

STAFF REPORT

Planning and Zoning Board, May 19, 2014

Tree Protection Regulations – Champion Trees and Other Related Changes Round 27 – Item E2 (PL14-034)

Consideration of amendments to the Land Development Ordinance (LDO)

Speaker: Ricky Barker, AICP, Associate Planning Director

From: Jeffery G. Ulma, AICP, Planning Director

Prepared by: Ricky Barker, AICP, Associate Planning Director

Approved by: Benjamin T. Shivar, Town Manager

Approved by: Russ Overton, Assistant Town Manager

EXECUTIVE SUMMARY

In December 2013, Town Council adopted interim adjustments to champion tree regulations which included more specific criteria that the Planning Director would use to determine when a healthy champion tree could be removed to accommodate development activity. As directed by Town Council, staff has completed a more comprehensive revision to the champion tree regulations based upon feedback from Town Council, the Planning and Zoning Board, and a stakeholders group. The Planning and Zoning Board has conducted two work sessions to provide feedback on the proposed regulations. Staff has also requested and received feedback from members of a stakeholders group. Staff believes the proposed amendments provide for adequate protection of trees while allowing for the reasonable development of land. Following the public hearing, staff recommends the Planning and Zoning Board forward these amendments to Town Council for approval.

OVERVIEW

While a majority of the amendments below directly address regulations regarding champion trees, some of the changes apply to other aspects of tree protection. A summary of the ordinance changes are listed below.

Approval Authority – The proposed ordinance delineated the decision making authority for removing champion trees. For instance, the removal of healthy champion trees over a certain size and/or champion trees in groupings not adversely impacted by infrastructure must be approved by the Town Council. In addition, development plans that are under a certain percentage of required open space, must receive Town Council approval if any healthy champion tree not adversely impacted by infrastructure is being removed.

Intent and Purpose – The goals and specific purpose for preserving existing healthy vegetation on developing sites are set forth.

Tree Survey Requirements – The boundary for tree surveys has been modified to limit it to only within a certain distance from disturbed areas. Previously, the large trees throughout the entire site were surveyed even if they were not near disturbed areas. The proposed ordinance amendments also require the involvement of a certified arborist to verify the correct species of trees.

Tree Protection During Construction – These changes clarify the placement of tree protection fencing and the requirement for trenching when construction activity is immediately adjacent to the critical root zones of champion and specimen trees.

Champion Tree Protection Required – In addition to setting forth a clear requirement to protect these trees, the proposed ordinance provides a champion tree priority list based on tree size, grouping, and location. For example, champion trees on the rear side of developments may not be as valuable as trees along a heavily travelled roadway.

Design Flexibility: Allowable Modifications and Reductions – The proposed ordinance provides for eleven allowable modifications to ordinance requirements in exchange for saving champion trees. These modifications may be approved by staff and must be done in priority order. For example, reductions for interior buffers must be used prior to reducing exterior buffers. Buffers adjacent to existing single-family developments may not be modified/reduced. In addition, the proposed ordinance amendments allow for redevelopment/reuse sites to maintain the widths of existing buffers/streetscapes even if they are less than today’s ordinance requirements.

Replanting Requirements – The proposed amendments allow for the caliper inches of saved existing trees outside of required open space areas to be used for a 150% credit toward replacement trees when healthy champion trees are removed.

Definitions – The champion tree definition has been expanded to include small understory champion trees; and the definition for measuring trees has been clarified. Staff has also recommended an increase to the caliper size of upper story champion trees from 30 inches to 32 inches. The methodology used to determine the minimum size of a champion tree was to take an average diameter of the various species of State’s Champion Trees (equaled 65 inches for upper story trees and 24 inches for understory trees). This average was then divided in half to produce a minimum of 32 caliper inches for upper story champion trees and 12 inches for understory champion trees. The minimum caliper for a champion pine tree was raised to 40 inches because staff felt that the size of pine trees should be larger since they typically grow faster and have less of a canopy than hardwood trees.

FISCAL IMPACT

As with many new ordinance amendments, staff will spend additional time to ensure that development plans are meeting these new requirements. We estimate up to four additional hours per week of staff time. At this time, staff believes that this time can be absorbed by existing staff.

STAFF RECOMMENDATION

Staff recommends that the Planning and Zoning Board forward these amendments to the Town Council for approval.

LAND DEVELOPMENT ORDINANCE TEXT AMENDMENTS

**Tree Protection Regulations – Champion Trees and Other Related Changes
Round 27 – Item E2**

(F) Approval Authority

- (1) Approval by Town Council or Zoning Board of Adjustment

The Town Council shall have final decision-making authority on the following types of site and/or subdivision plans, which shall be reviewed using the procedure set forth in this Section, except for

properties owned by the Town, which shall be reviewed in accordance with Section 3.9.2(F)(2), except as otherwise noted:

(a) Plans that seek reductions or deviations from the ~~buffering landscaping, buffering, screening, and tree protection requirements~~ (see Section 7.2) or parking requirements (see Section 7.8) of this Ordinance beyond the Minor Modifications (see Section 3.19) allowed by staff or that otherwise require Town Council waivers pursuant to the terms of this Ordinance; and

(b) Plans for uses that require approval of a Special Use (see Section 3.8), except for properties owned by the Town, for which the Zoning Board of Adjustment shall have final decision-making authority; and

(c) Plans that seek reductions or deviations from the minimum required setbacks for telecommunications facilities, except for plans for certain telecommunications facilities for which the Zoning Board of Adjustment shall have final decision-making authority [see Section 5.2.4(D)]; and

(d) Plans that propose one hundred (100) residential units or more, or that would construct one hundred thousand (100,000) square feet of nonresidential floor area or more, or that would construct a new drive-through facility or expand an existing drive-through facility; excepting plans meeting all of the following criteria, which plans shall be reviewed by the Planning Director:

1. A rezoning for the property was approved after March 1, 2013; and,
2. The plan is not otherwise subject to review by Council or the Zoning Board of Adjustment pursuant to Section 3.9.2(F)(1)(a), (b), or (c).

7.2 LANDSCAPING, BUFFERING, SCREENING, AND TREE PROTECTION

7.2.5 Tree Protection, Tree Surveys, and Replacement Trees ~~Tree Surveys, Protection and Replacement~~

(A) Tree Protection and Tree Surveys

(1) *Intent*

~~The Town Council finds that preserving existing healthy vegetation on a site during development enhances the visual character of the community by screening and softening the impact of buildings and balancing the scale of buildings in addition to preserving wildlife habitat, controlling surface water runoff, and moderating temperatures.~~

It is the goal of the Town Council to preserve existing trees and other vegetation through buffer, streetscape, urban transition buffer, floodplain area, and champion tree preservation requirements, to the extent practical and reasonable, while taking unique site conditions and features into consideration and allowing flexibility to meet these requirements. Preserving champion trees, specimen trees, and/or significant

vegetation on a site should not prevent the reasonable development of a particular site, given existing zoning.

~~Preservation of trees and existing vegetation ultimately conserves water because of factors such as increased absorption ability and reduced heat effects. The Town Council finds that preserving and perimeter buffers and significant vegetation inside the buffers, is a goal that warrants flexibility on the Town's part in administering these requirements.~~

(2) Purpose

The Town Council finds that preserving existing healthy vegetation on a site during development, including champion trees, specimen trees, and significant vegetation:

- a. Maintains and enhances the visual character and aesthetic qualities and appearance of the community;
- b. Conserves and enhances the value of buildings and land;
- c. Conserves the natural resources and environmental quality of the Town and its environs;
- d. Screens and softens the impact of construction and buildings while balancing the scale of buildings;
- e. Preserves wildlife habitat, controlling surface water runoff, and moderating temperatures; and
- f. Conserves water due to increased absorption ability and reduced heat effects.

~~The purpose of the tree survey is to identify those areas of vegetation, including specimen trees and significant vegetation, before site and/or subdivision plans are so far advanced that it is unreasonable and impractical to modify the plans to protect the vegetation identified to be saved on the tree survey.~~

~~Preserving specimen trees or significant vegetation on a site should not prevent a particular site from being developed for reasonable uses, given existing zoning.~~

(3) Tree Survey Requirements

~~A tree survey is a description of the existing vegetation on a site. This is necessary to ensure protection of ornamental trees and other significant vegetation within required protection areas. In addition, the tree survey is used to identify those areas of vegetation, including champion trees, specimen trees, and significant vegetation, before site and/or subdivision plans are fully designed so modifications can be made to the plans to protect the vegetation identified and/or required to be preserved (e.g., champion trees).~~

A tree survey is required with the submission of all site and/or subdivision plans and shall be prepared by professional survey, engineer, or landscape architect and reviewed by a certified arborist to confirm tree species, especially the under story champion trees. A tree survey may be required for reuse/redevelopment and minor alterations that are disturbing areas that include and/or are adjacent to existing trees. The survey shall, at a minimum, provide the following information:

- (a) The number, caliper size, and location of upper story specimen trees within 50 feet of disturbed areas and champion trees within 100 feet of disturbed areas ~~with their diameters and general location;~~
- (b) The location of all ~~specimen and~~ significant trees 10 inches and greater within the interior ten (10) feet of ~~the~~ all buffer, streetscapes, floodplains, and/or other required undisturbed area; and,
- (c) A general description of the forest stands on site that are outside of required open space areas (i.e., ~~buffers, or open space areas~~), including information on the type of vegetation and size ranges;.

(4) Incentives and Design Flexibility

~~Applicants are strongly encouraged to save specimen trees interior to the site, however this requirement does not obligate the applicant to save interior trees by modifying the site and/or subdivision plan. Section 7.2.10 provides incentives and design flexibility for saving preserving existing healthy trees and forest stands and/or protecting the critical root zone of specimen trees located outside of the required open space areas on to the site. For example, and the Planning Director may exchange tree preservation areas for areas within buffers and streetscapes and may grant reductions to the required landscape/tree preservation areas and parking reductions if interior trees or forest stands outside of required open space areas are preserved protected.~~

(5) Definitions

For purposes of this Section 7.2.5 the following definitions apply:

(a) Adversely impacted means that twenty-five percent (25%) or more of the critical root zone of a champion tree will be, or has been within the three (3) years prior to the date of application, impacted by the construction or installation of the listed improvement.

~~(b) No practical alternative location means the applicant has prepared multiple designs or scenarios demonstrating that there is no practical alternative location for the required development feature that preserves a champion tree and seventy-five percent (75%) or more of its critical root zone.~~

(c) Grouping means that the critical root zone of two or more trees overlap.

(d) Required Open Space means all buffers, streetscapes, floodplains, open space required through rezoning conditions, champion tree protection areas, and community gathering spaces.

(B) Tree Protection During Construction

(1) Owner's Responsibility

During development of the property, the owner shall be responsible for the erection of any and all barriers necessary to protect any existing or installed vegetation from damage both during and after construction. Any unauthorized disturbance within the boundaries of the tree protection areas shall result in fines as identified in Section 7.2.13(C)(1)(a), in addition to any other fines and replanting requirements for the removal or damage of vegetation within tree protection areas.

(2) Tree Protection Fencing

(a) Where Required

All existing trees and vegetation that is to be preserved, ~~including buffers,~~ shall be delineated completely enclosed with a sturdy and visible tree protection fence before grading begins. Fencing shall be required around champion trees and shall extend in a circular manner as far as practical, based on a rule of a distance of at least one and one-quarter (1.25) feet from the tree for each inch of caliper (excluding existing and unchanged non-pervious area on redevelopment/reuse sites), ~~but in no case closer than six (6) feet to the trunk.~~ Fencing of areas adjacent to existing and proposed roadways also is also required. Fencing is required on all Town and Department of Transportation road transportation projects that are adjacent to protected streetscapes or buffers. ~~The applicant and~~

Staff should consider existing site conditions in determining the exact location of any tree protection fencing and may make field adjustments to the amount of fencing needed.

* * *

(3) Encroachments

Encroachments within the critical root zones of champion trees, or within designated tree protection zones, shall occur only in rare instances and only if approved on the subdivision/site plan. If such an encroachment is anticipated due to the planting of vegetation or minor utility lines, the following preventive measures shall be employed:

(a) Clearing Activities

The removal of trees adjacent to tree saved areas can cause inadvertent damage to the protected trees. ~~Wherever possible, it is strongly recommended to cut~~ If trees are being removed adjacent to tree saved areas, a minimum one and one-half (1 1/2)-foot trenches along the limits of land disturbance, so as to cut, rather than tear, roots. Trenching ~~may~~ shall be required for the protection of specimen and/or champion tree critical root zones immediately adjacent to or within the land disturbance area (see Community Appearance Manual for further guidance).

(b) Soil Compaction

Where compaction might occur due to traffic or the transportation of materials through the tree protection zone, the area must first be mulched with a minimum four (4)-inch layer of processed pine bark or wood chips or a six (6)-inch layer of pine straw (see Community Appearance Manual). Equipment or materials storage shall not be allowed within tree protection areas.

(C) Protection of Champion Trees Required

(1) Intent

The intent of this subsection is to protect healthy champion trees on sites during the development process. These requirements are implemented through the review and implementation of site/subdivision plans, reuse/redevelopment plans, and minor

alterations. These requirements do not apply to champion trees located on existing single family lots. ~~With this in mind,~~ Flexibility in site design is provided for in Section 7.2.10 (Allowable Modifications and Reductions) to offset area used to preserve champion trees by deducting area from other required landscape/buffer areas. No champion tree may be removed during development, unless the approval criteria of Section 7.2.5(C)(3)(D) are met and the tree is replaced pursuant to Section 7.2.5(D); ~~or unless approved by the Town Council pursuant to Section 7.2.5(C)(4).~~ In support of any application which requests removal of a Champion tree, the applicant must submit a report from a certified arborist that addresses the criteria of Sections 7.2.5(C)(2) and (D) or other such specialist.

(2) ~~For purposes of this section 7.2.5(C) the following definitions apply:~~

~~(a) *Adversely impacted* means that twenty-five percent (25%) or more of the critical root zone of the Champion tree will be, or has been within the three (3) years prior to the date of application, impacted by the construction or installation of the listed improvement.~~

~~(b) *No practical alternative location* means the applicant has prepared multiple designs or scenarios demonstrating that there is no practical alternative location for the required development feature that preserves the Champion tree and seventy-five percent (75%) or more of its critical root zone.~~

Priority Order For Preserving Champion Trees

When applicants are designing site and/or subdivision plans, and when the decision-making authority is determining whether a plan is in compliance with Section 7.2.5, champion trees should be preserved in the following priority order:

- (a) Any upper story champion tree equal to or greater than 40 caliper inches or understory tree equal to or greater than 15 caliper inches;
- (b) Any grouping of champion trees;
- (c) Any grouping of a champion tree with a specimen tree;

Any upper story champion tree less than 40 caliper inches, or any understory champion tree less than 15 caliper inches:

- (d) Located in a prominent location such as along public roadways, surrounded by residential lots, or adjacent to greenways;
- (e) Located adjacent to required open space; and
- (f) Located in less prominent areas, such as the rear of lots or buildings sites.

(D) Approval Authority for Removal of Champion Trees

(1) The Planning Director shall approve the removal of a champion tree if the criteria of (a) or (b) below are met.

(a) After using the allowable modifications/reductions in Section 7.2.10, the tree is adversely impacted by one (1) of the following and no practical alternative location for such improvement exists:

i. Required road connections;

ii. Required sanitary sewer or storm drain lines;

iii. Public infrastructure improvements made by others;

iv. Required stormwater treatment devices located in geographically and topographically appropriate areas; or

v. Town design standards that limit the location of buildings and/or other features such as parking and private streets on the site (e.g. requirements for the buildings to front on streets).

(b) All the following criteria have been met:

- i. All allowable modifications in Section 7.2.10 have been exhausted;
- ii. the upper story champion tree(s) being removed is less than 40 caliper inches or the understory champion tree is less than 15 caliper inches;
- iii. the champion tree being removed is not part of a grouping of two or more champion trees; and
- iv. the total site is composed of 30% or greater required open space, or 15% or greater required open space in the Town Center Zoning District or on reuse/redevelopment sites.

(2) The Town Council shall review any other request to remove a champion tree as a Minor Modification pursuant to Section 3.19.

(DE) Replacement of Champion Trees

(1) When a champion tree is removed during construction, or is dying or dies within one (1) year following completion of construction of a site and/or subdivision plan, on a site located outside of the Town Center District and on non-reuse/redevelopment sites, the applicant or developer shall replace such champion tree as follows:

- a. Trees of similar type must be planted at least thirty (30) feet from any other tree such that the total caliper inches of trees planted is no less than the caliper inches diameter of the tree removed;
- b. The size of such replacement trees at the time of installation shall be a minimum of two and one-half (2 ½) inches in caliper;

- c. Existing tree preservation areas that are not in required open space may be credited towards this replacement requirement at 150% of the caliper inches of the trees preserved for healthy hardwood trees a minimum of 2 caliper inches in size and healthy evergreen trees a minimum of 4 caliper inches in size; and
 - d. If sufficient area does not exist on the site to plant replacement trees, the applicant or developer must coordinate with Town staff to design and implement a plan to plant the required replacement trees on town properties, town-maintained properties, and/or other public property within the Town's jurisdiction. If the Town determines this is not feasible, the trees may be planted in required open space areas on other property.
- (2) When a champion tree is removed during construction, or is dying or dies within one (1) year following completion of construction of a site and/or subdivision plan on a site located within the Town Center District or on reuse/redevelopment sites, the applicant or developer shall comply with the requirements of section 7.2.5(~~DE~~)(1), except that the total caliper inches of trees planted may be less than the diameter of the tree removed if it is not practical to replant the required number and size of trees spaced at least thirty (30) feet from any other tree on the same site or any adjacent property under common ownership. The maximum size of any replacement tree shall be three (3) caliper inches.
- (3) In consultation with the Town staff, acceptable replacement trees shall be determined by a person qualified by training or experience to have expert knowledge of the subject. Alternatively, the valuation of trees removed may be established in accordance with standards established by the International Society of Arboriculture and replaced with landscaping of equal dollar value.
- (4) Replacement trees shall be maintained through an establishment period of at least three (3) years, except that replacement trees planted in association with development of detached dwellings on an individual lot shall have an establishment period of only one (1) year. The property owner and developer shall execute a landscape agreement guaranteeing the survival and health of all replacement trees during the establishment period and guaranteeing to replace any replacement tree(s) that does not survive the establishment period in good health as determined by a certified arborist.

7.2.10 Allowable Modifications and Reductions

(A) This subsection provides flexibility and presents alternative ways to meet the standards set forth in this Ordinance, while encouraging the preservation of existing healthy vegetation and innovation in site design.

- (1) Existing healthy vegetation and the area of land used to maintain the vegetation may be counted toward meeting the performance criteria for buffers, streetscapes, and vehicular use areas set out in Sections 7.2.3, 7.2.4, and 7.2.6.
- (2) Up to a twenty (20) percent reduction in the number of parking spaces required on the site shall be allowed to the extent that the reduction in the amount of required pavement will preserve existing healthy trees in an undisturbed, natural condition.

- (3) The Town Council may reduce the width of required streetscapes and buffers to no less than ten (10) feet. Buffer reductions between uses may be considered based on the use of innovative site/building design concepts. The Council may make exceptions to this minimum width for development within the Town Center District and for reuse/redevelopment sites. Reductions in the width of streetscapes and buffers should only be allowed when meeting the required width prevents reasonable use of the property based on the zoning and/or when additional existing healthy vegetation or open space is provided elsewhere on the site. The Planning Director may allow redevelopment/reuse sites to maintain their existing buffer and streetscape widths even if such width is less than current ordinance requirements so long as the proposed development plan does not reduce the existing buffer or streetscape width on the site. If existing pavement, curbs, and/or buildings are being removed from the required buffer and streetscape widths, the Planning Director may require plantings to reasonably meet the intent of the landscape requirements (i.e., parking lot screening, streetscape/buffer and parking lot trees).
- (4) An average buffer/streetscape width that equals the width of the required buffer/streetscape may be approved, provided that all of the following requirements are met:
- (a) The buffer/streetscape average equals the required width {for example, a required fifty (50) foot buffer could average a minimum of fifty (50) feet in width.}
 - (b) In no case shall a buffer/streetscape that is adjacent to single-family residential development be less than thirty (30) feet in width.
 - (c) All buffer/streetscape areas that are less than the required minimum width must include additional vegetation, walls/fencing, and/or other measures.
- (5) Where spacing of required streetscape trees evenly across the frontage of the property or existing vegetation would interfere with the visibility of features or landscapes intended specifically for public or civic purposes such as art, monuments, and memorials, the required number of trees may be staggered, clustered and otherwise arranged as deemed appropriate in order to promote optimal growth and health of the vegetation. In addition, existing vegetation may be removed from the streetscape for visibility of features provided that an area of equal to the area of vegetation being removed is preserved elsewhere on the site (in addition to required buffers).
- (6) The area used for preserving existing healthy non-champion trees vegetation (~~specimen trees preferred~~) within the site may be used as credit for required perimeter buffers, interior buffers, and/or streetscapes at a rate of one and one-half (1.5) times. For example, if the area taken up by the preserved vegetation is one thousand two hundred (1,200) square feet, then the applicant may deduct an area equal to one thousand eight hundred (1,800) square feet from other required landscape/buffer areas. However, the application of this subsection is subject to the limits provided under Section 7.2.10(C) and (D) above. In addition, the area removed from required perimeter buffers or streetscapes should not contain specimen trees. Area taken up by preserved vegetation includes the area under the tree canopies.

- (7) Interior buffer areas may be relocated provided that the square footage of area is relocated elsewhere on the site (preferably to save more existing vegetation).

~~(b) Parking lot landscape areas are designed in a combined linear fashion instead of as small, isolated pockets of vegetation.~~

- (8) The required streetscape along thoroughfares and collectors may be reduced to ten (10) feet, and building setbacks from the streetscape to zero (0) when buildings are placed close to the street inside Mixed Use Centers.

(B) In addition to subsection (A) above, and in order to provide for flexibility in site design and landscape requirements to preserve champion trees, the Planning Director may approve the below modifications in the order listed and only to the extent necessary to preserve champion trees. The area used to preserve champion trees shall not be included within new residential lots.

- (1) The required number of parking spaces may be reduced by up to twenty-five (25) percent;
- (2) Interior non-residential buffers and interior buffers within a mixed-use development may be reduced and/or eliminated;
- (3) Linear parking lot islands may be reduced and/or eliminated;
- (4) The area used to preserve champion trees may be used to meet the community gathering space requirements;
- (5) Total perimeter buffers widths not adjacent to existing single family developments may be reduced to no less than 20 feet provided the critical root zones of specimen trees are not adversely impacted and there is sufficient room to plant the required buffer type;
- (6) Setbacks from buffers/streetscapes may be reduced/eliminated provided the critical root zones of specimen trees are not adversely impacted;
- (7) The area under common open space used to preserve champion trees may be used to meet the bonus open space requirements within the conservation residential overlay district without being contiguous or meeting the area size requirements;
- ~~(8) Critical root zone area may be included within lots provided it is outside of the building envelope and is preserved through a landscape easement;~~
- (9) Buffers and streetscape areas may be used for bio-retention provided the critical root zones of specimen trees are not adversely impacted;
- (10) Required streetscapes areas may be reduced provided the critical root zones of specimen trees are not adversely impacted and there is sufficient room to plant the required buffer type – 80 feet to 50 feet; 50 feet to 30 feet; 30 feet to 15 feet;
- (11) The connectivity index, primary circulation standards and the cross access requirements within Section 7.10.3 Standards for Streets/On-Site Vehicular Circulation, subsection (A) and (C) may be modified/eliminated;
- (12) Critical root zone measurement may be reduced to one (1) foot from the tree for each inch of caliper.

In order to better preserve a champion tree and reduce possible impacts to the critical root zone from demolition activities, the Planning Director may approve the above modifications to make up the land area needed to preserve an existing house on a site located within or immediately adjacent to the critical root zone.

CALIPER

A horticultural method of measuring the diameter of a tree trunk for the purpose of size grading. The caliper of the trunk is measured six (6) inches above the ground for trees up to and including four (4) inches in diameter, twelve (12) inches above the ground for trees greater than four (4) inches up to twelve (12) inches in diameter, and at breast height (four and one-half (4.5) feet) for trees greater than twelve (12) inches in diameter. The following measurements of caliper may be used when appropriate: vertically growing tree on a slope - measure diameter 4.5 ft from the ground on the upper side of the slope; tree leans - measure 4.5 ft up the stem in the direction of the lean; tree forks below diameter at breast height (DBH) - measure at the narrowest part of the main stem below the fork (if the circumference measurement below the lowest fork places the measurement on the ground, the trees shall be considered separately.

CHAMPION TREE

~~Any single tree that measures: has been determined to be of value because of its species, size, age, or other professional criteria. An upper-story tree which is thirty (30) inches or greater in diameter at breast height is considered as a champion tree. Size ranges for understory trees are smaller, and vary based upon species. (a) 40 caliper inches or greater for pines; (b) thirty-two (32) caliper inches or greater for all upper story trees other than pines; or twelve (12) caliper inches or greater for all understory trees. A tree that meets the indicated size above but is dead or diseased, or has an abnormal form that is not characteristic of its species (for example the habit is one-sided, or the crown is significantly misshapen or missing) as determined by a certified arborist, shall not be considered to be a Champion Tree.~~

FOREST OR FOREST STAND

Areas or stands of trees, the majority of which are greater than ten (10) inches caliper, covering an area greater than one-quarter (0.25) acre; or groves of mature trees without regard to minimum area consisting of substantial numbers of individual specimens (Substantial numbers represents more of a visual impression as opposed to a specific number).

SIGNIFICANT TREES/VEGETATION

Any growing upper-story tree, greater than 10 inches in diameter at breast height (DBH) or understory tree greater than 2 inches in caliper, which displays a root zone, canopy and limb structure characteristic of the particular species, and is in good health and vigor.

SIGNIFICANT VEGETATION

~~— An upper-story tree which is over ten inches in diameter at breast height and/or an understory tree which is two inches or more in caliper which displays a root zone, canopy and limb structure characteristic of the particular species, and is in a condition of good health and vigor.~~

SPECIMEN TREES

Any growing upper-story tree, greater than eighteen (18) inches in diameter at breast height (DBH) or understory tree greater than four (4) inches in caliper, which displays a root zone, canopy and limb structure characteristic of the particular species, and is in good health and vigor.

TREE, UNDERSTORY

A tree with a canopy that covers at least four hundred (400) square feet at maturity but less than nine hundred (900) square feet under urban conditions, with a crown diameter of at least twenty-five (25) feet and a height at maturity not exceeding thirty (30) feet. Understory trees include dogwood, horticultural cherry, redbud, silverbell, and serviceberry.

TREE, UPPER-STORY

A tree with a canopy that covers at least sixteen hundred (1,600) square feet at maturity under urban conditions, with a crown diameter of at least forty (40) feet and a height at maturity of sixty (60) feet.

TREE SURVEY

A map or plan indicating the vegetation on a site that is to be preserved while the site is developed that identifying certain trees in accordance with the requirements of Section 7.2.5 to assist in the preservation and protection of trees.