



CITY OF KIRKLAND
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MEMORANDUM

To: Houghton Community Council

From: Deb Powers, Urban Forester
Adam Weinstein, AICP, Planning and Building Director

Date: February 25, 2019

Subject: Draft Code Amendments, Kirkland Zoning Code Chapter 95
Tree Management and Required Landscaping, File Number CAM18-00408

Staff Recommendation

Receive an update on the Kirkland Zoning Code Chapter 95 (KZC 95, Attachment 1) code amendment process.

Background

See the February 14, 2019 Planning Commission memo for the Background, Analysis, Stakeholder Collaboration and Next Steps sections (Attachment 2). The known draft KZC 95 code revisions to date are attached to this memo (Attachment 3) in addition to a clean copy version of the draft code (Attachment 4). The February 14 memo also summarizes feedback received from the Finn Hill Neighborhood Alliance/Master Builders Association of King County collaboration, and staff revisions made in response to this group's recommendations.

Project

The purpose of the 2018 tree code amendments is to support the goals established in Kirkland's Comprehensive Plan and the objectives in the [Urban Forestry Strategic Management Plan](#), to address issues and challenges that have arisen since the last tree code revision and to make the code more effective and practical to use.

This memo to the Houghton Community Council (HCC) was prepared prior to the February 14, 2019 Planning Commission (PC) meeting. At the February 25, 2019 HCC meeting, staff will update the HCC on comments made by the PC on the latest version of the KZC 95 code amendments.

Houghton Community Council Comments

The HCC communicated to staff at the [August 27, 2018 meeting](#) and at a joint meeting with the PC on November 26, 2018 that code changes should address the following issues. The number corresponds to an Update # on the compiled list of Potential Code Amendments (Attachment 5) and in the draft code:

- A High Retention Value tree definition that is less subjective (#64)
- Clarify language on public tree removals (#18, 35)
- Retain tree groves when designing parking lots (#74)
- Clarify modification process on short plat/subdivisions after tree removals (#39)
- Address tree removal prior to development permit submittal as an “unintended consequence” of unclear and unpredictable codes (#56, 58, 59, 60, 19, 38)
- Address damage to trees adjacent to development properties (to remain a civil issue) (#26)
- Integrate tree protection inspections with building inspections (#46, procedural)

At the joint November 26 meeting, the HCC and the PC developed several “principles” to guide the KZC 95 code revision process. Although not formally adopted, the principles could be used to ascertain code amendment priorities. They are paraphrased below:

- Strive to achieve a healthy, resilient urban forest with a 40% tree canopy cover, focused primarily on retention efforts enhanced by tree planting.
- Result in constant, predictable outcomes.
- Address potential conflicts with renewable energy systems (solar, wind).
- Provide incentives to retain trees by allowing modifications to development standards.

Staff believes the draft code amendments are generally consistent with these principles. Following discussion at the February 14 PC meeting and February 25 HCC meeting, staff will want to consider additional changes to the code such as clustering lots to retain trees and identifying other incentives to protect trees.

Next Steps

The focus of the February 25 HCC meeting is to provide an update on the KZC 95 code amendment process. Staff will return with further code refinements to the March 28 PC meeting, in advance of a public hearing on April 25. Staff anticipates presenting draft code to the Houghton Community Council for their recommendation to the Planning Commission in early May 2019, followed by City Council code adoption in late May 2019 and HCC consideration in June 2019.

Attachments:

1. Current Kirkland Zoning Code Chapter 95 (KZC 95)
2. Staff Memo to the Planning Commission, February 14, 2019
3. Draft KZC 95 Code Amendments
4. Draft Clean Copy KZC 95 Code Amendments
5. Compiled List KZC 95 Code Amendments

cc: File Number CAM18-00408

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95.05 Purpose and Intent

1. Trees and other vegetation are important elements of the physical environment. They are integral to Kirkland's community character and protect public health, safety and general welfare. Protecting, enhancing, and maintaining healthy trees and vegetation are key community values. Comprehensive Plan Policy NE-3.1 describes working towards achieving a City-wide tree canopy coverage of 40 percent. The many benefits of healthy trees and vegetation contribute to Kirkland's quality of life by:

- a. Minimizing the adverse impacts of land disturbing activities and impervious surfaces such as runoff, soil erosion, land instability, sedimentation and pollution of waterways, thus reducing the public and private costs for storm water control/treatment and utility maintenance;
- b. Improving the air quality by absorbing air pollutants, mitigating the urban heat island effect, assimilating carbon dioxide and generating oxygen, and decreasing the impacts of climate change;
- c. Reducing the effects of excessive noise pollution;
- d. Providing cost-effective protection from severe weather conditions with cooling effects in the summer months and insulating effects in winter;

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- e. Providing visual relief and screening buffers;
- f. Providing recreational benefits;
- g. Providing habitat, cover, food supply and corridors for a diversity of fish and wildlife; and
- h. Providing economic benefit by enhancing local property values and contributing to the region's natural beauty, aesthetic character, and livability of the community.

2. Tree and vegetation removal in urban areas has resulted in the loss to the public of these beneficial functions. The purpose of this chapter is to establish a process and standards to provide for the protection, preservation, replacement, proper maintenance, and use of significant trees, associated vegetation, and woodlands located in the City of Kirkland.

The intent of this chapter is to:

- a. Maintain and enhance canopy coverage provided by trees for their functions as identified in KZC 95.05(1);
- b. Preserve and enhance the City of Kirkland's environmental, economic, and community character with mature landscapes;
- c. Promote site planning, building, and development practices that work to avoid removal or destruction of trees and vegetation, that avoid unnecessary disturbance to the City's natural vegetation, and that provide landscaping to buffer the effects of built and paved areas;
- d. Mitigate the consequences of required tree removal in land development through on- and off-site tree replacement with the goals of halting net loss and enhancing Kirkland's tree canopy to achieve an overall healthy tree canopy cover of 40 percent City-wide over time;
- e. Encourage tree retention efforts by providing flexibility with respect to certain other development requirements;
- f. Implement the goals and objectives of the City's Comprehensive Plan;
- g. Implement the goals and objectives of the State Environmental Policy Act (SEPA); and
- h. Manage trees and other vegetation in a manner consistent with the City's Natural Resource Management Plan.
- i. Preserve and protect street trees, trees in public parks and trees on other City property.

(Ord. 4238 § 2, 2010; Ord. 4010 § 2, 2005)

95.10 Definitions

The following definitions shall apply throughout this chapter unless the context clearly indicates otherwise. Definitions that apply throughout this code are also located in Chapter 5 KZC.

1. Caliper – The American Association of Nurserymen standard for trunk measurement of nursery stock. Caliper of the trunk shall be the trunk diameter measured six (6) inches above the ground for up to and including 4-inch caliper size and 12 inches above the ground for larger sizes.
2. Critical Root Zone – The area surrounding a tree at a distance from the trunk, which is equal to one (1) foot for every inch of trunk diameter measured at 4.5 feet from grade or otherwise determined by a qualified professional (example: one (1) foot radius per one (1) inch DBH).
3. Crown – The area of a tree containing leaf- or needle-bearing branches.

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4. Diameter at Breast Height (DBH) – The diameter or thickness of a tree trunk measured at 4.5 feet from the ground. DBH is also known as Diameter at Standard Height (DSH).
5. Dripline – The distance from the tree trunk, that is equal to the furthest extent of the tree’s crown.
6. Grove – A group of three (3) or more significant trees with overlapping or touching crowns.
7. Hazard Tree – A tree that meets all the following criteria:
 - a. A tree with a combination of structural defects and/or disease which makes it subject to a high probability of failure;
 - b. Is in proximity to moderate to high frequency targets (persons or property that can be damaged by tree failure); and
 - c. The hazard condition of the tree cannot be lessened with reasonable and proper arboricultural practices nor can the target be removed.
8. Impact – A condition or activity that affects a part of a tree including the trunk, branches, and critical root zone.
9. Limit of Disturbance – The boundary between the protected area around a tree and the allowable site disturbance as determined by a qualified professional measured in feet from the trunk.
10. Nuisance Tree – A tree that meets either of the following criteria:
 - a. Is causing obvious physical damage to private or public structures, including but not limited to: sidewalk, curb, road, driveway, parking lot, building foundation, or roof; or
 - b. Has sustained damage from past maintenance practices.

The problems associated with the tree must be such that they cannot be corrected by reasonable practices including but not limited to: pruning of the crown or roots of the tree, bracing, and/or cabling to reconstruct a healthy crown.
11. Public Works Official – Designee of the Public Works Director.
12. Qualified Professional – An individual with relevant education and training in arboriculture or urban forestry, having two (2) or more of the following credentials:
 - International Society of Arboriculture (ISA) Certified Arborist;
 - Tree Risk Assessor Certification (TRACE) as established by the Pacific Northwest Chapter of ISA (or equivalent);
 - American Society of Consulting Arborists (ASCA) registered Consulting Arborist;
 - Society of American Foresters (SAF) Certified Forester for Forest Management Plans;

For tree retention associated with a development permit, a qualified professional must have, in addition to the above credentials, a minimum of three (3) years’ experience working directly with the protection of trees during construction and have experience with the likelihood of tree survival after construction. A qualified professional must also be able to prescribe appropriate measures for the preservation of trees during land development.
13. Retention Value – The Planning Official’s designation of a tree based on information provided by a qualified professional that is one (1) of the following:

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- a. High, a viable tree, located within required yards and/or required landscape areas. Tree retention efforts shall be directed to the following trees if they are determined to be healthy and windfirm by a qualified professional, and provided the trees can be safely retained when pursuing alternatives to development standards pursuant to KZC 95.32:
- 1) Specimen trees;
 - 2) Tree groves and associated vegetation that are to be set aside as preserved groves pursuant to KZC 95.51(3);
 - 3) Trees on slopes of at least 10 percent; or
 - 4) Trees that are a part of a grove that extends into adjacent property, such as in a public park, open space, critical area buffer or otherwise preserved group of trees on adjacent private property. If significant trees must be removed in these situations, an adequate buffer of trees may be required to be retained or planted on the edge of the remaining grove to help stabilize;
- b. Moderate, a viable tree that is to be retained if feasible; or
- c. Low, a tree that is either (1) not viable or (2) is in an area where removal is unavoidable due to the anticipated development activity.
14. Significant Tree – A tree that is at least six (6) inches in diameter at breast height (DBH) as measured at 4.5 feet from the ground.
15. Significantly Wooded Site – A subject property that has a number of significant trees with crowns that cover at least 40 percent of the property.
16. Site Disturbance – Any development, construction, or related operation that could alter the subject property, including, but not limited to, soil compaction, tree or tree stump removal, road, driveway or building construction, installation of utilities, or grading.
17. Specimen Tree – A viable tree that is considered in very good to excellent health and free of major defects, as determined by the City’s Urban Forester.
18. Street Tree – A tree located within the public right-of-way; provided, that if the trunk of the tree straddles the boundary line of the public right-of-way and the abutting property, it shall be considered to be on the abutting property and subject to the provisions of this chapter.
19. Tree Removal – The removal of a tree, through either direct or indirect actions, including but not limited to: (1) clearing, damaging or poisoning resulting in an unhealthy or dead tree; (2) removal of at least half of the live crown; or (3) damage to roots or trunk that is likely to destroy the tree’s structural integrity.
20. Viable Tree – A significant tree that a qualified professional has determined to be in good health, with a low risk of failure due to structural defects, is windfirm if isolated or remains as part of a grove, and is a species that is suitable for its location.
21. Wildlife Snag – The remaining trunk of a tree that is intentionally reduced in height and usually stripped of its live branches.
22. Windfirm – A condition of a tree in which it withstands average peak local wind speeds and gusts.

(Ord. 4551 § 4, 2017; Ord. 4238 § 2, 2010; Ord. 4193 § 1, 2009; Ord. 4010 § 2, 2005)

95.20 Exemptions

The following activities are exempt from the provisions of this chapter:

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1. **Emergency Tree Removal.** Any tree that poses an imminent threat to life or property may be removed. The City must be notified within seven (7) days of the emergency tree removal with evidence of the threat for removing the tree to be considered exempt from this chapter. If the Planning Official determines that the emergency tree removal was not warranted or if the removed tree was required by a development permit, the Planning Official may require that the party obtain a permit and/or require that replacement trees and vegetation be replanted as mitigation.
2. **Utility Maintenance.** Trees may be removed by the City or utility provider in situations involving interruption of services provided by a utility only if pruning cannot solve utility service problems. Utility maintenance shall conform to a City-approved Utility Vegetation Management Plan.
3. **Commercial Nurseries or Tree Farms.** A nursery or tree farm owner may remove trees that are being grown to be sold as Christmas or landscape trees.

(Ord. 4238 § 2, 2010; Ord. 4010 § 2, 2005)

95.21 Tree Pruning

1. **Tree Pruning of Street Trees.** It is the responsibility of the abutting property owner to maintain street trees abutting their property, which may include pruning, watering, and mulching. In order to prune, trim, modify, or alter a street tree, the abutting property owner shall apply for a permit by filing a written application with the City. Pruning shall conform to the most recent version of the American National Standards Institute (ANSI) A300 Part 1 – 2001 pruning standards or as outlined in an approved Utility Vegetation Management Plan. The City reserves the right to have City or utility crews perform routine pruning and maintenance of street trees.
2. **Tree Pruning on Private Property.** A permit is not required to prune trees on private property. Pruning which results in the removal of at least half of the live crown will be considered tree removal and subject to the provisions in KZC 95.23.

Tree topping is not allowed. If a tree required by this chapter is smaller than six (6) inches in diameter and is topped, it must be replaced pursuant to the standards in Chapter 1.12 KMC. If a tree six (6) inches or larger in diameter is topped, the owner must have a qualified professional develop and implement a 5-year restoration pruning program.

(Ord. 4281 § 1, 2011; Ord. 4238 § 2, 2010)

95.23 Tree Removal – Not Associated with Development Activity

1. **Introduction.** Tree and vegetation removal in urban areas has resulted in the loss of beneficial functions provided by trees to the public. The majority of tree canopy within the City of Kirkland is on private property. The purpose of this section is to establish a process and standards to slow the loss of tree canopy on private property, contributing towards the City's canopy goals and a more sustainable urban forest.
2. **Permit Required for Removal of Trees on Private Property or City Right-of-Way.** It is unlawful for any person (other than City crews) to remove, prune, trim, modify, alter or damage a tree in a public park or on any other City property.

No person, directly or indirectly, shall remove any significant tree on any property within the City, or any tree in the public right-of-way, without first obtaining a tree removal permit as provided in this chapter, unless the activity is exempted in KZC 95.20 and subsection (5) of this section.

3. **Tree Removal Permit Application Form.** The Planning and Building Department and Public Works Department shall establish and maintain a tree removal permit application form to allow property owners to request City review of tree removal for compliance with applicable City regulations. The tree removal application form shall include at a minimum the following:
 - a. A site plan showing the approximate location of significant trees, their size (DBH) and their species, along with the location of structures, driveways, access ways and easements.

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b. For required replacement trees, a planting plan showing location, size and species of the new trees in accordance to standards set forth in KZC 95.33(3).

4. Tree Removal Permit Application Procedure and Appeals.

a. Applicants requesting to remove trees must submit a completed permit application on a form provided by the City. The City shall review the application within 21 calendar days and either approve, approve with conditions or modifications, deny the application or request additional information. Any decision to deny the application shall be in writing along with the reasons for the denial and the appeal process.

b. The decision of the Planning Official is appealable using the applicable appeal provisions of Chapter 145 KZC.

c. Time Limit. The removal shall be completed within one (1) year from the date of permit approval.

5. Tree Removal Allowances.

a. Except in the Holmes Point Overlay zone, any private property owner of developed property may remove up to two (2) significant trees from their property within a 12-month period without having to apply for a tree removal permit; provided, that:

- 1) There is no active application for development activity for the site;
- 2) The trees were not required to be retained or planted as a condition of previous development activity; and
- 3) All of the additional standards for tree removal and tree removal permits as described in subsections (5)(b) through (e) of this section are met.

The Planning and Building Department shall establish and maintain a tree removal request form. The form may be used by property owners to request Department review of tree removal for compliance with applicable City regulations.

b. Tree Retention and Replacement Requirements.

1) Tree Retention. For single-family homes, cottages, carriage units, two/three-unit homes, two (2) trees shall be required to remain on the subject property.

2) Tree Replacement.

a) For every significant tree that is removed and is not required to remain based on subsection (5)(b)(1) of this section, the City encourages the planting of a tree that is appropriate to the site.

b) If a tree removal request is for one (1) or both of the trees required to remain, a tree removal permit and one-for-one replacement is required. the replacement tree shall be six (6) feet tall for a conifer and 2-inch caliper for deciduous or broad-leaf evergreen tree.

c) For all other uses not listed in subsection (5)(b)(1) of this section, a tree removal permit is required and the required tree replacement will be based on the required landscaping standards in KZC 95.40 through 95.45.

c. Shoreline Jurisdiction. Properties located within the City's shoreline jurisdiction are subject to additional tree removal and replacement standards if the tree(s) to be removed are located within the required shoreline setback. See Chapter 83 KZC for additional standards.

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d. Removal of Hazard or Nuisance Trees. Any private property owner seeking to remove any number of significant trees which are a hazard or nuisance from developed or undeveloped property or the public right-of-way shall first obtain approval of a tree removal permit and meet the requirements of this subsection.

1) Tree Risk Assessment. If the nuisance or hazard condition is not obvious, a tree risk assessment prepared by a qualified professional explaining how the tree(s) meet the definition of a nuisance or hazard tree is required. Removal of nuisance or hazard trees does not count toward the tree removal limit if the nuisance or hazard is supported by a report prepared by a qualified professional and approved by the City.

2) Trees in Critical Areas or Critical Areas Buffers. See Chapter 90 KZC.

3) The removal of any tree in the Holmes Point Overlay Zone requires the planting of a native tree of a minimum of six (6) feet in height in close proximity to where the removed tree was located. Selection of native species and timing of installation shall be approved by the Planning Official.

4) Street Trees. Street trees may only be removed if determined to be a hazard or nuisance. If the removal request is for street trees, the Public Works Official may consider whether the tree(s) are now, or may be in the future, part of the City's plans for the right-of-way. The City shall require a one-for-one tree replacement in a suitable location.

e. Forest Management Plan.

1) A Forest Management Plan must be submitted for developed, significantly wooded sites (over 40 percent canopy coverage) of at least 35,000 square feet in size in which removal of more than two (2) trees is requested and is not exempt under KZC 95.20. A Forest Management Plan must be developed by a qualified professional and shall include the following:

- a) A site plan depicting the location of all significant trees (a survey identifying tree locations is not required) with a numbering system of the trees (with corresponding tags on trees in the field). The site plan shall include size (DBH), species, and condition of each tree;
- b) Identification of trees to be removed, including reasons for their removal and a description of low impact removal techniques pursuant to subsection (5)(e)(2) of this section;
- c) A reforestation plan that includes location, size, species, and timing of installation;

2) The following Forest Management Plan standards shall apply:

- a) Trees to remain should be dominant or co-dominant in the stand, healthy and windfirm.
- b) No removal of trees from critical areas and their buffers, unless otherwise permitted by this chapter.
- c) No removal of specimen trees, unless otherwise permitted by this chapter.
- d) No removal of healthy trees that would cause trees on adjacent properties to become hazardous.
- e) The reforestation plan ensures perpetuity of the wooded areas. The size of planted trees for reforestation shall be a minimum of three (3) feet tall.
- f) Logging operations shall be conducted so as to expose the smallest practical area of soil to erosion for the least possible time. To control erosion, native shrubs, ground cover and stumps shall be retained where feasible. Where not feasible, appropriate erosion control measures to be approved by the City shall be implemented.
- g) Removal of tree debris shall be done pursuant to Kirkland Fire Department standards.

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h) Recommended maintenance prescription for retained trees with a specific timeline for such management.

(Ord. 4551 § 4, 2017; Ord. 4491 § 3, 2015; Ord. 4437 § 1, 2014; Ord. 4408 § 1, 2013; Ord. 4372 § 1, 2012; Ord. 4238 § 2, 2010)

95.25 Sustainable Site Development

All activities regulated by this chapter shall be performed in compliance with the applicable standards contained in this chapter, unless the applicant demonstrates that alternate measures or procedures will be equal or superior to the provisions of this chapter in accomplishing the purpose and intent of this chapter as described in KZC 95.05.

Applicants requesting alternative compliance shall submit a site assessment report prepared by a qualified professional detailing how the proposed alternative measures will be equal or superior to the benefits provided by the established trees to be removed. Qualifying projects shall implement sustainable site development strategies throughout the construction process as well as contain measurable performance standards for the techniques used. Examples of sustainable site development include building placement with minimal site impact, habitat protection, water conservation, heat island reduction, storm water flow runoff control and water quality, and utilization of the site's natural services such as solar and wind. Requests to use alternative measures and procedures shall be reviewed by the Planning Official, who may approve, approve with conditions, or deny the request.

(Ord. 4238 § 2, 2010; Ord. 4010 § 2, 2005)

95.30 Tree Retention Associated with Development Activity

1. Introduction. The City's objective is to retain as many viable trees as possible on a developing site while still allowing the development proposal to move forward in a timely manner. To that end, the City requires approval of a tree retention plan in conjunction with all development permits resulting in site disturbance and for any tree removal on developed sites not exempted by KZC 95.20. This section includes provisions that allow development standards to be modified in order to retain viable significant trees.

In order to make better decisions about tree retention, particularly during all stages of development, tree retention plans will require specific information about the existing trees before removal is allowed. Specific tree retention plan review standards provided in this section establish tree retention priorities, incentives, and variations to development standards in order to facilitate preservation of viable trees.

A minimum tree density approach is being used to retain as many viable trees as possible with new development activity. The requirement to meet a minimum tree density applies to new single-family homes, cottages, carriage units, two/three-unit homes, and new residential subdivisions and short subdivisions. If such a site falls below the minimum density with existing trees, supplemental planting is required. A tree density for existing trees to be retained is calculated to see if new trees are required in order to meet the minimum density for the entire site. Supplemental tree location priority is set as well as minimum size of supplemental trees to meet the required tree density.

The importance of effective protection of retained trees during construction is emphasized with specific protection standards in the last part of this section. These standards must be adhered to and included on demolition, grading and building plans as necessary.

Properties within jurisdiction of the Shoreline Management Act are subject to additional tree retention and protection regulations as set forth in Chapter 83 KZC.

Properties within the Holmes Point Overlay zone are subject to additional tree retention and protection regulations as set forth in Chapter 70 KZC.

2. Tree Retention Plan Required. An applicant for a development permit must submit a tree retention plan that complies with this section. A qualified professional may be required to prepare certain components of a tree retention plan at the applicant's expense. If proposed development activities call for more than one (1) tree retention plan component, the more stringent tree retention plan component shall apply; provided, that the Planning Official

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may require a combination of tree plan components based on the nature of the proposed development activities. If the proposed activity is not clearly identified in this chapter, the Planning Official shall determine the appropriate tree retention plan requirements.

The chart in subsection (5) of this section sets forth the tree retention plan requirements for development activities and associated tree removal. Applicants for development are encouraged to confer with City staff as early in the design process as possible so that the applicable tree planting and retention concepts can be incorporated into the design of the subject property. The Planning Official may waive a component of the tree retention plan if the Planning Official determines that the information is not necessary.

3. Tree Retention Plan Review. Any proposed development of the subject property requiring approval through a building permit, land surface modification permit, and/or demolition permit, or Design Review, Process I, IIA or IIB, described in Chapters 142, 145, 150 and 152 KZC respectively, shall include a tree retention plan to be considered as part of that process.

Based on the tree retention plan information submitted by the applicant and the Planning Official's evaluation of the trees relative to the proposed development on the subject property, the Planning Official shall designate each tree as having a high, moderate, or low retention value as defined in KZC 95.10, Definitions, for application towards the regulations in this chapter.

4. Tree Retention Plan Components. The tree retention plan shall contain the following information as specified in the chart in subsection (5) of this section, unless waived by the Planning Official:

a. A tree inventory containing the following:

- 1) A numbering system of all existing significant trees on the subject property (with corresponding tags on trees); the inventory must also include significant trees on adjacent property with driplines extending over the subject property line;
- 2) Limits of disturbance (LOD) of all existing significant trees (including approximate LOD of off-site trees with overhanging driplines);
- 3) Size (DBH);
- 4) Proposed tree status (trees to be removed or retained);
- 5) Brief general health or condition rating of these trees (i.e.: poor, fair, good, excellent, etc.);
- 6) Tree type or species.

b. A site plan depicting the following:

- 1) Location of all proposed improvements, including building footprint, access, utilities, applicable setbacks, buffers, and required landscaped areas clearly identified. If a short plat or subdivision is being proposed and the location of all proposed improvements cannot be established, a phased tree retention plan review is required as described in subsection (6)(a) of this section;
- 2) Accurate location of significant trees on the subject property (surveyed locations may be required). The site plan must also include the approximate trunk location and critical root zone of significant trees that are on adjacent property with driplines extending over the subject property line;
- 3) Trees labeled corresponding to the tree inventory numbering system;
- 4) Location of tree protection measures;

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- 5) Indicate limits of disturbance drawn to scale around all trees potentially impacted by site disturbances resulting from grading, demolition, or construction activities (including approximate LOD of off-site trees with overhanging driplines);
 - 6) Proposed tree status (trees to be removed or retained) noted by an ‘X’ or by ghosting out;
 - 7) Proposed locations of any supplemental trees and any required trees in order to meet tree density or minimum number of trees as outlined in KZC 95.33.
- c. An arborist report containing the following:
- 1) A complete description of each tree’s health, condition, and viability;
 - 2) A description of the method(s) used to determine the limits of disturbance (i.e., critical root zone, root plate diameter, or a case-by-case basis description for individual trees);
 - 3) Any special instructions specifically outlining any work proposed within the limits of the disturbance protection area (i.e., hand-digging, tunneling, root pruning, any grade changes, clearing, monitoring, and aftercare);
 - 4) For trees not viable for retention, a description of the reason(s) for removal based on poor health, high risk of failure due to structure, defects, unavoidable isolation (windfirmness), or unsuitability of species, etc., and for which no reasonable alternative action is possible must be given (pruning, cabling, etc.);
 - 5) Describe the impact of necessary tree removal to the remaining trees, including those in a grove or on adjacent properties;
 - 6) For development applications, a discussion of timing and installation of tree protection measures that must include fencing and be in accordance with the tree protection standards as outlined in KZC 95.34; and
 - 7) The suggested location and species of supplemental trees to be used when required. The report shall include planting and maintenance specifications pursuant to KZC 95.50 and 95.51.

5. Tree Retention Plan. The applicant shall submit a Tree Retention Plan that includes the components identified in the following chart based on the proposed development activity.

TREE RETENTION PLAN

Development Activity	Minor ⁽¹⁾⁽³⁾ – Single-Family, or two attached, detached, or stacked dwelling units, and related demolition and land surface modification applications	Major ⁽²⁾⁽³⁾ Single-Family, or two attached, detached, or stacked dwelling units, and related demolition and land surface modification applications	Multifamily, Commercial, any other use other than residential, and related demolition and land surface modification applications	Short Plat, Subdivisions, cottages, carriage units, two/three-unit homes, and related demolition and land surface modification applications (see KZC 95.30(6)(a), Phased Review, for additional standards)
Required Components				
TREE INVENTORY AS DESCRIBED IN KZC 95.30(4)(a) FOR:				
All significant trees on the subject property		X	X	X
Significant trees potentially impacted by proposed development activity	X			
SITE PLAN AS DESCRIBED IN KZC 95.30(4)(b) TO INCLUDE:				
Surveyed tree locations if required by the Planning Official		X	X	

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Development Activity	Minor ⁽¹⁾⁽³⁾ – Single-Family, or two attached, detached, or stacked dwelling units, and related demolition and land surface modification applications	Major ⁽²⁾⁽³⁾ Single-Family, or two attached, detached, or stacked dwelling units, and related demolition and land surface modification applications	Multifamily, Commercial, any other use other than residential, and related demolition and land surface modification applications	Short Plat, Subdivisions, cottages, carriage units, two/three-unit homes, and related demolition and land surface modification applications (see KZC 95.30(6)(a), Phased Review, for additional standards)
Required Components				
Surveyed tree locations				X
A final landscape plan showing retained trees			X	
REQUIREMENTS IN KZC 95.30(4)(c) SHALL BE PREPARED BY A QUALIFIED PROFESSIONAL AND APPLY TO:				
Significant trees within required yards or within 10 feet of any side property line		X		
Significant trees potentially impacted by proposed development activity as determined by the Planning Official			X	
Proposed removal of trees with a high retention value in required landscaping areas			X	
All significant trees				X
TREE RETENTION STANDARDS				
Applicant is encouraged to retain viable trees	X ⁽⁴⁾			
Retain and protect trees with a high retention value to the maximum extent possible		X ⁽⁴⁾	X ⁽⁴⁾	X ⁽⁴⁾
Retain and protect trees with a moderate retention value if feasible		X	X	X
Preservation and maintenance agreements pursuant to KZC 95.51 are required for all remaining trees on the subject property	X	X	X	X ⁽⁵⁾
TREE DENSITY				
Tree density requirements shall apply as required in KZC 95.33		X		X
A minimum of two trees must be on the lot following the requirement set forth in KZC 95.33(4)	X			
LANDSCAPING				
Preserved trees in required landscaping areas shall apply toward required landscaping requirements			X	

(1) Applicable when new development, redevelopment, or development in which the total square footage of the proposed improvements is less than 50 percent of the total square footage of the existing improvements on the subject property.

(2) Applicable when new development, redevelopment, or development in which the total square footage of the proposed improvements is more than 50 percent of the total square footage of the existing improvements on the subject property.

(3) For lots created through a short subdivision, subdivision, or planned unit development with an approved Tree Retention Plan, the applicant must comply with the Tree Retention

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Plan approved with the short subdivision, subdivision, or planned unit development unless subsection (6)(a) of this section, Phased Review, applies.

(4) To retain trees with a high retention value, the applicant shall pursue, where feasible, applicable variations in the development standards of this code as outlined in KZC 95.32.

(5) Prior to short plat or subdivision recording.

6. Additional Tree Retention Plan Standards for Short Plats and Subdivisions.

a. Phased Review.

1) If during the short plat or subdivision review process the location of all proposed improvements, including the building footprint, utilities, and access, was not able to be established, the applicant may submit a Tree Retention Plan that addresses trees only affected by the known improvements at the time of application. Tree removal shall be limited to those affected areas.

2) A new Tree Retention Plan shall be required at each subsequent phase of the project as more information about the location of the proposed improvements is known subject to all of the requirements in this section.

3) Phased review of Tree Retention Plans is not permitted in the Holmes Point Overlay zone. In the HPO zone, subdivision or short plat applications shall provide a comprehensive review of Tree Retention Plans as outlined in subsections (2) through (5) of this section.

b. Modifications to Tree Retention Plan for Short Plats and Subdivisions. A Tree Retention Plan modification request shall contain information as determined by the Planning Official based on the requirements in subsection (5) of this section, Tree Retention Plan. The fee for processing a modification request shall be established by City ordinance.

For Tree Retention Plans approved during the short plat or subdivision review process that established the location of all proposed improvements, including the building footprint, utilities, and access, a modification to the Tree Retention Plan may be approved as follows:

1) Modification – General. The Planning Official may approve minor modifications to the approved Tree Retention Plan in which the minimum tree density credits associated with trees identified for retention are not decreased.

2) Modification Prior to Tree Removal. The Planning Official may approve a modification request to decrease the minimum number of tree density credits associated with trees previously identified for retention if:

a) Trees inventoried in the original Tree Retention Plan have not yet been removed; and

b) The Planning Official shall not approve or deny a modification pursuant to this section without first providing notice of the modification request consistent with the noticing requirements for the short plat.

3) Modification after Tree Removal. A modification request is required to decrease the minimum number of tree density credits associated with trees previously identified for retention after which trees inventoried in the original Tree Retention Plan have already been removed. Such a request may be approved by the Hearing Examiner only if the following are met:

a) The need for the modification was not known and could not reasonably have been known before the tree retention plan was approved;

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- b) The modification is necessary because of special circumstances which are not the result of actions by the applicant regarding the size, shape, topography, or other physical limitations of the subject property relative to the location of proposed and/or existing improvements on or adjacent to the subject property;
- c) There is no practicable or feasible alternative development proposal that results in fewer additional tree removals;
- d) The Hearing Examiner shall not approve or deny a modification pursuant to this section without the Planning Official first providing notice of the modification request consistent with the noticing requirements for the short plat and providing opportunity for comments for consideration by the Hearing Examiner; and
- e) Said comment period shall not be less than 14 calendar days.

(Ord. 4619 § 1, 2017; Ord. 4437 § 1, 2014; Ord. 4252 § 1, 2010; Ord. 4238 § 2, 2010; Ord. 4010 § 2, 2005)

95.32 Incentives and Variations to Development Standards

In order to retain trees, the applicant should pursue provisions in Kirkland's codes that allow development standards to be modified. Examples include but are not limited to number of parking stalls, right-of-way improvements, lot size reduction under Chapter 22.28 KMC, lot line placement when subdividing property under KMC Title 22, Planned Unit Developments, and required landscaping, including buffers for lands use and parking/driving areas.

Requirements of the Kirkland Zoning Code may be modified by the Planning Official as outlined below when such modifications would further the purpose and intent of this chapter as set forth in KZC 95.05 and would involve trees with a high or moderate retention value.

1. **Common Recreational Open Space.** Reductions or variations of the area, width, or composition of required common recreational open space may be granted.
2. **Parking Areas and Access.** Variations in parking lot design and/or access driveway requirements may be granted when the Public Works and Planning Officials both determine the variations to be consistent with the intent of City policies and codes.
3. **Required Yards.** Initially, the applicant shall pursue options for placement of required yards as permitted by other sections of this code, such as selecting one (1) front required yard in the RSX zone and adjusting side yards in any zone to meet the 15-foot total as needed for each structure on the site. The Planning Official may also reduce the front, side or rear required yards; provided, that:
 - a. No required side yard shall be less than five (5) feet; and
 - b. The required front yard shall not be reduced by more than five (5) feet in residential zones. There shall not be an additional five (5) feet of reduction beyond the allowance provided for covered entry porches;
 - c. Rear yards that are not directly adjacent to another parcel's rear yard but that are adjacent to an access easement or tract may be reduced by five (5) feet;
 - d. No required yard shall be reduced by more than five (5) feet in residential zones.
4. **Storm Water.** Requirements pertaining to stormwater may be varied if approved by the Public Works Official under KMC 15.52.060.
5. **Additional Variations.** In addition to the variations described above, the Planning Official is authorized to require site plan alterations to retain trees with a high retention value. Such alterations include minor adjustments to the location of building footprints, adjustments to the location of driveways and access ways, or adjustment to the

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location of walkways, easements or utilities. The Planning Official and the applicant shall work in good faith to find reasonable solutions.

(Ord. 4547 § 1, 2016; Ord. 4350 § 1, 2012; Ord. 4238 § 2, 2010)

95.33 Tree Density Requirement

The required minimum tree density is 30 tree credits per acre for single-family homes, cottages, carriage units, two/three-unit homes, short plats, and/or subdivisions and associated demolition and land surface modification. For individual lots in a short subdivision or subdivision with an approved Tree Retention Plan, the tree density shall be calculated for each lot within the short plat or subdivision. The tree density may consist of existing trees pursuant to the tree’s retention value, supplemental trees or a combination of existing and supplemental trees pursuant to subsection (2) of this section. Existing trees transplanted to an area on the same site shall not count toward the required density unless approved by the Urban Forester based on transplant specifications provided by a qualified professional that will ensure a good probability for survival.

1. Tree Density Calculation. In calculating tree density credits, tree credits may be rounded up to the next whole number from a 0.5 or greater value. For the purpose of calculating required minimum tree density, public right-of-way, areas to be dedicated as public right-of-way, and vehicular access easements not included as lot area with the approved short plat shall be excluded from the area used for calculation of tree density.

Tree density calculation for existing individual trees:

- a. Diameter breast height (DBH) of the tree shall be measured in inches.
- b. The tree credit value that corresponds with DBH shall be found in Table 95.33.1. Existing native conifers (or other conifer species as approved by the Urban Forester) shall count 1.5 times credits for retention.

Table 95.33.1

Tree Density for Existing Significant Trees

(Credits per minimum diameter – DBH)

DBH	Tree Credits	DBH	Tree Credits	DBH	Tree Credits
3 – 5"	0.5				
6 – 10"	1	24"	8	38"	15
12"	2	26"	9	40"	16
14"	3	28"	10	42"	17
16"	4	30"	11	44"	18
18"	5	32"	12	46"	19
20"	6	34"	13	48"	20
22"	7	36"	14	50"	21

Example: a 7,200-square-foot lot would need five (5) tree credits ($7,200/43,560 = 0.165 \times 30 = (4.9)$ or five (5)). The tree density for the lot could be met by retaining one (1) existing 16-inch deciduous tree and one (1) existing 6-inch deciduous tree on site. The same 7,200-square-foot lot would meet the required five (5) tree credits by retaining one (1) existing 14-inch conifer.

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2. Supplemental Trees Planted to Meet Minimum Density Requirement. For sites and activities requiring a minimum tree density and where the existing trees to be retained do not meet the minimum tree density requirement, supplemental trees shall be planted to achieve the required minimum tree density.
3. Tree Location. In designing a development and in meeting the required minimum tree density, the trees shall be planted in the following order of priority:
 - a. On-Site. The preferred locations for new trees are:
 - 1) In preserved groves, critical areas or their buffers.
 - 2) Adjacent to storm water facilities as approved by Public Works under KMC 15.52.060.
 - 3) Entrance landscaping, traffic islands and other common areas in residential subdivisions.
 - 4) Site perimeter – The area of the subject property that is within 10 feet from the property line.
 - 5) On individual residential building lots.
 - b. Off-Site. When room is unavailable for planting the required trees on site, then they may be planted at another approved location in the City.
 - c. City Forestry Account. When the Planning Official determines on-site and off-site locations are unavailable, then the applicant shall pay an amount of money approximating the current market value of the supplemental trees into the City forestry account.
4. Minimum Size and Tree Density Value for Supplemental Trees. The required minimum size of the supplemental tree worth one (1) tree credit shall be six (6) feet tall for Thuja/Arborvitae or four (4) feet tall for native or other conifers and 2-inch caliper for deciduous or broad-leaf evergreen tree. Additional credits may be awarded for larger supplemental trees. The installation and maintenance shall be pursuant to KZC 95.50 and 95.51 respectively.

(Ord. 4547 § 1, 2016; Ord. 4238 § 2, 2010)

95.34 Tree and Soil Protection during Development Activity

Prior to development activity or initiating tree removal on the site, vegetated areas, individual trees and soil to be preserved shall be protected from potentially damaging activities pursuant to the following standards:

1. Placing Materials near Trees. No person may conduct any activity within the protected area of any tree designated to remain, including, but not limited to, operating or parking equipment, placing solvents, storing building material or stockpiling any materials, or dumping concrete washout or other chemicals. During construction, no person shall attach any object to any tree designated for protection.
2. Protective Barrier. Before development, land clearing, filling or any land alteration, the applicant shall:
 - a. Erect and maintain readily visible temporary protective tree fencing along the limits of disturbance which completely surrounds the protected area of all retained trees, groups of trees, vegetation and native soil. Fences shall be constructed of chain link and be at least six (6) feet high, unless other type of fencing is authorized by the Planning Official.
 - b. Install highly visible signs spaced no further than 15 feet along the entirety of the protective tree fence. Said sign must be approved by the Planning Official and shall state at a minimum “Tree and Soil Protection Area, Entrance Prohibited” and provide the City phone number for code enforcement to report violations.
 - c. Prohibit excavation or compaction of soil or other potentially damaging activities within the barriers; provided, that the Planning Official may allow such activities approved by a qualified professional and under the supervision of a qualified professional retained and paid for by the applicant.

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- d. Maintain the protective barriers in place for the duration of the project until the Planning Official authorizes their removal.
 - e. Ensure that any approved landscaping done in the protected zone subsequent to the removal of the barriers shall be accomplished with machinery from outside the protected zone or by hand.
 - f. In addition to the above, the Planning Official may require the following:
 - 1) If equipment is authorized to operate within the protected zone, the soil and critical root zone of a tree must be covered with mulch to a depth of at least six (6) inches or with plywood, steel plates or similar material in order to protect roots and soil from damage caused by heavy equipment.
 - 2) Minimize root damage by hand-excavating a 2-foot-deep trench, at edge of critical root zone, to cleanly sever the roots of trees to be retained. Never rip or shred roots with heavy equipment.
 - 3) Corrective pruning performed on protected trees in order to avoid damage from machinery or building activity.
 - 4) Maintenance of trees throughout construction period by watering and fertilizing.
3. Grade.
- a. The grade shall not be elevated or reduced within the critical root zone of trees to be preserved without the Planning Official's authorization based on recommendations from a qualified professional. The Planning Official may allow coverage of up to one-half (1/2) of the area of the tree's critical root zone with light soils (no clay) to the minimum depth necessary to carry out grading or landscaping plans, if it will not imperil the survival of the tree. Aeration devices may be required to ensure the tree's survival.
 - b. If the grade adjacent to a preserved tree is raised such that it could slough or erode into the tree's critical root zone, it shall be permanently stabilized to prevent soil erosion and suffocation of the roots.
 - c. The applicant shall not install an impervious surface within the critical root zone of any tree to be retained without the authorization of the Planning Official. The Planning Official may require specific construction methods and/or use of aeration devices to ensure the tree's survival and to minimize the potential for root-induced damage to the impervious surface.
 - d. To the greatest extent practical, utility trenches shall be located outside of the critical root zone of trees to be retained. The Planning Official may require that utilities be tunneled under the roots of trees to be retained if the Planning Official determines that trenching would significantly reduce the chances of the tree's survival.
 - e. Trees and other vegetation to be retained shall be protected from erosion and sedimentation. Clearing operations shall be conducted so as to expose the smallest practical area of soil to erosion for the least possible time. To control erosion, it is encouraged that shrubs, ground cover and stumps be maintained on the individual lots, where feasible.
4. Directional Felling. Directional felling of trees shall be used to avoid damage to trees designated for retention.
5. Additional Requirements. The Planning Official may require additional tree protection measures that are consistent with accepted urban forestry industry practices.

(Ord. 4547 § 1, 2016; Ord. 4238 § 2, 2010)

95.40 Required Landscaping

1. User Guide. Chapters 15 through 56 KZC containing the use zone or development standards tables assign a landscaping category to each use in each zone. This category is either "A," "B," "C," "D," or "E." If you do not know which landscaping category applies to the subject property, you should consult the appropriate use zone or development standards tables.

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Requirements pertaining to each landscaping category are located throughout this chapter, except that Landscaping Category E is not subject to this section.

Landscape Categories A, B, C, D, and E may be subject to additional related requirements in the following other chapters:

- a. Various use zone charts or development standards tables, in Chapters 15 through 56 KZC, establish additional or special buffering requirements for some uses in some zones.
 - b. Chapter 85 KZC, Geologically Hazardous Areas, addresses the retention of vegetation on steep slopes.
 - c. Chapter 90 KZC, Critical Areas, addresses vegetation within critical areas and critical area buffers.
 - d. Chapter 110 KZC and Chapter 19.36 KMC address vegetation within rights-of-way, except for the I-405 and SR-520 rights-of-way, and the Cross Kirkland Corridor railbanked rail corridor or the Eastside Rail Corridor.
 - e. KZC 115.135, Sight Distance at Intersections, which may limit the placement of landscaping in some areas.
 - f. Chapter 22 KMC addresses trees in subdivisions.
2. Use of Significant Existing Vegetation.
- a. General. The applicant shall apply subsection KZC 95.30(3), Tree Retention Plan Procedure, and KZC 95.32, Incentives and Variations to Development Standards, to retain existing native trees, vegetation and soil in areas subject to the landscaping standards of this section. The Planning Official shall give substantial weight to the retained native trees and vegetation when determining the applicant's compliance with this section.
 - b. Supplement. The City may require the applicant to plant trees, shrubs, and groundcover according to the requirements of this section to supplement the existing vegetation in order to provide a buffer at least as effective as the required buffer.
 - c. Protection Techniques. The applicant shall use the protection techniques described in KZC 95.34 to ensure the protection of significant existing vegetation and soil.
3. Landscape Plan Required. In addition to the Tree Retention Plan required pursuant to KZC 95.30, application materials shall clearly depict the quantity, location, species, and size of plant materials proposed to comply with the requirements of this section, and shall address the plant installation and maintenance requirements set forth in KZC 95.50 and 95.51. Plant materials shall be identified with both their scientific and common names. Any required irrigation system must also be shown.

(Ord. 4551 § 4, 2017; Ord. 4547 § 1, 2016; Ord. 4476 § 3, 2015; Ord. 4408 § 1, 2013; Ord. 4238 § 2, 2010; Ord. 4121 § 1, 2008; Ord. 4097 § 1, 2007; Ord. 4037 § 1, 2006; Ord. 4030 § 1, 2006; Ord. 4010 § 2, 2005)

95.41 Supplemental Plantings

1. General. The applicant shall provide the supplemental landscaping specified in subsection (2) of this section in any area of the subject property that:
 - a. Is not covered with a building, vehicle circulation area or other improvement; and
 - b. Is not a critical area, critical area buffer, or in an area to be planted with required landscaping; and
 - c. Is not committed to and being used for some specific purpose.
2. Standards. The applicant shall provide the following at a minimum:

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- a. Living plant material which will cover 80 percent of the area to be landscaped within two (2) years. If the material to be used does not spread over time, the applicant shall re-plant the entire area involved immediately. Any area that will not be covered with living plant material must be covered with nonliving groundcover. Preference is given to using native plant species. See Kirkland Native Tree/Plant Lists.
- b. One (1) tree for each 1,000 square feet of area to be landscaped. At the time of planting, deciduous trees must be at least two (2) inches in caliper and coniferous trees must be at least five (5) feet in height.
- c. If a development requires approval through Process I, IIA or IIB as described in Chapters 145, 150 and 152 KZC, respectively, the City may require additional vegetation to be planted along a building facade if:
 - 1) The building facade is more than 25 feet high or more than 50 feet long; or
 - 2) Additional landscaping is necessary to provide a visual break in the facade.
- d. In RHBD varieties of rose shrubs or ground cover along with other plant materials shall be included in the on-site landscaping.
- e. If development is subject to Design Review as described in Chapter 142 KZC, the City will review plant choice and specific plant location as part of the Design Review approval. The City may also require or permit modification to the required plant size as part of Design Review approval.

(Ord. 4547 § 1, 2016; Ord. 4238 § 2, 2010)

95.42 Minimum Land Use Buffer Requirements

The applicant shall comply with the provisions specified in the following chart and with all other applicable provisions of this chapter. Land use buffer requirements may apply to the subject property, depending on what permitted use exists on the adjoining property or, if no permitted use exists, depending on the zone that the adjoining property is in.

LANDSCAPING CATEGORY	ADJOINING PROPERTY	*Public park or low density residential use or if no permitted use exists on the adjoining property then a low density zone.	Medium or high density residential use or if no permitted use exists on the adjoining property then a medium density or high density zone.	Institutional or office use or if no permitted use exists on the adjoining property then an institutional or office zone.	A commercial use or an industrial use or if no permitted use exists on the adjoining property then a commercial or industrial zone.
A	Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (2) (Buffering Standard 2)	
B	Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (1) (Buffering Standard 1)		
C	Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (2) (Buffering Standard 2)		
D	Must comply with subsection (2) (Buffering Standard 2)				
E					
Footnotes:	*If the adjoining property is zoned Central Business District, Juanita Business District, North Rose Hill Business District, Rose Hill Business District, Finn Hill Neighborhood Center, Houghton/Everest Neighborhood Center, Business District Core or is located in TL 5, this section KZC 95.42 does not apply.				

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This chart establishes which buffering standard applies in a particular case. The following subsections establish the specific requirement for each standard:

1. For standard 1, the applicant shall provide a 15-foot-wide landscaped strip with a 6-foot-high solid screening fence or wall. Except for public utilities, the fence or wall must be placed on the outside edge of the land use buffer or on the property line when adjacent to private property. For public utilities, the fence or wall may be placed either on the outside or inside edge of the landscaping strip. A fence or wall is not required when the land use buffer is adjacent and parallel to a public right-of-way that is improved for vehicular use. See KZC 115.40 for additional fence standards. The land use buffer must be planted as follows:
 - a. Trees planted at the rate of one (1) tree per 20 linear feet of land use buffer, with deciduous trees of two and one-half (2-1/2) inch caliper, minimum, and/or coniferous trees eight (8) feet in height, minimum. At least 70 percent of trees shall be evergreen. The trees shall be distributed evenly throughout the buffer, spaced no more than 20 feet apart on center.
 - b. Large shrubs or a mix of shrubs planted to attain coverage of at least 60 percent of the land use buffer area within two (2) years, planted at the following sizes and spacing, depending on type:
 - 1) Low shrub – (mature size under three (3) feet tall), 1- or 2-gallon pot or balled and burlapped equivalent;
 - 2) Medium shrub – (mature size from three (3) to six (6) feet tall), 2- or 3-gallon pot or balled and burlapped equivalent;
 - 3) Large shrub – (mature size over six (6) feet tall), 5-gallon pot or balled and burlapped equivalent.
 - c. Living ground covers planted from either 4-inch pot with 12-inch spacing or 1-gallon pot with 18-inch spacing to cover within two (2) years 60 percent of the land use buffer not needed for viability of the shrubs or trees.
2. For standard 2, the applicant shall provide a 5-foot-wide landscaped strip with a 6-foot-high solid screening fence or wall. Except for public utilities, the fence or wall must be placed on the outside edge of the land use buffer or on the property line when adjacent to private property. For public utilities, the fence or wall may be placed either on the outside or inside edge of the landscaping strip. A fence or wall is not required when the land use buffer is adjacent and parallel to a public right-of-way that is improved for vehicular use. See KZC 115.40 for additional fence standards. The landscaped strip must be planted as follows:
 - a. One (1) row of trees planted no more than 10 feet apart on center along the entire length of the buffer, with deciduous trees of 2-inch caliper, minimum, and/or coniferous trees at least six (6) feet in height, minimum. At least 50 percent of the required trees shall be evergreen.
 - b. Living ground covers planted from either 4-inch pot with 12-inch spacing or 1-gallon pot with 18-inch spacing to cover within two (2) years 60 percent of the land use buffer not needed for viability of the trees.
3. Plant Standards. All plant materials used shall meet the most recent American Association of Nurserymen Standards for nursery stock: ANSI Z60.1.
4. Location of the Land Use Buffer. The applicant shall provide the required buffer along the entire common border between the subject property and the adjoining property.
5. Multiple Buffering Requirement. If the subject property borders more than one (1) adjoining property along the same property line, the applicant shall provide a gradual transition between different land use buffers. This transition must occur totally within the area which has the less stringent buffering requirement. The specific design of the transition must be approved by the City.
6. Adjoining Property Containing Several Uses. If the adjoining property contains several permitted uses, the applicant may provide the least stringent land use buffer required for any of these uses.

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7. Subject Property Containing Several Uses. If the subject property contains more than one (1) use, the applicant shall comply with the land use buffering requirement that pertains to the use within the most stringent landscaping category that abuts the property to be buffered.
8. Subject Property Containing School. If the subject property is occupied by a school, land use buffers are not required along property lines adjacent to a street.
9. Encroachment into Land Use Buffer. Typical incidental extensions of structures such as chimneys, bay windows, greenhouse windows, cornices, eaves, awnings, and canopies may be permitted in land use buffers as set forth in KZC 115.115(3)(d); provided, that:
 - a. Buffer planting standards are met; and
 - b. Required plantings will be able to attain full size and form typical to their species.

(Ord. 4637 § 3, 2018; Ord. 4636 § 3, 2018; Ord. 4495 § 2, 2015; Ord. 4238 § 2, 2010)

95.43 Outdoor Use, Activity, and Storage

Outdoor use, activity, and storage (KZC 115.105(2)) must comply with required land use buffers for the primary use, except that the following outdoor uses and activities, when located in commercial or industrial zones, are exempt from KZC 115.105(2)(c)(1) and (2)(c)(2) as stated below:

1. That portion of an outdoor use, activity, or storage area which abuts another outdoor use, activity, or storage area which is located on property zoned for commercial or industrial use.
2. Outdoor use, activity, and storage areas which are located adjacent to a fence or structure which is a minimum of six (6) feet above finished grade, and do not extend outward from the fence or structure more than five (5) feet; provided, that the total horizontal dimensions of these areas shall not exceed 50 percent of the length of the facade or fence (see Plate 11).
3. If there is an improved path or sidewalk in front of the outdoor storage area, the outdoor use, activity or storage area may extend beyond five (5) feet if a clearly defined walking path at least three (3) feet in width is maintained and there is adequate pedestrian access to and from the primary use. The total horizontal dimension of these areas shall not exceed 50 percent of the length of the facade of the structure or fence (see Plate 11).
4. Outdoor dining areas.
5. That portion of an outdoor display of vehicles for sale or lease which is adjacent to a public right-of-way that is improved for vehicular use; provided, that it meets the buffering standards for driving and parking areas in KZC 95.45(1); and provided further, that the exemptions of KZC 95.45(2) do not apply unless it is fully enclosed within or under a building, or is on top of a building and is at least one (1) story above finished grade.
6. Outdoor Christmas tree lots and fireworks stands if these uses will not exceed 30 days, and outdoor amusement rides, carnivals and circuses, and parking lot sales which are ancillary to the indoor sale of the same goods and services, if these uses will not exceed seven (7) days.

(Ord. 4547 § 1, 2016; Ord. 4238 § 2, 2010)

95.44 Internal Parking Lot Landscaping Requirements

The following internal parking lot landscape standards apply to each parking lot or portion thereof containing more than eight (8) parking stalls.

1. The parking lot must contain 25 square feet of landscaped area per parking stall planted as follows:
 - a. The applicant shall arrange the required landscaping throughout the parking lot to provide landscape islands or peninsulas to separate groups of parking spaces (generally every eight (8) stalls) from one another and each row of spaces from any adjacent driveway that runs perpendicular to the row. This island or peninsula

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must be surrounded by a 6-inch-high vertical curb and be of similar dimensions as the adjacent parking stalls. Gaps in curbs are allowed for stormwater runoff to enter landscape island.

- b. Landscaping shall be installed pursuant to the following standards:
- 1) At least one (1) deciduous tree, two (2) inches in caliper, or a coniferous tree five (5) feet in height.
 - 2) Groundcover shall be selected and planted to achieve 60 percent coverage within two (2) years.
 - 3) Natural drainage landscapes (such as rain gardens, bio-infiltration swales and bioretention planters) are allowed when designed in compliance with the stormwater design manual adopted in KMC 15.52.060. Internal parking lot landscaping requirements for trees still apply. Refer to Public Works Pre-Approved Plans.
- c. Exception. The requirements of this subsection do not apply to any area that is fully enclosed within or under a building.

2. Rooftop Parking Landscaping. For a driving or parking area on the top level of a structure that is not within the CBD zone or within any zone that requires design regulation compliance, one (1) planter that is 30 inches deep and five (5) feet square must be provided for every eight (8) stalls on the top level of the structure. Each planter must contain a small tree or large shrub suited to the size of the container and the specific site conditions, including desiccating winds, and is clustered with other planters near driving ramps or stairways to maximize visual effect.

3. If development is subject to Design Review as described in Chapter 142 KZC, the City will review the parking area design, plant choice and specific plant location as part of the Design Review approval. The City may also require or permit modification to the required landscaping and design of the parking area as part of Design Review approval.

(Ord. 4547 § 1, 2016; Ord. 4350 § 1, 2012; Ord. 4238 § 2, 2010)

95.45 Perimeter Landscape Buffering for Driving and Parking Areas

1. Perimeter Buffering – General. Except as specified in subsection (2) of this section, the applicant shall buffer all parking areas and driveways from abutting rights-of-way and from adjacent property with a 5-foot-wide strip along the perimeter of the parking areas and driveways planted as follows (see Figure 95.45.A):

- a. One (1) row of trees, two (2) inches in caliper and planted 30 feet on center along the entire length of the strip.
- b. Living groundcover planted to attain coverage of at least 60 percent of the strip area within two (2) years.
- c. Natural drainage landscapes (such as rain gardens, bio-infiltration swales and bioretention planters) are allowed when designed in compliance with the stormwater design manual adopted in KMC 15.52.060. Perimeter landscape buffering requirements for trees in driving and parking areas still apply. Refer to Public Works Pre-Approved Plans.

2. Exception. The requirements of this section do not apply to any parking area that:

- a. Is fully enclosed within or under a building; or
- b. Is on top of a building and is at least one (1) story above finished grade; or
- c. Serves detached dwelling units exclusively; or
- d. Is within any zone that requires design regulation compliance. See below for Design District requirements.

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3. Design Districts. If subject to Design Review, each side of a parking lot that abuts a street, through-block pathway or public park must be screened from that street, through-block pathway or public park by using one (1) or a combination of the following methods (see Figures 95.45.A, B, and C):
- a. By providing a landscape strip at least five (5) feet wide planted consistent with subsection (1) of this section, or in combination with the following. In the RHBD Regional Center (see KZC Figure 92.05.A) a 10-foot perimeter landscape strip along NE 85th Street is required planted consistent with subsection (1) of this section.
 - b. The hedge or wall must extend at least two (2) feet, six (6) inches, and not more than three (3) feet above the ground directly below it.
 - c. The wall may be constructed of masonry or concrete, if consistent with the provisions of KZC 92.35(1)(g), in building material, color and detail, or of wood if the design and materials match the building on the subject property.
 - d. In JBD zones:
 - 1) If the street is a pedestrian-oriented street, the wall may also include a continuous trellis or grillwork, at least five (5) feet in height above the ground, placed on top of or in front of the wall and planted with climbing vines. The trellis or grillwork may be constructed of masonry, steel, cast iron and/or wood.
 - 2) If the wall abuts a pedestrian-oriented street, the requirements of this subsection may be fulfilled by providing pedestrian weather protection along at least 80 percent of the frontage of the subject property.
 - e. If development is subject to Design Review as described in Chapter 142 KZC, the City will review plant choice and specific plant location as part of the Design Review approval. The City may also require or permit modification to the required plant size as part of Design Review approval.
4. Overlapping Requirements. If buffering is required in KZC 95.42, Land Use Buffering Standards, and by this subsection, the applicant shall utilize the more stringent buffering requirement.

Perimeter Parking Lot Landscaping

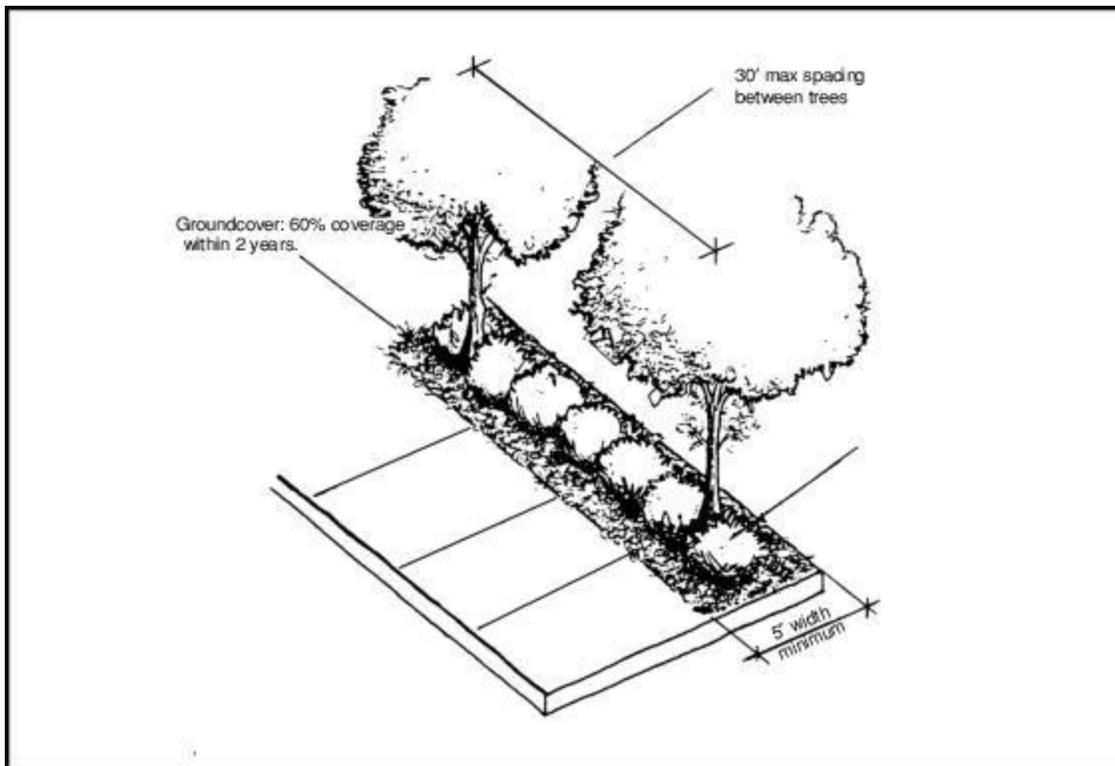


FIGURE 95.45.A

Perimeter Parking – Examples of Various Screen Wall Designs

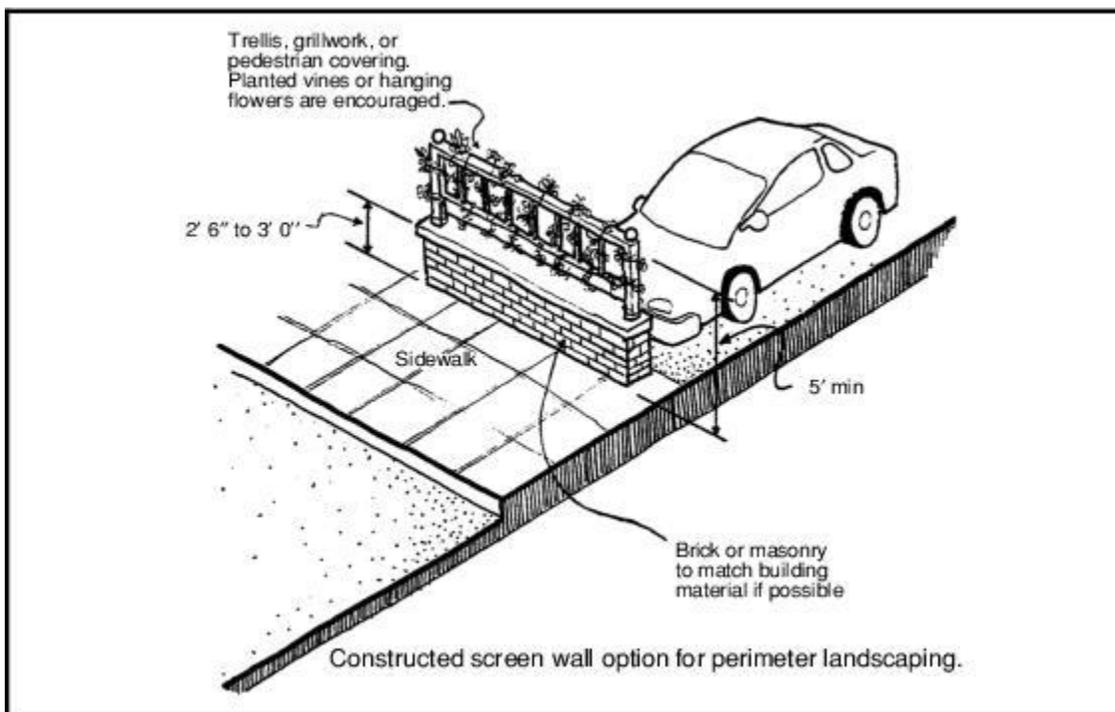


FIGURE 95.45.B

Perimeter Parking – Examples of Various Screen Wall Designs

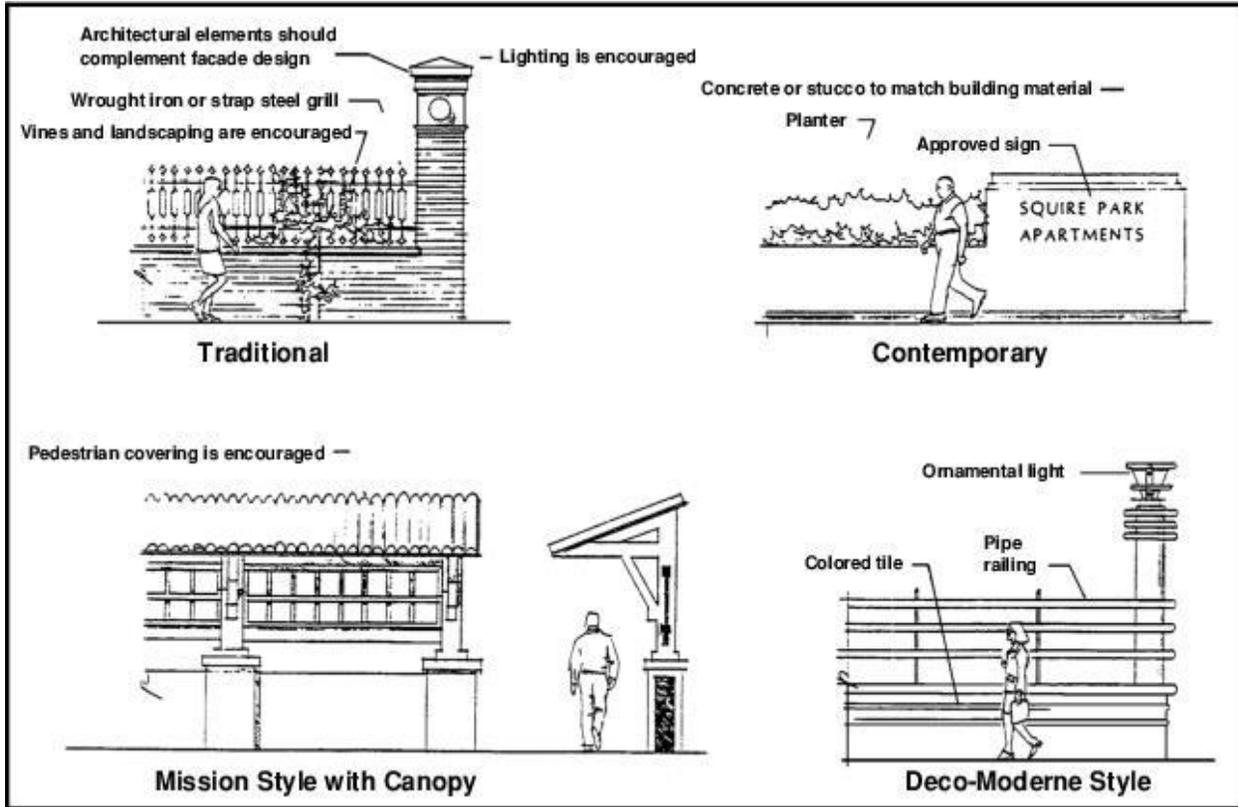


FIGURE 95.45.C

(Ord. 4547 § 1, 2016; Ord. 4238 § 2, 2010; Ord. 4010 § 2, 2005)

95.46 Modifications to Landscaping Standards

1. Modification to Land Use Buffer Requirements. The applicant may request a modification of the requirements of the buffering standards in KZC 95.42. The Planning Official may approve a modification if:

- a. The owner of the adjoining property agrees to this in writing; and
- b. The existing topography or other characteristics of the subject property or the adjoining property, or the distance of development from the neighboring property decreases or eliminates the need for buffering; or
- c. The modification will be more beneficial to the adjoining property than the required buffer by causing less impairment of view or sunlight; or
- d. The Planning Official determines that it is reasonable to anticipate that the adjoining property will be redeveloped in the foreseeable future to a use that would require no, or a less intensive, buffer; or
- e. The location of pre-existing improvements on the adjoining site eliminates the need or benefit of the required landscape buffer.

2. Modifications to General Landscaping Requirements.

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a. Authority to Grant and Duration. If the proposed development of the subject property requires approval through Design Review or Process I, IIA, or IIB, described in Chapters 142, 145, 150, and 152 KZC, respectively, a request for a modification will be considered as part of that process under the provisions of this section. The City must find that the applicant meets the applicable criteria listed in subsections (2)(b) and (2)(c) of this section. If granted under Design Review or Process I, IIA, or IIB, the modification is binding on the City for all development permits issued for that development under the building code within five (5) years of the granting of the modification.

If the above does not apply, the Planning Official may grant a modification in writing under the provisions of this section.

b. Internal Parking Lot Landscaping Modifications. For a modification to the internal parking lot landscaping requirements in KZC 95.44, the landscape requirements may be modified if:

- 1) The modification will produce a landscaping design in the parking area comparable or superior to that which would result from adherence to the adopted standard; or
- 2) The modification will result in increased retention of significant existing vegetation; or
- 3) The purpose of the modification is to accommodate low impact development techniques as approved by the Planning Official.

c. Perimeter parking lot and driveway landscaping. For a modification to the perimeter landscaping for parking lots and driveways, the buffering requirements for parking areas and driveways may be modified if:

- 1) The existing topography of or adjacent to the subject property decreases or eliminates the need for visual screening; or
- 2) The modification will be of more benefit to the adjoining property by causing less impairment of view or sunlight; or
- 3) The modification will provide a visual screen that is comparable or superior to the buffer required by KZC 95.45; or
- 4) The modification eliminates the portion of the buffer that would divide a shared parking area serving two (2) or more adjacent uses, but provides the buffer around the perimeter of the shared parking area.

(Ord. 4547 § 1, 2016; Ord. 4238 § 2, 2010)

95.47 Nonconforming Landscaping and Buffers

1. The landscaping requirements of KZC 95.41, Supplemental Plantings, KZC 95.43 Outdoor Use, Activity and Storage, KZC 95.44, Internal Parking Lot Landscaping, and KZC 95.45, Perimeter Landscape Buffering for Driving and Parking Areas, must be brought into conformance as much as is feasible, based on available land area, in either of the following situations:

- a. An increase of at least 10 percent in gross floor area of any structure; or
 - b. An alteration to any structure, the cost of which exceeds 50 percent of the replacement cost of the structure.
2. Land use buffers must be brought into conformance with KZC 95.42 in either of the following situations:
- a. An increase in gross floor area of any structure (the requirement to provide conforming buffers applies only where new gross floor area impacts adjoining property); or
 - b. A change in use on the subject property and the new use requires larger buffers than the former use.

(Ord. 4547 § 1, 2016; Ord. 4238 § 2, 2010)

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95.50 Installation Standards for Required Plantings

All required trees, landscaping and soil shall be installed according to sound horticultural practices in a manner designed to encourage quick establishment and healthy plant growth. All required landscaping shall be installed in the ground and not in above-ground containers, except for landscaping required on the top floor of a structure.

When an applicant proposes to locate a subterranean structure under required landscaping that appears to be at grade, the applicant will: (1) provide site-specific documentation prepared by a qualified expert to establish that the design will adequately support the long-term viability of the required landscaping; and (2) enter into an agreement with the City, in a form acceptable to the City Attorney, indemnifying the City from any damage resulting from development activity on the subject property which is related to the physical condition of the property. The applicant shall record this agreement with the King County Recorder's Office.

1. Compliance. It is the applicant's responsibility to show that the proposed landscaping complies with the regulations of this chapter.
2. Timing. All landscaping shall be installed prior to the issuance of a certificate of occupancy, except that the installation of any required tree or landscaping may be deferred during the summer months to the next planting season, but never for more than six (6) months. Deferred installation shall be secured with a performance bond pursuant to Chapter 175 KZC prior to the issuance of a certificate of occupancy.
3. Grading. Berms shall not exceed a slope of two (2) horizontal feet to one (1) vertical foot (2:1).
4. Soil Specifications. Soils in planting areas shall have soil quality equivalent to Washington State Department of Ecology BMP T5.13. The soil quality in any landscape area shall comply with the soil quality requirements of the Public Works Pre-Approved Plans. See subsection (9) of this section for mulch requirements.
5. Plant Selection.
 - a. Plant selection shall be consistent with the Kirkland Plant List, which is produced by the City's Natural Resource Management Team and available in the Planning and Building Department.
 - b. Plants shall be selected and sited to produce a hardy and drought-resistant landscape area. Selection shall consider soil type and depth, the amount of maintenance required, spacing, exposure to sun and wind, the slope and contours of the site, and compatibility with existing native vegetation preserved on the site. Preservation of existing vegetation is strongly encouraged.
 - c. Prohibited Materials. Plants listed as prohibited in the Kirkland Plant List are prohibited in required landscape areas. Additionally, there are other plants that may not be used if identified in the Kirkland Plant List as potentially damaging to sidewalks, roads, underground utilities, drainage improvements, foundations, or when not provided with enough growing space.
 - d. All plants shall conform to American Association of Nurserymen (AAN) grades and standards as published in the "American Standard for Nursery Stock" manual.
 - e. Plants shall meet the minimum size standards established in other sections of the KZC.
 - f. Multiple-stemmed trees may be permitted as an option to single-stemmed trees for required landscaping provided that such multiple-stemmed trees are at least 10 feet in height and that they are approved by the Planning Official prior to installation.
6. Fertilization. All fertilizer applications to turf or trees and shrubs shall follow Washington State University, National Arborist Association or other accepted agronomic or horticultural standards.
7. Irrigation. The intent of this standard is to ensure that plants will survive the critical establishment period when they are most vulnerable due to lack of watering. All required plantings must provide an irrigation system, using either Option 1, 2, or 3 or a combination of those options. For each option irrigation shall be designed to conserve water by using the best practical management techniques available. These techniques may include, but not be

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limited to: drip irrigation to minimize evaporation loss, moisture sensors to prevent irrigation during rainy periods, automatic controllers to ensure proper duration of watering, sprinkler head selection and spacing designed to minimize overspray, and separate zones for turf and shrubs and for full sun exposure and shady areas to meet watering needs of different sections of the landscape.

Exceptions, as approved by the Planning Official, to the irrigation requirement may be approved xeriscape (i.e., low water usage plantings), plantings approved for low impact development techniques, established indigenous plant material, or landscapes where natural appearance is acceptable or desirable to the City. However, those exceptions will require temporary irrigation (Option 2 and/or 3) until established.

- a. Option 1. A permanent built-in irrigation system with an automatic controller designed and certified by a licensed landscape architect as part of the landscape plan.
- b. Option 2. An irrigation system designed and certified by a licensed landscape architect as part of the landscape plan, which provides sufficient water to ensure that the plants will become established. The system does not have to be permanent if the plants chosen can survive adequately on their own, once established.
- c. Option 3. Irrigation by hand. If the applicant chooses this option, an inspection will be required one (1) year after final inspection to ensure that the landscaping has become established.

8. Drainage. All landscapes shall have adequate drainage, either through natural percolation or through an installed drainage system. A percolation rate of one-half (1/2) inch of water per hour is acceptable.

9. Mulch.

- a. Required plantings, except turf or areas of established ground cover, shall be covered with two (2) inches or more of organic mulch to minimize evaporation and runoff. Mulch shall consist of materials such as yard waste, sawdust, and/or manure that are fully composted.
- b. All mulches used in planter beds shall be kept at least six (6) inches away from the trunks of shrubs and trees.

10. Protection. All required landscaped areas, particularly trees and shrubs, must be protected from potential damage by adjacent uses and development, including parking and storage areas. Protective devices such as bollards, wheel stops, trunk guards, root guards, etc., may be required in some situations.

(Ord. 4551 § 4, 2017; Ord. 4547 § 1, 2016; Ord. 4491 §§ 3, 11, 2015; Ord. 4350 § 1, 2012; Ord. 4238 § 2, 2010; Ord. 4010 § 2, 2005)

95.51 Tree and Landscape Maintenance Requirements

The following maintenance requirements apply to all trees, including street trees, and other vegetation required to be planted or preserved by the City:

1. Responsibility for Regular Maintenance. Required trees and vegetation, fences, walls, and other landscape elements shall be considered as elements of the project in the same manner as parking, building materials, and other site details. The applicant, landowner, or successors in interest shall be responsible for the regular maintenance of required landscaping elements. Plants that die must be replaced in kind. It is also the responsibility of the property owner to maintain street trees abutting their property pursuant to KZC 95.21.
2. Maintenance Duration. Maintenance shall be ensured in the following manner except as set forth in subsections (3), (4) and (5) of this section:
 - a. All required landscaping shall be maintained throughout the life of the development. Prior to issuance of a certificate of occupancy, the proponent shall provide a final as-built landscape plan and an agreement to maintain and replace all landscaping that is required by the City.

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b. Any existing tree or other existing vegetation designated for preservation in a tree retention plan shall be maintained for a period of five (5) years following issuance of the certificate of occupancy for the individual lot or development. After five (5) years, all trees on the property are subject to KZC 95.23 unless:

- 1) The tree and associated vegetation are in a grove that is protected pursuant to subsection (3) of this section; or
- 2) The tree or vegetation is considered to be a public benefit related to approval of a planned unit development; or
- 3) The tree or vegetation was retained to partially or fully meet requirements of KZC 95.40 through 95.45, required landscaping.

3. Maintenance of Preserved Grove. Any applicant who has a grove of trees identified for preservation on an approved Tree Retention Plan pursuant to KZC 95.30(2) shall provide prior to occupancy the legal instrument acceptable to the City to ensure preservation of the grove and associated vegetation in perpetuity, except that the agreement may be extinguished if the Planning Official determines that preservation is no longer appropriate.

4. Maintenance in Holmes Point Overlay Zone. Vegetation in designated Protected Natural Areas in the Holmes Point Overlay Zone is to be protected in perpetuity pursuant to KZC 70.15(8)(a). Significant trees in the remainder of the lot shall be protected in perpetuity pursuant to KZC 70.15(8)(b).

5. Nonnative Invasive and Noxious Plants. It is the responsibility of the property owner to remove nonnative invasive plants and noxious plants from the vicinity of any tree or other vegetation that the City has required to be planted or protected. Removal must be performed in a manner that will not harm the tree or other vegetation that the City has required to be planted or protected.

6. Landscape Plans and Utility Plans. Landscape plans and utility plans shall be coordinated. In general, the placement of trees and large shrubs should adjust to the location of required utility routes both above and below ground. Location of plants shall be based on the plant's mature size both above and below ground. See the Kirkland Plant List for additional standards.

(Ord. 4551 § 4, 2017; Ord. 4437 § 1, 2014; Ord. 4238 § 2, 2010)

95.52 Prohibited Vegetation

Plants listed as prohibited in the Kirkland Plant List shall not be planted in the City or required to be retained.

For landscaping not required under this chapter, this prohibition shall become effective on February 14, 2008. The City may require removal of prohibited vegetation if installed after this date. Residents and property owners are encouraged to remove pre-existing prohibited vegetation whenever practicable.

(Ord. 4450 § 1, 2014; Ord. 4238 § 2, 2010; Ord. 4121 § 1, 2008)

95.55 Enforcement and Penalties

Upon determination that there has been a violation of any provision of this chapter, the City may pursue code enforcement and penalties in accordance with the provisions of Chapter 1.12 KMC, Code Enforcement.

(Ord. 4286 § 1, 2011; Ord. 4281 § 1, 2011; Ord. 4238 § 2, 2010; Ord. 4010 § 2, 2005)

95.57 City Forestry Account

1. Funding Sources. All civil penalties received under this chapter and all money received pursuant to KZC 95.33(3)(c) shall be used for the purposes set forth in this section. In addition, the following sources may be used for the purposes set forth in this section:

- a. Agreed upon restoration payments imposed under KZC 95.55 or settlements in lieu of penalties;

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- b. Sale of trees or wood from City property where the proceeds from such sale have not been dedicated to another purpose;
 - c. Donations and grants for tree purposes;
 - d. Sale of seedlings by the City; and
 - e. Other monies allocated by the City Council.
2. Funding Purposes. The City shall use money received pursuant to this section for the following purposes:
- a. Acquiring, maintaining, and preserving wooded areas within the City;
 - b. Planting and maintaining trees within the City;
 - c. Establishment of a holding public tree nursery;
 - d. Urban forestry education;
 - e. Implementation of a tree canopy monitoring program; or
 - f. Other purposes relating to trees as determined by the City Council.

(Ord. 4238 § 2, 2010)



CITY OF KIRKLAND
Planning and Building Department
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MEMORANDUM

To: Planning Commission

From: Deb Powers, Urban Forester
Adam Weinstein, AICP, Planning and Building Director

Date: February 14, 2019

Subject: Draft Code Amendments, Kirkland Zoning Code Chapter 95
Tree Management and Required Landscaping, File Number CAM18-00408

Staff Recommendation

Review draft amendments to Kirkland Zoning Code Chapter 95 (KZC 95) to direct staff on additional code revisions and to finalize the related project schedule.

Background

Balancing growth and development while maintaining a [livable community](#) is a primary reason cities adopt tree protection ordinances. KZC 95 (Attachment 1) establishes a permit process and standards for the protection and replacement of trees primarily on private property. Initially adopted in 2006, Kirkland's tree code was last updated in 2010.

The purpose of the 2018 tree code amendments is to support the goals established in Kirkland's Comprehensive Plan and the objectives in the [Urban Forestry Strategic Management Plan](#), to address issues and challenges that have arisen since the last tree code revision and to make the code more effective and practical to use.

Background of the code and a description of how it currently works was outlined in the [June 28, 2018 memo](#) to the Planning Commission (PC) on pages 4-11. From June to November 2018, code interpretation issues and potential amendments were identified with input from the PC and Houghton Community Council (HCC), City staff, local developers, neighborhood groups and the public. Code changes were informed by:

- The 2018 Planning intern field studies
- The 2018 Urban Tree Canopy Cover Analysis report
- Updates to industry standards
- "Best practice" municipal tree codes in the Puget Sound region
- Continued discussions with Planners, Code Enforcement and Legal staff

The most straightforward potential code amendments with no-to-low policy impacts were the focus of the [September 13, 2018 Planning Commission](#) meeting. The PC confirmed that the general direction and preliminary text for those code changes was

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appropriate at that time. Due to the volume of potential code amendments, staff presented subsequent proposed code in manageable segments over the course of multiple study sessions.

On September 27 and November 8, the PC reviewed the more complex and controversial amendments to KZC 95. At the September 27 meeting, the PC requested additional information and options for some of the potential code amendments, including the regulation of hedges and posting bonds for retained trees instead of the current 5 Year Maintenance Agreement.

At the November 8 meeting, the PC agreed with numerous staff recommendations or directed staff to make specific changes that would address code issues such as the prevention of tree girdling and determining the cost for in-lieu tree planting. A compiled list of potential code amendments is shown in Attachment 2. Related code changes for these and the no/low policy impact potential code amendments that were previously resolved are shown in blue text in the draft code, Attachment 3.

This memo focuses on the remaining potential code amendments presented in the November 8, 2018 PC meeting [memo](#) that the PC was unsure of, needed additional information on, or desired feedback from the Finn Hill Neighborhood Alliance (FHNA) and the Master Builders Association of King and Snohomish Counties (MBAKS) on whether to:

- Replace tree density credits with canopy cover-based requirements (#75)
- Increase tree density requirements city-wide (#77, 40)
- Clearly define and prioritize trees of merit (#63, 64, 70)
- Clarify the language on retention requirements for trees of merit (#69, 70)
- Strive to achieve predictable code outcomes (#60)

All unresolved potential code amendments are shown in shaded lines in Attachment 2. A brief discussion of each issue and updated staff recommendations are shown in the Analysis section below. The remaining code amendment recommendations have been incorporated into draft code in Attachment 3, using red text to distinguish these from the minor code amendments and/or amendments that the PC previously resolved. A clean copy of the draft KZC 95 is included as Attachment 4.

It should be noted that the collaboration between the two stakeholder groups resulted in an agreement to continue using the current tree density credit requirement system, with a proposed increase in tree density credits. Additional feedback from the stakeholder groups is outlined in the Stakeholder Collaboration section, following the Analysis.

Analysis

The outstanding issues from the November 8 PC meeting, including the canopy cover metric, are summarized below. A staff recommendation is provided for each.

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Replace tree density credits with canopy cover-based requirements (#75)
Code section: KZC 95.33
Issue: In the past, the FHNA advocated use of a canopy-based metric on a lot-by-lot basis to ascertain the sufficiency of tree planting/retention. Recent collaborative efforts between FHNA and MBAKS resulted in an agreement to continue using the current tree density credit requirement system.
Discussion: See the June 28, 2018 Planning Commission memo on the pros/cons of using canopy cover as a tree retention/replanting metric. Benefits of the credit system include: <ul style="list-style-type: none"> • Ease of measuring trunk diameter (DBH) regardless of expertise • The standard methodology for measuring trunk size is less subjective than measuring tree canopy • Trunk size generally correlates to tree size, age and canopy cover • Other cities use credit-based systems including Issaquah, Medina, Kenmore, Woodinville and Vancouver, WA
Staff recommendation: Continue using tree density credit system.

Increase tree density credit requirements city-wide (#77)
Code section: KZC 95.33
Issue: Increase retention/replanting to ensure canopy cover goals are met over time.
Discussion: The 2018 canopy analysis shows an incremental loss of city-wide canopy cover, which is modest considering the rapid pace of redevelopment over the past several years. Field study findings indicate low levels of large tree preservation on 2008-2013 development sites, pointing to the need to increase retention of healthy large trees and trees of merit. Staff agrees with raising tree density credit requirements from thirty to forty credits per acre to slow the loss of canopy cover on development sites, retain trees of merit, maximize the benefits of trees and ensure a healthy, uneven-aged resilient urban forest.
Staff recommendations: <ol style="list-style-type: none"> 1. Increase tree density credit requirements from 30 to 40 per acre. 2. Clearly define trees of merit (see #63, 64, 70).

Establish a cut-off point or maximum tree density credit per tree (#40)
Code section: KZC 95.33.1, Table 95.33.1
Issue: Although meant to incentivize large tree retention, the current credit system results in fewer trees being retained on sites with groves and larger trees.
Discussion: Tree density credits are awarded by tree trunk size, up to 21 credits for a 50-inch DBH tree (trunk diameter at 4.5 feet above grade). Often applicants can achieve the minimum required credits by retaining a few large trees on a development site, hastening

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the loss of canopy cover on development sites. Other cities that “cap” credits are Medina at 24” DBH and Woodinville at 36” DBH.
Staff recommendation: “Cap” or limit per-tree density credits at 30-inch DBH (11 credits)

Clarify the grove easement and protection measures (#63)
Code section: KZC 95.05, 95.10, KZC 95.51.3
Issue: Disagreements on the interpretation of code provisions related to groves between staff and developers.
Discussion: Retaining tree groves enhances community character, helps to slow the loss of canopy cover and furthers the intent and purpose of KZC 95. Other cities that protect tree groves are Bellevue, Issaquah, Kenmore, Mercer Island, Renton, Sammamish, Shoreline, and Woodinville.
Staff recommendations: <ol style="list-style-type: none"> 1. Revise code so easement and maintenance requirements are located in the same code section. 2. Clarify that grove designations are not required on sites undergoing remodels or additions. 3. Define groves as including no hazard or nuisance trees.

Clearly define and prioritize trees of merit (#64, 70)
Code section: KZC 95.10
Issue: Current code definitions and requirements over the trees worthy of retention are areas of disagreement between staff and developers, and developers desire more certainty/predictability.
Discussion: A sustainable urban forest is ensured when tree planting is driven by canopy status, age distribution and species diversity objectives. The 2018 tree canopy analysis shows a modest city-wide decrease in canopy cover between 2010 and 2017, most notably in the Single Family Residential land use classification, and staff believes that much of the loss derives from the removal of groves and large trees. The Planning and Building Department’s tree intern findings provide justification for retaining trees of merit: <ul style="list-style-type: none"> • The notably good condition of trees retained on development sites indicate that the current High Retention Value Tree requirements are effective in protecting some large trees on Single Family lots. • Required tree planting is providing an abundance of new trees. • Only 10% of all trees retained on development sites are large trees over 22-inch DBH (trunk diameter). • On the sites examined, trees required to be retained had not been removed after the 5 Year Maintenance Agreement expired. Other cities use the same/similar trees of merit definitions and priorities as proposed are Issaquah, Lake Forest Park, Redmond, Bellevue, Medina, Renton, Vancouver WA and Olympia.

<p>Staff Recommendations:</p> <ol style="list-style-type: none"> 1. Eliminate the Low, Moderate and High Retention Value definitions 2. Clearly define and prioritize trees of merit by size, condition and grove status: <ol style="list-style-type: none"> a. Landmark – healthy tree over 24” DBH b. Exceptional – a viable significant tree (a tree greater than 6” DBH that’s in very good to excellent health and free of major defects). c. Grove – significant trees that form a contiguous canopy (numerous cities protect groves, see #63), and 3. Clearly define the location of retained trees within required yards (setbacks) as determined by applicable zoning. 4. Incentivize tree preservation on private property. For example, if resources allow: <ol style="list-style-type: none"> a. Offer a template Voluntary Tree Conservation Easement (Example: Attachment 5) b. Support a citizen-led volunteer Heritage Tree Program similar to the City of Seattle-PlantAmnesty model c. Conduct public education on the benefits of trees and mature tree maintenance.
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Eliminate Low Retention Value tree definition (#69)
Code section: KZC 95.1013c
Issue: Perception that Low Retention Value Tree definition allows unnecessary tree removal.
Discussion: The code currently defines Low Retention Value trees as trees <i>in a condition that would not sustain the impacts of construction and/or are located within the building footprint of a proposed structure</i> , which is perceived as a tree removal loophole.
Staff recommendation <ol style="list-style-type: none"> 1. Eliminate the Low, Moderate and High Retention Value definitions (#64, 70). 2. Clearly define retention requirements and location of trees of merit (#64, 70).

Clarify retention requirements for trees of merit (#70)
Code section: KZC 95.30.5
Issue: Current code requirements are areas of disagreement between staff and developers and developers desire more certainty/predictability.
Discussion: Code currently reads: retain High Retention Value trees “to the maximum extent possible” and the applicant “shall pursue where feasible applicable variations in the development standards,” which is too subjective.
Staff recommendation <ol style="list-style-type: none"> 1. Clearly define and prioritize trees worthy of retention (#63, 64, 72) 2. Specify that <i>site improvements shall be designed and constructed to protect trees with the following characteristics...</i> (Redmond, Shoreline) 3. Require applicants to show where <i>alternative design of the building is feasible in retaining the tree</i> (Medina)

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Strive to achieve predictable code outcomes (#60)
Code section: KZC 95.30
Issue: Code requirements that are perceived as being too onerous result in an avoidance of meeting tree retention requirements and less cooperation towards compliance. Code provisions intended to provide greater flexibility are often areas of disagreement between staff and developers.
Discussion: Developers desire more certainty/predictability with the permitting process. Public engagement revealed a fair amount of confusion over existing code requirements, regardless of prior familiarity or frequency of use.
Staff recommendation: <ol style="list-style-type: none"> 1. Eliminate the Low, Moderate and High Retention Value definitions (#69, 70). 2. Clearly define and prioritize trees worthy of retention (#63, 64, 70) 3. Eliminate phased short plat/subdivision development review so that tree retention decisions are known early in the permitting process (#73, 34) and to streamline the modification process (#39). 4. Strive to achieve greater code clarity based on model city tree codes, PC input and community feedback.

Stakeholder Collaboration

To find common areas of agreement on KZC 95 code amendments, representatives from the Master Builders Association of King and Snohomish Counties (MBAKS) and the Finn Hill Neighborhood Alliance (FHNA) met eight times over the months following the November 8, 2018 PC meeting. These individuals have expressed an interest in urban forestry regulatory issues, the rules governing trees on development sites and improving the tree code. On January 15, 2019, the two groups jointly submitted a Memorandum Regarding Kirkland Zoning Code Chapter 95 Draft Tree Code Amendments (Attachment 6), outlining high-level primary areas of concern. Each area of concern in the Memorandum is listed below followed by the related code update and/or brief staff response:

- *Predictability of process* - Staff agrees; deleted "if feasible" and "to the maximum extent possible" language. Staff deleted High, Moderate, Low Retention Value requirements; replaced with clear, simple definitions for trees of merit. See the bullet point below on Phased review and IDP.
- *Landmark trees* - Staff agrees with eliminating retention values and clearly defining trees of merit by size, condition and grove status (#63, 64, 70).
- *Tree "groupings"* - Staff believes redefining grove is unnecessary, beyond clarifying that groves cannot be comprised of hazard or nuisance trees (#63).
- *Retention vs. replanting* - The proposed code defines trees of merit, prioritizes retention requirements and clarifies that tree density credits may be exceeded to retain trees of merit. Staff agrees with increasing the minimum tree density credit requirements (#40, 77).
- *Tree replanting locations and alternatives to replanting* - See Staff Recommendation #40 regarding replanting location. The cost of replacement trees is standardized in draft code KZC 95.33.3c. (#64, 7).

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- *Phased review/IDP* – This is a key area where FHNA/MBAKS did not reach full agreement. At the November 8, 2018 PC meeting, the Planning Commission supported a staff recommendation to eliminate phased review for short plats and subdivisions (#73), citing that a citywide IDP process would allow for a more predictable and consistent tree plan review. Staff drafted code language based on the November 8 PC direction with proposed KZC 95.30.6.
- *Additional amendments and continued involvement in the KZC 95 updates* – staff encourages continued involvement in the code amendment process through upcoming PC, HCC, City Council meetings and the Public Hearing.

The areas of stakeholder concern resulting in code amendments are shown in red text in Attachment 3. In addition, the FHNA/MBAKS group submitted a draft KZC 95 with strikeouts/markups (Attachment 7). The City may consider additional changes noted in the stakeholder's draft KZC 95 along with feedback from other groups and the public moving forward.

Houghton Community Council Comments

The HCC communicated to staff at the [August 27, 2018 meeting](#) and at a joint meeting with the PC on November 26, 2018 that code changes should address:

- A High Retention Value tree definition that is less subjective
- Clarifying KZC 95.23 on public tree removals
- Retaining tree groves when designing parking lots
- Clarifying KZC 95.30.6 (b) on tree plan modifications
- Planned tree removal prior to development permit submittal that is the “unintended consequence” of unclear and unpredictable codes
- Damage to trees adjacent to development properties (should remain a civil issue)
- Integrating tree protection inspections with building inspection procedures

Following discussion at the February 14, 2019 Planning Commission meeting, staff will want to consider additional changes to the code such as clustering lots to retain trees, and potentially other incentives to protect significant trees. Staff will seek feedback from the City Council and Houghton Community Council on the general approach to these proposed code amendments prior to drafting amendments to KZC 95 in preparation of the Public Hearing.

Next Steps

The emphasis of this memo is to continue discussions on the more complex and controversial potential tree code amendments. At the February 14, 2019 Planning Commission meeting, staff would appreciate feedback on the following:

- *Does the Planning Commission agree with staff's draft code recommendations?*
- *Can the Planning Commission confirm staff has covered all key topics for KZC 95 code amendments?*
- *Is there any other information the Planning Commission needs to review the potential KZC 95 code amendments?*

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With the PC's direction, staff will return with further code refinements at the March 28 PC meeting, so that on April 25, a Public Hearing can be held on KZC 95 code amendments followed by code adoption in May 2019.

Attachments:

1. Current Kirkland Zoning Code Chapter 95 (KZC 95)
2. Compiled List of Potential KZC 95 Code Amendments
3. Draft KZC 95 Code Amendments
4. Draft Clean Copy KZC 96 Code Amendments
5. Sample Tree Conservation Easement
6. Memorandum Regarding Kirkland Zoning Code Chapter 95 Draft Tree Code Amendments
7. FHNA/MBAKS Proposed Draft KZC 95

cc: File Number CAM18-00408

DRAFT REVISED Chapter 95 – TREE MANAGEMENT AND REQUIRED LANDSCAPING

Sections:

- 95.05 Purpose and Intent
- 95.10 Definitions
- 95.20 ~~Tree Removal~~ Exemptions
 - 1. Emergency Tree Removal
 - 2. Utility Maintenance
 - 3. Commercial Nurseries or Tree Farms
- 95.21 Tree Pruning
 - 1. Tree Pruning of Street Trees
 - 2. Tree Pruning on Private Property
- 95.23 Tree Removal – Not Associated with Development Activity
 - 1. Introduction
 - 2. Permit Required for Removal of ~~Public~~ Trees ~~on Private Property or City Right of Way~~
 - x. ~~Permit Required for Removal of Trees on Private Property~~
 - 3. Tree Removal Permit Application Form
 - 4. Tree Removal Permit Application Procedures and Appeals
 - 5. Tree Removal Allowances
- 95.25 Sustainable Site Development
- 95.30 Tree Retention Associated with Development Activity
 - 1. Introduction
 - 2. Tree Retention Plan ~~Submittal~~Required
 - 3. Tree Retention Plan Review
 - 4. Tree Retention Plan ~~Elements~~Components
 - 5. Tree Retention Plan ~~Requirements~~
 - 6. ~~Additional~~ Tree Retention Plan Standards for Short Plats and Subdivisions – ~~Integrated Development Plan and Modifications~~
 - a. ~~Phased Review~~
 - b. ~~Modifications to Tree Retention Plan for Short Plats and Subdivisions~~
- 95.32 Incentives and Variations to Development Standards ~~to Retain Trees~~ (*rearranged for clarity*)
 - 1. ~~Common Recreational Open Space~~ Variations
 - 2. Required Yards

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- 3. Common Recreation Areas
- 4. Parking Areas and Access
- 4. Storm Water
- 5. Additional Variations
- 95.33 Tree Density Requirement
 - 1. Tree Density Calculation
 - 2. Supplemental Trees Planted to Meet Minimum Density Requirement
 - 3. Tree Location
 - 4. Minimum Size and Tree Density Value for Supplemental Trees
- 95.34 Tree and Soil Protection during Development Activity
 - 1. Placing Materials near Trees
 - 2. Protective Barrier
 - 3. Grade
 - 4. Directional Felling
 - 5. Additional Requirements
- 95.40 Required Landscaping based on Zoning District
 - 1. User Guide
 - 2. Use of Significant Existing Vegetation
 - 3. Landscape Plan Required
- 95.41 Supplemental Plantings
 - 1. General
 - 2. Standards
- 95.42 ~~Minimum~~-Land Use Buffer Requirements
- 95.43 Outdoor Use, Activity, and Storage
- 95.44 Internal Parking Lot Landscaping Requirements
- 95.45 Perimeter Landscape Buffering for Driving and Parking Areas
 - 1. Perimeter Buffering – General
 - 2. Exception
 - 3. Design Districts
 - 4. Overlapping Requirements
- 95.46 Modifications to Landscaping Standards
 - 1. Modification to Land Use Buffer Requirements
 - 2. Modifications to General Landscaping Requirements

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95.47 Nonconforming Landscaping and Buffers
95.50 Installation Standards for Required Plantings

1. Compliance
2. Timing
3. Grading
4. Soil Specifications
5. Plant Selection
6. Fertilization
7. Irrigation
8. Drainage
9. Mulch
10. Protection

95.51 Tree and Landscape Maintenance Requirements

1. Responsibility for Regular Maintenance
2. Maintenance Duration
3. Maintenance of Preserved Grove
4. Maintenance in Holmes Point Overlay Zone
5. Nonnative Invasive and Noxious Plants
6. Landscape Plans and Utility Plans

95.52 Prohibited Vegetation
95.55 Enforcement and Penalties
95.57 City Forestry Account

1. Funding Sources
2. Funding Purposes

95.05 Purpose and Intent

1. Trees and other vegetation are important elements of the physical environment. They are integral to Kirkland's community character and protect public health, safety and general welfare. Protecting, enhancing, and maintaining healthy trees and vegetation are key community values. Comprehensive Plan Policy NE-3.1 describes working towards achieving a [healthy, resilient urban forest with a](#) City-wide tree canopy coverage of 40 percent. The many benefits of healthy trees and vegetation contribute to Kirkland's quality of life by:

- a. Minimizing the adverse impacts of land disturbing activities and impervious surfaces such as runoff, soil erosion, land instability, sedimentation and pollution of waterways, thus reducing the public and private costs for storm water control/treatment and utility maintenance;
- b. Improving the air quality by absorbing air pollutants, mitigating the urban heat island effect, assimilating carbon dioxide and generating oxygen, and decreasing the impacts of climate change;

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- c. Reducing the effects of excessive noise pollution;
 - d. Providing cost-effective protection from severe weather conditions with cooling effects in the summer months and insulating effects in winter;
 - e. Providing visual relief and screening buffers;
 - f. Providing recreational benefits;
 - g. Providing habitat, cover, food supply and corridors for a diversity of fish and wildlife; and
 - h. Providing economic benefit by enhancing local property values and contributing to the region's natural beauty, aesthetic character, and livability of the community.
2. Tree and vegetation removal in urban areas has resulted in the loss to the public of these beneficial functions. The purpose of this chapter is to establish a process and standards to provide for the protection, preservation, replacement, proper maintenance, and use of significant trees, associated vegetation, and woodlands located in the City of Kirkland.

The intent of this chapter is to:

- a. Maintain and enhance canopy coverage provided by trees for their functions as identified in KZC 95.05(1);
- b. Preserve and enhance the City of Kirkland's environmental, economic, and community character with mature landscapes;
- c. Promote site planning, building, and development practices that work to avoid removal or destruction of trees and vegetation, that avoid unnecessary disturbance to the City's natural vegetation, and that provide landscaping to buffer the effects of built and paved areas;
- d. Mitigate the consequences of required tree removal in land development through on- and off-site tree replacement with the goals of halting net loss and enhancing Kirkland's tree canopy to achieve an overall healthy tree canopy cover of 40 percent City-wide over time;
- e. Encourage tree retention efforts by providing flexibility with respect to certain other development requirements;
- f. Implement the goals and objectives of the City's Comprehensive Plan;
- g. Implement the goals and objectives of the State Environmental Policy Act (SEPA); and
- h. Manage trees and other vegetation in a manner consistent with the City's [Urban Forest Strategic Natural Resource-Management Plan](#) and industry standards and best management practices established by the [International Society of Arboriculture \(ISA\)](#) and the [American National Standards Institute \(ANSI\)](#).
- i. Preserve and protect street trees, trees in public parks and trees on other City property.

(Ord. 4238 § 2, 2010; Ord. 4010 § 2, 2005)

95.10 Definitions

The following definitions shall apply throughout this chapter unless the context clearly indicates otherwise. Definitions that apply throughout this code are also located in Chapter 5 KZC.

1. Caliper – The ~~industry-American Association of Nurserymen~~ standard for trunk measurement of nursery stock, applicable to supplemental required trees. Caliper of the trunk shall be the trunk diameter measured six (6) inches above the ground for up to and including 4-inch caliper trunk sizes and 12 inches above the ground for larger sizes.

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2. Critical Root Zone (CRZ) – The circular area around a tree measured from the trunk surrounding a tree at a distance from the trunk, which is equal to one (1) foot radius for every inch of Diameter at Breast Height (DBH), trunk diameter measured at 4.5 feet from grade or as otherwise determined by a qualified professional. (example: one (1) foot radius per one (1) inch DBH). Example: a 24-inch DBH tree has a 24-foot Critical Root Zone.

3. Crown – The area of a tree containing leaf- or needle-bearing branches.

4. Diameter at Breast Height (DBH) – The diameter or thickness of a tree trunk measured at 4.5 feet from the ground. DBH is also known as Diameter at Standard Height (DSH).

5. Dripline – The distance from the tree trunk, that is equal to the furthest extent of the tree’s crown.

x. Exceptional tree – a significant, viable tree that a qualified professional has determined to be in very good to excellent health and free of major defects that is worthy of long-term retention.

Commented [DP1]: Update #64. Clearly designate trees of merit.
 Update #60. Develop clear, streamlined and predictable tree retention requirements

6. Grove – A group of three (3) or more significant viable trees with overlapping or touching crowns.

7. Hazard Trees – A tree that meets all the following criteria: are assessed by a qualified arborist as having a high risk rating using the ISA Tree Risk Assessment Qualification (TRAQ) method in its most current form. Definitions of TRAQ method terminology that are not set forth in this chapter can be found in the article “Qualitative Tree Risk Assessment” by E. Thomas Smiley, Nelda Matheny, and Sharon Lilly on file at Kirkland City Hall. Steps in the TRAQ method in developing a tree risk rating include the following:

Commented [DP2]: Update #48. Industry standard, add course of action.
 Update #60. Develop clear, streamlined and predictable tree retention/replanting requirements.

a. Identify possible targets and estimate occupancy rate;

b. Inspect tree and identify tree parts that could fail and strike targets (referred to as failure mode);

c. For each significant failure mode identified:

- i. The likelihood of failure is assessed;
- ii. The likelihood of a tree part impacting a target is assessed;
- iii. The likelihood of a tree failure impacting a target is assessed;
- iv. Consequences of failure are estimated;
- v. The risk is designated pursuant to the matrix in Table xx;
- vi. Possible mitigation treatments to reduce the risk are identified;
- vii. The risk is again designated pursuant to the matrix in Table xx after mitigation treatment is completed.

d. When assessing the risk of a tree, the Planning Official shall evaluate the tree based on existing conditions and shall exclude possible impacts caused by new development, any land alteration activity, or other similar such activities that might otherwise unnaturally cause the risk rating to increase.

e. The following table is from the ISA TRAQ method and denotes the risk rating matrix used to assess levels of tree risk as a combination of likelihood of a tree failing and impacting a specified target, and the severity of the associated consequences should the tree or any part of the tree fail:

Table xx Tree Risk Rating Matrix

Likelihood of Failure and Impact	Consequences			
	Negligible	Minor	Significant	Severe

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<u>Very likely</u>	<u>Low risk</u>	<u>Moderate risk</u>	<u>High Risk</u>	<u>Extreme Risk</u>
<u>Likely</u>	<u>Low risk</u>	<u>Moderate risk</u>	<u>High risk</u>	<u>High risk</u>
<u>Somewhat Likely</u>	<u>Low risk</u>	<u>Low risk</u>	<u>Moderate risk</u>	<u>Moderate risk</u>
<u>Unlikely</u>	<u>Low risk</u>	<u>Low risk</u>	<u>Low risk</u>	<u>Low risk</u>

f. The consequences listed in Table xx have meanings as follows:

i. Extreme Risk. This category applies to trees in which failure is “imminent” and there is a high likelihood of impacting a target, and the consequences of the failure are “severe.”

ii. High Risk. This category applies to situations in which consequences are significant and likelihood is “very likely” or “likely,” or when consequences are “severe” and likelihood is “likely.”

iii. Moderate Risk. This category applies to trees in which consequences are “minor” and likelihood is “very likely” or “likely” or when likelihood is “somewhat likely” and the consequences are “significant” or “severe.”

iv. Low Risk. This category applies to trees in which consequences are “negligible” and likelihood is “unlikely”; or when consequences are “minor” and likelihood is “somewhat likely.”

v. Potential targets are permanent structures or an area of moderate to high use. Where a target does not exist, applicants should consider routine pruning and maintenance to mitigate hazards.

vi. Where a tree is found to have a high or extreme risk, the Planning Official may authorize hazard pruning to mitigate the risk rather than removing the entire tree.

vii. If the city arborist assesses a tree to have a high or extreme risk and mitigation of the risk through pruning or moving of potential targets is not feasible, the Planning Official shall designate the tree a hazard tree.

a. A tree with a combination of structural defects and/or disease which makes it subject to a high probability of failure;

b. Is in proximity to moderate to high frequency targets (persons or property that can be damaged by tree failure); and

c. The hazard condition of the tree cannot be lessened with reasonable and proper arboricultural practices nor can the target be removed.

x. Inner Critical Root Zone – an area encircling a tree that is half the distance of the Critical Root Zone. Example: a 24-inch DBH tree has a 12-foot radius Inner Critical Root Zone.

8. Impact – A condition or activity that affects a part of a tree including the trunk, branches, and critical root zone.

k. Landmark tree – a significant, viable tree that is at least 24 inches in diameter (DBH).

9. Limit of Disturbance (LOD) –The boundary between the protected area around a tree and the allowable site disturbance as determined by a qualified professional, measured in feet from the trunk, intended to protect individual trees, groups of trees, vegetation, roots and soil from construction-related activities. Limit of Disturbance denotes the location of tree protection fencing. Determining LOD may include Critical Root Zone, dripline, or root plate diameter methodologies or exploratory root excavations.

Commented [DP3]: Update #64. Clearly designate trees of merit.
 Update #60. Develop clear, streamlined and predictable tree retention/replanting requirements

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10. Nuisance Tree – A tree that meets either of the following criteria:

- a. Is causing obvious physical damage to private or public structures, including but not limited to: sidewalk, curb, road, driveway, parking lot, building foundation, or roof; or
- b. Has sustained damage from past maintenance practices.

The problems associated with the tree must be such that they cannot be corrected by reasonable practices including but not limited to: pruning of the crown or roots of the tree, bracing, and/or cabling to reconstruct a healthy crown.

~~x. Public Tree – a tree located in parks, along public rights-of-way, on City facility property or other property owned by the City.~~

11. Public Works Official – Designee of the Public Works Director.

12. Qualified Professional – An individual with relevant education and training in arboriculture or urban forestry, having two (2) or more of the following credentials:

- International Society of Arboriculture (ISA) Certified Arborist;
- Tree Risk Assessor Qualification Certification (TRAQCE) as established by the ~~Pacific Northwest Chapter of ISA~~ (or equivalent);
- American Society of Consulting Arborists (ASCA) registered Consulting Arborist;
- Society of American Foresters (SAF) Certified Forester for Forest Management Plans;
- ~~Board Certified Master Arborist as established by the ISA;~~

For tree retention associated with a development permit, a qualified professional must have, in addition to the above credentials, a minimum of three (3) years’ experience working directly with the protection of trees during construction and have experience with the likelihood of tree survival after construction. A qualified professional must also be able to prescribe appropriate measures for the preservation of trees during land development.

~~13. Retention Value – The Planning Official’s designation of a tree based on information provided by a qualified professional that is one (1) of the following:~~

~~a. High, a viable tree, located within required yards and/or required landscape areas. Tree retention efforts shall be directed to the following trees if they are determined to be healthy and windfirm by a qualified professional, and provided the trees can be safely retained when pursuing alternatives to development standards pursuant to KZC 95.32:~~

- ~~1) Specimen trees;~~
- ~~2) Tree groves and associated vegetation that are to be set aside as preserved groves pursuant to KZC 95.51(3);~~
- ~~3) Trees on slopes of at least 10 percent; or~~
- ~~4) Trees that are a part of a grove that extends into adjacent property, such as in a public park, open space, critical area buffer or otherwise preserved group of trees on adjacent private property. If significant trees must be removed in these situations, an adequate buffer of trees may be required to be retained or planted on the edge of the remaining grove to help stabilize;~~

~~b. Moderate, a viable tree that is to be retained if feasible; or~~

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~~e. – Low, a tree that is either (1) not viable or (2) is in an area where removal is unavoidable due to the anticipated development activity.~~

14. Significant Tree – A tree that is at least six (6) inches in diameter at breast height (DBH) as measured at 4.5 feet from the ground. Trees with multiple trunks shall be measured per the industry standard outlined in the most recent edition of the Guide for Plant Appraisal by the Council of Tree and Landscape Appraisers.

15. Significantly Wooded Site – A subject property that has a number of significant trees with crowns that cover at least 40 percent of the property.

16. Site Disturbance – Any development, construction, or related operation that could alter the subject property, including, but not limited to, soil compaction, tree or tree stump removal, road, driveway or building construction, installation of utilities, or grading.

~~17. Specimen Tree – A viable tree that is considered in very good to excellent health and free of major defects, as determined by the City's Urban Forester.~~

18. Street Tree – A tree located within the public right-of-way; provided, that if the trunk of the tree straddles the boundary line of the public right-of-way and the abutting property, it shall be considered to be on the abutting property and subject to the provisions of this chapter.

~~xx. Topping – The reduction of a tree's size using heading cuts that shorten limbs or branches back to a predetermined crown limit. Topping is not an acceptable pruning practice and is not appropriate on established trees.~~

19. Tree Removal – The removal of a tree, through either direct or indirect actions, including but not limited to: (1) clearing, damaging or poisoning resulting in an unhealthy or dead tree; (2) removal of at least half of the live crown; or (3) damage to roots or trunk that is likely to destroy the tree's structural integrity. Trees that have been recently girdled at development permit submittal will be treated as unauthorized tree removal subject to code enforcement.

20. Viable Tree – A significant tree that a qualified professional has determined to be in good health, with a low risk of failure due to structural defects, is windfirm if isolated or remains as part of a grove and is a species that is suitable for its location.

21. Wildlife Snag – The remaining trunk of a tree that is intentionally reduced in height and usually stripped of its live branches.

22. Windfirm – A condition of a tree in which it withstands average peak local wind speeds and gusts.

(Ord. 4551 § 4, 2017; Ord. 4238 § 2, 2010; Ord. 4193 § 1, 2009; Ord. 4010 § 2, 2005)

95.20 Tree Removal Exemptions

The following activities are exempt from the provisions of this chapter:

1. Emergency Tree Removal. Any tree that poses an imminent threat to life or property may be removed. The City must be notified within seven (7) days of the emergency tree removal with evidence of the threat for removing the tree to be considered exempt from this chapter. If the Planning Official determines that the emergency tree removal was not warranted or if the removed tree was required by a development permit, the Planning Official may require that the party obtain a permit and/or require that replacement trees and vegetation be replanted as mitigation.
2. Utility Maintenance. Trees may be removed by the City or utility provider in situations involving interruption of services provided by a utility only if pruning cannot solve utility service problems. Utility maintenance shall conform to a City-approved Utility Vegetation Management Plan.
3. Commercial Nurseries or Tree Farms. A nursery or tree farm owner may remove trees that are being grown to be sold as Christmas or landscape trees.

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(Ord. 4238 § 2, 2010; Ord. 4010 § 2, 2005)

95.21 Tree Pruning

1. Tree Pruning of Street Trees. It is the responsibility of the abutting property owner to maintain street trees abutting their property, which may include pruning, watering, and mulching. In order to prune, trim, modify, or alter a street tree, the abutting property owner shall apply for a permit by filing a written application with the City. Pruning shall conform to the most recent version of the American National Standards Institute (ANSI) A300 Part 1 – 2001 pruning standards or as outlined in an approved Utility Vegetation Management Plan. The City may allow adjacent property owners to lightly prune street trees. The City reserves the right to have City or utility crews perform routine pruning and maintenance of street trees.

2. Tree Pruning on Private Property. A permit is not required to prune trees on private property. Topping or pruning which results in the removal of at least half of the live crown will be considered tree removal and subject to the provisions in KZC 95.23. Tree topping is not allowed. If a tree smaller than six (6) inches in diameter that were required to be planted by this chapter that are smaller than six (6) inches in diameter and is topped, it must be replaced pursuant to the standards in Chapter 1.12 KMC. If a tree six (6) inches or larger in diameter is topped, the owner must have a qualified professional develop and implement a 5-year restoration pruning program.

3. Pruning or topping of trees in critical areas or buffers is prohibited other than City-approved creation of snags for nuisance or hazard trees.

(Ord. 4281 § 1, 2011; Ord. 4238 § 2, 2010)

95.23 Tree Removal – Not Associated with Development Activity

1. Introduction. Tree and vegetation removal in urban areas has resulted in the loss of beneficial functions provided by trees to the public. The majority of tree canopy within the City of Kirkland is on private property. The purpose of this section is to establish a process and standards to slow the loss of tree canopy on private property, contributing towards the City’s canopy goals and a more sustainable urban forest.

2. ~~Permit Required for Removal of Public Trees on Private Property or City Right of Way. Other than City Crews, no person, directly or indirectly, shall It is unlawful for any person (other than City crews) to remove, prune, trim, modify, alter or damage any tree in a public park or on any other City property.~~

Commented [DP4]: Update to distinguish allowed or prohibited activities with public vs. private trees.

~~No person, directly or indirectly, shall remove any significant tree on any property within the City, or any tree in the public right of way, without first obtaining a tree removal permit as provided in this chapter, unless the activity is exempted in KZC 95.20, Tree Removal Exemptions, and subsection (5) of this section.~~

~~x. Permit Required for Removal of Trees on Private Property. It is unlawful for any person to remove a tree on private property without first obtaining a tree removal permit as provided in this chapter, unless the activity is exempted in KZC 95.20 or allowed in subsection (5) of this section. The City may order diseased trees removed from private property as hazard or nuisance trees to prevent the spread of a disease/pest that would cause catastrophic tree decline and failure of public and private property trees.~~

Commented [DP5]: Update #76. Address tree removal resulting from highly contagious pests/pathogens.

3. Tree Removal Permit Application Form. The ~~applicable City Planning and Building Department and Public Works Department~~ shall establish and maintain a tree removal permit application form. ~~The form shall be used for to allow~~ property owners to request City review of tree removal for compliance with applicable City regulations. The tree removal application form shall include at a minimum the following:

- a. A site plan showing the approximate location of significant trees, their size (DBH) and their species, along with the location of structures, driveways, access ways and easements.
- b. For required replacement trees, a planting plan showing location, size and species of the new trees in accordance to standards set forth in KZC 95.33(3).

4. Tree Removal Permit Application Procedure and Appeals.

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a. Applicants requesting to remove trees must submit a completed permit application on a form provided by the City. The City shall review the application within 21 calendar days and either approve, approve with conditions or modifications, deny the application or request additional information. Any decision to deny the application shall be in writing along with the reasons for the denial and the appeal process.

b. The decision of the Planning Official is appealable using the applicable appeal provisions of Chapter 145 KZC.

c. ~~Time Limit. The removal by felling shall be completed within one (1) year from the date of permit approval. Trees approved for removal shall not be damaged, poisoned or sustain removal of at least half of the live crown in lieu of felling, unless activities such as the creation of wildlife snags is approved by the Planning Official.~~

Commented [DP6]: Updates #38, 56, 58, 59 – prevent girdling/tree removal done to intentionally avoid retention requirements with anticipated development.

5. Tree Removal Allowances.

a. ~~Except in the Holmes Point Overlay zone, a~~ Any private property owner of developed property may remove a specific number of up to two (2) significant trees from their property with notification, depending on lot size per the table below within a 12-month period without having to apply for a tree removal permit; provided, that:

Commented [DP7]: Update #53. Adjust tree removal proportionate to lot size. Note: lot size categories same as Redmond, Renton, Issaquah.

x) ~~The trees are not located in critical areas or their buffers, in geologically hazardous areas, or on properties in the Holmes Point Overlay area;~~

x) ~~The trees are not Landmark trees;~~

1) There is no active application for development activity for the site. ~~There shall be no tree removal or land clearing in advance of issuance of land development permit on any site for the sake of preparing that site for future development. Development permit applications may be submitted at any time, but will not be processed for 12 months following tree removal;~~

2) The trees were not required to be retained or planted as a condition of previous development activity; and

3) All of the additional standards for tree removal and tree removal permits as described in subsections (5)(b) through (e) of this section are met.

x) ~~Hedges comprised of any number of trees >6" DBH that are replaced with suitable species, planted as a hedge in the same location.~~

Commented [DP8]: Update #67. Allow multiple trees planted as a hedge to be removed with replanting.

Table x

Commented [DP9]: Update #53 Adjust tree removal allowance in proportion to varying lot sizes

Lot Size	Maximum number of significant trees allowed to be removed every 12 months with notification
Lots up to 10,000 sq. ft.	2
Lots 10,000 to 20,000 sq. ft.	4
Lots 20,000 sq. ft. or greater	6
Lots over 1 acre with a Forest Management Plan	>6
Except landmark trees (greater than 24-inch DBH) shall not be removed without permit approval	

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The Planning and Building Department shall establish and maintain a tree removal request notification form. The form may be used by property owners to request Department review of tree removal for compliance with applicable City regulations and to notify the Department of allowable tree removal.

- b. Tree Retention and Replacement Requirements.
 - 1) Tree Retention. For single-family homes, cottages, carriage units, two/three-unit homes, two (2) trees shall be required to remain on the subject property.
 - 2) Tree Replacement.
 - a) For every significant tree that is removed and is not required to remain based on subsection (5)(b)(1) of this section, the City encourages the planting of a tree that is appropriate to the site.
 - b) If a tree removal request is for one (1) or both of the trees required to remain, a tree removal permit and one-for-one replacement is required. the replacement tree shall be six (6) feet tall for a conifer and 2-inch caliper for deciduous or broad-leaf evergreen tree.
 - c) For all other uses not listed in subsection (5)(b)(1) of this section, a tree removal permit is required and the required tree replacement will be based on the required landscaping standards in KZC 95.40 through 95.45.
- c. Shoreline Jurisdiction. Properties located within the City’s shoreline jurisdiction are subject to additional tree removal and replacement standards if the tree(s) to be removed are located within the required shoreline setback. See Chapter 83 KZC for additional standards.
- d. Removal of Hazard or Nuisance Trees. Any private property owner seeking to remove any number of significant trees which are a hazard or nuisance from developed or undeveloped property or the public right-of-way shall first obtain approval of a tree removal permit and meet the requirements of this subsection.
 - 1) Tree Risk Assessment. If the nuisance or hazard condition is not evident in a photographobvious, a tree risk assessment prepared by a qualified professional explaining how the tree(s) meet the definition of a nuisance or hazard tree is required. Removal of nuisance or hazard trees does not count toward the tree removal limit if the nuisance or hazard is supported by a report prepared by a qualified professional and approved by the City.
 - 2) Trees in Critical Areas or Critical Areas Buffers. See Chapters 85 and 90 KZC.
 - a. No trees shall be removed from a critical area, critical area buffer or geologic hazard areas unless determined to be nuisance or hazardous trees. Any tree removal shall be authorized in advance through a tree removal permit unless emergency tree removal is warranted per KZC 95.20.1;
 - b. Hazard or nuisance trees in critical areas and their buffers shall be removed in a manner that creates a wildlife snag;
 - c. If creation of a snag is not feasible, then the felled tree shall be left in place unless the Planning Official approves tree removal in writing; and
 - d. The removal of any tree in a critical area shall be replaced with one (1) to three (3) native tree species at a minimum height of six (6) feet depending on the size, quality and species of removed tree. The Planning Official shall determine the location and required number of replacement trees.
 - 3) The removal of any tree in the Holmes Point Overlay Zone requires the planting of a native tree of a minimum of six (6) feet in height in close proximity to where the removed tree was located. Selection of native species and timing of installation shall be approved by the Planning Official.

Commented [DP10]: Update #72. Clearly denote limited tree removal in critical areas in KZC 95.23, edit the language in KZC 90.135.

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4) PublicStreet Trees. PublicStreet trees may only be removed if determined to be a hazard or nuisance. If the removal request is for publicstreet trees, including trees in rights of way, parks and other City facilities, the appropriate DepartmentPublic-Works Official may consider whether the tree(s) are now, or may be in the future, part of the City's plans for the right-of-way or other capital projects. The City shall require a one-for-one tree replacement in a suitable location.

e. Forest Management Plan.

1) A Forest Management Plan must be submitted for developed, significantly wooded sites (over 40 percent canopy coverage) of at least 35,000 square feet in size in which removal of more than two (2) trees is requested and is not exempt under KZC 95.20. A Forest Management Plan must be developed by a qualified professional and shall include the following:

- a) A site plan depicting the location of all significant trees (a survey identifying tree locations is not required) with a numbering system of the trees (with corresponding tags on trees in the field). The site plan shall include size (DBH), species, and condition of each tree;
- b) Identification of trees to be removed, including reasons for their removal and a description of low impact removal techniques pursuant to subsection (5)(e)(2) of this section;
- c) A reforestation plan that includes location, size, species, and timing of installation;

2) The following Forest Management Plan standards shall apply:

- a) Trees to remain should be dominant or co-dominant in the stand, healthy and windfirm.
- b) No removal of trees from critical areas and their buffers, unless otherwise permitted by this chapter.
- c) No removal of specimen trees, unless otherwise permitted by this chapter.
- d) No removal of healthy trees that would cause trees on adjacent properties to become hazardous.
- e) The reforestation plan ensures perpetuity of the wooded areas. The size of planted trees for reforestation shall be a minimum of three (3) feet tall.
- f) Logging operations shall be conducted so as to expose the smallest practical area of soil to erosion for the least possible time. To control erosion, native shrubs, ground cover and stumps shall be retained where feasible. Where not feasible, appropriate erosion control measures to be approved by the City shall be implemented.
- g) Removal of tree debris shall be done pursuant to Kirkland Fire Department standards.
- h) Recommended maintenance prescription for retained trees with a specific timeline for such management.

(Ord. 4551 § 4, 2017; Ord. 4491 § 3, 2015; Ord. 4437 § 1, 2014; Ord. 4408 § 1, 2013; Ord. 4372 § 1, 2012; Ord. 4238 § 2, 2010)

95.25 Sustainable Site Development

All activities regulated by this chapter shall be performed in compliance with the applicable standards contained in this chapter, unless the applicant demonstrates that alternate measures or procedures will be equal or superior to the provisions of this chapter in accomplishing the purpose and intent of this chapter as described in KZC 95.05.

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Applicants requesting alternative compliance shall submit a site assessment report prepared by a qualified professional detailing how the proposed alternative measures will be equal or superior to the benefits provided by the established trees to be removed. Qualifying projects shall implement sustainable site development strategies throughout the construction process as well as contain measurable performance standards for the techniques used. Examples of sustainable site development include building placement with minimal site impact, habitat protection, water conservation, heat island reduction, storm water flow runoff control and water quality, and utilization of the site's natural services such as solar and wind. Guidance may include Low Impact Development (LID) standards within the Public Works Pre-Approved Plans and Policies, Kirkland Municipal Code 15.52 and King County Stormwater Manual. Qualifying sustainability certifications include, but are not limited to, International Living Futures Institute (ILFI) Living Building Challenge, Leadership in Energy and Environmental Design (LEED), Built Green Net Zero, Salmon Safe, ILFI Net Zero or Passive House programs that will be equal or superior to the provisions of KZC 95. Requests to use alternative measures and procedures shall be reviewed by the Planning Official, who may approve, approve with conditions, or deny the request.

Commented [DP11]: Update #43. Reference Low Impact Development/current green building standards

(Ord. 4238 § 2, 2010; Ord. 4010 § 2, 2005)

95.30 Tree Retention Associated with Development Activity

1. Introduction. The City's objective is to retain as many viable trees as possible on a developing site while still allowing the development proposal to move forward in a timely manner. To that end, the City requires approval of a tree retention plan in conjunction with all development permits resulting in site disturbance and for any tree removal on developed sites not exempted by KZC 95.20. This section includes provisions that ~~require~~ allow development standards to be modified in order to retain viable significant trees.

In order to make better decisions about tree retention, particularly during all stages of development, tree retention plans will require specific information about the existing trees before removal is allowed. Specific tree retention plan review standards provided in this section establish tree retention priorities, incentives, and variations to development standards in order to facilitate preservation of viable trees.

A ~~minimum~~ tree density approach is being used ~~in combination with retention priorities~~ to retain as many viable trees as possible with new development activity. The requirement to meet ~~or exceed a minimum~~ tree density ~~esy~~ applies to new single-family homes, cottages, carriage units, two/three-unit homes, and new residential subdivisions and short subdivisions. If such a site falls below the ~~required minimum~~ density with existing trees, supplemental planting is required. A tree density for existing trees to be retained is calculated to see if new trees are required in order to meet the ~~required minimum~~ density for the entire site. ~~Tree densities per KZC 95.33, Tree Density Requirements, may be exceeded to retain Landmark, Exceptional and Grove trees.~~ Supplemental tree location priority is set as well as minimum size of supplemental trees to meet the required tree density.

Commented [DP12]: Update #60. Develop clear, streamlined and predictable tree retention/replanting requirements
Update #64. Clearly designate trees of merit.

Priorities for retention are assessed in subsection 3 of this section. The importance of effective protection of retained trees during construction is emphasized with specific protection standards in the last part of this section. These standards must be adhered to and included on demolition, grading and building plans as necessary.

Properties within jurisdiction of the Shoreline Management Act are subject to additional tree retention and protection regulations as set forth in Chapter 83 KZC.

Properties within the Holmes Point Overlay zone are subject to additional tree retention and protection regulations as set forth in Chapter 70 KZC.

2. Tree Retention Plan ~~Submittal~~Required. An applicant for a development permit must submit a tree retention plan that complies with this section. A qualified professional may be required to prepare certain ~~elementse~~components of a tree retention plan at the applicant's expense. If proposed development activities call for more than one (1) tree retention plan ~~elemente~~component, the more stringent tree retention plan ~~requirementse~~component shall apply; provided, that the Planning Official may require a combination of tree plan ~~elementse~~components based on the nature of the proposed development activities. If the proposed activity is not

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clearly identified in this chapter, the Planning Official shall determine the appropriate tree retention plan requirements.

The chart in subsection (5) of this section sets forth the tree retention plan requirements for development activities and associated tree removal. Applicants for development are encouraged to confer with City staff as early in the design process as possible so that the applicable tree planting and retention concepts can be incorporated into the design of the subject property. The Planning Official may waive an ~~element component~~ of the tree retention plan if the Planning Official determines that the information is not necessary.

3. **Tree Retention Plan Review.** Any proposed development of the subject property requiring approval through a building permit, land surface modification permit, and/or demolition permit, or Design Review, Process I, IIA or IIB, described in Chapters 142, 145, 150 and 152 KZC respectively, shall include a tree retention plan to be considered as part of that process.

Commented [DP13]: Updates #34, 64, 72. Clearly designate trees of merit, clearly define the location of retained trees.

Based on the ~~Tree Retention Plan~~ information submitted by the applicant and the Planning Official's evaluation of the trees relative to the proposed development on the subject property, the Planning Official shall designate each tree as **Landmark, Exceptional or Grove having a high, moderate, or low retention value** as defined in KZC 95.10, Definitions, for application towards the regulations in this chapter.

Tree retention efforts shall be directed to the following trees if they are determined to be healthy and windfirm by a qualified professional, and provided the trees can be safely retained when pursuing alternatives to development standards pursuant to KZC 95.32. ~~Site improvements shall be designed and constructed to protect the following trees. Trees located in required yards and/or required landscape areas shall be retained in the following order of priority:~~

Priority 1	a. Landmark trees;
	b. Tree groves and associated vegetation that are to be set aside as preserved groves pursuant to KZC 95.51(3);
	c. Trees in critical areas per KZC 90 and geologic hazard areas per KZC 85 slopes of at least 10 percent;
Priority 2	d. Exceptional trees;
Priority 3	e. Trees that are a part of a grove that extend onto adjacent property, such as in a public park, open space, critical area buffer or otherwise preserved group of trees on adjacent private property. If significant trees must be removed in these situations, an adequate buffer of trees may be required to be retained or planted on the edge of the remaining grove to help stabilize;
Priority 4	f. Landmark, Exceptional and grove trees located outside required yards and/or required landscape areas, provided the trees can be safely retained when pursuing alternatives to development standards pursuant to KZC 95.32

Commented [DP14]: Update #70. Clearly define and prioritize trees worthy of retention.

4. **Tree Retention Plan ~~Elements~~Components.** The tree retention plan shall contain the following information as specified in the chart in subsection (5) of this section, unless waived by the Planning Official:

- a. A tree inventory ~~with~~containing the following:
 - 1) A numbering system of all existing significant trees on the subject property (~~with~~ corresponding to tags on trees); ~~4) The inventory must also include significant trees on adjacent property with Critical Root Zones (CRZ) with driplines extending onto over the subject property line;~~
 - 2) ~~The~~ Critical Root Zone (CRZ) and the proposed Limits of Disturbance (LOD) distances in feet of all existing significant trees (including ~~the proposed~~ LODs of ~~potentially impacted~~ off-site significant trees);
 - 3) Size (DBH);

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- 4) Proposed tree status (trees to be removed or retained);
 - 5) Brief general health or condition rating of these trees (i.e.: poor, fair, good, very good, excellent, etc.);
 - 6) Tree ~~type or~~ species and/or common name.
- b. A site plan ~~showing~~depicting the following:
- 1) Location of all proposed improvements, including building footprint, access, utilities, applicable setbacks, buffers, and required landscaped areas clearly identified. ~~If a short plat or subdivision is being proposed and the location of all proposed improvements cannot be established, a phased tree retention plan review is required as described in subsection (6)(a) of this section;~~
 - 2) Accurate location of significant trees on the subject property (surveyed locations may be required). The site plan must also ~~show~~include the approximate trunk location ~~and critical root zone of~~ potentially impacted significant trees that are on adjacent properties ~~with driplines extending over the subject property line;~~
 - 3) Trees labeled corresponding to the tree inventory numbering system;
 - ~~4) Location of tree protection measures;~~
 - 5) ~~Indicate the limits of disturbance-Critical Root Zones~~ drawn to scale around all trees potentially impacted by site disturbances resulting from grading, demolition, or construction activities (including ~~approximate LOD of all potentially impacted off-site trees with overhanging driplines;~~
 - x) Proposed location of tree protection fence, the Limits of Disturbance, with distances from the trunk to the fence noted in the site plan;
 - 6) ~~Proposed tree status (Trees proposed to be removed, or retained)~~ noted by an 'X' or by ghosting out;
 - 7) Proposed locations of any supplemental trees ~~and any required trees in order~~ to meet tree density credits or minimum number of trees as outlined in KZC 95.33.
- c. An arborist report ~~with~~containing the following:
- 1) A complete description of each tree's health, condition, and viability (~~including off-site trees that may be potentially impacted by site disturbances;~~
 - 2) A description of the method(s) used to determine the ~~L~~Limits of ~~d~~disturbance (i.e., ~~C~~Critical ~~R~~Root ~~Z~~Zone ~~formula~~, root plate diameter, exploratory root excavations or a case-by-case basis description for individual trees);
 - 3) Any special instructions specifically outlining any work proposed within the ~~Critical Root Zone limits of the disturbance protection area~~ (i.e., hand-digging, tunneling, root pruning, any grade changes, clearing, monitoring, and aftercare), including any disturbance proposed within the Inner Critical Root Zone of offsite trees;
 - 4) For trees not viable for retention, a description of the reason(s) for removal based on poor health, high risk of failure due to structure, defects, unavoidable isolation (windfirmness), or unsuitability of species, etc., and for which no reasonable alternative action is possible must be given (pruning, cabling, etc.);
 - 5) Describe the impact of necessary tree removal to the remaining trees, including those in a grove or on adjacent properties;
 - 6) For development applications, a ~~description~~discussion of project sequencing related to the timing and installation of tree protection measures, including landscaping and other activity within the Critical Root

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Zone of retained trees that must include fencing and be in accordance with the tree protection standards as outlined in KZC 95.34; and

7) The suggested location and species of supplemental trees to be used when required. The report shall include planting and maintenance specifications pursuant to KZC 95.50 and 95.51.

5. Tree Retention Plan Requirements. The applicant shall submit a Tree Retention Plan that includes the elements/components identified in the following chart based on the proposed development activity.

Commented [DP15]: Updates #64, 72. Clearly designate trees of merit.

TREE RETENTION PLAN

Development Activity	Minor ⁽¹⁾⁽³⁾ – Single-Family, or two attached, detached, or stacked dwelling units, and related demolition and land surface modification applications	Major ⁽²⁾⁽³⁾ Single-Family, or two attached, detached, or stacked dwelling units, and related demolition and land surface modification applications	Multifamily, Commercial, any other use other than residential, and related demolition and land surface modification applications	Short Plat, Subdivisions, cottages, carriage units, two/three-unit homes, and related demolition and land surface modification applications (see KZC 95.30(6)(a), Phased Review , for additional standards)
Required Components				
TREE INVENTORY AS DESCRIBED IN KZC 95.30(4)(a) FOR:				
All significant trees on the subject property		X	X	X
Significant trees potentially impacted by proposed development activity	X			
SITE PLAN AS DESCRIBED IN KZC 95.30(4)(b) TO INCLUDE:				
Accurate tree locations, survey may be required –Surveyed tree locations if required by the Planning Official		X	X	X
Surveyed tree locations				X
A final landscape plan showing retained trees			X	
REQUIREMENTS IN KZC 95.30(4)(c) SHALL BE PREPARED BY A QUALIFIED PROFESSIONAL AND APPLY TO:				
Significant trees within required yards or within 10 feet of any side property line		X	X	X
Significant trees, <u>including trees on neighboring properties</u> potentially impacted by proposed development activity as determined by the Planning Official	X	X	X	X
Proposed removal of <u>Landmark, Exceptional and Grove trees with a high-retention value</u> in required yards and required landscaping areas	X	X	X	X
All significant trees				X
TREE RETENTION STANDARDS				
Applicant is encouraged to retain viable trees	X ⁽⁴⁾			
Retain and protect <u>Landmark and Exceptional trees located in required yards with a high-retention value to the maximum extent possible provided the trees can be safely retained when pursuing alternatives to development standards pursuant to KZC 95.32</u>		X ⁽⁴⁾	X ⁽⁴⁾	X ⁽⁴⁾

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Development Activity	Minor ⁽¹⁾⁽³⁾ – Single-Family, or two attached, detached, or stacked dwelling units, and related demolition and land surface modification applications	Major ⁽²⁾⁽³⁾ Single-Family, or two attached, detached, or stacked dwelling units, and related demolition and land surface modification applications	Multifamily, Commercial, any other use other than residential, and related demolition and land surface modification applications	Short Plat, Subdivisions, cottages, carriage units, two/three-unit homes, and related demolition and land surface modification applications (see KZC 95.30(6) (a) ; Phased-Review , for additional standards)
Required Components				
Retain and protect Grove trees located in required yards provided the trees can be safely retained when pursuing alternatives to development standards pursuant to KZC 95.32		X	X	X
Retain and protect all other viable trees with a moderate retention value if feasible		X	X	X
Preservation and maintenance agreements pursuant to KZC 95.51 are required for all remaining trees on the subject property	X	X	X	X ⁽⁵⁾
TREE DENSITY				
Tree density requirements shall apply as required in KZC 95.33		X		X
A minimum of two trees must be on the lot following the requirement set forth in KZC 95.33(4)	X			
LANDSCAPING PER ZONING/LAND USE				
Preserved trees in required landscaping areas shall apply toward required landscaping requirements			X	

(1) Applicable when new development, redevelopment, or development in which the total square footage of the proposed improvements is less than 50 percent of the total square footage of the existing improvements on the subject property.

(2) Applicable when new development, redevelopment, or development in which the total square footage of the proposed improvements is more than 50 percent of the total square footage of the existing improvements on the subject property.

(3) For lots created through a short subdivision, subdivision, or planned unit development with an approved Tree Retention Plan, the applicant must comply with the Tree Retention Plan approved with the short subdivision, subdivision, or planned unit development. **unless subsection (6)(a) of this section, Phased Review, applies.**

(4) To retain **Landmark, Exceptional and Grove trees located in required yards with a high retention value**, the applicant shall pursue, **where feasible**, applicable variations in the development standards of this code as outlined in KZC 95.32.

(5) Prior to short plat or subdivision recording.

(x) Proposed tree removal for the installation of renewable energy system hardware such as solar panels or wind turbines shall be reviewed by the Planning Official with the associated electrical permit.

Commented [DP16]: Update #71. Address potential conflicts with renewable energy systems.

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6. ~~Additional Tree Retention Plan Standards for Short Plats and Subdivisions – Integrated Development Plan and Modifications. Tree retention decisions made early in the short plat and subdivision design process results in predictable development sequencing and effective tree retention. For~~

a. ~~Tree Retention Plans approved during the short plat or subdivision review process that shall establish the location of all proposed improvements, including the building footprint, utilities, changes to existing grade and access roads. a modification to the Tree Retention Plan may be approved as follows:~~

a. ~~Phased Review:~~

1) ~~If during the short plat or subdivision review process the location of all proposed improvements, including the building footprint, utilities, and access, was not able to be established, the applicant may submit a Tree Retention Plan that addresses trees only affected by the known improvements at the time of application. Tree removal shall be limited to those affected areas.~~

2) ~~A new Tree Retention Plan shall be required at each subsequent phase of the project as more information about the location of the proposed improvements is known subject to all of the requirements in this section.~~

3) ~~Phased review of Tree Retention Plans is not permitted in the Holmes Point Overlay zone. In the HPO zone, subdivision or short plat applications shall provide a comprehensive review of Tree Retention Plans as outlined in subsections (2) through (5) of this section.~~

Modifications after Tree Removal. A modification request is required to remove trees previously identified for retention in the original short plat or subdivision Tree Retention Plan. Such a request may be approved by the Hearing Examiner only if the following are met:

- x) The need for the modification was not known and could not reasonably have been known before the tree retention plan was approved;
- x) The modification is necessary because of special circumstances which are not the result of actions by the applicant regarding the size, shape, topography, or other physical limitations of the subject property relative to the location of proposed and/or existing improvements on or adjacent to the subject property;
- x) There is no practicable or feasible alternative development proposal that results in fewer additional tree removals;
- x) The Hearing Examiner shall not approve or deny a modification pursuant to this section without the Planning Official first providing notice of the modification request consistent with the noticing requirements for the short plat and providing opportunity for comments for consideration by the Hearing Examiner; and
- x) Said comment period shall not be less than 14 calendar days.

x) **The fee for processing a modification request shall be established by City ordinance**

1) ~~Modification—General. The Planning Official may approve minor modifications to the approved Tree Retention Plan in which the minimum tree density credits associated with trees identified for retention are not decreased.~~

2) ~~Modification Prior to Tree Removal. The Planning Official may approve a modification request to decrease the minimum number of tree density credits associated with trees previously identified for retention if:~~

a) ~~Trees inventoried in the original Tree Retention Plan have not yet been removed; and~~

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- ~~b) The Planning Official shall not approve or deny a modification pursuant to this section without first providing notice of the modification request consistent with the noticing requirements for the short plat.~~
- ~~3) Modification after Tree Removal. A modification request is required to decrease the minimum number of tree density credits associated with trees previously identified for retention after which trees inventoried in the original Tree Retention Plan have already been removed. Such a request may be approved by the Hearing Examiner only if the following are met:~~
 - ~~a) The need for the modification was not known and could not reasonably have been known before the tree retention plan was approved;~~
 - ~~b) The modification is necessary because of special circumstances which are not the result of actions by the applicant regarding the size, shape, topography, or other physical limitations of the subject property relative to the location of proposed and/or existing improvements on or adjacent to the subject property;~~
 - ~~c) There is no practicable or feasible alternative development proposal that results in fewer additional tree removals;~~
 - ~~d) The Hearing Examiner shall not approve or deny a modification pursuant to this section without the Planning Official first providing notice of the modification request consistent with the noticing requirements for the short plat and providing opportunity for comments for consideration by the Hearing Examiner; and~~
 - ~~e) Said comment period shall not be less than 14 calendar days.~~

(Ord. 4619 § 1, 2017; Ord. 4437 § 1, 2014; Ord. 4252 § 1, 2010; Ord. 4238 § 2, 2010; Ord. 4010 § 2, 2005)

95.32 Incentives and Variations to Development Standards to Retain Trees

In order to retain trees, the applicant ~~should~~ shall pursue provisions in Kirkland’s codes that allow development standards to be modified to retain Landmark, Exceptional and grove trees on development sites.

Requirements of the Kirkland Zoning Code may be modified by the Planning Official as outlined below when such modifications would further the purpose and intent of this chapter as set forth in KZC 95.05 and would involve Landmark, Exceptional and Grove trees with a high or moderate retention value.

1. Variations (*moved from below*). ~~In addition to the variations described above,~~ The Planning Official is authorized to require site plan alterations to retain Landmark, Exceptional and Grove trees with a high retention value. Such alterations include minor adjustments to the location of building footprints, adjustments to the location of driveways and access ways, or adjustment to the location of walkways, easements or utilities. The applicant must provide alternative design, method or material options for tree retention such as pin or pier foundations, hydro-boring, cantilevering, etc. The Planning Official and the applicant shall work in good faith to find reasonable solutions

2. Required Yards (*moved*). Initially, the applicant shall pursue options for placement of required yards as permitted by other sections of this code, such as selecting one (1) front required yard in the RSX zone and adjusting side yards in any zone to meet the 15-foot total as needed for each structure on the site. The Planning Official may also reduce the front, side or rear required yards; provided, that:

- a. No required side yard shall be less than five (5) feet; and
- b. The required front yard shall not be reduced by more than five (5) feet in residential zones. There shall not be an additional five (5) feet of reduction beyond the allowance provided for covered entry porches;
- c. Rear yards that are not directly adjacent to another parcel’s rear yard but that are adjacent to an access easement or tract may be reduced by five (5) feet;
- d. No required yard shall be reduced by more than five (5) feet in residential zones.

Commented [DP17]: Update #60. Develop clear, streamlined and predictable tree retention/replanting requirements

Commented [DP18]: Updates #64, 72. Clearly designate trees of merit.

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3. Common Recreational Open Space. Reductions or variations of the area, width, or composition of required common recreational open space may be granted to retain Landmark, Exceptional and Grove trees.
4. Parking Areas and Access. Variations in parking lot design and/or access driveway requirements may be granted when the Public Works and Planning Officials both determine the variations to be consistent with the intent of City policies and codes.
5. Storm Water. Requirements pertaining to stormwater may be varied if approved by the Public Works Official under KMC 15.52.060.
6. Additional Variations. Examples include but are not limited to number of parking stalls, right-of-way improvements, lot size reduction under Chapter 22.28 KMC, lot line placement when subdividing property under KMC Title 22, Planned Unit Developments, and required landscaping, including buffers for lands use and parking/driving areas. *(moved from above)*

(Ord. 4547 § 1, 2016; Ord. 4350 § 1, 2012; Ord. 4238 § 2, 2010)

95.33 Tree Density Requirement

The required minimum tree density is ~~40~~ tree credits per acre for single-family homes, cottages, carriage units, two/three-unit homes, short plats, and/or subdivisions and associated demolition and land surface modification *(moved)*. The tree density shall consist of existing Landmark, Exceptional and Grove trees, supplemental trees or a combination of existing and supplemental trees pursuant to subsection (2) of this section. ~~The tree densities set forth in subsection 2 of this section may be exceeded to retain existing Landmark, Exceptional and Grove trees. When the provisions of this chapter are in conflict, that provision which provides more protection for individual trees and trees in groves shall apply unless specifically provided otherwise in this chapter or unless such provision conflicts with federal or state laws or regulations.~~

Commented [DP19]: Update #77. Increase tree credit requirements city-wide.

~~For individual lots in a short subdivision or subdivision with an approved Tree Retention Plan, the tree density shall be calculated for each lot within the short plat or subdivision. The tree density may consist of existing trees pursuant to the tree's retention value, supplemental trees or a combination of existing and supplemental trees pursuant to subsection (2) of this section. Existing trees transplanted to an area on the same site shall not count toward the required density unless approved by the Urban Forester based on transplant specifications provided by a qualified professional that will ensure a good probability for survival.~~

~~1. Tree Density Calculation. In calculating tree density credits, tree credits shall may be rounded up to the next whole number from a 0.5 or greater value. For the purpose of calculating required minimum tree density, public right of way, areas to be dedicated as public right of way, and vehicular access easements not included as lot area with the approved short plat shall be excluded from the area used for calculation of tree density.~~

1. Tree Density Calculation. Tree density calculation for existing individual trees:
 - a. Diameter breast height (DBH) of the tree shall be measured in inches.
 - b. The tree credit value that corresponds with DBH shall be found in Table 95.33.1. Existing native conifers (or other conifer species as approved by the ~~Planning Official~~ Urban Forester) shall count 1.5 times credits for retention.
 - c. Trees located in the public right of way, areas to be dedicated as public right of way, and vehicular access easements not included as lot area with the approved short plat shall not count towards tree density credit requirements *(moved)*.
 - d. Existing trees transplanted to an area on the same site shall not count toward the required density unless approved by the Planning Official based on transplant specifications provided by a qualified professional that will ensure a good probability for survival *(moved)*.

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e. The total resulting tree density credits on a lot shall result from retained existing trees, supplemental trees, or a combination of the two. For individual lots in a short subdivision or subdivision with an approved Tree Retention Plan, the required tree density applies to each lot within the short plat or subdivision (*moved*).

**Table 95.33.1
 Tree Density Credits for Existing Significant Trees**

(Credits per minimum diameter – DBH)

DBH	Tree Credits	DBH	Tree Credits
6 – 10"	1	24"	8
12"	2	26"	9
14"	3	28"	10
16"	4	30" or greater	11
18"	5		
20"	6		
22"	7		

Commented [DP20]: Update #40. Establish a cap for tree density credits

2. To calculate tree density credits, the square foot area of the subject lot is divided by 43,560, the square foot equivalent to one acre. The resulting number is then multiplied by 40, the minimum tree density credit requirement for one acre. In calculating tree density credits, tree credits shall be rounded up to the next whole number from a 0.5 or greater value (*moved*).

Example: an 8,500-square-foot lot would need eight (8) tree credits ($8,500/43,560 = 0.195 \times 40 = 7.8$, or eight (8) credits). The tree density for the lot could be met by retaining two (2s) existing 14-inch deciduous trees and one (1) existing 12-inch deciduous tree on site. The same 8,500-square-foot lot would meet the required eight (8) tree credits by retaining one (1) existing 20-inch conifer.

3. Supplemental Trees Planted to Meet Minimum Density Requirement. For sites and activities requiring a minimum tree density and where the existing trees to be retained do not meet the minimum tree density requirement, supplemental trees shall be planted to achieve the required minimum tree density.

4. Minimum Size and Tree Density Value for Supplemental Trees. The required minimum size of the supplemental tree worth one (1) tree credit shall be six (6) feet tall for Thuja/Arborvitae or four (4) feet tall for native or other conifers and 2-inch caliper for deciduous or broad-leaf evergreen tree. Additional credits may be awarded for larger supplemental trees. Supplemental Thuja/Arborvitae or other slow-growing conifers such as Hinoki cypress planted on development sites shall not count towards tree density credits on a lot. The installation and maintenance shall be pursuant to KZC 95.50 and 95.51 respectively.

Commented [DP21]: Update #55. Limit credits awarded for arborvitae.

5. Tree Location. In designing a development and in meeting the required minimum tree density, the trees shall be planted pursuant to KZC 95.50 in the following order of priority:

- a. On-Site. The preferred locations for new trees are:
 - 1) On individual residential building lots (*reprioritized*)
 - 2) In preserved groves, critical areas or their buffers.
 - 3) Adjacent to storm water facilities as approved by Public Works under KMC 15.52.060.

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- 4) Site perimeter – The area of the subject property that is within 10 feet from the property line.
- 5) Entrance landscaping, traffic islands and other common areas with the development of ~~in~~ residential subdivisions.
 - b. Off-Site. When room is unavailable for planting the required trees on site, then they may be planted at another approved location in the City. Trees that are planted offsite from the subject property may be required to be preserved in perpetuity.
 - c. Payment in Lieu of Planting City Forestry Account. When the Planning Official determines on-site and off-site locations are unavailable, then the applicant shall pay an amount of money in lieu of planting, utilizing the most recent version of the Pacific Northwest International Society of Arboriculture (PNW ISA) "Species Ratings for Landscape Tree Appraisal" unit cost of \$480 per conifer or \$390 per deciduous tree, multiplied by the number of required tree credits approximating the current market value of the supplemental trees into the City ~~F~~forestry ~~A~~account.

(Ord. 4547 § 1, 2016; Ord. 4238 § 2, 2010)

95.34 Tree and Soil Protection during Development Activity

Prior to development activity or initiating tree removal on the site, vegetated areas, individual trees and soil to be preserved shall be protected from potentially damaging activities during development activity per ISA and ANSI standards for tree protection as follows pursuant to the following standards:

- x. Tree Cutting in Advance of Issuance of Land Development Permit. There shall be no tree removal or land clearing on any site for the sake of preparing that site for future development.
- 1. Placing Materials near Trees. No person may conduct any activity within the protected area of any tree designated to remain, including, but not limited to, operating or parking equipment, placing solvents, storing building material or stockpiling any materials, or dumping concrete washout or other chemicals. During construction, no person shall attach any object to any tree designated for protection.
- 2. Tree Protection Fence~~Protective Barrier~~. Before development, land clearing, filling or any land alteration, the applicant shall:
 - a. Erect and maintain immovable, readily visible temporary protective tree fencing at along the approved ~~L~~imits of Disturbance which completely surrounds the protected area of all retained trees, groups of trees, vegetation and native soil. Fences shall be constructed of chain link and be at least six (6) feet high, unless other type of fencing is authorized by the Planning Official.
 - b. Install highly visible signs spaced no further than 15 feet along the entirety of the Tree Protection Fence~~protective tree fence~~. Said sign must be approved by the Planning Official and shall state at a minimum "Tree and Soil Protection Area, Entrance Prohibited" and provide the City phone number for code enforcement to report violations.
- x. Site plans showing approved tree retention/protection shall be displayed on development sites in plain view with the general contractor or other responsible party's phone number.
- c. Prohibit excavation or compaction of soil or other potentially damaging activities within the fencebarriers; provided, that the Planning Official may allow such activities approved by a qualified professional and under the supervision of a qualified professional retained and paid for by the applicant.
- x. If any disturbance is proposed within the Inner Critical Root Zone of significant trees on a neighboring property, the applicant shall provide evidence that the owner of said tree(s) has been notified in writing of the potential impact. The Planning Official may waive this requirement if the applicant's arborist can demonstrate, through non-injurious methods such as pneumatic root excavations, that there are no roots within the Inner Critical Root Zone.

Commented [DP22]: Update #61. Clarify language regarding fees in lieu of planting new trees.

Commented [DP23]: Updates #38, 56, 58, 59 – prevent preemptive girdling/tree removal done to intentionally avoid retention requirements with anticipated development.

Commented [DP24]: Updates #45, 46. Revise tree fence/sign standards

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- d. Maintain the ~~Tree Protection Fence~~ protective barriers in ~~its approved location place~~ for the duration of the project until the Planning Official authorizes ~~its~~ removal.
- e. Ensure that any approved landscaping done in the protected zone subsequent to the removal of the barriers shall be accomplished with machinery from outside the protected zone or by hand.
- f. In addition to the above, the Planning Official may require the following:
- 1) If equipment is authorized to operate within the ~~protected~~ Critical Root Zone, the soil ~~and critical root zone of a tree~~ must be covered with mulch to a depth of at least six (6) inches or with plywood, steel plates or similar material in order to protect roots and soil from damage caused by heavy equipment.
 - 2) Minimize root damage by hand-excavating a 2-foot-deep trench, at edge of Critical Root Zone, to cleanly sever the roots of trees to be retained. Never rip or shred roots with heavy equipment.
 - 3) Corrective pruning performed on protected trees in order to avoid damage from machinery or building activity.
 - 4) Maintenance of trees throughout construction period by watering and fertilizing.
3. Grade.
- a. The grade shall not be elevated or reduced within the Critical Root Zone of trees to be preserved without the Planning Official's authorization based on recommendations from a qualified professional. The Planning Official may allow coverage of up to one-half (1/2) of the area of the tree's Critical Root Zone with light soils (no clay) to the minimum depth necessary to carry out grading or landscaping plans, if it will not imperil the survival of the tree. Aeration devices may be required to ensure the tree's survival.
 - b. If the grade adjacent to a preserved tree is raised such that it could slough or erode into the tree's Critical Root Zone, it shall be permanently stabilized to prevent soil erosion and suffocation of the roots.
 - c. The applicant shall not install an impervious surface within the Critical Root Zone of any tree to be retained without the authorization of the Planning Official. The Planning Official may require specific construction methods and/or use of aeration devices to ensure the tree's survival and to minimize the potential for root-induced damage to the impervious surface.
 - d. To the greatest extent practical, utility trenches shall be located outside of the critical root zone of trees to be retained. The Planning Official may require that utilities be tunneled under the roots of trees to be retained if the Planning Official determines that trenching would significantly reduce the chances of the tree's survival.
 - e. Trees and other vegetation to be retained shall be protected from erosion and sedimentation. Clearing operations shall be conducted so as to expose the smallest practical area of soil to erosion for the least possible time. To control erosion, it is encouraged that shrubs, ground cover and stumps be maintained on the individual lots, where feasible.
4. Directional Felling. Directional felling of trees shall be used to avoid damage to trees designated for retention.
5. Additional Requirements. The Planning Official may require additional tree protection measures that are consistent with accepted urban forestry industry practices, including maintenance pursuant to KZC 9551.

(Ord. 4547 § 1, 2016; Ord. 4238 § 2, 2010)

95.40 Required Landscaping based on Zoning District

1. User Guide. Chapters 15 through 56 KZC containing the use zone or development standards tables assign a landscaping category to each use in each zone. This category is either "A," "B," "C," "D," or "E." If you do not know which landscaping category applies to the subject property, you should consult the appropriate use zone or development standards tables.

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Requirements pertaining to each landscaping category are located throughout this chapter, except that Landscaping Category E is not subject to this section.

Landscape Categories A, B, C, D, and E may be subject to additional related requirements in the following other chapters:

- a. Various use zone charts or development standards tables, in Chapters 15 through 56 KZC, establish additional or special buffering requirements for some uses in some zones.
 - b. Chapter 85 KZC, Geologically Hazardous Areas, addresses the retention of vegetation on steep slopes.
 - c. Chapter 90 KZC, Critical Areas, addresses vegetation within critical areas and critical area buffers.
 - d. Chapter 110 KZC and Chapter 19.36 KMC address vegetation within rights-of-way, except for the I-405 and SR-520 rights-of-way, and the Cross Kirkland Corridor railbanked rail corridor or the Eastside Rail Corridor.
 - e. KZC 115.135, Sight Distance at Intersections, which may limit the placement of landscaping in some areas.
 - f. Chapter 22 KMC addresses trees in subdivisions.
2. Use of Significant Existing Vegetation.
- a. General. The applicant shall apply subsection KZC 95.30(3), Tree Retention Plan Procedure, and KZC 95.32, Incentives and Variations to Development Standards, to retain existing native trees, vegetation and soil in areas subject to the landscaping standards of this section. The Planning Official shall give substantial weight to the retained native trees and vegetation when determining the applicant's compliance with this section.
 - b. Supplement. The City may require the applicant to plant trees, shrubs, and groundcover according to the requirements of this section to supplement the existing vegetation in order to provide a buffer at least as effective as the required buffer.
 - c. Protection Techniques. The applicant shall use the protection techniques described in KZC 95.34 to ensure the protection of significant existing vegetation and soil.
3. Landscape Plan Required. In addition to the Tree Retention Plan required pursuant to KZC 95.30, application materials shall clearly depict the quantity, location, species, and size of plant materials proposed to comply with the requirements of this section, and shall address the plant installation and maintenance requirements set forth in KZC 95.50 and 95.51. Plant materials shall be identified with both their scientific and common names. Any required irrigation system must also be shown.

(Ord. 4551 § 4, 2017; Ord. 4547 § 1, 2016; Ord. 4476 § 3, 2015; Ord. 4408 § 1, 2013; Ord. 4238 § 2, 2010; Ord. 4121 § 1, 2008; Ord. 4097 § 1, 2007; Ord. 4037 § 1, 2006; Ord. 4030 § 1, 2006; Ord. 4010 § 2, 2005)

95.41 Supplemental Plantings

1. General. The applicant shall provide the supplemental landscaping specified in subsection (2) of this section in any area of the subject property that:
 - a. Is not covered with a building, vehicle circulation area or other improvement; and
 - b. Is not a critical area, critical area buffer, or in an area to be planted with required landscaping; and
 - c. Is not committed to and being used for some specific purpose.
2. Standards. The applicant shall provide the following at a minimum:

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- a. Living plant material which will cover 80 percent of the area to be landscaped within two (2) years. If the material to be used does not spread over time, the applicant shall re-plant the entire area involved immediately. Any area that will not be covered with living plant material must be covered with nonliving groundcover, i.e.: mulch. Preference is given to using native plant species. See Kirkland Native Tree/Plant Lists.
- b. One (1) tree for each 1,000 square feet of area to be landscaped. At the time of planting, deciduous trees must be at least two (2) inches in caliper and coniferous trees must be at least five (5) feet in height, with preference to native species.
- c. If a development requires approval through Process I, IIA or IIB as described in Chapters 145, 150 and 152 KZC, respectively, the City may require additional vegetation to be planted along a building facade if:
 - 1) The building facade is more than 25 feet high or more than 50 feet long; or
 - 2) Additional landscaping is necessary to provide a visual break in the facade.
- d. In RHBD varieties of rose shrubs or ground cover along with other plant materials shall be included in the on-site landscaping.
- e. If development is subject to Design Review as described in Chapter 142 KZC, the City will review plant choice and specific plant location as part of the Design Review approval. The City may also require or permit modification to the required plant size as part of Design Review approval.

(Ord. 4547 § 1, 2016; Ord. 4238 § 2, 2010)

95.42 Minimum Land Use Buffer Requirements

The applicant shall comply with the provisions specified in the following chart and with all other applicable provisions of this chapter. Land use buffer requirements may apply to the subject property, depending on what permitted use exists on the adjoining property or, if no permitted use exists, depending on the zone that the adjoining property is in.

LANDSCAPING CATEGORY	ADJOINING PROPERTY	*Public park or low density residential use or if no permitted use exists on the adjoining property then a low density zone.	Medium or high density residential use or if no permitted use exists on the adjoining property then a medium density or high density zone.	Institutional or office use or if no permitted use exists on the adjoining property then an institutional or office zone.	A commercial use or an industrial use or if no permitted use exists on the adjoining property then a commercial or industrial zone.
A		Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (2) (Buffering Standard 2)	
B		Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (1) (Buffering Standard 1)		
C		Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (2) (Buffering Standard 2)		
D		Must comply with subsection (2) (Buffering Standard 2)			
E					
Footnotes:		*If the adjoining property is zoned Central Business District, Juanita Business District, North Rose Hill Business District, Rose Hill Business District, Finn Hill Neighborhood Center, Houghton/Everest Neighborhood Center, Business District Core or is located in TL 5, this section KZC 95.42 does not apply.			

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This chart establishes which buffering standard applies in a particular case. The following subsections establish the specific requirement for each standard:

1. For standard 1, the applicant shall provide a 15-foot-wide landscaped strip with a 6-foot-high solid screening fence or wall. Except for public utilities, the fence or wall must be placed on the outside edge of the land use buffer or on the property line when adjacent to private property. For public utilities, the fence or wall may be placed either on the outside or inside edge of the landscaping strip. A fence or wall is not required when the land use buffer is adjacent and parallel to a public right-of-way that is improved for vehicular use. See KZC 115.40 for additional fence standards. The land use buffer must be planted as follows:
 - a. Trees planted at the rate of one (1) tree per 20 linear feet of land use buffer, with deciduous trees of two and one-half (2-1/2) inch caliper, minimum, and/or coniferous trees eight (8) feet in height, minimum. At least 70 percent of trees shall be evergreen. The trees shall be distributed evenly throughout the buffer, spaced no more than 20 feet apart on center.
 - b. Large shrubs or a mix of shrubs planted to attain coverage of at least 60 percent of the land use buffer area within two (2) years, planted at the following sizes and spacing, depending on type:
 - 1) Low shrub – (mature size under three (3) feet tall), 1- or 2-gallon pot or balled and burlapped equivalent;
 - 2) Medium shrub – (mature size from three (3) to six (6) feet tall), 2- or 3-gallon pot or balled and burlapped equivalent;
 - 3) Large shrub – (mature size over six (6) feet tall), 5-gallon pot or balled and burlapped equivalent.
 - c. Living ground covers planted from either 4-inch pot with 12-inch spacing or 1-gallon pot with 18-inch spacing to cover within two (2) years 60 percent of the land use buffer not needed for viability of the shrubs or trees.
2. For standard 2, the applicant shall provide a 5-foot-wide landscaped strip with a 6-foot-high solid screening fence or wall. Except for public utilities, the fence or wall must be placed on the outside edge of the land use buffer or on the property line when adjacent to private property. For public utilities, the fence or wall may be placed either on the outside or inside edge of the landscaping strip. A fence or wall is not required when the land use buffer is adjacent and parallel to a public right-of-way that is improved for vehicular use. See KZC 115.40 for additional fence standards. The landscaped strip must be planted as follows:
 - a. One (1) row of trees planted no more than 10 feet apart on center along the entire length of the buffer, with deciduous trees of 2-inch caliper, minimum, and/or coniferous trees at least six (6) feet in height, minimum. At least 50 percent of the required trees shall be evergreen.
 - b. Living ground covers planted from either 4-inch pot with 12-inch spacing or 1-gallon pot with 18-inch spacing to cover within two (2) years 60 percent of the land use buffer not needed for viability of the trees.
3. Plant Standards. All plant materials used shall meet the most recent American Association of Nurserymen Standards for nursery stock: ANSI Z60.1.
4. Location of the Land Use Buffer. The applicant shall provide the required buffer along the entire common border between the subject property and the adjoining property.
5. Multiple Buffering Requirement. If the subject property borders more than one (1) adjoining property along the same property line, the applicant shall provide a gradual transition between different land use buffers. This transition must occur totally within the area which has the less stringent buffering requirement. The specific design of the transition must be approved by the City.

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6. Adjoining Property Containing Several Uses. If the adjoining property contains several permitted uses, the applicant may provide the least stringent land use buffer required for any of these uses.
7. Subject Property Containing Several Uses. If the subject property contains more than one (1) use, the applicant shall comply with the land use buffering requirement that pertains to the use within the most stringent landscaping category that abuts the property to be buffered.
8. Subject Property Containing School. If the subject property is occupied by a school, land use buffers are not required along property lines adjacent to a street.
9. Encroachment into Land Use Buffer. Typical incidental extensions of structures such as chimneys, bay windows, greenhouse windows, cornices, eaves, awnings, and canopies may be permitted in land use buffers as set forth in KZC 115.115(3)(d); provided, that:
 - a. Buffer planting standards are met; and
 - b. Required plantings will be able to attain full size and form typical to their species.

(Ord. 4637 § 3, 2018; Ord. 4636 § 3, 2018; Ord. 4495 § 2, 2015; Ord. 4238 § 2, 2010)

95.43 Outdoor Use, Activity, and Storage

Outdoor use, activity, and storage (KZC 115.105(2)) must comply with required land use buffers for the primary use, except that the following outdoor uses and activities, when located in commercial or industrial zones, are exempt from KZC 115.105(2)(c)(1) and (2)(c)(2) as stated below:

1. That portion of an outdoor use, activity, or storage area which abuts another outdoor use, activity, or storage area which is located on property zoned for commercial or industrial use.
2. Outdoor use, activity, and storage areas which are located adjacent to a fence or structure which is a minimum of six (6) feet above finished grade, and do not extend outward from the fence or structure more than five (5) feet; provided, that the total horizontal dimensions of these areas shall not exceed 50 percent of the length of the facade or fence (see Plate 11).
3. If there is an improved path or sidewalk in front of the outdoor storage area, the outdoor use, activity or storage area may extend beyond five (5) feet if a clearly defined walking path at least three (3) feet in width is maintained and there is adequate pedestrian access to and from the primary use. The total horizontal dimension of these areas shall not exceed 50 percent of the length of the facade of the structure or fence (see Plate 11).
4. Outdoor dining areas.
5. That portion of an outdoor display of vehicles for sale or lease which is adjacent to a public right-of-way that is improved for vehicular use; provided, that it meets the buffering standards for driving and parking areas in KZC 95.45(1); and provided further, that the exemptions of KZC 95.45(2) do not apply unless it is fully enclosed within or under a building, or is on top of a building and is at least one (1) story above finished grade.
6. Outdoor Christmas tree lots and fireworks stands if these uses will not exceed 30 days, and outdoor amusement rides, carnivals and circuses, and parking lot sales which are ancillary to the indoor sale of the same goods and services, if these uses will not exceed seven (7) days.

(Ord. 4547 § 1, 2016; Ord. 4238 § 2, 2010)

95.44 Internal Parking Lot Landscaping Requirements

The following internal parking lot landscape standards apply to each parking lot or portion thereof containing more than eight (8) parking stalls.

1. The parking lot must contain 25 square feet of landscaped area per parking stall planted as follows:

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- a. The applicant shall arrange the required landscaping throughout the parking lot to provide landscape islands or peninsulas to separate groups of parking spaces (generally every eight (8) stalls) from one another and each row of spaces from any adjacent driveway that runs perpendicular to the row. This island or peninsula must be surrounded by a 6-inch-high vertical curb and be of similar dimensions as the adjacent parking stalls. Gaps in curbs are allowed for stormwater runoff to enter landscape island.
 - b. Landscaping shall be installed pursuant to the following standards:
 - 1) At least one (1) deciduous tree, two (2) inches in caliper, or a coniferous tree five (5) feet in height.
 - 2) Groundcover shall be selected and planted to achieve 60 percent coverage within two (2) years.
 - 3) Natural drainage landscapes (such as rain gardens, bio-infiltration swales and bioretention planters) are allowed when designed in compliance with the stormwater design manual adopted in KMC 15.52.060. Internal parking lot landscaping requirements for trees still apply. Refer to Public Works Pre-Approved Plans.
 - c. Exception. The requirements of this subsection do not apply to any area that is fully enclosed within or under a building.
2. Rooftop Parking Landscaping. For a driving or parking area on the top level of a structure that is not within the CBD zone or within any zone that requires design regulation compliance, one (1) planter that is 30 inches deep and five (5) feet square must be provided for every eight (8) stalls on the top level of the structure. Each planter must contain a small tree or large shrub suited to the size of the container and the specific site conditions, including desiccating winds, and is clustered with other planters near driving ramps or stairways to maximize visual effect.
3. If development is subject to Design Review as described in Chapter 142 KZC, the City will review the parking area design, plant choice and specific plant location as part of the Design Review approval. The City may also require or permit modification to the required landscaping and design of the parking area as part of Design Review approval.

(Ord. 4547 § 1, 2016; Ord. 4350 § 1, 2012; Ord. 4238 § 2, 2010)

95.45 Perimeter Landscape Buffering for Driving and Parking Areas

1. Perimeter Buffering – General. Except as specified in subsection (2) of this section, the applicant shall buffer all parking areas and driveways from abutting rights-of-way and from adjacent property with a 5-foot-wide strip along the perimeter of the parking areas and driveways planted as follows (see Figure 95.45.A):
 - a. One (1) row of trees, two (2) inches in caliper and planted 30 feet on center along the entire length of the strip.
 - b. Living groundcover planted to attain coverage of at least 60 percent of the strip area within two (2) years.
 - c. Natural drainage landscapes (such as rain gardens, bio-infiltration swales and bioretention planters) are allowed when designed in compliance with the stormwater design manual adopted in KMC 15.52.060. Perimeter landscape buffering requirements for trees in driving and parking areas still apply. Refer to Public Works Pre-Approved Plans.
2. Exception. The requirements of this section do not apply to any parking area that:
 - a. Is fully enclosed within or under a building; or
 - b. Is on top of a building and is at least one (1) story above finished grade; or
 - c. Serves detached dwelling units exclusively; or
 - d. Is within any zone that requires design regulation compliance. See below for Design District requirements.

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3. Design Districts. If subject to Design Review, each side of a parking lot that abuts a street, through-block pathway or public park must be screened from that street, through-block pathway or public park by using one (1) or a combination of the following methods (see Figures 95.45.A, B, and C):
- a. By providing a landscape strip at least five (5) feet wide planted consistent with subsection (1) of this section, or in combination with the following. In the RHBD Regional Center (see KZC Figure 92.05.A) a 10-foot perimeter landscape strip along NE 85th Street is required planted consistent with subsection (1) of this section.
 - b. The hedge or wall must extend at least two (2) feet, six (6) inches, and not more than three (3) feet above the ground directly below it.
 - c. The wall may be constructed of masonry or concrete, if consistent with the provisions of KZC 92.35(1)(g), in building material, color and detail, or of wood if the design and materials match the building on the subject property.
 - d. In JBD zones:
 - 1) If the street is a pedestrian-oriented street, the wall may also include a continuous trellis or grillwork, at least five (5) feet in height above the ground, placed on top of or in front of the wall and planted with climbing vines. The trellis or grillwork may be constructed of masonry, steel, cast iron and/or wood.
 - 2) If the wall abuts a pedestrian-oriented street, the requirements of this subsection may be fulfilled by providing pedestrian weather protection along at least 80 percent of the frontage of the subject property.
 - e. If development is subject to Design Review as described in Chapter 142 KZC, the City will review plant choice and specific plant location as part of the Design Review approval. The City may also require or permit modification to the required plant size as part of Design Review approval.
4. Overlapping Requirements. If buffering is required in KZC 95.42, Land Use Buffering Standards, and by this subsection, the applicant shall utilize the more stringent buffering requirement.

Perimeter Parking Lot Landscaping

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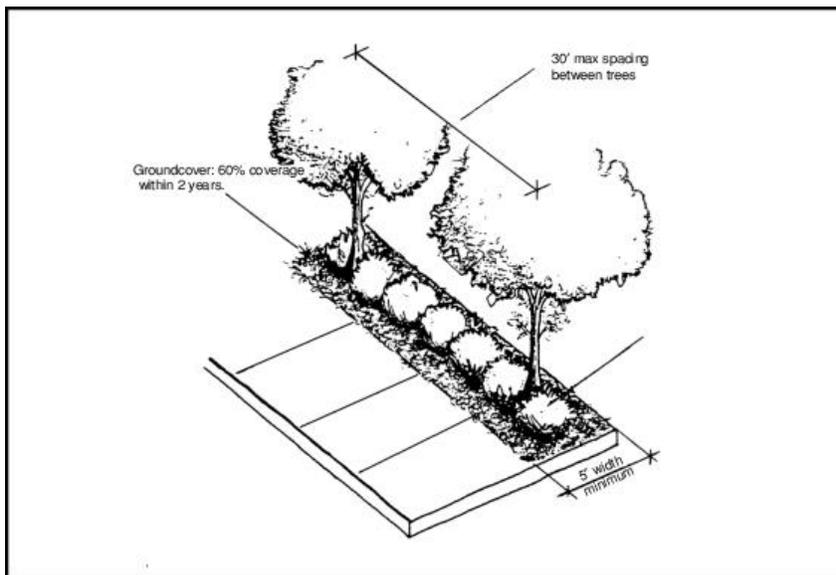


FIGURE 95.45.A

Perimeter Parking – Examples of Various Screen Wall Designs

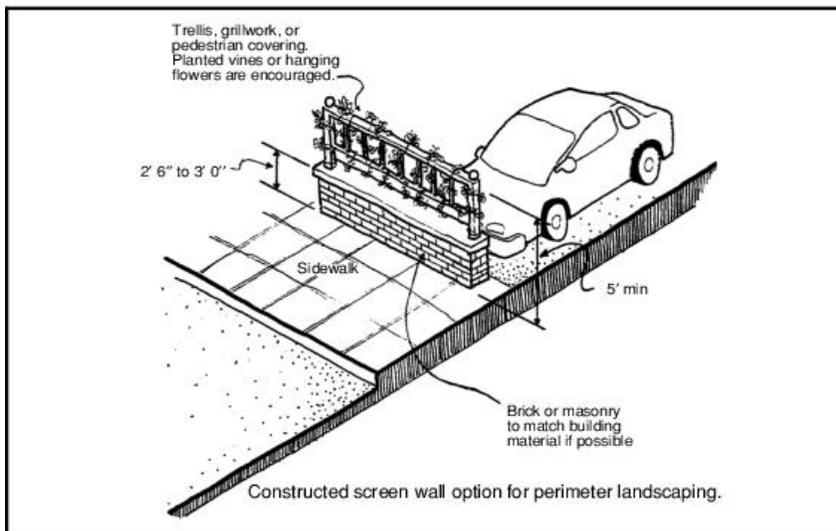


FIGURE 95.45.B

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Perimeter Parking – Examples of Various Screen Wall Designs

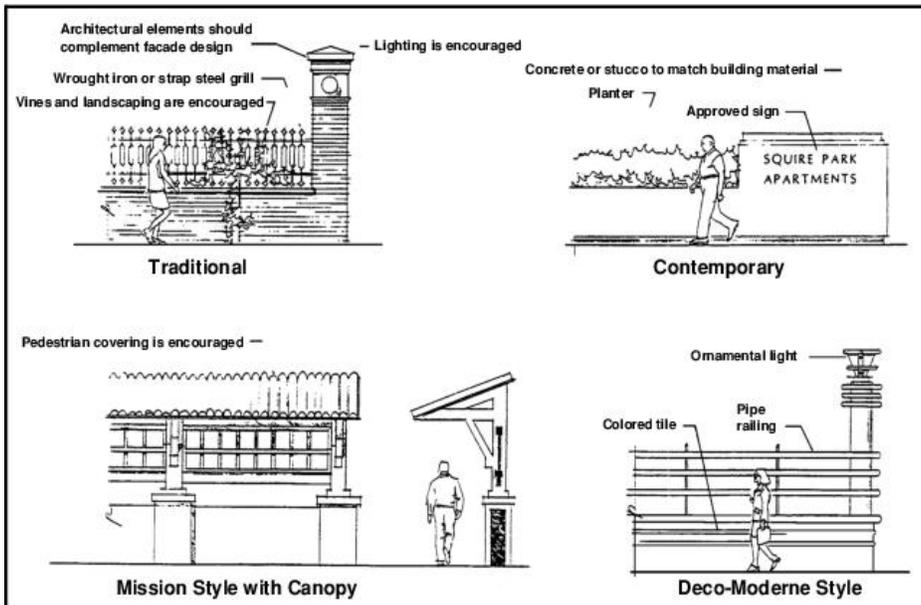


FIGURE 95.45.C

(Ord. 4547 § 1, 2016; Ord. 4238 § 2, 2010; Ord. 4010 § 2, 2005)

95.46 Modifications to Landscaping Standards

1. Modification to Land Use Buffer Requirements. The applicant may request a modification of the requirements of the buffering standards in KZC 95.42. The Planning Official may approve a modification if:

- a. The owner of the adjoining property agrees to this in writing; and
- b. The existing topography or other characteristics of the subject property or the adjoining property, or the distance of development from the neighboring property decreases or eliminates the need for buffering; or
- c. The modification will be more beneficial to the adjoining property than the required buffer by causing less impairment of view or sunlight; or
- d. The Planning Official determines that it is reasonable to anticipate that the adjoining property will be redeveloped in the foreseeable future to a use that would require no, or a less intensive, buffer; or
- e. The location of pre-existing improvements on the adjoining site eliminates the need or benefit of the required landscape buffer.

2. Modifications to General Landscaping Requirements.

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a. Authority to Grant and Duration. If the proposed development of the subject property requires approval through Design Review or Process I, IIA, or IIB, described in Chapters 142, 145, 150, and 152 KZC, respectively, a request for a modification will be considered as part of that process under the provisions of this section. The City must find that the applicant meets the applicable criteria listed in subsections (2)(b) and (2)(c) of this section. If granted under Design Review or Process I, IIA, or IIB, the modification is binding on the City for all development permits issued for that development under the building code within five (5) years of the granting of the modification.

If the above does not apply, the Planning Official may grant a modification in writing under the provisions of this section.

b. Internal Parking Lot Landscaping Modifications. For a modification to the internal parking lot landscaping requirements in KZC 95.44, the landscape requirements may be modified if:

- 1) The modification will produce a landscaping design in the parking area comparable or superior to that which would result from adherence to the adopted standard; or
- 2) The modification will result in increased retention of significant existing vegetation; or
- 3) The purpose of the modification is to accommodate low impact development techniques as approved by the Planning Official.

c. Perimeter parking lot and driveway landscaping. For a modification to the perimeter landscaping for parking lots and driveways, the buffering requirements for parking areas and driveways may be modified if:

- 1) The existing topography of or adjacent to the subject property decreases or eliminates the need for visual screening; or
- 2) The modification will be of more benefit to the adjoining property by causing less impairment of view or sunlight; or
- 3) The modification will provide a visual screen that is comparable or superior to the buffer required by KZC 95.45; or
- 4) The modification eliminates the portion of the buffer that would divide a shared parking area serving two (2) or more adjacent uses, but provides the buffer around the perimeter of the shared parking area.

(Ord. 4547 § 1, 2016; Ord. 4238 § 2, 2010)

95.47 Nonconforming Landscaping and Buffers

1. The landscaping requirements of KZC 95.41, Supplemental Plantings, KZC 95.43 Outdoor Use, Activity and Storage, KZC 95.44, Internal Parking Lot Landscaping, and KZC 95.45, Perimeter Landscape Buffering for Driving and Parking Areas, must be brought into conformance as much as is feasible, based on available land area, in either of the following situations:

- a. An increase of at least 10 percent in gross floor area of any structure; or
- b. An alteration to any structure, the cost of which exceeds 50 percent of the replacement cost of the structure.

2. Land use buffers must be brought into conformance with KZC 95.42 in either of the following situations:

- a. An increase in gross floor area of any structure (the requirement to provide conforming buffers applies only where new gross floor area impacts adjoining property); or
- b. A change in use on the subject property and the new use requires larger buffers than the former use.

(Ord. 4547 § 1, 2016; Ord. 4238 § 2, 2010)

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95.50 Installation Standards for Required Plantings

All required trees, landscaping and soil shall be installed according to sound horticultural practices in a manner designed to encourage quick establishment and healthy plant growth. All required landscaping shall be installed in the ground and not in above-ground containers, except for landscaping required on the top floor of a structure.

When an applicant proposes to locate a subterranean structure under required landscaping that appears to be at grade, the applicant will: (1) provide site-specific documentation prepared by a qualified expert to establish that the design will adequately support the long-term viability of the required landscaping; and (2) enter into an agreement with the City, in a form acceptable to the City Attorney, indemnifying the City from any damage resulting from development activity on the subject property which is related to the physical condition of the property. The applicant shall record this agreement with the King County Recorder's Office.

1. Compliance. It is the applicant's responsibility to show that the proposed landscaping complies with the regulations of this chapter.
2. Timing. All landscaping shall be installed prior to the issuance of a certificate of occupancy, except that the installation of any required tree or landscaping may be deferred during the summer months to the next planting season, but never for more than six (6) months. Deferred installation shall be secured with a performance bond pursuant to Chapter 175 KZC prior to the issuance of a certificate of occupancy.
3. Grading. Berms shall not exceed a slope of two (2) horizontal feet to one (1) vertical foot (2:1).
4. Soil Specifications. Soils in planting areas shall have soil quality equivalent to Washington State Department of Ecology BMP T5.13. The soil quality in any landscape area shall comply with the soil quality requirements of the Public Works Pre-Approved Plans. See subsection (9) of this section for mulch requirements.

5. **Plant Selection.**

- a. Plant selection shall be consistent with the appropriate Kirkland Plant Lists, which are shown on the Planning Department webpage ~~is produced by the City's Natural Resource Management Team~~ and available in the Planning and Building Department. Species diversity is encouraged by planting species other than those listed, with Planning Official approval.
- b. Plants shall be selected and sited to produce a hardy and drought-resistant landscape area. Selection shall consider soil type and depth, the amount of maintenance required, spacing, exposure to sun and wind, the slope and contours of the site, and compatibility with existing native vegetation preserved on the site. Preservation of existing vegetation is strongly encouraged.
- c. ~~Prohibited Materials.~~ Plants listed ~~as prohibited~~ in the Kirkland Prohibited Plant List shall not be planted ~~are prohibited~~ in any required landscape areas. Additionally, there are other plants that may not be used if identified in the Kirkland Plant List as potentially damaging to sidewalks, roads, underground utilities, drainage improvements, foundations, or when not provided with enough growing space.
- d. All plants shall conform to American Association of Nurserymen (AAN) grades and standards as published in the "American Standard for Nursery Stock" manual.
- e. Plants shall meet the minimum size standards established in other sections of the KZC.
- f. Multiple-stemmed trees may be permitted as an option to single-stemmed trees for required landscaping provided that such multiple-stemmed trees are at least 10 feet in height and that they are approved by the Planning Official prior to installation.

x. Plant Location. Newly-planted supplemental trees must be planted at least 3 feet away from property lines. Planting large trees under/within proximity to overhead utilities shall be avoided. Newly-planted supplemental trees may be checked for the approved locations as a final inspection procedure on development sites.

Commented [DP25]: Update #60. Develop clear, streamlined and predictable tree retention/replanting requirements

Commented [DP26]: Update #68. Incentivize tree species diversity. Update #44/57/66. Specify appropriate locations for required trees

Commented [DP27]: Update #57. Specify appropriate locations for trees required to be planted.

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6. Fertilization. All fertilizer applications to turf or trees and shrubs shall follow Washington State University, National Arborist Association or other accepted agronomic or horticultural standards. ~~Fertilizer may include soil drenches to increase fungal biota and chemical root growth stimulators.~~

Commented [DP28]: Update #54. Aftercare options.

7. Irrigation. The intent of this standard is to ensure that plants will survive the critical establishment period when they are most vulnerable due to lack of watering. All required plantings must provide an irrigation system, using either Option 1, 2, or 3 or a combination of those options. For each option irrigation shall be designed to conserve water by using the best practical management techniques available. These techniques may include, but not be limited to: drip irrigation to minimize evaporation loss, moisture sensors to prevent irrigation during rainy periods, automatic controllers to ensure proper duration of watering, sprinkler head selection and spacing designed to minimize overspray, and separate zones for turf and shrubs and for full sun exposure and shady areas to meet watering needs of different sections of the landscape.

Exceptions, as approved by the Planning Official, to the irrigation requirement may be approved xeriscape (i.e., low water usage plantings), plantings approved for low impact development techniques, established indigenous plant material, or landscapes where natural appearance is acceptable or desirable to the City. However, those exceptions will require temporary irrigation (Option 2 and/or 3) until established.

a. Option 1. A permanent built-in irrigation system with an automatic controller designed and certified by a licensed landscape architect as part of the landscape plan.

b. Option 2. An irrigation system designed and certified by a licensed landscape architect as part of the landscape plan, which provides sufficient water to ensure that the plants will become established. The system does not have to be permanent if the plants chosen can survive adequately on their own, once established.

c. Option 3. Irrigation by hand, which includes the use of water bags. If the applicant chooses this option, an inspection will be required one (1) year after final inspection to ensure that the landscaping has become established.

8. Drainage. All landscapes shall have adequate drainage, either through natural percolation or through an installed drainage system. A percolation rate of one-half (1/2) inch of water per hour is acceptable.

9. Mulch.

a. Required plantings, except turf or areas of established ground cover, shall be covered with two (2) inches or more of organic mulch to minimize evaporation and runoff. Mulch shall consist of materials such as yard waste, sawdust, and/or manure that are fully composted.

b. All mulches used in planter beds shall be kept at least six (6) inches away from the trunks of shrubs and trees.

10. Protection. All required landscaped areas, particularly trees and shrubs, must be protected from potential damage by adjacent uses and development, including parking and storage areas. Protective devices such as bollards, wheel stops, trunk guards, root guards, etc., may be required in some situations.

(Ord. 4551 § 4, 2017; Ord. 4547 § 1, 2016; Ord. 4491 §§ 3, 11, 2015; Ord. 4350 § 1, 2012; Ord. 4238 § 2, 2010; Ord. 4010 § 2, 2005)

95.51 Tree and Landscape Maintenance Requirements

The following maintenance requirements apply to all trees, including street trees, and other vegetation required to be planted or preserved by the City:

1. Responsibility for Regular Maintenance. Required trees and vegetation, fences, walls, and other landscape elements shall be considered as elements of the project in the same manner as parking, building materials, and other site details. The applicant, landowner, or successors in interest shall be responsible for the regular maintenance of required landscaping elements. ~~Plants that die must be replaced in kind.~~ It is also the responsibility of the property owner to maintain street trees abutting their property pursuant to KZC 95.21.

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2. Maintenance Duration. Maintenance shall be ensured in the following manner except as set forth in subsections (3), (4) and (5) of this section:
- a. **Commercial, Industrial and Multifamily Development.** All required landscaping shall be maintained throughout the life of the development. ~~Plants that die must be replaced in kind.~~ Prior to ~~final inspection~~/issuance of a certificate of occupancy, the proponent shall provide a final as-built landscape plan and an agreement to maintain and replace all landscaping that is required by the City.
 - b. **Single Family Residential Development.** Any existing tree or other existing vegetation designated for preservation in a tree retention plan shall be maintained for a period of five (5) years following issuance of the certificate of occupancy for the individual lot or development. After five (5) years, all trees on the property are subject to KZC 95.23 unless:
 - 1) The tree and associated vegetation are in a grove that is protected pursuant to subsection (3) of this section; or
 - 2) The tree or vegetation is considered to be a public benefit related to approval of a ~~p~~Planned ~~u~~Unit ~~d~~Development; or
 - 3) The tree or vegetation was retained to partially or fully meet requirements of KZC 95.40 through 95.45, ~~r~~Required ~~l~~andscaping ~~and Zoning~~.
3. Maintenance of Preserved Grove. Any applicant who has a grove of trees identified for preservation on an approved Tree Retention Plan pursuant to KZC 95.30(2) shall provide prior to occupancy the legal instrument acceptable to the City to ensure preservation of the grove and associated vegetation in perpetuity, except that the agreement may be extinguished if the Planning Official determines that preservation is no longer appropriate.
4. Maintenance in Holmes Point Overlay Zone. Vegetation in designated Protected Natural Areas in the Holmes Point Overlay Zone is to be protected in perpetuity pursuant to KZC 70.15(8)(a). Significant trees in the remainder of the lot shall be protected in perpetuity pursuant to KZC 70.15(8)(b).
5. Nonnative Invasive and Noxious Plants. It is the responsibility of the property owner to remove nonnative invasive plants and noxious plants per the City's Prohibited Plant List, King County and Washington Weed Agencies from the vicinity of any tree or other vegetation that the City has required to be planted or protected. ~~Removal must be performed in a manner that is not injurious to will not harm the tree or other vegetation that the City required trees and vegetation. has required to be planted or protected.~~
6. Landscape Plans and Utility Plans. Landscape plans and utility plans shall be coordinated. In general, the placement of trees and large shrubs should adjust to the location of required utility routes both above and below ground. Location of plants shall be based on the plant's mature size both above and below ground. See the Kirkland Plant List for additional standards.

(Ord. 4551 § 4, 2017; Ord. 4437 § 1, 2014; Ord. 4238 § 2, 2010)

95.52 Prohibited Vegetation

Plants listed ~~as prohibited~~ in the Kirkland Prohibited Plant List shall not be planted in the City or required to be retained.

For landscaping not required under this chapter, this prohibition shall become effective on February 14, 2008. The City may require removal of prohibited vegetation if installed after this date. Residents and property owners are encouraged to remove pre-existing prohibited vegetation whenever practicable.

(Ord. 4450 § 1, 2014; Ord. 4238 § 2, 2010; Ord. 4121 § 1, 2008)

95.55 Enforcement and Penalties

Upon determination that there has been a violation of any provision of this chapter, the City may pursue code enforcement and penalties in accordance with the provisions of Chapter 1.12 KMC, Code Enforcement.

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(Ord. 4286 § 1, 2011; Ord. 4281 § 1, 2011; Ord. 4238 § 2, 2010; Ord. 4010 § 2, 2005)

95.57 City Forestry Account

1. Funding Sources. All civil penalties received under this chapter and all money received pursuant to KZC 95.33(3)(c) shall be used for the purposes set forth in this section. In addition, the following sources may be used for the purposes set forth in this section:

- a. Agreed upon restoration payments imposed under KZC 95.55 or settlements in lieu of penalties;
- x. Agreed upon payment in lieu of planting required trees under KZC 95.33.3c;
- b. Sale of trees or wood from City property where the proceeds from such sale have not been dedicated to another purpose;
- c. Donations and grants for tree purposes;
- d. Sale of seedlings by the City; and
- e. Other monies allocated by the City Council.

2. Funding Purposes. The City shall use money received pursuant to this section for the following purposes:

- a. Acquiring, maintaining, and preserving wooded areas within the City;
- b. Planting and maintaining trees within the City;
- c. Establishment of a holding public tree nursery;
- d. Urban forestry education;
- e. Implementation of a tree canopy monitoring program; or
- f. Other purposes relating to trees as determined by the City Council.

(Ord. 4238 § 2, 2010)

Commented [DP29]: Update #61. Clarify language regarding payment in lieu of planting trees.

DRAFT CLEAN COPY Chapter 95 – TREE MANAGEMENT AND REQUIRED LANDSCAPING

Sections:

- 95.05 Purpose and Intent
- 95.10 Definitions
- 95.20 Tree Removal Exemptions
 - 1. Emergency Tree Removal
 - 2. Utility Maintenance
 - 3. Commercial Nurseries or Tree Farms
- 95.21 Tree Pruning
 - 1. Tree Pruning of Street Trees
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- 95.23 Tree Removal – Not Associated with Development Activity
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- 95.25 Sustainable Site Development
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- 95.32 Incentives and Variations to Development Standards to Retain Trees (*rearranged for clarity*)
 - 1. Variations
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- 95.33 Tree Density Requirement
 - 1. Tree Density Calculation
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 - 3. Tree Location
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- 95.40 Required Landscaping based on Zoning District
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- 95.47 Nonconforming Landscaping and Buffers
- 95.50 Installation Standards for Required Plantings
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2. Timing
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1. Responsibility for Regular Maintenance
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 6. Landscape Plans and Utility Plans
- 95.52 Prohibited Vegetation
- 95.55 Enforcement and Penalties
- 95.57 City Forestry Account
1. Funding Sources
 2. Funding Purposes

95.05 Purpose and Intent

1. Trees and other vegetation are important elements of the physical environment. They are integral to Kirkland's community character and protect public health, safety and general welfare. Protecting, enhancing, and maintaining healthy trees and vegetation are key community values. Comprehensive Plan Policy NE-3.1 describes working towards achieving a healthy, resilient urban forest with a City-wide tree canopy coverage of 40 percent. The many benefits of healthy trees and vegetation contribute to Kirkland's quality of life by:

- a. Minimizing the adverse impacts of land disturbing activities and impervious surfaces such as runoff, soil erosion, land instability, sedimentation and pollution of waterways, thus reducing the public and private costs for storm water control/treatment and utility maintenance;
- b. Improving the air quality by absorbing air pollutants, mitigating the urban heat island effect, assimilating carbon dioxide and generating oxygen, and decreasing the impacts of climate change;
- c. Reducing the effects of excessive noise pollution;
- d. Providing cost-effective protection from severe weather conditions with cooling effects in the summer months and insulating effects in winter;

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- e. Providing visual relief and screening buffers;
- f. Providing recreational benefits;
- g. Providing habitat, cover, food supply and corridors for a diversity of fish and wildlife; and
- h. Providing economic benefit by enhancing local property values and contributing to the region's natural beauty, aesthetic character, and livability of the community.

2. Tree and vegetation removal in urban areas has resulted in the loss to the public of these beneficial functions. The purpose of this chapter is to establish a process and standards to provide for the protection, preservation, replacement, proper maintenance, and use of significant trees, associated vegetation, and woodlands located in the City of Kirkland.

The intent of this chapter is to:

- a. Maintain and enhance canopy coverage provided by trees for their functions as identified in KZC 95.05(1);
- b. Preserve and enhance the City of Kirkland's environmental, economic, and community character with mature landscapes;
- c. Promote site planning, building, and development practices that work to avoid removal or destruction of trees and vegetation, that avoid unnecessary disturbance to the City's natural vegetation, and that provide landscaping to buffer the effects of built and paved areas;
- d. Mitigate the consequences of required tree removal in land development through on- and off-site tree replacement with the goals of halting net loss and enhancing Kirkland's tree canopy to achieve an overall healthy tree canopy cover of 40 percent City-wide over time;
- e. Encourage tree retention efforts by providing flexibility with respect to certain other development requirements;
- f. Implement the goals and objectives of the City's Comprehensive Plan;
- g. Implement the goals and objectives of the State Environmental Policy Act (SEPA); and
- h. Manage trees and other vegetation in a manner consistent with the City's Urban Forest Strategic Management Plan and industry standards and best management practices established by the International Society of Arboriculture (ISA) and the American National Standards Institute (ANSI).
- i. Preserve and protect street trees, trees in public parks and trees on other City property.

(Ord. 4238 § 2, 2010; Ord. 4010 § 2, 2005)

95.10 Definitions

The following definitions shall apply throughout this chapter unless the context clearly indicates otherwise. Definitions that apply throughout this code are also located in Chapter 5 KZC.

1. Caliper – The industry standard for trunk measurement of nursery stock, applicable to supplemental required trees. Caliper shall be measured six (6) inches above the ground for up to and including 4-inch caliper trunk sizes.
2. Critical Root Zone (CRZ) – The circular area around a tree measured from the trunk equal to one (1) foot radius for every inch of Diameter at Breast Height (DBH), or as otherwise determined by a qualified professional. Example: a 24-inch DBH tree has a 24-foot Critical Root Zone.
3. Crown – The area of a tree containing leaf- or needle-bearing branches.

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4. Diameter at Breast Height (DBH) – The diameter or thickness of a tree trunk measured at 4.5 feet from the ground. DBH is also known as Diameter at Standard Height (DSH).
5. Dripline – The distance from the tree trunk, that is equal to the furthest extent of the tree’s crown.
- x. Exceptional tree – a significant, viable tree that a qualified professional has determined to be in very good to excellent health and free of major defects that is worthy of long-term retention.
6. Grove – A group of three (3) or more significant viable trees with overlapping or touching crowns.
7. Hazard Trees –are assessed by a qualified arborist as having a high risk rating using the ISA Tree Risk Assessment Qualification (TRAQ) method in its most current form. Definitions of TRAQ method terminology that are not set forth in this chapter can be found in the article “Qualitative Tree Risk Assessment” by E. Thomas Smiley, Nelda Matheny, and Sharon Lilly on file at Kirkland City Hall. Steps in the TRAQ method in developing a tree risk rating include the following:
 - a. Identify possible targets and estimate occupancy rate;
 - b. Inspect tree and identify tree parts that could fail and strike targets (referred to as failure mode);
 - c. For each significant failure mode identified:
 - i. The likelihood of failure is assessed;
 - ii. The likelihood of a tree part impacting a target is assessed;
 - iii. The likelihood of a tree failure impacting a target is assessed;
 - iv. Consequences of failure are estimated;
 - v. The risk is designated pursuant to the matrix in Table xx;
 - vi. Possible mitigation treatments to reduce the risk are identified;
 - vii. The risk is again designated pursuant to the matrix in Table xx after mitigation treatment is completed.
 - d. When assessing the risk of a tree, the Planning Official shall evaluate the tree based on existing conditions and shall exclude possible impacts caused by new development, any land alteration activity, or other similar such activities that might otherwise unnaturally cause the risk rating to increase.
 - e. The following table is from the ISA TRAQ method and denotes the risk rating matrix used to assess levels of tree risk as a combination of likelihood of a tree failing and impacting a specified target, and the severity of the associated consequences should the tree or any part of the tree fail:

Table xx Tree Risk Rating Matrix

Likelihood of Failure and Impact	Consequences			
	Negligible	Minor	Significant	Severe
Very likely	Low risk	Moderate risk	High Risk	Extreme Risk
Likely	Low risk	Moderate risk	High risk	High risk
Somewhat Likely	Low risk	Low risk	Moderate risk	Moderate risk
Unlikely	Low risk	Low risk	Low risk	Low risk

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f. The consequences listed in Table xx have meanings as follows:

i. Extreme Risk. This category applies to trees in which failure is “imminent” and there is a high likelihood of impacting a target, and the consequences of the failure are “severe.”

ii. High Risk. This category applies to situations in which consequences are significant and likelihood is “very likely” or “likely,” or when consequences are “severe” and likelihood is “likely.”

iii. Moderate Risk. This category applies to trees in which consequences are “minor” and likelihood is “very likely” or “likely” or when likelihood is “somewhat likely” and the consequences are “significant” or “severe.”

iv. Low Risk. This category applies to trees in which consequences are “negligible” and likelihood is “unlikely”; or when consequences are “minor” and likelihood is “somewhat likely.”

v. Potential targets are permanent structures or an area of moderate to high use. Where a target does not exist, applicants should consider routine pruning and maintenance to mitigate hazards.

vi. Where a tree is found to have a high or extreme risk, the Planning Official may authorize hazard pruning to mitigate the risk rather than removing the entire tree.

vii. If the city arborist assesses a tree to have a high or extreme risk and mitigation of the risk through pruning or moving of potential targets is not feasible, the Planning Official shall designate the tree a hazard tree.

x. Inner Critical Root Zone – an area encircling a tree that is half the distance of the Critical Root Zone. Example: a 24-inch DBH tree has a 12-foot radius Inner Critical Root Zone.8. Impact – A condition or activity that affects a part of a tree including the trunk, branches, and critical root zone.

x. Landmark tree – a significant, viable tree that is at least 24 inches in diameter (DBH).

9. Limit of Disturbance (LOD) –The boundary between the protected area around a tree and the allowable site disturbance as determined by a qualified professional, measured in feet from the trunk, intended to protect individual trees, groups of trees, vegetation, roots and soil from construction-related activities. Limit of Disturbance denotes the location of tree protection fencing. Determining LOD may include Critical Root Zone, dripline, or root plate diameter methodologies or exploratory root excavations.

10. Nuisance Tree – A tree that meets either of the following criteria:

a. Is causing obvious physical damage to private or public structures, including but not limited to: sidewalk, curb, road, driveway, parking lot, building foundation, or roof; or

b. Has sustained damage from past maintenance practices.

The problems associated with the tree must be such that they cannot be corrected by reasonable practices including but not limited to: pruning of the crown or roots of the tree, bracing, and/or cabling to reconstruct a healthy crown.

x. Public Tree – a tree located in parks, along public rights-of-way, on City facility property or other property owned by the City.

11. Public Works Official – Designee of the Public Works Director.

12. Qualified Professional – An individual with relevant education and training in arboriculture or urban forestry, having two (2) or more of the following credentials:

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- International Society of Arboriculture (ISA) Certified Arborist;
- Tree Risk Assessor Qualification (TRAQE) as established by the ISA (or equivalent);
- American Society of Consulting Arborists (ASCA) registered Consulting Arborist;
- Society of American Foresters (SAF) Certified Forester for Forest Management Plans;
- Board Certified Master Arborist as established by the ISA;

For tree retention associated with a development permit, a qualified professional must have, in addition to the above credentials, a minimum of three (3) years' experience working directly with the protection of trees during construction and have experience with the likelihood of tree survival after construction. A qualified professional must also be able to prescribe appropriate measures for the preservation of trees during land development.

14. Significant Tree – A tree that is at least six (6) inches in diameter at breast height (DBH) as measured at 4.5 feet from the ground. Trees with multiple trunks shall be measured per the industry standard outlined in the most recent edition of the Guide for Plant Appraisal by the Council of Tree and Landscape Appraisers.

15. Significantly Wooded Site – A subject property that has a number of significant trees with crowns that cover at least 40 percent of the property.

16. Site Disturbance – Any development, construction, or related operation that could alter the subject property, including, but not limited to, soil compaction, tree or tree stump removal, road, driveway or building construction, installation of utilities, or grading.

18. Street Tree – A tree located within the public right-of-way; provided, that if the trunk of the tree straddles the boundary line of the public right-of-way and the abutting property, it shall be considered to be on the abutting property and subject to the provisions of this chapter.

xx. Topping – The reduction of a tree's size using heading cuts that shorten limbs or branches back to a predetermined crown limit. Topping is not an acceptable pruning practice and is not appropriate on established trees.

19. Tree Removal – The removal of a tree, through either direct or indirect actions, including but not limited to: (1) clearing, damaging or poisoning resulting in an unhealthy or dead tree; (2) removal of at least half of the live crown; or (3) damage to roots or trunk that is likely to destroy the tree's structural integrity. Trees that have been recently girdled at development permit submittal will be treated as unauthorized tree removal subject to code enforcement.

20. Viable Tree – A significant tree that a qualified professional has determined to be in good health, with a low risk of failure due to structural defects, is windfirm if isolated or remains as part of a grove and is a species that is suitable for its location.

21. Wildlife Snag – The remaining trunk of a tree that is intentionally reduced in height and usually stripped of its live branches.

22. Windfirm – A condition of a tree in which it withstands average peak local wind speeds and gusts.

(Ord. 4551 § 4, 2017; Ord. 4238 § 2, 2010; Ord. 4193 § 1, 2009; Ord. 4010 § 2, 2005)

95.20 Tree Removal Exemptions

The following activities are exempt from the provisions of this chapter:

1. Emergency Tree Removal. Any tree that poses an imminent threat to life or property may be removed. The City must be notified within seven (7) days of the emergency tree removal with evidence of the threat for removing the tree to be considered exempt from this chapter. If the Planning Official determines that the emergency tree removal

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was not warranted or if the removed tree was required by a development permit, the Planning Official may require that the party obtain a permit and/or require that replacement trees and vegetation be replanted as mitigation.

2. Utility Maintenance. Trees may be removed by the City or utility provider in situations involving interruption of services provided by a utility only if pruning cannot solve utility service problems. Utility maintenance shall conform to a City-approved Utility Vegetation Management Plan.

3. Commercial Nurseries or Tree Farms. A nursery or tree farm owner may remove trees that are being grown to be sold as Christmas or landscape trees.

(Ord. 4238 § 2, 2010; Ord. 4010 § 2, 2005)

95.21 Tree Pruning

1. Tree Pruning of Street Trees. It is the responsibility of the abutting property owner to maintain street trees abutting their property, which may include pruning, watering, and mulching. In order to prune, trim, modify, or alter a street tree, the abutting property owner shall apply for a permit by filing a written application with the City. Pruning shall conform to the most recent version of the American National Standards Institute (ANSI) A300 Part 1 – 2001 pruning standards or as outlined in an approved Utility Vegetation Management Plan. The City may allow adjacent property owners to lightly prune street trees. The City reserves the right to have City or utility crews perform routine pruning and maintenance of street trees.

2. Tree Pruning on Private Property. A permit is not required to prune trees on private property. Topping or pruning which results in the removal of at least half of the live crown will be considered tree removal and subject to the provisions in KZC 95.23. Trees smaller than six (6) inches in diameter that were required to be planted by this chapter that are topped must be replaced pursuant to the standards in Chapter 1.12 KMC. If a tree six (6) inches or larger in diameter is topped, the owner must have a qualified professional develop and implement a 5-year restoration pruning program.

3. Pruning or topping of trees in critical areas or buffers is prohibited other than City-approved creation of snags for nuisance or hazard trees.

(Ord. 4281 § 1, 2011; Ord. 4238 § 2, 2010)

95.23 Tree Removal – Not Associated with Development Activity

1. Introduction. Tree and vegetation removal in urban areas has resulted in the loss of beneficial functions provided by trees to the public. The majority of tree canopy within the City of Kirkland is on private property. The purpose of this section is to establish a process and standards to slow the loss of tree canopy on private property, contributing towards the City's canopy goals and a more sustainable urban forest.

2. Removal of Public Trees. Other than City Crews, no person, directly or indirectly, shall remove, prune, trim, modify, alter or damage any tree in a public park or on any other City property without first obtaining a tree removal permit as provided in this chapter, unless the activity is exempted in KZC 95.20, Tree Removal Exemptions.

x. Permit Required for Removal of Trees on Private Property. It is unlawful for any person to remove a tree on private property without first obtaining a tree removal permit as provided in this chapter, unless the activity is exempted in KZC 95.20 or allowed in subsection (5) of this section. The City may order diseased trees removed from private property as hazard or nuisance trees to prevent the spread of a disease/pest that would cause catastrophic tree decline and failure of public and private property trees.

3. Tree Removal Permit Application Form. The applicable City's department shall establish and maintain a tree removal permit application form. The form shall be used for property owners to request City review of tree removal for compliance with applicable City regulations. The tree removal application form shall include at a minimum the following:

a. A site plan showing the approximate location of significant trees, their size (DBH) and their species, along with the location of structures, driveways, access ways and easements.

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- b. For required replacement trees, a planting plan showing location, size and species of the new trees in accordance to standards set forth in KZC 95.33(3).
4. Tree Removal Permit Application Procedure and Appeals.
- a. Applicants requesting to remove trees must submit a completed permit application on a form provided by the City. The City shall review the application within 21 calendar days and either approve, approve with conditions or modifications, deny the application or request additional information. Any decision to deny the application shall be in writing along with the reasons for the denial and the appeal process.
 - b. The decision of the Planning Official is appealable using the applicable appeal provisions of Chapter 145 KZC.
 - c. Time Limit. The removal by felling shall be completed within one (1) year from the date of permit approval. Trees approved for removal shall not be damaged, poisoned or sustain removal of at least half of the live crown in lieu of felling, unless activities such as the creation of wildlife snags is approved by the Planning Official.
5. Tree Removal Allowances.
- a. Any private property owner of developed property may remove a specific number of significant trees from their property with notification, depending on lot size per the table below within a 12-month period without having to apply for a tree removal permit; provided, that:
 - x) The trees are not located in critical areas or their buffers, in geologically hazardous areas, or on properties in the Holmes Point Overlay area;
 - x) The trees are not Landmark trees;
 - 1) There is no active application for development activity for the site. There shall be no tree removal or land clearing in advance of issuance of land development permit on any site for the sake of preparing that site for future development. Development permit applications may be submitted at any time, but will not be processed for 12 months following tree removal;
 - 2) The trees were not required to be retained or planted as a condition of previous development activity; and
 - 3) All of the additional standards for tree removal and tree removal permits as described in subsections (5)(b) through (e) of this section are met.
 - x) Hedges comprised of any number of trees >6" DBH that are replaced with suitable species, planted as a hedge in the same location.

Table x

Lot Size	Maximum number of significant trees allowed to be removed every 12 months with notification
Lots up to 10,000 sq. ft.	2
Lots 10,000 to 20,000 sq. ft.	4
Lots 20,000 sq. ft. or greater	6
Lots over 1 acre with a Forest Management Plan	>6

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Except landmark trees (greater than 24-inch DBH) shall not be removed without permit approval

The Planning and Building Department shall establish and maintain a tree removal notification form. The form may be used by property owners to request Department review of tree removal for compliance with applicable City regulations and to notify the Department of allowable tree removal.

b. Tree Retention and Replacement Requirements.

1) Tree Retention. For single-family homes, cottages, carriage units, two/three-unit homes, two (2) trees shall be required to remain on the subject property.

2) Tree Replacement.

a) For every significant tree that is removed and is not required to remain based on subsection (5)(b)(1) of this section, the City encourages the planting of a tree that is appropriate to the site.

b) If a tree removal request is for one (1) or both of the trees required to remain, a tree removal permit and one-for-one replacement is required. the replacement tree shall be six (6) feet tall for a conifer and 2-inch caliper for deciduous or broad-leaf evergreen tree.

c) For all other uses not listed in subsection (5)(b)(1) of this section, a tree removal permit is required, and the required tree replacement will be based on the required landscaping standards in KZC 95.40 through 95.45.

c. Shoreline Jurisdiction. Properties located within the City's shoreline jurisdiction are subject to additional tree removal and replacement standards if the tree(s) to be removed are located within the required shoreline setback. See Chapter 83 KZC for additional standards.

d. Removal of Hazard or Nuisance Trees. Any private property owner seeking to remove any number of significant trees which are a hazard or nuisance from developed or undeveloped property or the public right-of-way shall first obtain approval of a tree removal permit and meet the requirements of this subsection.

1) Tree Risk Assessment. If the nuisance or hazard condition is not evident in a photograph, a tree risk assessment prepared by a qualified professional explaining how the tree(s) meet the definition of a nuisance or hazard tree is required. Removal of nuisance or hazard trees does not count toward the tree removal limit if the nuisance or hazard is supported by a report prepared by a qualified professional and approved by the City.

2) Trees in Critical Areas or Critical Areas Buffers. See Chapters 85 and 90 KZC.

a. No trees shall be removed from a critical area, critical area buffer or geologic hazard areas unless determined to be nuisance or hazardous trees. Any tree removal shall be authorized in advance through a tree removal permit unless emergency tree removal is warranted per KZC 95.20.1;

b. Hazard or nuisance trees in critical areas and their buffers shall be removed in a manner that creates a wildlife snag;

c. If creation of a snag is not feasible, then the felled tree shall be left in place unless the Planning Official approves tree removal in writing; and

d. The removal of any tree in a critical area shall be replaced with one (1) to three (3) native tree species at a minimum height of six (6) feet depending on the size, quality and species of removed tree. The Planning Official shall determine the location and required number of replacement trees.

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- 3) The removal of any tree in the Holmes Point Overlay Zone requires the planting of a native tree of a minimum of six (6) feet in height in close proximity to where the removed tree was located. Selection of native species and timing of installation shall be approved by the Planning Official.
 - 4) Public Trees. Public trees may only be removed if determined to be a hazard or nuisance. If the removal request is for public trees, including trees in rights of way, parks and other City facilities, the appropriate Department Official may consider whether the tree(s) are now, or may be in the future, part of the City's plans for the right-of-way or other capital projects. The City shall require a one-for-one tree replacement in a suitable location.
- e. Forest Management Plan.
- 1) A Forest Management Plan must be submitted for developed, significantly wooded sites (over 40 percent canopy coverage) of at least 35,000 square feet in size in which removal of more than two (2) trees is requested and is not exempt under KZC 95.20. A Forest Management Plan must be developed by a qualified professional and shall include the following:
 - a) A site plan depicting the location of all significant trees (a survey identifying tree locations is not required) with a numbering system of the trees (with corresponding tags on trees in the field). The site plan shall include size (DBH), species, and condition of each tree;
 - b) Identification of trees to be removed, including reasons for their removal and a description of low impact removal techniques pursuant to subsection (5)(e)(2) of this section;
 - c) A reforestation plan that includes location, size, species, and timing of installation;
 - 2) The following Forest Management Plan standards shall apply:
 - a) Trees to remain should be dominant or co-dominant in the stand, healthy and windfirm.
 - b) No removal of trees from critical areas and their buffers, unless otherwise permitted by this chapter.
 - c) No removal of specimen trees, unless otherwise permitted by this chapter.
 - d) No removal of healthy trees that would cause trees on adjacent properties to become hazardous.
 - e) The reforestation plan ensures perpetuity of the wooded areas. The size of planted trees for reforestation shall be a minimum of three (3) feet tall.
 - f) Logging operations shall be conducted so as to expose the smallest practical area of soil to erosion for the least possible time. To control erosion, native shrubs, ground cover and stumps shall be retained where feasible. Where not feasible, appropriate erosion control measures to be approved by the City shall be implemented.
 - g) Removal of tree debris shall be done pursuant to Kirkland Fire Department standards.
 - h) Recommended maintenance prescription for retained trees with a specific timeline for such management.

(Ord. 4551 § 4, 2017; Ord. 4491 § 3, 2015; Ord. 4437 § 1, 2014; Ord. 4408 § 1, 2013; Ord. 4372 § 1, 2012; Ord. 4238 § 2, 2010)

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95.25 Sustainable Site Development

All activities regulated by this chapter shall be performed in compliance with the applicable standards contained in this chapter, unless the applicant demonstrates that alternate measures or procedures will be equal or superior to the provisions of this chapter in accomplishing the purpose and intent of this chapter as described in KZC 95.05.

Applicants requesting alternative compliance shall submit a site assessment report prepared by a qualified professional detailing how the proposed alternative measures will be equal or superior to the benefits provided by the established trees to be removed. Qualifying projects shall implement sustainable site development strategies throughout the construction process as well as contain measurable performance standards for the techniques used. Examples of sustainable site development include building placement with minimal site impact, habitat protection, water conservation, heat island reduction, storm water flow runoff control and water quality, and utilization of the site's natural services such as solar and wind. Guidance may include Low Impact Development (LID) standards within the Public Works Pre-Approved Plans and Policies, Kirkland Municipal Code 15.52 and King County Stormwater Manual. Qualifying sustainability certifications include, but are not limited to, International Living Futures Institute (ILFI) Living Building Challenge, Leadership in Energy and Environmental Design (LEED), Built Green Net Zero, Salmon Safe, ILFI Net Zero or Passive House programs that will be equal or superior to the provisions of KZC 95. Requests to use alternative measures and procedures shall be reviewed by the Planning Official, who may approve, approve with conditions, or deny the request.

(Ord. 4238 § 2, 2010; Ord. 4010 § 2, 2005)

95.30 Tree Retention Associated with Development Activity

1. Introduction. The City's objective is to retain as many viable trees as possible on a developing site while still allowing the development proposal to move forward in a timely manner. To that end, the City requires approval of a tree retention plan in conjunction with all development permits resulting in site disturbance and for any tree removal on developed sites not exempted by KZC 95.20. This section includes provisions that require development standards to be modified in order to retain viable significant trees.

In order to make better decisions about tree retention, particularly during all stages of development, tree retention plans will require specific information about the existing trees before removal is allowed. Specific tree retention plan review standards provided in this section establish tree retention priorities, incentives, and variations to development standards in order to facilitate preservation of viable trees.

A tree density approach is being used in combination with retention priorities to retain as many viable trees as possible with new development activity. The requirement to meet or exceed tree densities applies to new single-family homes, cottages, carriage units, two/three-unit homes, and new residential subdivisions and short subdivisions. If such a site falls below the required density with existing trees, supplemental planting is required. A tree density for existing trees to be retained is calculated to see if new trees are required in order to meet the required density for the entire site. Tree densities per KZC 95.33, Tree Density Requirements, may be exceeded to retain Landmark, Exceptional and Grove trees. Supplemental tree location priority is set as well as minimum size of supplemental trees to meet the required tree density.

Priorities for retention are assessed in subsection 3 of this section. The importance of effective protection of retained trees during construction is emphasized with specific protection standards in the last part of this section. These standards must be adhered to and included on demolition, grading and building plans as necessary.

Properties within jurisdiction of the Shoreline Management Act are subject to additional tree retention and protection regulations as set forth in Chapter 83 KZC.

Properties within the Holmes Point Overlay zone are subject to additional tree retention and protection regulations as set forth in Chapter 70 KZC.

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2. Tree Retention Plan Submittal. An applicant for a development permit must submit a tree retention plan that complies with this section. A qualified professional may be required to prepare certain elements of a tree retention plan at the applicant’s expense. If proposed development activities call for more than one (1) tree retention plan element, the more stringent tree retention plan requirements shall apply; provided, that the Planning Official may require a combination of tree plan elements based on the nature of the proposed development activities. If the proposed activity is not clearly identified in this chapter, the Planning Official shall determine the appropriate tree retention plan requirements.

The chart in subsection (5) of this section sets forth the tree retention plan requirements for development activities and associated tree removal. Applicants for development are encouraged to confer with City staff as early in the design process as possible so that the applicable tree planting and retention concepts can be incorporated into the design of the subject property. The Planning Official may waive an element of the tree retention plan if the Planning Official determines that the information is not necessary.

3. Tree Retention Plan Review. Any proposed development of the subject property requiring approval through a building permit, land surface modification permit, and/or demolition permit, or Design Review, Process I, IIA or IIB, described in Chapters 142, 145, 150 and 152 KZC respectively, shall include a tree retention plan to be considered as part of that process.

Based on the Tree Retention Plan information submitted by the applicant and the Planning Official’s evaluation of the trees relative to the proposed development on the subject property, the Planning Official shall designate each tree as Landmark, Exceptional or Grove as defined in KZC 95.10, Definitions, for application towards the regulations in this chapter.

Tree retention efforts shall be directed to the following trees if they are determined to be healthy and windfirm by a qualified professional, and provided the trees can be safely retained when pursuing alternatives to development standards pursuant to KZC 95.32. Site improvements shall be designed and constructed to protect the following trees. Trees located in required yards and/or required landscape areas shall be retained in the following order of priority:

Priority 1	a. Landmark trees;
	b. Tree groves and associated vegetation that are to be set aside as preserved groves pursuant to KZC 95.51(3);
	c. Trees in critical areas per KZC 90 and geologic hazard areas per KZC 85;
Priority 2	d. Exceptional trees;
Priority 3	e. Trees that are a part of a grove that extend onto adjacent property, such as in a public park, open space, critical area buffer or otherwise preserved group of trees on adjacent private property. If significant trees must be removed in these situations, an adequate buffer of trees may be required to be retained or planted on the edge of the remaining grove to help stabilize;
Priority 4	f. Landmark, Exceptional and grove trees located outside required yards and/or required landscape areas, provided the trees can be safely retained when pursuing alternatives to development standards pursuant to KZC 95.32

4. Tree Retention Plan Elements. The tree retention plan shall contain the following information as specified in the chart in subsection (5) of this section, unless waived by the Planning Official:

- a. A tree inventory with the following:
 - 1) A numbering system of all existing significant trees on the subject property (corresponding to tags on trees). The inventory must also include significant trees on adjacent property with Critical Root Zones (CRZ) extending onto the subject property;

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- 2) The Critical Root Zone (CRZ) and the proposed Limits of Disturbance (LOD) distances in feet of all existing significant trees (including the proposed LODs of potentially impacted off-site significant trees);
 - 3) Size (DBH);
 - 4) Proposed tree status (trees to be removed or retained);
 - 5) Brief general health or condition rating of these trees (i.e.: poor, fair, good, very good, excellent, etc.);
 - 6) Tree species and/or common name.
- b. A site plan showing the following:
- 1) Location of all proposed improvements, including building footprint, access, utilities, applicable setbacks, buffers, and required landscaped areas clearly identified.
 - 2) Accurate location of significant trees on the subject property (surveyed locations may be required). The site plan must also show the approximate trunk location of potentially impacted significant trees that are on adjacent properties;
 - 3) Trees labeled corresponding to the tree inventory numbering system;
 - 5) Critical Root Zones drawn to scale around all trees potentially impacted by site disturbances resulting from grading, demolition, or construction activities (including all potentially impacted off-site trees);
 - x) Proposed location of tree protection fence, the Limits of Disturbance, with distances from the trunk to the fence noted in the site plan;
 - 6) Trees proposed to be removed, noted by an 'X' or by ghosting out;
 - 7) Proposed locations of any supplemental trees required to meet tree density credits or minimum number of trees as outlined in KZC 95.33.
- c. An arborist report with the following:
- 1) A complete description of each tree's health, condition, and viability (including off-site trees that may be potentially impacted by site disturbances);
 - 2) A description of the method(s) used to determine the Limits of Disturbance (i.e., Critical Root Zone formula, root plate diameter, exploratory root excavations or a case-by-case basis description for individual trees);
 - 3) Any special instructions specifically outlining any work proposed within the Critical Root Zone (i.e., hand-digging, tunneling, root pruning, any grade changes, clearing, monitoring, and aftercare), including any disturbance proposed within the Inner Critical Root Zone of offsite trees;
 - 4) For trees not viable for retention, a description of the reason(s) for removal based on poor health, high risk of failure due to structure, defects, unavoidable isolation (windfirmness), or unsuitability of species, etc., and for which no reasonable alternative action is possible must be given (pruning, cabling, etc.);
 - 5) Describe the impact of necessary tree removal to the remaining trees, including those in a grove or on adjacent properties;
 - 6) For development applications, a description of project sequencing related to the timing and installation of tree protection measures, including landscaping and other activity within the Critical Root Zone of retained trees that must include fencing and be in accordance with the tree protection standards as outlined in KZC 95.34; and

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7) The suggested location and species of supplemental trees to be used when required. The report shall include planting and maintenance specifications pursuant to KZC 95.50 and 95.51.

5. Tree Retention Plan Requirements. The applicant shall submit a Tree Retention Plan that includes the elements identified in the following chart based on the proposed development activity.

TREE RETENTION PLAN

Development Activity	Minor ⁽¹⁾⁽³⁾ – Single-Family, or two attached, detached, or stacked dwelling units, and related demolition and land surface modification applications	Major ⁽²⁾⁽³⁾ Single-Family, or two attached, detached, or stacked dwelling units, and related demolition and land surface modification applications	Multifamily, Commercial, any other use other than residential, and related demolition and land surface modification applications	Short Plat, Subdivisions, cottages, carriage units, two/three-unit homes, and related demolition and land surface modification applications (see KZC 95.30(6) for additional standards)
Required Components				
TREE INVENTORY AS DESCRIBED IN KZC 95.30(4)(a) FOR:				
All significant trees on the subject property		X	X	X
Significant trees potentially impacted by proposed development activity	X			
SITE PLAN AS DESCRIBED IN KZC 95.30(4)(b) TO INCLUDE:				
Surveyed tree locations if required by the Planning Official		X	X	X
Surveyed tree locations				X
A final landscape plan showing retained trees			X	
REQUIREMENTS IN KZC 95.30(4)(c) SHALL BE PREPARED BY A QUALIFIED PROFESSIONAL AND APPLY TO:				
Significant trees within required yards or within 10 feet of any side property line		X	X	X
Significant trees, including trees on neighboring properties potentially impacted by proposed development activity as determined by the Planning Official	X	X	X	X
Proposed removal of Landmark, Exceptional and Grove trees in required yards and required landscaping areas	X	X	X	X
All significant trees				X
TREE RETENTION STANDARDS				
Applicant is encouraged to retain viable trees	X ⁽⁴⁾			
Retain and protect Landmark and Exceptional trees located in required yards provided the trees can be safely retained when pursuing alternatives to development standards pursuant to KZC 95.32		X ⁽⁴⁾	X ⁽⁴⁾	X ⁽⁴⁾
Retain and protect Grove trees located in required yards provided the trees can be safely retained when pursuing alternatives to development standards pursuant to KZC 95.32		X	X	X
Retain and protect all other viable trees if feasible		X	X	X

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Development Activity	Minor ⁽¹⁾⁽³⁾ – Single-Family, or two attached, detached, or stacked dwelling units, and related demolition and land surface modification applications	Major ⁽²⁾⁽³⁾ Single-Family, or two attached, detached, or stacked dwelling units, and related demolition and land surface modification applications	Multifamily, Commercial, any other use other than residential, and related demolition and land surface modification applications	Short Plat, Subdivisions, cottages, carriage units, two/three-unit homes, and related demolition and land surface modification applications (see KZC 95.30(6) for additional standards)
Required Components				
Preservation and maintenance agreements pursuant to KZC 95.51 are required for all remaining trees on the subject property	X	X	X	X ⁽⁵⁾
TREE DENSITY				
Tree density requirements shall apply as required in KZC 95.33		X		X
A minimum of two trees must be on the lot following the requirement set forth in KZC 95.33(4)	X			
LANDSCAPING PER ZONING/LAND USE				
Preserved trees in required landscaping areas shall apply toward required landscaping requirements			X	

(1) Applicable when new development, redevelopment, or development in which the total square footage of the proposed improvements is less than 50 percent of the total square footage of the existing improvements on the subject property.

(2) Applicable when new development, redevelopment, or development in which the total square footage of the proposed improvements is more than 50 percent of the total square footage of the existing improvements on the subject property.

(3) For lots created through a short subdivision, subdivision, or planned unit development with an approved Tree Retention Plan, the applicant must comply with the Tree Retention Plan approved with the short subdivision, subdivision, or planned unit development.

(4) To retain Landmark, Exceptional and Grove trees located in required yards, the applicant shall pursue applicable variations in the development standards of this code as outlined in KZC 95.32.

(5) Prior to short plat or subdivision recording.

(x) Proposed tree removal for the installation of renewable energy system hardware such as solar panels or wind turbines shall be reviewed by the Planning Official with the associated electrical permit.

6. Tree Retention Plan Standards for Short Plats and Subdivisions – Integrated Development Plan and Modifications. Tree retention decisions made early in the short plat and subdivision design process results in predictable development sequencing and effective tree retention. Tree Retention Plans approved during the short plat or subdivision review process shall establish the location of all proposed improvements, including the building footprint, utilities, changes to existing grade and access roads.

Modifications after Tree Removal. A modification request is required to remove trees previously identified for retention in the original short plat or subdivision Tree Retention Plan. Such a request may be approved by the Hearing Examiner only if the following are met:

- x) The need for the modification was not known and could not reasonably have been known before the tree retention plan was approved;

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- x) The modification is necessary because of special circumstances which are not the result of actions by the applicant regarding the size, shape, topography, or other physical limitations of the subject property relative to the location of proposed and/or existing improvements on or adjacent to the subject property;
- x) There is no practicable or feasible alternative development proposal that results in fewer additional tree removals;
- x) The Hearing Examiner shall not approve or deny a modification pursuant to this section without the Planning Official first providing notice of the modification request consistent with the noticing requirements for the short plat and providing opportunity for comments for consideration by the Hearing Examiner; and
- x) Said comment period shall not be less than 14 calendar days.
- x) The fee for processing a modification request shall be established by City ordinance
(Ord. 4619 § 1, 2017; Ord. 4437 § 1, 2014; Ord. 4252 § 1, 2010; Ord. 4238 § 2, 2010; Ord. 4010 § 2, 2005)

95.32 Incentives and Variations to Development Standards to Retain Trees

In order to retain trees, the applicant shall pursue provisions in Kirkland's codes that allow development standards to be modified to retain Landmark, Exceptional and grove trees on development sites.

Requirements of the Kirkland Zoning Code may be modified by the Planning Official as outlined below when such modifications would further the purpose and intent of this chapter as set forth in KZC 95.05 and would involve Landmark, Exceptional and Grove trees.

1. Variations (*moved from below*). The Planning Official is authorized to require site plan alterations to retain Landmark, Exceptional and Grove trees. Such alterations include minor adjustments to the location of building footprints, adjustments to the location of driveways and access ways, or adjustment to the location of walkways, easements or utilities. The applicant must provide alternative design, method or material options for tree retention such as pin or pier foundations, hydro-boring, cantilevering, etc. The Planning Official and the applicant shall work in good faith to find reasonable solutions
2. Required Yards (*moved*). Initially, the applicant shall pursue options for placement of required yards as permitted by other sections of this code, such as selecting one (1) front required yard in the RSX zone and adjusting side yards in any zone to meet the 15-foot total as needed for each structure on the site. The Planning Official may also reduce the front, side or rear required yards; provided, that:
 - a. No required side yard shall be less than five (5) feet; and
 - b. The required front yard shall not be reduced by more than five (5) feet in residential zones. There shall not be an additional five (5) feet of reduction beyond the allowance provided for covered entry porches;
 - c. Rear yards that are not directly adjacent to another parcel's rear yard but that are adjacent to an access easement or tract may be reduced by five (5) feet;
 - d. No required yard shall be reduced by more than five (5) feet in residential zones.
3. Common Recreational Open Space. Reductions or variations of the area, width, or composition of required common recreational open space may be granted to retain Landmark, Exceptional and Grove trees.
4. Parking Areas and Access. Variations in parking lot design and/or access driveway requirements may be granted when the Public Works and Planning Officials both determine the variations to be consistent with the intent of City policies and codes.

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5. Storm Water. Requirements pertaining to stormwater may be varied if approved by the Public Works Official under KMC 15.52.060.

6. Additional Variations. Examples include but are not limited to number of parking stalls, right-of-way improvements, lot size reduction under Chapter 22.28 KMC, lot line placement when subdividing property under KMC Title 22, Planned Unit Developments, and required landscaping, including buffers for lands use and parking/driving areas. *(moved from above)*

(Ord. 4547 § 1, 2016; Ord. 4350 § 1, 2012; Ord. 4238 § 2, 2010)

95.33 Tree Density Requirement

The required minimum tree density is 40 tree credits per acre for single-family homes, cottages, carriage units, two/three-unit homes, short plats, and/or subdivisions and associated demolition and land surface modification *(moved)*. The tree density shall consist of existing Landmark, Exceptional and Grove trees, supplemental trees or a combination of existing and supplemental trees pursuant to subsection (2) of this section. The tree densities set forth in subsection 2 of this section may be exceeded to retain existing Landmark, Exceptional and Grove trees. When the provisions of this chapter are in conflict, that provision which provides more protection for individual trees and trees in groves shall apply unless specifically provided otherwise in this chapter or unless such provision conflicts with federal or state laws or regulations.

1. Tree Density Calculation. Tree density calculation for existing individual trees:
 - a. Diameter breast height (DBH) of the tree shall be measured in inches.
 - b. The tree credit value that corresponds with DBH shall be found in Table 95.33.1. Existing native conifers (or other conifer species as approved by the Planning Official) shall count 1.5 times credits for retention.
 - c. Trees located in the public right of way, areas to be dedicated as public right of way, and vehicular access easements not included as lot area with the approved short plat shall not count towards tree density credit requirements *(moved)*.
 - d. Existing trees transplanted to an area on the same site shall not count toward the required density unless approved by the Planning Official based on transplant specifications provided by a qualified professional that will ensure a good probability for survival *(moved)*.
 - e. The total resulting tree density credits on a lot shall result from retained existing trees, supplemental trees, or a combination of the two. For individual lots in a short subdivision or subdivision with an approved Tree Retention Plan, the required tree density applies to each lot within the short plat or subdivision *(moved)*.

**Table 95.33.1
 Tree Density Credits for Existing Significant Trees**

(Credits per minimum diameter – DBH)

DBH	Tree Credits	DBH	Tree Credits
6 – 10"	1	24"	8
12"	2	26"	9
14"	3	28"	10
16"	4	30" or greater	11
18"	5		
20"	6		

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DBH	Tree Credits	DBH	Tree Credits
22"	7		

2. To calculate tree density credits, the square foot area of the subject lot is divided by 43,560, the square foot equivalent to one acre. The resulting number is then multiplied by 40, the minimum tree density credit requirement for one acre. In calculating tree density credits, tree credits shall be rounded up to the next whole number from a 0.5 or greater value (*moved*).

Example: an 8,500-square-foot lot would need eight (8) tree credits ($8,500/43,560 = 0.195 \times 40 = 7.8$, or eight (8) credits). The tree density for the lot could be met by retaining two (2s) existing 14-inch deciduous trees and one (1) existing 12-inch deciduous tree on site. The same 8,500-square-foot lot would meet the required eight (8) tree credits by retaining one (1) existing 20-inch conifer.

3. Supplemental Trees Planted to Meet Density Requirement. For sites and activities requiring a tree density and where the existing trees to be retained do not meet the tree density requirement, supplemental trees shall be planted to achieve the required tree density.

4. Minimum Size and Tree Density Value for Supplemental Trees. The required minimum size of the supplemental tree worth one (1) tree credit shall be four (4) feet tall for native or other conifers and 2-inch caliper for deciduous or broad-leaf evergreen tree. Additional credits may be awarded for larger supplemental trees. Supplemental Thuja/Arborvitae or other slow-growing conifers such as Hinoki cypress planted on development sites shall not count towards tree density credits on a lot. The installation and maintenance shall be pursuant to KZC 95.50 and 95.51 respectively.

5. Tree Location. In designing a development and in meeting the required tree density, the trees shall be planted pursuant to KZC 95.50 in the following order of priority:

- a. On-Site. The preferred locations for new trees are:
 - 1) On individual residential building lots (*reprioritized*)
 - 2) In preserved groves, critical areas or their buffers.
 - 3) Adjacent to storm water facilities as approved by Public Works under KMC 15.52.060.
 - 4) Site perimeter – The area of the subject property that is within 10 feet from the property line.
 - 5) Entrance landscaping, traffic islands and other common areas with the development of residential subdivisions.
- b. Off-Site. When room is unavailable for planting the required trees on site, then they may be planted at another approved location in the City. Trees that are planted offsite from the subject property may be required to be preserved in perpetuity.
- c. Payment in Lieu of Planting. When the Planning Official determines on-site and off-site locations are unavailable, then the applicant shall pay an amount of money in lieu of planting, utilizing the most recent version of the Pacific Northwest International Society of Arboriculture (PNW ISA) “Species Ratings for Landscape Tree Appraisal” unit cost of \$480 per conifer or \$390 per deciduous tree, multiplied by the number of required tree credits into the City Forestry Account.

(Ord. 4547 § 1, 2016; Ord. 4238 § 2, 2010)

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95.34 Tree and Soil Protection during Development Activity

Prior to development activity or initiating tree removal on the site, vegetated areas, individual trees and soil to be preserved shall be protected from potentially damaging activities during development activity per ISA and ANSI standards for tree protection as follows:

- x. Tree Cutting in Advance of Issuance of Land Development Permit. There shall be no tree removal or land clearing on any site for the sake of preparing that site for future development.
1. Placing Materials near Trees. No person may conduct any activity within the protected area of any tree designated to remain, including, but not limited to, operating or parking equipment, placing solvents, storing building material or stockpiling any materials, or dumping concrete washout or other chemicals. During construction, no person shall attach any object to any tree designated for protection.
 2. Tree Protection Fence. Before development, land clearing, filling or any land alteration, the applicant shall:
 - a. Erect and maintain immovable, readily visible temporary protective tree fencing at the approved Limits of Disturbance which completely surrounds the protected area of all retained trees, groups of trees, vegetation and native soil. Fences shall be constructed of chain link and be at least six (6) feet high, unless other type of fencing is authorized by the Planning Official.
 - b. Install highly visible signs spaced no further than 15 feet along the entirety of the Tree Protection Fence. Said sign must be approved by the Planning Official and shall state at a minimum "Tree and Soil Protection Area, Entrance Prohibited" and provide the City phone number for code enforcement to report violations.
- x. Site plans showing approved tree retention/protection shall be displayed on development sites in plain view with the general contractor or other responsible party's phone number.
 - c. Prohibit excavation or compaction of soil or other potentially damaging activities within the fence; provided, that the Planning Official may allow such activities approved by a qualified professional and under the supervision of a qualified professional retained and paid for by the applicant.
 - x. If any disturbance is proposed within the Inner Critical Root Zone of significant trees on a neighboring property, the applicant shall provide evidence that the owner of said tree(s) has been notified in writing of the potential impact. The Planning Official may waive this requirement if the applicant's arborist can demonstrate, through non-injurious methods such as pneumatic root excavations, that there are no roots within the Inner Critical Root Zone.
 - d. Maintain the Tree Protection Fence in its approved location for the duration of the project until the Planning Official authorizes its removal.
 - e. Ensure that any approved landscaping done in the protected zone subsequent to the removal of the barriers shall be accomplished with machinery from outside the protected zone or by hand.
 - f. In addition to the above, the Planning Official may require the following:
 - 1) If equipment is authorized to operate within the Critical Root Zone, the soil must be covered with mulch to a depth of at least six (6) inches or with plywood, steel plates or similar material in order to protect roots and soil from damage caused by heavy equipment.
 - 2) Minimize root damage by hand-excavating a 2-foot-deep trench, at edge of Critical Root Zone, to cleanly sever the roots of trees to be retained. Never rip or shred roots with heavy equipment.
 - 3) Corrective pruning performed on protected trees in order to avoid damage from machinery or building activity.
 - 4) Maintenance of trees throughout construction period by watering and fertilizing.

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3. Grade.
 - a. The grade shall not be elevated or reduced within the Critical Root Zone of trees to be preserved without the Planning Official's authorization based on recommendations from a qualified professional. The Planning Official may allow coverage of up to one-half (1/2) of the area of the tree's Critical Root Zone with light soils (no clay) to the minimum depth necessary to carry out grading or landscaping plans, if it will not imperil the survival of the tree. Aeration devices may be required to ensure the tree's survival.
 - b. If the grade adjacent to a preserved tree is raised such that it could slough or erode into the tree's Critical Root Zone, it shall be permanently stabilized to prevent soil erosion and suffocation of the roots.
 - c. The applicant shall not install an impervious surface within the Critical Root Zone of any tree to be retained without the authorization of the Planning Official. The Planning Official may require specific construction methods and/or use of aeration devices to ensure the tree's survival and to minimize the potential for root-induced damage to the impervious surface.
 - d. To the greatest extent practical, utility trenches shall be located outside of the critical root zone of trees to be retained. The Planning Official may require that utilities be tunneled under the roots of trees to be retained if the Planning Official determines that trenching would significantly reduce the chances of the tree's survival.
 - e. Trees and other vegetation to be retained shall be protected from erosion and sedimentation. Clearing operations shall be conducted so as to expose the smallest practical area of soil to erosion for the least possible time. To control erosion, it is encouraged that shrubs, ground cover and stumps be maintained on the individual lots, where feasible.
4. Directional Felling. Directional felling of trees shall be used to avoid damage to trees designated for retention.
5. Additional Requirements. The Planning Official may require additional tree protection measures that are consistent with accepted urban forestry industry practices, including maintenance pursuant to KZC 9551.

(Ord. 4547 § 1, 2016; Ord. 4238 § 2, 2010)

95.40 Required Landscaping based on Zoning District

1. User Guide. Chapters 15 through 56 KZC containing the use zone or development standards tables assign a landscaping category to each use in each zone. This category is either "A," "B," "C," "D," or "E." If you do not know which landscaping category applies to the subject property, you should consult the appropriate use zone or development standards tables.

Requirements pertaining to each landscaping category are located throughout this chapter, except that Landscaping Category E is not subject to this section.

Landscape Categories A, B, C, D, and E may be subject to additional related requirements in the following other chapters:

- a. Various use zone charts or development standards tables, in Chapters 15 through 56 KZC, establish additional or special buffering requirements for some uses in some zones.
- b. Chapter 85 KZC, Geologically Hazardous Areas, addresses the retention of vegetation on steep slopes.
- c. Chapter 90 KZC, Critical Areas, addresses vegetation within critical areas and critical area buffers.
- d. Chapter 110 KZC and Chapter 19.36 KMC address vegetation within rights-of-way, except for the I-405 and SR-520 rights-of-way, and the Cross Kirkland Corridor railbanked rail corridor or the Eastside Rail Corridor.
- e. KZC 115.135, Sight Distance at Intersections, which may limit the placement of landscaping in some areas.

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- f. Chapter 22 KMC addresses trees in subdivisions.
2. Use of Significant Existing Vegetation.
- a. General. The applicant shall apply subsection KZC 95.30(3), Tree Retention Plan Procedure, and KZC 95.32, Incentives and Variations to Development Standards, to retain existing native trees, vegetation and soil in areas subject to the landscaping standards of this section. The Planning Official shall give substantial weight to the retained native trees and vegetation when determining the applicant's compliance with this section.
- b. Supplement. The City may require the applicant to plant trees, shrubs, and groundcover according to the requirements of this section to supplement the existing vegetation in order to provide a buffer at least as effective as the required buffer.
- c. Protection Techniques. The applicant shall use the protection techniques described in KZC 95.34 to ensure the protection of significant existing vegetation and soil.
3. Landscape Plan Required. In addition to the Tree Retention Plan required pursuant to KZC 95.30, application materials shall clearly depict the quantity, location, species, and size of plant materials proposed to comply with the requirements of this section and shall address the plant installation and maintenance requirements set forth in KZC 95.50 and 95.51. Plant materials shall be identified with both their scientific and common names. Any required irrigation system must also be shown.

(Ord. 4551 § 4, 2017; Ord. 4547 § 1, 2016; Ord. 4476 § 3, 2015; Ord. 4408 § 1, 2013; Ord. 4238 § 2, 2010; Ord. 4121 § 1, 2008; Ord. 4097 § 1, 2007; Ord. 4037 § 1, 2006; Ord. 4030 § 1, 2006; Ord. 4010 § 2, 2005)

95.41 Supplemental Plantings

1. General. The applicant shall provide the supplemental landscaping specified in subsection (2) of this section in any area of the subject property that:
- a. Is not covered with a building, vehicle circulation area or other improvement; and
- b. Is not a critical area, critical area buffer, or in an area to be planted with required landscaping; and
- c. Is not committed to and being used for some specific purpose.
2. Standards. The applicant shall provide the following at a minimum:
- a. Living plant material which will cover 80 percent of the area to be landscaped within two (2) years. If the material to be used does not spread over time, the applicant shall re-plant the entire area involved immediately. Any area that will not be covered with living plant material must be covered with nonliving groundcover, i.e.: mulch. Preference is given to using native plant species. See Kirkland Native Tree/Plant Lists.
- b. One (1) tree for each 1,000 square feet of area to be landscaped. At the time of planting, deciduous trees must be at least two (2) inches in caliper and coniferous trees must be at least five (5) feet in height, with preference to native species.
- c. If a development requires approval through Process I, IIA or IIB as described in Chapters 145, 150 and 152 KZC, respectively, the City may require additional vegetation to be planted along a building facade if:
- 1) The building facade is more than 25 feet high or more than 50 feet long; or
- 2) Additional landscaping is necessary to provide a visual break in the facade.
- d. In RHBD varieties of rose shrubs or ground cover along with other plant materials shall be included in the on-site landscaping.

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e. If development is subject to Design Review as described in Chapter 142 KZC, the City will review plant choice and specific plant location as part of the Design Review approval. The City may also require or permit modification to the required plant size as part of Design Review approval.

(Ord. 4547 § 1, 2016; Ord. 4238 § 2, 2010)

95.42 Land Use Buffer Requirements

The applicant shall comply with the provisions specified in the following chart and with all other applicable provisions of this chapter. Land use buffer requirements may apply to the subject property, depending on what permitted use exists on the adjoining property or, if no permitted use exists, depending on the zone that the adjoining property is in.

LANDSCAPING CATEGORY	ADJOINING PROPERTY	*Public park or low density residential use or if no permitted use exists on the adjoining property then a low density zone.	Medium or high density residential use or if no permitted use exists on the adjoining property then a medium density or high density zone.	Institutional or office use or if no permitted use exists on the adjoining property then an institutional or office zone.	A commercial use or an industrial use or if no permitted use exists on the adjoining property then a commercial or industrial zone.
A	Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (2) (Buffering Standard 2)	
B	Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (1) (Buffering Standard 1)			
C	Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (2) (Buffering Standard 2)		
D	Must comply with subsection (2) (Buffering Standard 2)				
E					
Footnotes:	*If the adjoining property is zoned Central Business District, Juanita Business District, North Rose Hill Business District, Rose Hill Business District, Finn Hill Neighborhood Center, Houghton/Everest Neighborhood Center, Business District Core or is located in TL 5, this section KZC 95.42 does not apply.				

This chart establishes which buffering standard applies in a particular case. The following subsections establish the specific requirement for each standard:

1. For standard 1, the applicant shall provide a 15-foot-wide landscaped strip with a 6-foot-high solid screening fence or wall. Except for public utilities, the fence or wall must be placed on the outside edge of the land use buffer or on the property line when adjacent to private property. For public utilities, the fence or wall may be placed either on the outside or inside edge of the landscaping strip. A fence or wall is not required when the land use buffer is adjacent and parallel to a public right-of-way that is improved for vehicular use. See KZC 115.40 for additional fence standards. The land use buffer must be planted as follows:

a. Trees planted at the rate of one (1) tree per 20 linear feet of land use buffer, with deciduous trees of two and one-half (2-1/2) inch caliper, minimum, and/or coniferous trees eight (8) feet in height, minimum. At least 70 percent of trees shall be evergreen. The trees shall be distributed evenly throughout the buffer, spaced no more than 20 feet apart on center.

b. Large shrubs or a mix of shrubs planted to attain coverage of at least 60 percent of the land use buffer area within two (2) years, planted at the following sizes and spacing, depending on type:

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- 1) Low shrub – (mature size under three (3) feet tall), 1- or 2-gallon pot or balled and burlapped equivalent;
 - 2) Medium shrub – (mature size from three (3) to six (6) feet tall), 2- or 3-gallon pot or balled and burlapped equivalent;
 - 3) Large shrub – (mature size over six (6) feet tall), 5-gallon pot or balled and burlapped equivalent.
- c. Living ground covers planted from either 4-inch pot with 12-inch spacing or 1-gallon pot with 18-inch spacing to cover within two (2) years 60 percent of the land use buffer not needed for viability of the shrubs or trees.
2. For standard 2, the applicant shall provide a 5-foot-wide landscaped strip with a 6-foot-high solid screening fence or wall. Except for public utilities, the fence or wall must be placed on the outside edge of the land use buffer or on the property line when adjacent to private property. For public utilities, the fence or wall may be placed either on the outside or inside edge of the landscaping strip. A fence or wall is not required when the land use buffer is adjacent and parallel to a public right-of-way that is improved for vehicular use. See KZC 115.40 for additional fence standards. The landscaped strip must be planted as follows:
 - a. One (1) row of trees planted no more than 10 feet apart on center along the entire length of the buffer, with deciduous trees of 2-inch caliper, minimum, and/or coniferous trees at least six (6) feet in height, minimum. At least 50 percent of the required trees shall be evergreen.
 - b. Living ground covers planted from either 4-inch pot with 12-inch spacing or 1-gallon pot with 18-inch spacing to cover within two (2) years 60 percent of the land use buffer not needed for viability of the trees.
 3. Plant Standards. All plant materials used shall meet the most recent American Association of Nurserymen Standards for nursery stock: ANSI Z60.1.
 4. Location of the Land Use Buffer. The applicant shall provide the required buffer along the entire common border between the subject property and the adjoining property.
 5. Multiple Buffering Requirement. If the subject property borders more than one (1) adjoining property along the same property line, the applicant shall provide a gradual transition between different land use buffers. This transition must occur totally within the area which has the less stringent buffering requirement. The specific design of the transition must be approved by the City.
 6. Adjoining Property Containing Several Uses. If the adjoining property contains several permitted uses, the applicant may provide the least stringent land use buffer required for any of these uses.
 7. Subject Property Containing Several Uses. If the subject property contains more than one (1) use, the applicant shall comply with the land use buffering requirement that pertains to the use within the most stringent landscaping category that abuts the property to be buffered.
 8. Subject Property Containing School. If the subject property is occupied by a school, land use buffers are not required along property lines adjacent to a street.
 9. Encroachment into Land Use Buffer. Typical incidental extensions of structures such as chimneys, bay windows, greenhouse windows, cornices, eaves, awnings, and canopies may be permitted in land use buffers as set forth in KZC 115.115(3)(d); provided, that:
 - a. Buffer planting standards are met; and
 - b. Required plantings will be able to attain full size and form typical to their species.

(Ord. 4637 § 3, 2018; Ord. 4636 § 3, 2018; Ord. 4495 § 2, 2015; Ord. 4238 § 2, 2010)

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95.43 Outdoor Use, Activity, and Storage

Outdoor use, activity, and storage (KZC 115.105(2)) must comply with required land use buffers for the primary use, except that the following outdoor uses and activities, when located in commercial or industrial zones, are exempt from KZC 115.105(2)(c)(1) and (2)(c)(2) as stated below:

1. That portion of an outdoor use, activity, or storage area which abuts another outdoor use, activity, or storage area which is located on property zoned for commercial or industrial use.
2. Outdoor use, activity, and storage areas which are located adjacent to a fence or structure which is a minimum of six (6) feet above finished grade, and do not extend outward from the fence or structure more than five (5) feet; provided, that the total horizontal dimensions of these areas shall not exceed 50 percent of the length of the facade or fence (see Plate 11).
3. If there is an improved path or sidewalk in front of the outdoor storage area, the outdoor use, activity or storage area may extend beyond five (5) feet if a clearly defined walking path at least three (3) feet in width is maintained and there is adequate pedestrian access to and from the primary use. The total horizontal dimension of these areas shall not exceed 50 percent of the length of the facade of the structure or fence (see Plate 11).
4. Outdoor dining areas.
5. That portion of an outdoor display of vehicles for sale or lease which is adjacent to a public right-of-way that is improved for vehicular use; provided, that it meets the buffering standards for driving and parking areas in KZC 95.45(1); and provided further, that the exemptions of KZC 95.45(2) do not apply unless it is fully enclosed within or under a building, or is on top of a building and is at least one (1) story above finished grade.
6. Outdoor Christmas tree lots and fireworks stands if these uses will not exceed 30 days, and outdoor amusement rides, carnivals and circuses, and parking lot sales which are ancillary to the indoor sale of the same goods and services, if these uses will not exceed seven (7) days.

(Ord. 4547 § 1, 2016; Ord. 4238 § 2, 2010)

95.44 Internal Parking Lot Landscaping Requirements

The following internal parking lot landscape standards apply to each parking lot or portion thereof containing more than eight (8) parking stalls.

1. The parking lot must contain 25 square feet of landscaped area per parking stall planted as follows:
 - a. The applicant shall arrange the required landscaping throughout the parking lot to provide landscape islands or peninsulas to separate groups of parking spaces (generally every eight (8) stalls) from one another and each row of spaces from any adjacent driveway that runs perpendicular to the row. This island or peninsula must be surrounded by a 6-inch-high vertical curb and be of similar dimensions as the adjacent parking stalls. Gaps in curbs are allowed for stormwater runoff to enter landscape island.
 - b. Landscaping shall be installed pursuant to the following standards:
 - 1) At least one (1) deciduous tree, two (2) inches in caliper, or a coniferous tree five (5) feet in height.
 - 2) Groundcover shall be selected and planted to achieve 60 percent coverage within two (2) years.
 - 3) Natural drainage landscapes (such as rain gardens, bio-infiltration swales and bioretention planters) are allowed when designed in compliance with the stormwater design manual adopted in KMC 15.52.060. Internal parking lot landscaping requirements for trees still apply. Refer to Public Works Pre-Approved Plans.
 - c. Exception. The requirements of this subsection do not apply to any area that is fully enclosed within or under a building.

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2. **Rooftop Parking Landscaping.** For a driving or parking area on the top level of a structure that is not within the CBD zone or within any zone that requires design regulation compliance, one (1) planter that is 30 inches deep and five (5) feet square must be provided for every eight (8) stalls on the top level of the structure. Each planter must contain a small tree or large shrub suited to the size of the container and the specific site conditions, including desiccating winds, and is clustered with other planters near driving ramps or stairways to maximize visual effect.
3. If development is subject to Design Review as described in Chapter 142 KZC, the City will review the parking area design, plant choice and specific plant location as part of the Design Review approval. The City may also require or permit modification to the required landscaping and design of the parking area as part of Design Review approval.

(Ord. 4547 § 1, 2016; Ord. 4350 § 1, 2012; Ord. 4238 § 2, 2010)

95.45 Perimeter Landscape Buffering for Driving and Parking Areas

1. **Perimeter Buffering – General.** Except as specified in subsection (2) of this section, the applicant shall buffer all parking areas and driveways from abutting rights-of-way and from adjacent property with a 5-foot-wide strip along the perimeter of the parking areas and driveways planted as follows (see Figure 95.45.A):

- a. One (1) row of trees, two (2) inches in caliper and planted 30 feet on center along the entire length of the strip.
- b. Living groundcover planted to attain coverage of at least 60 percent of the strip area within two (2) years.
- c. Natural drainage landscapes (such as rain gardens, bio-infiltration swales and bioretention planters) are allowed when designed in compliance with the stormwater design manual adopted in KMC 15.52.060. Perimeter landscape buffering requirements for trees in driving and parking areas still apply. Refer to Public Works Pre-Approved Plans.

2. **Exception.** The requirements of this section do not apply to any parking area that:

- a. Is fully enclosed within or under a building; or
- b. Is on top of a building and is at least one (1) story above finished grade; or
- c. Serves detached dwelling units exclusively; or
- d. Is within any zone that requires design regulation compliance. See below for Design District requirements.

3. **Design Districts.** If subject to Design Review, each side of a parking lot that abuts a street, through-block pathway or public park must be screened from that street, through-block pathway or public park by using one (1) or a combination of the following methods (see Figures 95.45.A, B, and C):

- a. By providing a landscape strip at least five (5) feet wide planted consistent with subsection (1) of this section, or in combination with the following. In the RHBD Regional Center (see KZC Figure 92.05.A) a 10-foot perimeter landscape strip along NE 85th Street is required planted consistent with subsection (1) of this section.
- b. The hedge or wall must extend at least two (2) feet, six (6) inches, and not more than three (3) feet above the ground directly below it.
- c. The wall may be constructed of masonry or concrete, if consistent with the provisions of KZC 92.35(1)(g), in building material, color and detail, or of wood if the design and materials match the building on the subject property.
- d. In JBD zones:

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- 1) If the street is a pedestrian-oriented street, the wall may also include a continuous trellis or grillwork, at least five (5) feet in height above the ground, placed on top of or in front of the wall and planted with climbing vines. The trellis or grillwork may be constructed of masonry, steel, cast iron and/or wood.
 - 2) If the wall abuts a pedestrian-oriented street, the requirements of this subsection may be fulfilled by providing pedestrian weather protection along at least 80 percent of the frontage of the subject property.
- e. If development is subject to Design Review as described in Chapter 142 KZC, the City will review plant choice and specific plant location as part of the Design Review approval. The City may also require or permit modification to the required plant size as part of Design Review approval.
4. Overlapping Requirements. If buffering is required in KZC 95.42, Land Use Buffering Standards, and by this subsection, the applicant shall utilize the more stringent buffering requirement.

Perimeter Parking Lot Landscaping

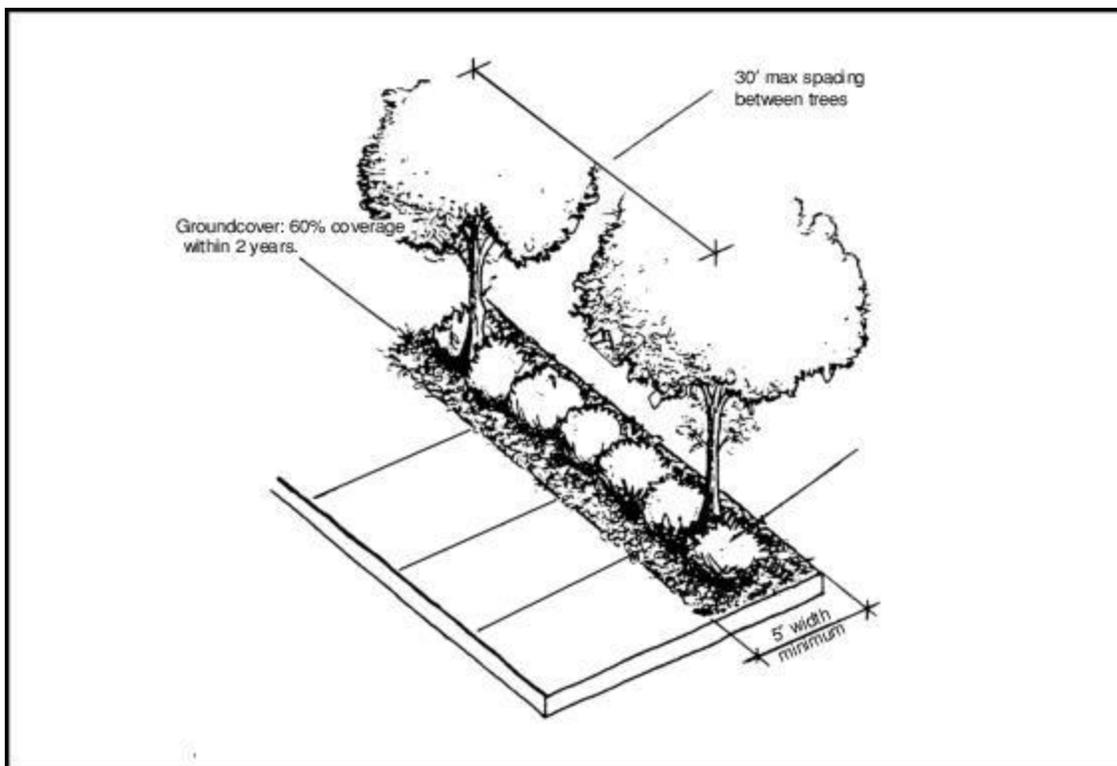


FIGURE 95.45.A

Perimeter Parking – Examples of Various Screen Wall Designs

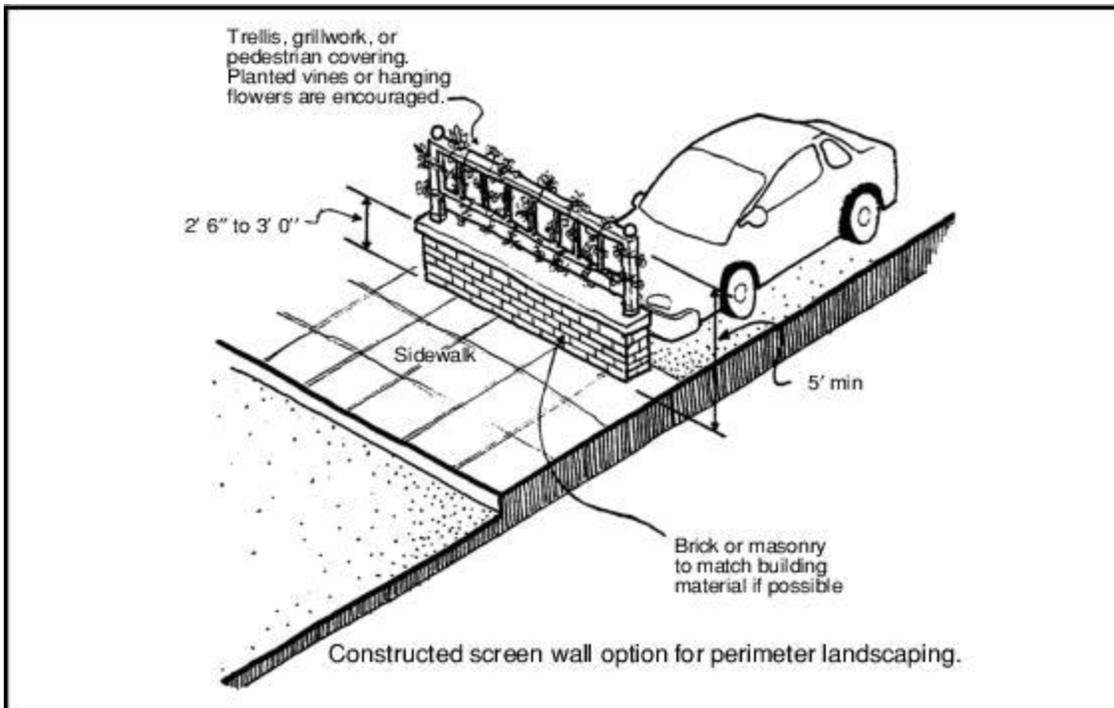


FIGURE 95.45.B

Perimeter Parking – Examples of Various Screen Wall Designs

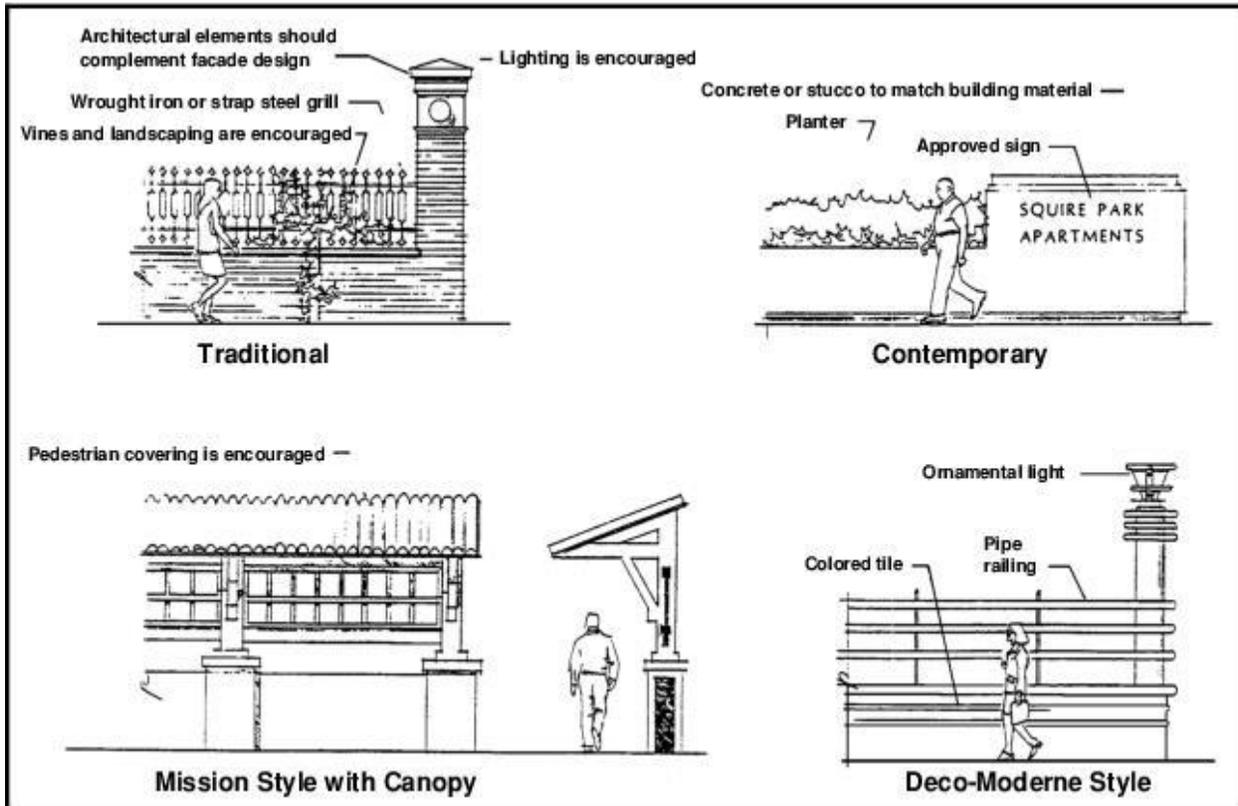


FIGURE 95.45.C

(Ord. 4547 § 1, 2016; Ord. 4238 § 2, 2010; Ord. 4010 § 2, 2005)

95.46 Modifications to Landscaping Standards

1. Modification to Land Use Buffer Requirements. The applicant may request a modification of the requirements of the buffering standards in KZC 95.42. The Planning Official may approve a modification if:

- a. The owner of the adjoining property agrees to this in writing; and
- b. The existing topography or other characteristics of the subject property or the adjoining property, or the distance of development from the neighboring property decreases or eliminates the need for buffering; or
- c. The modification will be more beneficial to the adjoining property than the required buffer by causing less impairment of view or sunlight; or
- d. The Planning Official determines that it is reasonable to anticipate that the adjoining property will be redeveloped in the foreseeable future to a use that would require no, or a less intensive, buffer; or
- e. The location of pre-existing improvements on the adjoining site eliminates the need or benefit of the required landscape buffer.

2. Modifications to General Landscaping Requirements.

- a. Authority to Grant and Duration. If the proposed development of the subject property requires approval through Design Review or Process I, IIA, or IIB, described in Chapters 142, 145, 150, and 152 KZC, respectively, a request for a modification will be considered as part of that process under the provisions of this section. The City must find that the applicant meets the applicable criteria listed in subsections (2)(b) and (2)(c)

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of this section. If granted under Design Review or Process I, IIA, or IIB, the modification is binding on the City for all development permits issued for that development under the building code within five (5) years of the granting of the modification.

If the above does not apply, the Planning Official may grant a modification in writing under the provisions of this section.

b. **Internal Parking Lot Landscaping Modifications.** For a modification to the internal parking lot landscaping requirements in KZC 95.44, the landscape requirements may be modified if:

- 1) The modification will produce a landscaping design in the parking area comparable or superior to that which would result from adherence to the adopted standard; or
- 2) The modification will result in increased retention of significant existing vegetation; or
- 3) The purpose of the modification is to accommodate low impact development techniques as approved by the Planning Official.

c. **Perimeter parking lot and driveway landscaping.** For a modification to the perimeter landscaping for parking lots and driveways, the buffering requirements for parking areas and driveways may be modified if:

- 1) The existing topography of or adjacent to the subject property decreases or eliminates the need for visual screening; or
- 2) The modification will be of more benefit to the adjoining property by causing less impairment of view or sunlight; or
- 3) The modification will provide a visual screen that is comparable or superior to the buffer required by KZC 95.45; or
- 4) The modification eliminates the portion of the buffer that would divide a shared parking area serving two (2) or more adjacent uses but provides the buffer around the perimeter of the shared parking area.

(Ord. 4547 § 1, 2016; Ord. 4238 § 2, 2010)

95.47 Nonconforming Landscaping and Buffers

1. The landscaping requirements of KZC 95.41, Supplemental Plantings, KZC 95.43 Outdoor Use, Activity and Storage, KZC 95.44, Internal Parking Lot Landscaping, and KZC 95.45, Perimeter Landscape Buffering for Driving and Parking Areas, must be brought into conformance as much as is feasible, based on available land area, in either of the following situations:

- a. An increase of at least 10 percent in gross floor area of any structure; or
 - b. An alteration to any structure, the cost of which exceeds 50 percent of the replacement cost of the structure.
2. Land use buffers must be brought into conformance with KZC 95.42 in either of the following situations:
- a. An increase in gross floor area of any structure (the requirement to provide conforming buffers applies only where new gross floor area impacts adjoining property); or
 - b. A change in use on the subject property and the new use requires larger buffers than the former use.

(Ord. 4547 § 1, 2016; Ord. 4238 § 2, 2010)

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95.50 Installation Standards for Required Plantings

All required trees, landscaping and soil shall be installed according to sound horticultural practices in a manner designed to encourage quick establishment and healthy plant growth. All required landscaping shall be installed in the ground and not in above-ground containers, except for landscaping required on the top floor of a structure.

When an applicant proposes to locate a subterranean structure under required landscaping that appears to be at grade, the applicant will: (1) provide site-specific documentation prepared by a qualified expert to establish that the design will adequately support the long-term viability of the required landscaping; and (2) enter into an agreement with the City, in a form acceptable to the City Attorney, indemnifying the City from any damage resulting from development activity on the subject property which is related to the physical condition of the property. The applicant shall record this agreement with the King County Recorder's Office.

1. Compliance. It is the applicant's responsibility to show that the proposed landscaping complies with the regulations of this chapter.
2. Timing. All landscaping shall be installed prior to the issuance of a certificate of occupancy, except that the installation of any required tree or landscaping may be deferred during the summer months to the next planting season, but never for more than six (6) months. Deferred installation shall be secured with a performance bond pursuant to Chapter 175 KZC prior to the issuance of a certificate of occupancy.
3. Grading. Berms shall not exceed a slope of two (2) horizontal feet to one (1) vertical foot (2:1).
4. Soil Specifications. Soils in planting areas shall have soil quality equivalent to Washington State Department of Ecology BMP T5.13. The soil quality in any landscape area shall comply with the soil quality requirements of the Public Works Pre-Approved Plans. See subsection (9) of this section for mulch requirements.
5. Plant Selection.
 - a. Plant selection shall be consistent with the appropriate Kirkland Plant Lists, which are shown on the Planning Department webpage and available in the Planning and Building Department. Species diversity is encouraged by planting species other than those listed, with Planning Official approval.
 - b. Plants shall be selected and sited to produce a hardy and drought-resistant landscape area. Selection shall consider soil type and depth, the amount of maintenance required, spacing, exposure to sun and wind, the slope and contours of the site, and compatibility with existing native vegetation preserved on the site. Preservation of existing vegetation is strongly encouraged.
 - c. Plants listed in the Kirkland Prohibited Plant List shall not be planted in any required landscape areas. Additionally, there are other plants that may not be used if identified in the Kirkland Plant List as potentially damaging to sidewalks, roads, underground utilities, drainage improvements, foundations, or when not provided with enough growing space.
 - d. All plants shall conform to American Association of Nurserymen (AAN) grades and standards as published in the "American Standard for Nursery Stock" manual.
 - e. Plants shall meet the minimum size standards established in other sections of the KZC.
 - f. Multiple-stemmed trees may be permitted as an option to single-stemmed trees for required landscaping provided that such multiple-stemmed trees are at least 10 feet in height and that they are approved by the Planning Official prior to installation.
 - x. Plant Location. Newly-planted supplemental trees must be planted at least 3 feet away from property lines. Planting large trees under/within proximity to overhead utilities shall be avoided. Newly-planted supplemental trees may be checked for the approved locations as a final inspection procedure on development sites.

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6. Fertilization. All fertilizer applications to turf or trees and shrubs shall follow Washington State University, National Arborist Association or other accepted agronomic or horticultural standards. Fertilizer may include soil drenches to increase fungal biota and chemical root growth stimulators.
7. Irrigation. The intent of this standard is to ensure that plants will survive the critical establishment period when they are most vulnerable due to lack of watering. All required plantings must provide an irrigation system, using either Option 1, 2, or 3 or a combination of those options. For each option irrigation shall be designed to conserve water by using the best practical management techniques available. These techniques may include, but not be limited to: drip irrigation to minimize evaporation loss, moisture sensors to prevent irrigation during rainy periods, automatic controllers to ensure proper duration of watering, sprinkler head selection and spacing designed to minimize overspray, and separate zones for turf and shrubs and for full sun exposure and shady areas to meet watering needs of different sections of the landscape.
- Exceptions, as approved by the Planning Official, to the irrigation requirement may be approved xeriscape (i.e., low water usage plantings), plantings approved for low impact development techniques, established indigenous plant material, or landscapes where natural appearance is acceptable or desirable to the City. However, those exceptions will require temporary irrigation (Option 2 and/or 3) until established.
- a. Option 1. A permanent built-in irrigation system with an automatic controller designed and certified by a licensed landscape architect as part of the landscape plan.
- b. Option 2. An irrigation system designed and certified by a licensed landscape architect as part of the landscape plan, which provides sufficient water to ensure that the plants will become established. The system does not have to be permanent if the plants chosen can survive adequately on their own, once established.
- c. Option 3. Irrigation by hand, which includes the use of water bags. If the applicant chooses this option, an inspection will be required one (1) year after final inspection to ensure that the landscaping has become established.
8. Drainage. All landscapes shall have adequate drainage, either through natural percolation or through an installed drainage system. A percolation rate of one-half (1/2) inch of water per hour is acceptable.
9. Mulch.
- a. Required plantings, except turf or areas of established ground cover, shall be covered with two (2) inches or more of organic mulch to minimize evaporation and runoff. Mulch shall consist of materials such as yard waste, sawdust, and/or manure that are fully composted.
- b. All mulches used in planter beds shall be kept at least six (6) inches away from the trunks of shrubs and trees.
10. Protection. All required landscaped areas, particularly trees and shrubs, must be protected from potential damage by adjacent uses and development, including parking and storage areas. Protective devices such as bollards, wheel stops, trunk guards, root guards, etc., may be required in some situations.

(Ord. 4551 § 4, 2017; Ord. 4547 § 1, 2016; Ord. 4491 §§ 3, 11, 2015; Ord. 4350 § 1, 2012; Ord. 4238 § 2, 2010; Ord. 4010 § 2, 2005)

95.51 Tree and Landscape Maintenance Requirements

The following maintenance requirements apply to all trees, including street trees, and other vegetation required to be planted or preserved by the City:

1. Responsibility for Regular Maintenance. Required trees and vegetation, fences, walls, and other landscape elements shall be considered as elements of the project in the same manner as parking, building materials, and other site details. The applicant, landowner, or successors in interest shall be responsible for the regular maintenance of required landscaping elements. It is also the responsibility of the property owner to maintain street trees abutting their property pursuant to KZC 95.21.

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2. Maintenance Duration. Maintenance shall be ensured in the following manner except as set forth in subsections (3), (4) and (5) of this section:
- a. Commercial, Industrial and Multifamily Development. All required landscaping shall be maintained throughout the life of the development. Plants that die must be replaced in kind. Prior to final inspection/issuance of a certificate of occupancy, the proponent shall provide a final as-built landscape plan and an agreement to maintain and replace all landscaping that is required by the City.
 - b. Single Family Residential Development. Any existing tree or other existing vegetation designated for preservation in a tree retention plan shall be maintained for a period of five (5) years following issuance of the certificate of occupancy for the individual lot or development. After five (5) years, all trees on the property are subject to KZC 95.23 unless:
 - 1) The tree and associated vegetation are in a grove that is protected pursuant to subsection (3) of this section; or
 - 2) The tree or vegetation is considered to be a public benefit related to approval of a Planned Unit Development; or
 - 3) The tree or vegetation was retained to partially or fully meet requirements of KZC 95.40 through 95.45, Required Landscaping and Zoning.
3. Maintenance of Preserved Grove. Any applicant who has a grove of trees identified for preservation on an approved Tree Retention Plan pursuant to KZC 95.30(2) shall provide prior to occupancy the legal instrument acceptable to the City to ensure preservation of the grove and associated vegetation in perpetuity, except that the agreement may be extinguished if the Planning Official determines that preservation is no longer appropriate.
4. Maintenance in Holmes Point Overlay Zone. Vegetation in designated Protected Natural Areas in the Holmes Point Overlay Zone is to be protected in perpetuity pursuant to KZC 70.15(8)(a). Significant trees in the remainder of the lot shall be protected in perpetuity pursuant to KZC 70.15(8)(b).
5. Nonnative Invasive and Noxious Plants. It is the responsibility of the property owner to remove nonnative invasive plants and noxious plants per the City's Prohibited Plant List, King County and Washington Weed Agencies from the vicinity of any tree or other vegetation that the City has required to be planted or protected. Removal must be performed in a manner that is not injurious to required trees and vegetation.
6. Landscape Plans and Utility Plans. Landscape plans and utility plans shall be coordinated. In general, the placement of trees and large shrubs should adjust to the location of required utility routes both above and below ground. Location of plants shall be based on the plant's mature size both above and below ground. See the Kirkland Plant List for additional standards.

(Ord. 4551 § 4, 2017; Ord. 4437 § 1, 2014; Ord. 4238 § 2, 2010)

95.52 Prohibited Vegetation

Plants listed in the Kirkland Prohibited Plant List shall not be planted in the City or required to be retained.

For landscaping not required under this chapter, this prohibition shall become effective on February 14, 2008. The City may require removal of prohibited vegetation if installed after this date. Residents and property owners are encouraged to remove pre-existing prohibited vegetation whenever practicable.

(Ord. 4450 § 1, 2014; Ord. 4238 § 2, 2010; Ord. 4121 § 1, 2008)

95.55 Enforcement and Penalties

Upon determination that there has been a violation of any provision of this chapter, the City may pursue code enforcement and penalties in accordance with the provisions of Chapter 1.12 KMC, Code Enforcement.

(Ord. 4286 § 1, 2011; Ord. 4281 § 1, 2011; Ord. 4238 § 2, 2010; Ord. 4010 § 2, 2005)

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95.57 City Forestry Account

1. Funding Sources. All civil penalties received under this chapter and all money received pursuant to KZC 95.33(3)(c) shall be used for the purposes set forth in this section. In addition, the following sources may be used for the purposes set forth in this section:

- a. Agreed upon restoration payments imposed under KZC 95.55 or settlements in lieu of penalties;
- x. Agreed upon payment in lieu of planting required trees under KZC 95.33.3c;
- b. Sale of trees or wood from City property where the proceeds from such sale have not been dedicated to another purpose;
- c. Donations and grants for tree purposes;
- d. Sale of seedlings by the City; and
- e. Other monies allocated by the City Council.

2. Funding Purposes. The City shall use money received pursuant to this section for the following purposes:

- a. Acquiring, maintaining, and preserving wooded areas within the City;
- b. Planting and maintaining trees within the City;
- c. Establishment of a holding public tree nursery;
- d. Urban forestry education;
- e. Implementation of a tree canopy monitoring program; or
- f. Other purposes relating to trees as determined by the City Council.

(Ord. 4238 § 2, 2010)

Update #	KZC 95. ___	Subsection	POTENTIAL KZC 95 CODE AMENDMENTS with NO/MINOR POLICY IMPACT*	Policy Level	PC Agree with Approach?
1	21	2	Add ' per ANSI standard... ' added 'topping' definition per ANSI standard to 95.10	None	yes
2	23	2	Add to end of sentence '...without permission.'	None	yes
3	23	3	Clarify "notification" in 3, 5 rather than repeating 2x	None	yes
4	30	4	Delete 'tree type' replace with 'Identify by tree species and/or common name.' Confusing - applicants think they need to type tree by retention value	None	yes
5	30	4	Clarify requirements between 2-5 for LOD, CRZ, fence location, tree protection zone, etc.	None	yes
6	30	4	Add language on project sequencing, IDPs. Include landscaping/other activity within CRZ	None	yes
7	50	5	Typo - revise 1st sentence to read: 'plants listed in the Kirkland Prohibited Plant list shall not be planted in required landscaping areas.'	None	yes
8	51	1	Revise last sentence for consistency with 95.21 (ROW tree maintenance responsibilities, adjacent property owners)	None	n/a
9	51	2	Distinguish between a) and b) 3 (housing/development types). Add to b 'part of an IDP'	None	yes
10	23	-	Typo in 2nd sentence, "and" should be "or". See Susan's email of 10/31/14	Minor	-
11	10	4	Measuring multiple trunks	Minor	yes
12	5	2	Add 'manage trees and other vegetation consistent with industry standards' (ISA, ANSI, etc.)	Minor	yes
13	10	9	Clarify tree protection definitions per updated ISA/ANSI standards	Minor	yes
14	10	7	Replace 'TRACE' with 'TRAQ' for qualified professional standards	Minor	yes
15	10		Add topping definition per ISA/ANSI standards	Minor	yes
16	23	5	Add ' Holmes Point Overlay Zone' after shoreline jurisdiction and critical areas	Minor	n/a
17	23	5	Revise 'is not obvious' to 'is evident in a photograph'	Minor	yes
18	23	5	Delete 'street,' replace with 'public' trees, add '...including streets, Parks...'	Minor	yes
19	30	1	3rd paragraph - clarify minimum tree density is in addition to High Retention Value trees	Minor	yes
20	30	3	Include lot line adjustments and applicable rezone process	Minor	yes
21	30	5	Under "Req'ments in KZC..." 1st row inconsistent with 95.30.4a(1) - address in either section	Minor	yes
22	30	5	Clarify IDP vs. phased review modifications if not addressed by Sean's code revision	Minor	yes
23	32		Revise 1st paragraph, 1st sentence to incentivize applicants	Minor	yes
24	33	4	Remove Arborvitae (LID/O-4547 added Thuja/Arborvitae to code, which was inconsistent with department practice). See e-mail "Arborvitae...", PC 8/9/18	Minor	yes
25	34		1st paragraph - reference ISA/ANSI standards for tree protection during development activity	Minor	yes

26	34	2	Revise LOD/critical root zone for consistency in 1 and 2	Minor	yes
27	34	3	Revise LOD/critical root zone for consistency in a-d	Minor	yes
28	40	2	Add at end of last sentence '...with preference to native vegetation species'.	Minor	yes
29	41	2	Add '...with preference to native vegetation species.' Add to last sentence 'i.e. mulch'	Minor	yes
30	51	5	Reference Prohibited Plant List, King County and WA Weed Agencies. Per GKP, add 'remove ivy'	Minor	yes
31	52		Revise 1st sentence to '...listed on the Kirkland Prohibited Plant List shall not be...'	Minor	yes
32	-	-	Simplify or rename 'tree density credits'/point system so it's not as confusing	Minor	n/a
33	50	5	Delete 'Natural Resource Management Team', replace with 'on the PBD webpage'. Add language to encourage species diversity by planting other than listed with Planning Official approval.	Minor	yes
34	30	6	Clearly specify areas for tree retention with Phased IDP (i.e.: "building envelope") MB 8/23/18	Minor	unsure
35	23	3	Clarify public and street tree removal requirements HCC 8/27/18	Minor	yes
36	30		Update to reflect current types of housing HCC 8/27/18	Minor	yes
37	50	5	Add language to avoid planting large trees under/within proximity to overhead utilities	Minor	yes
39	30	6	Streamline IDP modifications section	Minor	yes
50	20	1	First sentence add "...without previously obtaining a permit." Revise section for clarity/simplicity	Minor	yes
51	21	1	Address inconsistency with KMC 1.12. Add "within reason" and "allows" language. (Define) minor pruning OK for adjacent property owners	Minor	yes

Update #	KZC 95. —	Subsection		Policy Level	PC Agree with Approach or Staff Rec?
			POTENTIAL KZC 95 CODE AMENDMENTS with MODERATE/MAJOR POLICY IMPACT*		

Definitions

47	10	12	Add ISA Municipal Specialist Certification to credentials	Moderate	yes
48	10	7	Define 'Hazard' consistent with TRAQ standards/course of action	Moderate	yes

Tree Removal Allowances

53	23	5	Adjust tree removal allowance in proportion to varying lot sizes - PC 7/12/18	Moderate	yes
67			Allow removal of hedges (trees >6" DBH) with replacement, no hedge height regs - PC 8/9/18	Major	yes
76			Address hazard/nuisance tree removal resulting from contagious pests/diseases - CAO	Major	yes
38	30		Add language to prevent tree girdling (see #56, #58)	Moderate	yes
56	23		Prevent tree girdling/removals that occur to avoid 'High Retention Value' tree requirements - PC 8/9/18	Moderate	yes
58	23	2	Address tree girdling in 2 nd paragraph (see #38, #56)	Major	yes

Landscape Requirements per Zoning (applies to Multifamily, Commercial, etc.)

44	33	3	Add language regarding appropriate locations for newly-planted trees	Moderate	yes
49	34	5	Add "including aftercare" and include current arboricultural practices	Moderate	yes
62	44		Add language regarding tree retention in parking lots. Coordinate with PW on LID features	Major	yes
74			Promote retention of tree groves, particularly with parking lot design/development - HCC 8/27/18	Major	yes

Tree Retention with Development (applies primarily to short plats, subdivisions and Single Family Residential)					
40	33	1	Establish a cut-off point or maximum tree density credits per tree in Table 95.33.1	Moderate	unsure
41	42	-	Clarify intent of buffer (no issue found, most likely addressed by a previous code amendment)	Moderate	n/a
42	-	-	Authority to require tree removal based on species (addressed with prior code update, Prohibited Plant List)	Moderate	n/a
43	25		Reference Low impact Development (LID), LEED, Green Building Design, etc.	Moderate	yes
45	34	2	Revise tree protection fence requirements - HPO	Moderate	yes
46	34	2	Revise tree protection sign standards and inspection procedures – per HPO	Moderate	yes
52	42	2	Replace '10 feet apart' with 20 feet or use street tree list for small-medium trees	Moderate	n/a
54	50	7	List aftercare options such as gator bags, irrigation, soil drenches, etc. PC 8/9/18 (see #49 Minor)	Moderate	yes
55	33	4	Address overuse of arborvitae (allow certain # or % tree credits) - PC 8/9/18	Moderate	unsure
57	50		Specify appropriate locations for trees required to be planted - PC 8/9/18	Moderate	yes
59	23	5	Prevent girdling/tree removal in anticipation of development permit submittal to avoid 'High Retention Value' tree requirement compliance. Add 'intent to develop' language/time period requirement (see #38, #56)	Major	yes
60	30		Strive to achieve predictable code outcomes	Major	yes
61	33	3	Clarify the section on payment in lieu of planting new trees	Major	yes
63	51	3	Clarify the grove definition and protection measures	Major	yes
64	10		Clearly define trees of merit/trees worthy of retention - HPO, PC 7/12/18	Major	unsure
65	10		Require Landscape Architect review of Tree Retention Plans - HPO, PC 7/12/18 (see #44, #57 alternatives)	Major	yes
66			Address poorly located required tree plantings - PC 8/9/18 (same issue as #44 and #57)	Major	yes
68			Incentivize tree species diversity - PC 8/9/18		yes
69	10	13	Revise Low Retention Value tree definition to avoid tree removal loophole - PC 8/9/18 (see #60, #64)	Major	unsure
70	30	5.3	Clarify retention requirements for trees of merit - HPO, PC 8/9/18 (see #60, #64)	Major	unsure
73			Determine tree retention early in SPL/SUB design process (city-wide IDP) - PC 8/9/18	Major	yes
75	33		Replace tree density credits with a canopy cover-based system for retention/planting requirements - HPO	Major	unsure
77	33		Increase tree density credit requirements for retention/replanting city-wide - HPO	Major	unsure

Miscellaneous/New					
71			Address renewable energy system conflicts with trees - PC 8/9/18, MB 8/23	n/a	yes
72	23		Reference tree removal in critical areas – PBD email 10/26/18 (Delete KZC 90.135)	n/a	yes
79			Clarify how to measure DBH with multi-trunked trees - staff	Minor	yes
80			Address multiple references to City authority	n/a	yes

81	34	Require permit applicants post a bond instead of the current 5 Year Maintenance Agreement	Major	yes
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~~Lined out entries~~ - were addressed by the Planning & Building Department under prior code amendments

**No Impact* - amendments that clarify or further define something already in the code, address redundancies and typos, or involve reformatting or removal of outdated references. They do not change the meaning of the code.

Minor Impact - amendments resulting from updates to Best Available Science, Best Management Practices, industry standards, etc. that do not result in changes to code intent or an increase in requirements.

Moderate Impact - relatively uncontroversial restructuring of code sections, and any of the above that result in new, increased or eliminated requirements.

Major Impact - substantially prohibit/ban or add new requirements to what's currently allowed. These may result in significant changes to procedures, additional cost to permit applicants or change the intent of the code.