyed by  
44 accounting for all qualifying trees to be removed within the first 5  
45 acres. After the first 5 acres for development the developer may  
46 sample survey qualifying trees to be removed with sample plots. The

1 sample plots shall be a minimum area of 20% of the remaining part of  
2 the developed part of the site or for each vegetative community within  
3 the project; whichever is greater. The sample survey plots shall be a  
4 minimum of 100' x 100' in size and shall conform to current forestry  
5 practices.

- 6 2) The tree survey sample plots shall be conducted by a qualified  
7 professional such as a: landscape architect, arborist, forester,  
8 environmental scientist, or other professional acceptable to Lake  
9 County. The means and methods of the tree survey shall be clearly  
10 detailed in the written report provided to Lake County.  
11 3) Lake County reserves the right to ask for more detailed tree sampling  
12 ~~should~~shall the County designee feel that the information provided is  
13 insufficient.  
14 4) The locations of all historic trees proposed for removal shall be located  
15 on a site plan.  
16 5) Qualifying trees that are sampled shall be a minimum of 3" DBH  
17 Caliper unless the trees are part of a wetland, xeric pine or xeric oak  
18 community in which case trees 2" DBH and larger will be counted as  
19 part of the tree sampling.

20  
21  
22 C. Site plan projects.

- 23  
24 1. Replacement trees shall be planted prior to issuance of the certificate of  
25 occupancy. For unfinished projects, a performance bond or letter of credit shall  
26 be provided in the amount of 110% of the cost of the unfinished landscape  
27 improvement and shall be filed with the County. Unfinished landscaping shall be  
28 installed within 12 months of issuance of the Certificate of Occupancy.  
29  
30 2. Replacement trees shall be located onsite in areas approved by the County  
31 Manager or designee as a condition of the tree removal Permit. These areas may  
32 include, but are not limited to, open space areas, areas adjacent to stormwater  
33 management facilities, Landscaped Buffer areas, and entrances to the project Area  
34 (when visibility for vehicular and pedestrian traffic would not be hindered).  
35  
36 3. Subdivisions.  
37  
38 1a. Replacement trees shall be planted in accordance with either, or both, of the  
39 following:  
40  
41 a1. Prior to issuance of the certificate of occupancy for each individual  
42 Structure on a Lot; or  
43  
44 b2. At the time of submission of the performance bond required pursuant  
45 to Section 14.08.00 of the Lake County Land Development  
46 Regulations.

1  
2 | 2b. When the certificate of occupancy method is used pursuant to Subsection  
3 | 9.02.05.(D).~~3.a.1~~ above, the required number of replacement trees shall be  
4 | equally equitably distributed on each Lot within the subdivision in  
5 | accordance with Subsection 9.01.04 above.

6  
7 | 3e. When the performance bond method is used pursuant to Subsection  
8 | 9.02.05.D.3.1.b.a.2 above, the replacement trees shall be located onsite in  
9 | Areas approved by the County Manager or designee as a condition of the  
10 | tree removal Permit. These areas may include, but are not limited to, open  
11 | space Areas in PUD's, Areas adjacent to stormwater management facilities  
12 | Buffer areas, and entrances to the project Area (when visibility for  
13 | vehicular and pedestrian traffic would not be hindered). The Permittee  
14 | shall demonstrate the availability of water to maintain the trees through  
15 | water trucks, wells, central system, or other methods.

16  
17 | 4d. When both the certificate of occupancy and performance bond methods  
18 | are used, the applicable proportions of replacement trees determined from  
19 | each method shall be indicated on the tree removal Permit.

20  
21 | D4. Landscape credit. The replacement trees may be used to meet the requirements of  
22 | the Landscape standards set out in Section 9.01.00.

23  
24 | E5. Replacement maintenance. The replacement trees shall be maintained in good  
25 | condition ~~for one (1) year during~~ in perpetuity which the Property owner  
26 | pursuant to Subsection 9.02.06 guarantees survival.

27  
28 | F6. Restriction on Use of palm trees. ~~Protected p~~Palm trees shall not account for more  
29 | than twenty percent one-quarter (1/4)(20%), ~~or twenty-five (25) percent~~ of the  
30 | required replacement trees. More palms may be planted but shall not count for the  
31 | required replacement trees.

32  
33 | G7. Replacement credit. The Permittee may choose and is encouraged to retain some  
34 | of the trees Permitted for removal in lieu of replacement. The trees to be retained  
35 | may be selected totally at the discretion of the Permittee except for those trees  
36 | required to be removed by other ordinances, regulations, or statutes. ~~The number~~  
37 | ~~of trees retained Shall be credited toward meeting the above thirty three (33)~~  
38 | ~~percent replacement requirement~~ The retained trees may count for required  
39 | landscape provided the trees and landscape material is in good health and meet  
40 | the minimum trees sizes.

41  
42 | H8. Replacement exception. These replacement requirements shall not apply to any  
43 | Permit for the removal of less than three (3) trees. The removal of four (4) trees  
44 | requires one (1) replacement tree.

1 I9. Replacement size. A replacement tree shall be an approved tree at least two (2")  
2 inches for canopy trees and one-and-one-half inches (1-1/2") for ornamental trees  
3 two to two and one half (2 – 2 1/2), Florida number 1 grade or better. Ornamental  
4 trees may not exceed twenty percent (20%) of the total caliper replacement inches  
5 required.

6  
7 J40. Minimum tree requirements. These replacement requirements may apply to the  
8 minimum tree requirements set out in Subsections 9.01.04 through 9.01.06.

9  
10  
11 K. If replacement cannot be made on the subject property, the owner and or applicant  
12 may:

13  
14 1. Mitigate with replacement of the required trees on a designated recipient  
15 property. The recipient property shall be acceptable to the County and  
16 shall be suitable to accept the replacement trees. Mitigated replacement  
17 trees shall not count toward meeting minimum requirement of the  
18 recipient site for development purposes. Mitigated replacement trees shall  
19 not be exempt for tree removal and replacement requirements if the  
20 recipient property is subsequently cleared, regardless of the size of the tree  
21 at the time of clearing. The request to utilize this option shall be  
22 submitted to the County Manager or designee in writing and shall include  
23 the following justifications and information:

24  
25 a. Explanation why the trees cannot be replaced on site.

26  
27 b. A legal description and a copy of the property record information  
28 from the Lake County Property Appraiser for the proposed  
29 recipient site.

30  
31 c. An Affidavit from the owner of the recipient site agreeing to the  
32 terms of accepting the mitigated trees as listed above.

33  
34 2. The owner and or applicant may make a contribution to the "Pollution  
35 Recovery Trust Fund", "Tree mitigation fund" or other Lake County  
36 environmental fund in lieu of planting the replacement trees. The amount  
37 of the contribution shall be equal to the estimated cost of the replacement  
38 trees and the cost of installation of the trees.- shall as determined by Lake  
39 County in a separate Fee Schedule. Documentation shall:

40  
41 a. Explain why the trees cannot be replaced on site.

42  
43 b. Explain why the replacement trees cannot be mitigated by  
44 replacement on an alternative recipient site.

45  
46 c. Contain original estimates with the name, address, contact name  
47 and contact phone number of the landscape nurseries, tree farms or

1 | landscape contractors.

2 |  
3 | 3. A minimum of twenty-five ~~10~~(25%) of the removed trees requiring mitigation  
4 | shall be replaced on the property as approved by the County Manager or  
5 | designee.  
6 |

7 | **9.02.06 Guarantee of Survival.**  
8 |

9 | A. The Property owner Shall guarantee survival of the following trees in perpetuity for one  
10 | (1)-year from completion of Permitted construction:

11 |  
12 | 1. Any exempt tree that has not been removed;

13 |  
14 | 2. All trees that are retained or replaced pursuant to Subsections 9.01.03-~~E~~ and  
15 | 9.02.05-~~D~~.

16 |  
17 | 3. In the event any tree planted pursuant to the approved Landscape plan dies within one  
18 | (1) year of planting, the replacement tree Sshall be planted to fulfill the remaining  
19 | period of the original tree's guarantee year.  
20 |

21 | B. The County Manager or designee may conduct periodic inspections of the site. It is the  
22 | responsibility of the Permittee to ensure that all provisions of Section 9.02.00 are met.  
23 |

24 | **9.02.07 Voluntary Planting.**  
25 |

26 | This Section Shall not be interpreted to restrict, regulate, or limit the voluntary planting  
27 | of any protected tree in Lake County. Any size tree may be voluntarily planted. The  
28 | provisions of this Section govern only the planting of trees that are required to be planted  
29 | or retained under this Section.  
30 |

31 |  
32 | **9.02.08 Historic Trees.**  
33 |

34 | A. Purpose. It is the purpose of this Subsection to acknowledge the existence of certain  
35 | trees that portray a notable historical association or significance to Lake County, and to  
36 | protect such trees through their designation as historic trees and by requiring compliance  
37 | with the protection measures set out in Subsection 9.01.10.A. Designation of historic  
38 | trees by the Lake County Board of County Commissioners Shall be in accordance with  
39 | the standards and procedures in this Subsection.  
40 |

41 |  
42 | B. Application procedures.  
43 |

44 | 1. Applications may be initiated by:

45 |  
46 | a. Owners of the Property;

1  
2 | b. Developers as part of their Development plan; or

3  
4 | c. The County as part of a County review of a tree removal Permit application or  
5 | a County tree-protection planning program.

6  
7 2. Applications on forms provided by the County Manager or designee ~~Shall~~ be  
8 completed and submitted to the County Manager or designee.

9  
10 3. Completed applications shall be provided to the Lake County Historical Society  
11 with a request for review and written recommendation for approval or denial.

12  
13 C. Historical Society Recommendation. The Lake County Historic Society or the State  
14 Historic Preservation Officer of Florida or their designee may recommend approval of the  
15 designation of a historic tree for a tree that is considered to have a notable historical  
16 interest and value to the County due to its historical association or significance. The Lake  
17 County Historic Society or the State Historic Preservation Officer of Florida or their  
18 designee may recommend denial or approval, or the lack of any recommendation, does  
19 not preclude the County from denying or approving an application.

20  
21 D. *Designation Procedure.*

22  
23 1. Upon review and approval by the County Manager or designee, the application  
24 Shall be scheduled for a public hearing before the Board at a regularly scheduled  
25 Board meeting.

26  
27 2. The Lake County Board of County Commissioners Shall approve or deny the  
28 request. Approval by the Board Shall be in the form of a resolution.

29  
30 3. Any tree designated a historic tree Shall be protected by the Property owner. At a  
31 minimum, compliance with the protection standards set out in Subsection  
32 9.01.10.A Shall be required.

33  
34 **9.02.09 Specimen Trees.**

35  
36 A. *Purpose.* It is the purpose of this Subsection to acknowledge the existence of certain trees  
37 within the County that are rare or unique due to factors such as age, size, or type,  
38 and to protect such trees through their designation as specimen trees and by  
39 requiring compliance with the protection measures set out in Subsection  
40 9.01.10.A. Designation of specimen trees by the Board Shall be in accordance  
41 with the standards and procedures in this Subsection.

42  
43 | B. *Designation Standards.* At least one (1) of the following standards shall apply in order  
44 for a tree to be designated a specimen tree:  
45

- 1           1.     *Size.* Trees with a thirty (30) inch caliper or greater, or a circumference of eight  
2                     (8) feet or greater, singly or with a combined trunk, measured at fifty-four (54)  
3                     inches from the surface of the ground  
4
- 5           2.     *Age.* Trees that are determined to be at least one hundred (100) years old, or to be  
6                     at approximate half-life maturity and are in good health.  
7
- 8 |           3.     *Form.* Trees that are determined to have a unique form or shape, due to  
9                     geography, climate, environmental or natural growth habitat conditions, and are in  
10                    good health.  
11
- 12          4.     *Ecological Value.* Trees that are determined to have an ecological value to the  
13                     County in terms of soil or water conservation and management, wildlife habitat,  
14                     or endemic native flora habitat, and are in good health.  
15
- 16          5.     *Rarity.* Trees that are determined to be non-indigenous, rare, or unique to the  
17                     County, and are in good health. Prohibited trees, as listed in Subsection  
18 |                 9.02.10.I.02.B, are excluded from designation as a Specimen tree.  
19

20 C.     *Application Procedures.*

- 21           1.     Applications may be initiated by:
  - 22                    a.     Owners of the own Property; or
  - 23                    b.     Developers as part of their Development plan; or
  - 24                    c.           The County Manager or designee as part of the County review of a tree  
25                                 removal Permit application or a Development plan.  
26
- 27
- 28 |           2.       Applications on forms provided by the County Manager or designee shall be  
29                     completed and submitted to the County Manager or designee.  
30
- 31 |           3.       The County Manager or designee may request assistance from the Lake County  
32                     Forester, State Division of Forestry, in determining compliance with any of the  
33                     designation standards.  
34
- 35
- 36
- 37

38 D.     *Approval.*

- 39
- 40 |           1.       A request for designation of specimen tree shall be scheduled for a public hearing  
41 |                     before the Board at a regularly scheduled Board meeting.  
42
- 43 |           2.       The Board Shall approve or deny the request. Approval by the Board Shall be in the  
44                     form of a resolution.  
45

1 | 3. Any tree designated a specimen tree shall be protected by the Property owner. At a  
2 | minimum, compliance with the protection standards set out in Subsection 9.01.10.A  
3 | shall be required.

4 |  
5 | \* \* \*  
6 |  
7 |

8 | **Section 4. Severability.** If any section, subsection, sentence, clause, phrase, word or  
9 | provision of this ordinance is for any reason held invalid or unconstitutional by any court of  
10 | competent jurisdiction, whether for substantive, procedural, or any other reason, such portion  
11 | shall be deemed a separate, distinct and independent provision, and such holding shall not affect  
12 | the validity of the remaining portions of this ordinance.  
13 |

14 | **Section 5. Inclusion in the Code.** It is the intention of the Board and it is  
15 | hereby provided that the provisions of this ordinance shall be made a part of the Lake County  
16 | Code; that the sections of this ordinance may be renumbered or relettered to accomplish such  
17 | intention; and that the word "ordinance" may be changed to "section", "article", or other  
18 | appropriate designation.  
19 |

20 | **Section 6. Effective Date.** This Ordinance shall become effective as provided for by  
21 | law.

22 |  
23 | Enacted this \_\_\_\_ day of \_\_\_\_\_, 2008.

24 |  
25 | Filed with the Secretary of State \_\_\_\_\_ 2008.

26 |  
27 | Effective \_\_\_\_\_.

28 |  
29 |  
30 | ATTEST:

BOARD OF COUNTY COMMISSIONERS  
OF LAKE COUNTY, FLORIDA

31 |  
32 |  
33 | \_\_\_\_\_  
34 | Neil Kelly, Interim Clerk of the  
35 | Board of County Commissioners  
36 | of Lake County, Florida

\_\_\_\_\_

Welton G. Cadwell, Chairman  
This \_\_\_\_ day of \_\_\_\_\_, 2008.

37 |  
38 | Approved as to form and legality:  
39 |  
40 |

41 | \_\_\_\_\_  
42 | Sanford A. Minkoff  
43 | County Attorney  
44 |