

[Editor's Note: the entirety of Chapter 53, Article V, that relates to the current regulations for landscape and screening should be removed from Chapter 53, and re-established in a new Chapter 54. The recently passed –and as-yet un-codified–Outdoor Lighting Ordinance will remain in Chapter 53, and is neither amended nor deleted as a function of this text change.]

~~ARTICLE V. LANDSCAPING AND SCREENING REQUIREMENTS~~

~~Sec. 53-984. Purpose.~~

The purpose of this article is, in conjunction with the other requirements of this chapter, to promote and support the orderly, safe, attractive and healthful development of land located within the community, and to promote the general welfare of the community by preserving and enhancing ecological, environmental and aesthetic qualities, through established requirements for the installation and maintenance of landscaping elements and other means of site improvements in developed properties. The following are additional factors considered in establishing the requirements of this article:

- (1) Paved surfaces, automobiles, buildings and other improvements produce increases in air temperatures, a problem especially noticeable in this southern region, whereas plants have the opposite effect through transpiration and the creation of shade. Likewise, impervious surfaces created by development generate greater water runoff causing problems from contamination, erosion and flooding. Preserving and improving the natural environment and maintaining a working ecological balance are of increasing concern. The fact that the use of landscape elements can contribute to the processes of air purification, oxygen regeneration, water absorption, water purification, and noise, glare and heat abatement as well as the preservation of the community's aesthetic qualities indicates that the use of landscape elements is of benefit to the health, welfare and general well-being of the community and, therefore, it is proper that the use of such elements be required.
- (2) The city experiences frequent droughts and periodic shortages of adequate water supply; therefore, it is the purpose of this article to require the use of drought resistant vegetation that does not consume large quantities of water. ~~(See section 53-1231, grow green plant guide for native and adapted landscape plants.)~~

(Ord. No. 438, § 61(a), 11-24-2003)

~~Sec. 53-985. - Installation and plan.~~

- ~~(a) All landscape materials shall be installed according to American Association of Nurserymen (AAN) standards. All applications for a development permit must be accompanied by a landscape plan prepared and sealed by a registered landscape~~

~~architect, certified arborist, or registered forester~~ An approved landscape plan shall be required for all new development in any zoning district, except for developments in the A, UE, R-1-1, R-1-2 and R-1-A districts.

(b) All landscape plans shall be prepared and sealed by a registered landscape architect, certified arborist, or registered forester.

(c) -All landscape materials shall be installed according to ANSI A300 standards.

(d) Replacement of trees in the minimum required landscape areas, as determined by this section, must occur under the following conditions:

- a. To establish the minimum tree density requirements for the site.
- b. Where grading occurs outside the buildable area of the lot, including grading into the critical root zone of trees that are off of the development site.
- c. Where specimen trees or specimen stands of trees within the buildable portion of the lot are to be removed.
- a. Where specimen trees or specimen stands of trees, and trees within otherwise designated tree protective zones have been irreparably damaged or removed through development or construction activities.

(Ord. No. 438, § 61(b), 11-24-2003)

~~Sec. 53-986.~~— Maintenance.

- (a) The owner of the landscaped property shall be responsible for the maintenance of all landscape areas. Said areas shall be maintained so as to present a healthy, neat and orderly appearance at all times and shall be kept free of refuse and debris. All planted areas shall be provided with a readily available water supply and watered as necessary to ensure continuous healthy growth and development. Maintenance shall include the replacement of all dead plant material if that material was used to meet the requirements of this article. Landscape material must be trimmed and maintained for roadway visibility.
- (b) All property within the city limits will adhere to city drought management program when watering.

(Ord. No. 438, § 61(c), 11-24-2003)

~~Sec. 53-987.~~ - Planting criteria.

(a) (a)—Trees.

1. -Trees shall be a minimum of four-three (3) inches in caliper measured three feet six (6) inches above finished grade the root flare immediately after planting. A list of recommended landscape trees may be obtained from the city. If the developer chooses to substitute trees not included on the

recommended list, those trees shall have an average mature crown greater than 15 feet in diameter to meet the requirements of this article. Trees having an average mature crown less than 15 feet in diameter may be substituted by grouping trees so as to create at maturity the equivalent of a 15-foot diameter crown if the drip line area is maintained. A minimum area three feet in radius is required around the trunks of all existing and proposed trees.

(b) TREE SELECTION

1. Trees selected for planting must meet minimum requirements as provided below and in the American Standard of Nursery Stock.
2. Trees selected for planting must be free from injury, pests, disease, or nutritional disorders.
3. Trees selected for planting must be of good vigor. The determination of vigor is a subjective evaluation, and dependent upon species variability. The following criteria is generally used for the determination of vigor:
 - a. Foliage should have a green or dark green color. Vigorous trees will have large leaves and dense foliage when compared to trees with poor vigor.
 - b. Shoot growth for most vigorous trees will be at least one foot per year. At least one-half of the branches should arise from the top one-third and one-half from the center one-third.
 - c. Bark texture can denote vigor. Smooth or shiny bark on the trunk and branches of a young tree usually signifies good vigor, conversely, rough and full bark could indicate poor vigor.
 - d. Trunk taper. The trunks of vigorous trees will generally have an increase in diameter with a decrease in height. Trees with reverse tapers or no taper should be avoided.
 - e. Root color. Young roots of most trees will be light in color.
4. Trees selected for planting must be free of root defects. Two types of root defects generally occur:
 - a. Kinked roots, in which taproots, major branch roots, or both are bent more than 90 degrees with less than 20 percent of the root system originating above the kink. A tree with such roots will probably bend at the soil line when released from a supporting stake.
 - b. Circling or girdling roots which circle 80 percent or more of the root system by 360 degrees or more. A tree with such roots would ultimately have less than 20 percent of its system available for support.

- (b) Shrubs and ground cover. Shrubs, vines and ground cover planted pursuant to this section shall be good, healthy nursery stock. Shrubs must be, at a minimum, a one

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gallon container size, but shall average two (2) gallon for the entire project, and be drought resistant species. This applies to all zoning classifications.

- (c) Lawn grass. In order to limit the volume of water required for the turf, it is required that grass areas be planted with drought resistant species normally grown as permanent lawns, such as Bermuda, Zoysia, Buffalo or other similar drought resistant grasses. Grass areas may be sodded, plugged, sprigged or seeded except that solid sod shall be used in areas subject to erosion. This applies to all zoning classifications.
- (1) Other low water requirement turf products will be considered and may be approved by a designated city official or body on a case-by-case basis.
 - (2) These requirements for specific types of turf are adopted to establish conservation practices under the drought management plan of the city.
 - (3) The requirements set forth in this subsection shall not prohibit the installation or planting of any turf not described in this section (nonconforming turf) if at least 50 percent of the nonimpervious cover area of the lot or parcel was planted with a nonconforming turf prior to the effective date of the ordinance from which this chapter is derived and the same nonconforming turf is being installed or planted.
- (d) Synthetic plants. Synthetic or artificial lawns or plants shall not be used in lieu of plant requirements in this section.
- (e) Architectural planters. ~~The use of architectural planters may be permitted in fulfillment of landscape requirements. The community development director or his/her designee is authorized to approve the use of architectural planters when he/she determines the overall intent of the division and/or specific guidelines can be met.~~
- (f) Other. ~~Any a~~Approved decorative aggregate or pervious brick pavers shall qualify for landscaping credit if contained in planting areas, but no credit shall be given for concrete or other impervious surfaces. No more than 50% of the required total landscape area may covered in aggregate and/or pervious pavers.

(Ord. No. 438, § 61(d), 11-24-2003)

~~Sec. 53-988.~~ - Landscaping requirements.

A minimum percentage of the total lot area shall be devoted to landscape development in accordance with the following schedule:

Zoning and/or Proposed Land Use	Percentage
R-1-T, R-1-C, R-3-1, R-3-2, R-3-3, CBD-1	20 <u>15</u>
R-1-1, R-1-2, R-1-A, R-2, M-1, M-2, M-3	Note 1
CBD-2, RS, E, TU (SIC code 48811900 only), <u>CC, RV</u>	45 <u>10</u>

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W, CM	15
PUD	Note 2
Agricultural, <u>E</u>	None
Private and public park/public area	20

Note 1—Minimum landscape requirements for each lot on which a single-family, duplex, triplex or fourplex dwelling, or a manufactured home, is constructed or installed after the date of the ordinance from which this chapter is derived shall be a minimum of two ~~(2) four~~three-inch trees, six ~~(6) two~~-gallon shrubs and lawn grass from the front property line to the front two corners of the structure all plants shall be of native and adapted species and drought resistant. Residential structures on reverse frontage lots shall also be required to screen the rear of the structure from the abutting highway, access road, or other public rights-of-way.

Note 2—Landscaping requirements will apply to planned unit developments in the same manner as the requirements listed in note 1, to be determined by the zoning classification assigned to the planned unit development.

(Ord. No. 438, § 61(e), 11-24-2003)

~~Sec. 53-989.~~ - Exceptions~~Variances~~.

(a) In order to address atypical, site-specific development/redevelopment challenges, the community development director and/or his/her designee after ten (10) days of on-site public notification is authorized to approve alternative compliance landscape plans when s/he determines that one or more of the following conditions are present:

- (1) The site has space limitations or an unusual shape that makes strict compliance impossible or impractical;
- (2) Conditions on or adjacent to the site such as topography, soils, vegetation or existing structures or utilities are such that strict compliance is impossible, impractical or of no value in terms of advancing the general purposes of this division;
- (3) Safety considerations such as intersection visibility, utility locations, etc., make alternative compliance necessary; or
- (4) Creative, alternative landscape plans will provide an equal or better means of meeting the intent of the landscaping and screening regulations of this division.

(b) Those parties with standing, aggrieved by that decision of the director or his/her designee for alternate method(s) of compliance described in this section, may appeal the decision to the planning commission if the appeal request is made within 30 days of the decision being issued. At the subsequent hearing, the Planning Commission can affirm the staff decision, reverse and/or remand the staff decision, or modify the decision to any standard approved as appropriate by the Commission.

~~Exceptions to these provisions may be granted by the planning and zoning commission and/or council to require a lesser amount of landscaping if the aesthetic, buffering and environmental intent of this chapter is met, and the reduction of the landscape area results in the preservation of natural features having comparable value to the reduced landscape requirements.~~

(Ord. No. 438, § 61(f), 11-24-2003)

~~Sec. 53-990.~~ - Placement.

Landscaping shall be placed upon that portion of a tract or lot that is being developed. A minimum thirty-five (35)Fifty percent of the required landscaped area and required plantings shall be installed between the front property lines and the building being constructed, unless a lesser percentage is approved by planning staff. Undeveloped portions of a tract or lot shall not be considered landscaped, except as specifically approved by the planning and zoning commission. Landscaping placed within public rights-of-way shall not be credited to the minimum landscape requirements by this article.

(Ord. No. 438, § 61(g), 11-24-2003)

~~Sec. 53-991.~~ - Credit.

The ~~building official and/or city engineer~~community development director or his/her designee shall, with respect to the issuance of a building permit or approval of a construction or site development plan, give a credit against the requirements of this article for trees preserved on the site; provided that, in order to reward the preservation of significant tees, a credit may be given for such preservation only if no more than ~~50~~thirty (30) percent of the critical root zone is disturbed or distressed with impervious cover; ~~and provided further that the remaining critical root zone must consist of at least 100 square feet.~~

(Ord. No. 438, § 61(h), 11-24-2003)

~~Sec. 53-992.~~ - Additional required plantings.

For every 600 square feet of landscape area required by this article, two trees and four shrubs shall be planted. To reduce the thermal impact of unshaded parking lots, additional trees shall be planted, if necessary, so that no parking space is more than 50 feet away from the trunk of a tree, unless otherwise approved by the ~~planning and zoning commission~~community development director and/or his/her designee, in accordance with

Section [53-989]. This section shall not apply to any property included in any of the following zoning categories: A, ~~UE~~, R-1-1, R-1-2, ~~or~~ R-1-A, C/M, or W.

For all non-residential properties except agriculture and planned unit developments (PUDs), or residential properties larger than one (1) acre, the following scale of required planting shall apply:

Case 1: Required landscape area – less than 10k square feet = One (1) 3" caliper tree and three (3) 1 gallon shrubs per 1,000 square feet [maximum 10 trees and 30 shrubs].

Case 2: Required landscape area – between 10,000 square feet and 110,000 square feet = Ten (10) 3" caliper trees and thirty (30) 1 gallon shrubs [maximum 50 trees and 30 shrubs].

Case 3: Required landscape area – greater than 110k square feet = Fifty (50) 3" caliper trees and thirty (30) 1 gallon shrubs plus one (1) 3" caliper tree per 10,000 square feet.

Planting Option – Four (4) 4" trees or three (3) 4" - 5" trees count as credit for five 3" trees.

If more than 30 trees will be used, a mixture of three or more tree species must be used. If more than 50 shrubs will be used, a mixture of three or more shrub species must be used.

(Ord. No. 438, § 61(i), 11-24-2003)

~~Sec. 53-993~~. - Replacement of required trees.

Upon the death or removal of a tree planted pursuant to the terms of this article, a replacement tree of equal size and type shall be required to be planted. A smaller tree that will have a mature crown similar to the tree removed may be substituted if the planting area or pervious cover provided for the larger tree in this article is retained.

(Ord. No. 438, § 61(j), 11-24-2003)

~~Sec. 53-994~~. - Screening.

The following requirements shall be in addition to the landscaping and planting requirements in this article:

- (1) Required to be screened. All off-street parking lots serving five (5) or more spaces, loading spaces and docks, outside storage areas, satellite dishes larger than 18 inches in diameter, ~~antennas~~, mechanical equipment, and the rear of structures on reverse frontage lots, must be screened from view from the street or public rights-of-way.
- (2) Approved techniques. Approved screening techniques include privacy fences, evergreen vegetative screens, landscape berms, existing vegetation or any combination thereof.

(3) Privacy fences.

- a. All fences required by this subsection and along a common property boundary shall be a minimum of six feet in height.
- b. Fences up to eight feet in height, but not less than six feet, shall be allowed for impeding access to hazardous facilities including, but not limited to, electrical substations, swimming pools and chemical or equipment storage yards, where the slope of a line drawn perpendicular to the fence line averages 20 percent or more on either side of the fence over a distance no less than 15 feet, or where the fence forms a continuous perimeter around a subdivision and the design of said perimeter fence is approved by the planning and zoning commission.
- c. Fences less than or equal to three feet in height shall be allowed in front yards.
- d. No fence or other structure more than 30 percent solid or more than three feet high shall be located within 25 feet of the intersection of any rights-of-way.
- e. All fences shall be constructed to maintain structural integrity against natural forces such as wind, rain and temperature variations.
- f. The finished side of all fences built to comply with these regulations shall face away from the screened object.

(4) Evergreen vegetative screens. Evergreen plant materials shall be shrubs, at least 30 inches in height and at a minimum spacing of 48 inches at the time of installation. Shrubs may be used in combination with landscape trees to fulfill the requirements of this article.

(5) Landscape berms. Landscape berms may be used in combination with shrubs and trees to fulfill the screening requirements of this article if the berm is at least three feet in height and has a maximum side slope of four feet of horizontal run for every one foot in vertical rise.

(6) Native vegetation. Existing vegetation, demonstrating significant visual screening capabilities and as approved by the planning and zoning commission may fulfill the requirements of this article.

(Ord. No. 438, § 61(k), 11-24-2003)

~~Sec. 53-995.~~ - Trees.

(a) Purpose. The purpose of this section is to conserve, protect and enhance existing trees and natural landscape that are healthy and contribute to a safe and livable community. It is recognized that the preservation of existing trees contributes to the overall quality of life and environment of the city. Trees play a vital role in water and air quality. They protect the health of aquifers and creek watersheds, function in storm water management as well as erosion and dust control, abatement of noise, provision

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of wildlife habitat and enhancement of property values. This section establishes requirements for the following:

- Clearing of natural vegetation;
- Removal/mitigation of trees;
- Exception to mitigation/permits;
- Tree protection standards on construction sites;
- Incentives for retaining trees;
- Penalties.

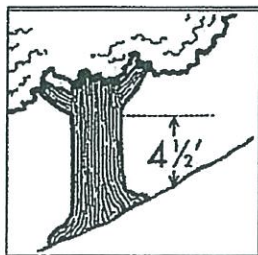
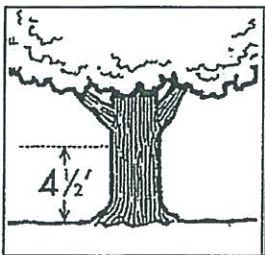
(b) Applicability. The provisions of this section are applicable to the following:

~~• Any activity on real property which requires the issuance of a land development permit within the City of Kyle. No land development permit may be issued by the city without it being determined that the proposed development is in conformance with the provisions of these regulations. All new residential and nonresidential development within the city.~~

~~• Redevelopment of any residential or nonresidential property within the city limits that results in an increase in building footprint or total destruction and reconstruction (not applicable to existing development wanting to remove a tree).~~

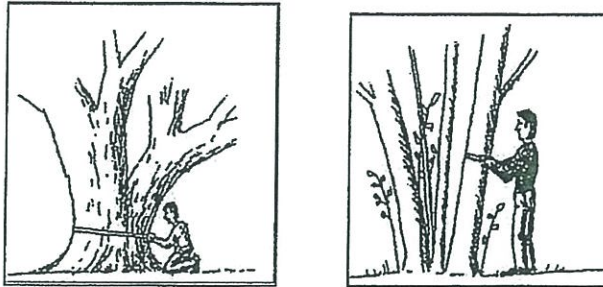
(c) Definitions. For the purposes of this Code, the following definitions will be used:

- (1) Caliper. The ~~American Association of Nurserymen~~ ANSI Z60.1 standard for trunk measurement (diameter) for nursery stock. ~~Caliper of the trunk shall be measured six inches above the root ball for four-inch caliper size and smaller, and 12 inches above the root ball for larger sizes.~~
- (2) Circumference. Circumference is measured four and one-half feet from the ground's level surface or directly below the first branches, whichever is lower.



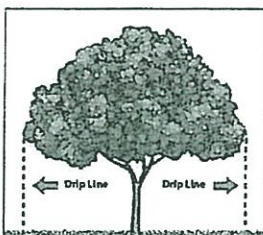
* If the tree is on a slope, measure from the high side of the slope

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For multiple trunk trees, the circumference is deemed to equal the circumference of the largest trunk plus half the circumference of each additional trunk. For example, a tree that has three trunks with circumferences of 22", 18", and 12" you would have a circumference of 37" ($22" + (\frac{1}{2} \times 18") + (\frac{1}{2} \times 12")$).

- (3) Clearing. The act of cutting down, removing all or a substantial part of, or damaging a tree or other vegetation that will cause the tree to decline and/or die (which includes but is not limited to chemical, physical, compaction or grading damage).
- (4) Critical root zone. The root protection zone is an area with a ~~radius-diameter~~ of one-half foot for each inch of trunk diameter measured four and one-half feet above the ground, or if branching occurs at four and one-half feet, the diameter is measured at the point where the smallest diameter closest to the branching occurs. ~~The zone need not be exactly centered around the tree or circular in shape, but it should be positioned so that no disturbance occurs closer to the tree than one-half of the radius of the zone or within five feet of the tree, whichever is more.~~
- (5) Drip line. A vertical line extending from the outermost portion of the tree canopy to the ground.

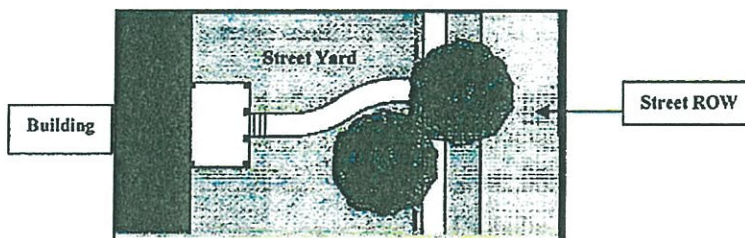


- (6) Protected tree. Trees with a ~~circumference-diameter greater than of 2812 and less than 25 inches or greater.~~
- (7) Public tree. All trees partially or completely resting on public property.
- (8) Removal of tree. An act that causes or may be reasonably expected to cause a tree to die, including, but not limited to: uprooting, severing the main trunk, damaging the root system by machinery, storage of materials or soil compaction; substantially changing the natural grade above the root system or around the

trunk; paving with concrete, asphalt, or other impervious materials in a manner which may reasonably be expected to kill the tree.

- (9) Specimen tree. Trees with a circumference-diameter of 725 inches or greater, which must be relatively upright, sound, with a solid trunk having no extensive decay; have no more than one major and several minor dead limbs; have no major insect or pathological problems; have no major pruning deficiencies, i.e. topping; and have at least 75 percent of the critical root zone in a natural, undisturbed state.

- (10) ~~Street yard. The area behind the street right-of-way (ROW), and in front of any building on private property is known as the street yard.~~



(d) Requirements.

- (1) Clearing or stripping of natural vegetation on a lot is expressly prohibited. Any part of a site not used for buildings, parking, driveways, walkways, utilities, on-site septic facilities (OSSF) and approved storage areas shall be retained in a natural state, or reclaimed to its natural state.
- (2) The following trees are exempt from mitigation requirements of this section:
- Celtis Occidentalis (hackberry);
 - Juniperus Virginiana, Juniperis Ashei (common cedar);
 - Chinaberry;
 - Mesquite;
 - Ligustrum.

Nothing in these regulations may be construed as allowing the removal of vegetation in a natural, undisturbed buffer required by zoning or land development regulations.

- (3) The removal of any protected tree with a circumference-diameter of 2812 inches or larger must be specifically requested by the applicant, and approved in writing by the community development director ~~of planning~~ or his/her designee prior to any action being taken to remove the tree or to damage or disturb the tree in any

way. The location of all trees over 2812 inches in circumference-diameter to be preserved or removed within the area proposed for development shall be designated at one of the following steps in the development process:

- On an application for a site plan for non-residential and multi-family developments;
- On a tree survey at the time of platting for development seeking to install infrastructure; or
- At the time of building permit for residential lots already platted and seeking to develop or redevelop.

Removal of any such trees without city approval is expressly prohibited. Such trees shall be tagged and numbered, and numbers shall be graphically depicted on the applicable plan submitted. The tags and related numbers shall remain on the trees until the certificate of occupancy is issued.

- (4) Trees over 2812 inches in circumference-diameter but less than 725 inches in circumference-diameter that are not located in one of the following areas shall be replaced on-site at a ratio of ~~two and one-half trees per tree~~ 1½ caliper inches for every 1 caliper inches removed and shall be credited toward the number of trees required for site development:

- Within a building footprint.
- Within ten feet of a building footprint.
- Within the area over the septic system.
- Within areas necessary for reasonable site access.
- Within areas designated for the construction or installation of public facilities such as streets or utilities, that the property owner requests and receives approval to remove may be removed.

~~Replacement trees shall have a minimum circumference of 12 inches (four-inch caliper tree). If two-inch caliper trees are utilized for mitigation then trees must be replaced at a ratio of five trees per tree removed. Replacement trees installed as a function of compensation for protected tree removals are in addition to the minimum required tree density for the site.~~

- (5) All reasonable efforts be made to save specimen trees. ("Reasonable effort" includes alternate building design, building location, parking area layout, parking area location, storm water management and equivalent or similar measures). The removal of specimen trees, which for the purposes of these requirements are trees with 725-inch circumference-diameter or greater, must be specifically approved by the planning and zoning commission prior to any action being taken to remove the tree or to damage or disturb the tree in any way. Any specimen tree that is removed shall be replaced circumference-for-circumference inch-for-

inch (a ratio of ~~one~~two-to-one) regardless of the location on the site of the specimen tree (~~even if the tree is within the building footprint~~). Replacement trees installed as a function of compensation for specimen tree removals are in addition to the minimum required tree density for the site.

- (6) Trees must be planted prior to the issuance of a certificate of occupancy unless a bond for the cost of the trees is posted with the city. If a bond is posted the property owner shall have up to 12 months to plant the required trees. Trees may be donated or a fee-in-lieu of planting the required trees may be paid to the City of Kyle if the following conditions exist:
- a. There is not adequate space on the site for all of the required trees to be planted on the site in which the tree(s) were removed.
 - b. Weather conditions are such that do not make it favorable for the required planted trees to survive and thrive.

Species, size, quantity, and delivery date of trees shall be approved by the director of parks and recreation.

- (7) Tree replacement fund. Occasionally, the tree replacement requirements of this section cannot be met because a project site will not accommodate the required density of trees. In this case, the community development director is authorized to approve a contribution to the City of Kyle Tree Replacement Fund. The following standards have been established for administering these contributions:

- (a) The community development director must review and approve all requests for alternative compliance. In no instance may 100 percent of the required site density be met through alternative compliance. As many trees as can reasonably be expected to survive must be planted on the site in question.
- (b) No permit may be issued until the required contribution has been made to the tree replacement fund.
- (c) The amount of the contribution must be determined by the director of the community development department or his/her designee.
- (d) The City of Kyle Tree Replacement Fund must be used for planting trees on public property. Funds may be used for the purchase of trees, installation of trees and irrigation, and the purchase of mulch and soil amendments for the planted areas.
- (e) Species selected for replacement must be quality specimens and must be ecologically compatible with the specifically intended growing site. No single tree species may be used for more than 35 percent of replacement trees. Evergreens may not be used for more than 25 percent of the trees in non-buffer areas. Standards for transplanting and selecting quality replacement stock must be in accordance with standards of the International Society of Arboriculture, and American Standard for Nursery Stock.

(f) Understory replacement trees may account for no greater than 25 percent of the required tree density units. The community development director is authorized to approve the additional use of understory trees for meeting density requirements on single-family lots if the size and/or layout of the lot does not allow for large overstory trees.

(g) Species selection and replacement densities are subject to approval by the community development director.

(e) Exemptions to mitigation.

(1) ~~Trees over 28 inches in circumference but less than 75 inches in circumference that are located within a building footprint or within ten feet of a building footprint, within the area over the septic system, or within areas necessary for reasonable site access (but not including parking areas), such as a driveway, shall not be required to be replaced.~~

(2) ~~Protected~~ Trees over 28 inches in circumference but less than 75 inches in circumference that are located within areas designated for the construction or installation of public facilities such as streets or utilities, shall not be required to be replaced, but must still submit a formal request for removal with the submittal of public improvement construction plans.

(f) Tree removal permit.

(1) The removal of an existing tree(s) from a development site must be in accordance with this and all other applicable ordinances of the city. Prior to the removal of any protected or specimen tree, as defined within this section, the property owner must first submit a letter detailing the following tree removal plan for approval:

- Which tree(s) will be removed (as shown on a site plan).
- How the removal will be performed (and machinery and equipment needed), and the date and time when the anticipated removal will occur.
- If a specimen or protected tree is proposed for removal ~~is within or not within the following:~~
 - ~~A building footprint or within ten feet of a building footprint.~~
 - ~~Within the area over the septic system.~~
 - ~~Within an area necessary for reasonable site access.~~
 - ~~Within an area designated for the construction or installation of public facilities such as streets or utilities.~~ a letter of justification for the removal must accompany the tree removal plan. The justification must include photographs and where appropriate, a letter of condition from a certified arborist.

(g) Tree Protection. The following minimum tree protection measures must be in place for all tree save areas:

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- (1) Tree protection fencing. Trees identified for preservation, either on or off the development site, must have protection fencing that is a minimum of four feet high installed at the edge of the critical root zones. The community development director is authorized to require the installation of four-foot high minimum chain link fencing in those areas where the likelihood of possible encroachment occurs. All tree protection zones must be designated as such with signage posted visibly on all sides of the fenced area. Signs requesting workers' cooperation and compliance with tree protection standards are recommended at the site entrance(s).
- (2) Silt fences. All tree protection zones must be designed to prevent the sedimentation of erosion material. Silt fences must be placed along the outer uphill edges of tree protection zones at the development interface.
- (3) Encroachment. No person may encroach into the tree protection zones. Construction activities, including but not limited to, parking, vehicle and foot traffic, material storage, concrete washout, debris burning, and other activities must be arranged so as to prevent disturbance within the protected areas.
- (4) Utilities. Reasonable efforts must be made to locate utility lines along corridors between tree protection zones. If utility lines must encroach into the protection zones, they must be installed by horizontal, directional boring rather than trenching.
- (5) Maintenance of tree protection. All tree protection devices must remain in fully functioning condition until the certificate of occupancy is issued.
 - a. Any tree, designated for preservation, either on or off the development site, which is negligently damaged during construction or removed without the appropriate review and approval, as determined by the community development director, must be treated in accordance with the American National Standards. If fatally damaged, the tree(s) must be replaced with four-inch caliper trees equal to the unit value of the tree removed. Any specimen tree damaged as described above must be replaced with trees equal to three times the unit value of the tree removed.
 - b. All tree protection zones must be mulched with at least four inches and not more than eight inches of organic mulch, such as pine straw, wood chips, tree leaves, or compost.
 - c. Construction activity is prohibited inside the tree save areas, including but not limited to, grading, paving, and construction of buildings and other structures.
 - d. The site must be designed and maintained in a manner to ensure proper drainage in tree save areas during and after construction.
- (6) Tree protection supervisors. The developer must designate a tree protection supervisor. This person must demonstrate knowledge in the area of tree protection practices during construction and must be on-site to ensure tree protection measures are enforced. The tree protection supervisor must participate in a pre-construction conference with the city prior to the

commencement of any development. The tree protection supervisor must notify the community development director immediately should any tree damage occur on the site.

- (7) Inspections. Tree protection inspections must be performed by a certified arborist or registered forester during construction. The inspections must be conducted prior to the commencement of development, immediately following the clearing and grubbing phase, immediately following the grading phase, and at the end of the project before a certificate of occupancy (commercial developments) is issued or the final plat approved (residential developments). The site must be inspected to ensure all tree protection regulations are being met and to identify any existing or developing tree-related problems that require treatment. An inspection report must be prepared and certified by the inspector and submitted to the *community development director*. Any damage noted must be treated in accordance with the recommendation of the inspector prior to the issuance of a certificate of occupancy or approval of the final plat. The *community development director* is authorized to require additional reports should he/she determine significant construction damage has occurred, the tree protection supervisor has failed to enforce minimum protection standards, or if other development processes, including but not limited to utility placement and building construction, may impact the tree save areas.

On-site tree protection requirements.

~~(1) — All protected trees within or next to an excavation site or construction site for any building, structure, or street work, shall be guarded with a good substantial protective fence, frame, or box not less than four feet high and surrounding the drip line of the tree. In addition, three inches of mulch or compost shall be spread beneath the drip line of the tree when the drip line is completely fenced off and eight to 12 inches of mulch if there will be any encroachment within the area under the drip line of the tree.~~

~~(2) — The barriers other than what is required per this section shall be approved by the building official and shall be in place before any site clearance or other site-disturbing act commences.~~

~~(3) — All building material, dirt, excavation or fill materials, chemicals, construction vehicles or equipment, debris, and other materials shall be kept outside the barrier.~~

~~(4) — Barriers shall remain in place until the final building and landscape site inspections are satisfactorily completed for the issuance of the certificate of occupancy.~~

(5) Activities hazardous to the health of any protected tree being preserved are prohibited, including but not limited to the following:

- Physical damage.
- Equipment cleaning and liquid disposal. Cleaning equipment, depositing or allowing harmful liquids to flow overland within the limits of the critical root zone.

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This includes paint, oil, solvents, asphalt, concrete, mortar, tar or similar materials.

- Grade changes. Grade changes (cut or fill) within the limits of the critical root zone.
- Material storage. Storing materials intended for use in construction or allowing waste materials due to excavation or demolition to accumulate within the limits of the drip line.
- Tree attachments. Attaching to a tree any signs, wires, or other items, other than those of a protective nature.
- Vehicular traffic. Vehicular and/or construction equipment traffic, parking, or storage within the limits of the drip line, other than on pre-existing or approved pavement. This restriction does not apply to single incident access within the drip line for purposes of clearing underbrush, vehicular access necessary for emergency services, routine utility maintenance, emergency restoration of utility service, or routine mowing operations.
- Utility encroachment. Installation of utilities and appurtenances within the drip line.
- Excavation and trenching. Excavation and trenching within the limits of the drip line.

~~(h) Incentives for retaining trees:~~

- ~~(1) Application. The provisions of this section apply to all new nonresidential and multi-family development within the City of Kyle limits.~~
- ~~(2) Incentives to retain existing trees. As an incentive to retain existing trees in the street yard, existing trees shall receive credit against the landscaping requirements according to the following schedule:~~
 - ~~a. Greater than 28-inch circumference: credit for two required trees.~~
 - ~~b. Greater than 12-inch but less than 28-inch circumference: credit for one and one-half trees.~~
 - ~~c. Any existing tree in the street yard which is at least 18 inches in circumference and at least 15 feet tall shall be considered as two and one-half trees for the purposes of satisfying the requirements of landscaping code.~~
 - ~~d. Any existing specimen tree (75-inch circumference or greater) shall be considered as a circumference for circumference match for the purposes of satisfying the requirements of the landscaping ordinance. For example, a 75-inch circumference tree can be counted for up to 12 trees each that have a six-inch circumference.~~

(ih) Penalty. Any person who shall violate any provision of this section or technical codes adopted herein, or shall fail to comply therewith, or with any of the requirements thereof shall be liable for a fine not to exceed the sum of \$2,000.00. Each tree removed and each day the violation exists shall constitute a separate offense.

~~(Ord. No. 725~~Ord. No. 725, § 2(Exh. A), 5-8-2013)

Secs. 53-996—53-1016. - Reserved.

APPENDIX A - TREE SELECTION

- (1) Trees selected for planting must meet minimum requirements as provided below and in the American Standard of Nursery Stock.
- (2) Trees selected for planting must be free from injury, pests, disease, or nutritional disorders.
- (3) Trees selected for planting must be of good vigor. The determination of vigor is a subjective evaluation, and dependent upon species variability. The following criteria is generally used for the determination of vigor:
- (4) Foliage should have a green or dark green color. Vigorous trees will have large leaves and dense foliage when compared to trees with poor vigor.
- (5) Shoot growth for most vigorous trees will be at least one foot per year. At least one-half of the branches should arise from the top one-third and one-half from the center one-third.
- (6) Bark texture can denote vigor. Smooth or shiny bark on the trunk and branches of a young tree usually signifies good vigor, conversely, rough and full bark could indicate poor vigor.
- (7) Trunk taper. The trunks of vigorous trees will generally have an increase in diameter with a decrease in height. Trees with reverse tapers or no taper should be avoided.
- (8) Root color. Young roots of most trees will be light in color.
- (9) Trees selected for planting must be free of root defects. Two types of root defects generally occur:
- (10) Kinked roots, in which taproots, major branch roots, or both are bent more than 90 degrees with less than 20 percent of the root system originating above the kink. A tree with such roots will probably bend at the soil line when released from a supporting stake.

(11) Circling or girdling roots which circle 80 percent or more of the root system by 360 degrees or more. A tree with such roots would ultimately have less than 20 percent of its system available for support.

APPENDIX B - TREE TRANSPLANTING

The transplanting of new trees can result in major injury to their root system. If proper transplanting techniques are employed, conditions will be more favorable for tree recovery, and the rate of attrition for newly planted trees will be reduced. Transplanting procedures must follow standards established by the International Society of Arboriculture in the Trees and Shrub Transplanting Manual, and the booklet by the Georgia Extension Service entitled "Plant Trees Right!" The following is a summary several of the more important considerations provided in the manual and booklet.

Preplanting considerations:

- (1) Only healthy trees with a well-developed root system and a well-formed top, characteristic of the species should be planted.
- (2) Trees selected for planting must be compatible with the specific site conditions.
- (3) The ability of a species to regenerate a new root system and to become reestablished should be considered. Generally, deciduous trees should be planted in the fall after leaf drop, or in early spring before bud break. There are indications that bare root trees will reestablish more readily if planted in early spring just prior to bud break.

Planting procedures:

- (1) Planting holes should be at least three times the diameter of the root ball.
- (2) Trees should not be planted deeper than they were in their former location or container.
- (3) Spade compacted bottom and sides of the planting hole should be roughed or scarified to allow the penetration of developing roots.
- (4) Good water drainage from the bottom of the planting hole is essential for root regeneration.
- (5) Once the transplanted tree is set, the hole should be backfilled with soil of good texture and structure. There are indications that a backfill with native soil alone may be inadequate. Traditionally, backfill material is comprised of a mix of negative soil, organic

matter such as peat, and inorganic material such as perlite or vermiculite in a 1:1:1 ratio.

(6) The addition of fertilizer to backfill soil can cause root injury, and is therefore not recommended. If fertilizer must be added, a low rate should be used. Approximately 1.5 pounds of nitrogen per cubic yard of backfill is recommended for bare root plants, and 2.5 pounds of nitrogen per cubic yard of backfill for balled and burlapped trees.

(7) The backfill should be gently tamped (but not compacted), and soaked for settling.

(8) The soil should be slightly mounded to allow for settling; a ridge or dike around the perimeter of the hole can facilitate watering.

APPENDIX C - PLANTING STANDARDS

(1) After selecting a suitable location, mark out a planting area that is five times the diameter of the planting ball. Use a rototiller or shovel to loosen and mix the soil in this entire area to a depth of about 12 inches.

(2) In the center of the prepared area, dig a shallow hole to set the tree or shrub. The hole should allow the root ball to sit on solid ground rather than loose soil. Once the ball is set the hole, its upper surface should be level with the existing soil.

(3) After the tree is properly situated, cut and remove the rope or wires holding the burlap in place and securing any part of the tree.

(4) Backfill around the root area, and gently firm the soil to prevent major air pockets. Do not pack the soil. Water can be used to help the soil settle and prevent overpacking. Rake the soil even over the entire area, and cover it with two to four inches of mulch. Maintaining the mulch layer carefully will improve tree growth substantially.

(5) Water berms or dikes are not recommended as they encourage abnormal root growth.

(6) It is best not to stake the tree, but if wind is a problem or the tree starts to lean, support it with a flexible stake so the trunk will sway in the wind. The movement is necessary for building the trunk's strength. Remove the stake and wire after one growing season since leaving wire or string around the tree can cause death.

(7) Do not wrap the trunk with "protective" tape. It will slow the tree's ability to adapt to the site and provide a home for insects. Tree bark needs air and sunlight in order to build a healthy protective sheath.