



**ALACHUA COUNTY**  
**Environmental Protection Advisory Committee**

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**David Moritz, Chair**  
**Scott Knight, Vice-Chair**  
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September 3, 2019

Alachua County Board of County Commissioners  
12 SE 1<sup>st</sup> Street, 2<sup>nd</sup> Floor  
Gainesville, Florida 32601

Dear Chair and Commissioners,

In response to your Board motion at your October 9, 2018 Regular Meeting to have EPAC review the County's heritage tree protection standards to determine if they need to be modified, the Alachua County Environmental Protection Advisory Committee (EPAC) recommends changes to the Alachua County Unified Land Development Code and recommends an additional arborist staff be added to Growth Management to provide proper enforcement, plan review, and tree permitting to meet code requirements.

The EPAC committee recommends the following changes to Chapter 406, Article 2, *Trees and Native Vegetation*, Table 407.50.1 *Appropriate Tree Plantings*, and Chapter 410, Unified Land Development Code (ULDC) *Definitions* as provided on the attached page titled, **EPAC Recommendations to the County's Tree Protection Regulations**. These recommendations are supported by the Alachua County Comprehensive Plan, Conservation and Open Space Element (COSE) Policy 5.4.1, 5.4.2, and 5.4.3. Increasing tree canopy protection in the urban area is also supported by Energy Element, Policy 3.2.2. EPAC also recognizes that the protection of trees and the planting of more trees reduces heat island effect and air pollution and is a vital aspect of our society's ability to reduce atmospheric carbon dioxide (CO<sub>2</sub>) and slow the impacts of climate change.

In addition to the changes proposed, EPAC would like the Alachua County Board of County Commissioners to consider a provision in the ULDC to allow *Open Space credit* or *Open Space flexibility* for the protection of additional long-living specimen trees. We also recommend that a tiered fee schedule be adopted that would increase tree permit fees and mitigation based on the size, historic or ecological value, and species of the tree further discouraging the removal of long-living large native trees.

Signed,

David W. Moritz, Chairman

On behalf of Alachua County Environmental Protection Advisory Committee (EPAC)

9/10/2019

Date

## EPAC 9/3/19 Recommendations to the County's Tree Protection Regulations

### 402.44 Thresholds for Development Review

Any proposed development, except those that are part of an approved planned development, special exception, or special use permit, that meets or exceeds the thresholds established in Table 402.44.1 below, including expansions of existing development that cumulatively cause the threshold to be met or exceeded, shall require preliminary development plan consideration and action by the Board of County Commissioners. Projects classified as redevelopment under Chapter 407 Article XV may exclude from the threshold calculation any existing square footage. Any preliminary development plans submitted for review concurrently with a zoning application for a planned development, special use permit, or special exception shall require board of county commissioner's consideration and action, regardless of whether they are above the thresholds in Table 402.44.1.

**Table 402.44.1  
Development Thresholds**

Development Type	Threshold
Residential, Single Family	100 dwelling units
Residential, Multiple Family	150 dwelling units
Commercial/Office	50,000 sf of GFA
Institutional/Place of Worship/Civic	25,000 sf of GFA
Industrial	100,000 sf of GFA
Mixed Use: Residential	80 dwelling units
Mixed Use: Commercial/Office	40,000 sf of GFA
Mixed Use: Industrial	80,000 sf of GFA
All Development Types	Extension of water-sewer service beyond the Urban
All Development Types	Adverse impact to wetlands
<b><u>All Development Types</u></b>	<b><u>Removal of Long-living Specimen Trees</u></b>
All Development Types	Proposed developed area of parcel contains Strategic

GFA = gross floor area

### 405.44. - Design standards.

(a) All new development and redevelopment within the urban service area shall develop, at a minimum, consistent with the design standards for a traditional neighborhood development in Chapter 407, Article VII. New development shall not be required to meet the standards in section 407.64(d) and section 407.64(c)1.

### 406.07 Recapture Prior to Submitting an Application.

Regulated natural and historic resources that have been cleared ~~after May 2, 2005 and~~ within ~~three (3)~~ **ten (10)** years prior to the submittal of a development plan, rezoning or land use change application shall be required to restore or mitigate that portion of the parcel that would have otherwise required protection in accordance with the standards of this chapter.

*[Also request that the City of Gainesville include regulations similar to this that also recognizes clearing that may have taken place in unincorporated Alachua County prior to annexing into the city]*

#### 406.10 Applicability

(a) Regulated trees include Champion trees, Heritage trees, woody native tree species 8" or more in diameter at breast height (dbh), specimen trees and those small specimen trees identified on Table 406.16.1 that are of significant value to the natural system. Additional requirements are included in other portions of this ULDC, including but not limited to the special area studies, activity centers and special planning districts in Chapter 405 and for single family lots less than 1 2-acres or less.

**(b) Except as specifically provided in this Chapter, removal of Long-living specimen trees (Table 406.12.1) with a condition rating of 3 (scale from 1 – 5) or more as determined by the County Forester/Landscape Specialist shall be prohibited, except as authorized in 406.12 (a)4.**

#### 406.11. - Exemptions.

(a) Residential lots one ~~two~~ acres or less. Residential lots one ~~two~~ acres or less in gross-size shall be exempt from the provisions of this article, provided that no champion or heritage trees shall be removed. All regulated trees and native vegetation identified for protection on lots subject to a previously approved development plan, plat, special area study, or preservation buffer overlay shall be retained.

#### 406.12 Permitting

A tree removal permit is required for the removal of trees and alteration of associated native vegetation as set forth below.

##### (a) Development Applications

All development applications including those for single-family residences on lots greater than ~~two~~ or equal to one acres shall be subject to the permit conditions for tree removal set forth below.

... 3. Development plans and subdivision plats shall be designed such that a minimum of twenty (20) percent of the tree canopy shown on the most recent aerials of the property available at the time of the application is retained. Traditional neighborhood, Transit Oriented Developments and Cottage Neighborhoods shall be designed such that a minimum of ~~five~~ten (10) percent of the tree canopy shown on the most recent aerials of the property available at the time of application is retained.

**4. Long-living specimen trees with a condition rating of 3 or more may only be removed under the following circumstances:**

**a. As part of an over-threshold preliminary development plan approval, per Section 402.44, where applicants requesting to remove long-living specimen tree(s) have demonstrated that:**

**1. The removal of the specimen tree(s) will result in a design that will allow for the maximum provision of ecological service, historic, and cultural value of the remaining trees on the site, or**

**2. The alternatives create more significant damage to existing regulated natural resources on site.**

**b. As part of a development plan where twenty-five (25) percent or more of the site will be protected as conservation management area.**

**54.** Development plans shall be designed such that 30 percent or more of the site will be under mature canopy within 20 years. For the purposes of demonstrating this canopy coverage, a residential development may count up to 400 square feet of canopy coverage per platted lot where it can be demonstrated that a homeowner's associated will require that planting and a list of trees that may be planted to satisfy the requirement.

#### Table 406.12.1

#### Long-living Specimen Trees

<u>Scientific Name</u>	<u>Common Name</u>	<u>Specimen Size (dbh)</u>
<u>Nyssa biflora</u>	<u>Swamp tupelo</u>	<u>20"</u>
<u>Nyssa sylvatica</u>	<u>Blackgum</u>	<u>20"</u>
<u>Magnolia grandiflora</u>	<u>Southern magnolia</u>	<u>20"</u>
<u>Pinus palustris</u>	<u>Longleaf pine</u>	<u>20"</u>
<u>Quercus sinuata</u>	<u>Bluff oak</u>	<u>18"</u>
<u>Quercus virginiana</u>	<u>Live oak</u>	<u>48"</u>
<u>Taxodium ascendens</u>	<u>Pond cypress</u>	<u>20"</u>
<u>Taxodium distichum</u>	<u>Bald cypress</u>	<u>20"</u>

#### 406.13 Relocation, replacement and mitigation required.

...(c) Mitigation by fee in lieu payment.

- (1) If relocation or mitigation by replacement are not feasible, a fee may be paid to Alachua County in lieu of replacement planting.
- (2) Replacement trees may be satisfied by a fee-in-lieu payment to the county for the purchase and relocation of a like tree. The payment amount shall be **in the fee schedule and** based on the average cost of the purchase, installation and maintenance for one year of an equivalent number of replacement trees or actual cost of removing and replanting regulated trees.

Update Definitions in Chapter 410:

Tree, specimen: A tree which has been identified by the County to be of notable interest or high value because of its age, size, species, condition, historic **habitat** association, **and/or** uniqueness. **Specimen status shall apply to all trees as defined in Table 407.50.1. Long-living specimen trees are listed in Table 406.10.1**

**See edits to Table 406.16.1 (below) and Table 407.50.1 (attached).** *Staff suggested that Table 407.50.1 be updated with a column to reflect at what size a tree becomes 'Specimen'. Table 406.16.1 – has been edited to eliminate all trees on the Small Specimen Tree List that are duplicated in Table 407.50.1. Trees listed in Small specimen tree list only utilized for habitat determination.*

**Table 406.16.1  
Small Specimen Tree List**

<b>Latin Name</b>	<b>Common Name</b>
<b>Acer-negundo</b>	<b>boxelder</b>
<b>Acer-saccharum-subsp.-floridanum</b>	<b>Florida-sugar-maplewax-myrtle</b>
<b>Aesculus-pavia</b>	<b>red-buckeye</b>
<b>Alnus serrulata</b>	<b>hazel alder</b>
<b>Aralia-spinosa</b>	<b>devil's-walkingstick</b>
<b>Betula-nigra</b>	<b>river birch</b>
<b>Carpinus-caroliniana</b>	<b>ironwood; blue-beech</b>
<b>Castanea-pumila</b>	<b>chinquapin</b>

<del>Catalpa bignonioides</del>	<b>southern catalpa</b>
Cephalanthus occidentalis	buttonbush
<del>Cereis canadensis</del>	<b>redbud</b>
<del>Chionanthus virginicus</del>	<b>fringe tree</b>
Cliftonia monophylla	black titi
Cornus asperifolia	roughleaf dogwood
<del>Cornus florida</del>	<b>flowering dogwood</b>
Cornus foemina	swamp dogwood
Crataegus aestivalis	may haw
Crataegus crus-galli	cockspur hawthorn
Crataegus flava	yellowleaf hawthorn
Crataegus marshallii	parsley hawthorn
<del>Crataegus michauxii</del>	<b>Miehaux's hawthorn</b>
Crataegus uniflora	dwarf hawthorn
Crataegus viridis	green hawthornelderberry
Cyrilla racemiflora	red titi
<del>Diospyros virginiana</del>	<b>persimmon</b>
Forestiera acuminata	swampprivet
<del>Fraxinus caroliniana</del>	<b>Carolina ash; pop ash</b>
<del>Gleditsia aquatica</del>	<b>water locust</b>
Halesia carolina	Carolina silverbell
Hamamelis virginiana	witch-hazel
Ilex ambigua	Carolina holly
<del>Ilex cassine</del>	<b>dahoon</b>
Ilex cassine var. myrtifolia	myrtle-leaved holly
Ilex coriacea	large gallberry
Ilex decidua	possumhaw
<del>Ilex opaca var. arenicola</del>	<b>American holly</b>
Ilex vomitoria	yaupon

Lyonia ferruginea	tree lyonia
Morus rubra	red mulberry
Myrica cerifera	wax myrtle
Nyssa ogeeche	ogeechee tupelo
Osmanthus americanus	devilwood
Ostrya virginiana	eastern hophornbeam
Persea borbonia var. humilis	silk bay
Planera aquatica	planer tree
Prunus americana	American plum
Prunus angustifolia	Chickasaw plum
Prunus caroliniana	laurel cherry
Prunus umbellata	flatwoods plum
Ptelea trifoliata	common hoptree
Quercus chapmanii	Chapman oak
Quercus incana	bluejack oak
Quercus leavis	turkey oak
Quercus margaretta	sand post oak
Quercus myrtifolia	myrtle oak
Rhamnus caroliniana	Carolina buckthorn
Rhus copallinum	winged sumac
Salix caroliniana	coastal plain willow
Salix floridana	Florida willow
Salix nigra	black willow
Sambucus nigra subsp. canadensis	elderberry
Sapindus saponaria	Florida soapberry
Sassafras albidum	sassafras
Sideroxylon alachuense	silver buckthorn
Sideroxylon lanuginosum	gum bumelia
Sideroxylon lycoides	buckthorn bully

<del>Sideroxylon tenax</del>	<del>tough bumelia</del>
Styrax americanus	American snowbell
Symplocos tinctoria	horse sugar/sweetleaf
<del>Tilia americana var. caroliniana</del>	<del>basswood</del>
<del>Vaccinium arboreum</del>	<del>sparkleberry</del>
Viburnum nudum	possumhaw viburnum
<del>Viburnum obovatum</del>	<del>Walter's viburnum</del>
<del>Viburnum rufidulum</del>	<del>rusty blackhaw</del>
<del>Zanthoxylum clava-herculis</del>	<del>Hereules-club</del>

Table 407.50.1  
Appropriate Tree Plantings

Native Scientific Name	Common Name	Maximum Height (feet)	Estimated Crown (20-Year) (feet)	Canopy or Understory	Appropriate Planting Location	Street tree minimum planting area (feet)	Specimen
Acer negundo	Boxelder maple	50	30	C, U	O, B	N/A	10"
Acer rubrum	Red maple	80	25	C, U	S, O, P, B	12	10"
Acer saccharinum	Silver maple	60	25	C, U	O, B	N/A	10"
Acer saccharum subsp. floridanum	Florida maple	60	25	C, U	S, O, P, B	12	10"
Aesculus pavia	Red buckeye	40	10	U	O, B	N/A	5"
Aralia spinosa	Devil's-walkingstick	30	10	U	O, B	N/A	3"
Betula nigra	River birch	60	25	C, U	S, O, B	12	10"
Carpinus caroliniana	American hornbeam	40	25	U	S, O, B	8	5"
Carya aquatica	Water hickory	100	30	C	O, B	N/A	10"
Carya cordiformis	Bitternut hickory	100	30	C	O, B	N/A	10"
Carya floridana	Scrub hickory	50	30	C	S, O, B	12	10"
Carya glabra	Pignut hickory	100	30	C	O, B	N/A	20"
Carya tomentosa	Mockernut hickory	100	30	C	O, B	N/A	20"
Castanea pumila	Florida chinquapin	50	30	C	O, B	N/A	10"
Catalpa bignonioides	Southern catalpa	60	20	C, U	O, B	N/A	10"
Celtis laevigata	Sugarberry	100	45	C	O, B	N/A	20"
Cercis canadensis	Redbud	30	25	U	S, T, O, P, B	8	5"
Chamaecyparis thyoides	Atlantic white cedar	80	20	C, U	O, B	N/A	5"
Chionanthus virginicus	White fringe tree	30	10	U	O, B	N/A	3"
Cornus florida	Flowering dogwood	40	25	U	S, O, B	8	10"
Crataegus michauxii	Michaux's hawthorn	25	15	U	S, O, B	8	5"
Diospyros virginiana	Common persimmon	100	25	C, U	S, T, O, P, B	8	10"
Fagus grandifolia	American beech	100	30	C, U	O, B	N/A	5"
Fraxinus americana	White ash	75	40	C	S, O, P, B	12	20"
Fraxinus caroliniana	Carolina pop ash	60	25	C	S, O, P, B	12	10"
Fraxinus pennsylvanica	Green ash	90	30	C	S, O, B	12	10"
Fraxinus profunda	Pumpkin ash	100	30	C	O, B	N/A	10"
Gleditsia aquatica	Water locust	50	25	C, U	O, B	N/A	10"
Gleditsia triacanthos	Honey locust	70	25	C, U	O, B	N/A	10"



Table 407.50.1  
Appropriate Tree Plantings

Native Scientific Name	Common Name	Maximum Height (feet)	Estimated Crown (20-Year) (feet)	Canopy or Understory	Appropriate Planting Location	Street tree minimum planting area (feet)	
Gordonia lasianthus	Loblolly bay	90	20	C, U	O, B	N/A	10"
Ilex cassine	Dehoon Holly	50	20	C, U	O, B	N/A	10"
Ilex opaca	American holly	50	25	C, U	S, T, O, P, B	8	10"
Ilex x attenuata 'East Palatka'	East Palatka holly	50	20	C, U	S, T, O, P, B	8	N/A
Ilex x attenuata 'Savannah'	Savannah holly	50	20	C, U	S, T, O, P, B	8	N/A
Juglans nigra	Black walnut	60	25	C	O, B	N/A	10"
Juniperus virginiana	Southern red cedar	60	25	C, U	S, O, P, B	12	20"
Liquidambar styraciflua	Sweetgum	100	30	C	S, O, B	12	N/A
Liriodendron tulipifera	Tulip tree	100	25	C	S, O, P, B	12	10"
Magnolia grandiflora	Southern magnolia	80	20	C, U	S, O, P, B	12	20"
Magnolia grandiflora 'Little Gem'	Little gem magnolia	30	10	U	S, O, B	8	N/A
Magnolia grandiflora 'Alta'	Alta magnolia	40	10	U	S, T, O, B	8	N/A
Magnolia macrophylla	Bigleaf magnolia, Ashe magnolia	20	15	U	O, B	N/A	3"
Magnolia virginiana	Sweetbay magnolia	80	20	C, U	S, O, P, B	12	10"
Malus angustifolia	Crabapple	25	15	U	O, B	N/A	5"
Morus rubra	Red mulberry	50	30	U	O, B	N/A	10"
Myrica cerifera	Waxmyrtle	30	10	U	O, B	N/A	5"
Nyssa aquatica	Water tupelo	100	25	C	S, O, B	12	10"
Nyssa ogeche	Ogeechee tupelo,	80	25	C	S, O, B	12	10"
Nyssa sylvatica var. biflora or sylvatica	Swamp tupelo, Blackgum	100	25	C	S, O, B	12	20"
Osmanthus americanus	Wild olive, Devilwood	40	20	U	S, O, B	8	3"
Ostrya virginiana	Ironwood, Hop hornbeam	40	25	C, U	S, T, O, P, B	8	5"
Persea borbonia var. borbonia or humilis	Red bay or Silk bay	60	25	C, U	O, B	N/A	5"
Pinus clausa	Sand pine	90	25	C	O, B	N/A	20"
Pinus echinata	Shortleaf pine	100	25	C	O, B	N/A	10"
Pinus elliotii	Slash pine	110	25	C	S, O, B	12	N/A
Pinus glabra	Spruce pine	90	25	C	S, O, B	12	20"

Table 407.50.1  
Appropriate Tree Plantings

Native Scientific Name	Common Name	Maximum Height (feet)	Estimated Crown (20-Year) (feet)	Canopy or Understory	Appropriate Planting Location	Street tree minimum planting area (feet)	
<i>Pinus palustris</i>	Longleaf pine	90	25	C	S,O,B	12	20"
<i>Pinus serotina</i>	Pond pine	100	25	C	O,B	N/A	20"
<i>Pinus taeda</i>	Loblolly pine	110	25	C	O,B	N/A	N/A
<i>Planera aquatica</i>	Water elm, Planer tree	40	30	C, U	O,B	N/A	10"
<i>Platanus occidentalis</i>	Sycamore	90	40	C	S,O,P,B	12	30"
<i>Populus deltoides</i>	Eastern cottonwood	70	30	C	O,B	N/A	20"
<i>Prunus americana</i>	American plum	30	20	U	S,T,O,P,B	8	5"
<i>Prunus angustifolia/umbellata</i>	Chickasaw, Flatwoods, Hog plum	20	15	U	S,O,P,B	8	5"
<i>Prunus caroliniana</i>	Cherry-laurel	40	20	U	S,T,O,P,B	8	10"
<i>Prunus serotina</i> var. <i>serotina</i>	Black cherry	80	30	C	S,O,P,B	12	20"
<i>Ptelea trifoliata</i>	Wafer ash, Hop-tree	20	10	U	O,B	N/A	5"
<i>Quercus alba</i>	White oak	90	25	C	S,O,P,B	12	10"
<i>Quercus chapmanii</i>	Chapman's oak	40	20	C	S,O,P,B	8	10"
<i>Quercus falcata</i>	Spanish oak, Southern red oak	100	30	C	S,O,P,B	12	20"
<i>Quercus geminata</i>	Sand live oak	60	30	C	S,O,P,B	8	10"
<i>Quercus incana</i>	Bluejack oak	50	25	C	S,O,P,B	8	10"
<i>Quercus laevis</i>	Turkey oak	60	25	C	S,O,P,B	8	10"
<i>Quercus laurifolia</i> (hemisphaerica)	Laurel oak	90	35	C	S,O,P,B	12	N/A
<i>Quercus lyrata</i>	Overcup oak	80	25	C	S,O,B	12	10"
<i>Quercus margaretta</i>	Sand post oak	70	30	C	S,O,P,B	8	10"
<i>Quercus marilandica</i>	Blackjack oak	50	25	C	S,O,B	12	10"
<i>Quercus michauxii</i>	Basket oak, Swamp chestnut oak	100	25	C	S,O,B	12	20"
<i>Quercus muehlenbergii</i>	Chinquapin oak	50	20	C	S,O,B	8	10"
<i>Quercus myrtifolia</i>	Myrtle oak	30	15	U	O,B	N/A	10"
<i>Quercus nigra</i>	Water oak	90	35	C	S,O,P,B	12	N/A
<i>Quercus pagoda</i>	Cherrybark oak	80	30	C	S,O,P,B	12	10"
<i>Quercus phellos</i>	Willow oak	60	20	C	S,O,P,B	12	10"
<i>Quercus shumardii</i>	Shumard oak	100	30	C	S,O,P,B	12	20"
<i>Quercus sinuata</i>	Bluff oak	90	30	C	S,O,P,B	8	20"

Table 407.50.1  
Appropriate Tree Plantings

Native Scientific Name	Common Name	Maximum Height (feet)	Estimated Crown (20-Year) (feet)	Canopy or Understory	Appropriate Planting Location	Street tree minimum planting area (feet)	
<i>Quercus stellata</i>	Post oak	80	25	C	S,O,P,B	8	10"
<i>Quercus virginiana</i>	Live oak	80	45	C	S,O,P,B	12	40"
<i>Rhamnus caroliniana</i>	Carolina buckthorn	20	10	U	O,B	N/A	5"
<i>Sabal palmetto</i>	Cabbage palm	60	15	C, U	S,T,O,B	8	N/A
<i>Salix caroliniana</i>	Carolina willow	40	15	U	O,B	N/A	5"
<i>Salix floridana</i>	Florida willow	20	15	U	O,B	N/A	5"
<i>Salix nigra</i>	Black willow	60	15	U	O,B	N/A	5"
<i>Sapindus saponaria</i>	Soapberry	50	25	C, U	S,O,P,B	12	10"
<i>Sassafras albidum</i>	Sassafras	40	15	U	O,B	N/A	5"
<i>Sideroxylon tenax</i>	Tough bully	30	10	U	O,B	N/A	3"
<i>Taxodium ascendens</i>	Pond cypress	90	20	C	S,O,P,B	12	20"
<i>Taxodium distichum</i>	Bald cypress	100	20	C	S,O,P,B	12	20"
<i>Tilia americana</i> var. <i>caroliniana</i>	Carolina basswood	80	25	C	O,B	N/A	20"
<i>Ulmus alata</i>	Winged elm	100	40	C	S,T,O,P,B	12	10"
<i>Ulmus americana</i>	Florida elm	100	35	C	S,T,O,P,B	12	10"
<i>Ulmus crassifolia</i>	Cedar elm	100	30	C	S,T,O,P,B	12	10"
<i>Ulmus rubra</i>	Slippery elm	60	20	C	S,O,P,B	12	10"
<i>Vaccinium arboreum</i>	Sparkleberry, Farkleberry	20	15	U	S,T,O,P,B	8	3"
<i>Viburnum obovatum</i>	Walter viburnum	30	15	U	O,B	N/A	3"
<i>Viburnum rufidulum</i>	Rusty blackhaw	20	15	U	O,B	N/A	3"
<i>Zanthoxylum clava-herculis</i>	Hercules club	50	25	U	O,B	N/A	5"
<i>Buria capitata</i>	Pindo palm	20	15	C, U	S,T,O	8	N/A
<i>Callistemon rigidus</i>	Stiff bottlebrush	60	15	U	S,T,O	8	N/A
<i>Callistemon viminalis</i>	Weeping bottlebrush	30	15	U	S,T,O	8	N/A
<i>Carya illinoensis</i>	Pecan	100	35	C	S,O,P	12	N/A

Table 407.50.1  
Appropriate Tree Plantings

Non-Native Scientific Name	Common Name	Maximum Height (feet)	Estimated Crown (20-Year) (feet)	Canopy or Understory	Appropriate Planting Location	Street tree minimum planting area (feet)	
<i>Cedrus deodara</i>	Deodar cedar	40	20	C, U	S, O, P	8	N/A
<i>Chionanthus retusus</i>	Chinese fringe tree	30	15	U	S, O	8	N/A
<i>Citrus spp.</i>	Citrus	20	10	U	O	N/A	N/A
<i>Cryptomeria japonica</i>	Japanese cedar	60	15	C, U	S, O	8	N/A
<i>Cunninghamia lanceolata</i>	China fir	60	15	C, U	S, O	8	N/A
X <i>Cupressocyparis leylandii</i>	Leyland cypress	30	15	U	S, O	12	N/A
<i>Cupressus sempervirens</i>	Italian cypress	70	10	U	S, T, O	8	N/A
<i>Ilex rotunda</i>	Round holly	30	15	C, U	S, T, O, P	8	N/A
<i>Lagerstroemia indica</i> (large varieties)	Crape myrtle	40	15	U	S, T, O	8	N/A
<i>Liquidambar formosana</i>	Formosa sweet gum	50	20	C	S, O, P	12	N/A
<i>Magnolia spp.</i>	Oriental magnolia	30	15	U	S, O	8	N/A
<i>Metasequoia glyptostroboides</i>	Dawn redwood	70	15	C	S, O, P	12	N/A
<i>Parkinsonia aculeata</i>	Jerusalem-thorn	15	10	U	O	N/A	N/A
<i>Phoenix spp.</i>	Date palm	60	25	C	S, T, O, P	8	N/A
<i>Pistacia chinensis</i>	Chinese pistachio	60	25	C	S, O, P	8	N/A
<i>Platycladus orientalis</i>	Oriental arborvitae	50	10	U	S, O	12	N/A
<i>Podocarpus macrophylla</i>	Japanese yew	40	15	C, U	S, T, O, P	8	N/A
<i>Podocarpus nagi</i>	Nagi podocarpus	50	20	C, U	S, T, O, P	8	N/A
<i>Prunus campanulata</i>	Flowering cherry	20	15	U	S, T, O	8	N/A
<i>Pyrus calleryana</i>	Aristocrat pear	40	15	C, U	S, T, O, P	8	N/A
<i>Quercus acutissima</i>	Sawtooth oak	60	25	C	S, O, P	12	N/A
<i>Quercus nuttallii</i>	Nuttall oak	70	25	C	S, O, P	12	N/A
<i>Robinia pseudoacacia</i>	Black locust	40	20	C	O	N/A	N/A
<i>Salix babylonica</i>	Weeping willow	40	30	C, U	S, O, P	12	N/A
<i>Ulmus parvifolia</i>	Chinese elm, Drake elm	40	35	C, U	S, T, O, P	8	N/A
<i>Ulmus pumila</i>	Siberian elm	30	15	C, U	S, T, O	8	N/A
<i>Washingtonia robusta</i>	Washington palm	80	15	C	S, T, O	8	N/A
S = Street tree	P = Parking lot islands	Canopy tree = provides larger amount of shading high above ground					

Table 407.50.1  
Appropriate Tree Plantings

T = Tree grate/well	B = Basin area	Understory tree = provides lower amount of shading near the ground
O = Other areas including common areas and buffers		