



CITY OF WOODINVILLE

TREE BOARD PACKET

September 25, 2013

*CITY HALL COUNCIL CHAMBERS
17301 133RD AVENUE NE
WOODINVILLE, WASHINGTON 98072*



CITY OF WOODINVILLE
TREE BOARD AGENDA
REGULAR MEETING WEDNESDAY, SEPTEMBER 25, 2013 5:30 PM



♦ Jey Manickam ♦ Thomas L Quigley ♦ Michael Munniks ♦ Paula Waters ♦ Steve Yabroff

5:30 **CALL TO ORDER**

5:31 **ROLL CALL**

5:33 **APPROVE AGENDA IN CONTENT & ORDER**

5:35 **PUBLIC COMMENTS**

BUSINESS AND DISCUSSION ITEMS

5:40 **1. Approval of August 28, 2013 Minutes**

5:45 **2. Review of Landscaping Code and Proposed Recommendations**

6:20 **PUBLIC COMMENTS**

6:25 **DIRECTOR'S REPORT**

6:30 **ADJOURNMENT**

(Note: The agenda may be rearranged or changed at the beginning of the meeting, with a consensus of Tree Board members present.)

Issue Date: September 20, 2013

Staff Contact: Sarah Ruether, Planner

Faxed to: News Media
E-mailed to: Tree Board
Publish: Not published
Post: 1) In-House, 2) Post Office & 3) Website

CITY OF WOODINVILLE, CITY COUNCIL CHAMBERS
17301 133RD AVE. NE, WOODINVILLE, WA 98072

NEXT REGULAR MEETING OCTOBER 23, 2013, 5:30 PM

AGENDA ITEM 1



City of Woodinville, Washington

TREE BOARD REGULAR MEETING MINUTES OF AUGUST 28, 2013
 Woodinville City Hall City Council Chambers, 17301 133rd Avenue NE, Woodinville, WA

<p><u>CALL TO ORDER</u></p>	<p>The regular meeting for the Woodinville Tree Board was called to order at 5:30 p.m. by Chair Tom Quigley.</p>
<p><u>ROLL CALL</u></p>	<p><u>Tree Board Present:</u> Chair Tom Quigley, Board Member Waters, and Board Member Yabroff.</p> <p><u>Absent:</u> Board Member Manickam and Board Member Munniks</p> <p><u>City Staff Present:</u> Sarah Ruether, Planner, and Sandy Guinn, Sr. Administrative Assistant</p> <p>MAIN MOTION: to excuse Board Members Manickam and Munniks</p> <p>Motion by: Board Member Yabroff</p> <p>Second by: Board Member Waters</p> <p>Action for the Main Motion: PASSED 3 - 0</p> <p>Vote: Ayes: Chair Quigley and Board Members Waters and Yabroff.</p> <p>Nayes: None.</p> <p>Abstain: None.</p>
<p><u>APPROVAL OF AGENDA ORDER AND CONTENT</u></p>	<p>Chair Quigley noted there was consensus to make no changes.</p>
<p><u>PUBLIC COMMENTS</u></p>	<p>None.</p>
<p><u>BUSINESS AND DISCUSSION ITEMS</u></p> <p>Approval of July 24, 2013 Regular Tree Board Minutes</p>	<p>I. <u>Approval of July 24, 2013 Regular Tree Board Meeting Minutes</u></p> <p>Tree Board approved the regular meeting minutes of July 24, 2013, as amended (to change “rational” to “rationale” in second paragraph, page 2 of the minutes).</p> <p>MAIN MOTION: to approve the regular meeting minutes of July 24, 2013, as amended.</p> <p>Motion by: Board Member Waters</p> <p>Second by: Board Member Yabroff</p> <p>Action for the Main Motion: PASSED 3 - 0</p>

<p><i>Approval of July 24, 2013 Regular Tree Board Minutes</i></p> <p><i>Discussion and Review Tree Regulations and Proposed Recommendations</i></p>	<p>Vote: Ayes: Chair Quigley and Board Members Waters and Yabroff</p> <p>Nayes: None.</p> <p>Abstain: None.</p> <p><u>2. Discussion & Review of Tree Regulations and Proposed Recommendations</u></p> <p>Board members and Planner Ruether discussed good tree coverage in urban open space (parking lots), grouping of trees to encourage large tree canopy, quality vs. quantity of tree canopy, the importance of healthy trees having a good root system, benefit of four large tree canopies vs. a lot of small tree canopies, structural soils, working with the Planning Commission (as the Planning Commission will be looking at the landscaping code), developing a homeowner's manual of how to plant trees and maintain the health of trees, incentives to property owners in Industrial zone to plant trees that will grow to be healthy, and bigger buffers when trees are planted next to buildings. Ms. Ruether advised that she will look at other landscaping codes, in addition to what has been provided in July 24th packet.</p>
<p><u>PUBLIC COMMENTS</u></p>	<p>None.</p>
<p><u>DIRECTOR'S REPORT</u></p>	<p>None.</p>
<p><u>ADJOURNMENT</u></p>	<p>Chair Quigley called the meeting adjourned.</p> <p>The meeting was adjourned at 6:30 p.m.</p>

Respectfully submitted,

Sandy Guinn

AGENDA ITEM 2



To: Tree Board **Date:** September 25, 2013
From: Dave Kuhl, Development Services Director 
By: Sarah Ruether, Planner 
Subject: Review of Landscaping Code and Proposed Recommendations

ISSUE: Shall the Tree Board review the current Tree Code and Proposed Recommendations for changes to the Code?

STAFF RECOMMENDATION: To review and consider proposed changes as part of the Tree Board work plan for 2013.

POLICY DECISION: The Tree Board provides an advisory role to the City Council on matters of trees and urban forestry.

BACKGROUND/ANALYSIS:

Landscaping Code for Commercial and Industrial Properties

The Tree Board discussed how to update our landscaping code so that it is more comprehensive in its approach so as to replace the current system, which uses both Chapter 21.15 Tree Protection and Chapter 21.16 Development Standards – Landscaping, and how to regulate trees in commercial and industrial properties. It has been discussed that a tree canopy requirement of 30 trees per acre for the CBD and 60 trees per acre for Industrial Properties are not reasonable requirements for tree canopy in highly urbanized areas. Therefore, a landscaping code that allows more flexibility for green design and various ways to green an urban area would be a better code mechanism to provide alternatives for trees and vegetation that is reasonable for these types of zoning.

Current Landscaping Code: Chapter 21.16

The City's current landscaping code uses a system of Type I, Type II, Type III and Type IV landscaping as the different types of planting to achieve various levels of screening. Type I landscaping is defined as a "full screen" that functions as a visual barrier. This type of landscaping requires at least 70 percent of evergreen trees. There are other mechanisms for visual screening, like vegetated walls, and the Tree Board may consider whether alternatives to the prescriptive nature of the current code would provide better flexibility and better chances of getting the right tree in the right place. Type II landscaping is defined as a "filtered screen" that functions as a visual separator. This type of landscaping requires at least 50 percent broadleaf trees and at least 30 percent evergreen trees. Type III landscaping is a "see-through buffer" that functions as a partial visual separator to soften the appearance of parking areas and building elevations. This is a portion of code that would benefit from having incentives for pervious pavement and structured soils. This is, also, a portion of code that would benefit from having minimum unpaved planting area per tree. Type IV landscaping is "parking area landscaping" and this would benefit from the same incentives discussed for Type III landscaping. See "Attachment A: Chapter 21.16 – Development Standards – Landscaping".

Tree Retention

A reference to Table 21.15.060 – Tree Types which encourage preservation of heritage trees could be used in conjunction with the new landscaping code to ensure that larger heritage trees are preserved to the maximum extent possible. See Attachment B Tree Types and the table below. This type of system is needed in the landscaping code to insure retention of larger trees and heritage trees if the tree code is removed from commercial tree requirements.

Type 1 Tree	Type 2 Tree	Type 3 Tree
<p>A viable tree that is determined to be healthy and windfirm by a qualified tree professional, and provided the trees can be safely retained when pursuing alternatives to development standards, and meets at least one of these criteria:</p> <p>(a) Heritage trees;</p> <p>(b) Specimen trees;</p> <p>(c) Tree groves and associated vegetation that are to be set aside as preserved groves pursuant to WMC 21.15.100;</p> <p>(d) Wildlife habitat regulated under WMC 21.24.410 through 21.24.440;</p> <p>(e) Trees in geologically hazardous areas as regulated under WMC 21.24.290 through 21.24.310;</p> <p>(f) Trees that are more than 75 years old or have a diameter-at-breast-height of at least 20 inches; or</p> <p>(g) Trees that are a part of a grove that extends into abutting property, such as in a public park, open space, sensitive area buffer or otherwise preserved group of trees on adjacent private property. If significant trees must be removed in these situations, an adequate buffer of trees may be required to be retained or planted on the edge of the remaining grove to help stabilize the remaining trees.</p>	<p>A viable tree that is to be retained if feasible.</p>	<p>A tree that is either</p> <p>(a) not viable, or</p> <p>(b) is in an area where removal is unavoidable due to the anticipated development activity.</p>

Example Landscaping Code

Some of the techniques we discussed in “Urban Design for a Wind Resistant Urban Forest” (provided in the August Staff Report) are part of the code examples included in the attachments for the City of Seattle and City of Tacoma’s landscape code.

The City of Seattle landscaping code uses a green factor measurement as part of their landscaping requirements. The green factor landscape elements provide a list of incentives that include credit for a larger soil depth, structured soils, green roofs, vegetated walls, permeable paving and various bonus credits. This system provides more flexibility to a developer to landscape and green a site and provides incentives for using techniques that allow for larger, healthier trees. This system could be combined with the City of Woodinville’s Types I, II, III and IV landscaping. The City of Seattle green factor elements also include Table B, which are requirements for the amount of square feet of landscape area required for different kinds of plantings. This requirement helps make sure that the right tree is planted in the right place by not allowing large trees to be planted in areas where there isn’t enough room.

The City of Tacoma’s landscaping code provides a good example of provisions to encourage retention of existing trees and good urban design incentives; for example, requirements for tree variety standards in planting plans and minimum unpaved planting area requirements. These type of requirements could be incorporated into the City’s landscaping code to assure better design of landscaping plans and to encourage better retention of existing trees and better health and size of newly planted urban trees. See Attachment D: City of Tacoma Landscaping Code - Chapter 13.

Tree Removal in Critical Areas and Native Growth Protection Areas

Native growth protection areas are generally very dense with vegetation and, therefore, meet or exceed required tree credits. The code provision for removal of a tree in a Native Growth Protection area and critical areas needs clarification in the cases where re-planting may not be possible or may not promote the best health of the area. The highlighted addition to the provision for tree removal in critical areas would give clarity and allow no replanting in those cases where no planting is needed to achieve the same amount of functionality due to the high density of trees.

(d) Trees in Critical Areas or Critical Area Buffers. The intent of preserving vegetation in and near streams and wetlands and in geologically hazardous areas is to support the functions of healthy critical areas and their buffers and/or avoid disturbance of geologically hazardous areas (see Chapter [21.24](#) WMC). The property owner must submit a Level IV Tree Plan to City Development Services Department to trim or fell any tree from a critical area or critical area buffer. If a tree is considered a nuisance or hazard in a critical area or its buffer, the priority action is to create a “snag” or wildlife tree with the subject tree. If creation of a snag is not feasible, then the felled tree shall be left in place unless the City Tree Official permits its removal in writing. The felling of any tree will require the replanting of an equivalent amount of tree credits in conformance with the tree planting requirements of WMC [21.15.070\(2\)](#), which may be modified by the City Tree Official based on the recommendation of a qualified tree professional; **If a qualified tree professional determines that the same amount of functionality of the area can be achieved without replanting, no replanting may be required., Otherwise.;** (i) the lesser number of tree credits will provide equal or better functionality in the critical area; (ii) there is a minimum replanting of 50 percent of the required tree credits; (iii) a coverage analysis is submitted stating that the replanted trees will have equal or better coverage than the trees removed within five years; (iv) understory plantings are also installed; (v) a replanting site plan is submitted, reviewed and approved. Replanted trees shall be planted in proximity to where the felled tree was located. Selection of native species is required, replanting the same species as the removed trees is preferred, and timing of installation shall be approved by the City Tree Official. If more than two trees are removed, the City Tree Official may require an approval pursuant to Chapter [21.24](#) WMC regarding alteration of critical areas.

**RECOMMENDED ACTION:
REVIEW PROPOSED OPTIONS AND MAKE RECOMMENDATIONS**

- Attachment A: City of Woodinville Chapter 21.16 Development Standards – Landscaping
- Attachment B: City of Woodinville Tree Code Table 21.15.060 -2- Tree Types
- Attachment C: City of Seattle Green Factor Measurement - Chapter 23.86.019
- Attachment D: City of Tacoma Landscaping Code - Chapter 13

Attachment A: City of Woodinville Chapter 21.16 Development Standards - Landscaping

21.16.010 Purpose.

The purpose of this chapter is to preserve the aesthetic character of communities; to improve the aesthetic quality of the built environment; to promote retention and protection of existing vegetation; to reduce the impacts of development on drainage systems and natural habitats; and to increase privacy for Residential zones by:

- (1) Providing visual relief from large expanses of parking areas and reduction of perceived building scale;
- (2) Providing physical separation between residential and nonresidential areas;
- (3) Providing visual screens and barriers as a transition between differing land uses;
- (4) Retaining existing vegetation and significant trees by incorporating them into the site design when possible; and
- (5) Providing increased areas of permeable surfaces to allow for:
 - (a) Infiltration of surface water into ground water resources;
 - (b) Reduction in the quantity of storm water discharge; and
 - (c) Improvement in the quality of storm water discharge. ([Ord. 335 § 2, 2003](#); [Ord. 175 § 1, 1997](#))

21.16.020 Application.

Except for communication facilities regulated pursuant to Chapter [21.26](#) WMC, all new development listed in WMC [21.16.030](#) shall be subject to the landscaping provisions of this chapter; provided, that specific landscaping provisions for uses established through a conditional use permit or a special use permit shall be determined during the applicable review process. For the purposes of this chapter, a new development involves a new occupancy or tenant improvement that exceeds 25 percent of the assessed value of the structure before the improvement or before any damage occurred, if the structure has been damaged and is being repaired. ([Ord. 478 § 6, 2009](#); [Ord. 335 § 2, 2003](#); [Ord. 256 § 1, 2000](#); [Ord. 175 § 1, 1997](#))

21.16.030 Land use grouping.

In order to facilitate the application of this chapter, the land uses of Chapter [21.08](#) WMC have been grouped in the following manner:

- (1) Residential development shall refer to those uses listed in WMC [21.08.030](#), except those uses listed under accessory uses, provided:
 - (a) Attached/group residences shall refer to:
 - (i) Townhomes;
 - (ii) Apartments;
 - (iii) Senior citizen assisted;

- (iv) Temporary lodging;
- (v) Group residences (community residential facilities); and
- (vi) Mobile home parks.

(b) Single detached development shall refer to residential subdivisions.

(2) Commercial development shall refer to those uses in:

- (a) WMC 21.08.040, as park/recreation and amusement/entertainment uses;
- (b) WMC [21.08.050](#), except health and educational services;
- (c) WMC 21.08.060, as general business services, professional offices, and commercial accessory uses; and
- (d) WMC [21.08.070](#).

(3) Industrial development shall refer to those listed in:

- (a) WMC [21.08.050](#), except health and education services;
- (b) WMC [21.08.060](#), except general business services, professional offices, and commercial accessory uses;
- (c) WMC [21.08.080](#); and
- (d) WMC 21.08.090, as mineral extraction and processing.

(4) Institutional development shall refer to those uses listed in:

- (a) WMC 21.08.040, as cultural uses, except arboretums;
- (b) WMC 21.08.050, as health services, and education services except specialized instruction schools permitted as an accessory use;
- (c) WMC [21.08.055](#); and
- (d) WMC [21.08.100](#).

(5) Utility development shall refer to those listed in WMC 21.08.060 as subregional utilities.

(6) Uses contained in Chapter [21.08](#) WMC that are not listed in subsections (1) through (5) of this section shall not be subject to landscaping except as specified in any applicable review of a conditional use or special use permit. ([Ord. 478](#) § 6, 2009; [Ord. 335](#) § 2, 2003; [Ord. 175](#) § 1, 1997)

21.16.040 Landscaping – Types and description.

The four types of landscaping are described and applied as follows:

(1) Type I Landscaping.

(a) Type I landscaping is a “full screen” that functions as a visual barrier. This landscaping is typically found adjacent to freeways and between residential and nonresidential areas;

(b) Type I landscaping shall consist of:

(i) A mix of primarily evergreen trees and shrubs placed to form a continuous screen;

(ii) At least 70 percent evergreen trees;

(iii) Evergreen trees spaced no more than 15 feet on center;

(iv) Broadleaf trees spaced no more than 20 feet on center;

(v) Evergreen shrubs spaced no more than four feet apart; and

(vi) Groundcover pursuant to WMC [21.16.090](#);

(2) Type II Landscaping.

(a) Type II landscaping is a “filtered screen” that functions as a visual separator. This landscaping is typically found between commercial and industrial uses; between differing types of residential development; and to screen industrial uses from the street;

(b) Type II landscaping shall consist of:

(i) A mix of evergreen and broadleaf trees and shrubs spaced to create a filtered screen;

(ii) At least 50 percent broadleaf trees and at least 30 percent evergreen trees;

(iii) Evergreen trees spaced no more than 15 feet on center;

(iv) Broadleaf trees spaced no more than 20 feet on center;

(v) Shrubs spaced no more than five feet apart; and

(vi) Groundcover pursuant to WMC [21.16.090](#);

(3) Type III Landscaping.

(a) Type III landscaping is a “see-through buffer” that functions as a partial visual separator to soften the appearance of parking areas and building elevations. This landscaping is typically found along street frontage or between apartment developments;

(b) Type III landscaping shall consist of:

(i) A mix of evergreen and/or broadleaf trees spaced to create a continuous canopy;

(ii) At least 70 percent broadleaf trees;

- (iii) Trees spaced no more than 25 feet on center;
- (iv) Shrubs, that do not exceed a height of four feet, spaced no more than four feet apart; and
- (v) Groundcover pursuant to WMC [21.16.090](#);

(4) Type IV Landscaping.

(a) Type IV landscaping is “parking area landscaping” that provides shade and visual relief while maintaining clear sight lines within parking areas;

(b) Type IV landscaping shall consist of:

- (i) Canopy-type broadleaf or evergreen trees, evergreen shrubs and groundcovers planted in islands or strips;
- (ii) Shrubs that do not exceed a height of four feet;
- (iii) Plantings contained in planting islands or strips having an area of at least 75 square feet and with a narrow dimension of no less than four feet;
- (iv) Groundcover pursuant to WMC [21.16.090](#); and
- (v) At least 90 percent of the trees shall be broadleaf. ([Ord. 335](#) § 2, 2003; [Ord. 242](#) § 6, 1999; [Ord. 175](#) § 1, 1997)

21.16.050 Landscaping – Street frontages.

Perimeter landscaping along street frontages shall be provided as follows:

- (1) A 10-foot width of Type II landscaping shall be provided for an institutional use, excluding playgrounds and playfields.
- (2) A 10-foot width of Type II landscaping shall be provided for an industrial development, except a 25-foot width of Type II landscaping shall be provided for development on I-zoned property abutting SR 202 or Woodinville-Snohomish Highway.
- (3) A 10-foot width of Type II landscaping shall be provided for an above ground subregional utility development located outside a public right-of-way.
- (4) A 10-foot width of Type III landscaping shall be provided for a commercial or attached/group residence development, except the 10-foot width of Type III landscaping may not be required pursuant to the City of Woodinville Design Guidelines and Standards.
- (5) For single detached subdivisions:
 - (a) Trees shall be planted at the rate of one tree for every:
 - (i) Fifty feet of frontage along a neighborhood collector street; and
 - (ii) Forty feet of frontage along an arterial street.

(b) The trees shall be:

- (i) Located within the street right-of-way if permitted by the custodial State or local agency;
- (ii) No more than 20 feet from the street right-of-way line when located within a lot;
- (iii) Maintained by the adjacent landowner unless part of a City maintenance program; and
- (iv) A species approved by the City Tree Official in accordance with the Tree Board approved required tree species list.

(c) The trees may be spaced at irregular intervals in order to accommodate sight distance requirements for driveways and intersections.

(6) For developments in the Tourist District Overlay, see WMC [21.38.065](#).

(7) Street trees shall be required in all development fronting a public street. Street tree species shall be approved by the City Tree Official in accordance with the Tree Board approved required tree species list or by the City's adopted street tree plan if applicable. ([Ord. 511](#) § 7, 2010; [Ord 448](#) § 18, 2007; [Ord. 335](#) § 2, 2003; [Ord. 239](#) § 4, 1999; [Ord. 194](#) § 5, 1997; [Ord. 175](#) § 1, 1997)

21.16.060 Landscaping – Interior lot lines.

Perimeter landscaping along interior lot lines shall be provided as follows:

(1) Type I landscaping shall be included in a commercial, office, or industrial development as follows:

- (a) A 20-foot width abutting residentially developed property or undeveloped residentially zoned property;
- (b) A 10-foot width abutting property developed public recreational; or
- (c) A 10-foot width abutting property designated as permanent open space.

(2) A 20-foot width of Type II landscaping shall be included in an attached/group residence development along any portions of the development adjacent to a single-family detached residential development. Along portions of the development adjacent to another attached/group residence development or any nonresidential use the requirement shall be a 10-foot width of Type II landscaping.

(3) A 10-foot width of Type II landscaping shall be included in an industrial development along any portion adjacent to a commercial or institutional development.

(4) A 10-foot width of Type II landscaping shall be included in an institutional use, excluding playgrounds and playfields, or an above ground subregional utility development, excluding distribution or transmission corridors, when located outside a public right-of-way. If the institutional use abuts a residentially zoned or developed property, a 20-foot width of Type II landscaping is required along lines abutting the property. If the institutional use abuts an agriculturally zoned parcel, a 50-foot width of Type II landscaping is required along property lines abutting the parcel.

(5) For developments in the Tourist District Overlay, see WMC [21.38.065](#).

(6) For commercial and industrial developments, storm water retention facilities may be located in interior lot line landscaping areas; provided, that landscaping requirements are still met and the location is approved by the Development Services Director. ([Ord. 511 § 7, 2010](#); [Ord. 465 § 27, 2008](#); [Ord. 335 § 2, 2003](#); [Ord. 194 § 5, 1997](#); [Ord. 175 § 1, 1997](#))

21.16.070 Landscaping – Surface parking areas.

Type IV landscaping shall be provided within surface parking areas with 10 or more parking stalls as follows:

(1) Residential developments with common parking areas shall provide planting areas at the rate of 20 square feet per parking stall;

(2) Commercial, industrial, or institutional developments shall provide landscaping at a rate of:

(a) Twenty square feet per parking stall when 10 to 30 parking stalls are provided; and

(b) Twenty-five square feet per parking stall when 31 or more parking stalls are provided;

(3) Trees shall be provided and distributed throughout the parking area at a rate of:

(a) One tree for every five parking stalls for a commercial or industrial development; and

(b) One tree for every 10 parking stalls for residential or institutional development;

(4) The maximum distance between any parking stall and required parking area landscaping shall be no more than 65 feet; and

(5) Permanent curbs or structural barriers shall be provided to protect the plantings from vehicle overhang;

(6) For developments in the Tourist District Overlay, see WMC [21.38.065](#). ([Ord. 335 § 2, 2003](#); [Ord. 175 § 1, 1997](#))

21.16.075 Landscaping adjacent to public trails and other publicly used lands.

(1) All developments adjacent to publicly used trails and other public lands shall provide landscaping adjacent to and along the building facade that faces the trail or land at the rate of at least one tree per 50 feet of facade. Exceptions may be made for those developments meeting Section IV.F of the City's Design Guidelines and Standards.

(2) All development shall provide, at a minimum depending upon the intensity of use to be screened, Type III landscape screening from public areas, etc., to reduce off-site visual impacts. The applicant shall propose the type of landscaping to be provided for approval by the City Tree Official. ([Ord. 448 § 18, 2007](#); [Ord. 335 § 2, 2003](#); [Ord. 239 § 4, 1999](#); [Ord. 194 § 5, 1997](#); [Ord. 175 § 1, 1997](#))

21.16.080 Landscaping – Adjacent to freeway rights-of-way.

(1) All residential developments shall provide a minimum of 20 feet of Type I landscaping adjacent to freeway rights-of-way.

(2) All other developments shall provide a minimum of 25 feet of Type III landscaping adjacent to freeway rights-of-way. ([Ord. 511 § 7, 2010](#); [Ord. 335 § 2, 2003](#); [Ord. 175 § 1, 1997](#))

21.16.085 Landscaping – Utility corridors.

Utility purveyors within the City of Woodinville are required to maintain and plant landscaping within their right-of-way as follows:

- (1) Limited disturbance of vegetation to that necessary for safety and maintenance of transmission lines;
- (2) Prune trees to direct growth away from utility lines using accepted pruning practices identified in the public tree care standards manual;
- (3) Phase replacement of vegetation located improperly in the right-of-way;
- (4) Prune trees in an aesthetic manner according to the professional arboricultural specifications and standards;
- (5) Select tree species recommended by the City's Tree Board or as approved by the City Tree Official that are compatible with utility lines;
- (6) Provide the City with a copy of the utility's policies and guidelines regarding tree pruning; and
- (7) Present the City with a tree-pruning plan at least one week prior to tree-pruning activities. ([Ord. 335 § 2, 2003](#); [Ord. 175 § 1, 1997](#))

21.16.090 Landscaping – General requirements.

Landscape designs shall conform to the following provisions:

(1) New landscaping materials shall include species native to the coastal region of the Pacific Northwest or non-invasive naturalized species that have adapted to the climatic conditions of the coastal region of the Pacific Northwest in the following amounts:

(a) Seventy-five percent of groundcover and shrubs; and

(b) Fifty percent of trees;

(2) At least 60 percent of new landscaping materials shall consist of drought-tolerant species, except where site conditions within the required landscape areas assure adequate moisture for growth;

(3) Existing vegetation may be used to augment new plantings to meet the standards of this chapter; **THIS NEEDS TO BE CHANGED NO INCENTIVE TO RETAIN EXISTING VEGETATION OR TREES**

(4) Broadleaf trees shall have a caliper of at least 1.75 inches at the time of planting. The caliper may be averaged, but no individual tree shall have a caliper of less than 1.5 inches;

(5) Evergreen trees shall be at least six feet in height measured from treetop to the ground at the time of planting;

(6) When the width of any landscape strip is 20 feet or greater, the required trees shall be staggered in two or more rows;

(7) Shrubs shall be:

(a) Number two size, and minimum 18 inches in height, at time of planting in Type II, III and IV landscaping;

- (b) At least 24 inches in height at the time of planting for Type I landscaping; and
 - (c) Maintained at a height not exceeding four feet when located in Type III or IV landscaping;
- (8) Groundcovers shall be planted and spaced to result in total coverage of the required landscape area within three years as follows:
- (a) Four-inch pots at 18 inches on center; or
 - (b) One gallon or greater sized containers at 24 inches on center;
- (9) Turf may be used as groundcover in landscape areas; provided, that the turf area:
- (a) Constitutes no more than 30 percent of Type I and II landscape areas; and
 - (b) Is at least five feet wide at the smallest dimension;
- (10) Grass and groundcover areas shall contain at least two inches of composted organic material at finish grade;
- (11) All fences shall be placed on the inward side of any required perimeter landscaping;
- (12) Berms shall not exceed a slope of three horizontal feet to one vertical foot for lawns and shall not exceed a slope of two horizontal feet to one vertical foot for other plant materials;
- (13) Existing soils shall be augmented with a two-inch layer of fully composted organic material rototilled a minimum of six inches deep; **INCENTIVES FOR HAVING DEEPER SOIL OR PERVIOUS PAVERS?**
- (14) Landscape areas shall be covered with at least two inches of mulch to minimize evaporation. Mulch shall consist of materials such as yard waste, sawdust and/or manure that is fully composted;
- (15) Drought-tolerant and nondrought-tolerant species shall be distributed and irrigated in a manner that uses water efficiently;
- (16) Required street landscaping may be placed within City of Woodinville street rights-of-way subject to the City's street design standards with the permission of the Public Works Director, provided adequate space is maintained along the street line on-site to replace the required landscaping should subsequent street improvements require the removal of landscaping within the rights-of-way;
- (17) Species and plantings shall be consistent with the Tree Board approved required tree species list and required plant species list; and
- (18) A qualified tree professional, as defined in WMC [21.06.486](#), shall be on-site during any site work affecting preserved trees. ([Ord. 478](#) § 6, 2009; [Ord. 335](#) § 2, 2003; [Ord. 239](#) § 4, 1999; [Ord. 175](#) § 1, 1997)

21.16.100 Landscaping – Alternative options.

The following alternative landscape options may be allowed only if they accomplish equal or better levels of screening and are subject to Development Services Director approval:

(1) When the total area for required landscaping and that within the dripline of retained trees exceeds 15 percent of the area of the site, the landscaping requirement may be reduced so that the total required landscape and tree retention area will not exceed the 15 percent of site area;

(2) The width of the perimeter landscape strip may be reduced up to 25 percent along any portion where:

(a) Berms at least three feet in height or architectural barriers at least six feet in height are incorporated into the landscape design; and

(b) The landscape materials are incorporated elsewhere on-site;

(3) The width of the perimeter landscaping may be reduced up to 10 percent when a development retains an additional 10 percent of significant trees or 10 significant trees per acre on-site (above the requirements of WMC 21.15.070), whichever is greater;

(4) The landscaping requirement may be modified when existing conditions on or adjacent to the site, such as significant topographic differences, vegetation, structures or utilities would render application of this chapter ineffective or result in scenic view obstruction;

(5) Street perimeter landscaping may be waived provided a site plan is approved that provides a significant amount of street trees and other pedestrian-related amenities;

(6) When an existing structure precludes installation of the total amount of required site perimeter landscaping, such landscaping material shall be incorporated on another portion of the site; and

(7) The width of the perimeter landscaping may be averaged, provided the minimum width is not less than five feet. ([Ord. 478 § 6, 2009](#); [Ord. 465 § 27, 2008](#); [Ord. 335 § 2, 2003](#); [Ord. 175 § 1, 1997](#))

21.16.110 Landscaping – Irrigation.

(1) Except for areas of undisturbed existing vegetation or low areas with existing high soil moisture conditions, landscape areas shall have temporary irrigation systems. Such systems shall be removed after 24 months or two growing seasons, whichever occurs first; provided, that the plantings are established;

(2) Areas of undisturbed existing vegetation or areas where existing site conditions assure adequate soil moisture for growth within the required landscape area shall have temporary irrigation systems only as required to sustain new plantings and shall be determined on a case-by-case basis by the Development Services Director; and

(3) Areas of undisturbed existing vegetation, low areas with existing high soil moisture conditions, or landscape areas consisting of drought-tolerant vegetation shall not have permanent irrigation systems. Permanent irrigation systems may be permitted within all other required landscape areas; provided such systems shall be designed by a licensed landscape architect or certified irrigation designer and with:

(a) Moisture or precipitation sensors;

(b) Automatic timers set for operation during periods of minimum evaporation and that assure adequate moisture levels;

- (c) Head-to-head spacing, if sprinkler heads are proposed;
- (d) Pressure regulating devices;
- (e) Backflow prevention devices; and
- (f) Separate irrigation zones for:
 - (i) Turf and planting beds; and
 - (ii) Other nondrought-tolerant species. ([Ord. 465](#) § 27, 2008; [Ord. 335](#) § 2, 2003; [Ord. 175](#) § 1, 1997)

Attachment B: City of Woodinville Tree Code Table 21.15.060 -2- Tree Types

(6) Tree Plan Review Standards.

(a) Site Design for Development. Tree retention shall be pursuant to this chapter; provided, that such tree retention may use the priority trees listed below and may apply for alternative compliance under WMC [21.15.040](#). Tree plans shall comply with all other tree retention requirements in the Woodinville Municipal Code, including but not limited to those in Chapter [21.24](#) WMC, Development Standards – Critical Areas.

(i) Tree Retention Standards.

(A) Based on the tree plan information submitted by the applicant, the applicant’s qualified tree professional, and the City Tree Official’s evaluation of the trees and proposed development on subject property, the City Tree Official will designate each tree as a Type 1, 2 or 3 tree according to the criteria below. The priority shall be that Type 1 trees are preserved as far as is practicable.

(B) Table 21.15.060-2 – Tree Types.

Type 1 Tree	Type 2 Tree	Type 3 Tree
<p>A viable tree that is determined to be healthy and windfirm by a qualified tree professional, and provided the trees can be safely retained when pursuing alternatives to development standards, and meets at least one of these criteria:</p> <p>(a) Heritage trees;</p> <p>(b) Specimen trees;</p> <p>(c) Tree groves and associated vegetation that are to be set aside as preserved groves pursuant to WMC 21.15.100;</p> <p>(d) Wildlife habitat regulated under WMC 21.24.410 through 21.24.440;</p> <p>(e) Trees in geologically hazardous areas as regulated under WMC 21.24.290 through 21.24.310;</p> <p>(f) Trees that are more than 75 years old or have a diameter-at-breast-height of at least 20 inches; or</p> <p>(g) Trees that are a part of a grove that extends into abutting property, such as in a public park, open space, sensitive area buffer or otherwise preserved group of trees on adjacent private property. If significant trees must be removed in these situations, an adequate buffer of trees may be required to be retained or planted on the edge of the remaining grove to help stabilize the remaining trees.</p>	<p>A viable tree that is to be retained if feasible.</p>	<p>A tree that is either</p> <p>(a) not viable, or</p> <p>(b) is in an area where removal is unavoidable due to the anticipated development activity.</p>

(C) At the discretion of the City Tree Official, damaged or diseased or standing dead trees may be preserved and credited toward the tree preservation requirement if demonstrated that such trees will provide important

wildlife habitat and are not classified as a hazard or nuisance tree. Hazard or nuisance trees may be felled to prevent hazardous conditions.

(ii) Incentives and Variations to Development Standards. In order to retain trees, the applicant should pursue provisions in Woodinville's codes that allow development standards to be modified. The City Tree Official, Public Works Director, Parks and Recreation Director and Fire Marshal may review and recommend to the City Council what development standards may be modified to retain existing trees.

(iii) Additional Variations. In addition to the variations described above, the City Tree Official is authorized to require site plan alterations to retain Type 1 trees. Such alterations include minor adjustments to the location of building footprints, parking, driveways and access ways, and/or walkways, easements or utilities.

Attachment C: City of Seattle Green Factor Measurement

23.86.019 Green Factor measurement

A. Development standards for certain areas require landscaping that meets a minimum Green Factor score. All required landscaping shall meet standards promulgated by the Director to provide for the long-term health, viability, and coverage of plantings. These standards may include, but are not limited to, the type and size of plants, spacing of plants, depth and quality of soil, use of drought-tolerant plants, and access to light and air for plants. The Green Factor score shall be calculated as follows:

1. Identify all proposed landscape elements, sorted into the categories presented in Table A for Section 23.86.019
2. Multiply the square feet, or equivalent square footage where applicable, of each landscape element by the multiplier provided for that element in Table A for Section 23.86.019, according to the following provisions:
 - a. If multiple elements listed on Table A for Section 23.86.019 occupy the same area (for example, groundcover under a tree), count the full square footage or equivalent square footage of each element.
 - b. Landscaping elements in the right-of-way between the lot line and the roadway may be counted, provided that they are approved by the Director of the Department of Transportation.
 - c. Elements listed in Table A for Section 23.86.019 that are provided to satisfy any other requirements of this Code may be counted.
 - d. For trees, large shrubs, and large perennials, use the equivalent square footage of each tree or shrub according to Table B for Section 23.86.019
 - e. For vegetated walls, use the square footage of the portion of the wall covered by vegetation. All vegetated wall structures, including fences counted as vegetated walls, shall be constructed of durable materials, provide adequate planting area for plant health, and provide appropriate surfaces or structures that enable plant coverage.
 - f. For all elements other than trees, large shrubs, large perennials, and vegetated walls, square footage is determined by the area of the portion of a horizontal plane that lies over or under the element.
 - g. All permeable paving and structural soil credits together may not count for more than one third of the lot's Green Factor score.
3. Add together all the products calculated under subsection 23.86.019.A.2 to determine the Green Factor numerator.
4. Divide the Green Factor numerator by the lot area to determine the Green Factor score.

Table A for Section 23.86.019: Green Factor Landscape Elements

Green Factor Landscape Elements		Multiplier
(Use some kind of table like this and link these requirements to Type I, II and III and IV landscaping Requirements)		
A. Planted Areas (choose one of the following for each planting area)		
	1. Planted areas with a soil depth of less than 24 inches	0.1
	2. Planted areas with a soil depth of 24 inches or more:	0.6
	3. Bioretention facilities meeting standards of the Stormwater Code, Title 22 Subtitle VIII of the Seattle Municipal Code	1.0
B. Plants		
	1. Mulch, ground covers or other plants	0.1

	normally expected to be less than 2 feet tall at maturity.	
	2. Large shrubs or other perennials at least 2 feet tall at maturity	0.3
	3. Small trees	0.3
	4. Small/medium trees	0.3
	5. Medium/large trees	0.4
	6. Large trees	0.4
	7. Preservation of existing large trees at least 6 inches in diameter at breast height	0.8
C. Green roofs		
	1. Planted over at least 2 inches but less than 4 inches of growth medium	0.4
	2. Planted over at least 4 inches of growth medium	0.7
D. Vegetated walls		
E. Water features using harvested rainwater and under water at least six months per year		0.7
F. Permeable paving		
	1. Installed over at least 6 inches and less than 24 inches of soil and/or gravel	0.2
	2. Installed over at least 24 inches of soil and/or gravel	0.5
G. Structural soil		
H. Bonuses applied to Green Factor landscape elements:		
	1. Landscaping that consists entirely of drought- tolerant or native plant species	0.1
	2. Landscaping that receives at least 50 percent of its irrigation through the use of harvested rainwater	0.2
	3. Landscaping visible from adjacent rights-of-way or public open space	0.1
	4. Landscaping in food cultivation	0.1

Table B for Section 23.86.019

Equivalent square footage of trees and large shrubs (This assures that trees have adequate space to grow and be healthy)

Landscape Elements	Equivalent Square Feet
Large shrubs or large perennials	12 square feet per plant
Small trees	75 square feet per tree
Small/medium trees	150 square feet per tree
Medium/large trees	250 square feet per tree
Large trees	350 square feet per tree

Existing large trees	20 square feet per inch of trunk diameter 4.5 feet above grade
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Legislative history/notes:

(Ord. [123495](#) , § 101, 2011; Ord. No. [123209](#) , § 67, 2009; Ord. [122935](#) , § 24, 2009.)

Attachment D: City of Tacoma Landscaping Code

13.06.502 Landscaping and/or buffering standards.

A. General requirements. The landscaping section is divided into four sections, with one each specifically addressing the landscaping requirements for development in Residential Zoning Districts, Commercial Zoning Districts, Mixed-Use Zoning Districts, or Industrial Zoning Districts. In addition to the standards outlined in each of those tables, the general requirements contained herein and the landscaping types outlined in subsection F apply to all districts.

1. Intent. The landscaping requirements, as a whole, are intended to contribute to the aesthetic environment of the City; provide green spaces that can support the urban citywide tree canopy; wildlife, such as birds, in the urban environment; help reduce storm water runoff; filter pollution; and buffer visual impacts of development.

2. Applicability. Unless specifically exempted, landscaping shall be provided consistent with this section for all new development, including structures and/or parking lots, as well as alterations to existing development, as outlined below.

a. Alterations. Three thresholds are used to gauge the extent of landscaping standard compliance on alterations to existing development:

(1) Level I alterations to a site include all remodels and/or additions within a two-year period whose cumulative value is less than 50% of the value of the existing development or structure, as determined by the Building Code, excluding purchase costs of the property and/or structure. The requirement for such alterations is only that the proposed improvements meet the standards and do not lead to further nonconformance with the standards. For example, for an expanded parking area, landscaping would be required for the new parking area, but the applicant would not be required to bring an existing parking area into conformance with these landscaping standards.

(2) Level II alterations to a site include all remodels and/or additions within a two-year period whose cumulative value ranges from 50% to 200% of the value of the existing development or structure, as determined by the Building Code, excluding purchase costs of the property and/or structure. All standards that do not involve repositioning the building or reconfiguring site development shall apply to Level II.

(3) Level III alterations to a site include all remodels and/or additions within a two-year period whose cumulative value exceeds 200% of the value of the existing development or structure, as determined by the Building Code, excluding purchase costs of the property and/or structure. Such developments shall be brought into conformance with ALL of the applicable landscaping standards.

(4) The standards do not apply to remodels that do not change the exterior form of the building. However, if a project involves both exterior and interior improvements, then the project valuation shall include both exterior and interior improvements.

(5) No alteration shall increase the level of nonconformity or create new nonconformities to these standards.

3. Required landscape plans shall be prepared by a licensed landscape architect, certified nursery professional, or certified landscaper. Exempted developments:

a. Residential developments with less than 7 units.

b. Non-residential and mixed-use developments featuring less than 500 square feet of landscaping.

4. Native landscaping. The retention and use of new native landscaping is encouraged and permitted for any and all landscaping. New landscaping materials shall include species native to the Puget Sound lowland region of the Pacific Northwest or non-invasive naturalized species that have adapted to the climactic conditions of the region in the following minimum amounts:

a. 50 percent of trees.

b. 75 percent of ground cover and shrubs. – SAME AS THE CITY OF WOODINVILLE

5. Landscaping, visibility and safety. Except in cases where required landscaping is intended to provide dense visual buffers, trees and shrubs shall be selected and maintained to maximize visibility at eye level for safety. To meet this requirement, shrubs shall be chosen and maintained at no taller than 3 feet. Trees shall be selected and pruned (once tall enough) to maximize views below 7 feet in height. Limited flexibility in the selection of trees and shrubs shall be allowed to address unique circumstances such as unusual topography, existing features, or where strict adherence to this standard is not necessary to meet the intent. This provision does not apply to buffers required along property lines that abut residentially-zoned property and to Landscaping Type A.

6. Street trees.

a. Street trees shall be compatible with other trees in the vicinity by variety, species, and planting pattern. Trees and any associated grates must comply with any applicable, adopted business area improvement plan, streetscape design plan, and/or the City's Tree Planting Program.

Tacoma Municipal Code

- b. Street trees should generally be evenly spaced to create or maintain a rhythmic pattern, but can be provided with variations in spacing and/or grouped to accommodate driveways, building entrances, other streetscape amenities, etc. To achieve consistency with an existing, well-established pattern of tree spacing, the quantity of required street trees may be reduced.
- c. Street trees shall, when possible, be planted within the right-of-way adjacent to the curb and between the pedestrian lane/sidewalk and curb. When this is not possible, street trees may be located within the right-of-way and behind the sidewalk. If neither of these preferred locations is possible, such as when existing infrastructure prevents trees from being planted within the right-of-way, trees located within 10 feet of the right-of-way may be counted as street trees.
- d. In cases where street trees are provided adjacent to a required buffer, the trees provided as street trees may be used to reduce the number of trees required in the buffer area.

7. General tree size standards. Unless specified otherwise, trees provided to meet the landscaping requirements shall be consistent with these minimum size standards. For deciduous trees, at least 50% of the trees provided shall be a minimum 2-inch caliper at the time of planting, with the remaining deciduous trees a minimum 1½-inch caliper. The caliper of deciduous trees shall be measured 4½ feet above the root ball or grade (diameter at breast height, or DBH). For evergreen trees, at least 50% of the trees provided shall be a minimum of 6 feet tall at the time of planting, with the remaining evergreen trees a minimum of 5 feet tall at the time of planting. Evergreen trees provided to meet these requirements shall also be species with the ability to develop a minimum branching width of 8 feet within 5 years. In all cases, trees that are provided that are above and beyond the landscaping requirements can be smaller.

THIS REQUIREMENT WOULD BE GOOD FOR ENCOURAGING BETTER DESIGN

8. General tree variety standards. In order to improve and protect the health, aesthetic quality, and sustainability of the City's urban forest, projects shall provide a mix of trees. For projects that involve the planting of between four and ten trees, at least two different kinds (genera) of trees shall be included. For projects involving the planting of more than ten trees, at least three different kinds (genera) of trees shall be included.

9. General shrub size standards. Unless specified otherwise, shrubs provided to meet these requirements shall be from a minimum 3-gallon container.

10. Landscaping quantity calculations. When a specified amount or number of trees or plants is specified, that shall be the minimum number required. Any requirement resulting in a fraction, when applied, shall be rounded up or down to the nearest whole number. In cases where the minimum is expressed as a ratio of a number of trees or shrubs per a specified amount of area or length of site frontage or buffer (such as 3 trees per 100 feet of street frontage), the number of required trees or shrubs shall be calculated by applying the ratio to the square footage of the area or length of the associated frontage or buffer. For example, under a street tree requirement of 3 trees per 100 feet of street frontage, a site with 50 feet of street frontage would require 2 trees ($50 \times 3/100 = 1.5$, which rounds up to 2) and a site with 90 feet of street frontage would require 3 trees ($90 \times 3/100 = 2.7$, which rounds up to 3). The same planting may satisfy more than one requirement, unless specifically noted otherwise.

11. Minimum landscaped area – overall site. Where a minimum amount of landscaped area is identified for an entire site, that percentage shall be considered the minimum requirement. More specific requirements that also apply, such as buffering or parking lot landscaping, may necessitate more landscaping than this minimum.

12. Credits for retaining existing trees and shrubs. These requirements are provided to encourage tree preservation because of the greater visual and ecological benefits of mature plantings.

INCENTIVES FOR EXISTING TREE RETENTION

a. The following tree planting credits are available for existing trees, provided an arborist's or landscape architect's appraisal determines that the tree(s) is healthy and can be saved. If retained trees are damaged during or after construction, replacement shall be based upon the same ratios.

- One required tree for every retained tree of at least equal size;
- Two required trees for every retained tree that is 8 inches to 20 inches in diameter (measured at breast height);
- Three required trees for every retained tree 20 inches to 32 inches in diameter (measured at breast height);
- Four required trees for every retained tree over 32 inches in diameter (measured at breast height).

b. Existing shrubs, which comply with the minimum plant size specifications of this table, may count towards the required landscape plantings. Invasive plants, such as blackberry and scotch broom, shall not count towards the required plantings.

THIS REQUIREMENT ALONG WITH INCENTIVES FOR PERVIOUS PAVERS AND STRUCTURED SOILS WOULD ENCOURAGE LARGER AND MORE STORM RESISTANT TREES

13. Minimum unpaved planting area per tree. Trees shall be provided with the following minimum planting areas:

a. Parking lot trees and other trees on private property; 60 square feet, 5-foot minimum width. b.

Street trees in the right-of-way; 24 square feet; 4-foot minimum width.

c. Street trees in right-of-way with tree grates; 16 square feet; 4-foot minimum width.

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Tacoma Municipal Code

THIS PROVISION HELPS ENSURE THE LONG TERM HEALTH OF TREES

14. Minimum tree trunk setbacks. Trees shall be planted a minimum of 2 feet from a sidewalk or curb, 5 feet from a structure, and 10 feet from pedestrian light standards or parking lot light standards. However, limited flexibility in the placement of trees shall be allowed to address unique circumstances such as unusual topography or where other required or existing features limit the ability to strictly meet this standard.

15. Installation. Landscaping meeting the standards of this section shall be installed by the time of final occupancy.

16. Maintenance. Landscaping shall be maintained in a healthy, growing, and safe condition, and replaced or repaired as necessary, during the plant establishment period and for the life of the project. Pruning of required trees or shrubs shall be for the purpose of maintaining the tree or shrub in a healthy growing condition and/or to enhance its natural growing form. Trees and shrubs shall not be excessively pruned such that it adversely affects the healthy living condition of the plant, significantly damages the natural growing form of the plant, or eliminates or significantly reduces the purpose for the planting. Modifications to the landscaping shall be in conformance with these standards and subject to approval of the City.

City Clerk's Office

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(Revised 06/2013)

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