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## **MEMORANDUM**

**To:** Houghton Community Council

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

**Date:** July 22, 2019

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

### **Staff Recommendation**

Review draft [Kirkland Zoning Code Chapter 95](#) (KZC 95) amendments in preparation for holding a joint public hearing with the Planning Commission. The Commission has provided direction to take the current draft (Attachment 4) to public hearing.

### **Background**

Tree protection ordinances balance urban growth, help to maintain a [livable community](#) and preserve community character. KZC 95 establishes a permit process and standards for the protection and replacement of trees - mainly on private property. Attachment 1 summarizes the most basic requirements of KZC 95.

A brief history of Kirkland's tree code is provided in the June 28, 2018 Planning Commission (PC) meeting [memo](#) on pages 1 and 2. How the code is applied is described in the same memo on pages 4-10. The challenges of administering Kirkland's tree code from the public, developer and staff point of view are described on pages 10-11.

### **Project Scope**

KZC 95 was last updated in 2010. Amendments to KZC 95 were identified in the 2018 Planning Work Program and have been carried over onto the 2019 Work Program. The primary objectives of the tree code amendments are to:

- Support the City's Comprehensive Plan policy goals
- Address issues and challenges that have arisen since the last code update
- Revise the code so that it is effective and practical to use for developers, homeowners and City staff

Although public tree pruning and removal is addressed in the code, public tree management goals are not within the scope of amendments to KZC 95.

### Tree Code Amendment Process

The 2018-2019 tree code update process was initiated with the PC in June 2018, followed by an [August 27, 2018 meeting](#) with the Houghton Community Council (HCC). The HCC communicated to staff that tree code changes should:

- Define trees required to be retained in a less subjective manner
- Clarify the short plat/subdivision integrated tree plan review process (IDP)
- Clarify the language on public tree removals
- Address tree removal prior to development permit submittal
- Address damage to trees adjacent to development properties

The Planning Commission, Houghton Community Council and City Council have since held several study sessions and briefings to provide staff with direction on code changes. At the [September 13, 2018](#) and [September 27, 2018](#) PC meetings, the most straightforward potential code amendments having the least policy impacts were considered, leading up to discussions on the most complex and controversial of the amendments, tree retention with development, at the [November 8, 2018](#) PC meeting.

Potential code changes were reiterated at a joint meeting with the PC on [November 26, 2018](#). At that meeting, the HCC developed guiding principles for their analysis of the Chapter 95 code amendments. Although not formally adopted, the principles (below) could be used by the HCC to ascertain code amendment priorities that would:

1. Strive to achieve a healthy, resilient urban forest with a 40% tree canopy cover.
2. Strive for an objective process with predictable outcomes.
3. Consider homeowner preferences for sunlight to generate solar energy and/or photosynthesis, as well as views.
4. Allow modifications to proposed building plans to retain trees that would not result in unreasonably negative consequences to property owners.
5. Promote simplicity and make code easier to implement.

The applicability of the HCC's guiding principles to the draft tree code amendments is noted under the related key code issues below.

Staff returned to the [February 14, 2019](#) PC meeting with recommendations for remaining code issues, incorporating input from a stakeholder group comprised of the Master Builders Association of King and Snohomish Counties (MBAKS) and the Finn Hill Neighborhood Alliance (FHNA). At the direction of the PC, staff continued to meet with the MBAKS-FHNA stakeholder group for the next few months to get additional input on 3 main code issues:

- Numerical thresholds such as credit requirements
- Definitions and development standards for high priority tree retention
- Tree retention rules applicable to short plat/subdivision development (IDP, or Integrated Development Plan)

The code amendments highlighted in Attachment 2 are detailed versions of these 3 themes.

### Input from MBAKS-FHNA Stakeholder Group

Staff met with the stakeholder group six times in March and April 2019 on high priority tree definitions followed by four additional meetings to clarify the stakeholders' approach to other trees (Tier 1 and Tier 2 trees, respectively). The primary objective of the MBAKS-FHNA's concept is to retain the largest, mature trees located anywhere on a site using the most

stringent code requirements. Other than those large mature trees, the stakeholder proposal was to establish a quota metric for trees that did not meet the Tier 1 definition. Once a minimum quota (45-50 tree density credits per acre) was met, any trees that did not meet the Tier 1 criteria could be removed. MBAKS-FHNA did not jointly agree on short plat and subdivision tree retention rules (IDP).

Attachment 3 summarizes the stakeholder's general code concepts while incorporating the PC's direction to staff at the May 23, 2019 PC meeting, such as the approach to Tier 1 and Tier 2 tree requirements.

### Context/Analysis

The 2018-2019 tree code amendments allow the opportunity to review code effectiveness and ensure the codes are:

- Relevant
- Consistent with best available science
- Aligned with the community's vision

The most recent update to Kirkland's Comprehensive Plan, a framework for the community's vision, expanded a policy goal for 40 percent tree canopy cover to include an additional performance measure for tree age/size diversity. Using best available science, city-wide [tree canopy cover](#) was analyzed in 2018. To review code efficacy, the City Manager's Office funded a [field study](#) of 154 single family properties resulting from development between 2008 and 2013.

Findings from both analyses provide insight into what changes could be made to the code for greater urban forest resiliency. The canopy analysis showed the greatest percentage of canopy loss since 2010 was in the single-family residential land use areas, with 253 acres of canopy lost. The field study showed that under the current code, two-thirds of all trees on post-development sites are newly planted, indicating appropriate tree planting requirements. In contrast, a very low percentage of trees exceeding 22-inch trunk diameters (DBH) were retained with development, indicating tree age/size diversity was not resulting from the tree code.

Staff demonstrated with table-top exercises that *successfully* retaining large trees on development site is challenging due to the extent of the larger root systems. As code concepts emerged with stakeholder input, staff applied different approaches to actual development sites and compared the results. The comparison showed that a substantive increase in the retention of trees greater than 30 inches DBH did not result when retention requirements were increased to 45-50 tree credits per acre, compared to the current code approach of retaining trees in setbacks.

These and other data, graphs and further analysis providing the context for the tree code updates are detailed in the May 23, 2019 PC meeting [memo](#).

### **Draft Code Amendments**

Having received feedback resulting from six months' MBAKS-FHNA input, the PC directed staff at the [May 23, 2019](#) PC meeting to refocus outreach efforts for larger community feedback and move forward with developing draft code that:

- Favors the Tier 1 landmark and grove tree approach

- Retains high quality trees located in setbacks as Tier 2 parameters
- Does not use credit quotas for existing retained trees

Attachment 4 is the resulting preliminary draft code reflecting the PC's direction. Due to extensive edits, formatting and text moves are not shown in tracked changes but rather noted where sections were reorganized. Some numerical/alphabetical references may be indicated as an x and code cross-references may not match at this point in the code's development. A clean copy of the draft code is provided in Attachment 5.

### **Key Code Issues**

The preliminary draft code addresses those remaining issues concerning tree retention with development, the primary purpose of the MBAKS-FHNA stakeholder involvement and PC direction. These issues, identified by Roman numerals in the draft code and discussed below, include an assessment for their application of the HCC Guiding Principles for tree code amendments:

**I. Clearly define regulated/retained trees by size, condition and location on a development site**

*Issue:* Current definitions and requirements often are areas of disagreement between staff and developers. Some permit applicants feel they're required to retain trees of lesser quality.

*Discussion:* Findings and data provide justification to retain high quality trees on development sites. The challenge is to balance the community desire for tree retention in a manner that does not unduly limit development potential.

*Result:*

1. Eliminate Low, Moderate and High Retention Value code provisions
2. Establish the Tier 1-2 tree definitions
3. Incorporate stakeholders' provisions for guaranteed development rights using a building envelope approach
4. Define Tier 1 Landmark trees in excellent-good condition, over 30" DBH, located anywhere on a development site
5. Redefine Grove (Tier 1) trees as
  - 3 or more trees forming a contiguous canopy, 1 of which is 30" DBH
  - 5 or more trees forming a contiguous canopy, 1 of which is 24" DBH
6. Define Tier 2 in excellent-good condition, minimum 6" DBH, located in setbacks
7. Define tree condition based on industry standards (multiple sources include Purdue University Extension, ANSI Standards for tree retention suitability and the 10<sup>th</sup> Edition Guide for Plant Appraisal)
8. Consider other cities' high-priority tree definitions (Issaquah, Lake Forest Park, Redmond, Bellevue, Medina, Renton, Vancouver WA and Olympia)

*Application of HCC Guiding Principles:* With the additional language in KZC 95.30.6 on solar panel/wind turbine requirements, all HCC Guiding Principles are met with these proposed code amendments.

**II. Specify site plan alterations and development standards to retain regulated trees**

*Issue:* Staff-developer-community disagreements arise on code interpretations related to the extent to which trees must be protected – participants in the process have differing opinions on what is “possible” or “feasible” and developers desire more certainty/predictability, particularly during their feasibility stage.

*Discussion:* Current code uses phrases like “retain and protect...to the maximum extent possible/feasible” and “shall pursue where feasible applicable variations in the development standards,” which are too subjective.

*Result:*

1. Work with FHNA-MBAKS to clearly specify expectations of permit applicants and the City’s code flexibility using the Tier 1-2 General Principles template, incorporate into the draft code.
2. Specify when and how site improvements shall be designed and constructed to protect trees with specific characteristics (see Redmond, Shoreline code)
3. Require applicants adjust building configurations to protect trees (see Medina code)

*Application of HCC Guiding Principles:* These proposed code amendments

- Strive for an objective process with predictable outcomes (2)
- Allow modifications to proposed building plans that would not result in unreasonably negative consequences to property owners (4)
- Promote simplicity and make code easier to implement (5)

**III. Clarify the grove easement/protection measures**

*Issue & Discussion:* Some permit applicants feel they’re required to retain groves with trees of lesser quality. Developers have objected to the legal mechanism that’s currently in place (Grove Protection Easement) due to the perception that it will encumber the property, which may affect prospective property owners. Other cities that protect tree groves include Bellevue, Issaquah, Kenmore, Mercer Island, Renton, Sammamish, Shoreline, and Woodinville.

*Result:*

1. Consolidate grove easement and maintenance requirement code sections
2. Codify that single-family remodels or additions do not trigger grove designations
3. Define groves in a manner that trees must be in excellent to good condition
4. Develop a Tree Grove Covenant template rather than Easement (administrative action)

*Application of HCC Guiding Principles:* With the new covenant template and additional language in KZC 95.30.6, all HCC Guiding Principles are met with these proposed code amendments.

**IV. Streamline tree retention requirements**

*Issue & Discussion:* Some permit applicants feel the Tree Retention Plan table in KZC 95.30.5 is too long and complicated.

*Results:* Reorganize the code so the Tree Retention Plan table can be removed and requirements are spelled out in text.

*Application of HCC Guiding Principles:* These proposed code amendments

- Strive for an objective process with predictable outcomes (2)
- Promote simplicity and make code easier to implement (5)

**V. Establish a cut-off point or maximum tree credits awarded per tree**

*Issue:* Fewer trees of merit on larger sites are being retained.

*Discussion:* Tree density credits are awarded based on tree trunk size, up to 21 credits for a 50-inch DBH tree. Generally, applicants seek to meet only the minimum required credits on development sites, hastening the loss of canopy cover. Other cities that “cap” credits are Medina at 24 inches DBH and Renton at 30 inches DBH.

*Result:* “Cap” or limit per-tree density credits at 30-inch DBH (11 credits) to encourage planting of new trees.

*Application of HCC Guiding Principles:* By taking a balanced approach to tree retention and replanting requirements, all HCC Guiding Principles are met with this code amendment.

**VI. Determine tree retention early in the short plat/subdivision design process (IDP)**

*Issue:* The code currently allows a phased review of short plats and subdivisions so that tree retention decisions and tree removals may occur at multiple stages. Making tree retention decisions early (as utilities, grading, infrastructure, and development are reviewed) would be appropriate city-wide to better protect tree canopy while providing more certainty for the development community.

*Discussion:* At the November 8, 2018 PC meeting, the PC supported a staff recommendation to eliminate phased review for short plats and subdivisions, noting that a citywide IDP process would allow for a more predictable and consistent tree plan review. The MBAKS-FHNA group does not have a consensus opinion on requiring IDPs.

*Result:* Require IDP city-wide (already required in HPO).

*Application of HCC Guiding Principles:* Consideration of tree retention decisions at one time early in the short plat and subdivision design process meets all HCC Guiding Principles, particularly to “strive for an objective process with predictable outcomes” (2).

**PC Feedback on Preliminary Draft Code**

At the June 11, 2019 PC meeting, the PC agreed that the new code definitions are an improvement, addressing one of the main issues of the tree code being too subjective or not predictable enough. The PC considers the draft code to be understandable and highly readable, and that the proposed tree condition criteria establishes clear standards for homeowners, arborists and developers.

The PC discussed minor improvements to the code such as:

- Consideration to lower the 30-inch DBH Landmark tree size threshold
- Explore using a different term than "shift" for building footprints on development sites
- Clear provisions for Landmark tree removal where no development occurs (such as robust outreach efforts and penalties commensurate with unauthorized Landmark tree removals)
- Consider greater flexible standards for tree plan review with short plats/subdivisions (IDP)
- Add the supplemental tree planting schedule (Table 95.33) back into the code
- Address recently-emerging issue with over-planting of trees on commercial, multifamily and mixed-use developments

The PC expressed that no additional study sessions are needed to incorporate these changes and that the code is appropriate for public hearing.

### **Public Outreach**

Having been involved with the stakeholder group for a six-month period midway through the code amendment project, the PC and HCC directed staff to extend outreach efforts for larger community feedback at the May 23 and May 30 PC/HCC meetings.

Staff met with the City's Neighborhood Services Coordinator and Communications Manager to develop a strategy on how to re-engage the public following the time dedicated to the stakeholder group. Currently there are almost 900 webpage listserv subscribers signed up to receive project updates, which is an unusually large number. Recently, at the City's Sustainability Forum event, an overwhelming number of attendees were discussing trees and urban forestry issues. Plans are underway to engage with other stakeholder groups such as consulting arborists and neighborhood groups other than the Finn Hill Neighborhood Alliance.

Once a hearing date is scheduled, staff will issue a standard notice for the public hearing.

### **Next Steps**

Staff will schedule a joint PC-HCC public hearing in September 2019. Staff will pursue broader community input on the proposed updates and prepare the draft code for review at the public hearing and ultimately, City Council adoption. Additional code changes are anticipated with the public hearing. The PC requested that time for a 10-minute presentation from the MBAKS-FHNA be allowed at the public hearing.

### **Attachments**

1. Tree Code Basic Requirement Chart
2. Potential Code Amendment List
3. Tier 1 and 2 Stakeholder Chart
4. Draft Kirkland Zoning Code Chapter 95
5. Draft Kirkland Zoning Code Chapter 95 – Clean Copy

cc: File Number CAM18-00408





## TREE REMOVAL- CURRENT CODE SUMMARY

	REMOVAL SCENARIO	REVIEW OR PERMIT REQUIRED?	MISC.
PRIVATE PROPERTY	Remove 2 trees (regardless of condition)	<b>No review, no permit Tree removal request recommended</b>	Notification appreciated to avoid unnecessary Code Enforcement response
	Remove 3+ trees Considered hazard or nuisance	<b>No review, no permit if...</b>	Hazard or nuisance is obvious in a photo or other documentation
	Remove hazard or nuisance trees in critical areas	<b>Yes, review and permit required</b>	Arborist report, replacements may be required
	Emergency/urgent tree removal	<b>No review, no permit</b>	Contact Planning Dept.
	Prune or trim trees	<b>No review, no permit</b>	-Property owners are responsible for tree care -No topping allowed (>50% live crown removal is same as tree removal)
	Tree removal with development	<b>Yes, included with land use or development permit</b>	-Arborist report required for trees potentially impacted by development -Protection measures required on site
PUBLIC PROPERTY	ROW median, CKC, CBD trees maintained by the City. ROW trees maintained by adjacent property owner unless hazard conditions exist.	<b>Yes, review and permit required</b>	-Public Works staff may prune street trees by property owner request -Public Works staff may remove street trees at their discretion
	Prune or remove park trees	<b>No permit required; review/service performed by request</b>	-Staff may prune park trees by property owner request -Most hazard tree removal is contracted out

## POTENTIAL CODE AMENDMENTS - KZC 95

Update #	KZC 95. —	Subsection	NO/MINOR POLICY IMPACT	Level of Policy Impact	PC Direction
2	23	2	Add to end of sentence '...without permission.'	None	yes
3	23	3	Clarify "notification" in 3, 5 rather than repeating 2x	None	yes
4	30	4	Delete 'tree type' replace with 'Identify by tree species and/or common name.'	None	yes
5	30	4	Clarify requirements for LOD, CRZ, fence location, tree protection zone, etc.	None	yes
6	30	4	Add language on project sequencing, IDPs. Include landscaping/other activity within CRZ	None	yes
7	50	5	Revise to read: 'plants listed in the Prohibited Plant list shall not be planted in required landscaping areas.'	None	yes
9	51	2	Distinguish between a) and b) 3 (housing/development types).	None	yes
11	10	4	Address how multiple-trunked trees will be measured for credit purposes	Minor	yes
12	5	2	Add 'manage trees and other vegetation consistent with industry standards' (ISA, ANSI, etc.)	Minor	yes
13	10	9	Clarify tree protection definitions per updated ISA/ANSI standards	Minor	yes
14	10	7	Replace 'TRACE' with 'TRAQ' for qualified professional standards	Minor	yes
15	10		Add topping definition per ISA/ANSI standards	Minor	yes
17	23	5	Revise 'is not obvious' to 'is evident in a photograph'	Minor	yes
18	23	5	Delete 'street,' replace with 'public' trees, add '...including streets, Parks...'	Minor	yes
19	30	1	3rd paragraph - clarify minimum tree density is in addition to High Retention Value trees	Minor	yes
23	32		Revise 1st paragraph, 1st sentence to incentivize applicants	Minor	yes
25	34		1st paragraph - reference ISA/ANSI standards for tree protection during development activity	Minor	yes
26	34	2	Revise LOD/critical root zone for consistency in 1 and 2	Minor	yes
27	34	3	Revise LOD/critical root zone for consistency in a-d	Minor	yes
28	40	2	Add at end of last sentence '...with preference to native vegetation species'.	Minor	yes
29	41	2	Add to last sentence 'i.e. mulch'	Minor	yes
30	51	5	Reference Prohibited Plant List, King County and WA Weed Agencies. Per GKP, add 'remove ivy'	Minor	yes
31	52		Revise 1st sentence to '...listed on the Kirkland Prohibited Plant List shall not be...'	Minor	yes
32			Simplify or rename 'tree density credits'/point system	Minor	yes
33	50	5	Delete 'Natural Resource Management Team', replace with 'on the PBD webpage'. Encourage species diversity by planting other than how it's listed (with Planning Official approval).	Minor	yes
34	30	6	Clearly specify areas for tree retention (i.e.: outside "building envelope") MBAKS 8/23/18, PC 7/11/19	Minor	yes
35	23	3	Clarify public and street tree removal requirements HCC 8/27/18	Minor	yes

36	30		Update to reflect current types of housing HCC 8/27/18	Minor	yes
37	50	5	Add language to avoid planting large trees under/within proximity to overhead utilities	Minor	yes
39	30	6	Clarify IDP modification process	Minor	unsure
50	20	1	First sentence add "...without previously obtaining a permit." Revise section for clarity/simplicity	Minor	yes
51	21	1	Address inconsistency with KMC 1.12. Add "within reason" and "allows" language. Define minor public tree pruning for adjacent property owners - TN	Minor	yes

Update #	KZC 95. —	Subsection	<b>MODERATE/MAJOR POLICY IMPACT</b>	Level of Policy Impact	PC Direction
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### Definitions

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

### Tree Removal Allowances

53	23	5	Adjust tree removal allowance in proportion to varying lot sizes - PC 7/12/18	Moderate	yes
67			Allow removal of overgrown hedges with trees >6" DBH when replaced with appropriately-sized trees	Major	yes
76			Address hazard/nuisance tree removal resulting from contagious pests/diseases - CAO	Major	yes
38	30		Add language to prevent tree girdling	Moderate	yes
56	23		Prevent tree girdling/removals that occur to avoid tree retention requirements - PC 8/9/18	Moderate	yes
58	23	2	Address tree girdling in 2 <sup>nd</sup> paragraph	Major	yes

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

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

### Tree Retention with Development (applies primarily to short plats, subdivisions and Single Family Residential)

40	33	1	Lower maximum tree density credits per tree (11 credits for 30" dbh? 8 credits for 24" dbh?)	Moderate	unsure
43	25		Reference Low impact Development (LID), LEED, Green Building Design, etc.	Moderate	yes
45	34	2	Revise tree protection fence requirements – per HPO	Moderate	yes
46	34	2	Revise tree protection sign standards and inspection procedures – per HPO	Moderate	yes
54	50	7	List aftercare options such as gator bags, irrigation, soil drenches, etc. PC 8/9/18	Moderate	yes
55	33	4	Address overuse of arborvitae by not awarding tree density credits - PC 11/8/18	Moderate	yes

57	50		Specify appropriate locations for trees required to be planted - PC 8/9/18	Moderate	yes
59	23	5	Prevent girdling/tree removal in anticipation of development permit submittal to avoid tree retention requirements. Add 'intent to develop' language/time period requirement	Major	yes
60	30		Streamline tree retention/replanting requirements PC 7/11/19	Major	yes
61	33	3	Clarify the section on payment in lieu of planting new trees	Major	yes
63	51	3	Clarify the grove definition and maintenance requirements	Major	yes
64	10		Clearly define existing trees worthy of retention by size, condition, location on development site PC 7/11/19	Major	yes
65	10		Require Landscape Architect review of Tree Retention Plans - HPO, PC 7/12/18	Major	no
66			Address poorly-located required tree plantings - PC 8/9/18 (same issue as #44 and #57)	Major	yes
68			Incentivize tree species diversity - PC 8/9/18		yes
70	30	5.3	Strengthen retention requirements for existing trees worthy of retention - HPO, PC 8/9/18	Major	unsure
73			Determine tree retention early with SPL/SUB design (city-wide IDP) - PC 11/8/18, add flexibility PC 7/11/19	Major	yes
75	30		Use a canopy-based requirement metric instead of tree density credits - HPO	Major	no
77			Increase tree density credit requirements for retention/replanting city-wide – HPO, PC 7/11/19	Major	no

Miscellaneous/New					
71			Address renewable energy system conflicts with trees - PC 8/9/18, MBAKS 8/23, HCC. See new 95.30.6	Moderate	yes
72	23		Reference tree removal in critical areas – PBD email 10/26/18 (Delete KZC 90.135)	Minor	yes
80			Address multiple references to City authority	No	(CAO?)
81	34		Require permit applicants post a bond instead of the current 5 Year Maintenance Agreement	Major	no
82			Regulate the height of hedges same as fence heights - PC 8/9/18	Major	no
83			"Borrow" against allowed future tree removals – PC 11/8/18	Major	no
84			Address public tree management (Parks, Public Works) to achieve canopy cover goals	-	n/a
85			Adjust tree codes that allow for a range of housing types and affordability – MBAKS 7/11/19	-	n/a
86			Increase funding/staffing resources for code enforcement/monitoring development sites – FHNA 7/11/19	-	n/a

### Policy Impacts

*N/A* – not within the scope of KZC 95 code amendments or Planning Commission jurisdiction

*No-none* - amendments that clarify or further define something already in the code, address redundancies and typos, or involve reformatting or removal of outdated references. They do not change the meaning of the code.

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

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

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

<b>Tier 1 General Principles</b>		
LOCATION – anywhere on a development site except within Tier 1 building footprint guaranteed area SIZE – Landmark tree = 30" dbh GROVES – 3 or more trees with one 30" dbh or 5 or more trees with one 24" dbh CONDITION – good-excellent condition per industry standards CREDITS – per PC direction 7/11/19, Landmark trees/groves must be retained regardless of credits REPLANTING STANDARD – per PC direction 7/11/19, replanting is triggered when retained trees do not meet or exceed 30 tree density credits per acre		
<b><i>The applicant is guaranteed...</i></b>	<b><i>The applicant shall pursue/City will require these site plan alterations to retain Tier 1 trees...</i></b>	<b><i>...and the City has the authority to vary these development standards...</i></b>
<p>General support for 40' wide front facade x 36' deep building pad, with an attached 20' x 20' allowed behind that pad. The 20' x 20' pad can shift from side-to-side. Total pad length is 56-60' deep. This is based on feedback on garage locations, standard room sizes and access to rooms behind garage.</p> <p>No adjustments are made for larger lots by area.</p> <p>Maximums allowed by the applicable zoning for:</p> <ul style="list-style-type: none"> <li>• FAR</li> <li>• Lot coverage</li> <li>• Density</li> </ul>	<p><u>Site plan modifications</u></p> <ul style="list-style-type: none"> <li>• Flip (mirror) house and driveway configuration</li> <li>• 10' front setbacks, 5' rear setbacks</li> <li>• Selection of side yard setbacks (5' min/15' total)</li> <li>• Design deck, patio, paths to retain trees</li> <li>• Relocate utilities when it's an option with PW approval</li> <li>• Avoid rockery, retaining wall locations in Tier 1 CRZs</li> <li>• Shore basements and other extensive excavations</li> <li>• Cantilever structures over CRZs</li> </ul> <p><u>Shortplat/subdivision alterations</u></p> <ul style="list-style-type: none"> <li>• Cluster houses/lots</li> <li>• Reroute access roads</li> <li>• Relocate utilities as applicable (see above)</li> <li>• Rearrange property lines (same as clustering)</li> </ul> <p><u>Arboricultural methods</u></p> <ul style="list-style-type: none"> <li>• Air spade excavations</li> <li>• Bore/tunnel under CRZs rather than trench</li> <li>• Additional CRZ protection (plywood, steel, mats, etc.)</li> </ul>	<p><u>Site plan modifications</u></p> <ul style="list-style-type: none"> <li>• 10' front/5' rear setbacks</li> <li>• Modify garage width limits</li> <li>• 18' x 18' parking pad limits</li> <li>• Parking pads designed to retain Landmarks</li> <li>• Modify ROW frontage improvement requirements (no landscape strip, etc.)</li> <li>• Building height limitations per PC direction 5/23/19</li> </ul> <p><u>Shortplat/subdivision alterations</u></p> <ul style="list-style-type: none"> <li>• Allow 3' side yard setbacks with internal lots</li> <li>• Reduce lot size when clustering, while allowing full FAR &amp; lot coverage through averaging</li> </ul>

## ***Tier 2 General Principles***

LOCATION – within setbacks

SIZE – 6” dbh or greater

CONDITION - in good/excellent health and structure per industry standard but will be clearly defined for greatest predictability. Includes:

- Windfirm if isolated (or remains as part of a grove)
- No “weed trees” such as cottonwood or alder per Prohibited Plant List (doesn’t apply in critical areas/buffers)

CREDITS – per PC direction 5/23/19 no credit quotas apply to require removal of Tier 2 trees

REPLANTING STANDARD - replanting is triggered when retained trees do not meet/exceed 30 tree density credits per acre per current code. May use table format for # trees per lot size. Incentivize replanting large/native conifers by awarding additional credits.

<b><i>To retain Tier 2 trees, the applicant is guaranteed...</i></b>	<b><i>To retain Tier 2 trees, the applicant shall pursue/City will require these site plan alterations...</i></b>	<b><i>...and the City has the authority to vary these development standards...</i></b>
<ul style="list-style-type: none"> <li>• A 50’ by 50’ building pad, setbacks allowing.</li> <li>• For front facades wider than 50’ (setbacks allowing), less 10% of the distance between side setbacks (i.e. – with a 70’ lot with two 5’ side setbacks and a 60’ front façade, applicant reduces front facade width by 6’ to an allowed 54’ width)</li> </ul> <p>Maximums allowed by the applicable zoning for:</p> <ul style="list-style-type: none"> <li>• FAR</li> <li>• Lot coverage</li> <li>• Density</li> </ul>	<p><u>Site plan modifications</u></p> <ul style="list-style-type: none"> <li>• Shift or flip (mirror) building footprint/driveways</li> <li>• Selection of front and side yard setbacks (5’ min/15’ total) per applicable zoning requirements</li> <li>• Shift the building footprint on the lot to take advantage of the setback modifications/reductions allowed</li> <li>• Redesign deck, patio, path for tree retention</li> <li>• Avoid retaining wall/rockeries where possible</li> </ul> <p><u>Arboricultural methods</u></p> <ul style="list-style-type: none"> <li>• Bore for utilities less than 2” diameter</li> </ul>	<p><u>Site plan modifications</u></p> <ul style="list-style-type: none"> <li>• Reductions of front yard setbacks by 5’ and rear yard setbacks that are not directly adjacent to another parcel’s rear yard but that are adjacent to an access easement or tract by 5’</li> <li>• Modify garage requirements to allow “snout house” designs</li> <li>• Modify ROW frontage improvement requirements (no landscape strip, etc.) with PW approval</li> </ul> <p><u>Shortplat/subdivision alterations</u></p> <ul style="list-style-type: none"> <li>• Reduce lot size when clustering, while allowing full FAR &amp; lot coverage through averaging</li> </ul>

## Chapter 95 – TREE MANAGEMENT AND REQUIRED LANDSCAPING

### 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 Natural Resource 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~~American Association of Nurserymen standard for trunk measurement of nursery stock, applicable to supplemental required trees. Caliper ~~of the trunk~~ shall be ~~the trunk diameter~~ measured six (6) inches above the ground for up to and including 4-inch caliper trunk sizes ~~and 12 inches above the ground for larger sizes~~.
2. Critical Root Zone (CRZ) –The area encircling the trunk of surrounding a tree ~~at a distance from the trunk, which is~~ equal to one (1) foot radius for every inch of trunk diameter (DBH) used to establish the Tree Protection Zone (TPZ). ~~trunk~~



~~diameter measured at 4.5 feet from grade or otherwise determined by a qualified professional. (example: one (1) foot radius per one (1) inch DBH). 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 from the ground. 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. 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. DBH is also known as Diameter at Standard Height (DSH).
5. Dripline – The distance from the tree trunk, that is equal to the furthest extent of the tree's crown.
6. ~~Grove—A group of three (3) or more significant trees with overlapping or touching crowns (moved below).~~
7. ~~Hazard Tree—A tree that meets all the following criteria: (moved below)~~
  - a. ~~A tree with a combination of structural defects and/or disease which makes it subject to a high probability of failure;~~
  - b. ~~Is in proximity to moderate to high frequency targets (persons or property that can be damaged by tree failure); and~~
  - c. ~~The hazard condition of the tree cannot be lessened with reasonable and proper arboricultural practices nor can the target be removed.~~

x. Inner Critical Root Zone – an area half the distance of the Critical Root Zone that when impacted, may compromise the structural integrity of a tree. Example: a 24-inch DBH tree has a 12-foot radius Inner Critical Root Zone measured from the face of the trunk.

x. ISA – International Society of Arboriculture

8. Impact – A condition or activity that affects a part of a tree including the trunk, branches, and Critical Root Zone.
9. ~~Limit of Disturbance—the boundary between the protected area around a tree and the allowable site disturbance as determined by a qualified professional measured in feet from the trunk.~~
10. ~~Nuisance Tree—A tree that meets either of the following criteria: (moved below)~~
  - a. ~~Is causing obvious physical damage to private or public structures, including but not limited to: sidewalk, curb, road, driveway, parking lot, building foundation, or roof; or~~
  - b. ~~Has sustained damage from past maintenance practices.~~

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

~~11.—Public Works Official—Designee of the Public Works Director.~~

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

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

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

13. ~~Retention Values (deleted – replaced by tree condition in KZC 95.32.2)~~



~~14. **Significant Tree** – A tree that is at least six (6) inches in diameter at breast height (DBH) as measured at 4.5 feet from the ground. (moved/changed)~~

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

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

~~17. **Specimen Tree** – A viable tree that is considered in very good to excellent health and free of major defects, as determined by the City's Urban Forester. (deleted – replaced by tree condition in KZC 95.32.2)~~

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

xx. **Topping** – The reduction of a tree's size using heading cuts that shorten limbs or branches back to a predetermined crown limit. Topping is not an acceptable pruning practice and is not appropriate on established trees. 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 KMC 1.12.100, Special Provisions Related to Enforcement of Tree Regulations.

xx. **Tree Plan** – add definitions per recent court case

xx. **Tree Retention Plan** - add definitions per recent court case

xx. **Tree Protection Zone (TPZ)** – The outer boundary of a tree's protected area, as determined by a qualified professional, intended to protect individual trees, groups of trees, vegetation, 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, dripline, or root plate diameter methodologies or exploratory root excavations. TPZ denotes the location of tree protection fencing.

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

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

## xx. **Trees**

- a. Grove – A group of three (3) or more regulated significant trees with overlapping or touching crowns, one of which is a minimum (((30?)))-inch DBH, or a group of five (5) or more regulated trees, one of which is a minimum (((24?)))-inch DBH.
- b. Hazard Trees – A tree assessed by a qualified arborist as having an Imminent or High risk rating using the ISA Tree Risk Assessment Qualification (TRAQ) method in its most current form, as applied in KZC 95.xx, Tree Removals.
- c. Landmark Tree – a regulated tree with a minimum (((30?)))-inch DBH in excellent-good condition per KZC.95.30.3c.
- 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: sidewalk, curb, road, driveway, parking lot, building foundation, or roof; or
  - 2) Has sustained damage from past maintenance practices.

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

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

g. **SignificantRegulated Tree** – A tree that is at least six (6) inches DBH that is not listed on the Prohibited Plant List in diameter at breast height (DBH) as measured at 4.5 feet from the ground.

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

i. Tier 1 Tree(s) – Landmark Trees and Groves.

j. Tier 2 Tree – A regulated tree with any portion of the trunk located in a required yard or a required landscaping area in excellent-good condition per **KZC 95.30.3c**.

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

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

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

## **95.21 Public Tree Removal and Pruning**

1. ~~Public Tree Removal~~Pruning of Street Trees. Other than City crews, no person, directly or indirectly, shall remove any ~~significant~~ tree on any ~~City property within the City~~, or any tree in the public right-of-way, without first obtaining a tree removal permit as provided in this chapter, unless the activity is exempted in **KZC 95.20, Tree Removal Exemptions** or subsection (x) of this section. Public trees may only be removed if determined to be a hazard or nuisance. If the removal request is for public trees, including trees in rights of way, parks and other City facilities, the appropriate Department Official may consider whether the tree(s) are now, or may be in the future, part of the City's plans for the right-of-way or other capital projects. *(consolidated/moved)*

2. Public Tree Pruning. Any ~~Public tree~~ pruning shall conform to the most recent version of the American National Standards Institute (ANSI) A300 - Part 1 ~~2004~~ pruning standards or as outlined in an approved Utility Vegetation Management Plan.

a. Parks, Unmaintained City Right of Way, Stormwater and Other City Facilities. Other than City crews, no person, directly or indirectly, shall ~~It is unlawful for any person (other than City crews) to remove, prune, trim, modify, alter or damage any tree in a public park or on any other City property without first obtaining a **Public Tree Pruning tree removal** permit as provided in this chapter, unless the activity is exempted in KZC 95.20.~~

b. Street Trees. It is the responsibility of the ~~adjacent~~abutting property owner to maintain street trees abutting their property, which may include minor pruning of up to one-inch diameter branches for sidewalk clearance, watering, and mulching. ~~In order A Public Tree Pruning permit is required to substantially prune, or trim, modify, or alter a street tree the abutting property owner shall apply for a permit by filing a written application with the City.~~ The City reserves the right to have City or utility crews perform routine pruning and maintenance of street trees.

~~2. Tree Pruning on Private Property. A permit is not required to prune trees on private property. Pruning which results in the removal of at least 25% half of the live crown will be considered tree removal and subject to the provisions in KZC 95.23. Tree topping is not allowed. If a tree required by this chapter is smaller than six (6) inches in diameter and is topped, it must be replaced pursuant to the standards in Chapter 1.12 KMC. If a tree six (6) inches or larger in diameter is topped, the owner must have a qualified professional develop and implement a 5-year restoration pruning program.~~  
*(moved below)*

## 95.23 Tree Pruning and Removal on Private Property with No Development Activity

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

~~2. Permit Required for Removal of Trees on Private Property or City Right-of-Way~~ (this section split into public/private property sections above and below)

~~1. Tree Pruning on Private Property.~~ Tree topping is not allowed. Any private property owner may prune trees on their property without a permit with the exception of the following:--Pruning which results in the removal of more than half of the live crown will be considered tree removal and subject to the provisions in KZC 95.--(moved)

a. Trees located in critical areas wetlands, streams or their buffers, in landslide geologically hazardous areas, or on properties in the Holmes Point Overlay; (consolidated)

b. Landmark trees or dedicated grove trees.

~~If a tree required by this chapter is smaller than six (6) inches in diameter and is topped, it must be replaced pursuant to the standards in Chapter 1.12 KMC. If a tree six (6) inches or larger in diameter is topped, the owner must have a qualified professional develop and implement a 5-year restoration pruning program. (move to KMC 1.12.100, Tree Code Enforcement)~~

~~2. Tree Removal Allowances.~~ a. Except in the Holmes Point Overlay zone, Any private property owner of developed property may remove up to two (2) significant a specified number of regulated trees 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 critical areas wetlands, streams or their buffers, in geologically landslide hazardous areas, or on properties in the Holmes Point Overlay area (consolidated);

b. The trees are not Landmark trees or dedicated grove trees

c. There is no active application for development activity for the site;

d. The trees were not required to be retained or planted as a condition of previous development activity;

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

f. The trees are not located on properties within the City's shoreline jurisdiction. 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; and

g. ~~All of~~ the additional standards for tree removal and tree removal permits as described in subsections ~~s~~ (4) of this section are met.

**Table x**

<u>Lot Size</u>	<u>Maximum number of regulated trees allowed to be removed every 12 months with notification</u>
<u>Lots up to 10,000 sq. ft.</u>	<u>2</u>
<u>Lots 10,000 to 20,000 sq. ft.</u>	<u>4</u>
<u>Lots 20,000 sq. ft. or greater</u>	<u>6</u>
<u>Lots over 35,000 square feet with a Forest Management Plan</u>	<u>&gt;6</u>
<u>Landmark trees and protected groves shall not be removed without permit approval</u>	

3. Tree Removal Prior to Development Permit. 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, the City will not accept any application for a short plat or subdivision for properties where regulated trees have been removed (including girdling) for a period of 12 months following the tree removal. The City will make an exception for approved removals of hazard or nuisance trees or in instances where the tree removal.

4. Tree Removal Notification Form. The Planning and Building Department shall ~~provide establish and maintain~~ a tree removal ~~request notification~~ form. The form may be used by property owners to request Department review of tree removal for compliance with applicable City regulations.

5. Tree Removal on Private Property. It is unlawful for any person to remove a tree on private property without first obtaining a tree removal permit as provided in this chapter, unless the activity is exempted in KZC 95.20 or allowed in subsection (2) of this section, Tree Removal Allowances.

6. Tree Removal Permit Application Form. The ~~applicable City Planning and Building Department and Public Works Department~~ shall ~~provide establish and maintain~~ a tree removal permit application form. Property owners requesting to remove trees shall submit a completed permit application for City review for compliance with applicable City regulations. *(consolidated, moved from below)* The tree removal permit application form shall include at a minimum the following:

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

7. Tree Removal Permit Decision and Appeals.

a. The City shall review the application within 21 calendar days and either approve, approve with conditions or modifications, deny the application or request additional information. Any decision to deny the application shall be in writing along with the reasons for the denial and the appeal process.

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

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

8. Tree ~~Retention and~~ Replacement Requirements.

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

- a. Tree Replacement. For every ~~regulated~~significant tree that is removed ~~and is not required to remain based on subsection (x)(x) of this section,~~ the City encourages the planting of a tree that is appropriate to the site.
- b. Public Trees – the City shall require a one-for-one replacement in a suitable location. *(moved)*
- c. 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. *(moved)*
- d. For the approved removal of overgrown hedges comprised of regulated trees, replacements shall be in kind with a more suitable species in the same location.

e. If a tree removal request is for one (1) or both of the last 2 regulated trees on single-family home, cottage, carriage unit, or two/three-unit home sites, ~~required to remain~~, a tree removal permit and one-for-one replacement is required. The replacement tree shall be six (6) feet tall for a conifer and 2-inch caliper for deciduous or broad-leaf evergreen tree.

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

9. Removal of Hazard or Nuisance Trees. Any private property owner seeking to remove any number of ~~significant~~ regulated trees from developed or undeveloped property or the public right-of-way which are a hazard or nuisance shall first obtain approval of a tree removal permit and meet the requirements of this subsection. The City may order diseased trees removed from private property as hazard trees to prevent the spread of a disease/pest that would cause catastrophic decline in tree health and failure.

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

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

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."

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

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



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

10. Trees in Critical Areas or Critical Areas Buffers. See Chapter s 85 and 90 KZC (Moved from KZC 90.135, consolidated into KZC 95.23.d).

a. No trees shall be removed from a ~~critical area wetland, stream or their buffers, critical area buffer or geologic hazard areas~~ unless determined to be nuisance or hazardous trees. No trees shall be removed from landslide hazard areas unless the City determines, based on review of requirements of Chapter 85, that the removal will not impact slope stability. Any tree removal shall be authorized in advance through a tree removal permit unless emergency tree removal is warranted per **KZC 95.20.1**;

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

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

d. The removal of any tree in a ~~critical area wetland, stream, and their buffers~~ shall be replaced with one (1) to three (3) native trees ~~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.

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

#### 11. Forest Management Plan.

a. A Forest Management Plan ~~may~~**must** be submitted for developed, significantly wooded sites ~~(over 40 percent canopy coverage)~~ of at least 35,000 square feet in size in which removal of more than ~~two (2) any~~ **number of trees in excess of the allowable tree removal per KZC 95.23** is requested and is not exempt under KZC 95.20, Tree Removal Exemptions. A Forest Management Plan must be developed by a qualified professional and shall include the following:

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

b. The following Forest Management Plan standards shall apply:

- 1) Trees to remain should be dominant or co-dominant in the stand, healthy and windfirm.
- 2) No removal of trees from critical areas and their buffers, unless otherwise permitted by this chapter.
- 3) No removal of ~~Landmark trees or dedicated grove specimen~~ trees, unless otherwise permitted by this chapter.
- 4) No removal of **healthy** trees that would cause trees on adjacent properties to become hazardous.
- 5) 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.
- 6) 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.
- 7) Removal of tree debris shall be done pursuant to Kirkland Fire Department standards.
- 8) Recommended maintenance prescription for retained trees with a specific timeline ~~for such management.~~

## **~~95.25 Sustainable Site Development~~ (consolidated/moved into KZC 95.30.5)**

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

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

## **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 retain as many viable trees as possible on a developing site while still allowing the development proposal to move forward in a timely manner. To that end, the City requires approval of a tree retention plan in conjunction with all development permits resulting in site disturbance and for any tree removal on developed sites not exempted by KZC 95.20. (moved to 95.30.2) This section includes provisions that allow development standards to be modified in order to retain viable significant trees.~~

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

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

~~The importance of effective protection of retained trees during construction is emphasized with specific protection standards in the last part of this section. These standards must be adhered to and included on demolition, grading and building permit plans as necessary. (moved to 95.30.3b) Applicants for development are encouraged to confer with City staff as early in the design process as possible so that the applicable tree planting and retention concepts can be incorporated into the design of the subject property. The Planning Official and the applicant shall work in good faith to find reasonable solutions. (moved)~~

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

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

**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 components of a tree retention plan at the applicant's expense. If proposed development activities call for more than one (1) Tree Retention Plan element component, the more stringent tree retention plan component shall apply; provided, that the Planning Official may require the more stringent of, or a combination of tree plan elements components based on the nature of the proposed development activities. If the proposed activity is not clearly identified in this chapter, the Planning Official shall determine the appropriate Tree Retention Plan requirements.

~~The chart in subsection (5) of this section sets forth the tree retention plan requirements for development activities and associated tree removal. (Note: the chart has been deleted altogether). Applicants for development are encouraged to confer with City staff as early in the design process as possible so that the applicable tree planting and retention concepts~~

~~can be incorporated into the design of the subject property. The Planning Official may waive a component of the tree retention plan if the Planning Official determines that the information is not necessary. (moved)~~

2. Tree Retention Plan Review Applicability. ~~Unless otherwise exempt pursuant to KZC 95.20,~~ any proposed development of the subject property requiring approval through a building permit, land surface modification permit, and/or demolition permit, or Design Review, Process I, IIA or IIB, described in Chapters 142, 145, 150 and 152 KZC respectively, shall include a Tree Retention Plan to be considered as part of that process.

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

a. The City requires approval of a Tree Retention Plan in conjunction with all development permits resulting in site disturbance and for any tree removal on developed sites except for additions and remodels in which the total square footage of the proposed improvements is less than 50 percent of the total square footage of the existing improvements on the subject property and no development activity is proposed within the CRZ of Tier 1 or Tier 2 trees.

b. Additional tree retention and protection regulations apply to: (moved).

1) Properties within jurisdiction of the Shoreline Management Act as set forth in Chapter 83 KZC;

2) Properties with Critical Areas or related 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.

~~The Planning Official may waive a component of the tree retention plan if the Planning Official determines that the information is not necessary. (moved)~~

3. Tree Retention Plan Submittal Requirements Components. ~~The Tree Retention Plans~~ shall contain the following information ~~as specified in the chart in subsection (5) of this section (chart deleted)~~ unless waived by the Planning Official:

a. A tree inventory. ~~The inventory may be noted on the site plan or in the arborist report, listing containing~~ the following:

1) A numbering system of a ~~All existing regulated significant trees on the subject property identified by a consistent the same numbering system in the arborist report, site plan and onsite tree tags or flagging. (with corresponding tags on trees)~~ The inventory must also include regulated significant trees that are on adjacent properties that appear to have Critical Root Zones (CRZ) -with driplines extending onto ~~over~~ the subject property line;

2) The Critical Root Zone (CRZ) and the proposed Tree Protection Zone (TPZ) distances Limits of Disturbance (LOD ~~of all existing regulated significant trees specified in feet from the face of the tree trunk. The inventory must also include the approximate CRZ and proposed TPZ LOD of regulated significant trees that appear to have Critical Root Zones (CRZ) extending onto the subject property);~~

3) Size (DBH);

4) Proposed tree status (trees to be removed or retained);

5) Brief general health or Condition rating of regulated these trees (i.e.: poor, fair, good, excellent, etc.) per KZC 95.32.3(c);

6) Tree type or species and/or common name.

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

8) -The inventory may be noted on the site plan or in the arborist report.

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

1) Location of all proposed improvements, including building footprint, access, utilities, applicable setbacks, buffers, and required landscaped areas clearly identified. If a short plat or subdivision is being proposed and the location of all proposed improvements cannot be established, a phased tree retention plan review is required as described in subsection (6)(a) of this section;



- 2) Accurate location of ~~regulated significant~~ trees on the subject property (surveyed locations may be required). The site plan must also ~~show~~include the approximate trunk location ~~and critical root zone~~ of ~~potentially impacted regulated significant~~ trees that are on adjacent properties ~~easy with driplines extending over the subject property line~~;
- 3) Trees labeled corresponding to the tree inventory numbering system;
- 4) ~~Location of tree protection measures~~;
- 5) ~~Indicate the limits of disturbance~~ Critical Root Zones drawn to scale around all trees potentially impacted by site disturbances resulting from grading, demolition, or construction activities (including approximate ~~LOD-CRZs~~ of all potentially impacted trees that are on adjacent properties ~~off-site trees with overhanging driplines~~);
- 6) Location of tree protection fence at the proposed Tree Protection Zone, with distances from trunk to fence noted on the site plan. Specific tree protection standards during construction are described in 95.34 KZC. These standards must be adhered to and included on demolition, grading and building permit plans (edited, moved from 95.31.1);
- 7) ~~Proposed tree status~~ (Trees proposed to be removed, or retained) noted by an 'X' or by ghosting out;
- 8) Proposed locations of any supplemental trees ~~and any required trees in order~~ to meet tree density credits or the minimum number of trees as outlined in KZC 95.32.

c. ~~An Arborist report~~ with ~~containing~~ the following:

- 1) ~~A complete description of each tree's health, condition, and viability~~; The condition rating for each regulated tree's suitability for retention based on its health and structure, including regulated trees that appear to have Critical Root Zones (CRZ) extending onto the subject property. Suitability for retention shall be assessed using the following criteria:

<u>Condition Rating</u>	<u>Tree Structure</u> <i>Root flare, trunk condition, branch assembly</i>	<u>Tree Health</u> <i>Twig and leaf density, size and growth, pest/pathogen issues</i>
<u>Excellent</u>	<u>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.</u>	<u>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.</u>
<u>Good</u>	<u>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.</u>	<u>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.</u>
<u>Fair</u>	<u>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.</u>	<u>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.</u>
<u>Poor</u>	<u>High to imminent risk trees (hazard). Structural problems cannot be corrected. Failure may occur at any time.</u>	<u>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.</u>

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

- 3) A description of the method(s) used to determine the Tree Protection Zone limits of disturbance (i.e., Critical Root Zone formula, root plate diameter, exploratory root excavations or a case-by-case basis description for individual trees);
- 4) Any special instructions specifically outlining any work proposed within the Critical Root Zone of retained trees limits of the disturbance protection area (i.e., additional protection from soil compaction, hand-digging, tunneling or boring, root pruning, mitigating any grade changes, clearing, 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 ~~and be~~ in accordance with the tree protection standards ~~as outlined in~~ KZC 95.34, including any anticipated changes to tree protection fence location or other activity within the 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 trees, including those in a grove or on adjacent properties;
- 7) The suggested location and species of supplemental trees to be used when required. The report shall include planting and maintenance specifications pursuant to KZC 95.50 and 95.51.

4. Tree Retention Plan Review Standards for Development of Single Family Dwellings, Short Plats, Subdivisions, and Two/Three Unit Homes. (Note: Tree Retention Plan chart deleted)

~~The applicant shall submit a Tree Retention Plan that includes the components identified in the following chart based on the proposed development activity. In order to retain regulated trees, the applicant should shall pursue provisions in Kirkland's codes that allow development standards to be modified. The authority to make decisions under this 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 permit Chapters 142, 145, 150 and 152 KZC, respectively. (consolidated/moved)~~

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

Tree Retention Plan review and approval shall be based on compliance to the following provisions for specific trees:

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, is a configuration of 40-foot wide by 40-foot deep building footprint, in combination with a contiguous 20-foot wide by 20-foot deep building footprint that may shift location around Tier 1 Trees.

2) In order to retain Tier 1 trees, the applicant shall pursue and the Planning Official is authorized to require site plan alterations such as minor adjustments to the location of building footprints, adjustments to the location of driveways and access ways, or adjustment to the location of walkways, easements or utilities, including the following: (moved from KZC 95.32)

- a) Shift or flip (mirror) the location of building footprints and driveways
- b) Selection of front yard on corner lots in the RSA and RSX zones and selection of the side yard to meet the 15-foot total in the RS zone
- 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 adjustments to the location of driveways and access ways
- h) With short plats and subdivisions, clustering per Section 95.30.7.b, rearrange property lines, relocate access roads and relocate utilities

3) In order to retain Tier 1 trees, 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) In order to retain Tier 1 trees, the applicant shall pursue and the Planning Official (or Public Works Official where applicable) is authorized to allow these variations to development standards:

- a) 10-foot front and 5-foot rear required yards
- b) Garage requirements of KZC 115.43
- c) Maximum lot coverage by not more than 10 percent where necessary to extend access due to building footprint location
- c) Allow 18-foot by 18-foot parking pads
- d) Modify right of way frontage improvement requirements such as waive landscape strip, etc.
- e) Allow up to a five 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.)
- f) With short plats and subdivisions, allow 3-foot side required yards with internal lots.

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 side required yards. For example: a 70-foot wide lot with a 60-foot wide front building façade and two 5-foot side required yards results in a 10 percent, or 6-foot reduction to the building pad, which totals a 54' maximum building envelope.

2) The applicant shall pursue and the Planning Official is authorized to require site plan alterations, including:

- a) Shift or flip (mirror) the location of building footprints and driveways
- b) Select 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 in the RS zone
- c) Reduce required front yard by five-feet and reduce rear yards that are not directly adjacent to another parcel's rear yard but that are adjacent to an access easement or tract may be reduced by five-feet;
- d) Shift the building footprint on the lot to take advantage of the setback modifications/reductions allowed
- e) Redesign deck, patio, path
- f) Avoid retaining wall/rockeries within the CRZ where possible

3) Bore under roots within TPZ for utilities less than 2 inches diameter

4) The Planning Official (or Public Works Official where applicable) is authorized to allow these variations to development standards:

- a) 10-foot front and 5-foot rear required yards
- b) Garage requirements of KZC 115.43
- c) Maximum lot coverage by not more than 10 percent where necessary to extend access due to building footprint location
- d) Modify right of way frontage improvement requirements (no landscape strip, etc.)
- e) Clustering with short plats and subdivisions subject to Section 95.30.7.b.

5. Tree Retention Plan Review Standards for Development of Multifamily, Commercial, Mixed Use, and Cottage/Carriage Development. Other Incentives and Variations to Development Plans (moved to Tier 1 requirements/consolidated from KZC 95.25 and KZC 95.32). In addition to the variations described above, the Planning Official is authorized to allow:

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

To retain regulated trees in required yards and/or required landscape areas, the applicant shall pursue provisions in Kirkland's codes that allow development standards to be modified. The authority to make decisions under this 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 permit Chapters 142, 145, 150 and 152 KZC, respectively. (consolidated/moved)

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 landscape strip, etc.
- h. ~~Reductions or Variations to~~ Common Recreational Open Space area, width, or composition of required common recreational open space ~~may be granted~~.
- i.
- ~~b.~~ ~~Variations in~~ parking lot design and/or access driveway requirements ~~may be granted~~ when the Public Works and Planning Officials both determine the variations to be consistent with the intent of City policies and codes.
- ~~j.~~
- ~~c.~~ ~~Storm Water. R~~ ~~Variations to the r~~ requirements pertaining to stormwater if approved by the Public Works Official under KMC 15.52.060.

~~3. Required Yards. Initially, the applicant shall pursue options for placement of required yards as permitted by other sections of this code, such as selecting one (1) front required yard in the RSX zone and adjusting side yards in any zone to meet the 15-foot total as needed for each structure on the site. The Planning Official may also reduce the front, side or rear required yards; provided, that:~~

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

~~Additional Variations. In addition to the variations described above, the Planning Official is authorized to require site plan alterations to trees with a high retention value. Such alterations include minor adjustments to the location of building footprints, adjustments to the location of driveways and access ways, or adjustment to the location of walkways, easements or utilities. The Planning Official and the applicant shall work in good faith to find reasonable solutions. (moved)~~

6. The Planning Official may authorize the removal of Tier 1 and Tier 2 trees required 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 would result in either of the following cases:

1) Tree(s) that are unsuitable for retention per the condition ratings in KZC 95.30.3c

2) The retention of a Tier 2 tree compromises a Tier 1 tree's suitability for retention.

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 Chapter *(moved/consolidated)* 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.

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 deny the request. The Planning Official and the applicant shall work in good faith to find reasonable solutions. *(moved)*

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

### a. ~~Phased Review.~~

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

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

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

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

~~a. Modifications. For Tree Retention Plans approved during the short plat or subdivision review process that established the location of all proposed improvements, including the building footprint, utilities, and access, a~~ Modifications ~~to the Tree Retention Plan may be approved as follows pursuant to the standards of KMC 22.20.025 and the following criteria:~~

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

~~1) Modification Prior to Tree Removal. The Planning Official Planning Director may approve a modification request to remove Tier 2 trees decrease the minimum number of tree density credits associated with trees previously identified for retention if:~~

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

and



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

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

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

b. Clustering of lots associated with short plats and subdivisions. The Planning Director may approve variations to minimum Lot Size, maximum Floor Area Ratio and Lot Coverage requirements in order to facilitate retention of Tier 1 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 the allowed density or number of lots otherwise allowed for the subject property;
- 2) The maximum Floor Area Ratio 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 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.

### **NEW 95.32 Tree Planting Requirements Associated with Development Activity**

*(moved from 95.30.1)* When the incentives, site plan alterations and variations to development standards listed in this Chapter have been pursued and the Planning Official determines that there are no existing Landmark trees, Groves and Tier 2 trees located in required yards in excellent to good condition to retain on a development site, supplemental trees shall be planted to achieve a required tree density per acre on a development site.

1. Supplemental Tree Requirement. The required ~~minimum~~ 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 *(moved)*. Applicants may exceed tree density credits requirements. The tree density may consist of existing trees pursuant to the tree's retention value, supplemental trees or a combination of existing and supplemental trees pursuant to subsection (2) of this section.

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

~~Tree density calculation for existing individual trees:~~

- a. ~~Diameter breast height (DBH) of the tree shall be measured in inches.~~

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

2. Applicability of Tree Credits. For individual lots in a short subdivision or subdivision with an approved Tree Retention Plan, the required tree density applies to each lot within the short plat or subdivision. *(moved)* 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 *(moved)*.

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 *(moved)*.

~~e. The total resulting tree density credits on a lot shall result from retained existing trees, supplemental trees, or a combination of the two.~~

*(Reinsert Table 95.33.1 here with revisions to maximum credits)*

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

3. Tree 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 *(moved)*.

Example: an 8,500-square-foot lot would need eight (8) tree credits  $(8,500/43,560 = 0.195 \times 40 = 7.8, \text{ or eight (8) credits})$ .

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

5. Supplemental Tree Locations. In designing a development and in meeting the required ~~minimum~~ tree density, the supplemental 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: *(reprioritized)*
  - 1) On individual residential building lots
  - 2) In preserved groves, critical areas or their buffers.
  - 3) Adjacent to storm water facilities as approved by Public Works under KMC 15.52.060.
  - 4) Site perimeter – The area of the subject property that is within 10 feet from the property line.
  - 5) Entrance landscaping, traffic islands and other common areas with the development of in residential subdivisions.
- b. Off-Site. When room is unavailable for planting the required trees on site, then they may be planted at another approved location in the City. Trees that are planted offsite from the subject property may be required to be preserved in perpetuity.

6. Payment in Lieu of Planting. ~~City Forestry Account.~~ When the Planning Official determines on-site and off-site locations are unavailable, then the applicant shall pay an amount of money in lieu of planting, utilizing the most recent version of the Pacific Northwest International Society of Arboriculture (PNW ISA) "Species Ratings for Landscape Tree Appraisal" unit cost of \$480 per conifer or \$390 per deciduous tree, multiplied by the number of required tree credits approximating the current market value of the supplemental trees into the City ~~F~~orestry ~~A~~ccount 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.
  - ~~b. Chapter 85 KZC, Geologically Hazardous Areas, addresses the retention of vegetation on steep slopes.~~
  - ~~c. Chapter 90 KZC, Critical Areas, addresses vegetation within critical areas and critical area buffers.~~
  - d. Chapter 110 KZC and Chapter 19.36 KMC address vegetation within rights-of-way, except for the I-405 and SR-520 rights-of-way, and the Cross Kirkland Corridor railbanked rail corridor or the Eastside Rail Corridor.
  - e. KZC 115.135, Sight Distance at Intersections, which may limit the placement of landscaping in some areas.
  - f. Chapter 22 KMC addresses trees in subdivisions.
2. Use of Significant Existing Vegetation.
- a. General. The applicant shall apply subsection **KZC 95.30(3)**, Tree Retention Plan Procedure, and **KZC 95.32**, Incentives and Variations to Development Standards, to retain existing native trees, vegetation and soil in areas subject to the landscaping standards of this section. The Planning Official shall give substantial weight to the retained native trees and vegetation when determining the applicant's compliance with this section.
  - b. Supplement. The City may require the applicant to plant trees, shrubs, and groundcover according to the requirements of this section to supplement the existing vegetation in order to provide a buffer at least as effective as the required buffer.
  - c. Protection Techniques. The applicant shall use the protection techniques described in **KZC 95.34** to ensure the protection of significant existing vegetation and soil.
3. Landscape Plan Required. In addition to the Tree Retention Plan required pursuant to **KZC 95.30**, application materials shall clearly depict the quantity, location, species, and size of plant materials proposed to comply with the requirements of this section and shall address the plant installation and maintenance requirements set forth in **KZC 95.50 and 95.51**. Plant materials shall be identified with both their scientific and common names. Any required irrigation system must also be shown.

#### 95.41 Supplemental Plantings

1. General. The applicant shall provide the supplemental landscaping specified in **subsection (2)** of this section in any area of the subject property that:
  - a. Is not covered with a building, vehicle circulation area or other improvement; and
  - ~~b. Is not a critical area critical area buffer or~~
  - 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.
2. Standards. The applicant shall provide the following at a minimum:
  - a. Living plant material which will cover 80 percent of the area to be landscaped within two (2) years. If the material to be used does not spread over time, the applicant shall re-plant the entire area involved immediately. Any area that will not be covered with living plant material must be covered with nonliving groundcover, i.e.: mulch. Preference is given to using native plant species. See Kirkland Native Tree/Plant Lists.
  - b. One (1) tree for each 1,000 square feet of area to be landscaped. At the time of planting, deciduous trees must be at least two (2) inches in caliper and coniferous trees must be at least five (5) feet in height.
  - 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.

#### 95.42 **Minimum Land Use Buffer Requirements**

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

LANDSCAPING CATEGORY	ADJOINING PROPERTY	*Public park or low density residential use or if no permitted use exists on the adjoining property then a low density zone.	Medium or high density residential use or if no permitted use exists on the adjoining property then a medium density or high density zone.	Institutional or office use or if no permitted use exists on the adjoining property then an institutional or office zone.	A commercial use or an industrial use or if no permitted use exists on the adjoining property then a commercial or industrial zone.
A		Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (2) (Buffering Standard 2)	
B		Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (1) (Buffering Standard 1)		
C		Must comply with subsection (1) (Buffering Standard 1)	Must comply with subsection (2) (Buffering Standard 2)		
D		Must comply with subsection (2) (Buffering Standard 2)			
E					
<b>Footnotes:</b>		*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:

- 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.
- 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**

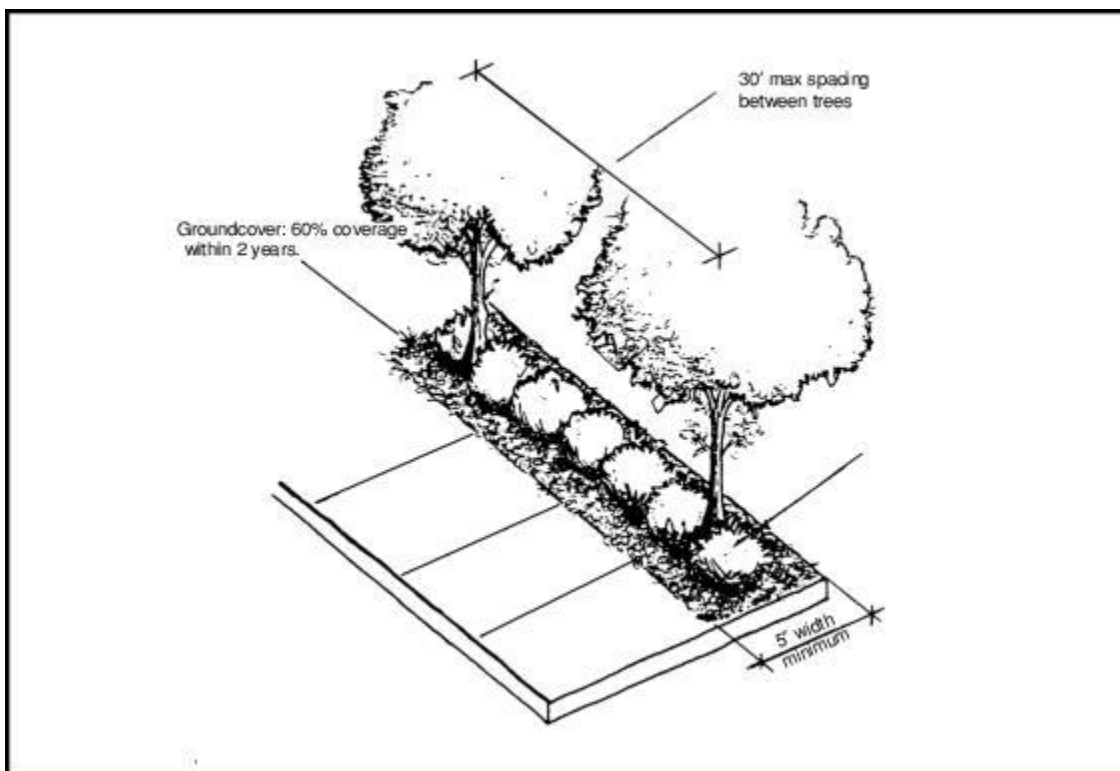


FIGURE 95.45.A

### Perimeter Parking – Examples of Various Screen Wall Designs

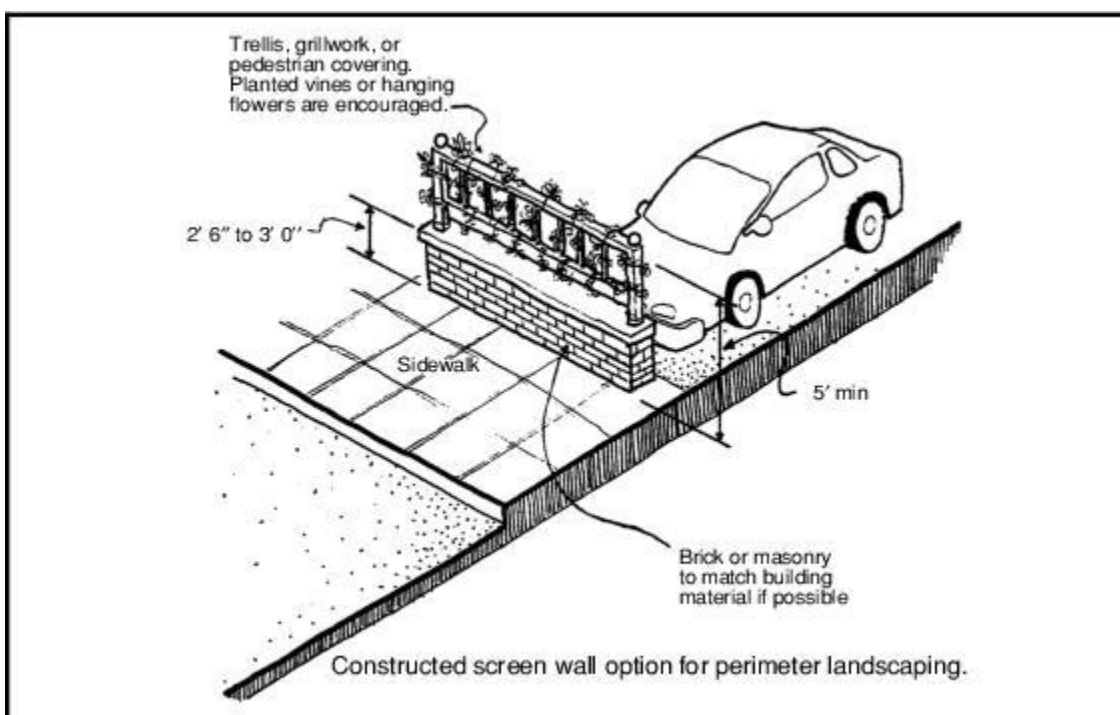


FIGURE 95.45.B

### Perimeter Parking – Examples of Various Screen Wall Designs



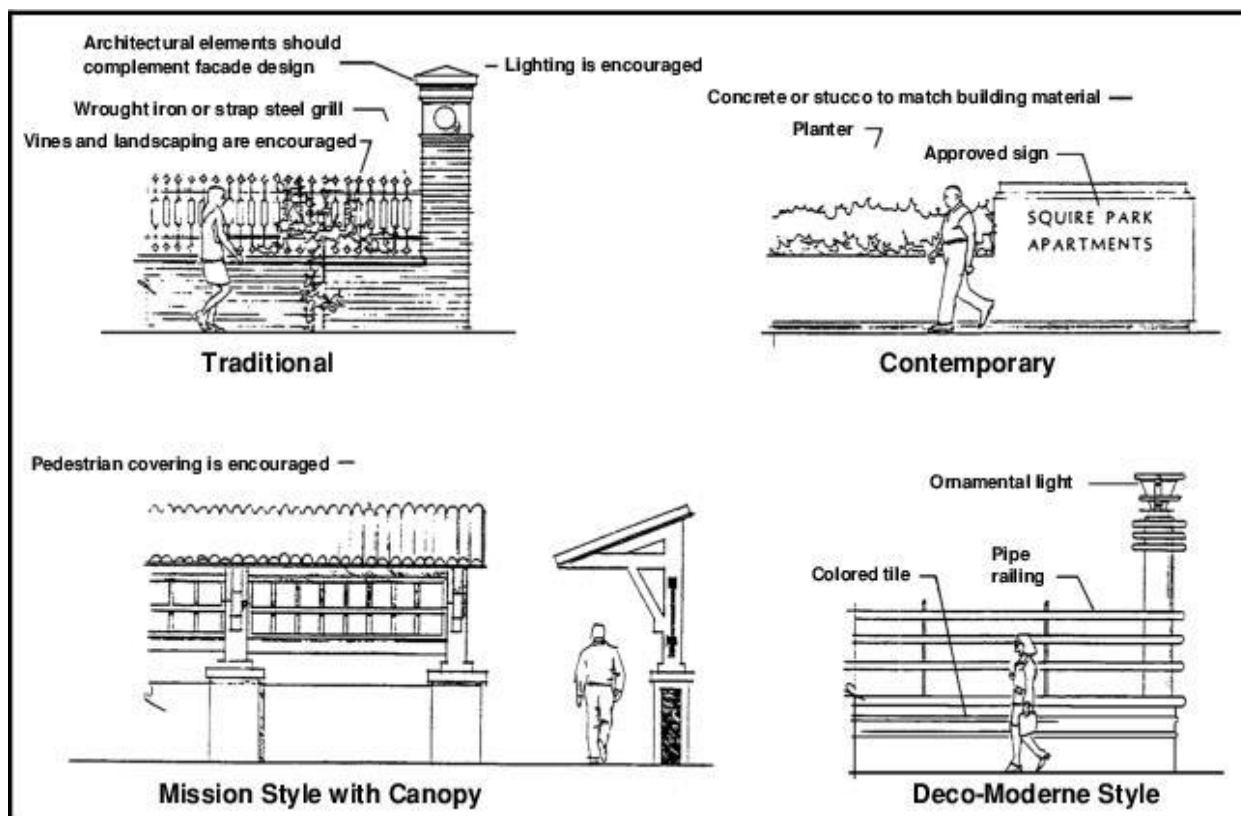


FIGURE 95.45.C

## 95.46 Modifications to Landscaping Standards

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

- The owner of the adjoining property agrees to this in writing; and
- 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
- The modification will be more beneficial to the adjoining property than the required buffer by causing less impairment of view or sunlight; or
- 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
- 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.

- 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.

- 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 95.41**, Supplemental Plantings, **KZC 95.43** Outdoor Use, Activity and Storage, **KZC 95.44**, Internal Parking Lot Landscaping, and **KZC 95.45**, Perimeter Landscape Buffering for Driving and Parking Areas, must be brought into conformance as much as is feasible, based on available land area, in either of the following situations:
  - a. An increase of at least 10 percent in gross floor area of any structure; or
  - b. An alteration to any structure, the cost of which exceeds 50 percent of the replacement cost of the structure.
2. Land use buffers must be brought into conformance with **KZC 95.42** in either of the following situations:
  - a. An increase in gross floor area of any structure (the requirement to provide conforming buffers applies only where new gross floor area impacts adjoining property); or
  - b. A change in use on the subject property and the new use requires larger buffers than the former use.

#### **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 long-term viability of the required landscaping~~; and (2) enter into an agreement with the City, in a form acceptable to the City Attorney, indemnifying the City from any damage resulting from development activity on the subject property which is related to the physical condition of the property. The applicant shall record this agreement with the King County Recorder's Office.

1. Compliance. It is the applicant's responsibility to show that the proposed landscaping complies with the regulations of this chapter.
2. Timing. All landscaping shall be installed prior to the issuance of a certificate of occupancy, except that the installation of any required tree or landscaping may be deferred during the summer months to the next planting season, but never for more than six (6) months. 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~~is produced by the City's Natural Resource Management Team~~ and available in the Planning and Building Department. Species diversity is encouraged by planting species other than those listed, with Planning Official approval.

b. Plants shall be selected and sited to produce a hardy and drought-resistant landscape area. Selection shall consider soil type and depth, the amount of maintenance required, spacing, exposure to sun and wind, the slope and contours of the site, and compatibility with existing native vegetation preserved on the site. Preservation of existing vegetation is strongly encouraged.

c. ~~Prohibited Materials.~~ Plants listed ~~as prohibited~~ in the Kirkland Prohibited Plant List ~~shall not be planted~~ are prohibited in any required landscape areas. Additionally, there are other plants that may not be used if identified in the Kirkland Plant List as potentially damaging to sidewalks, roads, underground utilities, drainage improvements, foundations, or when not provided with enough growing space.

d. All plants shall conform to American Association of Nurserymen (AAN) grades and standards as published in the "American Standard for Nursery Stock" manual.

e. Plants shall meet the minimum size standards established in other sections of the KZC.

f. Multiple-stemmed trees may be permitted as an option to single-stemmed trees for required landscaping provided that such multiple-stemmed trees are at least 10 feet in height and that they are approved by the Planning Official prior to installation.

x. Trees planted to form a clipped or sheared hedge or living wall will not be counted toward tree density credits.

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

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

7. Irrigation. The intent of this standard is to ensure that plants will survive the critical establishment period when they are most vulnerable due to lack of watering. All required plantings must provide an irrigation system, using either Option 1, 2, or 3 or a combination of those options. 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.
- 8. Drainage. All landscapes shall have adequate drainage, either through natural percolation or through an installed drainage system. A percolation rate of one-half (1/2) inch of water per hour is acceptable.
- 9. Mulch.
  - a. Required plantings, except turf or areas of established ground cover, shall be covered with two (2) inches or more of organic mulch to minimize evaporation and runoff. Mulch shall consist of materials such as yard waste, sawdust, and/or manure that are fully composted.
  - b. All mulches used in planter beds shall be kept at least six (6) inches away from the trunks of shrubs and trees.
- 10. Protection. All required landscaped areas, particularly trees and shrubs, must be protected from potential damage by adjacent uses and development, including parking and storage areas. Protective devices such as bollards, wheel stops, trunk guards, root guards, etc., may be required in some situations.

x. Final Inspection. During final inspection, if these requirements are not met, the project will not be signed off.

### 95.51 Tree and Landscape Maintenance Requirements

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

- 1. Responsibility for Regular Maintenance. Required trees and vegetation, fences, walls, and other landscape elements shall be considered as elements of the project in the same manner as parking, building materials, and other site details. The applicant, landowner, or successors in interest shall be responsible for the regular maintenance of required landscaping elements. ~~Plants that die must be replaced in kind.~~ It is also the responsibility of the property owner to maintain street trees abutting their property pursuant to **KZC 95.21**.
- 2. Maintenance Duration. Maintenance shall be ensured in the following manner except as set forth in subsections (3), (4) and (5) of this section:
  - a. Commercial, Industrial and Multifamily Development. All required landscaping shall be maintained throughout the life of the development. Plants that die must be replaced in kind. Prior to final inspection/issuance of a certificate of occupancy, the proponent shall provide a final as-built landscape plan and an agreement to maintain and replace all landscaping that is required by the City.
  - b. Single Family Residential Development. Any existing tree or other existing vegetation designated for preservation in a tree retention plan shall be maintained for a period of five (5) years following issuance of the certificate of occupancy for the individual lot or development. After five (5) years, all trees on the property are subject to **KZC 95.23** unless:
    - 1) The tree and associated vegetation are in a grove that is protected pursuant to subsection (3) of this section; or
    - 2) The tree or vegetation is considered to be a public benefit related to approval of a ~~p~~Planned ~~u~~Unit ~~d~~Development; or
    - 3) The tree or vegetation was retained to partially or fully meet requirements of **KZC 95.40 through 95.45**, ~~R~~Required ~~I~~Landscaping and Zoning.
- 3. Maintenance of Preserved Grove. Any applicant who has a grove of trees identified for preservation on an approved Tree Retention Plan pursuant to KZC 95.30(2) shall provide prior to occupancy the legal instrument acceptable to the City to ensure preservation of the grove and associated vegetation in perpetuity, except that the agreement may be extinguished if the Planning Official determines that preservation is no longer appropriate.
- 4. Maintenance in Holmes Point Overlay Zone. Vegetation in designated Protected Natural Areas in the Holmes Point Overlay Zone is to be protected in perpetuity pursuant to KZC 70.15(8)(a). Significant trees in the remainder of the lot shall be protected in perpetuity pursuant to **KZC 70.15(8)(b)**.
- 5. Nonnative Invasive and Noxious Plants. It is the responsibility of the property owner to remove nonnative invasive plants and noxious plants per the City's Prohibited Plant List, King County and Washington Weed Agencies from the vicinity of any tree or other vegetation that the City has required to be planted or protected. Removal must be performed in

a manner that ~~is not injurious to~~ ~~will not harm the tree or other vegetation that the City~~ ~~required trees and vegetation.~~ ~~has required to be planted or protected.~~

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

### 95.52 Prohibited Vegetation

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

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

### 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 Code Enforcement. Tree topping shall result in the following penalties:

1. Topped trees less than six (6) inches DBH that were required to be planted or retained by this chapter must be replaced pursuant to the standards in Chapter 1.12 KMC.

2. Property owners must have a qualified professional develop and implement a restoration pruning plan for topped trees greater than six (6) inches DBH. (moved from 95.23, Tree Pruning and Removal on Private Property)

### 95.57 City Forestry Account

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

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

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

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

## DRAFT Chapter 95 – TREE MANAGEMENT AND REQUIRED LANDSCAPING (CLEAN COPY)

### 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 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) used to establish the Tree Protection Zone (TPZ). 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. 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.
- x. Inner Critical Root Zone – an area half the distance of the Critical Root Zone that when impacted, may compromise the structural integrity of a tree. Example: a 24-inch DBH tree has a 12-foot radius Inner Critical Root Zone measured from the face of the trunk.
- x. ISA – International Society of Arboriculture
8. Impact – A condition or activity that affects a part of a tree including the trunk, branches, and Critical Root Zone.
12. Qualified Professional – An individual with relevant education and training in arboriculture or urban forestry, having two (2) or more of the following credentials:
  - International Society of Arboriculture (ISA) Certified Arborist;
  - Tree Risk Assessor Qualification (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 qualified professional must have, in addition to the above credentials, a minimum of three (3) years' experience working directly with the protection of trees during construction and have experience with the likelihood of tree survival after construction. A qualified professional must also be able to prescribe appropriate measures for the preservation of trees during land development.

15. Significantly Wooded Site – A subject property that has trees with crowns that cover at least 40 percent of the property.
16. Site Disturbance – Any development, construction, or related operation that could alter the subject property, including, but not limited to, soil compaction, tree or tree stump removal, road, driveway or building construction, installation of utilities, or grading.
- xx. Topping – The reduction of a tree's size using heading cuts that shorten limbs or branches back to a predetermined crown limit. Topping is not an acceptable pruning practice and is not appropriate on established trees. 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 KMC 1.12.100, Special Provisions Related to Enforcement of Tree Regulations.

[xx. Tree Plan – add definitions per recent court case](#)

[xx. Tree Retention Plan - add definitions per recent court case](#)

xx. Tree Protection Zone (TPZ) – The outer boundary of a tree's protected area, as determined by a qualified professional, intended to protect individual trees, groups of trees, vegetation, 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, dripline, or root plate diameter methodologies or exploratory root excavations. TPZ denotes the location of tree protection fencing.

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

xx. Trees

- a. Grove – A group of three (3) or more regulated trees with overlapping or touching crowns, one of which is a minimum ((30?))-inch DBH, or a group of five (5) or more regulated trees, one of which is a minimum ((24?))-inch DBH.
- b. Hazard Trees – A tree assessed by a qualified arborist as having an Imminent or High risk rating using the ISA Tree Risk Assessment Qualification (TRAQ) method in its most current form, as applied in KZC 95.xx, Tree Removals.

- c. Landmark Tree – a regulated tree with a minimum (((30?)))-inch DBH in excellent-good condition per **KZC.95.30.3c**.
  - 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: sidewalk, curb, road, driveway, parking lot, building foundation, or roof; or
    - 2) Has sustained damage from past maintenance practices.

The problems associated with the tree must be such that they cannot be corrected by reasonable practices including but not limited to: pruning of the crown or roots of the tree, bracing, and/or cabling to reconstruct a healthy crown.
  - f. Public Tree – a tree located in parks, along public rights-of-way, on City facility property or other property owned by the City.
  - g. Regulated Tree – A tree that is at least six (6) inches DBH that is not listed on the Prohibited Plant List.
  - h. Street Tree – A tree located within the public right-of-way; provided, that if the trunk of the tree straddles the boundary line of the public right-of-way and the abutting property, it shall be considered to be on the abutting property and subject to the provisions of this chapter
  - i. Tier 1 Tree(s) – Landmark Trees and Groves.
  - j. Tier 2 Tree – A regulated tree with any portion of the trunk located in a required yard or a required landscaping area in excellent-good condition per **KZC 95.30.3c**.
21. Wildlife Snag – The remaining trunk of a tree that is intentionally reduced in height and usually stripped of its live branches.
22. Windfirm – A condition of a tree in which it withstands average peak local wind speeds and gusts.

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

## 95.21 Public Tree Removal and Pruning

1. Public Tree Removal. Other than City crews, no person, directly or indirectly, shall remove any tree 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 **KZC 95.20**, Tree Removal Exemptions or subsection (x) of this section. Public trees may only be removed if determined to be a hazard or nuisance. If the removal request is for public trees, including trees in rights of way, parks and other City facilities, the appropriate Department Official may consider whether the tree(s) are now, or may be in the future, part of the City's plans for the right-of-way or other capital projects.

2. Public Tree Pruning. Any public tree pruning shall conform to the most recent version of the American National Standards Institute (ANSI) A300 - Part 1 Pruning Standards or as outlined in an approved Utility Vegetation Management Plan.

- 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 tree in a public park or on any other City property without first obtaining a Public Tree Pruning permit as provided in this chapter.
- b. Street Trees. It is the responsibility of the adjacent property owner to maintain street trees abutting their property, which may include minor pruning of up to one-inch diameter branches for sidewalk clearance, watering, and mulching. A Public Tree Pruning permit is required to substantially prune, trim, modify or alter a street tree. The City reserves the right to have City or utility crews perform routine pruning and maintenance of street trees.

### 95.23 Tree Pruning and Removal on Private Property with No Development

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 Pruning on Private Property. Tree topping is not allowed. Any private property owner may prune trees on their property without a permit, **except for:**
  - a. Trees located in wetlands, streams or their buffers, in landslide hazard areas, or on properties in the Holmes Point Overlay;
  - b. Landmark trees or dedicated grove trees.
2. Tree Removal Allowances. Any private property owner of developed property may remove a specified number of regulated trees 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, in landslide hazard areas, or on properties in the Holmes Point Overlay area (*consolidated*);
  - b. The trees are not Landmark trees or dedicated grove trees
  - c. There is no active application for development activity for the site;
  - d. The trees were not required to be retained or planted as a condition of previous development activity;
  - e. The trees are not protected under a Voluntary Tree Conservation Easement;
  - f. The trees are not located on properties within the City's shoreline jurisdiction. 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; and
  - g. All the additional standards for tree removal and tree removal permits as described in subsection (4) of this section are met.

**Table x**

Lot Size	Maximum number of regulated trees allowed to be removed every 12 months with notification
Lots up to 10,000 sq. ft.	2
Lots 10,000 to 20,000 sq. ft.	4
Lots 20,000 sq. ft. or greater	6
Lots over 35,000 square feet with a Forest Management Plan	>6
Landmark trees and protected groves shall not be removed without permit approval	

3. Tree Removal Prior to Development Permit. 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, the City will not accept any application for a short plat or subdivision for properties where regulated trees have been removed (including girdling) for a period of



12 months following the tree removal. The City will make an exception for approved removals of hazard or nuisance trees or in instances where the tree removal.

4. Tree Removal Notification Form. The Planning and Building Department shall provide 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. It is unlawful for any person to remove a tree on private property without first obtaining a tree removal permit as provided in this chapter, unless the activity is exempted in KZC 95.20 or allowed in subsection (2) of this section, Tree Removal Allowances.

6. Tree Removal Permit Application Form. The applicable City's department shall provide a tree removal permit application form. Property owners 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 regulated trees, their size (DBH) and their species, along with the location of structures, driveways, access ways and easements.
- b. For required replacement trees, a planting plan showing location, size and species of the new trees in accordance to standards set forth in KZC 95.33(3).

7. Tree Removal Permit Decision and Appeals.

- a. The City shall review the application within 21 calendar days and either approve, approve with conditions or modifications, deny the application or request additional information. Any decision to deny the application shall be in writing along with the reasons for the denial and the appeal process.
- b. The decision of the Planning Official is appealable using the applicable appeal provisions of Chapter 145 KZC.
- c. Time Limit. Tree removal by felling shall be completed within one (1) year from the date of permit approval.

8. Tree Replacement Requirements.

- a. Tree Replacement. For every regulated tree that is removed the City encourages the planting of a tree that is appropriate to the site.
- b. Public Trees – the City shall require a one-for-one replacement in a suitable location.
- c. 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. For the approved removal of overgrown hedges comprised of regulated trees, replacements shall be in kind with a more suitable species in the same location.
- e. If a tree removal request is for one (1) or both of the last 2 regulated trees on single-family home, cottage, carriage unit, or two/three-unit home sites, a tree removal permit and one-for-one replacement is required. The replacement tree shall be six (6) feet tall for a conifer and 2-inch caliper for deciduous or broad-leaf evergreen tree.
- f. For all other land uses not listed in this section, a tree removal permit is required and the required tree replacement will be based on the required landscaping standards in KZC 95.40 through 95.45.

9. Removal of Hazard or Nuisance Trees. Any private property owner seeking to remove any number of regulated trees from developed or undeveloped property or the public right-of-way which are a hazard or nuisance shall first obtain approval of a tree removal permit and meet the requirements of this subsection. The City may order diseased trees removed from private property as hazard trees to prevent the spread of a disease/pest that would cause catastrophic decline in tree health and failure.

a. Tree Risk Assessment. If the nuisance or hazard condition is not evident based on a photograph, a tree risk assessment prepared by a qualified professional explaining how the tree(s) meet the definition of a nuisance or hazard tree is required. Removal of nuisance or hazard trees does not count toward the tree removal limit if the nuisance or hazard is supported by a report prepared by a qualified professional and approved by the City. Hazard tree risk assessment shall follow the steps in the ISA 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.”
- v. Potential targets are permanent structures or an area of moderate to high use. Where a target does not exist, applicants should consider routine pruning and maintenance to mitigate hazards.
- vi. Where a tree is found to have a high or extreme risk, the Planning Official may authorize hazard pruning to mitigate the risk rather than removing the entire tree.

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

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

- a. No trees shall be removed from a wetland, stream or their buffers, unless determined to be nuisance or hazardous trees. No trees shall be removed from landslide hazard areas unless the City determines, based on review of requirements of Chapter 85, that the removal will not impact slope stability. Any tree removal shall be authorized in advance through a tree removal permit unless emergency tree removal is warranted per **KZC 95.20.1**;
- b. Hazard or nuisance trees in wetlands, streams and their buffers shall be removed in a manner that creates a wildlife snag;
- c. If creation of a snag is not feasible, then the felled tree shall be left in place unless the Planning Official approves tree removal in writing; and
- d. The removal of any tree in a wetland, stream, 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.

11. Forest Management Plan.

- a. A Forest Management Plan may be submitted for developed, significantly wooded sites of at least 35,000 square feet in size in which removal of more than any number of trees in excess of the allowable tree removal per **KZC 95.23** is requested and is not exempt under KZC 95.20, Tree Removal Exemptions. A Forest Management Plan must be developed by a qualified professional and shall include the following:
  - 1) A site plan depicting the location of all regulated (a survey identifying tree locations is not required) with a numbering system of the trees (with corresponding tags on trees in the field). The site plan shall include size (DBH), species, and condition of each tree;
  - 2) Identification of trees to be removed, including reasons for their removal and a description of low impact removal techniques pursuant to subsection **(5)(e)(2)** of this section;
  - 3) A reforestation plan that includes location, size, species, and timing of installation;
- b. The following Forest Management Plan standards shall apply:
  - 1) Trees to remain should be dominant or co-dominant in the stand, healthy and windfirm.
  - 2) No removal of trees from critical areas and their buffers, unless otherwise permitted by this chapter.
  - 3) No removal of Landmark trees or dedicated grove trees, unless otherwise permitted by this chapter.
  - 4) No removal of trees that would cause trees on adjacent properties to become hazardous.
  - 5) 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.
  - 6) 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.
  - 7) Removal of tree debris shall be done pursuant to Kirkland Fire Department standards.
  - 8) Recommended maintenance prescription for retained trees with a specific timeline.

### 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 development are encouraged to confer with City staff as early in the design process as possible so that the applicable tree planting and retention concepts can be incorporated into the design of the subject property. The Planning Official 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 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, any proposed development of the subject property requiring approval through a building permit, land surface modification permit, and/or demolition permit, or Design Review, Process I, IIA or IIB, described in Chapters 142, 145, 150 and 152 KZC respectively, shall include a Tree Retention Plan to be considered as part of that process.

a. The City requires approval of a Tree Retention Plan in conjunction with all development permits resulting in site disturbance and for any tree removal on developed sites except for additions and remodels in which the total square footage of the proposed improvements is less than 50 percent of the total square footage of the existing improvements on the subject property and no development activity is proposed within the CRZ of Tier 1 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 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, listing the following:

- 1) All existing regulated trees on the subject property identified by a consistent numbering system in the arborist report, 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 (CRZ) 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 tree trunk. The inventory must also include the approximate CRZ and proposed TPZ of regulated trees that appear to have Critical Root Zones (CRZ) extending onto the subject property);
- 3) Size (DBH);
- 4) Proposed tree removals;
- 5) Condition rating of regulated trees (i.e.: poor, fair, good, excellent, etc.) per KZC 95.32.3(c);
- 6) Tree species and/or common name.
- 7) Identification of trees that meet the definition of Tier 1 trees.
- 8) The inventory may be noted on the site plan or in the arborist report.

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 setbacks, buffers, and required landscaped areas clearly identified.
- 2) Accurate location of regulated trees on the subject property (surveyed locations may be required). The site plan must also show the approximate trunk location of potentially impacted regulated trees that are on adjacent properties;

3) Trees labeled corresponding to the tree inventory numbering system;

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

6) Location of tree protection fence at the proposed Tree Protection Zone, with distances from trunk to fence noted on the site plan. Specific tree protection standards during construction are described in **95.34 KZC**. These standards must be adhered to and included on demolition, grading and building permit plans;

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

8) Proposed locations of any supplemental trees required to meet tree density credits or the minimum number of trees as outlined in **KZC 95.32**.

c. Arborist report with the following:

1) The condition rating for each regulated tree's suitability for retention based on its health and structure, including regulated trees that appear to have Critical Root Zones (CRZ) extending onto the subject property. Suitability for retention shall be assessed using the following criteria:

<b>Condition Rating</b>	<b>Tree Structure</b> <i>Root flare, trunk condition, branch assembly</i>	<b>Tree Health</b> <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 structure, defects, unavoidable isolation (windfirmness), or unsuitability of species, etc., and for which no reasonable alternative action is possible must be given (pruning, cabling, etc.);

3) A description of the method(s) used to determine the Tree Protection Zone (i.e., Critical 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 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 95.34**, including any anticipated changes to tree

protection fence location or other activity within the 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 trees, including those in a grove or on adjacent properties;
- 7) The suggested location and species of supplemental trees to be used when required. The report shall include planting and maintenance specifications pursuant to **KZC 95.50 and 95.51**.

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

To retain regulated trees, the applicant shall pursue provisions in Kirkland's codes that allow development standards to be modified. The authority to make decisions under this 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 permit 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, maximum allowed Floor Area Ratio (FAR) or Lot Coverage, or that preclude required access and utility connections.

Tree Retention Plan review and approval shall be based on compliance to the following provisions for specific trees:

##### 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, is a configuration of 40-foot wide by 40-foot deep building footprint, in combination with a contiguous 20-foot wide by 20-foot deep building footprint that may shift location around Tier 1 Trees.
- 2) 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 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 front yard on corner lots in the RSA and RSX zones and selection of the side yard to meet the 15-foot total in the RS zone
  - 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
  - h) With short plats and subdivisions, clustering per Section 95.30.7.b, rearrange property lines, relocate access roads and relocate utilities
- 3) In order to retain Tier 1 trees, 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) In order to retain Tier 1 trees, the applicant shall pursue and the Planning Official (or Public Works Official where applicable) is authorized to allow these variations to development standards:
  - a) 10-foot front and 5-foot rear required yards
  - b) Garage requirements of KZC 115.43
  - c) Maximum lot coverage by not more than 10 percent where necessary to extend access due to building footprint location
  - c) Allow 18-foot by 18-foot parking pads
  - d) Modify right of way frontage improvement requirements such as waive landscape strip, etc.
  - e) Allow up to a five 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.)



f) With short plats and subdivisions, allow 3-foot side required yards with internal lots.

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 side required yards. For example: a 70-foot wide lot with a 60-foot wide front building façade and two 5-foot side required yards results in a 10 percent, or 6-foot reduction to the building pad, which totals a 54' maximum building envelope.

2) The applicant shall pursue and the Planning Official is authorized to require site plan alterations, including:

- a) Shift or flip (mirror) the location of building footprints and driveways
- b) Select 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 in the RS zone
- c) Reduce required front yard by five-feet and reduce rear yards that are not directly adjacent to another parcel's rear yard but that are adjacent to an access [easement](#) or tract may be reduced by five-feet;
- d) Shift the building footprint on the lot to take advantage of the setback modifications/reductions allowed
- e) Redesign deck, patio, path
- f) Avoid retaining wall/rockeries within the CRZ where possible

3) Bore under roots within TPZ for utilities less than 2 inches diameter

4) The Planning Official (or Public Works Official where applicable) is authorized to allow these variations to development standards:

- a) 10-foot front and 5-foot rear required yards
- b) Garage requirements of KZC 115.43
- c) Maximum lot coverage by not more than 10 percent where necessary to extend access due to building footprint location
- d) Modify right of way frontage improvement requirements (no landscape strip, etc.)
- e) Clustering with short plats and subdivisions subject to Section 95.30.7.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 provisions in Kirkland's codes that allow development standards to be modified. The authority to make decisions under this 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 permit 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 landscape strip, etc.
- h. Reduce or Vary Common Recreational Open Space area, width, or composition of required common recreational open space .
- i. Vary parking lot design and/or access driveway requirements when the Public Works and Planning Officials both determine the variations to be consistent with the intent of City policies and codes.
- j. Vary requirements pertaining to stormwater if approved by the Public Works Official under KMC 15.52.060.

6. The Planning Official may authorize the removal of Tier 1 and Tier 2 trees required 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 would result in either of the following cases:

- 1) Tree(s) that are unsuitable for retention per the condition ratings in KZC **95.30.3c**
- 2) The retention of a Tier 2 tree compromises a Tier 1 tree's suitability for retention.

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 Chapter *(moved/consolidated)* 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.
- 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 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 to the Tree Retention Plan may be approved 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 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.

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 are met:

- a) The need for the modification was not known and could not reasonably have been known before the tree retention plan was approved;
  - b) The modification is necessary because of special circumstances which are not the result of actions by the applicant regarding the size, shape, topography, or other physical limitations of the subject property relative to the location of proposed and/or existing improvements on or adjacent to the subject property;
  - c) There is no practicable or feasible alternative development proposal that results in fewer additional tree removals;
  - d) The Planning Director shall not approve or deny a modification pursuant to this section without first providing notice of the modification request consistent with the noticing requirements for the short plat and providing opportunity for comments for consideration by the Planning Director; and
  - e) Said comment period shall not be less than 14 calendar days.
  - f) The fee for processing a modification request shall be established by City ordinance.
- b. Clustering of lots associated with short plats and subdivisions. The Planning Director may approve variations to minimum Lot Size, maximum Floor Area Ratio and Lot Coverage requirements in order to facilitate retention of Tier 1 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 the allowed density or number of lots otherwise allowed for the subject property;
  - 2) The maximum Floor Area Ratio 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 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.

### **NEW 95.32 Tree Planting Requirements Associated with Development Activity**

When the incentives, site plan alterations and variations to development standards listed in this Chapter have been pursued and the Planning Official determines that there are no existing Landmark trees, Groves and regulated trees located in required yards in excellent to good condition to retain on a development site, supplemental trees shall be planted to achieve a required tree density per acre on a development site.

1. Supplemental Tree Requirement. 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 Applicants may exceed tree density credits requirements.

2. Applicability of Tree Credits. For individual lots in a short subdivision or subdivision with an approved Tree Retention Plan, the required tree density applies to each lot within the short plat or subdivision.) 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
- 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.

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 eight (8) tree credits ( $8,500/43,560 = 0.195 \times 40 = 7.8$ , or eight (8) credits).

4. Minimum Size for Supplemental Trees. The required minimum size of the supplemental tree worth one (1) tree credit shall be four (4) feet tall for native or other conifers and 2-inch caliper for deciduous or broad-leaf evergreen trees.

Additional credits may be awarded for larger supplemental trees. Supplemental Thuja/Arborvitae or other slow-growing conifers such as Hinoki cypress planted on development sites shall not count towards tree density credits on a lot. The installation and maintenance shall be pursuant to KZC 95.50 and 95.51 respectively.

5. Supplemental Tree Locations. In designing a development and in meeting the required tree density, the supplemental 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 groves, critical areas or their buffers.
  - 3) Adjacent to storm water facilities as approved by Public Works under KMC 15.52.060.
  - 4) Site perimeter – The area of the subject property that is within 10 feet from the property line.
  - 5) Entrance landscaping, traffic islands and other common areas with the development of residential subdivisions.
- b. Off-Site. When room is unavailable for planting the required trees on site, then they may be planted at another approved location in the City. Trees that are planted offsite from the subject property may be required to be preserved in perpetuity.

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 cost of \$480 per conifer or \$390 per deciduous tree, 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(3), Tree Retention Plan Procedure, and KZC 95.32, Incentives and Variations to Development Standards, to retain existing native trees, vegetation and soil in areas subject to the landscaping standards of this section. The Planning Official shall give substantial weight to the retained native trees and vegetation when determining the applicant's compliance with this section.
- b. Supplement. The City may require the applicant to plant trees, shrubs, and groundcover according to the requirements of this section to supplement the existing vegetation in order to provide a buffer at least as effective as the required buffer.
- c. Protection Techniques. The applicant shall use the protection techniques described in KZC 95.34 to ensure the protection of significant existing vegetation and soil.

3. Landscape Plan Required. In addition to the Tree Retention Plan required pursuant to KZC 95.30, application materials shall clearly depict the quantity, location, species, and size of plant materials proposed to comply with the requirements of this section and shall address the plant installation and maintenance requirements set forth in KZC 95.50

and 95.51. Plant materials shall be identified with both their scientific and common names. Any required irrigation system must also be shown.

### 95.41 Supplemental Plantings

1. General. The applicant shall provide the supplemental landscaping specified in subsection (2) of this section in any area of the subject property that:
  - a. Is not covered with a building, vehicle circulation area or other improvement; and
  - b. Is not in an area to be planted with required landscaping; and
  - c. Is not committed to and being used for some specific purpose.
2. Standards. The applicant shall provide the following at a minimum:
  - a. Living plant material which will cover 80 percent of the area to be landscaped within two (2) years. If the material to be used does not spread over time, the applicant shall re-plant the entire area involved immediately. Any area that will not be covered with living plant material must be covered with nonliving groundcover, i.e.: mulch. Preference is given to using native plant species. See Kirkland Native Tree/Plant Lists.
  - b. One (1) tree for each 1,000 square feet of area to be landscaped. At the time of planting, deciduous trees must be at least two (2) inches in caliper and coniferous trees must be at least five (5) feet in height.
  - 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.

### 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)		

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.
D		Must comply with subsection (2) (Buffering Standard 2)			
E					
<b>Footnotes:</b>		*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

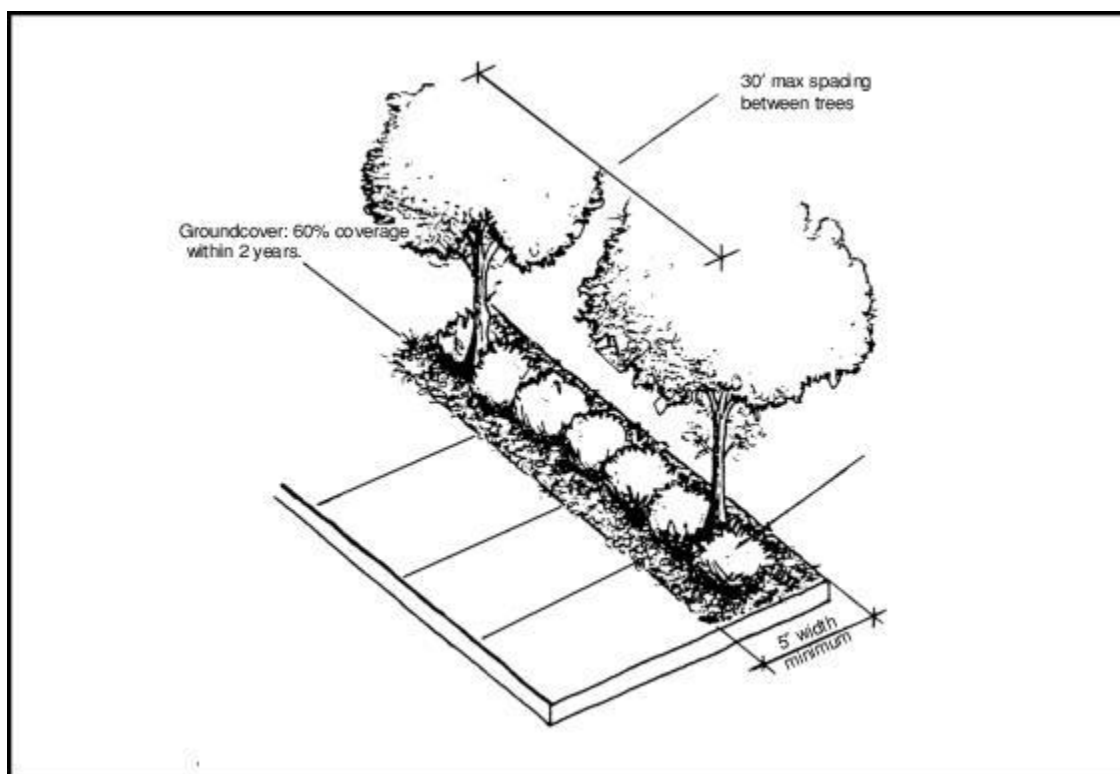


FIGURE 95.45.A

#### Perimeter Parking – Examples of Various Screen Wall Designs

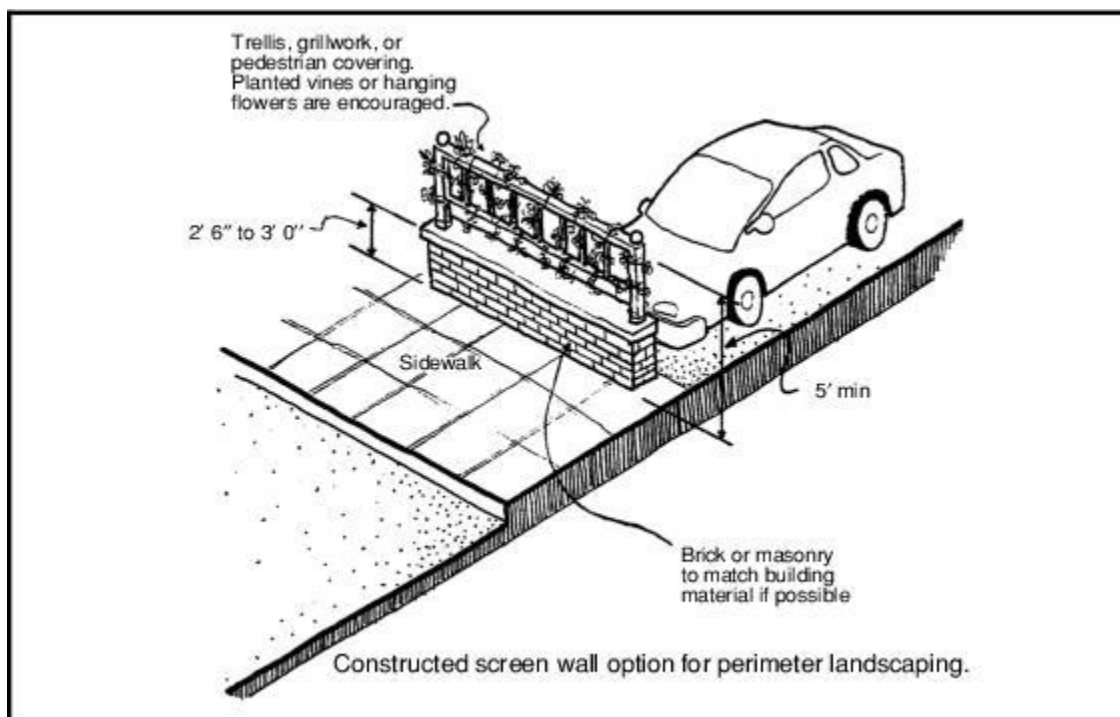


FIGURE 95.45.B

### Perimeter Parking – Examples of Various Screen Wall Designs

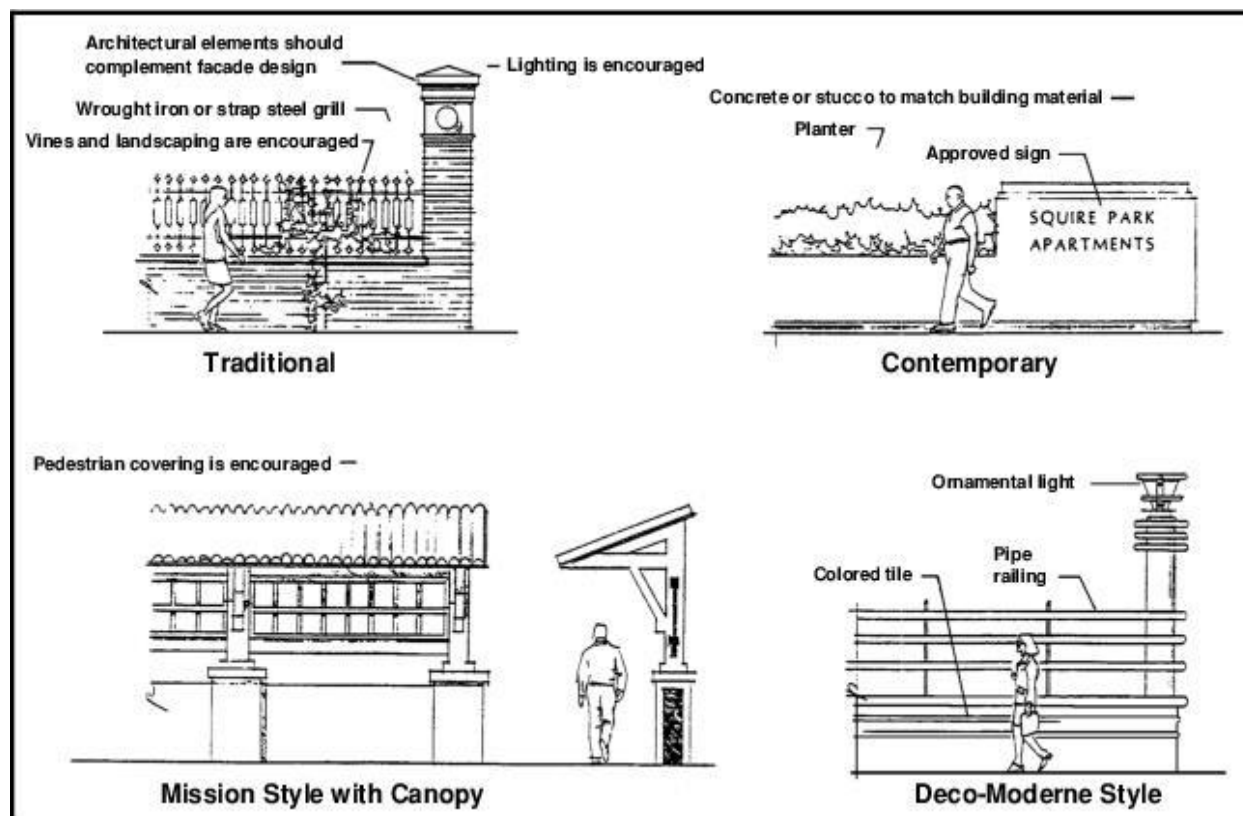


FIGURE 95.45.C

## 95.46 Modifications to Landscaping Standards

1. Modification to Land Use Buffer Requirements. The applicant may request a modification of the requirements of the buffering standards in **KZC 95.42**. The Planning Official may approve a modification if:
  - a. The owner of the adjoining property agrees to this in writing; and
  - b. The existing topography or other characteristics of the subject property or the adjoining property, or the distance of development from the neighboring property decreases or eliminates the need for buffering; or
  - c. The modification will be more beneficial to the adjoining property than the required buffer by causing less impairment of view or sunlight; or
  - d. The Planning Official determines that it is reasonable to anticipate that the adjoining property will be redeveloped in the foreseeable future to a use that would require no, or a less intensive, buffer; or
  - e. The location of pre-existing improvements on the adjoining site eliminates the need or benefit of the required landscape buffer.
2. Modifications to General Landscaping Requirements.
  - a. Authority to Grant and Duration. If the proposed development of the subject property requires approval through Design Review or Process I, IIA, or IIB, described in **Chapters 142, 145, 150, and 152 KZC**, respectively, a request for a modification will be considered as part of that process under the provisions of this section. The City must find that the applicant meets the applicable criteria listed in **subsections (2)(b) and (2)(c) 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 95.41**, Supplemental Plantings, **KZC 95.43** Outdoor Use, Activity and Storage, **KZC 95.44**, Internal Parking Lot Landscaping, and **KZC 95.45**, Perimeter Landscape Buffering for Driving and Parking Areas, must be brought into conformance as much as is feasible, based on available land area, in either of the following situations:
  - a. An increase of at least 10 percent in gross floor area of any structure; or
  - b. An alteration to any structure, the cost of which exceeds 50 percent of the replacement cost of the structure.



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

### 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.
- x. Trees planted to form a clipped or sheared hedge or living wall will not be counted toward tree density credits.

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

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

7. Irrigation. The intent of this standard is to ensure that plants will survive the critical establishment period when they are most vulnerable due to lack of watering. All required plantings must provide an irrigation system, using either Option 1, 2, or 3 or a combination of those options. 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.

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

9. Mulch.

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

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

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

x. Final Inspection. During final inspection, if these requirements are not met, the project will not be signed off.

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

## 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. Tree topping shall result in the following penalties:

1. Topped trees less than six (6) inches DBH that were required to be planted or retained by this chapter must be replaced pursuant to the standards in Chapter 1.12 KMC.
2. Property owners must have a qualified professional develop and implement a restoration pruning plan for topped trees greater than six (6) inches DBH.

## 95.57 City Forestry Account

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

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

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

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