ORDINANCE NO. ____

PROPOSED ORDINANCE NO. 24-037

AN ORDINANCE OF THE CITY COMMISSION OF THE CITY OF LAKELAND, FLORIDA RELATING TO ZONING; PROVIDING FOR TEXT AMENDMENT LDC24-005 TO ARTICLE 4 (GENERAL SITE DEVELOPMENT STANDARDS), SECTION 4.5 (LANDSCAPING, TREES AND BUFFERING) OF THE LAND DEVELOPMENT CODE TO APPLY THE TREE PRESERVATION REQUIREMENTS TO UNPLATTED PARCELS OF LAND WHICH ARE ZONED FOR SINGLE-FAMILY OR TWO-FAMILY RESIDENTIAL USES AND GREATER THAN ONE ACRE IN AREA, ADOPT A NEW LIST OF QUALIFIED TREE, PALM, SHRUB, GROUNDCOVER AND FLOWER PLANTINGS, AND INCORPORATE CERTAIN FLORIDA-FRIENDLY LANDSCAPING REQUIREMENTS FOR IRRIGATION SYSTEMS; MAKING FINDINGS; FINDING CONFORMITY WITH THE COMPREHENSIVE PLAN; PROVIDING FOR SEVERABILITY; PROVIDING AN EFFECTIVE DATE.

WHEREAS, by Ordinance 5425, adopted on December 16, 2013, the City Commission of the City of Lakeland, Florida adopted the Land Development Code for the City of Lakeland; and

WHEREAS, the Planning and Zoning Board held a public hearing on July 16, 2024, to consider Text Amendment LDC24-005 to Article 4 (General Site Development Standards), Section 4.5 (Landscaping, Trees and Buffering) of the Land Development Code to apply the tree preservation requirements to unplatted parcels of land which are zoned for single-family or two-family residential uses and greater than one acre in area, adopt a new list of qualified tree, palm, shrub, groundcover and flower plantings, and incorporate certain Florida-Friendly Landscaping requirements for irrigation systems; and

WHEREAS, the Planning and Zoning Board, at the conclusion of its regular meeting on August 20, 2024, approved and recommended to the City Commission that Text Amendment LDC24-005 to the Land Development Code be adopted; and

WHEREAS, the City Commission, after conducting a duly-advertised public hearing at which all interested persons were afforded the opportunity to be heard, finds that it is in furtherance of the public health, safety and welfare of the citizens of the City of Lakeland to adopt Text Amendment LDC24-005 as described above;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COMMISSION OF THE CITY OF LAKELAND, FLORIDA:

SECTION 1. The foregoing findings are true and correct and are incorporated herein by reference and made a part hereof.

SECTION 2. Text Amendment LDC24-005 to the Land Development Code, as set forth in Attachments "A," “B,” “C,” “D,” and “E,” attached hereto and made a part hereof, is hereby adopted and made a part of the City’s Land Development Code.

SECTION 3. The City Commission does hereby expressly find that the provisions of this Ordinance are in conformity with the Comprehensive Plan of the City of Lakeland adopted by Ordinance 5885, and that all procedures for the enactment of this Ordinance have been complied with.

SECTION 4. All ordinances or parts of ordinances in conflict herewith are hereby repealed.

SECTION 5. If any word, sentence, clause, phrase or provision of this Ordinance, for any reason, is held to be unconstitutional, void or invalid, the validity of the remainder of this Ordinance shall not be affected thereby.

SECTION 6. This Ordinance shall take effect immediately upon its passage.

PASSED AND CERTIFIED AS TO PASSAGE this 16th day of September, A.D. 2024.

_____
H. WILLIAM MUTZ, MAYOR

ATTEST: _____
KELLY S. KOOS, CITY CLERK

APPROVED AS TO FORM AND CORRECTNESS: _____
PALMER C. DAVIS
CITY ATTORNEY

ATTACHMENT “A”

ARTICLE 4: - GENERAL SITE DEVELOPMENT STANDARDS

…

4.5.3 DEFINITIONS

…

Florida-Friendly Landscaping: ~~Landscapes designed and maintained to maximize water conservation by minimizing irrigation needs.~~ Science-based, low-impact, sustainable, environmentally friendly landscaping practices that conserve water, reduce pollutant loading to Florida waters, and protect Florida’s natural resources, in accordance with the University of Florida IFAS Extension and FDEP’s “Landscape Irrigation and Florida-Friendly Landscape Design Standards,” as amended.

…

4.5.10 TREE PRESERVATION

4.5.10.1 Intent and Applicability

a. Intent

1. It is the intent of this section to establish standards to prevent, mitigate or compensate for the loss of the public resource where tree canopy is proposed to be destroyed by development.

2. Except as specifically provided herein, the preservation of existing trees on development sites is to be preferred to the planting of new trees.

3. Efforts to preserve existing trees are encouraged and the Director of Parks and Recreation may recommend that the Director of Community Development modify development standards in order to save specific trees.

b. Applicability

The provisions of this section shall apply to the proposed destruction or relocation of any regulated tree as the result of development activity, with the following exceptions:

1. Lots or parcels zoned for single-family or two-family dwellings less than one acre in size and comprised of not more than two lots of record, which are not part of a proposed development or subdivision plan; ~~(However, this section shall apply to proposed subdivisions for single-family or two-family dwellings;)~~

2. Any vertical mixed use development where residential or office uses are located above ground floor commercial and a minimum of 60 percent of the building frontage is dedicated to retail or service commercial uses;

3. Bona fide agricultural uses, commercial nurseries and botanical gardens;

4. Bona fide utility maintenance, safety or fire reduction activities; or

5. Emergency or disaster recovery activities.

…

4.5.11 STANDARDS FOR LANDSCAPE DESIGN, INSTALLATION AND MAINTENANCE

4.5.11.1 Required landscaping and irrigation systems shall be designed, installed and maintained in accordance with Florida-Friendly Landscaping practices and the following standards. Approved landscape and irrigation plans shall provide the basis on which compliance is determined.

…

4.5.11.3 Irrigation Systems

The following standards shall apply to the installation of new residential and non-residential irrigation systems, and the retrofit or replacement of existing residential and non-residential irrigation systems.

a. Unless otherwise provided herein, all required landscaping shall be irrigated by a permanent irrigation system designed for maximum water conservation, which shall provide 100 percent coverage of plant material and shall be fully operational before building occupancy except that no irrigation systems shall be required in those areas where existing trees or areas of natural vegetation are to be preserved, non-required landscape areas, or as indicated on the approved landscape plan. If approved by the Director of Parks and Recreation, newly planted trees may be irrigated by a temporary irrigation system. Newly planted trees shall be irrigated until they are established at which time irrigation may be terminated and any temporary system removed.

b. ~~Rain shut-off devices shall be required.~~ A rain sensor or equal technology that inhibits or interrupts operations of the irrigation system during periods of sufficient moisture shall be installed and control all irrigation zones. Rain sensor and related hardware shall be installed per manufacturer specifications.

c. Irrigation systems serving landscape areas ~~having~~ with different irrigation demands shall be zoned according~~ly~~ to vegetated groupings (e.g., turfgrass, shrubs, trees) and the watering requirements of the plants. Turfgrass and landscaped beds, such as trees, shrubs and groundcover beds shall not be irrigated in the same zone.

d. Rotary irrigation heads and spray irrigation heads should be kept in separate zones, and no irrigation zone shall include both rotary and spray irrigation heads.

e. All sprinkler heads with spray nozzles shall be pressure regulated at the head and/or valve. Adequate pressure per the manufacturer specifications must be achieved throughout an entire zone.

f. Narrow areas, 4 feet or less, shall not be irrigated unless correctly installed low-volume irrigation or end-strip/side-strip nozzles are used.

g. Large sod zones shall be irrigated using rotors or similar devices to achieve maximum irrigation efficiency.

h. Distribution equipment in a given zone shall have matched precipitation rates.

i. All irrigation installations will include backflow assembly per Florida Building Code. If a chemical injection system is present for any reason, a reduced pressure principal backflow assembly is required.

j. A minimum separation of 4 inches shall be required between distribution equipment and pavement.

k. Sprinklers in low-lying areas shall have check valves to prevent head drainage.

l. Irrigation design should include head-to-head spacing and consider soil, slope, and other site characteristics to minimize water waste, such as: overspray, off-site runoff, the watering of impervious surfaces and other non-vegetated areas.

m. Sprinklers shall rise above turfgrass height:

1. Minimum 6-inch pop-up for sprays and 4-inch pop-up for rotors for St. Augustine, Zoysia, and Bahia grasses;

2. Minimum 4-inch pop-up for sprays and rotors for Centipede, Bermuda, and Seashore Paspalum grasses.

n. Irrigation installers shall provide property owners and users with post-construction maintenance and system information, including:

1. Design drawings as detailed in Appendix F of the Plumbing Volume of the Florida Building Code.

2. Recommended maintenance activities and schedules.

3. Operation schedule.

4. Instructions on adjusting the system to irrigate in accordance with the rules of the Southwest Florida Water Management District after landscaping is established.

5. Water shut-off method.

6. Manufacturer's operational guide for the controller.

~~d~~o. Water Source

1. At the discretion of the Water Utilities Department, the use of non-potable water sources may be required for irrigation. Non-potable water sources include shallow wells, agricultural wells, lakes, ponds, stormwater retention and detention facilities, and reclaimed/reuse water systems. Where non-potable irrigation water systems are planned but not yet operational, at the discretion of the Water Utilities Department the irrigation system may be connected to the potable water system and disconnected when non-potable water becomes available. The use of non-potable irrigation water sources shall not exempt development from the water-efficient landscaping principles of this article.

2. Irrigation systems shall not be connected to both potable and non-potable sources due to the potential of contaminating the City's potable water system. Any water source other than the City's potable water system is an "auxiliary source." Where an auxiliary source is used, there shall be a physical disconnect (air gap) between the two piping systems. An approved backflow prevention assembly shall be installed at the City's water service connection to any premises where there is an auxiliary water supply and the public water system. Backflow prevention assemblies approved by the Water Utilities Department shall be installed on all potable water service connections/meters to the site, including those for domestic, fire service and irrigation water.

p. All irrigation restrictions imposed by the City of Lakeland and/or the Southwest Florida Water Management District shall be adhered to within 60 calendar days after landscape installation and the plant establishment period.

q. All irrigation systems shall be installed and maintained in accordance with manufacturer's specifications.

r. The following are exempt from the Irrigation System standards but should follow applicable Florida-Friendly Landscaping best management practices:

1. Bona fide agricultural activities;

2. Vegetable gardens and fruit and nut trees;

3. Athletic parks;

4. Parks and recreational areas;

5. Golf course play areas;

6. Cemeteries;

7. Nurseries;

8. Botanical gardens;

9. Open space;

10. Temporary establishment irrigation.

ATTACHMENT “B”

TABLE 4.5-1 FRONTAGE BUFFER OPTIONS

Options	Minimum Planter Strip Width	Minimum Landscaping Required
Option 1	5’	Type A hedge with ~~8~~ 10 C (Small) trees per 100 lin. ft. or fraction thereof.
Option 2	7.5’	Type A hedge with ~~4~~ 6 B (Medium) trees per 100 lin. ft. or fraction thereof.
Option 3 (Limited to 150 lin. ft. per frontage in Central City Area)	4’ including wall	3 ft. high masonry streetwall with low shrubs and groundcover on street side.

Notes:

1. These are minimum standards. Buffers may incorporate greater width and additional plant materials.
2. Tree species shall be in accordance with Table 4.5-6. Hedge, shrub and groundcover species shall be in accordance with Table 4.5-8.
3. Where located with less than 15 feet offset from overhead powerlines, trees shall be limited to specific C (Small) trees in accordance with Table 4.5-6.
4. Planter strip width is measured to the inside of curbs with no vehicle overhang. Curbing, wheelstops or posts shall be used to control vehicle overhang.
5. Tree spacing may vary but the intent is to space trees evenly across the frontage. The spacing standard indicates the number of trees to be planted, not the precise location of trees. Where street trees exist or are proposed within the adjacent right-of-way, the intent is to alternate the frontage buffer canopy trees between the street trees.
6. All ground area within planters shall be covered by turf grass, low shrubs or groundcover plants.
7. Streetwalls shall have a minimum 75% view blockage and shall match the architectural materials and finish of the principal building.

ATTACHMENT "C"

TABLE 4.5-6 QUALIFIED TREES

Botanical Name √ = Native		Common Name	Street Tree	Mature Height	Mature Spread	Power Line Offset	Water/ Sewer Offset	Deciduous/ Evergreen	Growth Habit	Soil Moisture	Drought Tolerance	Wind Resistance
LARGE "A" TREES												
Carya illinoinensis		Pecan	No	60'-100'	40'-60'	30'	8'	Deciduous	Broad Oval	Moist to Well-Drained	High	Low
Carya glabra	√	Pignut Hickory	No	50'-65'	30'-40'	30'	8'	Deciduous	Oval	Well-Drained	High	Medium
Carya tomentosa	√	Mockernut Hickory	Yes	50'-75'	35'-50'	30'	8'	Deciduous	Oval	Well-Drained	High	Medium
Celtis laevigata	√	Sugarberry	No	50'-70'	50'-60'	30'	8'	Deciduous	Rounded Vase	Varied	Low	Medium
Chorisia speciosa		Floss Silk Tree	No	35'-50'	40'-50'	30'	8'	Deciduous	Upright	Well-Drained	High	Medium
Cinnamomum camphora		Camphor	Yes	40'-50'	50'-70'	30'	8'	Evergreen	Spreading	Varied	High	High
Fraxinus pennslyvanica	√	Green Ash	No	60'-70'	40'-45'	30'	8'	Deciduous	Upright	Varied	Medium	Low
Liquidambar formosana		Formosan Sweetgum	Yes	40'-60'	30'-45'	30'	8'	Deciduous	Pyramidal Rounded	Well-Drained	Medium	Medium
Liquidambar styraciflua	√	Sweetgum	Yes	60'-75'	30'-50'	30'	8'	Deciduous	Upright	Moist to Well-Drained	High	Medium

TABLE 4.5-6 QUALIFIED TREES

Botanical Name √ = Native		Common Name	Street Tree	Mature Height	Mature Spread	Power Line Offset	Water/ Sewer Offset	Deciduous/ Evergreen	Growth Habit	Soil Moisture	Drought Tolerance	Wind Resistance
Liriodendron tulipifera	√	Tulip Tree	Yes	80'-120'	30'-50'	30'	8’	Deciduous	Pyramidal	Moist to Well-Drained	Medium	Medium
Magnolia grandiflora	√	Southern Magnolia	Yes	60'-80'	30'-40'	30'	8’	Evergreen	Upright Pyramidal	Varied	Medium	High
Nyssa sylvatica	√	Black Gum	No	65'-75'	25'-35'	30'	8’	Deciduous	Pyramidal Oval	Moist to Wet	High	Medium
Pinus clausa	√	Sand Pine	No	60'-80'	15'-40'	30'	8’	Evergreen	Pyramidal	Well-Drained	High	Low
Pinus elliotti	√	Slash Pine	No	60'-100'	30'-60'	30'	8’	Evergreen	Upright Open	Varied	High	Medium
Pinus elliotti densa	√	South Fla. Slash Pine	Yes	40'-60'	30'-60'	30'	8’	Evergreen	Upright Open	Varied	High	Medium
Pinus glabra	√	Spruce Pine	No	30'-60'	25'-40'	30'	8’	Evergreen	Upright Open	Varied	Medium	Medium
Pinus palustris	√	Longleaf Pine	No	60'-80'	30'-40'	30'	8’	Evergreen	Upright Irregular	Varied	High	Medium
Platanus occidentalis	√	Sycamore	Yes	75'-90'	60'-70'	30'	8’	Deciduous	Pyramidal Rounded	Varied	Medium	Medium
Quercus hemispherica	√	Laurel Oak	No	65'-100'	40'-60'	30'	8’	Semi-deciduous	Upright	Well-Drained	Medium	Low
Quercus lyrata	√	Overcup Oak	Yes	60'-80'	30'-50'	30'	8’	Deciduous	Rounded	Varied	Medium	High
Quercus michauxii	√	Swamp Chestnut	Yes	60'-80'	30'-50'	30'	8’	Deciduous	Narrow Pyramidal	Moist	Low	High

TABLE 4.5-6 QUALIFIED TREES

Botanical Name	√ = Native	Common Name	Street Tree	Mature Height	Mature Spread	Power Line Offset	Water/ Sewer Offset	Deciduous/ Evergreen	Growth Habit	Soil Moisture	Drought Tolerance	Wind Resistance
Quercus nuttalii	√	Nuttal Oak	Yes	60'-80'	40'-50'	30'	8’	Deciduous	Upright	Varied	Medium	Medium
Quercus shumardii	√	Shumard Oak	Yes	60'-80'	40'-50'	30'	8’	Deciduous	Upright	Moist	Medium	Medium
Quercus virginiana	√	Live Oak	Yes	60'-80'	60'-120'	30'	8’	Semi-deciduous	Spreading	Varied	High	High
Tipuana tipu		Pride of Bolivia	Yes	30'-50'	20'-40'	30'	8’	Evergreen	Spreading	Moist	Medium	Medium
Ulmus alata	√	Winged Elm	Yes	40'-70'	30'-40'	30'	8’	Deciduous	Rounded Vase	Dry to Wet	High	Medium
Ulmus americana	√	American Elm	Yes	50'-70'	30'-50'	30'	8’	Deciduous	Vase	Dry to Wet	High	Medium
MEDIUM "B" TREES												
Acer barbatum	√	Florida Sugar Maple	Yes	40'-50'	30'-40'	15'	5’	Deciduous	Rounded	Moist to Medium	Medium	Medium
Acer rubrum	√	Red Maple	No	40'-60'	25'-30'	15'	5’	Deciduous	Upright	Moist to Wet	Medium	Low
Averrhoa carambola		Star Fruit	No	25'-35'	20'-30'	15'	5’	Evergreen	Rounded	Well-Drained	Poor	Medium
Bauhinia blakeana		Hong Kong Orchid Tree	No	25'-30'	25'-35'	15'	5’	Deciduous	Vase	Well-Drained	High	Low
Betula nigra	√	River Birch	No	40'-50'	25’-35’	15'	5’	Deciduous	Upright Angular	Moist to Wet	Low	Medium
Brachychiton acerifolius		Bottle Tree	No	35'-50'	20'-30'	15'	5’	Deciduous	Oval Rounded	Well-Drained	High	Medium

TABLE 4.5-6 QUALIFIED TREES

Botanical Name √ = Native		Common Name	Street Tree	Mature Height	Mature Spread	Power Line Offset	Water/ Sewer Offset	Deciduous/ Evergreen	Growth Habit	Soil Moisture	Drought Tolerance	Wind Resistance
Carpinus caroliniana	√	Blue Beech	No	20'-40'	20'-40'	15'	5’	Deciduous	Upright Oval	Moist to Wet	Medium	High
Cassia leptophylla		Gold Medallion Tree	No	30'-40'	30'-40'	15'	5’	Deciduous	Rounded	Well-Drained	Medium	Medium
Citrus spp.		Orange, Lemon, Grapefruit	No	15'-30'	10’-20'	15'	5’	Evergreen	Spreading	Well-Drained	Medium	Medium
Cupressus arizonica	√	Carolina Saphire	Yes	30'-40'	15'-25'	15'	5’	Evergreen	Columnar	Varied	Medium	Low
Diospyros virginiana	√	Persimmon	No	40’-60'	20'-35'	15'	5’	Deciduous	Rounded	Moist to Wet	High	High
Elaeocarpus decipiens		Japanese Blueberry	Yes	25'-35'	10'-15'	15'	5’	Evergreen	Upright Narrow	Well-Drained	Medium	Medium
Eriobotrya japonica		Loquat	Yes	20'-30'	30'-35'	15'	5’	Evergreen	Round Vase	Varied	Medium	Medium
Gordonia lasianthus	√	Loblolly Bay	No	30'-40'	10'-20'	15'	5’	Evergreen	Narrow Conical	Wet	Low	High
Ilex cassine	√	Dahoon Holly	No	20'-30'	8'-12'	15'	5’	Evergreen	Upright Dense	Moist to Wet	Medium	High
Jacaranda mimosifolia		Jacaranda	No	25'-40'	25'-60'	15'	5’	Deciduous	Vase	Well-Drained	High	Low
Juniperus silicicola	√	Southern Red Cedar	Yes	30'-40'	20'-30'	15'	5’	Evergreen	Conical Open	Varied	High	Medium

TABLE 4.5-6 QUALIFIED TREES

Botanical Name √ = Native	Common Name	Street Tree	Mature Height	Mature Spread	Power Line Offset	Water/ Sewer Offset	Deciduous/ Evergreen	Growth Habit	Soil Moisture	Drought Tolerance	Wind Resistance
Juniperus virginiana √	Eastern Red Cedar	Yes	40'-50'	10'-25'	15'	5’	Evergreen	Oval Pyramidal	Varied	High	Medium
Koelreuteria formosana	Gold Rain Tree	Yes	25'-35'	25'-35'	15'	5’	Deciduous	Rounded	Well-Drained	High	Low
Lagerstroemia indica ‘Arapaho’	Crape Myrtle	Yes	12’-25’	12’-20’	15'	5’	Deciduous	Vase	Varied	High	High
Lagerstroemia indica ‘Bashams Party Pink’	Crape Myrtle	Yes	15’-25’	15’-20’	15'	5’	Deciduous	Rounded	Varied	High	High
Lagerstroemia indica ‘Biloxi’	Crape Myrtle	Yes	15’-25’	15’-20	15'	5’	Deciduous	Open	Varied	High	High
Lagerstroemia indica ‘Dynamite’	Crape Myrtle	Yes	15’-25’	15’-20	15'	5’	Deciduous	Upright	Varied	High	High
Lagerstroemia indica ‘Fantasy’	Crape Myrtle	Yes	15’-25’	15’-20	15'	5’	Deciduous	Vase	Varied	High	High
Lagerstroemia indica ‘Glendora White’	Crape Myrtle	Yes	15’-25’	15’-20	15'	5’	Deciduous	Upright	Varied	High	High
Lagerstroemia indica ‘Kiowa’	Crape Myrtle	Yes	15’-25’	15’-20	15'	5’	Deciduous	Vase	Varied	High	High
Lagerstroemia indica ‘Miami’	Crape Myrtle	Yes	15’-25’	15’-20	15'	5’	Deciduous	Upright	Varied	High	High
Lagerstroemia indica ‘Muskogee’	Crape Myrtle	Yes	15’-25’	15’-20	15'	5’	Deciduous	Rounded	Varied	High	High
Lagerstroemia indica ‘Natchez’	Crape Myrtle	Yes	15’-25’	15’-20	15'	5’	Deciduous	Rounded	Varied	High	High

TABLE 4.5-6 QUALIFIED TREES

Botanical Name √ = Native		Common Name	Street Tree	Mature Height	Mature Spread	Power Line Offset	Water/ Sewer Offset	Deciduous/ Evergreen	Growth Habit	Soil Moisture	Drought Tolerance	Wind Resistance
Lagerstroemia indica 'Townhouse'		Crape Myrtle	Yes	15'-25'	15'-20	15'	5'	Deciduous	Vase	Varied	High	High
Lagerstroemia indica 'Tuscarora'		Crape Myrtle	Yes	15'-25'	15'-20	15'	5'	Deciduous	Upright	Varied	High	High
Lagerstroemia indica 'Tuskegee'		Crape Myrtle	Yes	15'-25'	15'-20	15'	5'	Deciduous	Vase	Varied	High	High
Lagerstroemia indica 'Wichita'		Crape Myrtle	Yes	15'-25'	15'-20	15'	5'	Deciduous	Upright	Varied	High	High
Morus rubra	√	Red Mulberry	No	30'-50'	35'-50'	15'	5'	Deciduous	Rounded	Moist to Wet	Medium	Low
Olea europaea		Olive	Yes	25'-50'	25'-35'	15'	5'	Evergreen	Irregular	Varied	High	Medium
Podocarpus macrophyllus		Podocarpus	Yes	30'-50'	15'-25'	15'	5'	Evergreen	Upright	Varied	High	High
Podocarpus nagi		Broadleaf Podocarpus	Yes	30'-50'	15'-25'	15'	5'	Evergreen	Upright	Varied	High	High
Podocarpus gracilior		Weeping Podocarpus	Yes	30'-50'	25'-35'	15'	5'	Evergreen	Weeping	Varied	High	High
Quercus austrina	√	Bluff Oak	Yes	40'-60'	30'- 40'	15'	5'	Deciduous	Broad Pyramidal	Wet to Medium	Medium	High
Quercus geminata	√	Sand Live Oak	Yes	30'-50'	45'-60'	15'	5'	Semi-deciduous	Spreading	Well-Drained Sandy	High	High
Quercus incana	√	Bluejack Oak	No	25'-50'	25'-35'	15'	5'	Deciduous	Rounded	Varied	High	High

TABLE 4.5-6 QUALIFIED TREES

Botanical Name √ = Native		Common Name	Street Tree	Mature Height	Mature Spread	Power Line Offset	Water/ Sewer Offset	Deciduous/ Evergreen	Growth Habit	Soil Moisture	Drought Tolerance	Wind Resistance
Quercus marilandica	√	Blackjack Oak	No	30'-40'	20'-30'	15'	8’	Deciduous	Rounded	Medium to Dry	High	High
Quercus marilandica	√	Sand Post Oak	No	25'-50'	25'-35'	15'	5’	Deciduous	Oval	Well-Drained	High	High
Quercus stellata	√	Post Oak	Yes	20'-40'	15'-25'	15'	5’	Deciduous	Irregular	Varied	High	High
Salix babylonica		Weeping Willow	No	45'-70'	45'-70'	15'	5’	Semi-deciduous	Rounded Upright	Moist to Wet	Medium	Low
Salix caroliniana	√	Coastal Plain Willow	No	30'	20'-25'	15'	5’	Deciduous	Round Spreading	Wet	Medium	Low
Tabebuia caraiba		Trumpet Tree	No	15'-25'	10'-15'	15'	5’	Deciduous	Irregular	Varied	High	Low
Tabebuia chrysotricha		Gold Trumpet Tree	Yes	25'-35'	25'-35'	15'	5’	Deciduous	Upright	Varied	Medium	Low
Tabebuia heterophylla		Pink Trumpet Tree	Yes	40'-50'	35'-50'	15'	5’	Deciduous	Oval Round	Varied	Medium	Low
Tabebuia impetiginosa		Purple Trumpet Tree	Yes	20'-30'	15'-25'	15'	5’	Deciduous	Oval Round	Varied	Medium	Low
Tabebuia umbellata		Yellow Trumpet Tree	Yes	10'-20'	25'-35'	15'	5’	Deciduous	Horizontal	Varied	High	Low
Taxodium ascendens	√	Pond Cypress	No	60'-80'	15'-30'	15'	5’	Deciduous	Upright	Dry to Wet	High	High
Taxodium distichum	√	Bald Cypress	Yes	60'-80'	15'-30'	15'	5’	Deciduous	Upright	Dry to Wet	High	High

TABLE 4.5-6 QUALIFIED TREES

Botanical Name √ = Native		Common Name	Street Tree	Mature Height	Mature Spread	Power Line Offset	Water/ Sewer Offset	Deciduous/ Evergreen	Growth Habit	Soil Moisture	Drought Tolerance	Wind Resistance
Tecoma stans		Yellow Elder	No	20'-30'	20'-30'	15'	5’	Evergreen	Oval	Varied	High	Medium
Thuja occidentalis		Arborvitae	No	30'-50'	15'-25'	15'	5’	Evergreen	Upright	Varied	Medium	Medium
Ulmus parvifolia 'Allee'		Allee Elm	Yes	40'-50'	35'-50'	15'	5’	Deciduous	Upright Oval	Well-Drained	High	Low
SMALL "C" TREES												
Acacia farnesiana	√	Sweet Acacia	No	15'-25'	15'-25'	None	None	Semi-Evergreen	Rounded	Varied	High	High
Caesalpinia pulcherrima		Dwarf Poinciana	No	8'-12'	10'-12'	None	None	Evergreen	Rounded	Well-Drained	High	Low
Callistemon rigidus		Bottlebrush	No	15'-20'	15'-20'	None	None	Evergreen	Upright	Moist to Well-Drained	High	Medium
Callistemon viminalis		Weeping Bottlebrush	No	15'-20'	15'-20'	None	None	Evergreen	Weeping	Moist to Well-Drained	High	Medium
Camellia sansanqua		Sansanqua	No	15'-20'	15'-20'	None	None	Evergreen	Rounded	Well-Drained	Medium	Medium
Cassia bicapsularis		Butterfly Bush	No	8'-12'	8'-10'	None	None	Semi-Evergreen	Rounded	Well-Drained	Medium	Low
Chionanthus retusa	√	Chinese Fringetree	No	15'-20'	10'-15'	None	None	Deciduous	Rounded	Well-Drained	Medium	Medium
Cordia boissieri		White Geiger Tree	No	15'-20'	10'-15'	None	None	Evergreen	Rounded	Well-Drained	High	High

TABLE 4.5-6 QUALIFIED TREES

Botanical Name √ = Native		Common Name	Street Tree	Mature Height	Mature Spread	Power Line Offset	Water/ Sewer Offset	Deciduous/ Evergreen	Growth Habit	Soil Moisture	Drought Tolerance	Wind Resistance
Eugenia foetida		Simpson Stopper	Yes	10'-20'	10'-15'	None	None	Evergreen	Rounded	Varied	High	Medium
Ilex cornuta 'Burfordii'	√	Burford Holly	Yes	15'-25'	15'-25'	None	None	Evergreen	Rounded	Well-Drained to Moist	Medium	High
Ilex vomitoria	√	Yaupon Holly	Yes	15'-25'	15'-20'	None	None	Evergreen	Rounded Vase	Varied	High	High
Ilex vomitoria pendula	√	Weeping Yaupon Holly	Yes	15'-30'	8'-12'	None	None	Evergreen	Weeping	Varied	High	High
Lagerstroemia indica		Crape Myrtle	Yes	10'-30'	15'-25'	None	None	Deciduous	Vase	Varied	High	High
Lagerstroemia indica 'Acoma'		Crape Myrtle	Yes	6'-12'	6'-10'	None	None	Deciduous	Pendulous	Varied	High	High
Lagerstroemia indica 'Apalachee'		Crape Myrtle	Yes	12'-20'	10'15'	None	None	Deciduous	Upright	Varied	High	High
Lagerstroemia indica 'Centennial'		Crape Myrtle	Yes	6'-12'	6'-10'	None	None	Deciduous	Rounded	Varied	High	High
Lagerstroemia indica 'Cherokee'		Crape Myrtle	Yes	6'-12'	6'-10'	None	None	Deciduous	Upright	Varied	High	High
Lagerstroemia indica 'Comanche'		Crape Myrtle	Yes	12'-20'	10'-15'	None	None	Deciduous	Upright	Varied	High	High
Lagerstroemia indica 'Hope'		Crape Myrtle	Yes	6'-12'	6'-10'	None	None	Deciduous	Open	Varied	High	High

TABLE 4.5-6 QUALIFIED TREES

Botanical Name √ = Native	Common Name	Street Tree	Mature Height	Mature Spread	Power Line Offset	Water/ Sewer Offset	Deciduous/ Evergreen	Growth Habit	Soil Moisture	Drought Tolerance	Wind Resistance
Lagerstroemia indica 'Hopi'	Crape Myrtle	Yes	6'-12'	6'-10'	None	None	Deciduous	Open	Varied	High	High
Lagerstroemia indica 'Lipan'	Crape Myrtle	Yes	12'-20'	10'-15'	None	None	Deciduous	Upright	Varied	High	High
Lagerstroemia indica 'Near East'	Crape Myrtle	Yes	12'-20'	10'-15'	None	None	Deciduous	Open	Varied	High	High
Lagerstroemia indica 'Osage'	Crape Myrtle	Yes	12'-20'	10'-15'	None	None	Deciduous	Rounded	Varied	High	High
Lagerstroemia indica 'Osage Blush'	Crape Myrtle	Yes	12'-20'	10'-15'	None	None	Deciduous	Rounded	Varied	High	High
Lagerstroemia indica 'Pecos'	Crape Myrtle	Yes	6'-12'	6'-10'	None	None	Deciduous	Vase	Varied	High	High
Lagerstroemia indica 'Red Rooster'	Crape Myrtle	Yes	6'-12'	6'-10'	None	None	Deciduous	Rounded	Varied	High	High
Lagerstroemia indica 'Sarahs Favorite'	Crape Myrtle	Yes	12'-20'	10'-15'	None	None	Deciduous	Upright	Varied	High	High
Lagerstroemia indica 'Sioux'	Crape Myrtle	Yes	12'-20'	10'-15'	None	None	Deciduous	Upright	Varied	High	High
Lagerstroemia indica 'Tonto'	Crape Myrtle	Yes	6'-12'	6'-10'	None	None	Deciduous	Rounded	Varied	High	High
Lagerstroemia indica 'Yuma'	Crape Myrtle	Yes	12'-20'	10'-15'	None	None	Deciduous	Open	Varied	High	High
Ligustrum japonicum	Waxleaf Privet	Yes	10'-15'	15'-20'	None	None	Evergreen	Oval Round	Varied	High	Medium

TABLE 4.5-6 QUALIFIED TREES

Botanical Name √ = Native		Common Name	Street Tree	Mature Height	Mature Spread	Power Line Offset	Water/ Sewer Offset	Deciduous/ Evergreen	Growth Habit	Soil Moisture	Drought Tolerance	Wind Resistance
Parkinsonia aculeata		Jerusalem Thorn	No	15'-20'	20'-25'	None	None	Deciduous	Vase Spreading	Varied	High	High
Prunus angustifolia	√	Chickasaw Plum	No	12'-20'	15'-20'	None	None	Deciduous	Rounded	Well-Drained	High	Medium
Prunus umbellatta	√	Flatwoods Plum	No	15'-20'	15'-20'	None	None	Deciduous	Rounded	Well-Drained	Medium	High
Viburnum odoratissimum 'Awabuki'		Awabuki Sweet Viburnum	No	15'-20'	15'-20'	None	None	Evergreen	Rounded	Well-Drained	High	High
Vitex agnus-castus	√	Chastetree	Yes	10'-15'	15'-20'	None	None	Deciduous	Rounded	Varied	High	Medium

Table 4.5-6 Qualified Trees

Large 'A' Trees											
Botanical Name	**√ = Native**	**Common Name**	**Street Tree**	**Mature Height**	**Mature Spread**	**Power Line Offset**	**Water/Sewer Offset**	**Deciduous/Evergreen**	**Growth Habit**	**Soil Moisture**	**Drought Tolerance**	**Wind Resistance**
Brachychiton acerifolia		Illawara Flame Tree	No	50' - 60'	30' - 40'	30'	8'	Deciduous	Upright & Pyramidal	Well Drained	High	Low
Brachychiton discolor		Queensland Lacebark	Yes	40' - 65'	30'	30'	8'	Deciduous	Upright & Pyramidal	Well-Drained	High	Medium
Brachychiton populneus		Kurrajong	Yes	30' - 50'	30'	30'	8'	Deciduous	Upright & Pyramidal	Well-Drained	High	Medium
Carya glabra	√	Pignut Hickory	No	50' - 65'	30' - 40'	30'	8'	Deciduous	Oval	Well-Drained	High	Medium
Carya illinoinensis	√	Pecan	No	60' - 100'	40' - 60'	30'	8'	Deciduous	Broad Oval	Moist/Well-Drained	High	Medium
Carya tomentosa	√	Mockernut Hickory	Yes	50' - 75'	35' - 50'	30'	8'	Deciduous	Oval	Well-Drained	High	Medium
Ceiba speciosa		Floss Silk Tree	No	35' - 50'	40' - 50'	30'	8'	Deciduous	Upright	Well-Drained	High	Medium
Celtis laevigata	√	Sugarberry	No	50' - 70'	50' - 60'	30'	8'	Deciduous	Rounded Vase	Varied	Low	Medium

Cinnamomum camphora		Camphor	Yes	40' - 50'	50' - 70'	30'	8'	Evergreen	Spreading	Varied	Medium	Low
Liquidambar formosana		Formosan Sweetgum	Yes	40' - 60'	30' - 45'	30'	8'	Deciduous	Rounded	Well-Drained	Medium	Medium
Liquidambar styraciflua	√	American Sweetgum	Yes	60' - 75'	30' - 50'	30'	8'	Deciduous	Upright & Pyramidal	Varied	Medium	Low
Liriodendron tulipifera	√	Tulip Poplar	Yes	80' - 120'	30' - 50'	30'	8'	Deciduous	Pyramidal	Moist/Well-Drained	Medium	Medium
Magnolia grandiflora	√	Southern Magnolia	Yes	60' - 80'	30' - 40'	30'	8'	Evergreen	Upright & Pyramidal	Moist/Well-Drained	Low	High
Pinus clausa	√	Sand Pine	No	60' - 80'	15' - 40'	30'	8'	Evergreen	Pyramidal	Well-Drained	High	Low
Pinus elliotti	√	Slash pine	No	60' - 100'	30' - 60'	30'	8'	Evergreen	Upright Open	Varied	High	Medium
Pinus elliotti 'Densa'	√	'Densa' Slash Pine	No	40' - 60'	30' - 60'	30'	8'	Evergreen	Upright Open	Varied	High	Medium
Pinus glabra	√	Spruce Pine	No	30' - 60'	25' - 40'	30'	8'	Evergreen	Upright Open	Varied	Medium	Medium
Pinus palustris	√	Longleaf pine	No	60' - 80'	30' - 40'	30'	8'	Evergreen	Upright Irregular	Varied	High	Medium

Platanus occidentalis	√	American Sycamore	Yes	75' - 90'	60' - 70'	30'	8'	Deciduous	Pyramidal Rounded	Varied	Medium	Medium
Quercus lyrata	√	Overcup Oak	Yes	60' - 80'	30' - 50'	30'	8'	Deciduous	Rounded	Varied	Medium	High
Quercus virginiana	√	Live Oak	Yes	60' - 80'	60' - 120'	30'	8'	Semi-deciduous	Spreading	Varied	High	High
Roseodendron donell-smithii		Primavera	Yes	40' - 80'	30' - 50'	30'	8'	Deciduous	Rounded Vase	Moist/Well-Drained	Medium	Medium
Taxodium mucronatum		Montezuma Cypress	No	50' - 80'	20' - 40'	30'	8'	Deciduous	Upright Conical	Wet to Well-Drained	Low	High
Tipuana tipu		Pride of Bolivia	Yes	30' - 50'	20' - 40'	30'	8'	Evergreen	Spreading	Moist	Medium	Medium
Ulmus alata	√	Winged Elm	Yes	40' - 70'	30' - 40'	30'	8'	Deciduous	Rounded Vase	Wet to Dry	High	Medium
Ulmus americana	√	American Elm	Yes	50' - 70'	30' - 50'	30'	8'	Deciduous	Vase	Wet to Dry	High	Medium

Medium 'B' Trees												
Botanical Name √ = Native		**Common Name**	**Street Tree**	**Mature Height**	**Mature Spread**	**Power Line Offset**	**Water/Sewer Offset**	**Deciduous/Evergreen**	**Growth Habit**	**Soil Moisture**	**Drought Tolerance**	**Wind Resistance**
Acer floridanum	√	Florida Sugar Maple	Yes	20' - 60'	25' - 40'	15'	5'	Deciduous	Rounded	Moist/Well-Drained	Medium	Medium
Acer rubrum	√	Red Maple	Yes	40' - 60'	25' - 30'	15'	5'	Deciduous	Upright	Wet/Well-Drained	Medium	Low
Afrocarpus gracilior		African Fern Pine	Yes	30' - 50'	25' - 35'	15'	5'	Evergreen	Rounded Weeping	Varied	High	High
Averrhoa carambola		Star Fruit	No	25' - 30'	20' - 30'	15'	5'	Evergreen	Rounded	Well-Drained	Poor	Medium
Bauhinia x blakeana		Hong Kong Orchid Tree	No	25' - 30'	25' - 35'	15'	5'	Evergreen	Spreading	Moist/Well-Drained	Poor	Low
Brachychiton rupestris		Queensland Bottle Tree	Yes	30'	15'	15'	5'	Deciduous	Upright Bulbous trunk	Moist to Dry	High	Low
Carpinus caroliniana	√	Blue Beech	Yes	20' - 40'	20' - 40'	15'	5'	Deciduous	Upright Oval	Moist/Well-Drained	Medium	High
Citharexylum spinosum		Fiddlewood	No	15' - 35'	10' - 25'	15'	5'	Evergreen	Rounded Vase	Moist/Well-Drained	Medium	Medium

Cocculus laurifolius		Snail Seed	Yes	20' - 25'	20' - 25'	15'	5'	Evergreen	Spreading	Well-Drained	Medium	Medium
Cupressus arizonica		Arizona Cypress	No	30' - 40'	15' - 25'	15'	5'	Evergreen	Columnar	Well-Drained	Medium	Low
Diospyros virginiana	√	American Persimmon	No	40' - 60'	20' - 35'	15'	5'	Deciduous	Rounded	Moist/Well-Drained	Low	Medium
Elaeocarpus decipiens		Japanese Blueberry	No	25' - 35'	15' - 25'	15'	5'	Evergreen	Rounded	Well-Drained	Medium	Medium
Eriobotrya japonica		Loquat	Yes	20' - 30'	20' - 30'	15'	5'	Evergreen	Round Vase	Moist/Well-Drained	Low	Low
Erythrina caffra		South African Coral Tree	Yes	25' - 40'	25'	15'	5'	Deciduous	Vase	Moist to Dry	High	Medium
Erythrina lysistemon		Sacred Coral Tree	Yes	30'	10' - 30'	15'	5'	Deciduous	Speading Vase	Moist to Dry	High	Medium
Gordonia lasianthus	√	Loblolly Bay	No	30' - 40'	10' - 20'	15'	5'	Evergreen	Narrow Conical	Wet	Low	High
Handroanthus impetiginosus		Purple Trumpet Tree	Yes	20' - 30'	15' - 25'	15'	5'	Deciduous	Rounded	Varied	Medium	Low
Handroanthus umbellatus		Yellow Trumpet Tree	Yes	20' - 30'	20' - 30'	15'	5'	Semi-Deciduous	Rounded	Varied	High	Low

Hovenia dulcis		Japanese Raisin Tree	Yes	20' - 40'	30' - 40'	15'	5'	Deciduous	Open Oval	Moist/Well-Drained	Medium	High
Ilex cassine	√	Dahoon Holly	No	20' - 30'	8' - 12'	15'	5'	Evergreen	Upright Dense	Wet/Well-Drained	Medium	High
Jacaranda cuspidifolia		Cuspidateleaf Jacaranda	Yes	25' - 35'	15' - 30'	15'	5'	Deciduous	Rounded Open Habit	Well-Drained	Medium	Medium
Jacaranda mimosifolia		Jacaranda	No	25' - 50'	25' - 60'	15'	5'	Deciduous	Rounded Open Habit	Well-Drained	Medium	Low
Juniperus virginiana var. silicicola	√	Southern Red Cedar	Yes	30' - 40'	20' - 30'	15'	5'	Evergreen	Conical to Rounded (old)	Varied	High	Medium
Lagerstroemia indica 'Asuka Dwarf Hybrid' *x L. fauriei* (1972)		'Apalachee' Hybrid Crape Myrtle	Yes	15' - 25'	12' - 20'	15'	5'	Deciduous	Upright	Varied	High	High
Lagerstroemia indica x L. fauriei 'Basham's Party Pink' - (Chance Seedling 1963)		'Basham's Party Pink' Hybrid Crape Myrtle	Yes	15' -30'	12' - 15'	15'	5'	Deciduous	Rounded	Varied	High	High
[*Lagerstroemia indica* 'Dwarf Red' *x L. fauriei*] x [*L. indica* 'Low Flame' *x L. fauriei*] (1972)		'Biloxi' Hybrid Crape Myrtle	Yes	15' - 25'	15' - 25'	15'	5'	Deciduous	Vase	Varied	High	High
Lagerstroemia fauriei 'Fantasy' (Late 1950's)		'Fantasy' Japanese Crape Myrtle	Yes	15' - 35'	15' - 35'	15'	5'	Deciduous	Vase	Varied	High	High

Lagerstroemia indica 'Glendora White' (Chance Seedling 1957)		'Glendora White' Common Crape Myrtle	Yes	15' - 25'	15' - 20'	15'	5'	Deciduous	Upright	Varied	High	High
Lagerstroemia fauriei 'Kiowa' (Japan, 1968)		'Kiowa' Japanese Crape Myrtle	Yes	15' - 26'	15' - 24'	15'	5'	Deciduous	Vase	Varied	High	High
Lagerstroemia indica 'Pink Lace' *x L. fauriei* (1964)		'Muskogee' Hybrid Crape Myrtle	Yes	15' - 25'	15' - 20'	15'	5'	Deciduous	Rounded	Varied	High	High
Lagerstroemia indica 'Pink Lace' *x L. fauriei* (1969)		'Natchez' Hybrid Crape Myrtle	Yes	15' - 30'	15' - 35'	15'	5'	Deciduous	Rounded Vase	Varied	High	High
Lagerstroemia indica 'Potomac' (1962)		'Potomac' Common Crape Myrtle	Yes	15' - 25'	15' - 20'	15'	5'	Deciduous	Rounded	Varied	High	High
Lagerstroemia Hybrid 5570 EL (US National Arboretum 1992-1993)		'Sarah's Favorite' Hybrid Crape Myrtle	Yes	18' - 30'	20' - 35'	15'	5'	Deciduous	Rounded	Varied	High	High
Lagerstroemia fauriei 'Fantasy' (Chance Seedling 1981)		'Townhouse' Japanese Crape Myrtle	Yes	18' - 30'	15' - 20'	15'	5'	Deciduous	Vase	Varied	High	High
Michelia x alba		White Perfume Tree	Yes	50'	20' - 30'	15'	5'	Evergreen	Pyramidal	Moist to Well-Drained	Low	Medium
Morus rubra	√	Red Mulberry	No	30' - 50'	35' - 50'	15'	5'	Deciduous	Rounded	Wet/Well-Drained	Medium	Low

Nageia nagi		Asian Barberry or Broadleaf Podocarpus	Yes	30' - 50'	15' - 25'	15'	5'	Evergreen	Upright	Varied	High	High
Nyssa sylvatica	√	Black gum	No	65' - 75'	25' - 35'	30'	8'	Deciduous	Pyramidal Oval	Wet to Moist	Low	Medium
Olea europaea		Olive	Yes	25' - 50'	25' - 35'	15'	5'	Evergreen	Irregular	Well-Drained	High	Medium
Persea americana 'Brogdon'		'Brogdon' Avocado	No	20' - 40'	25' - 35'	15'	5'	Evergreen	Rounded Spreading	Well-Drained	Medium	Low
Persea americana 'Fuerte'		'Fuerte' Avocado	No	20' - 40'	25' - 35'	15'	5'	Evergreen	Rounded Spreading	Well-Drained	Medium	Low
Persea americana 'Hall'		'Hall' Avocado	No	20' - 40'	25' - 35'	15'	5'	Evergreen	Rounded Spreading	Well-Drained	Medium	Low
Pithecellobium flexicaule		Texas Ebony	Yes	25' - 30'	20' - 30'	15'	5'	Evergreen	Rounded	Well-Drained to Dry	High	High
Platycladus orientalis		Arborvitae	No	30' - 50'	15' - 20'	15'	5'	Evergreen	Conical Upright	Varied	Medium	Medium
Podocarpus henkelii		Long-Leafed Yellow-Wood	Yes	25' - 35'	15' - 25'	15'	5'	Evergreen	Conical Pyramid	Moist/Well-Drained	Low	High
Podocarpus macrophyllus		Yew Plum Pine	Yes	30' - 50'	15' - 25'	15'	5'	Evergreen	Upright	Varied	High	High

Quercus austrina	√	Bluff Oak	Yes	40' - 60'	30' - 40'	15'	5'	Deciduous	Broad Pyramidal	Moist/Well-Drained	Medium	High
Quercus geminata	√	Sand Live Oak	Yes	20' - 50	20' - 50'	15'	5'	Evergreen	Irregular Rounded	Well-Drained to Dry	High	High
Quercus incana	√	Bluejack Oak	No	30' - 55'	25' - 45'	15'	5'	Deciduous	Rounded	Well-Drained to Dry	High	High
Quercus margarettae	√	Sand Post Oak	Yes	35' - 50'	25' - 40'	15'	5'	Deciduous	Rounded	Well-Drained to Dry	High	High
Quercus marilandica	√	Blackjack Oak	Yes	30'- 40'	20'- 30'	15'	5'	Deciduous	Rounded	Well-Drained to Dry	High	High
Quecus michauxii	√	Swamp Chestnut Oak	Yes	60' - 80'	30' - 50'	15'	5'	Deciduous	Narrow Pyramidal	Moist/Well-Drained	Medium	High
Quercus nuttallii		Nuttall Oak	Yes	50'	40'	15'	5'	Deciduous	Upright	Moist/Well-Drained	Medium	Medium
Quercus stellata	√	Post Oak	Yes	20' - 40'	15' - 25'	15'	5'	Deciduous	Irregular	Varied	High	High
Salix babylonica		Weeping Willow	No	30' - 50'	30'- 50'	15'	5'	Deciduous	Rounded Weeping	Wet/Well-Drained	Low	Low
Salix caroliniana	√	Coastal Plain Willow	No	30'	20' - 25'	15'	5'	Deciduous	Rounded Spreading	Wet/Well-Drained	Low	Low

Tabebuia caraiba		Silver Trumpet Tree	Yes	15' - 25'	10' - 15'	15'	5'	Deciduous	Irregular Oval	Varied	High	Low
Taxodium ascendens	√	Pond Cypress	Yes	60' - 80'	15' - 30'	15'	5'	Deciduous	Conical Upright	Wet/Well-Drained	Medium	High
Taxodium distichum	√	Bald Cypress	Yes	60' - 80'	15' - 30'	15'	5'	Deciduous	Conical Upright	Wet/Well-Drained	Medium	High

Small 'C' Trees

Botanical Name √ = Native	Common Name	Street Tree	Mature Height	Mature Spread	Power Line Offset	Water/Sewer Offset	Deciduous/Evergreen	Growth Habit	Soil Moisture	Drought Tolerance	Wind Resistance
Callistemon citrinus	Lemon Bottlebrush	Yes	15' - 25'	15' - 25'	None	None	Evergreen	Upright	Moist/Well-Drained	Medium	Medium
Callistemon rigidus	Stiff Bottlebrush	Yes	15' - 20'	10' - 15'	None	None	Evergreen	Upright	Moist/Well-Drained	Medium	Medium
Callistemon viminalis	Weeping Bottlebrush	No	20' - 30'	15' - 25'	None	None	Evergreen	Weeping	Moist/Well-Drained	High	Medium
Camellia sansanqua	Sansanqua Tree	No	15' - 20'	15' - 20'	None	None	Evergreen	Rounded	Well-Drained	Medium	Medium
Chionanthus retusus	Chinese Fringetree	No	10' - 20'	10' - 20'	None	None	Deciduous	Rounded Spreading	Well-Drained	Medium	High

Chionanthus retusus 'Tokyo Tower'		'Tokyo Tower' Fringetree	Yes	10' - 15'	4' - 6'	None	None	Deciduous	Upright Columnar	Well-Drained	Medium	Medium
Cordia boissieri		Texas Olive or White Geiger	Yes	15' - 20'	10' - 15'	None	None	Evergreen	Rounded	Well-Drained	High	High
Eugenia foetida	√	Simpson Stopper	Yes	10' - 20'	10' - 15'	None	None	Evergreen	Rounded Spreading	Moist/Well-Drained	High	Medium
Ilex cornuta 'Burfordii'		Burford Holly	Yes	15' - 25'	15' - 25'	None	None	Evergreen	Rounded	Moist/Well-Drained	Medium	High
Ilex vomitoria	√	Yaupon Holly	Yes	15' - 20'	15' - 20'	None	None	Evergreen	Rounded Vase	Varied	Medium	High
Ilex vomitoria pendula	√	Weeping Yaupon Holly	Yes	15' - 30'	8' - 12'	None	None	Evergreen	Upright Weeping	Varied	Medium	High
Lagerstroemia indica		Common Crape Myrtle	Yes	10' - 30'	15' - 25'	None	None	Deciduous	Vase	Varied	High	High
[*Lagerstroemia indica* 'Pink Ruffles' *x L. indica*] x *L. fauriei* (1969)		'Acoma' Hybrid Crape Myrtle	Yes	6' - 12'	6' - 10'	None	None	Deciduous	Weeping	Varied	High	High
[*Lagerstroemia* 'Tuscarora' *x* (*L. indica* 'Red' x *L. indica* 'Carolina Beauty')] x [*L. limii x L. indica* 'Asuka Dwarf Hybrid'] (1989)		'Arapaho' Hybrid Crape Myrtle	Yes	12' - 20'	8' - 10'	None	None	Deciduous	Upright	Varied	High	High

Lagerstroemia indica 'Centennial' (1962)	'Centennial' Common Crape Myrtle	Yes	10' - 20'	10' - 15'	None	None	Deciduous	Rounded	Varied	High	High
Lagerstroemia indica 'Hardy Red' x *L. indica* 'Low Flame' (1970)	'Cherokee' Common Crape Myrtle	Yes	12' - 15'	6' - 10'	None	None	Deciduous	Vase	Varied	High	High
Lagerstroemia indica 'Dark Red' *x* [*L. indica x L. fauriei*] (1969)	'Comanchee' Hybrid Crape Myrtle	Yes	12' - 20'	10' - 15'	None	None	Deciduous	Rounded Spreading	Varied	High	High
Lagerstroemia indica 'Whit II' (1987)	Dynamite® Common Crape Myrtle	Yes	15' -20'	12' - 18'	None	None	Deciduous	Upright	Varied	High	High
Lagerstroemia indica 'Hope' (1963)	'Hope' Common Crape Myrtle	Yes	6' - 12'	6' - 10'	None	None	Deciduous	Open	Varied	High	High
[*Lagerstroemia indica* 'Pink Lace' *x L. fauriei*] *x L. indica* 'Alba Nana' (1972)	'Hopi' Hybrid Crape Myrtle	Yes	8' - 12'	6' - 10'	None	None	Deciduous	Upright Spreading	Varied	High	High
[*Lagerstroemia indica* 'Dwarf Red' *x L. fauriei*] x [(*L. indica* 'Pink Lace' x *L. fauriei*) *x L.* 'Basham's Party Pink'] (1975)	'Lipan' Hybrid Crape Myrtle	Yes	13' - 20'	10' - 15'	None	None	Deciduous	Upright	Varied	High	High
[*Lagerstroemia indica* 'Pink Lace' *x L. fauriei*] *x* [*L. indica* 'Firebird' *x* (*L. indica x L. fauriei*)] (1972)	'Miami' Hybrid Crape Myrtle	Yes	15' - 20'	12' - 15'	None	None	Deciduous	Upright	Varied	High	High

Lagerstroemia indica 'Near East' (1870)	'Near East' Common Crape Myrtle	Yes	15' - 20'	10' - 12'	None	None	Deciduous	Rounded	Varied	High	High
[*Lagerstroemia indica* 'Dwarf Red' *x L. fauriei*] *x* [*L. indica* 'Pink Lace' *x L. fauriei*] (1972)	'Osage' Hybrid Crape Myrtle	Yes	12' - 20'	10' x 15'	None	None	Deciduous	Rounded	Varied	High	High
[*Lagerstroemia indica* 'Dwarf red' *x L. fauriei*] *x* [*L. indica* 'Dark Red' *x L. fauriei*] (1972)	'Pecos' Hybrid Crape Myrtle	Yes	8' - 12'	6' - 10'	None	None	Deciduous	Vase	Varied	High	High
Lagerstroemia 'PIILAG-III' RED ROOSTER™ (2014)	'Red Rooster®' Hybrid Crape myrtle	Yes	8' - 10'	4' - 5'	None	None	Deciduous	Upright	Varied	High	High
[*Lagerstroemia indica* 'Dwarf Red' *x L. fauriei*] *x* [*L. indica* 'Pink Lace' x L. fauriei] (1972)	'Sioux' Hybrid Crape Myrtle	Yes	12' - 20'	10' - 15'	None	None	Deciduous	Upright Spreading	Varied	High	High
[(*Lagerstroemia indica* 'Pink Lace' *x L. fauriei*) *x L. indica* 'Catawba'] *x L.* 'Tuscarora' (1974)	'Tonto' Hybrid Crape Myrtle	Yes	6' - 12'	6' - 10'	None	None	Deciduous	Rounded	Varied	High	High
L. indica 'Dallas Red' *x* (*L. indica x L. fauriei*) 'Basham's Party Pink' (1968)	'Tuskegee' Hybrid Crape Myrtle'	Yes	10' - 18'	15' - 20'	None	None	Deciduous	Vase	Varied	High	High

(*L. indica* 'Pink Lace' *x L. fauriei*) *x* [*L. amabilis x* (*L. indica* 'Hardy Light Pink' *x L. indica* 'Red')] (1972)		'Yuma' Hybrid Crape Myrtle	Yes	12' - 20'	12' - 20'	None	None	Deciduous	Rounded	Varied	High	High
[*L. indica* 'Pink Lace' *x L. fauriei*] *x* [*L. indica* 'Firebird' *x* (*L. indica x L. fauriei*)] (1972)		'Wichita' Hybrid Crape Myrtle	Yes	15' - 20'	8' - 11'	None	None	Deciduous	Upright	Varied	High	High
Ligustrum japonicum		Waxleaf Privet	Yes	10' - 15'	15' - 20'	None	None	Evergreen	Rounded Spreading	Moist/Well-Drained	Medium	High
Prunus angustifolia	√	Chickasaw Plum	No	12' - 20'	15' - 20'	None	None	Deciduous	Rounded Spreading	Moist to Dry	High	Medium
Prunus umbellata	√	Flatwoods Plum	No	15' - 20'	15' - 20'	None	None	Deciduous	Rounded	Well-Drained	Medium	High
Quercus myrtifolia	√	Myrtle Oak	Yes	15' - 20'	8' - 10'	None	None	Evergreen	Upright Spreading	Well-Drained to Dry	High	High
Viburnum odorotissimum 'Awabuki'		'Awabuki' Sweet Viburnum	No	15' - 20'	15' - 20'	None	None	Evergreen	Rounded	Well-Drained	Medium	High

ATTACHMENT "D"

TABLE 4.5-7 QUALIFIED PALMS

Botanical Name √ = Native	Common Name	Street Tree	Mature Height	Mature Spread	Power Line Offset	Water/ Sewer Offset	Deciduous/ Evergreen	Growth Habit	Soil Moisture	Drought Tolerance	Wind Resistance
"D" PALMS											
Bismarkia nobilis 'Silver'	Silver Bismark Palm	No	30'-60'	10'-20'	30'	5'	Evergreen	Upright Palm	Varied	High	High
Phoenix canariensis	Canary Island Date Palm	No	40'-60'	15'-25'	30'	5'	Evergreen	Upright with long fronds	Varied	High	High
Phoenix reclinata 'X'	Senegal Date Palm	No	25'-30'	10'-20'	30'	5'	Evergreen	Upright with long fronds	Varied	High	High
Phoenix rupicola	Cliff Date Palm	No	40'-60'	10'-20'	30'	5'	Evergreen	Upright with long fronds	Varied	High	High
Phoenix sylvestris	Sylvester Palm	No	40'-50'	10'-20'	30'	5'	Evergreen	Upright with long fronds	Varied	High	High
Syagrus romanzoffiana	Queen Palm	No	30'-50'	15'-20'	30'	5'	Evergreen	Upright with long fronds	Varied	High	High
Archontophoenix alexandrae	Alexandra Palm	No	60'-90'	5'-10'	15'	5'	Evergreen	Upright Palm	Varied	High	High
Archontophoenix cunninghamiana	Picabeen Palm	No	30'-40'	10'-15'	15'	5'	Evergreen	Upright Palm	Varied	High	High

TABLE 4.5-7 QUALIFIED PALMS

Botanical Name √ = Native	Common Name	Street Tree	Mature Height	Mature Spread	Power Line Offset	Water/ Sewer Offset	Deciduous/ Evergreen	Growth Habit	Soil Moisture	Drought Tolerance	Wind Resistance
Butia capitata	Pindo Palm	No	15'-25'	10'-15'	15'	5’	Evergreen	Upright Palm	Varied	High	High
Livistonia chinensis	Chinese Fan Palm	No	30'-50'	5'-10'	15'	5’	Evergreen	Upright Palm	Varied	High	High
Livistonia decipiens	Ribbon Palm	No	30'-50'	5'-10'	15'	5’	Evergreen	Upright Palm	Varied	High	High
Livistonia nitida	Ribbon Palm	No	30'-50'	5'-10'	15'	5’	Evergreen	Upright Palm	Varied	High	High
Sabal causiarum	Hat Palm	No	40'-50'	10'-15'	15'	5’	Evergreen	Upright Palm	Varied	High	High
Sabal balckburiana	Hat Palm	No	40'-50'	10'-15'	15'	5’	Evergreen	Upright Palm	Varied	High	High
Sabal palmetto √	Cabbage Palm	No	30’-80’	10'-15'	15'	5’	Evergreen	Upright Palm	Varied	High	High
Washingtonia filifera	California Fan Palm	No	40'-50'	10'-15'	15'	5’	Evergreen	Upright Palm	Varied	High	High
Washingtonia robusta	Petticoat Palm	No	40'-60'	10'-15'	15'	5’	Evergreen	Upright Palm	Varied	High	High

Table 4.5-7 Qualified Palms

"D" Palms with Large Crowns

Botanical Name √ = Native	Common Name	Street Tree	Mature Height	Mature Spread	Power Line Offset	Water/Sewer Offset	Deciduous/Evergreen	Growth Habit	Soil Moisture	Drought Tolerance	Wind Resistance
Archontophoenix alexandrae	Alexandra Palm or King Palm	No	50' - 100'	15' - 20'	30'	5'	Evergreen	Upright Single Trunk Self-Cleaning	Moist/Well-Drained	Medium	High
Archontophoenix cunninghamiana	Picabeen Palm or Bungalow Palm	No	60' - 80'	15' - 20'	30'	5'	Evergreen	Upright Single Trunk Self-Cleaning	Moist/Well-Drained	Medium	High
Archontophoenix myolensis	Myola Palm	No	45' - 65'	15' - 20'	30'	5'	Evergreen	Upright Single Trunk Self-Cleaning	Moist/Well-Drained	Medium	High
x Butiagrus nabonnandii	Mule Palm	No	30' - 40'	15' - 20'	30'	5'	Evergreen	Upright Long Fronds Single Trunk	Varied	High	High
Phoenix reclinata	Senegal Date Palm	No	25' - 35'	10' - 20'	30'	5'	Evergreen	Upright Long Fronds Clumping	Varied	High	High
Phoenix rupicola	Cliff Date Palm	No	15' - 20'	15' - 25'	30'	5'	Evergreen	Upright Long Fronds Single Trunk	Varied	High	High

Phoenix sylvestris	Sylvester Palm	No	40' - 50'	15' - 25'	30'	5'	Evergreen	Upright Long Fronds Single Trunk	Varied	High	High
Sabal causiarum	Puerto Rican Hat Palm	No	40' - 50'	15' - 20'	30'	5'	Evergreen	Upright Single Trunk	Varied	High	High
Sabal uresana	Sonoran Palmetto	No	30'	15' - 25'	30'	5'	Evergreen	Upright Single Trunk	Varied	High	High
Sabal 'Riverside' (Unknown Parentage)	Riverside Sabal Palm	No	40'	20' - 35'	30'	5'	Evergreen	Upright Single Trunk	Varied	High	High
Syagrus romanzoffiana	Queen Palm	No	30' - 50'	15' - 25'	30'	5'	Evergreen	Upright Long Fronds Single Trunk	Varied	High	High
Syagrus romanzoffiana x S. schizophylla	Coco Queen Palm	No	30' - 40'	15' - 25'	30'	5'	Evergreen	Upright Long Fronds Single Trunk	Varied	High	High
Washingtonia filifera	California Fan Palm	No	40' - 50'	10' - 20'	30'	5'	Evergreen	Upright Single Trunk	Varied	High	High

"D" Palms with Small Crowns

Botanical Name √ = Native	Common Name	Street Tree	Mature Height	Mature Spread	Power Line Offset	Water/Sewer Offset	Deciduous/Evergreen	Growth Habit	Soil Moisture	Drought Tolerance	Wind Resistance
Copernicia alba	Carnaday Palm	No	42'	6' - 10'	15'	5'	Evergreen	Upright Single Trunk	Varied	High	High
Copernicia prunifera	Carnauba Wax Palm	No	12' - 30'	10' - 15'	15'	5'	Evergreen	Upright Single Trunk	Varied	High	High
Livistona australis	Australian Fan Palm	No	40' - 82'	10' - 15'	15'	5'	Evergreen	Upright Single Trunk	Varied	High	High
Livistona chinensis	Chinese Fan Palm	No	30' - 50'	5' - 10'	15'	5'	Evergreen	Upright Single Trunk	Varied	High	High
Livistona decora	Ribbon Palm	No	40' - 60'	10' - 15'	15'	5'	Evergreen	Upright Single Trunk	Varied	High	High
Livistona muelleri	Cairns Fan Palm	No	25' - 45'	10' - 15'	15'	5'	Evergreen	Upright Single Trunk	Varied	Medium	High
Livistona nitida	Carnavon Gorge Palm	No	50' - 100'	10' - 15'	15'	5'	Evergreen	Upright Single Trunk	Varied	High	High
Sabal blackburniana	Blackburn's Sabal Palm	No	20'	10' - 15'	15'	5'	Evergreen	Upright Single Trunk	Varied	High	High

Sabal palmetto	√	Cabbage Palm	No	30' - 80'	10' - 15'	15'	5'	Evergreen	Upright Single Trunk	Varied	High	High
Washingtonia robusta		Mexican Fan Palm	No	40' - 80'	10' - 15'	15'	5'	Evergreen	Upright Single Trunk	Varied	High	High

ATTACHMENT "E"

TABLE 4.5-8 QUALIFIED SHRUBS, FLOWERS AND GROUNDCOVERS

Botanical Name √ = Native		Common Name	Light Intensity	Flower Season
GROUNDCOVERS FOR NORMAL TO WET SITES				* Subject to freeze damage
Acrostichum danaeifolium	√	Giant Leather Fern	Low	NA
Ajuga reptans		Ajuga	Partial	Spring
Andropogon virginicus		Broomsedge	Full	Fall
Asparagus aethiopicus 'Myers'		Foxtail Fern	Partial	NA
Asparagus densiflorus		Sprengeri Fern	Partial	NA
Asplenium nidus		Birdsnest Fern	Low/Partial	NA
Bacopa monnieri		Smooth Water-hyssop	Full	
Blechnum serrulatum	√	Swamp Fern	Partial/Full	NA
Chasmanthium latifolium		Broadleaf Woodoats	Full	
Cuphea hyssopifolia		False Heather	Full	Spring/Summer
Cyrtomium falcatum		Holly Fern	Low	NA
Distichilis spicata		Grass Salt	Full	
Eremochloa ophiuroides		Grass Centipede	Full	NA
Evolvulus glomerata		Blue Daze	Full	Summer
Ficus pumila		Creeping Fig	Partial	NA
Juniperus procumbens		Juniper Japanese Garden	Full	NA
Mimosa strigillosa	√	Powderpuff	Full	
Muhlenbergia capillaris	√	Grass, Muhly	Full	Summer
Nephrolepis biserrata	√	Giant Sword Fern	Partial	NA
Nephrolepis exaaltata	√	Boston Fern	Partial	NA
Osmunda cinnamomea	√	Cinnamon Fern	Low	NA
Osmunda regalis	√	Royal Fern	Low/Partial	NA

TABLE 4.5-8 QUALIFIED SHRUBS, FLOWERS AND GROUNDCOVERS

Botanical Name √ = Native		Common Name	Light Intensity	Flower Season
Panicum hemitomon		Maidencane	Full	
Rumohra adiantiformis		Leatherleaf Fern	Partial/Full	NA
Sophastrum secundum	√	Grass, Lopsided Indian	Full	
Spartina alterniflora	√	Grass, Smooth Cord	Full	
Stachytarpheta Jamaicensis	√	Porterweed	Full	Summer
*Tetrastigma voinerianum**		Grape Ivy	Low/Partial	NA
Thelypteris kunthii		Southernshield Fern		NA
Trachelospermum asiaticum		Jasmine Asiatic	Partial	NA
Tradescantia pallida		Purple Queen	Low	
*Various species**	√	Bromeliad	Low	VARIES
GROUND COVERS FOR NORMAL TO DRY SITES				* Subject to freeze damage
Aspidistra elatior		Cast Iron Plant	Full	NA
Cynodon dactylon		Grass, Bermuda	Full	NA
Dianella tasmanica		Flax Lily	Full	
Eragrostis spectabilis	√	Grass, Purple Love	Full	
Gelsemium sempervirens	√	Carolina Jasmine	Full	Summer
Helianthus debilis	√	Beach Sunflower	Full	
Hypericum reductum	√	St. John's Wort	Full	
FLOWERS FOR NORMAL TO DRY SITES				* Subject to freeze damage
Lupinus diffusus		Lupine, Sky-blue	Full	
Monarda punctata		Dotted Horsemint	Full	
Neomarica spp		Iris, walking	Full	
Penstemon multiflorus		Beardtongue, White	Full	
Pentas lanceolata		Pentas	Full	Summer/Spring

TABLE 4.5-8 QUALIFIED SHRUBS, FLOWERS AND GROUNDCOVERS

Botanical Name √ = Native		Common Name	Light Intensity	Flower Season
Phlox divaricata		Phlox, Woodland	Full	Winter
Phlox drummondii		Phlox, Garden	Full	Winter
Pityopsis graminifolia		Silkgrass	Full	
Portulaca grandiflora		Moss Rose or Portulaca	Full	Summer
Ruellia caroliniensis		Wild Petunia	Full	Spring/Summer
Salvia splendens		Sage, Tropical	Full	Winter
Senecio cineraria		Dusty-miller	Full	Winter
Stokesia laevis		Aster, Stokes'	Full	Winter
Tithonia diversifolia		Mexican Sunflower	Full	Winter
Tithonia rotundifolia		Mexican Zinnia	Full	Winter
Verbena bonariensis		Verbena, Purpletop or Roadside	Full	Winter
Yucca spp		Yucca	Full	Summer
SHRUBS FOR NORMAL TO WET SITES				* Subject to freeze damage ^ Recommended for vehicle use areas
Acalypha hispida		Chenille Plant	Full	Summer
Acca sellowia		Pineapple Guava	Full	
Agarista populifolia		Pipestem	Low/Partial	
Brunfelsia grandiflora		Yesterday Today Tomorrow	Partial	Spring
Calycanthus floridaus	√	Sweet Shrub	Partial/Full	Summer
*Clerodendrum quadriloculare 'Brandonii'**		Variegated Shooting Star	Partial/Full	Summer
*Clerodendrum quadriloculare**		Shooting Star	Full	Summer
Clethra alnifolia	√	Sweet Pepperbush	Full	Spring
Cocculus laurifolius		Snailseed		
*Conocarpus erectus**	√	Silver Buttonwood	Full	NA

TABLE 4.5-8 QUALIFIED SHRUBS, FLOWERS AND GROUNDCOVERS

Botanical Name √ = Native		Common Name	Light Intensity	Flower Season
Cyrilla racemiflora	√	Titi	Fall/Low	Summer
Elaeocarpus decipiens		Japanese Blueberry	Full	NA
Galphimia gracilis		Thryallis	Full	Summer
Gardenia augusta		Gardenia, Cape Jasmine	Full	Spring
Hamelia patens	√	Firebush	Full/Partial	Summer
Hibiscus rosa-sinensis		Hibiscus	Full	Spring
Hydrangea macrophylla		Hydrangea	Partial	Summer
*Llex crenata^*		Japanese Holly	Full/Partial	NA
Llex glagra	√	Gallberry	Full	NA
Jasminum mesnyi		Jasmine	Full	NA
Jasminum multiflorum		Downy Jasmine	Full	Summer
Juniperus chinensis		Chinese Juniper	Full	NA
Lyonia lucida	√	Lyonia Shiny	Full/Partial	
Myrica cerifera	√	Wax Myrtle	Full/Partial	
Odontonema cuspidata		Firespike	Full	Spring
Osmanthus fragrans		*Sweel Olive	Full	NA
*Philodendron spp**		Philodendron, 'Xanadu'	Low	Fall/Winter
Plumbago auriculata		Plumbago	Low	NA
*Podocarpus macrophyllus^*		Podocarpus	Full	Spring/Summer
Psychotria nervosa	√	Wild Coffee	Low	
Pyracantha coccinea		Firethorn	Low	
Rapanea punctata	√	Myrsine	Full	Winter
*Rhaphiolepis indica^*		Indian Hawthorne	Full	Winter
Rhododendron austrinum		Azalea, Florida Flame	Low	Spring/Summer
Rhododendron Minus 'Chapmanii'	√	Chapemans Rhododendron	Low	

TABLE 4.5-8 QUALIFIED SHRUBS, FLOWERS AND GROUNDCOVERS

Botanical Name √ = Native		Common Name	Light Intensity	Flower Season
Rosa hybrid		Rose, 'Knockout'	Full	
Rosa laevigata		Rose, Charokee	Full	
Hibiscus syriacus		Rose of Sharon	Full	
*Robus spp'*Brazos'	√	Blackberry	Full	
Percea palustris	√	Swamp Bay		
Tecoma capensis		Honeysuckle, Cape	Full	Winter
Tibouchina spp		Glory Bush	Full	NA
Tripsacum dactyloides		Fakahatchee Grass	Full	
Vaccinium cultivars	√	Blueberry	Full	
Viburnum obovatum	√	Viburnum, 'Miss Shiller's Delight'	Full	
viburnum obovatum^	√	Viburnum, 'Walters	Full	
Viburnum odoratissimum		Viburnum, Sweet	Full	
Viburnum odoratissimum 'Awabuki'^		Viburnum, Mirror Leaf	Full	
Virburnum suspensum^		Viburnum, sandankwa	Full	
*Zingiber zerumbet**		Variegated Ginger	Full/Partial	
SHRUBS FOR NORMAL TO DRY SITES				* Subject to freeze damage Recommended for vehicle use areas
*Acalypha wilkesiana**		Copper Plant	Full	NA
Agave americana		Century Plant	Full	Summer
*Allamanda cathartica**		Allamanda	Full	Summer
Bougainvillea glabra		Bougainvillea	Full	Spring/Summer
Callicarpa americana	√	American Beautiberry	Partial/Full	Summer
Callistemon citrinos		Bottle Brush, 'Red Cluster'	Full	Summer
Camellia japonica	√	Camellia	Partial	Winter/Spring

TABLE 4.5-8 QUALIFIED SHRUBS, FLOWERS AND GROUNDCOVERS

Botanical Name √ = Native		Common Name	Light Intensity	Flower Season
Camellia sasanqua	√	Camellia	Full	Fall
*Coccoloba uvifera**	√	Sea Grape	Full	Spring
*Codiaeum variegatum**		Croton	Partial/Full	NA
Cortaderia Selloana		Pampas Grass	Full	Summer
Crinum asiaticum	√	Crinum Lily	Partial/Full	Summer/Fall
*Duranta erecta**		Duranta, 'Cuban Gold'	Full	Summer
*Duranta erecta**		Duranta, 'Gold Mound'	Full	Summer
*Duranta erecta**		Duranta, 'Sapphire Showers'	Full	Summer
Elaeagnus pungens^		Silverthorn	Fall	NA
*Eugenia uniflora**		Surinam Cherry	Fall	Spring
Hydrangea quefcifolia	√	Hydrangea Oakleaf	Partial	Spring
Ilex vomitoria^	√	Holly, 'Stoke's Dwarf'	Fall	
*Ixora coccinea**		Ixora	Fall	Summer
*Jatropha spp**		Jatropha	Fall	Summer
Lantana involucrata	√	Wild Sage	Fall	Winter/Spring
Lycium carolinianum		Christmas Berry		
Lyonia ferruginea	√	Lyonia, Rusty		
Malvaviscus arboreus		Turk's Cap		
Nandina domestica		heavenly Bamboo	Fall/Partial	Summer
Nerium oleander		Oleander	Fall	Spring/Summer
Philodendron selloum		Philodendron	Partial	NA
*Plumbago auriculata**		Plumbago	Fall	Winter/Spring
Platycladus orientalis		Arbor-vitae, Oriental	Fall	NA
Podocarpus macrophyllus		Podocarpus	Fall/Partial	NA
Rasmarinus officinalis		Rosemary	Fall	NA

TABLE 4.5-8 QUALIFIED SHRUBS, FLOWERS AND GROUNDCOVERS

Botanical Name √ = Native		Common Name	Light Intensity	Flower Season
*Schefflera arbicola**		Dwarf Schefflera	Partial	NA
Severinia buxifolia		Boxthorn		NA
Sophora tomentosa	√	Yellow Necklace Pod		Summer
Vaccinium darrowii	√	Blueberry Darrow's	Fall	Spring
Yucca aloifolia	√	Spanish Bayonet	Fall	Summer

Table 4.5-8 Qualified Shubs, Groundcovers & Flowers

Shrubs * Subject to Freeze Damage ** Recommended for Vehicle Use Areas					
Botanical Name √ = Native		**Common Name**	**Light Intensity**	**Flower Season or Season of Interest**	**Soil Moisture**
Acalypha wilkesiana *		Copper Plant or Jacob's Coat	Full Sun to Partial Shade	Year Round Color	Moist/Well-Drained
Acca sellowiana		Feijoa or Pineapple Guava	Full Sun	Spring to Summer	Well-Drained to Dry
Agave americana		Century Plant	Full Sun	NA	Well-Drained to Dry
Allamanda cathartica *		Allamanda	Full Sun	Year Round	Moist/Well-Drained
Alpinia zerumbet 'Variegata'		Variegated Shell Ginger	Partial Shade	Sporadic	Moist/Well-Drained
Atalantia buxifolia (formerly, *Severina buxifolia*)		Boxthorn	Full Sun to Partial Shade	NA	Moist to Dry
Brunfelsia grandiflora		Yesterday-Today-and-Tomorrow	Partial Shade	Spring to Fall	Well-Drained
Buxus microphylla		Japanese Boxwood	Full Sun	NA	Moist/Well-Drained
Callicarpa americana	√	American Beautyberry	Full Sun to Partial Shade	Spring to Fall	Moist/Well-Drained
Callistemon viminalis 'Little John'		Dwarf Bottlebrush	Full Sun	Year Round	Moist/Well-Drained

Calycanthus floridus	√	Carolina Allspice or Sweetshrub	Partial Shade to Shade	Spring to Summer	Moist/Well-Drained
Camelia japonica		Japanese Camelia	Partial Shade to Shade	Winter to Spring	Moist/Well-Drained
Camelia sansanqua		Sansanqua Camelia	Full Sun to Partial Shade	Fall to Winter	Moist/Well-Drained
Ceratozamia latifolia		Costilla de león or Mexican Horncone	Full Sun to Partial Shade	NA	Moist/Well-Drained to Dry
Ceratozamia plumosa		Norstog's Horncone (Plumose Form)	Full Sun to Partial Shade	NA	Well-Drained to Dry
Clethra alnifolia	√	Summersweet or Coastal Sweet Pepperbush	Full Sun to Patial Shade	Spring to Summer	Wet to Moist
Coccoloba uvifera	√	Sea Grape	Full Sun to Partial Shade	NA	Moist to Dry
Cocculus laurifolius		Snail Seed	Full Sun to Shade	NA	Well-Drained
Codiaeum variegatum *		Croton	Full Sun to Partial Shade	Year Round Color	Moist/Well-Drained
Conocarpus erectus sericeus *	√	Silver Buttonwood	Full Sun	NA	Moist to Dry
Cortaderia selloana		Pampas Grass	Full Sun	Summer to Fall	Moist/Well-Drained
Cyrilla racemiflora	√	Titi	Full Sun to Partial Shade	Spring to Summer	Moist/Well-Drained
Duranta erecta 'Cuban Gold' *		Golden Dewdrop or Pigeon Berry	Full Sun	Year Round Color	Moist/Well-Drained

Duranta erecta 'Gold Mound' *		Golden Dewdrop or Pigeon Berry	Full Sun	Year Round Color	Moist/Well-Drained
Duranta erecta 'Sapphire Showers' *		Golden Dewdrop or Pigeon Berry	Full Sun	Summer	Moist/Well-Drained
Elaeagnus pungens **		Silverthorn	Full Sun to Partial Shade	NA	Moist to Dry
Elaeocarpus decipiens		Japanese Blueberry	Full Sun to Partial Shade	Spring to Summer	Well-Drained
Encephalartos horridus		Ferocious Blue Cycad or Eastern Cape Blue Cycad	Full Sun	NA	Well-Drained to Dry
Galphimia gracilis		Thryalis or Slender Goldshower	Full Sun to Partial Shade	Year Round	Well-Drained
Gardenia jasminoides		Common Gardenia	Full Sun to Partial Shade	Spring to Fall	Moist/Well-Draned
Hamelia patens	√	Firebush	Full Sun to Partial Shade	Year Round	Moist/Well-Drained
Hibiscus rosa-sinensis		Hibiscus	Full Sun to Partial Shade	Year Round	Moist/Well-Drained
Hibiscus syriacus		Rose of Sharon	Full Sun to Partial Shade	Spring to Summer	Moist/Well-Drained
Hydrangea macrophylla		Hydrangea or French Hydrangea	Full Sun to Partial Shade	Summer	Moist/Well-Drained
Hydrangea quercifolia	√	Oak-Leaf Hydrangea	Full Sun to Partial Shade	Spring to Summer	Moist/Well-Drained
Ilex crenata		Japanese Holly	Full Sun to Partial Shade	NA	Moist/Well-Drained

Ilex glabra	√	Galberry or Inkberry	Full Sun to Partial Shade	NA	Wet to Well-Drained
Ilex vomitoria 'Nana' **	√	'Schilling's Dwarf' Holly	Full Sun to Partial Shade	NA	Moist to Dry
Ixora coccinea *		Ixora or Flame of the Woods	Full Sun to Partial Shade	Year Round	Moist/Well-Drained
Ixora taiwanensis *		Dwarf Ixora or Jungle Flame	Full Sun	Year Round	Moist to Well-Drained
Jasminum multiflorum		Star Jasmine or Downy Jasmine	Full sun to Partial Shade	Fall to Spring	Moist/Well-Drained
Jasminum sambac		Arabian Jasmine	Full Sun to Partial Shade	Summer	Well-Drained
Jatropha integerrima *		Spicy Jatropha or Perigrina	Full Sun to Partial Shade	Year Round	Moist/Well-Drained
Juniperus chinensis 'Spartan'		'Spartan' Chinese Juniper	Full Sun	NA	Well-Drained
Juniperus chinensis 'Torulosa'		'Torulosa' Chinese Juniper	Full Sun	NA	Well-Drained
Lantana involucrata	√	Wild Sage or White Lantana	Full Sun	Year Round	Well-Drained to Dry
Lycium carolinianum	√	Christmasberry	Full Sun to Partial Shade	Year Round	Well-Drained
Lyonia ferruginea	√	Rusty Lyonia or Rusty Fetterbush	Full Sun	Spring	Moist/Well-Drained
Lyonia lucida	√	Fetterbush or Shiny Lyonia	Partial Shade	Spring	Moist/Well-Drained

Malvaviscus arboreus		Turk's Cap Mallow	Partial Shade	Spring to Fall	Moist/Well-Drained
Myrica cerifera	√	Wax Myrtle	Full Sun to Partial Shade	NA	Wet to Well-Drained
Nerium oleander		Oleander	Full Sun to Partial Shade	Spring to Fall	Well-Drained
Odontonema cuspidatum		Firespike or Cardinal's Guard	Full Sun	Summer to Winter	Wet to Well-Drained
Osmanthus fragrans		Tea Olive	Full Sun to Partial Shade	Spring or Fall	Moist/Well-Drained
Philodendron selloum		Split Leaf Philodendron	Partial Shade	NA	Moist/Well-Drained
Plumbago auriculata		Plumbago or Cape Leadwort	Full Sun to Partial Shade	Summer to Fall	Well-Drained
Podocarpus macrophyllus **		Podocarpus or Japanese Yew	Full Sun to Light Shade	NA	Moist to Dry
Psychotria nervosa	√	Wild Coffee	Partial Sun to Full Shade	Spring to Fall	Moist/Well-Drained
Pyracantha coccinea		Pyracantha or Firethorn	Full Sun to Partial Shade	Spring to Fall	Moist to Dry
Rapanea punctata	√	Myrcine or Colicwood	Full Sun to Shade	NA	Moist/Well-Drained
Rhaphiolepis indica **		Indian Hawthorn	Full Sun	Spring	Moist to Dry
Rhododendron austrinum	√	Florida Flame Azalea	Partial Shade	Spring	Moist/Well-Drained

Rhododendron canescens	√	Florida Pinxter Azalea or Honeysuckle Azalea	Partial Shade	Spring	Moist/Well-Drained
Rhododendron indica 'Formosa'		Formosa Azalea	Partial Shade	Spring	Moist/Well-Drained
Rhododendron minus chapmanii	√	Chapman's Rhododendron or Dwarf Rhododendron	Partial Shade	Spring	Moist/Well-Drained
Rhododendron viscosum	√	Swamp Azalea	Partial Shade	Summer to Fall	Moist/Well-Drained
Rosa x		Hybrid Roses	Full Sun	Year Round	Moist/Well-Drained
Rosmarinus officinalis		Rosemary	Full Sun	Spring to Summer	Well-Drained to Dry
Schefflera arbicola 'Trinette' *		'Trinette' Schefflera	Full Sun to Partial Shade	Year Round Color	Well-Drained
Sophora tomentosa	√	Yellow Necklace Pod	Full Sun	Year Round	Well-Drained to Dry
Thaumatophyllum xanadu		Xanadu Philodendron	Full Sun to Shade	NA	Moist/Well-Drained
Tibouchina urvilleana		Princess Flower or Glory Bush	Full Sun to Partial Shade	Year Round	Moist/Well-Drained
Tripsacum dactyloides	√	Fakahatchee Grass or Eastern Gamma Grass	Full Sun to Partial Shade	NA	Moist/Well-Drained
Tripsacum floridanum	√	Dwarf Fakahatchee Grass	Full Sun to Partial Shade	NA	Moist to Dry
Viburnum obovatum	√	Walter's Viburnum	Full Sun to Partial Shade	Spring	Moist/Well-Drained

Viburnum obovatum 'Mrs. Schiller's Delight' **	√	Small Viburnum	Full Sun	Spring	Moist/Well-Drained
Viburnum odorotissimum		Sweet Viburnum	Full Sun to Partial Shade	Spring to Summer	Moist/Well-Drained
Viburnum odorotissimum 'Awabuki'		Mirror Leaf Viburnum or Awabuki Sweet Viburnum	Full Sun to Partial Shade	Spring	Moist/Well-Drained
Yucca aloifolia	√	Spanish Bayonet	Full Sun	Spring to Summer	Well/Drained to Dry
Zamia fischeri		Fischer's Zamia	Partial Shade	NA	Moist/Well-Drained to Dry
Zamia integrifolia	√	Florida Coontie	Full Sun to Shade	NA	Moist to Dry
Zamia vazquezii		Vasquez's Zamia	Partial Shade	NA	Moist/Well-Drained to Dry

Shrubs Permitted for Backflow Prevention Assemblies' Height Restrictions

* Subject to Freeze Damage ** Recommended for Vehicle Use Areas

Botanical Name √ = Native	**Common Name**	**Light Intensity**	**Flower Season or Season of Interest**	**Soil Moisture**
Allamanda cathartica 'Compacta' *	"Dwarf Jenny" Allamanda Bush	Full Sun to Partial Shade	Spring to Fall	Moist/Well-Drained
Ceratozamia latifolia	Costilla de león or Mexican Horncone	Full Sun to Partial Shade	NA	Moist/Well-Drained to Dry

Ceratozamia plumosa		Norstog's Horncone (Plumose Form)	Full Sun to Partial Shade	NA	Well-Drained to Dry
Codiaeum variegatum 'Mammy' *		'Mammy' Croton	Full Sun to Partial Shade	Year Round Color	Moist/Well-Drained
Codiaeum variegatum 'Zanzibar' *		'Zanzibar' Croton	Full Sun to Partial Shade	Year Round Color	Moist/Well-Drained
Dietes iridioides		African Iris or Butterfly Iris	Full Sun to Partial shade	Year Round	Moist/Well-Drained
Duranta erecta 'Gold Mound' *		Gold Mound	Full Sun to Partial Shade	Year Round Color	Moist/Well-Drained
Galphimia gracilis		Thryalis or Slender Goldshower	Full Sun to Partial Shade	Year Round	Well-Drained
Hamelia patens 'Grelmsiz' LIME SIZZLER PP# 26247 *	√	LIME SIZZLER Firebush	Partial Shade to Shade	Year Round Color	Well-Drained
Ilex glabra	√	Gallberry or Inkberry	Full Sun to Partial Shade	NA	Wet to Well-Drained
Ilex vomitoria 'Nana' **	√	'Schilling's Dwarf' Holly	Full Sun to Partial Shade	NA	Moist to Dry
Ixora taiwanensis *		Dwarf Ixora or Jungle Flame	Full Sun	Year Round	Moist to Well-Drained
Psychotria nervosa *	√	Wild Coffee	Partial Shade	Spring to Fall	Moist/Well-Drained
Rhaphiolepis indica **		Indian Hawthorne	Full Sun to Partial Shade	Spring	Moist/Well-Drained
Rosmarinus officinalis		Rosemary	Full Sun	Spring to Summer	Well-Drained to Dry

Thaumatophyllum xanadu		Xanadu Philodendron	Full Sun to Shade	NA	Moist/Well-Drained
Tripsacum floridanum	√	Dwarf Fakahatchee Grass or Florida Gammagrass	Full Sun to Partial Shade	Late Spring	Wet/Well-Drained
Zamia integrifolia **	√	Florida Coontie	Full Sun to Shade	NA	Moist to Dry

Groundcovers * Subject to Freeze Damage ** Recommended for Vehicle Use Areas					
Botanical Name **√ = Native**		**Common Name**	**Light Intensity**	**Flower Season or Season of Interest**	**Soil Moisture**
Acrostichum danaeifolium	√	Giant Leather Fern	Full Sun to Partial Sun	NA	Moist/Well-Drained
Agave lophantha		Thorncrest Century Plant	Full Sun	NA	Well-Drained to Dry
Ajuga reptans		Carpet Bugle	Partial Sun to Shade	Spring	Moist/Well-Drained
Asparagus densiflorus 'Myersii'		'Myers' Foxtail Fern	Partial Sun	NA	Moist/Well-Drained
Aspidistra elatior		Cast Iron Plant	Partial Sun to Heavy Shade	NA	Moist/Well-Drained
Asplenium nidus		Bird's Nest Fern	Partial Sun to Shade	NA	Moist/Well-Drained
Bacopa monnieri	√	Herb-of-Grace or Smooth Water Hyssop	Full Sun to Partial Sun	Year Round	Wet to Moist

Chasmanthium latifolium	√	Indian Woodoats	Full Sun to Partial Shade	Late Summer to Early Fall	Moist/Well-Drained
Cuphea hyssopifolia		False Heather	Full Sun	Year Round	Well-Drained
Cynodon dactylon		Common Bermuda Grass	Full Sun	NA	Moist to Dry
Cyrtomium falcatum		Holly Fern	Partial Shade to Full Shade	NA	Well-Drained
Dyschoriste oblongifolia	√	Twin Flower	Full Sun to Partial Shade	Year Round	Moist/Well-Drained
Eragrostis spectabilis	√	Purple Lovegrass	Full Sun	Summer	Well-Drained to Dry
Eremochloa ophiuroides		Centipede Grass	Full Sun	NA	Moist/Well-Drained
Evolvulus glomeratus		Blue Daze	Full Sun	Spring to Fall	Well-Drained
Gelsemium sempervirens	√	Carolina Jessamine	Full Sun	Spring	Well-Drained
Juniperus procumbens 'Nana'		Japanese Garden Juniper	Full Sun	NA	Well-Drained/Dry
Juniperus conferta **		Shore Juniper	Full Sun	NA	Well-Drained to Dry
Juniperus conferta 'Nana' **		Dwarf Shore Juniper	Full Sun	NA	Well-Drained to Dry
Juniperus horizontalis **		Dwarf Japanese Juniper	Full Sun	NA	Well-Drained to Dry

Mimosa strigillosa	√	Sunshine Mimosa or Sensitive Plant	Full Sun	Spring to Fall	Moist/Well-Drained
Muhlenbergia capillaris	√	Pink Muhly Grass	Full Sun	Fall	Moist/Well-Drained
Neoregelia 'Donger' Unknown Parentage		'Donger' Neoregelia, Bromeliad	Full Sun to Partial Shade	Year Round Color	Moist/Well-Drained
Neoregelia 'Fireball' Unknown Parentage (1960)		'Fireball' Neoregelia, Bromeliad	Full Sun to Partial Shade	Year Round Color	Moist/Well-Drained
[(*Neoregelia carolinae lineata* x *N. concentrica*) x *N. macwilliamsii*] (1996)		'Martin' Neoregelia, Bromeliad	Full Sun to Full Shade	Year Round Color	Moist/Well-Drained
Nephrolepis biserrata	√	Giant Sword Fern	Partial Sun to Shade	NA	Moist/Well-Drained
Osmunda cinnamomea	√	Cinnamon Fern	Partial Sun	NA	Moist/Well-Drained
Osmunda regalis	√	Royal Fern	Full Sun to Shade	NA	Moist/Well-Drained
Rumohra adiantiformis		Leatherleaf Fern	Patial Shade to Full Shade	NA	Moist/Well-Drained
Sorghastrum secundum	√	Lopsided Indian Grass	Full Sun	Fall	Moist/Well-Drained
Telmatoblechnum serrulatum	√	Swamp Fern	Full Sun to Full Shade	NA	Moist
Tetrastigma voinierianum *		Giant Grape Ivy or Chestnut Vine	Partial Shade to Full Shade	NA	Moist/Well-Drained
Thelypteris kunthii		Southern Shield Fern or Kunth's Maiden Fern	Partial Shade to Full Shade	NA	Moist/Wet

Trachelospermum asiaticum	Asiatic Jasmine or Minima Jasmine	Full Sun to Partial Shade	Sporadic	Moist/Well-Drained
Tradescantia pallida 'Pupurea'	Purple Queen or Purple Heart	Full Sun to Partial Shade	Year Round Color	Moist/Well-Drained
Tradescantia spathacea	Moses-in-a-Boat or Oyster Plant	Patial Shade	Year Round Color	Moist/Well-Drained

Supplemental Florida Monarch Butterfly Attracting Plants to Accomodate National Wildlife Federation's 'Mayor's Monarch Pledge'

√√ Florida Native Wildflower **Perrenial**

Botanical Name √ = Native		**Common Name**	**Light Intensity**	**Annual Growing Season**	**Soil Moisture**
Asclepias incarnata	√√	Swamp Milkweed or Pink Milkweed	Full Sun to Light Shade	Spring to Fall	Wet to Well-Drained
Asclepias perennis	√√	Aquatic Milkweed	Full Sun to Partial Shade	Spring to Fall	Wet to Well-Drained
Asclepias tuberosa ssp. Rolfsii	√√	Rolfs' Milkweed	Full Sun	Spring to Summer	Well-Drained to Dry
Asclepias tuberosa ssp. Tuberosa	√√	Butterfly Milkweed or Pleurosy Root	Full Sun	Spring to Summer	Well-Drained to Dry
Liatris spicata	√√	Dense Blazing Star or Gayfeather	Full Sun	Summer to Fall	Moist/Well-Drained

Planning & Zoning Board Recommendation

The Date:	September 3, 2024	Reviewer:	Audrey McGuire
Project No:	LDC24-005	Applicant:	City of Lakeland
P&Z Hearing:	July 16, 2024	P&Z Final Decision:	August 20, 2024
Request:	Changes to Article 4 (General Site Development Standards), Section 4.5 (Landscaping, Trees and Buffering) of the Land Development Code, to apply the tree preservation requirements to unplatted parcels of land which are zoned for single-family or two-family residential uses and greater than one acre in area, adopt a new list of qualified tree, palm, shrub, groundcover and flower plantings, and incorporate certain Florida-Friendly Landscaping requirements for irrigation systems.		

1.0 Background

1.1 Summary

Periodically, various changes to the Land Development Code (LDC) are proposed in response to changing circumstances or to address unintended consequences of existing standards. Proposed changes to Article 4 (General Site Development Standards) include amendments to the tree preservation requirements exempting certain single-family and two-family residential lots; a correction to Table 4.5-1 (Frontage Buffer Options); repealing and replacing Tables 4.5-6 (Qualified Trees), 4.5-7 (Qualified Palms) and 4.5-8 (Qualified Shrubs, Groundcover and Flower Plantings); and incorporation of Florida-Friendly Landscaping and water efficient design standards for landscape and irrigation systems.

1.2 Attachments

Attachment A: Proposed Changes to Article 4, Section 4.5 (Landscaping, Trees and Buffering)

Attachment B: Proposed Table 4.5-1 (Frontage Buffer Options)

Attachment C: Proposed Table 4.5-6 (Qualified Trees)

Attachment D: Proposed Table 4.5-7 (Qualified Palms)

Attachment E: Proposed Table 4.5-8 (Qualified Shrubs, Groundcover and Flower Plantings)

2.0 Discussion

2.1 Summary

Sub-Section 4.5.3 Definitions

The City encourages use of Florida-Friendly Landscaping principles for landscape and irrigation. The Florida-Friendly Landscaping ™ program is a partnership between the University of Florida, Institute of Food and Agricultural Sciences Extension (UF/IFAS Extension) and the Florida Department of Environmental Protection (FDEP) which promotes science-based, sustainable landscape practices to reduce water use and pollutant loading in the state's waterbodies. The definition of "Florida-Friendly

Landscaping" is proposed to be amended to be more consistent with this program (see Attachment "A").

Table 4.5-1 Frontage Buffer Options

A discrepancy has been identified between Table 4.5-1 (Frontage Buffer Options) and Figure 4.5-3 (Frontage Buffer Options) regarding the number of required plantings. Staff is proposing to amend Table 4.5-1 to reflect the tree planting requirements shown in Figure 4.5-3 and remove any uncertainty or confusion (see Attachment "B").

Sub-Section 4.5.10 Tree Preservation

The City's urban tree canopy provides numerous public benefits, including shade, reduced energy use, and improved air and water quality. The City's Land Development Code encourages preservation of the urban tree canopy by providing standards to prevent, mitigate and compensate for the loss of trees resulting from development and redevelopment. Currently, lots and parcels zoned for single-family and two-family dwellings, except those within proposed subdivisions, are exempt from the preservation requirements. This exemption allows property owners of large single-family and two-family lots, generally one acre or more in size, to circumvent tree preservation standards by removing trees and then later subdividing the property.

Staff is proposing changes to Sub-Section 4.5.10.1.b, as reflected in Attachment "A," to exempt only lots zoned for single-family and two-family which are less than one acre in size, comprised of not more than two lots of record, and are not part of a proposed development or subdivision plan.

Sub-Section 4.5.11 Standards for Landscape Design, Installation and Maintenance

The Land Development Code encourages water efficient landscape and irrigation standards. Staff is proposing amendments to further water conservation efforts by requiring Florida-Friendly Landscaping practices, more efficient irrigation design and installation standards, and exemptions for landscaping systems (see Attachment "A").

Tables 4.5-6 (Qualified Trees), 4.5-7 (Qualified Palms) and 4.5-7 (Qualified Shrubs, Flowers and Groundcovers

Updates to the existing Tables for qualified tree, palm, shrub, flower and groundcover species necessitate repeal and replacement of Tables 4.5-6 (Qualified Trees), 4.5-7 (Qualified Palms) and 4.5-8 (Qualified Shrubs, Flowers and Groundcovers) as reflected in Attachments "C," "D" and "E."

3.0 Recommendation

3.1 Community & Economic Development Staff

The Community & Economic Development Department reviewed this request for compliance with Lakeland Comprehensive Plan: Our Community 2030 and it is our opinion that the request is consistent with the Comprehensive Plan.

3.2 Planning & Zoning Board

The recommendation was approved by a 5—0 vote of the Board.

The Community & Development Department reviewed this request and recommends the proposed changes to the Land Development Code.

Recommendation

It is recommended that the proposed changes to Article 4 of the Land Development Code, as described in Attachments “A,” “B,” “C,” “D,” and “E” be approved.

ATTACHMENT “A”

ARTICLE 4: - GENERAL SITE DEVELOPMENT STANDARDS

…

4.5.3 DEFINITIONS

…

Florida-Friendly Landscaping: ~~Landscapes designed and maintained to maximize water conservation by minimizing irrigation needs.~~ Science-based, low-impact, sustainable, environmentally friendly landscaping practices that conserve water, reduce pollutant loading to Florida waters, and protect Florida’s natural resources, in accordance with the University of Florida IFAS Extension and FDEP’s “Landscape Irrigation and Florida-Friendly Landscape Design Standards,” as amended.

…

4.5.10 TREE PRESERVATION

4.5.10.1 Intent and Applicability

a. Intent

1. It is the intent of this section to establish standards to prevent, mitigate or compensate for the loss of the public resource where tree canopy is proposed to be destroyed by development.

2. Except as specifically provided herein, the preservation of existing trees on development sites is to be preferred to the planting of new trees.

3. Efforts to preserve existing trees are encouraged and the Director of Parks and Recreation may recommend that the Director of Community Development modify development standards in order to save specific trees.

b. Applicability

The provisions of this section shall apply to the proposed destruction or relocation of any regulated tree as the result of development activity, with the following exceptions:

1. Lots or parcels zoned for single-family or two-family dwellings less than one acre in size and comprised of not more than two lots of record, which are not part of a proposed development or subdivision plan; ~~(However, this section shall apply to proposed subdivisions for single-family or two-family dwellings;)~~

2. Any vertical mixed use development where residential or office uses are located above ground floor commercial and a minimum of 60 percent of the building frontage is dedicated to retail or service commercial uses;

3. Bona fide agricultural uses, commercial nurseries and botanical gardens;

4. Bona fide utility maintenance, safety or fire reduction activities; or

5. Emergency or disaster recovery activities.

…

4.5.11 STANDARDS FOR LANDSCAPE DESIGN, INSTALLATION AND MAINTENANCE

4.5.11.1 Required landscaping and irrigation systems shall be designed, installed and maintained in accordance with Florida-Friendly Landscaping practices and the following standards. Approved landscape and irrigation plans shall provide the basis on which compliance is determined.

…

4.5.11.3 Irrigation Systems

The following standards shall apply to the installation of new residential and non-residential irrigation systems, and the retrofit or replacement of existing residential and non-residential irrigation systems.

a. Unless otherwise provided herein, all required landscaping shall be irrigated by a permanent irrigation system designed for maximum water conservation, which shall provide 100 percent coverage of plant material and shall be fully operational before building occupancy except that no irrigation systems shall be required in those areas where existing trees or areas of natural vegetation are to be preserved, non-required landscape areas, or as indicated on the approved landscape plan. If approved by the Director of Parks and Recreation, newly planted trees may be irrigated by a temporary irrigation system. Newly planted trees shall be irrigated until they are established at which time irrigation may be terminated and any temporary system removed.

b. ~~Rain shut-off devices shall be required.~~ A rain sensor or equal technology that inhibits or interrupts operations of the irrigation system during periods of sufficient moisture shall be installed and control all irrigation zones. Rain sensor and related hardware shall be installed per manufacturer specifications.

c. Irrigation systems serving landscape areas ~~having~~ with different irrigation demands shall be zoned according~~ly~~ to vegetated groupings (e.g., turfgrass, shrubs, trees) and the watering requirements of the plants. Turfgrass and landscaped beds, such as trees, shrubs and groundcover beds shall not be irrigated in the same zone.

d. Rotary irrigation heads and spray irrigation heads should be kept in separate zones, and no irrigation zone shall include both rotary and spray irrigation heads.

e. All sprinkler heads with spray nozzles shall be pressure regulated at the head and/or valve. Adequate pressure per the manufacturer specifications must be achieved throughout an entire zone.

f. Narrow areas, 4 feet or less, shall not be irrigated unless correctly installed low-volume irrigation or end-strip/side-strip nozzles are used.

g. Large sod zones shall be irrigated using rotors or similar devices to achieve maximum irrigation efficiency.

h. Distribution equipment in a given zone shall have matched precipitation rates.

i. All irrigation installations will include backflow assembly per Florida Building Code. If a chemical injection system is present for any reason, a reduced pressure principal backflow assembly is required.

j. A minimum separation of 4 inches shall be required between distribution equipment and pavement.

k. Sprinklers in low-lying areas shall have check valves to prevent head drainage.

l. Irrigation design should include head-to-head spacing and consider soil, slope, and other site characteristics to minimize water waste, such as: overspray, off-site runoff, the watering of impervious surfaces and other non-vegetated areas.

m. Sprinklers shall rise above turfgrass height:

1. Minimum 6-inch pop-up for sprays and 4-inch pop-up for rotors for St. Augustine, Zoysia, and Bahia grasses;

2. Minimum 4-inch pop-up for sprays and rotors for Centipede, Bermuda, and Seashore Paspalum grasses.

n. Irrigation installers shall provide property owners and users with post-construction maintenance and system information, including:

1. Design drawings as detailed in Appendix F of the Plumbing Volume of the Florida Building Code.

2. Recommended maintenance activities and schedules.

3. Operation schedule.

4. Instructions on adjusting the system to irrigate in accordance with the rules of the Southwest Florida Water Management District after landscaping is established.

5. Water shut-off method.

6. Manufacturer's operational guide for the controller.

~~d~~o. Water Source

1. At the discretion of the Water Utilities Department, the use of non-potable water sources may be required for irrigation. Non-potable water sources include shallow wells, agricultural wells, lakes, ponds, stormwater retention and detention facilities, and reclaimed/reuse water systems. Where non-potable irrigation water systems are planned but not yet operational, at the discretion of the Water Utilities Department the irrigation system may be connected to the potable water system and disconnected when non-potable water becomes available. The use of non-potable irrigation water sources shall not exempt development from the water-efficient landscaping principles of this article.

2. Irrigation systems shall not be connected to both potable and non-potable sources due to the potential of contaminating the City's potable water system. Any water source other than the City's potable water system is an "auxiliary source." Where an auxiliary source is used, there shall be a physical disconnect (air gap) between the two piping systems. An approved backflow prevention assembly shall be installed at the City's water service connection to any premises where there is an auxiliary water supply and the public water system. Backflow prevention assemblies approved by the Water Utilities Department shall be installed on all potable water service connections/meters to the site, including those for domestic, fire service and irrigation water.

p. All irrigation restrictions imposed by the City of Lakeland and/or the Southwest Florida Water Management District shall be adhered to within 60 calendar days after landscape installation and the plant establishment period.

q. All irrigation systems shall be installed and maintained in accordance with manufacturer's specifications.

r. The following are exempt from the Irrigation System standards but should follow applicable Florida-Friendly Landscaping best management practices:

1. Bona fide agricultural activities;

2. Vegetable gardens and fruit and nut trees;

3. Athletic parks;

4. Parks and recreational areas;

5. Golf course play areas;

6. Cemeteries;

7. Nurseries;

8. Botanical gardens;

9. Open space;

10. Temporary establishment irrigation.

ATTACHMENT “B”

TABLE 4.5-1 FRONTAGE BUFFER OPTIONS

Options	Minimum Planter Strip Width	Minimum Landscaping Required
Option 1	5’	Type A hedge with ~~8~~ 10 C (Small) trees per 100 lin. ft. or fraction thereof.
Option 2	7.5’	Type A hedge with ~~4~~ 6 B (Medium) trees per 100 lin. ft. or fraction thereof.
Option 3 (Limited to 150 lin. ft. per frontage in Central City Area)	4’ including wall	3 ft. high masonry streetwall with low shrubs and groundcover on street side.

Notes:

1. These are minimum standards. Buffers may incorporate greater width and additional plant materials.
2. Tree species shall be in accordance with Table 4.5-6. Hedge, shrub and groundcover species shall be in accordance with Table 4.5-8.
3. Where located with less than 15 feet offset from overhead powerlines, trees shall be limited to specific C (Small) trees in accordance with Table 4.5-6.
4. Planter strip width is measured to the inside of curbs with no vehicle overhang. Curbing, wheelstops or posts shall be used to control vehicle overhang.
5. Tree spacing may vary but the intent is to space trees evenly across the frontage. The spacing standard indicates the number of trees to be planted, not the precise location of trees. Where street trees exist or are proposed within the adjacent right-of-way, the intent is to alternate the frontage buffer canopy trees between the street trees.
6. All ground area within planters shall be covered by turf grass, low shrubs or groundcover plants.
7. Streetwalls shall have a minimum 75% view blockage and shall match the architectural materials and finish of the principal building.