



Source: Community Development - BSD

Agenda Item No: REP 4-14

To: **City Council**
From: **City Manager and Staff**

Council Meeting Date: Jan 21, 2014

Re: Report - Proposed revisions to Section 12A-49, Tree Preservation and Landscaping Requirements, of the City's Code of Ordinances

EXECUTIVE SUMMARY:

Staff has been asked to prepare proposed revisions to the City of Columbia tree preservation requirements to address concerns regarding utility work within a tree preservation area as part of a comprehensive review of the ordinance. This report proposes an amendment to Chapter 12A that requires the *minimum* tree preservation area to be located outside of public utility easements and includes several other suggested revisions based on staff's experience administering the ordinance.

DISCUSSION:

Tree preservation within utility easements

Currently Chapter 12A-49(b) states in part that "*a minimum of twenty-five (25) percent of any climax forest area on any tract of land subject to land preservation requirements shall be maintained.*" The amendment adds language to the ordinance stating that existing or proposed utility and drainage easements cannot be counted towards the required tree preservation area. Developers currently have the option to count tree preservation areas located in easements toward their twenty-five (25) percent requirement. When utility companies or departments need to maintain or replace an underground utility, or the trees within the easement are threatening an overhead utility, the climax forest in these areas is adversely affected.

Though protecting trees from future utility work is a worthwhile goal, staff would not discourage tree preservation within easement areas when existing easements contain high-quality tree species and desired natural buffering. Often easements are located on the borders of property where it is both a desire of adjacent property owners and a relative convenience to the developer to save trees within these "buffer" areas. The majority of area within utility easements in developed areas throughout the City is seldom disturbed. The ordinance needs to account for the additional risk put upon these trees but not waive their preservation altogether.

Tree preservation conservation easement

Staff also recommends that Chapter 12A-49 be modified to require that all, or a portion of, the tree preservation area be either be covered by a tree preservation conservation easement (TPCE) or located on an open space common lot. Community Development staff has worked with the Law Department and Public Works Department to develop a standard Tree Preservation Conservation Easement form for use by the development community. Developers would only be required to provide a legal description of the area and sign the easement. Another option would be to dedicate the TPCE on the plat. The benefit of a recorded easement is it puts subsequent property owners on notice that a tree preservation area exists. A definition of Tree Preservation Conservation Easement is proposed as part of the Subdivision Regulations, Section 25-3.

Residential subdivisions

While proposed for all types of development, the Tree Preservation Conservation Easement could have special relevance to single-family residential development. Residential subdivisions are something of a hybrid in their preservation of trees; developers set-aside 25 percent of climax forest through the land disturbance and platting processes; however the current ordinance allows tree preservation located in newly platted residential lots to count as part of the minimum twenty-five (25) percent preservation requirement. When the residential lots are sold home contractors inevitably remove a portion and have the option to remove all - lots less than one acre in size are exempt - of the tree preservation area in order to construct a house. Home construction also often negatively affects the root system of trees the contractor intends to save. Impacts often are not visible until years after construction. Many builders and home buyers do recognize the benefits

that mature trees provide, and some will alter grading plans and use other tree protection practices during construction to save trees in the open space areas of the residential lots.

Staff believes that an ordinance change requiring a conservation easement will ensure that a greater portion of the tree preservation area within residential subdivisions is retained following home construction.

Enforcement

Staff recommends that the tree preservation ordinance be amended to clarify that tree preservation applies after the construction period. Currently the ordinance reads:

"If any of the trees required to be retained or trees planted as part of the landscaping plan should die within a period of eighteen months after completion of the activities associated with the land disturbance permit, the owner of the property shall replace the trees within six months at a ratio of one to one with an approved tree having a minimum diameter of two (2) inches measured at a point one foot above natural grade."

The proposed amendments require tree replacement for trees that die within a twenty-four month period rather than an eighteen month period, as well as requiring replacement of healthy trees that are removed any time from a designated tree preservation area. Exceptions can and should be allowed when preservation areas suffer storm damage or trees otherwise become diseased or weakened. Staff recommends that the replacement ratio be increased from "one to one" (caliper inches removed to caliper inches planted) to one new 2-inch tree for every one caliper inch lost.

Other changes

Other recommended changes include requiring that the landscaping plan include the zoning of the proposed development and adjacent properties as well as calculations showing compliance with City ordinance. Staff recommends specifically requiring orange construction fencing to delineate the tree preservation areas prior to issuance of a land disturbance permit. Currently ordinance allows laths and flags as means of delineation which are often knocked over or missed during mass grading operations.

The Environment and Energy Commission reviewed and provided input on an earlier draft of the ordinance and expressed support.

FISCAL IMPACT:

None.

VISION IMPACT:

<http://www.gocolumbiamo.com/Council/Meetings/visionimpact.php>

2.1 Goal: Columbia will preserve its existing character and enhance the city's natural and man-made aesthetics.

5.2 Goal: Land will be preserved throughout Columbia and Boone County to protect farmland, scenic views, natural topographies, rural atmosphere, watersheds, healthy streams, natural areas, native species, and unique environmentally sensitive areas, thereby enhancing quality of life.

9.1 Goal: Columbia and its neighboring communities will be a place where the air, water, land, and natural aesthetic qualities of our environment shall be protected by a combination of conservation strategies including, but not limited to, regulations and ordinances, conservation incentives, education programs, and smart growth planning.

SUGGESTED COUNCIL ACTIONS:

Direct staff to place the proposed ordinance on Council's agenda for public review and a hearing

FISCAL and VISION NOTES:					
City Fiscal Impact Enter all that apply		Program Impact		Mandates	
City's current net FY cost	\$0.00	New Program/ Agency?	No	Federal or State mandated?	No
Amount of funds already appropriated	\$0.00	Duplicates/Expands an existing program?	No	Vision Implementation impact	
Amount of budget amendment needed	\$0.00	Fiscal Impact on any local political subdivision?	No	Enter all that apply: Refer to Web site	
Estimated 2 year net costs:		Resources Required		Vision Impact?	Yes
One Time	\$0.00	Requires add'l FTE Personnel?	No	Primary Vision, Strategy and/or Goal Item #	2.1, 5.2, 9.1
Operating/ Ongoing	\$0.00	Requires add'l facilities?	No	Secondary Vision, Strategy and/or Goal Item #	
		Requires add'l capital equipment?	No	Fiscal year implementation Task #	

ARTICLE III. - TREE PRESERVATION AND LANDSCAPING REQUIREMENTS

Sec. 12A-49. - Clearing of trees; permit required.

(a) The mechanized clearing of trees, logging of trees or clear-cutting of trees by any means on tracts of land over one (1) acre shall be unlawful unless done in compliance with a land disturbance permit.

(b) A minimum of twenty-five (25) percent of any climax forest area on any tract of land subject to land preservation requirements shall be platted as a separate lot ~~any required plat~~, or designated as a ~~Greenspace Conservation Easement~~ Tree Preservation Conservation Easement, described by metes and bounds and recorded in a separate document. At the Director's discretion trees thus retained will count toward landscaping-screening requirements contained in the zoning ordinance. A maximum of 25% of the tree preservation area may be retained within any required stream buffer.

(c) No logging may occur without an approved Tree Preservation Plan or logging permit. ~~When logging is to occur prior to approval of a tree preservation plan or on property not otherwise subject to land disturbance requirements, To obtain a logging permit~~ a logging plan demonstrating compliance with tree preservation requirements must be submitted to the Director. This logging plan will include the area in square feet of forest land, the area in square feet of climax forest, and demonstrate that twenty-five (25) percent of the area of climax forest will be preserved after logging. Each logging operation on the same site will require a separate land disturbance permit. Under no circumstance shall successive logging remove greater than seventy-five (75) percent of the climax forest present upon the site before logging.

(If lot is platted or encumbered by a Tree Preservation Conservation Easement, the following is not needed.)

When a parcel, tract or lot that had a previous Tree Preservation Plan is then subdivided into smaller tracts greater than 1.0 acre and sold to new owners, a new Tree Preservation Plan shall be required for each parcel, tract or lot.

(d) A landscaping plan or Tree Preservation Plan demonstrating compliance with the specific requirements of the existing zoning of the site shall accompany all applications for land disturbance permits. The plan will be a drawing of the site sufficient in detail to illustrate the features of the plan. ~~The plan may be incorporated with other drawings or documents. The plan shall be prepared by a International Society of Arboriculture Certified Arborist, but shall~~ The plans shall contain the following information:

- (1) The area, in square feet or acres, of any climax forest areas on the site and those portions, in square feet or acres, of the climax forest to be preserved. The areas may be determined by actual field measurement or planimetry of scaled aerial photographs.
- (2) The number, spacing, size and species of planting materials, including new trees and final ground cover that will be planted as part of the landscaping or tree preservation plan.
- (3) The size and location of any walls, earth berms, and fences.
- (4) Provisions for watering, soil stabilization, plant protection and maintenance.

(5) Location and description of any barriers to be erected to protect any vegetation from damage both during and after construction.

(6) Zoning for the proposed development and adjacent properties

(7) Calculations showing compliance with Section 29-25(e) and 12A-49 of the City's Code of Ordinances.

(8) The plan shall clearly detail the methods used to remove trees, the areas of tree removal and areas of trees being saved and showing location of protective fencing. The areas to be saved will be shown on the plan along with State Plan Coordinates at all points of intersect.

(9) The plan shall also include a most recently available aerial photograph showing clearing limits, preservation area, protective fencing, and topography.

(e) Tree protection shall be required prior to and during the activities associated with the land disturbance permit in accordance with administrative standards promulgated and enforced by the Director, but under no circumstances shall activities with the potential of causing damage to the root systems of trees be allowed within fifteen feet (15) of the perimeter of the drip line of the trees being preserved, protected or planted as part of the landscaping or tree preservation plan. Protection shall consist of orange construction fencing or equivalent and be installed prior to the issuance of a land disturbance permit. "Tree Preservation - Keep Out" signs shall be posted on free standing post every 100 feet along the perimeter of the Tree Preservation area. Signs must be constructed of plastic or metal and be at least 8 ½" x 11" in size. Tree Preservation protective fencing and signs shall be maintained and repaired by the contractor for the duration of construction activities and be approved by the Director.

If site grading occurs within fifteen feet (15) of the Tree Preservation area, the perimeter of the area must be trenched to a minimum width of 2" and minimum depth of 24" using an air spade, mechanical trencher or equivalent. Tree roots then shall be pruned.

(f) If any of the trees required to be retained or trees planted as part of the landscaping plan should die within a period of ~~eighteen (18)~~ twenty-four (24) months after completion of the activities associated with the land disturbance permit, the owner of the property shall replace the trees within six (6) months at a ~~ratio of one to one~~ ratio of one tree per 1 inch of dbh lost. Replacement trees must be at least 2" in caliper size, with an approved tree having a minimum diameter of two (2) inches measured at a point one (1) foot above natural grade. ~~Shrubby or other plantings which die within eighteen (18) months of completion of the activities shall be replaced in kind within six (6) months. Owners of property shall not remove trees within a tree preservation area at any time unless, after consultation with the City Arborist, selective tree removal is advised for health and safety reasons. Unauthorized tree removal shall be subject to tree replacement as described in this section.~~

(g) All landscaping work and tree planting must be completed to City Standards and prior to the final inspection of a building or within one (1) year of issuance of the land disturbance permit, whichever occurs later. If completion of the work or building is at such time of the year that the landscaping cannot be completed, a performance bond or other acceptable financial instrument for cost of the completion of the work plus fifty(50%) percent may be accepted to allow the issuance of a certificate of occupancy.

(h) Landscaping plans may be amended during ~~or after~~ development with the approval of the Director, but in all cases must comply with the current landscaping requirements of the zoning district in which the site is located.

(l) Area contained within an existing or proposed easement shall not be counted as part of the required minimum tree preservation area.

Tree Preservation Conservation Easement (TPCE)

Section 25-3 Definitions; rules of construction.

For the purposes of this chapter, the following words, phrases, terms and their derivations shall have the meaning given herein and if not defined herein, shall have the definition as set forth in the zoning ordinance of the city.

...

Diameter at Breast Height (dbh). Measurement for timber volume. Diameter shall be measured in inches around the tree at four and one half (4½) feet above ground. If a slope is present, the above ground reference point shall be measured as the highest point on the ground touching the trunk.

...

Tree Preservation Conservation Easement. A perpetual interest in land described and dedicated on a subdivision plat. The use of area contained within shall be restricted as follows:

- (1) No development (as defined in section 12A-5 of this code) of the property shall occur;
- (2) No commercial signs or other advertising material shall be placed within the easement;
- (3) No activity allowed that may cause damage to the root system of trees within the TPCE
- (4) The TPCE is to be maintained as a natural and undisturbed area for the growth of Missouri native trees, shrubs, and plants. Dead trees and other vegetation provide invaluable habitat for a diversity of wildlife. Removal of a dead tree could alter some of the TPCE's natural functions that provide environmental protection. There shall be no removal of trees, shrubs or other vegetation on the property except for the cutting or removal of brush or trees necessary to:
 - a. Eliminate or through other means address trees which pose an immediate hazard to people or property, as determined by the Director;
 - b. Eliminate any plant material that is designated by the Missouri Department of Conservation as poisonous or noxious plant material;
 - c. Eliminate any tree acting as a host for a parasitic plant or has a pest or disease which may endanger other trees in the area and cannot reasonably be controlled through less drastic means.
 - i. Activities described in (3)a – (3)b shall be done by manual labor with hand help tools.

Ordinance Definition Changes and Additions:

Climax forest. Any woodland community in aggregate of over twenty thousand (20,000) square feet which is dominated by native Missouri upland and bottomland hardwood tree species. A list of common Missouri hardwood species can be found in the *Standards and Guidelines for Landscaping and Tree Preservation*, latest edition, on file with the Public Works Department. ~~climax species such as oak, hickory, sugar maple or bottomland hardwood such as river birch, basswood, sycamore and hornbeam.~~ Minimum requirements for preservation must ~~and which~~ include an area of five thousand (5,000) square feet with a maximum aspect ratio of 4:1. A cluster of climax forest tree species with a combined connecting canopy cover over 2,500 square feet, shared critical root zone, and a dbh over 18", may be given consideration in lieu of the 4:1 aspect ratio requirement at the discretion of the Director.

Woodland Community

A combination of the growth of native trees, forbs, grasses, plants, shrubs, and underbrush.

Drip Line

The beginning point of where the tree begins to get moisture from the soil. An imaginary, roughly circular line outside the maximum spread of the limbs of a tree.

Preservation

To keep in perfect or unaltered condition; maintain unchanged from human influence;
To leave intact; To keep the health of the natural world and biological diversity.