

CHAPTER 900. DEVELOPMENT STANDARDS

SECTION 905. GREENSPACE REQUIREMENTS AND STANDARDS

905.3 PLANTINGS IN RIGHTS-OF-WAY OF RESIDENTIAL SUBDIVISIONS – RESIDENTIAL STREET TREES

A. Intent and Purpose

It is the intent and purpose of this subsection to promote the development of residential communities in Pasco County that will promote the health, safety and general welfare of future residents of residential communities by establishing minimum standards for the planting, installation and maintenance of non-invasive trees along rights-of-ways to ensure street-lined trees in neighborhoods are esthetically pleasing, good for the environment, and cause minimal disruption to hardscapes, developed structures and roadways.

The use of trees planted along residential streets improves the aesthetic appearance of residential areas by softening the impact of paved surfaces and allowing for tree-lined streets that offer shade, encourage local wildlife habitation, offer privacy and help establish a more harmonious and relaxing residential environment.

B. Applicability

This section shall be applicable to all residential development plans submitted on or after January 1, 2017, and to single and two (2) family residential lots.

C. Intent and Purpose

The intent and purpose of this section is to provide for the timely compliance with the landscaping tree preservation and replacement provisions of this Code, while recognizing and encouraging development.

D. Definition

“Residential Street Trees” shall be defined as those trees planted in accordance with a subdivision development plan and to single and two (2) family residential lots along streets and roadways which are located within the designated right-of-way.

E. General Standards

1. Trees planted in accordance with this section shall not be counted toward yard-tree minimum planting requirements as outlined in Section 905.2 of this Code, and are not required to comply with the tree diversity requirements outlined in Table 905.2-B of this Code, but can be counted toward the minimum number of replacement trees.

2. Design

- a. Maintenance Responsibility. Landscaping plans must designate a person or entity, other than the County, to be responsible for maintenance of the trees planted in accordance with this subsection of the Code.
- b. Where a CDD, HOA or other like entity is designated, said designee shall be responsible for the maintenance of sidewalks, shrubbery, walkways, parking areas, and all common areas located in the rights-of-way, and shall not hold individual homeowner or property owner responsible for said areas, and shall be so noted in the License and Maintenance Agreement signed with Pasco County.
- c. Clear-Sight Triangle. Where a driveway/access-way intersects a road right-of-way or where two (2) road rights-of-way intersect, tree plantings shall not be located so as to interfere with the clear-sight triangle as defined in this Code.
- d. Allowable Tree Types
 - (1) All trees planted in rights-of-way pursuant to this Code shall be of a non-invasive species, suitable for growth in the County, and shall be chosen in compliance with Table 905.3-A.
 - (2) Utilities and Easements. Where utilities are located either underground or above-ground, and are less than 12 linear feet from a proposed tree planting, said tree placement shall be installed using mitigation standards such as alternate sub-base materials, root barriers, or other such methods as submitted to and approved by the County (for a list of suggested preventative measures, see Table 905.3-B). Said linear footage measurement is in addition to the square footage minimum measurement. If both measurements cannot be met at said location, a tree planting is not approved for that location. Trees with a mature height of 25' are not permitted to be planted underneath overhead power lines. Utilities shall include pressure pipes, underground and above ground utility boxes, water meters and other such structures installed for and by utility companies, but does not include storm water underdrains or sewer lines.

- 3. Tree plantings pursuant to this subsection of the Code shall require a County Right-of-Way Use Permit and a License and Maintenance Agreement.

4. Quality of Trees

Trees to be planted shall be Florida Grade No. 1 or better, pursuant to the Florida Department of Agriculture and Consumer Services, Division of Plant Industry, Grades, and Standards for Nursery Plants, which is incorporated herein by reference.

TABLE 905.3-A

STREET TREES – RECOMMENDED TREES AND PLANTING SPACE

Tree Type		Minimum Green Space Required (Without Preventative Measures)		Minimum Green Space Required (If Preventative Measures are Used) *See Table 905.3-B	
Common Name	Botanical Name	Square Feet (SF)	Single Dimension (LF)	Square Feet (SF)	Single Dimension (LF)
Large Shade Trees (Mature Ht. 40' + Avg. and Mature Spread 40' + Avg.)					
Florida Maple	<i>Acer barbatum</i>	80 SF	8'	40 SF	4'
Red Maple	<i>Acer rubrum</i>	80 SF	8'	40 SF	4'
River Birch	<i>Betula nigra</i>	100 SF	10'	60 SF	6'
Pignut Hickory	<i>Carya glabra</i>	100 SF	10'	60 SF	6'
Pop Ash	<i>Fraxinus caroliniana</i>	100 SF	10'	60 SF	6'
White Ash	<i>Fraxinus americana</i>	100 SF	10'	60 SF	6'
Green Ash	<i>Fraxinus pennsylvanica</i>	100 SF	10'	60 SF	6'
Loblolly Bay	<i>Gordonia lasianthus</i>	80 SF	8'	60 SF	4'
Sweetgum	<i>Liquidambar styraciflua</i>	100 SF	10'	60 SF	6'
Southern Magnolia	<i>Magnolia grandiflora</i>	100 SF	10'	60 SF	6'
Black Gum	<i>Nyssa sylvatica</i>	100 SF	10'	60 SF	6'
Sand Pine	<i>Pinus clausa</i>	100 SF	10'	60 SF	6'
Slash Pine	<i>Pinus elliotii</i>	100 SF	10'	60 SF	6'
Longleaf Pine	<i>Pinus palustris</i>	100 SF	10'	60 SF	6'
Loblolly Pine	<i>Pinus taeda</i>	100 SF	10'	60 SF	6'
Sycamore	<i>Platanus occidentalis</i>	100 SF	10'	60 SF	6'
Bluff Oak	<i>Quercus austrina</i>	100 SF	10'	60 SF	6'
Laurel Oak	<i>Quercus laurifolia</i>	100 SF	10'	60 SF	6'
Swamp Chestnut Oak	<i>Quercus michauxii</i>	100 SF	10'	60 SF	6'
Chestnut Oak	<i>Quercus prinus</i>	100 SF	10'	60 SF	6'
Shumard Oak	<i>Quercus shumardii</i>	100 SF	10'	60 SF	6'

Tree Type		Minimum Green Space Required (Without Preventative Measures)		Minimum Green Space Required (If Preventative Measures are Used) *See Table 905.3-B	
Common Name	Botanical Name	Square Feet (SF)	Single Dimension (LF)	Square Feet (SF)	Single Dimension (LF)
Large Shade Trees (Mature Ht. 40' + Avg. and Mature Spread 40' + Avg.)					
Live Oak	<i>Quercus virginiana</i>	100 SF	10'	60 SF	6'
Pond Cypress	<i>Taxodium ascendens</i>	80 SF	8'	40 SF	4'
Bald Cypress	<i>Taxodium distichum</i>	70 SF	7'	30 SF	3'
Winged Elm	<i>Ulmus alata</i>	70 SF	7'	30 SF	3'
Chinese Elm	<i>Ulmus parvifolia</i>	70 SF	7'	30 SF	3'
Small and Medium Shade Trees (Mature Ht. < 30' Avg. and Mature Spread > 30' Avg.)					
Sweet Acacia	<i>Acacia farnesiana</i>	60 SF	6'	30 SF	3'
Red Cluster Bottlebrush	<i>Callistemon 'Red Cluster'</i>	60 SF	6'	30 SF	3'
Eastern Redbud	<i>Cercis canadensis</i>	60 SF	6'	30 SF	3'
Fringetree	<i>Chionanthus virginicus</i>	60 SF	6'	30 SF	3'
Texas Olive	<i>Cordia boissieri</i>	60 SF	6'	30 SF	3'
Flowering Dogwood	<i>Cornus florida</i>	60 SF	6'	30 SF	3'
Japanese Blueberry	<i>Elaeocarpus decipens</i>	70 SF	7'	40 SF	4'
Stoppers	<i>Eugenia, spp.</i>	60 SF	6'	30 SF	3'
Dahoon Holly	<i>Ilex cassine</i>	60 SF	6'	30 SF	3'
Burford Holly	<i>Ilex cornuta 'Burfordii'</i>	60 SF	6'	30 SF	3'
American Holly	<i>Ilex opaca</i>	60 SF	6'	30 SF	3'
Yaupon Holly	<i>Ilex vomitoria</i>	60 SF	6'	30 SF	3'
East Palatka Holly	<i>Ilex x attenuata</i>	60 SF	6'	30 SF	3'
Mary Nell Holly	<i>Ilex x 'Mary Nell'</i>	60 SF	6'	30 SF	3'
Nellie R. Stevens Holly	<i>Ilex x 'Nellie R. Stevens'</i>	60 SF	6'	30 SF	3'
Southern Red Cedar	<i>Juniperus silicicola</i>	60 SF	6'	30 SF	3'
Eastern Red Cedar	<i>Juniperus virginiana</i>	60 SF	6'	30 SF	3'

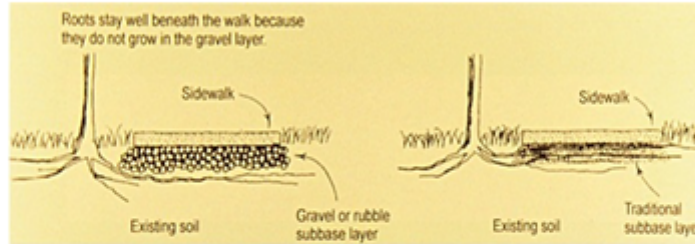
Tree Type		Minimum Green Space Required (Without Preventative Measures)		Minimum Green Space Required (If Preventative Measures are Used) *See Table 905.3-B	
Common Name	Botanical Name	Square Feet (SF)	Single Dimension (LF)	Square Feet (SF)	Single Dimension (LF)
Small and Medium Shade Trees (Mature Ht. < 30' Avg. and Mature Spread > 30' Avg.)					
Crape Myrtle	<i>Lagerstroemia spp.</i>	60 SF	6'	30 SF	3'
Ligustrum	<i>Ligustrum japonicum</i>	60 SF	6'	30 SF	3'
Sweet Bay	<i>Magnolia virginiana</i>	70 SF	7'	40 SF	4'
Wax Myrtle	<i>Myrica cerifera</i>	60 SF	6'	30 SF	3'
European Olive	<i>Olea europaea</i>	60 SF	6'	30 SF	3'
American Hornbeam	<i>Ostrya virginiana</i>	60 SF	6'	30 SF	3'
Redbay	<i>Persea borbonia</i>	70 SF	7'	40 SF	4'
Chickasaw Plum	<i>Prunus angustifolia</i>	60 SF	6'	30 SF	3'
Flatwoods Plum	<i>Prunus umbellata</i>	60 SF	6'	30 SF	3'
Sand Live Oak	<i>Quercus geminata</i>	70 SF	7'	40 SF	4'
Indian Hawthorn	<i>Raphiolepis spp.</i>	60 SF	6'	30 SF	3'
Viburnum	<i>Viburnum spp.</i>	60 SF	6'	30 SF	3'
Palms					
European Fan Palm	<i>Chamaerops humilis</i>	30 SF	3'	N/A	N/A
Ribbon Fan Palm	<i>Livistona decipiens</i>	30 SF	3'	N/A	N/A
Date Palm	<i>Phoenix spp.</i> (except <i>roebellini</i>)	60 SF	6'	N/A	N/A
Sabal Palm	<i>Sabal palmetto</i>	30 SF	3'	N/A	N/A
Notes					
Where bound on two or more sides by hardscape surfaces, trees shall be planted in the center of the greenspace and shall be a minimum of 12 linear feet from any underground or above ground utility installation or meter.					
This is a list of recommended trees to be used as Street Trees. Other trees may be presented and approved during site plan review. Not all trees will be appropriate for all sites. Plant characteristics, growth habits, native status, drought tolerance, water, soil texture, pH, and light requirements may found at Florida yards.org website or The Florida-Friendly Landscaping Guide to Plant Selection & Landscape Design, published by University of Florida.					

Preventative measures include various solutions to discourage root growth conflicting with sidewalks and curbs in small landscape strips. A list of recommended preventative measures may be found on Table 902.99-B. Alternative preventative measures may be presented and approved during site plan review.
Where site constraints or required street sections do not allow for recommended minimum green space, alternative green space may be presented and approved through site plan review, pending that applicant may provide documentation that proposed species will be supported in the provided space.
Minimum landscape strip / green space required is defined as area between two hardscape surfaces.
Trees shall not be placed where they will obstruct views of stop signs or other safety and traffic control signs. Trees and palms of the Phoenix type shall be placed a minimum of 30' from the face of any stop sign or safety and traffic control signs. Other types of palms with smaller heads should be placed a minimum of 15' from the face of any stop sign or safety and traffic control signs.
Where overhead utilities exist, refer to governing utility standards for acceptable trees.
Callistemon viminalis/Weeping Bottlebrush is prohibited due to invasive status per FEPPC.
When small trees and/or multi-trunk trees are used as street trees they shall have clear trunks and be tree form. They shall be placed so as not to impede clear sight from driveways and intersections.
Species that have natural characteristics to be full to ground are not recommended for planting where they may block views from drives and may cause sight clearance concerns. However they have been included in this table for use on certain roadways where appropriate.
This list is not intended to restrict use of trees in right of way. Generally, median plantings may be more flexible since more green space is available so long as other requirements of LDC are met.
Street trees are optional and not required by code. Where proposed within County owned and maintained rights-of-way, they may be subject to Right-of-Way Use Permit and License and Maintenance Agreement.
For purpose of compliance with this ordinance, in no case shall shrubs be substituted for trees.

TABLE 905.3-B

SUGGESTED PREVENTATIVE MEASURES

Install alternate sub-base material

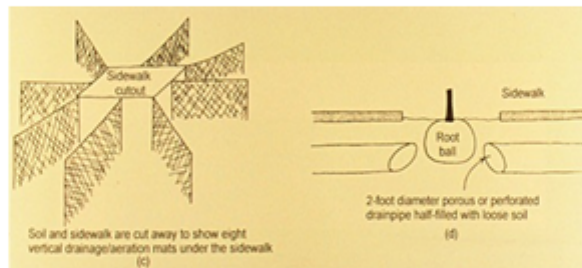


- Layer of washed gravel installed as sub-base material - roots remained under the gravel (left)
- Roots did not grow directly under the slab as they often do when a sand, limestone, or no sub-base is used (right)
- Gravel installation helped prolong the life of sidewalks

CONCRETE SIDEWALK WITH ROOT PROTECTOR OR ALTERNATIVE SUB BASE MATERIAL

Channeling roots under pavement

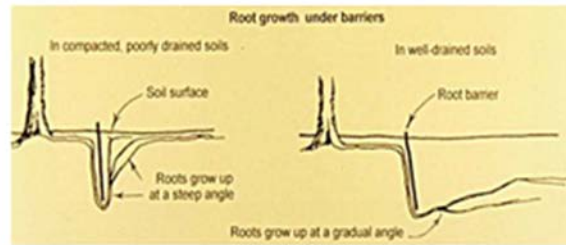
Tree roots can be directed to grow in channels provided for by good design



- (LEFT) One-inch thick aeration or drainage pads installed to increase the effective root zone beyond the small planting pit
- (RIGHT) Using pipes about 2 feet in diameter half filled with loose top soil and slow release fertilizer

CHANNELING ROOTS UNDER PAVEMENT

Root barriers can deflect roots



- Roots are deflected horizontally and down by most of the barriers on the market
- In compacted soils and soils with a high water table, roots grow under the barrier and up the other side
- In well drained soil, roots may remain at deeper depths longer

ROOT BARRIERS TO DEFLECT ROOTS HORIZONTALLY AND DOWN