



CITY OF KIRKLAND
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MEMORANDUM

To: Planning Commission

From: Deb Powers, Urban Forester
Jeremy McMahan, Planning and Building Deputy Director

Date: December 12, 2019

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

Note: please bring your November 5, 2019 packet to the November 25, 2019 meeting

Staff Recommendation

Continue deliberations from the November 5, 2019 joint public hearing with the Houghton Community Council (HCC) on amendments to [Kirkland Zoning Code Chapter 95](#) (KZC). Consider additional written testimony received since the hearing and the HCC's recommendation to the Planning Commission (Attachment 2). To facilitate the Planning Commission's (PC) discussion, staff will sequentially walk through the draft code sections, seeking the PC's recommendation to the City Council per KZC 160.80. Staff recommends using the version included as Attachment 1, which has been refined since the November 5th public hearing as discussed below.

In general, staff recommends adoption of the draft code, including the edits made by the HCC, with the following key exceptions. These exceptions are discussed in the draft zoning code section of the memo below. The remaining concerns from staff are those HCC recommendations and draft code provisions that result in a substantially lower level of tree retention on development sites and substantially greater homeowner tree removals than the current KZC 95.

- Establishing a new tree credit quota as recommended by HCC
- Allowing removal of landmark trees (as newly defined/regulated in the draft code) on sites in the absence development activity as recommended by the HCC
- Allowing greater tree removals at one time on larger properties
- Decreased tree retention on development sites by redefining groves to contain large DBH trees

Background

On November 5, 2019, a joint public hearing with the HCC was held on the draft code amendments to KZC 95, Kirkland's tree code. The purpose of the joint public hearing was to

take public comments on the proposed code, a result of over 18 months' direction from the PC, HCC and City Council.

A history of KZC 95, the key objectives of the code amendments and a chronology of the amendment process to-date are detailed in the [November 5, 2019](#) joint public hearing memo. The same memo outlines 9 discussion issues and 5 related policy issues, in addition to an overview of data and analysis that provide a basis for code amendment decisions. At the public hearing, the PC/HCC requested additional information on 11 related topics warranting staff's response on pages 2-4 in the [November 25, 2019](#) HCC meeting memo.

So that substantive issues would be the emphasis of the joint hearing discussions, it was agreed that editorial code changes intended to make the code easier to read and implement would be forwarded to staff following the hearing. Two such edits suggested during the hearing include:

- Commissioner Singhal's edits on KZC 95.23.8e, replacing "for the last of" number of trees with "any of" language.
- Councilmember Black's input on replacing "encourage" with "may require" in KZC 95.23.8a to reflect the requirements set forth in sections b-f.

Following the hearing, HCC member Neal Black reviewed the draft code in detail and provided numerous edits to aid in clarity and administration of the code. None of these edits would change the intent of the draft code and staff generally concurs with Councilmember Black's suggestions. This version of the draft regulations was used as the basis for HCC deliberations and further recommendations.

Staff is now seeking specific and overall recommendations from the PC for the City Council. Staff recommends that the PC consider if they support or oppose each of the proposed changes and include any additional specific recommendations that might improve proposed changes.

Draft Code Framework

To that end, staff recommends the PC use a framework similar to the HCC as a baseline for deliberations, showing the minor/editorial code changes in a single draft (Attachment 1). To recognize the origin of edits, the draft code is formatted as follows:

- HCC Councilmember Black's editorial changes reviewed and accepted by staff and the HCC at the November 25 HCC meeting are still shown in [red strikeout/markup text](#);
- Further editorial changes recommended by the HCC and supported by staff that do not change the substance or intent of the draft code are shown in [blue strikeout/markup text](#);
- Staff edits made after the November 5 hearing and presented with the draft code at the November 25 HCC meeting are still shown in [red strikeout/markup text with yellow highlighting](#);
- Staff edits made in response HCC recommendations are shown in [green strikeout/markup text](#).

Note that the substantive code changes recommended by the HCC and detailed in the HCC's memo to the PC (Attachment 2) are not incorporated into the draft code at this time.

A clean copy version of the draft code is provided in Attachment 3.

Table of Contents Overview

The outline of amendments below provides a table of contents overview of the draft code, indicating noteworthy edits in the same color formatting described above. By noteworthy, they may be amendments recommended by HCC that staff does not support or are substantive code changes requiring further PC direction. The latter substantive code changes are not shown in the draft code and are noted below in **purple text**, and provisions where the HCC expressed potential exercise of disapproval jurisdiction are shown in **bold purple text**.

Where staff anticipates the PC may need additional information for deliberations, (as with the HCC's substantive code changes for example), brief notes have been inserted, such as:

- Purpose or main issue of code change
- PC direction previously given to staff
- Resulting effect or consequence of the proposed code change
- Staff recommendations where applicable

Note that this additional information may not be applicable or uniformly applied to all proposed code provisions below. Where referenced, the resulting effect or consequence of proposed code changes is noted in the matrix shown in Attachment 4.

KZC 95 Draft Code Amendments

95.05 Purpose and Intent - no major changes

95.10 Definitions – revise to reflect updated industry standards throughout

95.10.4 HCC – for multi-trunked trees, strike “a cumulative sum,” use the industry standard and minimum DBH

95.10.16d New - 30” landmark tree definition

- *Purpose: created by the Finn Hill Neighborhood Alliance (FHNA) and Master Builders of King and Snohomish Counties (MBAKS) stakeholders to preserve “iconic trees”.*
- *PC Direction: consider lowering the 30” DBH (trunk diameter) threshold with public feedback.*
- *Effect: in development scenarios with typical sized lots, has very little consequence because large trees have large critical root zones that will continue to compete with the City’s allowed FAR and lot coverage. The best chance of retaining large trees will continue to be those located toward the perimeter of the property. Clustering requirements may save more of these trees with short plats and subdivisions and the rate of large tree removals by homeowners would slow if removal is prohibited with under the basic tree removal allowances for sites not being developed.*

95.10.16a Revised - grove definition

- *Original issue: permit applicants felt they’re required to retain groves of low-quality trees*
- *PC Direction: Define groves by condition. FHNA/MBAKS-proposed size/number of trees (3 or more with a 30” tree, 5 or more with a 24” tree) may need to be adjusted to reflect changes to landmark provisions and public feedback.*
- *Effect: significantly less grove retention*
- *Staff recommendation: retain current 3 or more definition with the inclusion of the new condition ratings and don’t require a 24” or greater DBH tree to constitute a grove. Or, if*

the PC agrees, define both Tier 1/Tier 2 groves using the proposed condition and current 3 or more standards; distinguishing Tier 1 groves by including 1 large-DBH tree, whereas Tier 2 groves consist of 3 regulated trees.

95.10.16a HCC – strike “deem” language, ensure preserved groves cannot be removed as hedges

95.10.16g Replace “significant” tree with “regulated” tree

95.10.16c New - hedge definition for removal allowances

95.10.16c HCC – add language so a hedge is not comprised of regulated trees

95.10.15 Strike - new language to address girdled tree removal

95.10.16i, j New - Tier 1/Tier 2 tree definitions

- *Original issue: The retention value definitions were perceived as too subjective*
- *PC Direction: Delete high/moderate/low retention value definitions. Define Tier 1 trees as landmark and grove trees in excellent-to-good condition, located anywhere on a development site. Define Tier 2 trees as excellent-to-good condition, minimum 6” DBH, located in required yards*
- *Effect: no substantive change in landmark tree retention on typical development sites (retention may be improved on clustered short plat/subdivisions and large lots). Slightly less tree retention without “Moderate Retention Value” tree protection. Significantly less tree retention without “Fair” tree protection. See 95.10.16a for effects to grove retention.*

95.20 Tree Removal Permit Exemptions – no major changes

95.21 Public Tree Removal and Pruning – no major changes, distinguishes public from private trees, allows minor pruning. *Staff Note: Public Works does not approve adding language making adjacent property owners responsible for street and/or sign clearance pruning. This work should continue to be performed by qualified City maintenance staff.*

95.23 Tree Pruning and Removal on Private Property ~~with No~~ in the Absence of Development Activity

95.23.5a New - prohibits landmark tree removal

95.23.5a HCC – do not prohibit landmark tree removal

- *Issues: Trees given the highest level of protection on development sites should continue to be protected after development and their removal prohibited outside of development scenarios. Prevent common practice of preemptive tree removals.*
- *PC Direction: Consider ways to make prohibited Landmark tree removal language more prominent in the code and implement a robust public information campaign so homeowners are aware of the change; otherwise, there may not be widespread compliance*
- *Effect: increased canopy results from protection where no development occurs. May offset increased tree removal allowed per property size*

95.23.5 New - increase tree removals by property size

95.23.5 HCC – clarify in table that notification is not required

- *Issue: The 2-per tree removal allowance is not perceived as equitable on larger properties.*
- *PC Direction: Allow increased tree removals for varying ranges of property sizes. Don't allow "banking" of tree removals for future years (i.e. – 6 trees in year one instead of 2 trees per year for three years) due to complexity of tracking and potential accelerated canopy loss.*
- *Effect: Likely accelerated homeowner tree removals*
- *Staff Recommendation: allow fewer than the proposed tree removals within 12 months, per property size. Example: replace 4 removals with 3, replace 6 removals with 4, etc.*

95.23.7 New - prohibits tree removal and tree girdling immediately prior to short plat and subdivision applications

95.23.7 HCC – preemptive removals rules should only apply to Landmark trees

- *Issue: Preemptive removal/girdling of high-quality trees to intentionally avoid compliance with development requirements occurs frequently.*
- *PC Direction: Prohibit tree removal, including tree girdling, in advance of development and require 12-month period between tree removal and development permit submittal.*
- *Resulting effects: Unnecessary additional tree removal. Girdling can result in tree failure, a potential hazard to adjacent properties.*
- *Staff recommendation: new preemptive removal language should apply to all regulated trees.*

95.23.11 New - City authority to remove severely diseased trees

95.23.12 Eliminate new draft TRAQ tree risk rating details, reference the industry standard

95.23.14a Clarify – intent of Forest Management Plan

95.25 Sustainable Site Development - consolidate/move to other sections

95.30 Tree Retention Associated with Development Activity – move tree density credits to 95.34 and eliminate Tree Retention Plan chart

95.30.2a HCC – revise threshold for tree plan review to consider the footprint rather than the square footage

95.30.3a(7) Clarify tree retention plan submittal requirements, strike language requiring identification of Tier 1/Tier 2 trees

95.30.3a(5), 95.30.3c(1) New - tree condition ratings

95.30.4 New - Tier 1 tree retention standards

95.30.4 HCC – Establish a 50-credit quota that allows removal of Tier 2 trees after the quota is reached (See 95.34 below for a 30 credit per acre planting standard). See HCC Recommendation #2 below.

95.30.4a(1) and b(1) New - building envelope dimensions for Tier 1/Tier 2 tree retention
95.30.4a(1) HCC – replace “in combination with...” with “in addition to...”

95.30.4a(2) and b(2) New - site plan alterations required to retain Tier 1/Tier 2 trees

95.30.4a(3) and b(2)g New - tree protection practices/methods/materials required to retain Tier 1/Tier 2 trees

95.30.4a(4) and b(3) New - variations to development standards to retain Tier 1/Tier 2 trees

95.30.4a(2)h and 95.30.4b(3)e New - *require* clustering or lots in short plats/subdivisions in order to retain Tier 1 trees and *allow* clustering to retain Tier 2 trees

95.30.5 Expand - development standards to retain trees on multifamily, commercial & mixed-use developments

95.30.6 New - Tier 1/Tier 2 tree retention/removal order of priorities

95.30.7 Eliminate/streamline – eliminate phased tree retention with short plat/subdivision developments (IDP), streamline IDP modification process
95.30.7c(2) HCC – clarify intent of clustering language

95.32 Tree and Soil Protection during Development Activity

95.32.1 HCC - strike new language clarifying prohibited activities prior to development permit submittal since it’s already stated in 95.23.7

95.32.3b New – display site plans indicating tree protection fence locations on job sites

95.32.3b HCC – administratively provide handouts of Pre-Approved Plans fence detail

95.32.4a HCC – replace “light soils” with a specific soil standard

95.34 Supplemental Tree Planting Requirements Related to Development Activity

95.34 HCC - Replace “significant” tree with “regulated” tree in Table 95.34

95.34.2 HCC – eliminate credit “cap” with application of the native conifer 1.5x multiplier

95.34.2 HCC – strike “as approved by Planning Official” and replace with a reference to a new list of “other” conifer species eligible for 1.5x credit

95.34.4 Eliminate - arborvitae and other slow-growing conifers eligibility for tree credits

95.34.4 HCC – add a reference to a new list of “other slow-growing conifers”

~~95.34.5b Consider higher tree protection for offsite-planted trees~~

95.34.5b HCC – strike new “in perpetuity” language, replace with 5-year maintenance agreement

95.34.6 Revise – use current industry standard for tree values paid into City Forestry Account

95.40 Required Landscaping Based on Zoning District – no significant changes

~~95.41 Supplemental Plantings~~

95.42 Land Use Buffer Requirements – minor change to tree spacing requirement

95.43 Outdoor Use, Activity, and Storage – no change

95.44 Internal Parking Lot Landscaping Requirements – no change

95.44 HCC - Develop more robust parking lot landscaping requirements

95.45 Perimeter Landscape Buffering for Driving and Parking Areas – no change

95.46 Modifications to Required Landscaping and Buffer Standards

95.47 Nonconforming Landscaping and Buffers – no change

95.50 Installation Standards for Required Plantings

95.50.6 Specify - appropriate plant locations

95.50.12 HCC - Strike new final inspection procedure language, replace with “these requirements shall be completed prior to final inspection”

95.51 Tree and Landscape Maintenance Requirements – minor changes

95.52 Prohibited Vegetation – minor changes

95.55 Enforcement and Penalties – minor change

95.57 City Forestry Account – minor change

Houghton Community Council Recommendation

The HCC recommendation to the PC is Attachment 2. Apart from 2 key issues of concern, most of the HCC’s recommendations are supported by staff and are intended as clarifications to make the code easier to read and implement. The 2 key issues that the HCC finds to be contrary to their guiding principles are outlined below, followed by a brief staff analysis of the HCC concerns established in Attachment 2:

1. HCC Issue - Prohibiting landmark tree removal on properties not being developed

This new code provision was developed at the same time as the MBAKS/FHNA Tier 1 concept and was initially supported by both stakeholders to protect Kirkland’s “iconic” trees. The personal preference for “sunlight for gardening, views, solar energy or simply the mental and physical benefits of sunlight” are generally considered with property acquisition and the human health benefits of tree canopy cover are well-documented. The proposed landmark tree removal prohibition, currently the only draft code provision that results in less homeowner tree removal, contrasts sharply with the proposed measures that will significantly increase homeowner tree removal (Attachment 4). Public testimony shows support for prohibiting the removal of landmark trees. The assumption that citizens will avoid pending regulations with preemptive activity is not a reason to dismiss its consideration. Adoption of a prohibition is a significant policy shift for the City but is necessary to make the development regulations for landmark trees meaningful. The PC has acknowledged the need for significant public education on such a change.

2. HCC Issue – Insufficient levels of code predictability that should be addressed by establishing a credit quota that once met, allows developers to remove Tier 2 trees at their discretion.

One of the primary goals for the KZC 95 code amendments was to increase the certainty and consistency of the development review process. To that effect, staff worked intensively with the MBAKS-FHNA stakeholders over the course of 6 months in response to developers' desire for a higher level of predictability, resulting in the following draft code revisions:

- Eliminate the "if feasible/if possible" and other subjective code language
- Eliminate the Low, Moderate and High retention value tree definitions
- Develop new tree condition ratings
- Define clear guidelines for guaranteed building envelopes, variations to development standards and site plan alterations to retain Tier 1/Tier 2 trees
- Eliminate phased review (IDP)

The PC endeavored to *balance* a desired level of predictability with the City's goals. The quota provision was shown to result in significantly less tree retention of development sites than the current code (Attachment 4). Based on all available data and analysis, the PC directed staff to not include a quota in the draft code and to proceed with the proposed Tier 1/Tier 2 retention approach.

3. HCC Guiding Principles.

Staff recommends that the PC respond to the statement of page 1 of the HCC recommendation stating that guiding principles were developed "in collaboration with the Planning Commission." Although the PC recognized the utility of the guiding principles to the HCC, staff's understanding is that the PC did not subscribe to their necessity or intent when they were introduced by HCC Chairperson Whitney at the joint November 26, 2018 meeting. This point is important in accurately conveying the recommendations of the HCC and PC to the City Council.

Public Comment

Following public testimony, the PC closed the hearing for oral comments yet continued the hearing for written public testimony. All public comments received by the Planning Commission, City Council, Houghton Community Council and staff up to October 30, 2019 were included in the Nov 5 memo as Attachment 6.

Public comment letters and emails received after October 30, 2019 are included as Attachment 5. The December 12, 2019 PC meeting is not a public hearing. Oral testimony will not be taken at the meeting; however, the Planning Commission may take written public testimony until the continuation of the public hearing for written testimony has been closed by the Planning Commission.

Next Steps

Following the Planning Commission's deliberations on December 12, 2019, the PC will consider all information submitted, including the HCC recommendation and all public comments in preparation of providing their recommendation to City Council for adoption. The PC will take a

final vote on HCC recommendations. Per KZC 160.45, the PC may modify the draft code proposal in any way.

January 21, 2020 has been scheduled for a City Council Study Session for additional consideration of changes to KZC 95. Staff will prepare the PC recommendations for the City Council's consideration for adoption in February 2020 per KZC 160.85, followed by HCC review for jurisdictional approval in March 2020.

Attachments

1. Draft Kirkland Zoning Code Chapter 95
2. HCC Recommendations to PC
3. Draft Clean Copy Kirkland Zoning Code Chapter 95
4. Code Effects Matrix
5. Public Comments

cc: Houghton Community Council
File Number CAM18-00408

KIRKLAND ZONING CODE CHAPTER 95 – TREE MANAGEMENT AND REQUIRED LANDSCAPING

Sections:

- 95.05 Purpose and Intent
- 95.10 Definitions
- 95.20 Tree Removal Permit Exemptions
- 95.21 Public Tree Removal and Pruning
- 95.23 Tree Pruning and Removal on Private Property with No in the Absence of Development Activity
- 95.30 Tree Retention Associated with Development Activity
- 95.32 Tree and Soil Protection during Development Activity
- 95.34 ~~Supplemental~~ Tree Planting Requirements Related to Development Activity
- 95.40 Required Landscaping Based on Zoning District
- ~~95.41 Supplemental Plantings~~
- 95.42 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
- 95.46 Modifications to Required Landscaping and Buffer Standards
- 95.47 Nonconforming Landscaping and Buffers
- 95.50 Installation Standards for Required Plantings
- 95.51 Tree and Landscape Maintenance Requirements
- 95.52 Prohibited Vegetation
- 95.55 Enforcement and Penalties
- 95.57 City Forestry Account

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;
 - 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; industry standards; and best management practices established by the International Society of Arboriculture (ISA) and the American National Standards Institute (ANSI) for Management of Trees During Site Planning, Development and Construction, Pruning, and Tree Risk Assessment.
- i. Preserve and protect street trees, trees in public parks and trees on other City property.

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 replacement 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 area encircling the trunk of a tree equal to one (1) foot radius for every inch of ~~trunk diameter (DBH).~~ Example: a 24-inch DBH tree has a 24-foot radius ~~Critical-Root-Zone~~ measured from the face of the trunk.
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 above average grade. ~~For trees with multiple leaders at 4.5 feet height, the DBH shall be the combined cumulative total of branches greater than six (6) inches diameter at 4.5 feet above average grade. For trees with multiple trunks at 4.5 feet height, only trunks 3" DBH or greater shall be included. Where a tree splits into several trunks close to ground level, the DBH for the tree is the square root of the sum of the DBH for each individual stem squared (example with 3 trunks: DBH = square root [(stem1)² + (stem2)² + (stem3)²]).~~ If a tree has been removed and only the stump remains that is below 4.5 feet tall, the size of the tree shall be the diameter of the top of the stump.
5. Dripline – The distance from the tree trunk, that is equal to the furthest extent of the tree's ~~crown~~ Crown.
- ~~6. Hedge – 5 or more trees of the same species planted in linear formation, typically to function as a screen or barrier.~~
7. Inner Critical Root Zone – an area half the distance of the ~~Critical-Root-Zone~~ that, when ~~it~~ impacted, may compromise the structural integrity of a the applicable tree. Example: a 24-inch DBH tree has a 12-foot radius Inner Critical Root Zone measured from the face of the trunk.
- ~~8. ISA – International Society of Arboriculture~~
8. Impact – A condition or activity that adversely affects any part of a tree, including, but not limited to, the trunk, branches, and or ~~Critical-Root-Zone~~.
- ~~9. Public Works Official – Designee of the Public Works Director.~~
109. 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 (TRAQ) 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 ~~q~~Qualified ~~p~~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 ~~q~~Qualified ~~p~~Professional must also be able to prescribe appropriate measures for the preservation of trees during land development.

~~4410. Prohibited Plant List – The Planning and Building Department shall make available a list of trees and, which may include other vegetation, that are invasive, noxious, or inappropriate species for replacement trees or for retention.~~

~~11. Significantly Wooded Site – A subject property that has trees with ~~crowns~~ Crowns that, in the aggregate when outlined in aerial imagery, cover at least 40 percent of the ~~total area of the~~ property.~~

~~126. 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.~~

~~132. Topping – The reduction of a tree's size using indiscriminate heading cuts made between branches that leave a stub, used to reduce the height or crown size of an established tree, shorten limbs or branches back to a predetermined crown limit. Topping is not an acceptable pruning practice pursuant to best management practices established in the ANSI A300 Pruning Standards, and is not appropriate on established trees. Topping or pruning that results in the removal of more than 25 percent of the live crown will be considered tree removal and subject to the provisions in KMG 1.12.100, Special Provisions Related to Enforcement of Tree Regulations.~~

~~143. Tree Protection Zone (TPZ) – The outer boundary of a tree's protected area, as determined by a ~~Q~~Qualified ~~P~~Professional, intended to protect individual trees, groups of trees' ~~vegetation, trunks, roots~~ and soil from construction-related impacts. TPZ is measured in feet from the face of the trunk and may be determined using Critical Root Zone, ~~D~~dripline, ~~or root plate diameter methodologies or~~ exploratory root excavations ~~or other methodologies. The TPZ is variable depending on species, age and health of the tree, soil conditions and proposed construction.~~ TPZ denotes the location of tree protection fencing.~~

~~154. Tree Removal – The removal of a tree, through either direct or indirect actions, including but not limited to: (1) clearing, damaging, girdling, or poisoning, in each case, resulting in an unhealthy or dead tree; (2) ~~t~~opping that results in removal of more than 25% of the live ~~e~~Crown; or (3) damage to roots or trunk that is likely to destroy the tree's structural integrity. ~~Trees that have been girdled at or prior to the time of development permit submittal will be treated as unauthorized tree removal subject to code enforcement.~~~~

~~165. Trees – A tree or a group of trees may fall under one of the following definitions for purposes of this chapter:~~

a. Grove – A group of three (3) or more ~~r~~Regulated ~~T~~trees with overlapping or touching ~~e~~Crowns, one of which is a minimum 30-inch DBH ~~tree in excellent or good condition per KZC.95.30.3~~, or a group of five (5) or more ~~R~~regulated ~~T~~trees, one of which is a minimum 24-inch DBH ~~tree in excellent or good condition per KZC.95.30.3; provided, that Groves will not be deemed Hedge Trees. Strike "provided that groves will not be deemed Hedge trees," add language to ensure that groves preserved through development (KZC 95.51.3) cannot be removed as hedges.~~

b. Hazard Trees – A tree assessed by a ~~Q~~Qualified ~~P~~Professional ~~arborist~~ as having an ~~i~~mminent or ~~H~~high-risk rating using the ISA Tree Risk Assessment Qualification (TRAQ) method in its most current form, ~~as applied in KZC 95.23.109.~~

~~c. Hedge Trees – Five (5) or more trees of the same species with overlapping or touching Crowns that have been planted by a current or former owner of a subject property in a linear formation, typically to function as a screen or barrier. A Hedge will not be deemed a Grove or be comprised of regulated trees.~~

~~e.d.~~ Landmark Tree – a ~~R~~regulated ~~T~~tree with a minimum 30-inch DBH in excellent ~~or~~ good condition per KZC.95.30.3.

~~d.e.~~ Nuisance Tree – A tree that meets either of the following criteria:

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

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

~~e.f. Public Tree – a A tree located in parks, along within maintained and/or unmaintained public rights-of-way, in a Sstormwater facility onand, or on City facility property or~~ other property owned by the City.

~~f.g. Regulated Tree – A tree that is at least six (6) inches DBH that is not listed on the Prohibited Plant List.~~

~~g.h. Street Tree – A tree-Public 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.~~

~~h.i. Tier 1 Tree(s) – Landmark Trees and Groves in Excellent or Good condition per KZC 9.30.3.~~

~~i.j. Tier 2 Tree – A Rregulated Ttree with any portion of the trunk located in a Rrequired Yyard or a required landscaping area in excellent or -good condition per KZC 95.30.3, subsection (c).~~

~~176. Wildlife Snag – The remaining trunk of a tree that is intentionally reduced in height and usually stripped of its live branches.~~

~~187. Windfirm – A condition of a tree in which it withstands average peak local wind speeds and gusts.~~

95.20 Tree Removal Permit 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-after~~ 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 ~~to be retained or planted by- pursuant to~~ a development permit, then the removal will be subject to code enforcement, including fines and restoration. **The Planning Official may require that the party obtain a tree removal permit.**
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.

95.21 Public Tree Removal and Pruning

1. Public Tree Removal.- Other than City crews, no person, directly or indirectly, shall remove any ~~Public Ttree (including any Tree Removal as defined in KZC 95.10.15) on any City property, 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 per ~~KZC 95.203-2, Tree Removal Permit Exemptions.~~ The City will not authorize removal of any ~~Ppublic Ttree~~ by any private party unless the tree is determined to be a ~~Hhazard Tree~~ or ~~Nnuisance Tree~~.
2. Public Tree Pruning. ~~The pruning of Public Trees, including Street Trees, shall conform to the following:~~
 - ~~a. Any Ppublic Ttree pruning shall conform to the most recent version of the American National Standards Institute (ANSI) A300 – Part 1 Ppruning Sstandards or as outlined in an approved Utility Vegetation Management Plan.~~
 - ~~b.a. Parks, Unmaintained City Right of Way, Stormwater and Other City Facilities.~~ Other than City crews, no person, directly or indirectly, shall prune, trim, modify, alter, or damage any ~~Public tTree in a public park or on any other City property~~ without first obtaining a Public Tree ~~Ppruning~~ permit as provided in this chapter, ~~unless the activity is exempt per KZC 95.20 or falls within one of the exceptions set forth in subsection (b) below related to Street Trees.~~
 - ~~b. Street Trees.~~ It is the responsibility of the adjacent property owner to maintain ~~sStreet tTrees~~ abutting their property, which may include minor pruning of up to one-inch diameter branches for sidewalk clearance, watering, and mulching. A Public Tree ~~Ppruning~~ permit is required to trim, modify, alter, or substantially prune

branches of a Street Tree more than one-inch in diameter ~~or~~. The City reserves the right to have City or utility crews perform routine pruning and maintenance of ~~S~~street ~~T~~rees.

- c. The pruning of Public Trees, including Street Trees, shall conform to the most recent version of the American National Standards Institute (ANSI) A300 Pruning Standards or as outlined in a City-approved Utility Vegetation Management Plan.

95.23 Tree Pruning and Removal on Private Property ~~with No~~ in the Absence of Development Activity

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 resulting from tree removal, contributing towards the City's canopy goals and a more sustainable urban forest.

1. Tree Removal on Private Property. No person, directly or indirectly, shall remove any Regulated Tree (including any Tree Removal as defined in KZC 95.10.15) from private property without first obtaining a tree removal permit as provided in this chapter, unless the activity is exempt per KZC 95.20 or is subject to the tree removal allowances set forth in KZC 95.23.5.

1.2. Tree Pruning on Private Property. Any private property owner may prune trees on their property without a permit, subject to the following ~~Tree topping is not an acceptable form of pruning and is not allowed. Otherwise:~~

- a. Any pruning of Landmark Trees or Groves preserved pursuant to KZC 95.51.3 by Private property owners shall prune Any Landmark Trees and preserved Groves shall be pruned pursuant to in conformance with conform to the most recent version of the ANSI A300 Pruning Standards.
- b. ~~Any Private property owners may prune trees on their property without a permit with the exception of shall not prune trees located in wetlands, streams, or their buffer~~ the following:

- ~~a. Trees located in wetlands, streams or their buffers.~~
- ~~b. Landmark trees or dedicated grove trees.~~

3. Tree Removal Notification Form. The Planning and Building Department shall make available a tree removal notification form. The tree removal notification form may be used by property owners to request review by the Planning and Building Department for compliance with applicable City regulations.

4. Tree Removal Permit Application Form. The applicable City department shall make available a tree removal permit application form. Property owners required by this chapter to obtain a tree removal permit shall submit a completed permit application for City review for compliance with applicable City regulations. The tree removal permit application form shall require, at a minimum, submittal of the following:

- a. A site plan showing the approximate location of all Regulated Trees on the subject property, their DBH, and their species, along with the location of structures, driveways, access ways, and easements on the subject property.
- b. For required replacement trees, a planting plan showing the location, size, and species of each replacement tree to be planted on the subject property, in accordance with the tree replacement requirements set forth in KZC 95.23.8.

2.5. Tree Removal Allowances. Any private property owner of developed property may remove a specified number of Rregulated Trees from their property based on the table below within a 12-month period without having to apply for a tree removal permit; provided, that:

- a. The trees are not located in wetlands, streams, or their buffers; are not located on properties in the Holmes Point Overlay area; ~~or are not located~~ within the City's shoreline jurisdiction; or any are not a Landmark Tree; or preserved and do not consist of a preserved Groves pursuant to Chapter KZC 95.51.3-KZC. Trees within 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;
- ~~b. The trees are not Landmark trees or dedicated grove trees~~
- b. ~~c.~~ There is no active application for development activity for the site subject property;

c. The trees were not required to be retained or planted as a condition of previous development activity per KZC 95.40, 95.42-45;

~~e. The trees are not protected under a Voluntary Tree Conservation Easement;~~

d. ~~f.~~ All the additional standards for tree ~~removal and tree removal permits as replacement~~ described in ~~subsection (4) of this section~~ KZC 95.23.38 are met.

Table x

Lot Size	Maximum number of allowed Regulated Tree removal 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
<u>Lots greater than 35,000 sq. ft.</u>	<u>May remove 6 or more than 6 trees with a Forest Management Plan</u>

~~6. Tree Removal Permit. A Tree Removal Permit is required if a property owner is requesting to exceed the allowances in subsection (5) of this section, or to remove Hazard Trees or Nuisance Trees pursuant to subsection 10 of this section.~~

~~3.7. Tree Removal on Private Property Prior to Development Permits. The City will not accept any application for a short plat or subdivision for a property with a pending tree removal permit or tree removal notification. Further, with the exception of approved removals of Hazard Trees or Nuisance Trees per KZC 95.23.9, for a period of 12 months following the most recent removal of a Regulated Tree on a subject property (including girdling), the City will not accept any application for a short plat or subdivision for the subject property ~~ies where Rregulated Ttrees have been removed (including girdling) for a period of 12 months following the most recent tree removal of a Regulated Tree, with the exception of approved Hhazard Tree or Nnuisance Ttree removals.~~~~

~~4. Tree Removal Notification Form. The Planning and Building Department shall provide ~~make available~~ 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.~~

~~5. Tree Removal on Private Property. A Tree Removal Permit is required if a property owner is requesting to exceed the allowances in subsection (2) of this section, or to remove Hazard Trees or Nuisance Trees in subsection 9 of this section.~~

~~4. Tree Removal Permit Application Form. The applicable City s department shall ~~make available~~ provide a tree removal permit application form. Property owners required by this chapter to obtain a Tree Removal Permit requesting to remove trees shall submit a completed permit application for City review for compliance with applicable City regulations. The tree removal permit application form shall include at a minimum the following:~~

~~a. A site plan showing the approximate location of Rregulated Ttrees, 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. 23.8, Tree Replacement Requirements.~~

~~5.8. Tree Removal Permit Decision and Appeals.~~

a. The City shall review ~~each Ttree Rremoval Ppermit~~ 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. Tree removal by felling shall be completed within one (1) year from the date of permit approval or the permit is void.

6.9. Tree Replacement Requirements.

- a. Tree Replacement. For every ~~R~~regulated ~~T~~tree that is removed, the City encourages the planting of a replacement tree that is appropriate to the site.
- b. Public Trees. — For every Public Tree that is removed, the City shall require a minimum one-for-one replacement in a suitable location.
- c. Holmes Point Overlay Zone. 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.
- d. Hedge Trees. For the approved removal of ~~overgrown H~~hedge ~~Trees comprised of regulated trees,~~ the City shall require a one-for-one replacement in a suitable location. ~~trees are required at a 1:1 ratio.~~
- e. The Last Regulated Trees on Certain Lots. ~~If a tree~~For the removal ~~request is for of~~ one (1) or both of the last ~~two (2)~~ ~~R~~regulated ~~T~~trees on lots containing single-family homes, cottages, carriage units, or two/three-unit homes ~~sites~~ under 10,000 square feet, approval of a tree removal permit is required and the City is authorized to require the planting of replacement trees, on a one-for-one basis ~~replacement is required, that are appropriate to the subject property and in locations on the subject property that are suitable.~~ ~~For the removal of~~ ~~request is for one (12) or more of the last four (4)~~ ~~R~~regulated ~~T~~trees on any lots between 40,000 to under 20,000 square feet but at least 10,000 square feet, approval of a tree removal permit is required and the City is authorized to require the planting of replacement trees, on a one-for-one basis ~~replacement is required, that are appropriate to the subject property and in locations on the subject property that are suitable.~~ ~~If the request is for 3~~For the removal of (1) or more of the last ~~six (6)~~ ~~R~~regulated ~~T~~trees on any lots greater than 20,000 square feet or greater, approval of a tree removal permit is required and the City is authorized to require the planting of replacement trees, on a one-for-one replacement is required basis, that are appropriate to the subject property and in locations on the subject property that are suitable. The replacement trees required by this subsection shall be at least six (6) feet tall for ~~a~~-conifers and at least 2-inch ~~c~~Caliper for deciduous or broad-leaf evergreen trees.
- f. Other Circumstances. For all other circumstances, the required tree replacement will be based on the required landscaping standards in KZC 95.40 through 95.50.

10. Removal of Hazard Trees or Nuisance Trees. Any private property owner seeking to remove any number of ~~R~~regulated ~~T~~trees ~~or the public right-of-way which that~~ are ~~a~~-Hazard Trees or ~~N~~nuisance Trees from ~~their~~ developed or undeveloped property shall first obtain approval of a tree removal permit and meet the requirements of this subsection. Removal of a Hazard Tree or Nuisance Tree by the applicable property owner does not count toward the tree removal limit allowed number of tree removals set forth in KZC 95.23.5, if:

— a. T the conditions giving rise to the nuisance or hazard condition is not are evident based on in a photograph; or, in the case of a Hazard Tree,

7. ~~b. T the conditions giving rise to the nuisance or hazard is are~~ supported by a ~~report~~-Tree Risk Assessment prepared by a ~~Q~~qualified ~~P~~professional in accordance with KZC 95.23.10 and approved by the City.

11. The City may order diseased trees removed from private property as ~~H~~hazard ~~T~~trees to prevent the spread of a disease/pest that would cause catastrophic decline in tree health and failure, ~~except as otherwise allowed under subsection 2.~~

12. Tree Risk Assessments for Hazard Trees.

- a. If the conditions giving rise to a nuisance or Hhazard condition is are not ~~obvious-evident in a photograph,~~ a ~~t~~tree ~~r~~Risk ~~a~~Assessment report prepared by a ~~Q~~qualified ~~P~~professional explaining how the tree, or tree(s), meet the definition of a ~~nuisance or H~~hazard ~~t~~tree is required. ~~Hazard-T~~tree ~~R~~Risk ~~A~~Assessments shall follow the categorization methods for developing a tree risk rating set forth pursuant to steps in the ISA Tree Risk Assessment Manual. TRAQ method for developing a tree risk rating, as follows:

1) ~~Identify possible targets and estimate occupancy rate;~~

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

3) ~~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.~~

~~b. 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.~~

~~c. 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

- ~~d. 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.”~~
- b. The method for developing a tree risk rating set forth in the ISA Tree Risk Assessment Manual involves assessing levels of tree risk as a combination of the 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. Potential targets are permanent structures or an area of moderate to high use. Where a potential target does not exist, applicants should consider routine pruning and maintenance to mitigate hazards.
- c. Where a tree is found to have a high risk or extreme risk rating, the Planning Official may approve authorize hazard-pruning-to-mitigation one measures to reduce the risk rather than approving the removing of the entire tree.
- d. Where If the Planning Official assesses a tree is found to have a high risk or extreme risk rating and mitigation of the risk through pruning or moving of potential targets is not feasible, the Planning Official shall approve the removal of designate the tree as a Hazard Ttree.

~~12.13.~~ Trees in ~~Critical Areas or Critical Areas~~Wetlands, Streams, or their Buffers. See Chapters 85 and 90 KZC.

- a. Hazard ~~Trees~~ or ~~N~~uisance ~~T~~rees in wetlands, streams, ~~or~~and their buffers shall be removed in a manner that creates a ~~w~~Wildlife ~~s~~Snag, ~~or~~;
- b. If creation of a ~~W~~ildlife ~~s~~Snag is not feasible, then the felled tree shall be left in place unless the Planning Official approves tree removal in writing; and
- c. The removal of any tree in a wetland, stream, ~~or~~and their buffers 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.
- d. No trees shall be removed from a wetland, stream, or their buffers unless determine to be ~~N~~uisance ~~T~~rees or ~~H~~azardous ~~T~~rees. Any tree removal shall be authorized in advance through a tree removal permit unless emergency tree removal is warranted per KZC 95.20.1.

~~13.14.~~ Forest Management Plan.

- a. ~~Traditional forest management may require selective tree removal to meet objectives for sustainable growth, composition, health, and quality.~~ A Forest Management Plan may be submitted for developed, ~~heavily~~ ~~Significantly~~ ~~w~~Wooded ~~s~~Sites of at least 35,000 square feet in size where tree removal exceeds the allowances of KZC 95.23.2-5 and is not exempt under KZC 95.20, ~~Tree Removal Permit Exemptions.~~ A Forest Management Plan must be developed by a ~~Q~~qualified ~~P~~professional and shall include the following:
 - i. A site plan depicting the location of all ~~R~~egulated ~~T~~rees (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-the~~ DBH, species, and condition of each tree;
 - ii. Identification of trees ~~proposed~~ to be removed, including reasons for their removal and a description of low impact removal techniques pursuant to subsection (~~4412~~)(b) of this section.
 - iii. A reforestation plan that includes location, size, species, and timing of installation;
- b. The following Forest Management Plan standards shall apply:
 - i. Trees to remain should be dominant or co-dominant in the stand, healthy and ~~W~~indfirm.
 - ii. No removal of trees from ~~wetlands, streams, or critical areas and~~ their buffers, unless otherwise permitted by this chapter.
 - iii. No removal of Landmark ~~T~~rees or ~~dedicated preserved g~~Groves ~~s~~ trees, unless otherwise permitted by this chapter.
 - iv. No removal of trees that would cause trees on adjacent properties to become hazardous.
 - v. 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.
 - vi. 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.
 - vii. Removal of tree debris shall be done pursuant to Kirkland Fire Department standards.
 - viii. Recommended maintenance prescription for retained trees with a specific timeline.
- c. ~~T~~he Planning Official may require a performance security pursuant to KZC 175 in order to ~~ensure that~~ ~~the~~assure reforestation requirements of the approved ~~F~~orest ~~M~~anagement ~~P~~lan ~~are met.~~

95.30 Tree Retention Associated with Development Activity

The City's objective is to mitigate the impacts of incremental canopy loss due to development by establishing clear standards for the retention of existing trees and standards for planting and maintenance of new trees.

Applicants for a development permit are encouraged to confer with City staff as early in the design process as possible so that the applicable tree planting and retention principles found in this chapter can be incorporated into the design of the subject property. The Planning Official and the applicant shall work in good faith to find reasonable solutions.

1. Tree Retention Plan General Requirements. 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 submittal elements at the applicant's expense. If proposed development activities call for more than one Tree Retention Plan element, the Planning Official may require the more stringent of, or a combination of, the 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.

2. Tree Retention Plan Applicability. Unless otherwise exempt pursuant to KZC 95.20 or subject to the exception in subsection (a) of this section below, any proposed development of the subject property requiring approval through a building permit, land surface modification permit, and/or demolition permit, and/or Design Review, Process I, IIA, or IIB, described in Chapters 142, 145, 150 and 152 KZC, respectively, shall include a Tree Retention Plan. Arborist Tree Retention Plans containing reports of one or more Qualified Professionals in which the field work was completed occurred over 3 years ago may need to be updated with current data.

- a. Exception. A Tree Retention Plan is not required for additions to and remodels of existing improvements in which the total square footage of the proposed improvements is less than 50 percent of the total square footage of the existing improvements footprint on the subject property and no development activity is proposed within the CRZ of Tier 1 Trees or Tier 2 trees.
- b. Additional tree retention and protection regulations apply to:
 - 1) Properties within jurisdiction of the Shoreline Management Act as set forth in Chapter 83 KZC;
 - 2) Properties with Critical Areas or related Critical Area buffers as set forth in Chapters 85 and 90 KZC; and
 - 3) Properties within the Holmes Point Overlay zone as set forth in Chapter 70 KZC.

3. Tree Retention Plan Submittal Requirements. Tree Retention Plans shall contain the following information unless waived by the Planning Official:

- a. Inventory. The inventory may be noted on the site plan or in the arborist report of a Qualified Professional, listing the following:
 - 1) All existing regulated trees on the subject property identified by a consistent numbering system in the arborist report of a Qualified Professional or, site plan and onsite tree tags or flagging. The inventory must also include regulated trees that are on adjacent properties that appear to have Critical Root Zones (CRZs) extending onto the subject property;
 - 2) The Critical Root Zone (CRZ) and the proposed Tree Protection Zone (TPZ) distances of all existing regulated trees specified in feet from the face of the each tree trunk. The inventory must also include the approximate CRZ and proposed TPZ of regulated trees that appear to have Critical Root Zones (CRZs) extending onto the subject property);
 - 3) Existing Regulated Tree Trunk DBH;
 - 4) Proposed tree removals;
 - 5) Condition rating of regulated trees (i.e., poor, fair, good, excellent, etc.) per KZC 95.30.3, subsection (c)32.3(e); and
 - 6) Tree species and/or common name.

~~7) Identification of trees that meet the definition of Tier 1 and Tier 2 trees.~~

b. Site plan. The site plan must be drawn to scale showing the following:

- 1) Location of all proposed improvements, including building footprint, access, utilities, applicable Required Yard setbacks, buffers, and required landscaped areas clearly identified.
- 2) Surveyed location of regulated trees on the subject property. The site plan must also show the approximate trunk location of potentially impacted regulated trees that are potentially impacted on adjacent properties;

_____3) Trees labeled corresponding to the tree inventory numbering system per subsection (a) of this section;

4) ~~Critical Root Zone~~CRZs drawn to scale around all trees potentially impacted by site disturbances resulting from grading, demolition, or construction activities (including approximate CRZs of all ~~potentially impacted~~ trees that are potentially Impacted on adjacent properties);

5) Location of tree protection fences at the proposed ~~TPZ~~free Protection Zone, with distances from the applicable trunks to fences noted on the site plan. Specific tree protection standards during construction are described in KZC 95.32 ~~KZC~~. These standards must be adhered to and included on demolition, grading, and building permit plans;

6) Trees proposed to be removed, noted by an 'X' or by ghosting out;

7) Proposed locations of any replacement supplemental trees to be planted required to meet tree density credits or the minimum number of trees as outlined in KZC 95.34.

c. Arborist rReport of a Qualified Professional with the following:

1) The condition rating for each Rregulated Ttree's ~~suitability for retention~~ based on its health and structure, including Rregulated Ttrees that appear to have ~~Critical Root Zones~~ (CRZs) extending onto the subject property. ~~Suitability for retention~~The condition rating for each Regulated Tree shall be assessed using the following criteria:

Condition Rating	Tree Structure <i>Root flare, trunk condition, branch assembly</i>	Tree Health <i>Twig and leaf density, size and growth, pest/pathogen issues</i>
Excellent	Trunk and root flare are sound and solid, no visible defects or cavities. Generally symmetric crown. Branch spacing, structure and attachments are normal for species and free of defects.	High vigor with little to no twig dieback, discoloration or defoliation. No apparent pest problems. New growth has normal to exceeding shoot length. Leaf size and color normal. Exceptional life expectancy for the species.
Good	Well-developed structure. Defects are minor and can be corrected. Codominant stem formation may be present. Trees that are part of a designated grove may have major asymmetries/deviations form an open-grown form of the same species.	Vigor is normal for species. No significant damage due to diseases or pests. Any twig dieback, defoliation or discoloration is minor (less than 25% of the crown). Typical life expectancy for the species. Trees that are part of a designated grove may have reduced vigor compared to an open-grown form of the same species.
Fair	A single defect of a significant nature such as a trunk cavity or multiple moderate defects such as large girdling roots, trunk damage, evidence of decay that are not practical to correct or would require multiple treatments over several years.	New growth is stunted or absent. Twig dieback, defoliation, discoloration, and/or dead branches may compromise from 25-50% of the crown. Damage due to insects or diseases may be significant and associated with defoliation but is not likely to be fatal. Below average life expectancy.
Poor	High to imminent risk trees (hazard). Structural problems cannot be corrected. Failure may occur at any time.	Poor vigor, unhealthy and declining. Low foliage density with extensive (more than 50%) twig and/or branch dieback. Smaller-than-normal leaf size and little evidence of new growth. Potentially fatal pest infestation.

2) For trees not suitable for retention, a description of the reason(s) for removal must be given based on poor health; high risk of failure due to poor structure, other defects, or, unavoidable isolation (windfirmness); or unsuitability of species, etc., and for which no reasonable alternative action is possible ~~must be given~~ (pruning, cabling, etc.);

3) The Qualified Professional's A-description of the method(s) used to determine the ~~TPZ~~free Protection Zone (i.e., CRZ~~ritical Root Zone~~ formula, ~~root plate diameter~~, exploratory root excavations, or a case-by-case basis description for individual trees);

4) Any special instructions specifically outlining any work proposed within the CRZ~~Critical Root Zone~~ of retained trees (i.e., additional protection from soil compaction, hand-digging, tunneling or boring, root

pruning, mitigating any grade changes, monitoring during development activity, and aftercare), including potentially impacted trees on adjacent properties;

5) A discussion of timing and installation of tree protection measures that must include fencing in accordance with the tree protection standards in KZC 95.32, including any anticipated changes to tree protection fence location or other activity within the ~~CR~~Critical Root Zone of retained trees during project construction (i.e. material delivery, equipment access, landscaping, etc.);

6) Describe the impact of necessary tree removal to the ~~remaining~~remaining trees to be retained, including those in a ~~g~~Grove or on adjacent properties;

7) The suggested location and species of ~~replacement supplemental~~replacement supplemental trees to be ~~planted used when required~~planted used when required. The report shall include planting and maintenance specifications pursuant to KZC 95.50, ~~and~~and 95.51, ~~and~~and 95.52.

4. Tree Retention Plan Review Standards for Development of Single-Family Dwellings, Short Plats, Subdivisions, and Two/Three-Unit Homes.

To retain ~~R~~regulated ~~T~~Trees, the applicant shall ~~modify its proposed design, consistent with the pursue~~modify its proposed design, consistent with the pursue provisions in ~~KZC 95~~this chapter that allow development standards to be modified. The authority to make decisions under this ~~C~~chapter resides with the Planning Official for building permits, land surface modification permits, and/or demolition permits or with the applicable decision authority for Design Review, Process I, IIA, or IIB permits ~~described in~~described in Chapters 142, 145, 150 and 152 KZC, respectively.

The City does not require tree retention efforts that would reduce maximum allowed density or number of lots, ~~or~~or maximum allowed Floor Area Ratio (FAR) or ~~Maximum~~Maximum Lot Coverage, or that preclude required access and utility connections.

Tree Retention Plan review and approval shall be based on compliance with the following provisions:

a. Tier 1 Trees located anywhere on the subject property shall be retained using the following standards:

1) The applicant is entitled to a maximum building footprint, where consistent with applicable dimensional standards, ~~ins~~ins a configuration of 40-foot wide by 40-foot deep building footprint, in ~~combination with addition to~~combination with addition to a contiguous 20-foot wide by 20-foot deep building footprint that may shift location around Tier 1 Trees. An applicant is not required to limit the building footprint pursuant to this section where the limitation is not necessary to retain ~~one or more a~~one or more a Tier 1 ~~T~~Tree(s).

2) ~~In order to retain Tier 1 trees, t~~In order to retain Tier 1 trees, the applicant shall pursue, and the Planning Official is authorized to require, site plan alterations, such as adjustments to the location of building footprints, adjustments to the location of driveways and ~~other~~other access ways, or adjustment to the location of walkways, easements, or utilities, including the following:

a) Shift or flip (mirror) the location of building footprints and driveways;

b) Selection of ~~the required~~the required front yard on corner lots in the RSA and RSX zones and selection of the ~~required~~required side yard to meet the 15-foot total ~~required in the~~required in the RS zones;

c) Adjust deck, patio, and path designs;

d) Relocate utilities when gravity and location of existing mains permit;

e) Avoid rockery/retaining walls located within CRZs;

f) Shore basements and other extensive excavations in order to avoid impact within CRZs;

g) Cantilever structures over CRZs; ~~and~~

h) With short plats and subdivisions, clustering per ~~Section KZC 95.30.7, subsection (b),~~Section KZC 95.30.7, subsection (b), rearrangement of property lines ~~within the applicable short plat or subdivision,~~within the applicable short plat or subdivision, relocation of access roads, and relocation of utilities.

3) The applicant shall employ arboricultural methods such as air excavations, boring under roots instead of trenching, and using additional CRZ protection per KZC 95.34.

4) The applicant may pursue ~~these the following~~these the following variations prior to restricting/adjusting the building footprint, and the Planning Official (or Public Works Official, where applicable) is authorized to allow these variations to development standards:

a) ~~Allow~~Allow 10-foot front and 5-foot rear ~~R~~Required ~~y~~Yards;

- b) ~~Allow variations to the~~ Garage requirements of KZC 115.43.3;
- c) ~~Allow variations to the m~~Maximum lot coverage by not more than 10 percent, where necessary, and the driveway width does not exceed a width of 20 feet to extend access due to building footprint location;
- ~~d~~e) Allow 18-foot by 18-foot parking pads;
- ~~e~~d) Modify right-of-way frontage improvement requirements, such as waiving any required landscape strip, ~~etc.~~;
- ~~f~~e) Allow up to a ~~five~~5-foot increase in building height where the additional height is clearly related to tree retention (i.e., locating mechanical equipment in the attic, avoiding excavation or fill, etc.);
- ~~g~~f) With short plats and subdivisions, allow 3-foot required side yards within the proposed short plat or subdivision~~from internal property lines.~~

b. Tier 2 Trees shall be retained using the following standards:

1) The applicant is entitled to a maximum building footprint of the following configuration, where consistent with applicable dimensional standards:

- a) 50-foot wide by 50-foot deep building footprint, or
- b) ~~For front building facades wider than 50 feet, the maximum building footprint shall be less 10 percent of the distance between the required side yards. For parcels where an applicant could otherwise construct a Front Façade that is wider than the 50-foot wide building footprint, the allowable width of the Front Façade shall be determined by measuring the distance between the Required Yards parallel to and along the Front Façade and reducing that width by 10% as provided in the formula below:~~

$$\text{MAXIMUM FRONT FAÇADE WIDTH} = (\text{DISTANCE BETWEEN REQUIRED YARDS}) - (\text{DISTANCE BETWEEN REQUIRED YARDS} \times 10\%)$$

For example: a 70-foot wide lot with a 60-foot wide front building facade and two 5-foot side ~~r~~Required ~~y~~Yards results in a 10 percent, or 6-foot reduction, to the building pad width, which totals a 54'-~~foot~~ maximum building envelope width.

An applicant is not required to limit the building footprint pursuant to this section where the limitation is not necessary to retain one or more Tier 2 Tree(s).

2) **In order to retain Tier 2 trees,** ~~T~~the applicant shall pursue and the Planning Official is authorized to require site plan alterations, including the following:

- a) Shift or flip (mirror) the location of building footprints and driveways;
- b) Selection of the required front yard on corner lots in the RSA and RSX zones and selection of the required side yard to meet the 15-foot total required in ~~the~~ RS zones;
- c) Reduce required front yard by up to five5- feet and reduce any rear yards that are not directly adjacent to another parcel's rear yard but that, instead, are adjacent to an access easement or tract ~~may be reduced~~ by up to five5- feet;
- d) Shift the building footprint on the lot to take advantage of the modifications/reductions allowed in subsection (4);
- e) ~~Redesign~~ Adjust deck, patio, and path designs;
- f) Avoid rockery/retaining wall/~~r~~ockeries located within ~~the~~ CRZs ~~where possible;~~ and
- ~~3~~g) Bore under roots within TPZs for utilities less than 2 inches diameter.

~~4~~3) The applicant may pursue ~~these~~ the following variations prior to restricting/adjusting the building footprint, and the Planning Official (or Public Works Official, where applicable) is authorized to allow these variations to development standards:

- a) Allow 10-foot front and 5-foot rear ~~r~~Required ~~y~~Yards;
- b) Allow variations to the Garage requirements of KZC 115.43.3;

- c) ~~Allow variations to the maximum lot coverage by not more than 10 percent, where necessary, and the driveway width does not exceed a width of 20 feet to extend access due to building footprint location;~~
- d) ~~Modify right of way frontage improvement requirements, such as waiving any required (no landscape strip, etc.);~~
- e) ~~Clustering with short plats and subdivisions, subject clustering pursuant to Section per KZC 95.30.7, subsection (b).~~

5. Tree Retention Plan Review Standards for Development of Multifamily, Commercial, Mixed Use, and Cottage/Carriage Development.

To retain regulated trees in required yards and/or required landscape areas, the applicant shall ~~pursue~~ modify its proposed design, consistent with the provisions in ~~KZC 95~~ this chapter that allow development standards to be modified. The authority to make decisions under this ~~C~~ chapter resides with the Planning Official for building permits, land surface modification permits, and/or demolition permits or with the applicable decision authority for Design Review, Process I, IIA or IIB permits described in Chapters 142, 145, 150 and 152 KZC, respectively.

The City does not require tree retention efforts that would reduce maximum allowed density or ~~lot coverage~~ or that preclude required access and utility connections.

Tree Retention Plan review and approval shall be based on compliance with the following provisions for regulated trees located in required yards and/or required landscape areas. Regulated trees in these areas shall be retained to the maximum extent possible using the following standards:

- a. Adjust deck, patio, and path designs;
- b. Relocate utilities when gravity and location of existing mains permit;
- c. Avoid rockery/retaining walls located within CRZs;
- d. Shore basements and other extensive excavations in order to avoid impact within CRZs;
- e. Cantilever structures over CRZs;
- f. Employ arboricultural methods such as air excavations, boring under roots instead of trenching, and using additional CRZ protection per KZC 95.34;
- g. ~~Modify right-of-way frontage improvement requirements, such as waiving any required landscape strip, etc.;~~
- h. ~~Reduce or vary any required Common Recreational Open Space the~~ area, width, or composition of any required common recreational open space;
- i. Vary parking lot design and/or access driveway requirements when the Public Works Official and Planning Officials both determine the variations to be consistent with the intent of City policies and codes; and
- j. Vary requirements pertaining to stormwater if approved by the Public Works Official under KMC 15.52.060.

6. Tier 1 Tree and Tier 2 Tree Retention Priorities. The City may authorize the removal of Tier 1 Trees and Tier 2 ~~T~~ Trees otherwise required by this chapter to be retained for retention if:

- a. After utilizing the required site plan alterations and allowed variations to development standards listed in KZC 95.30.4 and 95.30.5, encroachment into the CRZ of one or more Tier 1 Tree or Tier 2 Tree would result in either of the following:
 - 1) One or more Tier 1 Trees or Tier 2 Tree(s) that are unsuitable for retention per the condition ratings in KZC 95.30.3, subsection (c), in which case the City may authorize the removal of the applicable Tier 1 Trees or Tier 2 Trees; or
 - 2) Conditions in which the retention of a Tier 2 Tree compromises a Tier 1 Tree's suitability for retention, in which case the City may authorize the removal of the applicable Tier 2 Tree.
- b. Proposed alternative measures using sustainable site development strategies and qualifying sustainability certifications result in development sites that are equal or superior to the intent of this ~~C~~ chapter, such as:
 - 1) Low Impact Development (LID) standards within the Public Works Pre-Approved Plans and Policies and King County Stormwater Manual;
 - 2) International Living Futures Institute (ILFI) Living Building Challenge;

- 3) Leadership in Energy and Environmental Design (LEED);
- 4) Built Green Net Zero;
- 5) Salmon Safe, ILFI Net Zero or Passive House programs ~~that will be equal or superior to the provisions of KZC 95; and~~
- 6) The installation of renewable energy system hardware, such as solar panels or wind turbines.

Requests to use alternative measures and procedures shall be reviewed by the Planning Official, who may approve, approve with conditions or modifications, or deny the request. The Planning Official and the applicant shall work in good faith to find reasonable solutions.

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

a. Modifications. Modifications to the Tree Retention Plan may be approved by the Planning Director pursuant to the standards of KMC 22.20.025 and the following criteria:

~~1) Modification Prior to Tree Removal. The Planning Director may approve a modification request to remove Tier 1 Trees or Tier 2 Trees previously identified for retention if:~~

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

~~b) Notice of the modification request is provided consistent with the noticing requirements for the short plat or subdivision.~~

~~2) Modification after Tree Removal. A modification request is required to remove 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 Planning Director only if the following criteria are met:~~

~~a1) The need for the modification was not known and could not reasonably have been known before the Tree Retention Plan was approved;~~

~~b2) The modification is necessary because of special circumstances that 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; and~~

~~c3) There is no practicable or feasible alternative development proposal that results in fewer additional tree removals.~~

~~b.3) —Public Notice for Modifications. The Planning Director shall not approve or deny a modification pursuant to this subsection without first providing notice of the modification request consistent with the noticing requirements for the short plat or subdivision and providing opportunity for comments for consideration by the Planning Director. and~~

~~4)e) Said comment period shall not be less than 14 calendar days.~~

~~54)f) The fee for processing a modification request shall be established by City ordinance.~~

~~b.c. Lot Clustering. Clustering of lots associated with short plats and subdivisions. The Planning Director may approve variations to minimum Lot Size, and maximum Floor Area Ratio and Lot Coverage requirements in order to facilitate retention of Tier 1 Trees and Tier 2 Trees where necessitated by retention of trees in protective tracts or where lot sizes are averaged in order to retain trees. The following standards shall apply:~~

~~1) Lot sizes may be averaged with no minimum lot size specified, provided there is no increase in the allowed density or number of lots otherwise allowed for the subject property;~~

~~2) The maximum Floor Area Ratio (FAR) and/or Lot Coverage requirements may be adjusted proportionate to the Lot Size reduction(s), provided there is no net increase in the aggregate Floor Area Ratio (FAR) and/or aggregate Lot Coverage otherwise allowed for the subject property. The variations and resultant restrictions shall be included in a recorded agreement and binding on future owners of the lots. [Clarify: intent is not to decrease the allowed FAR and Maximum Lot Coverage for clustered short plats and subdivisions].~~

95.32 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:

~~1. Tree Cutting in Advance of Issuance of Land Development Permit. There shall be no tree removal, land surface modifications, or clearing of other vegetation (or of other vegetation clearing) land surface modifications on any site for the sake of preparing that site for future development (strike all)~~

2. Placing Materials near Trees. No person may conduct any activity within the ~~TPZ~~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.

3. Tree Protection Fence. Before development, land clearing, filling, or any land ~~surface modifications alteration~~, the applicant shall:

a. Erect and maintain 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.
(administratively provide handouts of Pre-Approved Plans fence detail)

c. 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.

d. 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.

e. If any disturbance is proposed within the Inner Critical Root Zone of ~~one or more Regulated T~~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~~Qualified Professional can demonstrate, through non-injurious methods such as pneumatic root excavations, that there are no roots within the Inner Critical Root Zone.

f. Maintain the Tree Protection Fence in its approved location for the duration of the project until the Planning Official authorizes its removal.

g. 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.

h. In addition to the above, the Planning Official may require the following:

- 1) If equipment is authorized to operate within the ~~Critical Root Zone~~CRZ, the soil and ~~critical root zone~~CRZ 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 ~~the~~ edge of ~~Critical Root Zone~~the CRZ, 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.

4. Grade.

- a. The grade shall not be elevated or reduced within the **Critical Root ZoneCRZ** 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 ZoneCRZ** with (insert soil specification here) **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 ZoneCRZ**, 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 ZoneCRZ** 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-zoneCRZ** 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 95.51.

95.34 Supplemental Tree Planting Requirements Related to Development Activity

This section establishes the minimum tree planting requirements for development permits using a tree credit system. This section does not establish a maximum retention standard for existing trees.

1. **Supplemental Trees Required to be** Planted to Meet Tree Density Requirements. The required tree density for replanting 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.
2. Applicability of Tree Credits. The tree credit value that corresponds with DBH shall be found in Table 95.34. The maximum number of credits awarded to any one individual tree is 11 credits. Existing native conifers (or other conifer species **as approved by the Planning Official (reference list instead)**) shall count 1.5 times credits for retention. For individual lots in a short **plat subdivision** or subdivision with an approved Tree Retention Plan, the required tree density applies to each lot within the short plat or subdivision. Trees planted in the following locations shall not count towards tree density credit requirements:
 - a. 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 **or subdivision**.
 - b. Existing trees transplanted to an area on the same site unless approved by the Planning Official based on transplant specifications provided by a **Qualified Professional** that will ensure a good probability for survival

Table 95.34.
Tree Density for Existing Significant Regulated Trees
(Credits per minimum diameter – DBH)

DBH	Tree Credits	DBH	Tree Credits	DBH	Tree Credits
3 – 5"	0.5				
6 – 10"	1	24"	8		
12"	2	26"	9		
14"	3	28"	10		
16"	4	30"	11		
18"	5				
20"	6				
22"	7				

3. Tree Density Credit Calculation. To calculate required tree density credits, divide the square foot area of the subject lot by 43,560 (the square foot equivalent to one acre). The resulting number is then multiplied by 30, the minimum tree density credit requirement for one acre. In calculating required tree density credits, any fraction of credits shall be rounded up to the next whole number from a 0.5 or greater value.

Example: an 8,500-square-foot lot would need six (6) tree credits ($8,500/43,560 = 0.195 \times 30 = 5.8$, or six (6) credits). The tree density for the lot would be exceeded/met by retaining two (2) existing Landmark ~~30-inch DBH T~~ trees and two (2) existing 12-inch DBH Tier 2 ~~Trees that are~~ conifers ~~s-trees~~ (tree densities may be exceeded to retain Landmark ~~T~~ trees and existing native conifers count 1.5 times credits). Or, the tree density for the lot would be met by retaining two (2) existing 14-inch DBH deciduous Tier 2 ~~T~~ trees.

4. Minimum Size for ~~Replacement~~ ~~Supplemental~~ Trees. The required minimum size of ~~a replacement the supplemental~~ tree worth one (1) tree credit shall be four (4) feet tall for native or other conifers and 2-inch ~~C~~ caliper for deciduous or broad-leaf evergreen trees. Additional credits may be awarded for larger ~~supplemental-replacement~~ trees. Trees planted to form a clipped or sheared hedge or living wall will not be counted toward tree density credits. Supplemental Thuja/Arborvitae or other slow-growing conifers ([reference list](#)) 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. ~~Replacement~~ ~~Supplemental~~ Tree Locations. In designing a development and in meeting the required tree density, the ~~replacementsupplemental~~ 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
 - 2) In preserved ~~G~~ groves, ~~s~~ Critical ~~A~~ areas or ~~their-Critical Area B~~ 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~~ in the development of residential subdivisions.
- b. Off-Site. When room is unavailable for planting the required ~~replacement~~ trees on site, then they may be planted at another approved location in the City. Trees that are planted off site from the subject property ~~shall be subject to a 5 Year Maintenance Agreement may be required to be preserved in perpetuity.~~

6. 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 costs for

conifers and deciduous trees, multiplied by the number of required tree credits into the City Forestry Account pursuant to KZC 95.57.

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.
 - 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, Tree Retention Plan Procedure 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. **Replacements 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 95.32 to ensure the protection of significant existing vegetation and soil.

34. General. The applicant shall provide the **replacements 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 in an area to be planted with required landscaping; and
- c. Is not committed to and being used for some specific purpose.

42. 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.
- 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.

53. 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.

95.41 Supplemental Plantings

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 (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.				

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. The spacing may be increased to 15 feet to accommodate larger species and avoid long-term crowding. 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.

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.

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.
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.

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:
 - 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

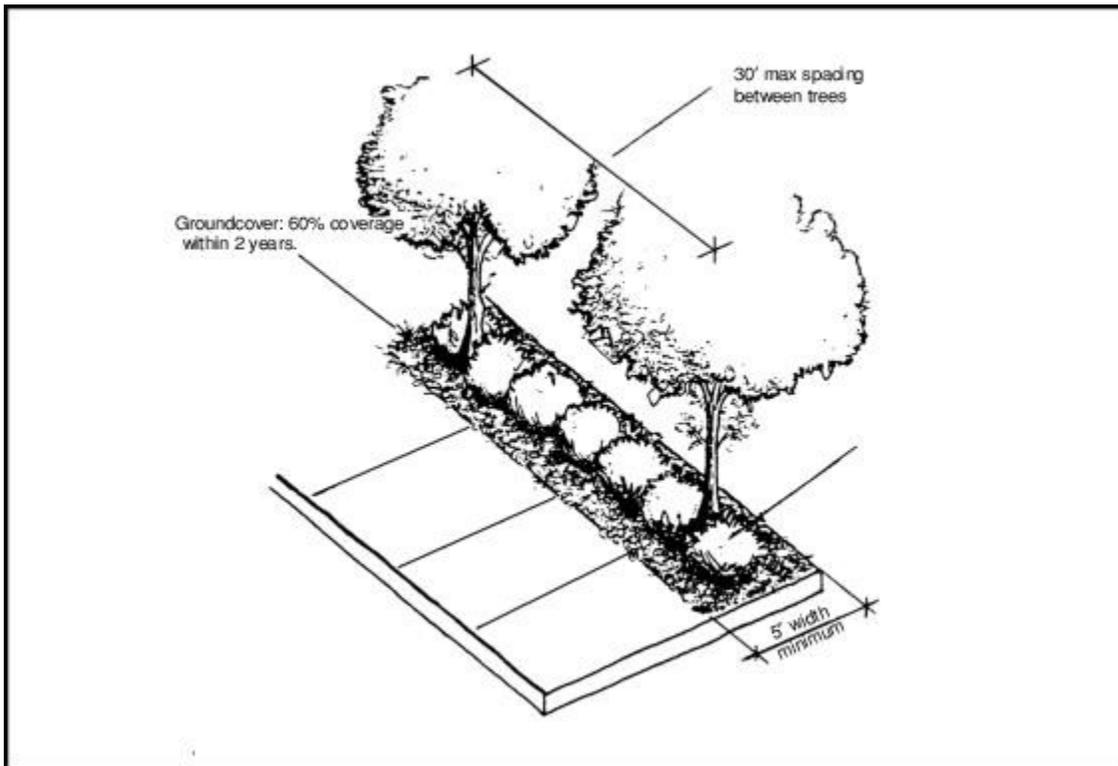


FIGURE 95.45.A

Perimeter Parking – Examples of Various Screen Wall Designs

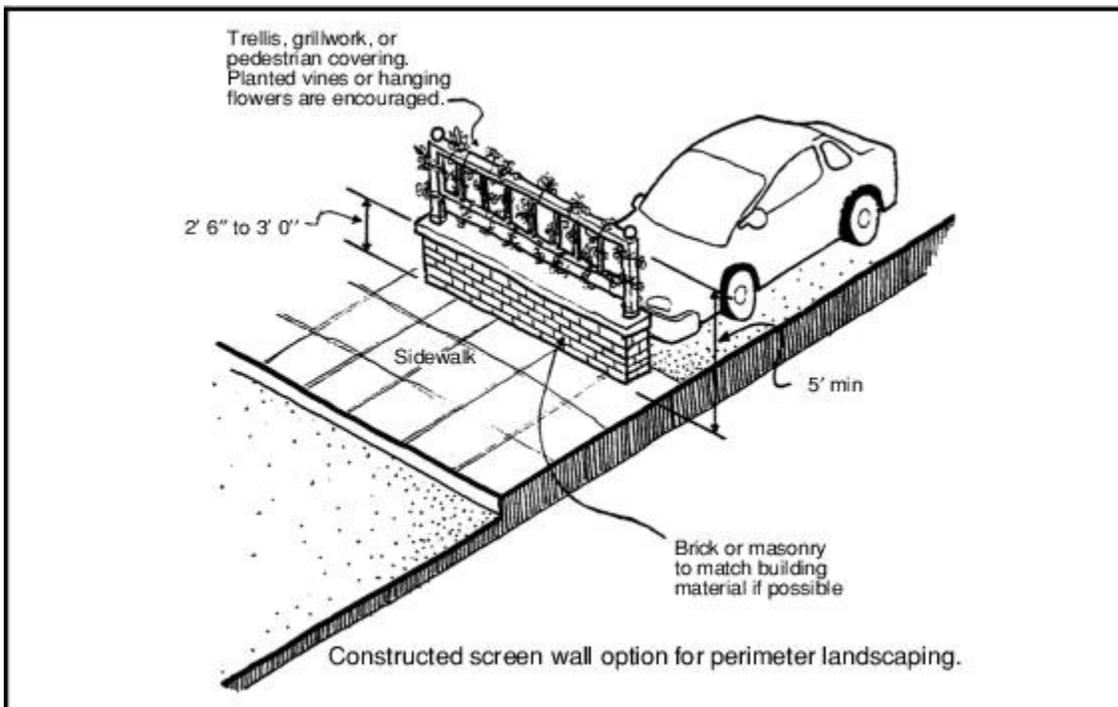


FIGURE 95.45.B

Perimeter Parking – Examples of Various Screen Wall Designs

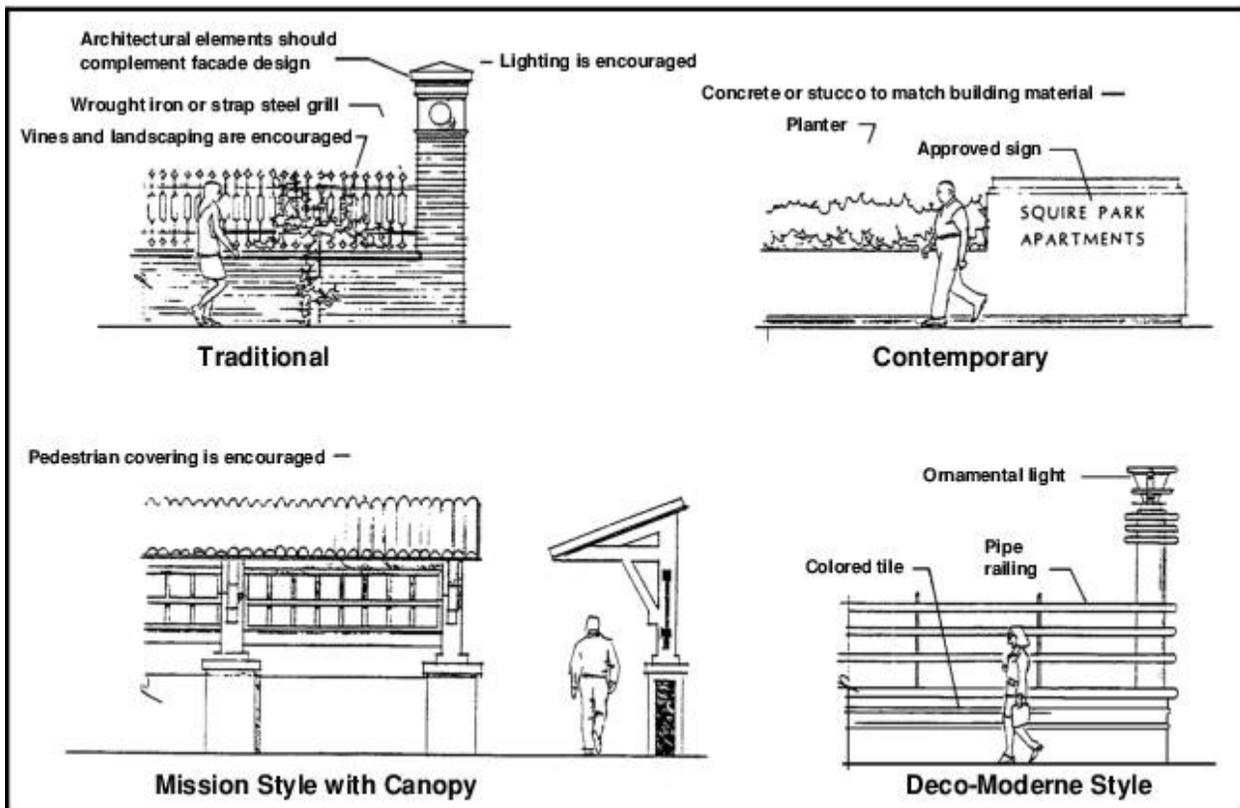


FIGURE 95.45.C

95.46 Modifications to Required Landscaping and Buffer 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) 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.

95.47 Nonconforming Landscaping and Buffers

1. The landscaping requirements of KZC 95.404, Required Landscaping Based on Zoning District Replacement 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.

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 mature size of specified trees and other vegetation species; 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. Trees should be planted in the fall, winter or early spring, between October and April, or must be irrigated.

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.

6. Plant Location. Newly-planted **supplementalreplacement** trees should generally be planted at least 3 feet away from property lines. Planting large trees under/within proximity to overhead utilities shall be avoided. Newly-planted **replacementsupplemental** trees may be checked for the approved locations as a final inspection procedure on development sites. **ReplacementSupplemental** trees must be planted in a manner that allows the tree species to mature to its full height and width. Trees shall be located with the appropriate spacing from buildings and other trees, soil volume should not be restricted for the mature size of the tree and soil should be amended in accordance with the storm water code. Trees shall be installed so that the root flare is at or slightly above the finished ground elevation in order to promote a healthy root structure and identify any girdling roots at the time of planting.

7. 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.

8. 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. Selected irrigation option shall be specified on the Landscape or Tree Plan. 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.

9. 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.
10. 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.
11. 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.
12. Final Inspection. ~~During final inspection, if these requirements are not met, the project will not be signed off. These requirements shall be completed prior to final inspection.~~

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.
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..
 - 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 Regulated 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.

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.

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 1.12.100 KMC, Special Provisions Relating to Enforcement of Tree Regulations in Chapter 95 KZC. ~~non~~Notwithstanding the provisions of Chapter 1.12.100 KMC, Tree ~~T~~Iopping shall result in the following penalties:

1. Required Trees. Trees that were required to be planted or retained by this chapter that are less than six (6) inches DBH that have been ~~damaged by Topping~~topped must be replaced pursuant to the standards in Chapter 1.12 KMC.

2. Restoration. For ~~topped~~ trees greater than six (6) inches DBH that have been damaged by Topping, property owners must have a ~~Q~~qualified ~~P~~professional develop and implement a restoration pruning plan.

95.57 City Forestry Account

1. Funding Sources. All civil penalties received under this chapter and all money received pursuant to KZC 95.34.6 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~~b. Agreed upon payment in lieu of planting ~~required-replacement~~ trees under KZC 95.34.6;
- ~~b~~c. Sale of trees or wood from City property where the proceeds from such sale have not been dedicated to another purpose;
- ~~e~~d. Donations and grants for tree purposes;
- ~~e~~e. Sale of seedlings by the City; and
- ~~f~~f. 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.

