

CITY OF PUYALLUP
DEVELOPMENT AND PERMITTING SERVICES DEPARTMENT
Planning Division

VEGETATION MANAGEMENT STANDARDS
ADMINISTRATIVE POLICIES AND PROCEDURES
November, 2022

Policy Procedure Number _____

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Date: 11/17/2022

TITLE: Vegetation Management Standards

Distribution: All Employees _____ Managers _____ Others

VEGETATION MANAGEMENT STANDARDS ('VMS')

SECTIONS:

- 1.0 PURPOSE
 - 1.1 GOALS
- 2.0 CITY DEPARTMENTS AFFECTED
- 3.0 AUTHORITY AND REFERENCE
- 4.0 RESPONSIBILITIES
- 5.0 SCOPE
 - 5.1 ENVIRONMENTALLY CRITICAL AREAS
 - 5.2 OVERLAY AREAS
- 6.0 LANDSCAPE PLANTING PLAN
 - 6.1 DESIGN CONSIDERATIONS
 - 6.2 LANDSCAPE PLAN REQUIRED
 - 6.3 PRELIMINARY PLANS
 - 6.4 FINAL PLANS
 - 6.5 CLEAR SIGHT TRIANGLE
- 7.0 MATERIAL STANDARDS
 - 7.1 PLANT MATERIAL - GENERAL STANDARDS
 - 7.2 PLANT MATERIAL - REQUIRED SIZES
 - 7.3 NATIVE PLANT MATERIALS
 - 7.4 NON-VEGETATIVE LANDSCAPE MATERIAL
- 8.0 LANDSCAPE INSTALLATION STANDARDS
 - 8.1 GENERAL INSTALLATION STANDARDS
 - 8.2 SOIL QUANTITY AND QUALITY STANDARDS
 - 8.3 MULCHING
- 9.0 GUARDING AGAINST DAMAGE
 - 9.1 VEGETATION PROTECTION
 - 9.2 EXCAVATING IN ROOT ZONE
 - 9.3 VIOLATION - PENALTY FOR DAMAGE
- 10. COEXISTING AND NATIVE VEGETATION
 - 10.1 EXISTING TREES
 - 10.2 EXISTING VEGETATION
- 11.0 MAINTENANCE STANDARDS
 - 11.1 GENERAL MAINTENANCE
 - 11.2 BUFFERS AND OPEN SPACE
 - 11.3 CULTIVATED AREAS
 - 11.4 STREET TREE OBSTRUCTION CLEARANCE
 - 11.5 STREET TREE AND VEGETATION MAINTENANCE
- 12.0 STREET TREE SELECTION AND INSTALLATION STANDARDS
 - 12.1 WORK NOTIFICATION
 - 12.2 TREE INSTALLATION CENSUS
 - 12.3 STREET TREE MATERIAL STANDARDS

- 12.4 STREET TREE LOCATION AND SPACING
- 12.5 TREE SELECTION
- 12.6 STREET TREE MIX
- 12.7 CLASS I – OVERHEAD UTILITY STREET TREES
- 12.8 CLASS II - NARROW STREET TREES
- 12.9 CLASS III - MEDIUM STREET TREES
- 12.10 CLASS IV - BOULEVARD STREET TREES
- 12.11 CLASS V – PROHIBITED TREES
- 13.0 LANDSCAPE BUFFERS
 - 13.1 REQUIRED LANDSCAPE TYPES FOR PERIMETER LOT LINES
- 14.0 LANDSCAPE TYPES - PERIMETER BUFFERS
 - 14.1 TYPE I (VISUAL BARRIER)
 - 14.2 TYPE II
 - 14.3 TYPE III
 - 14.4 TYPE IV
 - 14.5 SLD-01, SLD-02
- 15.0 GENERAL REVISIONS
 - 15.1 ADMINISTRATIVE EXCEPTIONS OR MODIFICATIONS
 - 15.2 OVERLAY DISTRICTS
 - 15.3 CONFLICTS
- 16.0 COMPLETION OF INSTALLATION - SURETY
 - 16.1 SURETY FOR DELAYED LANDSCAPE INSTALLATION
 - 16.2 LARGE PROJECT SURETY OR WARRANTY
- 17.0 MAINTENANCE SURETY AND ENFORCEMENT
 - 17.1 RELEASE OF SURETY WITH PLAN CONFORMITY
 - 17.2 SURETY HELD ON NON-CONFORMING LANDSCAPES
- 18.0 EFFECTIVE DATE
- 19.0 DEFINITIONS
- 20.0 APPENDICES
 - 20.1 PUYALLUP MUNICIPAL CODE 11.28
 - 20.2 PUYALLUP MUNICIPAL CODE 20.58
 - 20.3 NATIVE LANDSCAPE PLAN EXAMPLES
 - 20.4 PLANTING AND ROOT BARRIER DETAIL
 - 20.5 STANDARD TREE PROTECTION DETAIL
 - 20.6 VIEW CORRIDOR TREE TRIMMING EXAMPLES
 - 20.7 SIGHT TRIANGLE DIAGRAM
 - 20.8 TREE REMOVAL, PRUNING AND PLANTING APPLICATIONS
 - 20.9 DOE BMP T5.13
 - 20.10 TREE PROTECTION STANDARDS ON CONSTRUCTION SITES
 - 20.11 ANSI A300, Z60.1 STANDARDS
 - 20.12 ANSI Z133.1 SAFETY STANDARDS
 - 20.13 LANDSCAPING PLAN EXAMPLE
 - 20.14 WHY TOPPING HURTS TREES
 - 20.15 TYPE IV DESIGN STANDARDS – SAMPLE SITE PLAN

1.0 PURPOSE: To establish uniform policies, procedures, and standards relevant to vegetation management within the rights-of-way, established setbacks and other lands owned or controlled by the City of Puyallup and all other areas where landscaping or a landscape plan is required by the Puyallup Municipal Code (PMC). The standards contained in this document are intended to: encourage development which is economically viable; utilize the criteria that selection and maintenance of vegetation shall consider the horticultural, aesthetic, and urban design requirements in equal measure; promote environmentally sound practices and clarify, supplement and augment existing language in Titles 11, 20 and 21 of the PMC. Where conflict might arise, the more stringent or restrictive shall be controlling.

1.1 Goals

The vegetation management policies, procedures and standards are intended to achieve:

- A. The proper selection, installation, maintenance, preservation, and protection of vegetation within all areas controlled by City of Puyallup and all other areas where landscaping or a landscape plan is required by the PMC.
- B. To outline needed information to be provided on landscape plans when required.
- C. Conservation and enhancement of the City's physical and aesthetic environment through the proper utilization of vegetation to:
 - (1) Maximize the inherent functional qualities of vegetation while providing physical buffering and visual screening where required to achieve acceptable separation and transition between different uses or zones;
 - (2) Enhance and complement the existing natural landscape character;
 - (3) Provide positive climate and environmental modification, energy conservation, reduction, and control of storm water runoff and erosion;
 - (4) Increased development of potential urban wildlife habitat;
 - (5) Maintain and protect property values;
 - (6) Contribute to neighborhood identity, enhance the attraction of customers to commercial areas;
 - (7) Provide visual relief and reduction of heat island effect from expansive impervious surfaces and/or parking areas;
 - (8) Enhance the streetscape along public rights-of-way with an emphasis on street tree installation and maintenance.
- D. Protect and enhance of the quality of life, general welfare, and safety through increased stewardship of vegetation within areas controlled by the City of Puyallup; and,
- E. Implement the policies, goals and objectives outlined in the City of Puyallup Comprehensive Plan.

2.0 CITY DEPARTMENTS AFFECTED: Development and Permitting Services (Planning, Engineering and Building), Parks Department (Parks Maintenance), Public Works (City Engineer, Water, Sewer, Streets, Stormwater, Collections).

3.0 AUTHORITY and REFERENCE: The authority for establishing these policies, procedures and standards is granted to the Development and Permitting Services (Planning) Director

pursuant to the provisions set forth in various Puyallup Municipal Code Sections including: 11.28.010, 11.28.025(4); and 20.58.015(6).

4.0 RESPONSIBILITIES: Implementation of policies and standards are primarily carried out by the lead processor of various development applications. Lead processors or “case managers”, within Development and Permitting Services are primarily responsible for implementation and monitoring compliance. The Planning Division is typically the lead in reviewing, approving, and inspecting landscape plans. Staff members from Engineering Services, Public Works and the Parks Department/Parks Maintenance may also be involved. Other staff members of the development permit team will have adjunct responsibility to work with the case planner. Additional City staff may handle enforcement, research, and field duties. Staff may include the City’s Certified Arborist, technicians from Planning or Parks handling field work concerning landscape plan compliance, street tree placement or vegetation management. The Development and Permitting Services Department Code Enforcement Officer may assist with enforcement.

5.0 SCOPE: This policy shall apply to all rights-of-way, established setbacks, street tree easements, regulated critical areas and other lands regulated, owned, or controlled by the City of Puyallup, and all other areas where landscaping or a landscape plan is required by the Puyallup Municipal Code except as provided for in this section.

5.1 Environmentally Critical Areas

Nothing in this policy shall in any way alter or amend the provisions of the Environmentally Critical Areas Management Regulation as set forth now or as amended in the PMC. Where conflicts exist between tree maintenance or other provisions of this policy and the Environmentally Critical Areas Management Regulation, the more stringent or restrictive shall be controlling.

5.2 Overlay Area Establishment

Upon appropriate City approval, overlay areas may be established that set forth additional, different, or unique requirements or specifications for tree and vegetation installation and/or maintenance with the intent of improving the functional or aesthetic qualities of a specific area. Overlay areas may include but are not limited to entry nodes or corridors, gateway corridors, sub-plan areas, pedestrian districts, special business districts, historic districts, or neighborhood plan areas.

6.0 LANDSCAPE PLANTING PLAN: Landscape plans are required as part of the development process as described in PMC 20.58.010 (see Appendix 20.2).

6.1 Design Considerations

In addition to the application of appropriate functional requirements described in Section 14, all landscaping shall incorporate the following design criteria:

- A. Selection and placement of design material shall consider the horticultural, functional, and aesthetic requirements in equal measure;

B. Design materials shall be combined with the existing site opportunities through the application of artistic principles (variety, emphasis, repetition, balance sequence) to the basic elements (line, form, color, texture) to produce a visually pleasing design that is more than just functional decoration;

C. Establish groupings or zones of plant material that have compatible horticultural and maintenance requirements. Groups or zones of plants should coordinate with proposed irrigation hydrozoning as well as topographic features to best utilize precipitation along with the natural movement of surface and sub-surface water;

D. Select and locate plants to match the existing site conditions with the plant's horticultural needs. Plant selection should coordinate and enhance the existing local

natural vegetation as well as integrate native vegetation in landscape plans, where appropriate;

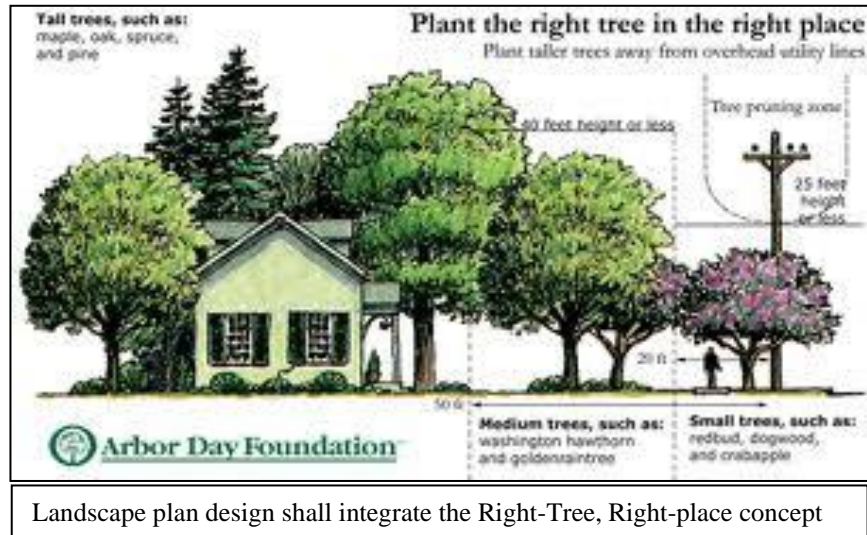
E. Develop site specific designs that integrate and accentuate the positive project features while providing a beneficial and functional addition to the greater community landscape, while respecting the need for sustainable landscape installation (e.g., Right-Tree, Right-Place); and,

F. Develop landscape plans and designs that respect and integrate the need for healthy and adequate soil volume needed to develop landscaping and grow large trees that will produce functional environmental services and benefits.

6.2 Landscape Plan Required

Landscape plans are required for projects as described in PMC Chapter 20.58 and are briefly summarized here. No permit or license for new construction, including the physical expansion of an existing building or parking lot, or for moving a building shall be issued unless a landscape plan for such improvement has been approved by the Director. This provision does not apply to single-family and multiple-family developments with four or less units per enabling language in PMC 20.58 and 11.28.

Landscape plans for all projects involving new structures or 10,000 square feet or greater or 20,000 square feet or greater of affected site area shall be prepared by a professional landscape architect licensed in this state unless this requirement is expressly waived by the Director, where allowed by law. For smaller projects with unique site or development characteristics, the Director shall have the authority to require that a landscape architect licensed in this state prepare the plan.



Landscape plan design shall integrate the Right-Tree, Right-place concept

6.3 Preliminary Plans

A preliminary landscape plan shall be submitted during the land use permit process, (e.g., preliminary site plan, conditional use permit, preliminary plat) for staff review. A preliminary plan may indicate existing and proposed shrubs and trees as masses rather than showing individual plants. Only general or proposed plant types need to be identified at this time except for those existing trees to be identified as heritage or significant as described in section 10 of this document which must be specifically identified, although a more detailed planting plan will enable more specific comments by staff on placement and selection of plant material. Plant quantities are encouraged but not required on the preliminary plan. Additionally, preliminary plan shall meet the following criteria. (Note: Greater detail than what is outlined here may be required if the project landscaping is a key element for mitigation or satisfying an applicable PMC requirement.)

- A. Drawing with a verifiable scale;
- B. Landscape plans shall be submitted on standard sized sheet(s) and contain standard informational labeling such as title block, north arrow, scale, date of submission etc.
- C. Provide address or location of project, tax assessor's parcel number and name/business name and mailing address for: property owner, developer or applicant, landscape designer and landscape installer;
- D. Show existing and proposed buildings, walks, parking areas, driveways, and other hardscape site elements;
- E. Show property lines, easements, rights-of-ways, existing and proposed streets, or alleys, loading and storage areas, designated open space, and recreational amenities;
- F. Identify location and dimensions of any Environmentally Critical Area and the associated buffer;
- G. Show location of storm water retention, detention, and drainage ponds and swales;
- H. Provide approximate location for existing and general trench depth or height from final grade for new utilities, including overhead or underground power, water, sewer, cable television, telephone or other lines that may impact the aesthetics or vegetation on site;
- I. Define all areas devoted to landscaping clearly showing all existing plant materials to be retained;
- J. Show all areas reserved for future development and proposed use;
- K. Identify proposed and existing physical landscape elements such as fences, walls, all retaining structures with approximate height and light fixtures;
- L. Identify all areas with existing or proposed grades of 15 percent or greater. Sections, elevations, or spot elevations of existing and/or proposed contours may be required;
- M. Provide size and location of proposed topographic features within the area to be landscaped such as berms or swales;
- N. Provide a contour plan when requested, for proposed landscape features such as berms or swales which have slopes exceeding 15 percent. Plans will show elevation intervals no greater than two feet for the proposed landscape feature. Additionally, elevation and/or section diagrams with cross section location clearly shown may be required;
- O. Label all areas devoted to turf or lawn and indicate the method of establishment (seed, hydroseed or solid sod).

6.4 Final Plans

Final landscape plans shall be consistent with, and incorporate any comments made by staff during the preliminary landscape plan review. Final plans which are normally submitted with final permit applications will include all information required by section 6.2 (preliminary plans). Final landscape plans are submitted during the civil permitting stage of the construction permitting process unless no civil permits are required in which case final landscape plans shall be reviewed and approved along with any building permits. The final landscape plan shall be included with the final civil construction permit drawings when final mylar drawings are submitted for city record keeping. Final landscape plan shall meet the following criteria:

A. Identify all proposed plants to be installed. Plants should be clearly labeled and linked to a plant schedule that includes common name, botanical name, quantity, installation size, planting method/condition, on-center spacing, and other information necessary to describe the plant material;

B. Provide location and extent for all inert ground covers such as stone, landscape paving, and all non-living organic ground covers including bark or mulch;

C. Identify all civil utilities overlaid on the proposed landscape plan, fire hydrants, fire department connections, check valves, light poles, street signs, ornamental fountains, trash receptacles, bollards, gates, drinking fountains, pools, benches, or other landscape furnishings.

D. Show all existing and proposed landscape watering facilities. Depending on the site and complexity of the facilities, this may include an 'as built' plan;

E. Indicate all provisions for handicapped parking and access ramps into buildings;

F. Include appropriate details to illustrate fine, complex, or special construction requirements for landscape elements;

G. Show details for tree staking when applicable and consistent with city standards for all landscaping (public and private).

H. Include cross-section details showing typical tree and shrub installation. Identify procedures for inspecting nursery stock, including corrective practices needed prior to installation (e.g., correcting circling roots, removing dead branches, inspecting/correcting branch architecture for defects, etc.). If needed, show planting methods and spacing for: bare root, container-grown, ground cover or any material requiring special or unusual installation; (See VMS appendices for an example of a landscape plan with plant schedule and details)

I. Identify all soil resources on site currently and analyze their potential re-use on-site. Identify all soil resources to be used and estimated soil volumes to meet the soil depth and quantity requirements stipulated by section 8.2 and type IV landscaping treatment; provide details of soil source and composition. Identify if soil will be imported or if on-site soils will be retained and amended.

J. Furnish other information or submissions consistent with this chapter as may be required by staff or the Director.

6.5 Clear Sight Triangle

Adjacent to public rights-of-way and points of access, no fences or landscape material at maturity, shall exceed three (3) feet (36") above the local finish grade within a clear sight

triangle. The dimensions of the required sight triangle are described in the PMC and illustrated in Appendix 20.7.

7.0 MATERIAL STANDARDS:

7.1 Plant Material - General Standards

At the time of installation, landscape plants required by the Puyallup Municipal Code, or this document shall be healthy, vigorous, disease-free specimens that meet or exceed the minimum standards presented below.

A. All planting material shall meet or exceed the most recent standards established in the publication 'American Standards for Nursery Stock', ANSI Z60.1-2004 or current successor, of the American Association of Nurserymen (AAN).

B. Specific size, location, spacing, installation, maintenance and/or removal techniques not specifically stated herein shall conform to prevailing arboricultural and horticultural best management practices and /or the most recent standards as set forth by the American Association of Nurserymen, International Society of Arboriculture or applicable equivalent.

C. All plants installed shall be of the type, size and condition shown on the project's approved final landscape plan. Plants shall exhibit normal habits of growth for the species, shall be free of scars, bruises, breaks to major branches and weed roots and seeds. Trees shall be pruned to correct any structural defects in the branch architecture (e.g., co-dominant stems, crossing branches, branch spacing, etc.) as well as correct circling/girdling roots in the root ball.

D. Plants shall be spaced appropriately for their type, function, and intent within the landscape design (massing, screening, specimen). For example, plants used for screening need to be spaced more closely than those for individual display.

E. All plants shall be from stock which has been cultivated. Use of collected native material shall only be used with prior Director approval. All stock shall be acclimatized to conditions like those prevailing at the project site.

F. No artificial lawn or plant material shall be accepted as satisfying landscape requirements.

7.2 Plant Material - Required Sizes

All non-street tree landscape material shall meet or exceed the following size standards at time of installation. Required sizes for street tree material is described in section 12.3. In some instances, additional or larger sized material may be required to mitigate the loss of on-site vegetation, to provide more immediate vegetation re-establishment, screening or buffering of the project site, or as other mitigation as determined appropriate by the Director. The following standards shall not apply in voluntary restoration of natural or critical areas.

A. All small deciduous trees, those less than 25 feet tall at maturity, shall be at least 1" caliper, preferably 1.5" or larger, and branched with a strong, central single leader.

B. Medium or large deciduous trees shall be at least one (1") inch in caliper, preferably 1.5" or larger, and branched with a strong, central single leader.

C. All shrubs required by this document and/or Title 20 of the Puyallup Municipal Code shall be no smaller than two (2) gallon in size at the time of planting, unless otherwise specified.

D. All groundcover materials required by this document and/or Title 20 of the Puyallup Municipal Code shall be no smaller than one (1) gallon in size, unless otherwise specified.

F. Coniferous evergreen trees shall be a minimum of 5 to 6 feet in height.

G. Any material not specifically listed shall meet current AAN standards and be of appropriate size to satisfy the intent of this document and/or the PMC.

7.3 Native plant materials

A minimum of 50 percent of the shrubs and ground covers used in projects under the requirements of the PMC and the VMS shall be native to the Puget Sound region. Drought tolerant non-PNW Native species, such as xeriscape plants, may be used as a substitute to native plant requirements to create landscapes adaptable to climate change and localized heat island issues that may not allow PNW native species to successfully establish. PNW native species shall be used in all cases as a first priority; the project landscape architect must detail why xeriscape species of plants would be used as a supplement or substitute.

7.4 Daffodils

The Puyallup area has a long history with daffodil bulb agricultural cultivation. To reflect that cultural heritage, daffodils shall be used in all perimeter yard areas. All perimeter landscape yard areas required by PMC 20.58 shall include *Narcissus trumpet* 'King Alfred' or 'Dutch Master' in the first 3' of landscape areas behind the property line, planted at 6" on-center. Other groupings of *Narcissus* shall be used in groupings through landscape areas.

A. Daffodil Bulbs may be interspersed throughout the perimeter landscape areas with standard landscaping shrubs/ground cover/trees, as required.

B. Other varieties of *Narcissus trumpet* may be used, with the preference of 'King Alfred' or 'Dutch Master' in the frontage areas closest to any property line for visibility from the right of way.

C. Daffodil bulb planting shall be completed at appropriate time of year to allow establishment (September – November). Applicants may be required to post an assignment to secure the installation at the appropriate time of year. Project landscape architect may spec an alternative time of year to plant, such as during the winter or very early spring.

7.5 Non-vegetative Landscape Material

A. Bark, mulch, gravel, or other non-vegetative material shall only be used in conjunction with ground cover plantings to assist growth and maintenance or to visually complement plant material. Non-vegetative material is not a substitute for and should not appear to be visually dominate over plant material.

B. All non-vegetative ground cover material shall be generally free of foreign material and not detract from the overall design intent of the plan or these policies.

C. All non-vegetative material, site furnishings and built structures shall meet all applicable codes and be installed in a safe and professional manner.

8.0 LANDSCAPE INSTALLATION STANDARDS:

8.1. General Installation Standards

A. All work shall be performed and completed in a professional manner. All public rights-of-ways shall be cleared of all mud and debris at the completion of every workday. All on-site storage and work areas shall be maintained in a safe and hazard free condition.

B. All final landscape plans shall indicate the method of planting and tree staking when applicable. Staking shall only be used where demonstrated to be necessary. Newly planted trees installed in very loose soil or extremely windy locations shall be staked for one full growing season to minimize tree movement. The tree shall be secured to the stakes with a loose attachment that will allow the tree to grow without injury. The stake will be placed in such a manner that there will be no limb or bark damage. The stake shall not penetrate the root ball and be placed on the lee side of the prevailing winds. All stakes and attachment material will be removed by the contractor or property owner at the completion of the first full growing season.

C. In parking areas, trees and shrubs shall be planted at least two and one-half feet from the inside edge of the curb or wheel stop, where vehicles may overhang planted areas. Ground cover vegetation should be installed on a regular spaced grid pattern including the overhang area.

8.2 Soil Quantity and Quality Standards

Purpose and Definition

Naturally occurring (undisturbed) soil and vegetation provide important stormwater functions including water infiltration; nutrient, sediment, and pollutant adsorption; sediment and pollutant biofiltration; water interflow storage and transmission; and pollutant decomposition. These functions are largely lost when development strips away native soil and vegetation and replaces it with minimal topsoil and sod. Not only are these important stormwater functions lost, but such landscapes themselves become pollution-generating pervious surfaces due to increased use of pesticides, fertilizers and other landscaping and household/industrial chemicals, the concentration of pet wastes, and pollutants that accompany roadside litter. Establishing soil quality and depth regains greater stormwater functions in the post development landscape, provides increased treatment of pollutants and sediments that result from development and habitation, and minimizes the need for some landscaping chemicals, thus reducing pollution through prevention.

All soils in all landscape installations shall conform to the following soil depth and quality requirements. Please refer to appendix 20.9 for further installation guidance:

A. A minimum of eight (8) inches of topsoil, containing ten percent dry weight in planting beds, and 5% organic matter content in turf areas, and a pH from 6.0 to 8.0 or matching the pH of the original undisturbed soil. The topsoil layer shall have a minimum depth of eight inches (8") except where tree roots limit the depth of incorporation of amendments needed to meet the criteria. Subsoils below the topsoil layer should be scarified at least 6 inches with some incorporation of the upper material to avoid stratified layers, where feasible. Installation of the eight inches (8") of topsoil, as described above, shall generally be achieved by placing five inches

(5") of imported sandy loam topsoil into planned landscape areas (sub-base scarified four inches (4")) with a three-inch (3") layer of compost tilled into the entire depth.

B. **For street trees in the right of way planter strip**, the following standards shall apply in relation to soil depth, soil amendments and installation of new street trees. The following notes shall be shown on the face of the preliminary and final landscape plan sheets:

(1) **For new construction:** In areas where a new planter strip and street tree shall be established or reconstructed due to a street construction project, the planter strip area shall be excavated to a depth of 24" and backfilled following the standard above to achieve a topsoil mix with 40 percent compost by volume. The contractor or installer shall:

- i. **Review the city standard planting detail** – All contractors/installers are required to following city standard #01.02.07 (street tree planting) and #01.02.03 (root barrier installation). The contractor/installer shall review the planting standard detail prior to installation to understand the city's requirements. Failure to follow the standard may result in rejection of the work by the inspector and/or Planning Department.
- ii. **Schedule a field pre-construction meeting** - The contractor/installer shall contact the site inspector and Planning Department 48 hours in advance of the installation of street tree(s) for a field pre-construction meeting on-site to review the approved plan set and city standard details. If street trees are to be installed over a longer timeline (such as a residential plat where trees may be installed over a multi-month period), the contractor/installer shall hold one consolidated pre-con to review plans. All street trees shall be inspected after planting by the Planning Department.
- iii. **Excavate all construction materials** - Excavate all construction materials, remnant soil, gravel, pit run, construction debris, etc. from the planter strip area to a depth of 24" prior to planting. Discard this material as the placement of new compost amended topsoil is required.
- iv. **Prepare the planting strip** - After excavating all materials from the planter strip, scarify and rip the sub-base with the teeth of a backhoe bucket (or other mechanical means or hand tools) to a depth of 6" with multiple passes, 90 degrees to each other. Prior to planting the tree, re-compact the tree base where the street tree will be planted to avoid setting of the root ball.

At this stage, if the tree is to be planted when the planter strip is backfilled with amended topsoil, the contractor/installer should measure the depth of the root ball to determine when to place the tree in the pit during the backfilling process. If the root ball or root mass (in the case of bare root trees) is less than 24", the street tree shall be planted in a manner in which the root flare is level with or at least 1" above grade at the time of finished planting. This may require the root ball be placed on a compacted sub-base of the compost amended topsoil as backfilling is occurring,

- v. **Install root barrier panels** - At this stage the contractor/installer shall place 24" deep root barrier panels (UB-24) along the edge of the sidewalk and curb line for a total of eight feet (8') of lineal protection along either side of the planting area. The panels shall be installed perpendicular to the edge of paved surface in accordance with the manufacturer's standards for a 'linear' application; the root barrier panels **shall not** be installed in the planting pit as a 'surround' application, unless specified on the final landscape plans. The top of the root barrier panel shall be installed such that ½" of the root barrier is above the finished grade.
 - vi. **Compost amended topsoil required** – Topsoil source shall be reviewed and approved during the pre-construction meeting; all topsoil shall be a top quality sandy-loam mix, or equivalent as approved by the Planning Department. The topsoil shall be amended on site during installation with compost to achieve a 40 percent by volume topsoil mix in the right-of-way planter strip. Imported topsoil may be used by the contractor if data 'cut sheets' are available from the supplier certifying compost amendment equaling 40 percent by volume using one of the approved compost sources below. Compost shall only be sourced from:
 - **Cascade Compost** (also known as PREP/LRI) (available through Pierce County Recycling, Composting & Disposal, 10308 Sales Road, Tacoma, Washington 98499, or retail/wholesale landscape material suppliers)
 - **TAGRO Compost Mix** (available through City of Tacoma, 2201 E. Portland Avenue, Gate 6, Tacoma, WA, 98421, or retail/wholesale landscape material suppliers)
 - **Cedar Grove Compost** (available through Cedar Grove Compost, 17825 Cedar Grove Road S.E., Maple Valley, 98038, or retail/wholesale landscape material suppliers)
 - vii. **Install and amend topsoil** - To avoid stratified layers, first place seven inches (7") of approved topsoil in the prepared/scarified planting strip area and mechanically till in five inches (5") of approved compost; follow this procedure twice to achieve the total 24" topsoil depth. Finished grade of topsoil should be 1/2" below the edge of sidewalk to allow the root barrier panel to be properly installed above finished grade.
 - viii. **Install tree stakes and finish mulch** - Placement of four inches (4") of wood chip mulch, water basin rings, tree staking, and temporary irrigation bags (where required) shall follow city standard #01.02.07.
- (1) **For street trees to be planted in existing right-of-way planter strips:** In a planter strip which already exists, and a new street tree shall be installed, the following procedures shall be followed to achieve a topsoil mix with 40 percent compost by volume:
- i. **Excavate soil** - Excavate existing soil to a depth of 24" (or equal to the root ball depth, whichever is greater) and width of 8' (or three times (3X) wider than the root ball or root mass, whichever is greater). Stockpile excavated soil on a tarp away from the street and storm water catch basins.

- ii. **Prepare the planting strip** - After excavating all materials from the planter strip, scarify and rip the sub-base (by mechanical means or hand tools) to a depth of 6" with multiple passes, 90 degrees to each other. Prior to planting the tree, re-compact the tree base where the street tree will be planted to avoid setting of the root ball.

At this stage, if the tree is to be planted when the planter strip is backfilled with amended topsoil, the contractor/installer should measure the depth of the root ball to determine when to place the tree in the pit during the backfilling process. If the root ball or root mass (in the case of bare root trees) is less than 24", the street tree shall be planted in a manner in which the root flare is level with or at least 1" above grade at the time of finished planting. This may require the root ball be placed on a compacted sub-base of the compost amended topsoil as backfilling is occurring,

- iii. **Install root barrier panels** - At this stage the contractor/installer shall place 24" deep root barrier panels (UB-24) along the edge of the sidewalk and curb line for a total of eight feet (8') of lineal protection along either side of the planting area. The panels shall be installed perpendicular to the edge of paved surface in accordance with the manufacturer's standards for a 'linear' application; the root barrier panels **shall not** be installed in the planting pit as a 'surround' application, unless specified on the final landscape plans. The top of the root barrier panel shall be installed such that ½" of the root barrier is above the finished grade.
- iv. **Compost amended topsoil required** – The topsoil shall be amended on site during installation with compost to achieve a 40 percent by volume topsoil mix in the right-of-way planter strip. Imported topsoil may be used by the contractor/installer if data 'cut sheets' are available from the supplier certifying compost amendment equaling 40 percent by volume using one of the approved compost sources below. Compost shall only be sourced from:
- **Cascade Compost** (also known as PREP/LRI) (available through Pierce County Recycling, Composting & Disposal, 10308 Sales Road, Tacoma, Washington 98499, or retail/wholesale landscape material suppliers)
 - **TAGRO Compost Mix** (available through City of Tacoma, 2201 E. Portland Avenue, Gate 6, Tacoma, WA, 98421, or retail/wholesale landscape material suppliers)
 - **Cedar Grove Compost** (available through Cedar Grove Compost, 17825 Cedar Grove Road S.E., Maple Valley, 98038, or retail/wholesale landscape material suppliers)
- v. **Install and amend topsoil** - To avoid stratified layers, first place seven inches (7") of approved topsoil in the prepared/scarified planting strip area and mechanically till in five inches (5") of approved compost; follow this procedure twice to achieve the total 24" topsoil depth. Finished grade of

topsoil should be 1/2" below the edge of sidewalk to allow the root barrier panel to be properly installed above finished grade.

- vi. **Install tree stakes and finish mulch** - Placement of four inches (4") of wood chip mulch, water basin rings, tree staking, and temporary irrigation bags (where required) shall follow city standard #01.02.07.

B. The project landscape architect shall utilize one of the design methods outlined in appendix 20.9 in incorporating this standard. The landscape architect shall estimate total topsoil and compost import volumes and specify the topsoil and compost source during the final landscape plan review. A topsoil delivery ticket(s), invoice(s), or other physical proof that the correct quantity and quality of topsoil was delivered shall be provided at the time of final inspection.

8.3 Mulching

To minimize water use, reduce costs and use of chemicals for maintenance, all planting areas shall be mulched with a uniform four (4") inch layer of organic compost mulch material or wood chips over a properly cleaned, amended and graded subsurface. Four (4) inches of mulch in planting areas shall be maintained through the life of the project. Herbicides shall not be used in the mulch ring area for street trees; see city standard #01.02.07 for street tree mulch application and dimensions.

9.0 GUARDING AGAINST DAMAGE:

9.1 Vegetation Protection

Any person, firm or corporation engaged in the construction, alteration or repair of any street, sidewalk, parking area, building or portion thereof, prior to starting of any such activity, shall place proper guards or temporary fences to ensure the protection of adjacent existing vegetation from all damage or injury. This shall include the restriction on stacking, storing, stockpiling, or the accumulation of goods or material in the area defined as the Critical Root Zone. See appendix 20.10 for tree protection on construction and development sites best management practices. See appendix 20.5 for standard detail for protection of all trees (public, private)

In developing a tree protection plan, the applicant shall consult a certified arborist, with a certification in Tree Risk Assessment (TRAQ). All vegetation scheduled or conditioned to be retained during development or construction actions shall be assessed by a certified arborist in accordance with industry accepted arboricultural standards as well as the standards contained in appendix 20.10. The project arborist shall integrate any and all applicable protection and pre-conditioning measures outlined in appendix 20.10.

9.2 Excavation in Root Zone

To avoid damaging the health and stability of any existing tree which is to be retained, all root structures one (1) inch in diameter or greater found within the upper 24 inches of soil, should not be cut. All roots over two inches in diameter should be tunneled under. Use of

pneumatic air tools to remove soil around existing root system is preferred. As last resort, if roots are to be cut, they should be cut cleanly. All exposed/cut roots shall be immediately covered with wet burlap, wet hog fuel/wood chips/sawdust or damp soil or compost to prevent desiccation. No ripping or tearing of the root structure shall be allowed. At no time shall the amount of root disturbance pose a danger to the general health or stability of the tree.

9.3 Violation - Penalty for Damage

Penalties for damage to vegetation covered by this document shall follow the appropriate PMC Section(s) including 11.28 or 20.95.

10.0 EXISTING AND NATIVE VEGETATION:

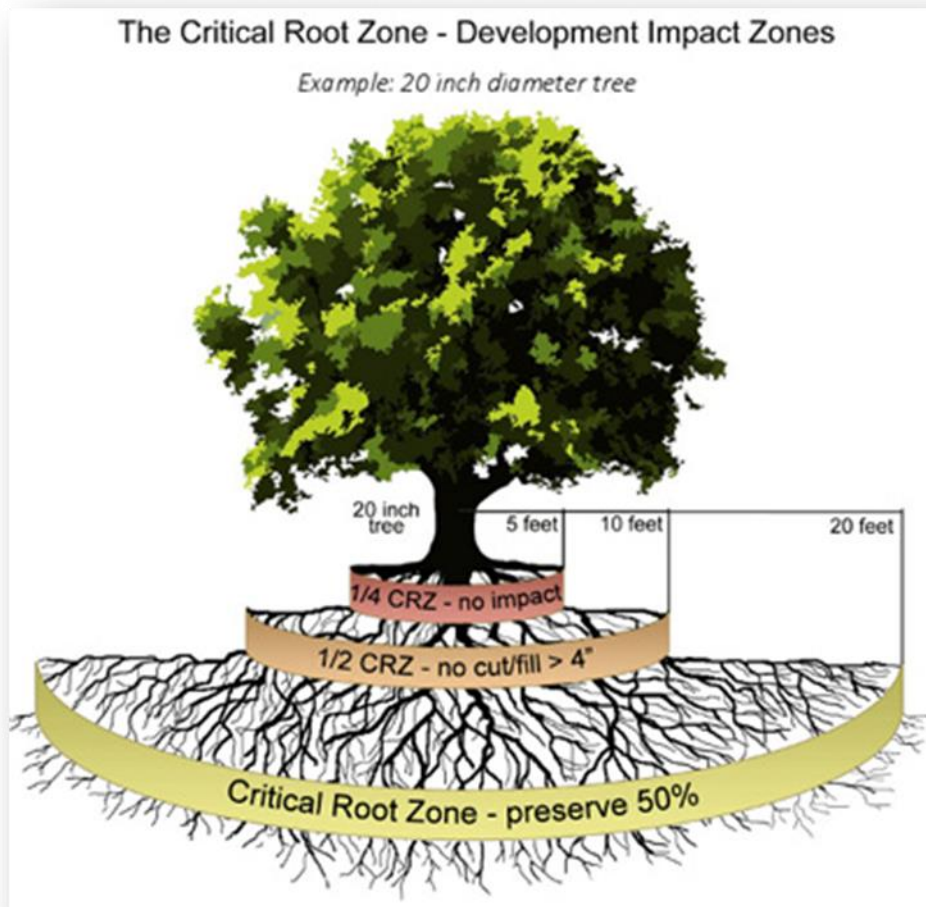
10.1 Existing Trees

To maintain and improve the environmental quality, comply with the intent of the Comprehensive Plan and to integrate the project with the existing vegetation, the following classes of trees shall be deemed worthy of retention per the standards of this section: significant trees and heritage trees. Significant trees (as defined below) on a single family or other residential property containing four (4) dwelling units or less are not regulated under the following standards, unless that tree is located in a critical area (as designated under PMC 21.06) or is a tree designated under the city's Heritage Tree Program (PMC 20.58.025).

See appendix 20.5 and 20.10 for further details regarding tree retention and protection during construction. Critical Root Zone areas shall be established using the following standards:

A. **Critical Root Protection Zones for Significant Trees.** In establishing the extent of the Critical Root Protection Zone (CRPZ) for individual significant trees, groupings of significant trees, a stand of significant trees, or a heritage tree the following formula shall be used:

- (1) Tree diameter (in inches) X 2, converted into feet = CRPZ diameter



(example: 20" tree X 2 = 40' CRPZ diameter)

- (2) A tree's root system ranges well beyond the dripline. The (CRPZ) has been established above to set a practical limit beyond which any loss of roots would not have a significant impact on a tree's survival. Certain conditions may require larger critical root zones to expect tree survival. Staff may request a larger preserved area for species that are less resilient to the impacts of development, high value trees, heritage trees, rare trees, and trees in sensitive site conditions. This request could identify a critical root zone 1.25 to 1.5 times larger than the minimum standard.
- (3) The following minimum design standards are established and shall be used to determine the extent of allowable impacts to the CRPZ of significant trees:
- i. For significant trees, a minimum of 50 percent of the critical root zone must be preserved at natural grade, with natural ground cover. For heritage trees, a minimum of 75 percent of the critical root zone must be preserved at natural grade with natural ground cover.

- ii. No cut or fill greater than four (4) inches will be located closer to the tree trunk than $\frac{1}{2}$ the CRPZ radius distance.
- iii. No cut or fill within the distance from the tree which is three (3) times the trunk diameter (also can be determined by calculating the $\frac{1}{4}$ CRPZ). For example, no cut is allowed within 60-inches of a tree which has a 20-inch diameter trunk.

These criteria represent minimum standards for determining whether or not a tree may be retained. Greater impacts may be allowed, provided that all design alternatives have been proven unfeasible and that a pre-conditioning and after care mitigation program is established. Such pre and after care program shall follow the guidelines for pre-conditioning found in appendix 20.10 (pages 18-20) and at a minimum shall include:

- i. Establishing and maintaining a 4-6" layer of hard wood chip mulch in the CRPZ
 - ii. Soil aeration using a high pressure air spade, pneumatic air tool or power auger to create a spoke patterned area around the base of the tree and throughout the CRPZ, back filled with compost to encourage root growth. See appendix 20.10, page 20, section 4 for specific standards.
 - iii. Temporary irrigation (soaker or drip irrigation) throughout the CRPZ during construction
- (4) The CRPZ shall be shown on the final clearing (CFG and TESC) plan sheets (under the civil site development permit) and final landscape plan sheet. The CRPZ shall be protected using the city standard detail found in appendix 20.5. The case planner shall complete an inspection of the CRPZ prior to any work occurring on the development site. The CRPZ fencing and tree protection signage shall remain in place throughout all phases of construction. Other permit conditions, which shall be shown on the face of all CFG, TESC and final landscape plan sheets, include:
- i. All trees shall be marked in the field. This may be done with a small aluminum tag, spray painted numbers using a stencil template, or other minimally invasive method that aids the site contractor and case planner in identifying each tree scheduled for retention.
 - ii. No work shall occur within the CRPZ, including, but not limited to, stockpiling materials or soil, parking equipment, placing solvents, or dumping any construction related debris, etc.
 - iii. Entry into the CRPZ or modification of the CRPZ area requires prior authorization from the city Planning Department.
 - iv. Roots cut shall be cut cleanly and immediately covered with wet burlap, wet wood chips/hog fuel, wet compost, etc. to prevent root desiccation.

- v. Areas immediately adjoining the CRPZ that will remain a root zone area/landscaping area post-construction but impacts to that area of the root zone are needed for construction related activities shall be covered with 6-8 inches of coarse wood chip mulch/hog fuel and covered with plywood to protect the roots in that area.

B. Significant Trees Established. Significant trees are all healthy and growing trees greater than fifteen (15) inches diameter breast height (DBH – 4.5’ above grade). Significant tree protections do not apply to native black cottonwood or red alder species (unless associated with a critical area, as protected by PMC 21.06). These sizes may be adjusted up or down for individual trees or sites based on site location, tree location on site, percent of tree coverage, species, species mix, potential for windthrow and other factors consistent with this document. All significant trees shall be assessed by a certified arborist - with a certification in Tree Risk Assessment (TRAQ) - for suitability of retention. Perimeter trees in landscaping setback areas represent the highest likelihood for retention and shall receive special attention; trees in perimeter setback areas under 15” DBH may be assessed for retention. Planned and required open spaces should incorporate existing trees to the extent feasible during site planning and plan review.

Significant and heritage trees shall be retained when possible, excepting for the following circumstances:

- (1) When a Tree Risk Assessment is completed and the tree(s) risk rating scores in a high-risk category based on the project arborist recommendation/assessment. The project arborist shall utilize ISA tree risk assessment forms for determining risk score and category. Trees assessed at a more moderate risk category may be included if the project arborist determines that retaining and monitoring the tree is not feasible and failure could occur, causing damage to life, negatively impacting high occupancy targets or unnecessarily damaging project improvements. The project arborist must demonstrate the likelihood of failure, consequences of the failure and likelihood of impacting targets near the tree(s) assessed justify the removal of the tree(s).
- (2) When, in the opinion of a certified arborist, the tree(s) pose a threat or hazard to structures, sidewalks, streets, driveways, sewer, water or other utility lines, and no reasonable alternatives exist to re-locate such improvements, or where existing tree(s) are damaging infrastructure, sidewalks/paving or utilities.
- (3) When no reasonable alternative exists to siting the project without removing or seriously compromising the long-term health of the tree. Staff shall use flexibility during site plan review to enable the protection of such trees.
- (4) When the preservation of the tree(s) will significantly block solar access All vegetation management criteria presented in PMC Title 21 and specifically Chapter 21.06 (Environmentally Critical Areas Management) shall be

followed. Maintaining trees and vegetation cover is critical for reducing potential erosion, soil and slope stability, habitat, and community aesthetics. Trees shall not be removed that will compromise soil stability, increase erosion potential, impact habitat functions or for establishing new scenic views that did not previously exist. With these constraints in mind, there are several alternatives to tree removal for solar access or view shed protection. The first option shall be to use one of several trimming practices including: windowing, interlimbing and skirting-up. These are explained in greater detail in Appendix 20.6. Only as a last resort, with staff approval of a certified arborist and/or qualified professional (e.g., biologist, geotechnical engineer, etc.) report, shall a minimum of clearly identified trees be removed to preserve view corridors or for establishing solar access. Mitigation for any trees removed for solar access or view protection shall be 2:1.

- (5) When all appropriate measures are taken to safeguard the tree and its root system, but the tree(s) will not likely survive the impacts of construction, due to condition, age, disease potential, alteration of water regime, significant grade changes, changes in drainage patterns, significantly increased exposure, or its location within a preexisting natural grouping.

10.2 Existing Vegetation

A. Credit for retention: Where existing healthy plant material exists on a site prior to its development, property owners/developers shall retain the existing landscaping and native vegetation to the greatest extent possible. The Director may give credit toward required landscaping for incorporating existing plant material into the project design if it meets the intent of this document.

B. Buffers: If the proposed project is required to provide natural vegetative buffers for mitigation or environmentally critical areas that will be located on or adjacent to the project site, the Director may permit the use of existing vegetation to satisfy a portion or all of the required landscaping or buffer planting requirements. The Director may require additional landscaping or enhancement to satisfy the standards and intent of this policy, PMC Title 20 or Title 21.

11.0 MAINTENANCE STANDARDS:

11.1 General Maintenance

All projects with approved landscape plans shall maintain such landscape in a green and growing condition. Any plant material diseased, deformed, stolen, significantly injured or dead shall be replaced at the earliest appropriate time. Landscaped areas shall be kept free of weeds, inappropriate plant material, rubbish and trash. All approved landscapes will be assessed for compliance with the approved final landscape plan and these standards at time of application for final Certificate of Occupancy. The installed landscape shall be reviewed one full growing season after issuance of final Certificate of Occupancy and periodically thereafter. Any plant material or

maintenance deficiencies shall be identified for correction and the property owner or landscape warranty provider shall be notified as a courtesy. Lack of notification does not release the property owner or warranty provider of maintenance and/or replacement responsibility.

11.2 Buffers and Open Space

All areas preserved as natural plant communities or common areas including buffers, enhanced buffers, storm water retention and detention facilities and designated open space area shall be annually cleared by the property owner(s) or neighborhood associations of invasive and inappropriate plant material, noxious vegetation and all trash and other debris. All such areas shall be managed with staff approval in order to maintain and enhance their intended function and purpose. No plant material shall be cut, topped, severely pruned or removed from these areas without proper notification, approval and permits.

11.3 Cultivated Areas

The owner of land subject to this document shall be responsible for the maintenance of said landscaping in good condition so as to present a healthy, neat and orderly landscape area.

A. New Installations: The amount of maintenance required by newly planted vegetation is more intensive than that for established plantings. The establishment period is generally two full growing seasons after planting. Trees will need a thorough watering at least once a week during the first growing season and bi-monthly watering thereafter until fully established. Shrubs and ground covers will need more frequent watering due to the smaller root system. Additional watering may be required based on soil, solar exposure, environmental and seasonal climatic conditions. Fertilizing and pruning should be an annual occurrence, or as needed. The applicant shall demonstrate how establishment period supplemental watering, as well as long-term watering schedule, will be implemented on the final landscape plan.

B. Established Vegetation: All landscaping and screening areas shall be maintained in healthy, growing condition. Broken, dead, stolen, topped or dying trees, shrubs or other plants shall be replaced in a timely manner with similar type and size material consistent with the approved landscape plan. Planting areas shall be routinely maintained and be kept free of trash and weeds. If a tree, or trees, required by PMC 20.58 or this document are topped they shall be promptly replaced at the property owner's expense.

C. Pruning: All pruning should be accomplished equivalent to the most recent issue of "Standards of Pruning for Certified Arborists" as developed by the International Society of Arboriculture or its industry accepted equivalent (ANSI A300). Trees and shrubs shall be pruned only as necessary to promote correct branch architecture, as preventative maintenance, provide needed clearance, maintain tree health, minimize failure risk, or improve/maintain a scenic view. All pruning should have an objective before being undertaken. Unless special approval is provided (e.g., overhead utility line clearance where reduction cuts are not feasible), trees shall be allowed to attain their normal size and shall not be severely pruned or "topped" in order to be maintained at a reduced height or crown shape.

11.4 Street Tree Obstruction Clearance

The overreaching branches of trees adjacent to rights-of way shall have a maintained minimum clearance above the finished grade of public streets of fourteen (14') feet and a

minimum seven (7') feet of clearance above finished grade of the sidewalk abutting the planting area. Every owner of any tree or shrub overhanging any street right-of-way shall prune the branches to provide safe use of the street and sidewalk and provide unobstructed views through street intersection sight triangles (see Appendix 20.7). Unless otherwise provided, obstruction clearance pruning for street trees located in the public right-of-way shall be the responsibility of the abutting property owner, with proper permitting.

11.5 Street Tree and Vegetation Maintenance

A. **Responsible parties** - The City of Puyallup shall maintain all trees paid for and/or planted by the City of Puyallup directly. The City shall maintain a list and supporting map(s) showing the location of these trees. Maintenance of street trees which were not planted by the City of Puyallup which are located in the public right-of-way, a street tree easement or on private property (when the tree was planted on private property to meet the requirements of 11.28.030) shall be the responsibility of the abutting property owner to water, prune and otherwise maintain and/or remove, with proper permitting as outlined herein. Any street tree (in any location) may only be removed under the following scenarios:

“Street Tree Removal Criteria”

- (1) The tree has been determined to be a hazard tree, as determined by a certified arborist with city approval, posing an immediate public safety hazard (that cannot be corrected or mitigated unless the tree is removed); OR,
- (2) The tree is in such a condition of poor health, or the tree is dead, such that removal is justified; OR,
- (3) It cannot be successfully retained, due to public or private construction or other development conflicts, whereby impacts cannot be mitigated or avoided and the tree is unlikely to survive construction impacts; OR,
- (4) The tree is damaging infrastructure improvements, such as sidewalks, walkways, paving or utilities or other improvements in ways that warrant removal of the tree(s). Considerations such as cutting, grinding or selective removal of tree roots, modifications to infrastructure to retain the tree(s) involved and/or the application of other methods in repairing or replacing infrastructure that would allow retention of the tree shall be considered.

If a certified arborist for the City of Puyallup determines a privately maintained street tree in the city right-of-way is a hazard to the public right of way and risk associated with the tree cannot be mitigated unless the tree is removed, pruned or otherwise maintained, the city shall notify the property owner of the need to remove and/or maintain the tree at the property owner's expense. If the property owner fails to act within a defined timeframe – as determined by a certified arborist for the City of Puyallup based on the condition of the tree and the overall risk to public safety – the city shall remove, prune or otherwise maintain the tree. The billing for that work may be provided to the abutting property owner.

B. **Replanting of removed street trees** – If a street tree is approved for removal, the planter strip in the direct proximity of the removal shall be evaluated for replacement of a new street tree. If the planter strip is 4’ or wider, a street tree may be required to be replanted; if the tree(s) removed were part of an approved landscape plan under PMC 20.58 (landscaping) and/or Street Trees (PMC 11.28), street tree(s) shall be replanted. All new street trees shall conform to the “Street Tree Installation Standards Table” in section 12.4 of this document.

C. **Permitting Requirements** – The City’s Development Services Director, or designee, shall review and approve all street tree maintenance, pruning, removal and planting requests in accordance with city standards.

(1) ***Pruning and removal*** –

A right-of-way street tree permit shall be obtained to:

- i. ***Prune branches larger than 2” in diameter or to remove more than 10 percent of the branches in any tree during a one-year period*** (pruning of branches smaller than 2” in diameter that does not exceed 10 percent removal of tree’s branches are exempt, unless they are within 15’ of energized overhead power lines, in which case a permit is required).

All pruning cuts shall be undertaken to either establish good branch patterns/architecture or provide clearance over roadways, sidewalks and near buildings. Pruning for other purposes must be explicitly stated and approved.

Unless special approval is provided (e.g., overhead utility line clearance where reduction cuts are not feasible), trees shall be allowed to attain their normal size and shall not be severely pruned or “topped” in order to be maintained at a reduced height or crown shape. All street tree pruning shall conform to all accepted arboricultural standards (ANSI A300) and shall be performed and/or supervised by a certified arborist; **tree topping is strictly prohibited.**

- ii. ***Remove a street tree over 6” in diameter*** (as measured at 4.5’ above grade, or DBH – trees smaller than 6” in diameter are exempt from permits but may only be removed based on the above established “Street Tree Removal Criteria”).
- iii. ***Remove any street tree within 15’ of an energized overhead power line.***
- iv. ***Root prune or trench near any street tree where roots over 1” in diameter will be effected.***

- (2) ***Planting*** – A street tree planting permit shall be required to plant a new street tree in the right-of-way. The permit shall be free of charge. All applicants proposing to plant new street trees shall call 811 to locate all underground utilities in the proximity of the work area.

- (3) ***Stump grinding*** - All street trees that are removed shall be completely removed and ground level (‘stump grinding’) at grade such that no tripping hazard is present upon completion of the work.

- (4) **Other standards** – All areas of work shall be cleared of all limbs, twigs, stumps, logs, leaves, etc. at the time of completing approved or exempt tree pruning, removal, maintenance or planting work. Tree companies operating in the public right-of-way should preferably be accredited by the Tree Care Industry Association (TCIA); all companies working in the city right-of-way shall adhere to the safety standards of ANSI Z133.1.

12.0 STREET TREE SELECTION AND INSTALLATION STANDARDS:

12.1 Work Notification

When any substantial pruning or removal of any tree in excess of 6" DBH or any tree within 15' of an energized power line within City right-of-way is proposed, a Public Works Right-of-Way Construction Permit must first be obtained from the Public Works Department except as provided for in the PMC. All trees within 15' of energized power lines (located on private or public property) requires notification and coordination with the local utility provider (Puget Sound Energy) regarding the work being completed; no tree company or individual may prune or remove any portion of any tree within 15' (or distance as established by other applicable law or standard) of an energized power line. Nothing in this manual shall be construed to exempt any person, firm or corporation from the requirement of obtaining any additional permits or insurance as required by law.

12.2 Tree Installation Census

For new tree plantings in any street right-of-way or established street tree easement, a street tree installation census must be completed. If the street tree installation is part of an approved site plan development, the census shall be completed during the final plan approval process. No fee shall be charged for this census, and it may be obtained from the Development Services Permit Center.

12.3 Street Tree Material and Planting Standards

- A. Street trees shall be provided as part of the development process as defined in the PMC 11.28 (see Appendix 20.1). Street trees are defined as trees with a mature height greater than 15 feet located within public rights-of-way or established easement along an existing or proposed street.
- B. Selection of street tree species and planting location shall conform to PMC Chapter 11.28, this document and be coordinated with the Development Services Planning Division and Parks Maintenance Division.
- C. Street trees shall be located in the public right-of-way or assigned easement and adhere to the design intent and objectives, spacing, location and requirements stated herein. The Planning Director and/or designee(s) shall review and approve any proposed species/cultivar substitution/deviation from the approved street tree species list below.
- D. Street trees shall meet all general plant material requirement with the exception of size which shall be as described below at time of installation:

- (1) Medium to Large street trees (40' or greater at maturity) shall be a minimum of 1 inch in caliper measured 4" inches above ground at time of installation;
- (2) Street tree with a mature height less than 25 feet shall be a minimum of 6 feet tall and branched at time of installation.
- (3) Trees with broken or inappropriately pruned tops, poor branching, injured trunks, or branch damage that cannot be corrected by minor pruning are not suitable as street trees will be rejected.
- (4) Street trees proposed in sight distance areas are required to be larger cultivated nursery stock, with tall branching up the trunk from the nursery, or with branching pruned at the time of installation to limit conflicts and provide a clear zone below the tree canopy for the expected driver's eye height per MUTCD standards.

12.4 Street Tree Location and Spacing

The following standards have been established to reduce potential conflicts between trees and streets, sidewalks, all underground and above ground utilities, pedestrian and vehicular safety, while pursuing the goals set by the Comprehensive Plan of attractive urban spaces with tree lined streets and neighborhoods.

These standards, as established below are based on the potential mature size and horticultural needs of the tree in relation to generalized site conditions. Specific sites will dictate the preferred tree and spacing, consult with city staff or for more information.

The preference for street tree location is in areas where suitable soil volumes exist to grow large, functional street trees. In no event shall a new street tree be planted in the right-of-way tree lawn if the width of such tree lawn area is narrower than 4'. New development shall dedicate suitable right-of-way for street trees if none exist. If existing area exists to plant street trees but the location underground utilities or inadequate planting space would prevent street trees from being placed in the right-of-way, the street trees may be placed on private property with a street tree easement, if required. Street trees on private property may serve a dual use as both street trees and as landscaping required by section 13.0 of this document.

Root barriers, in accordance with city standards, are required for all street trees in planter strips less than 8' in width; a minimum of 8' of linear protection along the edge of the sidewalk adjacent to the street tree shall be provided, using a minimum 24" deep root barrier panels. See city standards #01.02.07 and #01.02.03 for further details.

The anticipated size of the tree will dictate the planting location; street tree design shall focus primarily upon planting trees in locations that will protect other right-of-way infrastructure while providing large, functional canopy area, where appropriate. All tree selection shall follow the concept of 'right-tree, right-place'; the largest tree should be used for the rooting and overhead space available to improve overall canopy coverage throughout the city.

Street Tree Installation Standards Table – City of Puyallup

Criteria	Class I (Overhead Utility Street Trees)	Class II (Narrow Trees)	Class III (Medium Trees)	Class V (Large Trees)
Minimum planter strip width	4'	4'	5'	6'
On-center spacing standards	20 - 25 ft	20 - 25 ft	25 - 35 ft	30 - 40 ft
Plant under overhead utility lines?	Yes	No	No	No
Planting distance from buildings	7.5'	7.5'	10'	10'
Distance from utility and street light poles	10'	10'	10'	10'
Distance from fire hydrants	5'	5'	5'	5'
Distance from driveway (measured from the outer edge of driveway paving)	7.5'	7.5'	7.5'	7.5'
Distance from stop light signal poles	15'	15'	20'	25'
Distance from underground water, sanitary sewer or storm sewer lines	10'	10'	10'	10'
Distance from underground gas, power or other conduit	3'	3'	3'	5'
Minimum distance from intersection (as measured from the face of curb line corner at intersection)	30 ft	30 ft	30 ft	30 ft
Minimum distances from street signs (excluding parking signs)	30' from leading side, 10' from trailing side	30' from leading side, 10' from trailing side	30' from leading side, 10' from trailing side	30' from leading side, 10' from trailing side



12.5 Tree Selection

The selection of tree species for a particular location should consider the horticultural, aesthetic and urban design requirements in equal measure.

A. Street tree selection shall come from the approved listings in sections 12.7 - 12.10, unless otherwise approved by the Parks Maintenance Division and/or Planning Director/designee(s).

12.6 Street Tree Mix

A mixture of street tree species generally shall be provided throughout site-specific developments to provide visual interest and to ensure that a mixture of tree species are used throughout the city, as follows:

- A. For projects involving one (1) to three (3) trees, one (1) species may be used.
- B. For projects involving four (4) to eight (8) trees, at least two different species and/or cultivars of trees shall be included. Trees in this category can be of the same genus but shall be of differing cultivars.
- C. For projects involving nine (9) to fifteen (15) trees, at least three (3) different trees (all differing genus) shall be used.
- D. For projects involving sixteen (16) or more street trees, at least four (4) different trees (all differing genus) shall be used. Where a 10' planter strip or larger exists or is being provided, a minimum of 25 percent of these trees shall be evergreen conifer.

To prevent uniform disease susceptibility and eventual uniform senescence, no single species or cultivar shall make up more than 10 percent of the total City street tree population; no more than 20 percent of the total City street tree population shall be composed of one genus and no more than 30 percent of any one family. The Director may limit or adjust the required species mix on a given site, project, or area of the city if the proposed species presently or with the addition of the proposed trees would constitute over 15 percent of the total city-wide street

tree species mix. A periodic inventory of street trees shall be maintained by the Development Services Department. Species may also be limited or adjusted due to horticultural constraints including disease or potential pest problems.

12.7 Class I - Overhead Utility Street Trees

These trees are shorter and may be spaced as close as 18 feet but more commonly will be spaced 20 to 25 feet apart. The minimum planting tree lawn width for each of these trees is 4'. Care should be taken to select trees with an upright form for any planter strip less than 4'; root barriers are always required for trees in planter strips less than 8' in width. Each tree selected in this category is appropriate for planting under overhead utility lines.

Common name (Botanical)	Size (H X W)	Under overhead wires?	Minimum planter strip width	Comments
Amur Maple (Acer ginnala)	20' X 20'	Yes	4'	Multi-stem tree in some cases. 'Flame', 'Ruby Slippers' accepted
Amur Maackia (Maackia amurensis)	25' X 20'	Yes	4'	Upright vase shaped
Baby Blue Eyes Spruce (Picea pungens 'Baby Blueeyes')	30' X 15'	Yes	4'	EVERGREEN – Dwarf of Colorado blue spruce
Carriere Hawthorn (Crataegus x lavalley 'Carrierei')	20' X 15'	Yes	4'	Small orange fruit can attract wildlife
Cascara (Rhamnus purshiana)	30' x 15'	Yes	4'	Native – Great PNW native plant pick
Crape myrtle (Lagerstroemia indica)	15' x 15'	Yes	4'	Many cultivars available, make sure available in tree form – very showy flowers
Dwarf golden hemlock (Tsuga canadensis 'Everitt's Golden')	15' x 6'	Yes	5'	EVERGREEN - Striking foliage, avoid full sun exposure
Eastern Redbud (Cercis canadensis)	25' X 25'	Yes	4'	Spreading, rounded crown shape; other Cercis cultivars allowed
Flowering Crabapple (Malus Sp.)	Varies	Yes (generally)	4'	Usually a rounded growth habit, check species/cultivar
Goldenchain tree (Laburnum x Watereri 'Vossii')	25' x 20'	Yes	4'	Vase shaped, upright. Long, pendulous golden flower chains
Goldenraintree (Koelreuteria paniculata)	30' X 25'	Yes	4'	Columnar variety – 'Fastigiata' – also accepted for tight locations

Incense Cedar 'Maupin Glow' (Calocedrus decurrens 'Maupin Glow')	15' x 10'	Yes	5'	EVERGREEN – PNW Native – dwarf cultivar of incense cedar, drought tolerant
Ivory Silk Tree Lilac (Syringa reticulata 'Ivory Silk')	20' X 15'	Yes	4'	Showy flowering tree form lilac
Japanese Snowbell (Styrax Japonicus)	25' X 25'	Yes	4'	Showy flowers, prefers partial shade
Kousa Dogwood (Cornus kousa)	25' X 25'	Yes	4'	Showy flowers in spring
Mountian Hemlock (Tsuga mertensiana)	30' X 15'	Yes	6'	EVERGREEN- PNW native, smaller stature at lower elevations, pyramidal
Paperbark maple (Acer griseum)	25' X 20'	Yes	4'	Interesting cinnamon colored peeling bark
Paul's Scarlet Hawthorn (Crataegus laevigata)	22' x 20'	Yes	4'	Scarlet red flowers
Persian ironwood (Parrotia persica 'Vanessa')	28' X 15'	Yes	4'	Upright form, drought tolerant - 'Persian Spire' also acceptable
Serviceberry (Amelanchier grandiflora)	20' X 15'	Yes	3.5'	Cultivars 'Princess Diana' and 'Autumn Brilliance' approved
Shore Pine (Pinus contorta)	30' X 25'	Yes	5'	EVERGREEN – Native conifer, responds well to directional pruning
Skyward bald cypress (Taxodium distichum 'Skyward')	20' X 10'	Yes	4'	Deciduous conifer – dwarf bald cypress, narrow species
Slender Hinoki False Cypress (Chamaecyparis obtusa 'Gracilis')	15' X 10'	Yes	4'	EVERGREEN -Pendulous branches and growth, very small at maturity
Star Magnolia (Magnolia stellata)	20' X 15'	Yes	4'	Spreading, multi-branched, almost shrub-like; Note: other Magnolia permitted as small tree if under 30' at maturity
Summer Sprite Linden (Tilia cordata 'Halka')	20' X 15'	Yes	4'	Semi-dwarf form of Littleleaf Linden
Thornless Cockspur Hawthorn (C. crus-galli)	25' X 25'	Yes	4'	Thornless cultivar
Trident Maple (Acer buergerianum)	20' x 20'	Yes	4'	Rounded shape, should be used in wider strips to avoid clearance conflicts
Vanderwolf Limber Pine (Pinus flexilis 'Vanderwolf's Pyramid')	30' X 15'	Yes	5'	EVERGREEN – Beautiful pine, pyramidal

Vine Maple (<i>Acer circinatum</i>)	15' x 10'	Yes	4'	PNW native, good for very narrow spaces. 'Pacific Purple' and 'Pacific Fire' accepted
Wichita blue juniper (<i>Juniperus scopulorum</i>)	15' x 6'	Yes	5'	EVERGREEN – Small, tight form tree, silver blue foliage
Zelkova – 'City Sprite', 'Wireless' (<i>Zelkova serrata</i> 'City Sprite', 'Schmidtlow')	25' X 20' (City sprite) 25' X 35' (Wireless)	Yes	5'	Wireless zelkova should only be used in wide settings, both tough, upright trees

12.8 Class II - Narrow Street Trees

These trees may be used for narrow areas, but they still require adequate root area. The spacing will vary with the intent but may be as close as 15 feet, but 20 to 25 foot spacing will be more common. There are some tall trees included in this list, so check to make sure the site can handle the specific species or cultivar.

Common name (Botanical)	Size (H X W)	Under overhead wires?	Minimum planter strip width	Comments
American Linden (<i>Tilia americana</i> 'Boulevard', 'Continental Appeal')	50' X 25'	NO	5'	Very hardy, large leaf area
Arizona Cypress 'Blue Ice' (<i>Cupressus glabra</i> 'Blue Ice')	30' X 12'	NO	8'	EVERGREEN - Beautiful silver-blue foliage. Upright habit. Drought resistant.
Bald Cypress 'Shawnee Brave' (<i>Taxodium distichum</i> 'Shawnee Brave')	60' X 10'	NO	8'	Tolerates wet soil (swamp native), deciduous conifer. Needs plentiful rooting space
Beech 'Purple Dawyck' (<i>Fagus sylvatica</i> 'Dawyckii Purple')	50' X 15'	NO	5'	Good alternative to thundercloud plum
Columnar blue atlas cedar (<i>Cedrus atlantica</i> 'Glauca Fastigiata')	50' x 15'	NO	8'	EVERGREEN – Striking blue columnar form, true cedar tree
Columnar blue spruce (<i>Picea pungens</i> 'Fastigiata')	35' x 10'	NO	8'	EVERGREEN - Very narrow, tightly upright form
Columnar Tulip Poplar (<i>Liriodendron tulipifera</i> 'Fastigiatum')	50' X 20'	NO	6'	Interesting leaf shape, can have annual aphid problems
Deodar cedar 'Karl Fuchs' (<i>Cedrus deodara</i> 'Karl Fuchs')	30' x 10'	NO	8'	EVERGREEN -Columnar form
Emerald Arrow Bosnian Pine (<i>Pinus leucodermis</i> 'Emerald Arrow')	30' X 10'	NO	8'	EVERGREEN –Compact, upright form of Bosnian Pine

Fastigiata White Pine (<i>Pinus strobus</i> 'Fastigiata')	30' x 10'	NO	8'	EVERGREEN
Ginkgo 'Fastigiata' (<i>Ginkgo biloba</i> 'Fastigiata')	50' X 15'	NO	6'	Brilliant yellow fall color, distinctive leaf shape, also try 'Princeton Sentry'
Green Pilar Pin Oak (<i>Quercus palustris</i> 'Pringreen' or 'Green Pillar')	45' X 15'	NO	5'	Very columnar cultivar of Pin Oak
Honeylocust 'Streetkeeper' (<i>Gleditsia triacanthos</i> 'Draves')	45' X 20'	NO	6'	Columnar form
Incense cedar (<i>Calocedrus decurrens</i>)	40' X 15'	NO	8'	EVERGREEN – Narrow, columnar evergreen, should be used often, drought tolerant
Mushashino Zelkova (<i>Zelkova serrata</i> 'Musashino')	45' X 15'	NO	5'	Very narrow, tightly upright form
Pyramidal European Hornbeam (<i>Carpinus betulus</i> 'Fastigiata')	35' X 25'	NO	5'	Tough urban tree, good near hard surfaces. Also try 'Emerald Avenue' (40' x 28') and 'Frans Fontaine' (35' x 15')
Red Fox Katsura (<i>Cercidiphyllum japonicum</i> 'Rotfuchs')	35' X 15'	NO	5'	Columnar habit, purple foliage
Upright English Oak (<i>Quercus robur</i> 'Fastigiata')	50' X 25'	NO	6'	Narrow, upright form
Weeping Alaskan Yellow Cedar (<i>Chamaecyparis nootkatensis</i> 'Pendula')	45' X 15'	NO	8'	EVERGREEN -Beautiful accent tree, should be used in alternating plantings not as a standalone row;
Weeping Serbian Spruce (<i>Picea omorika</i> 'Pendula')	30' x 10'	NO	8'	EVERGREEN – One of the most attractive conifers accepted

12.9 Class III - Medium Street Trees

These trees are of medium size, 30 - 50 feet and should be used with some thought to early structural pruning to develop an attractive and safe branching pattern. The tree lawn should be at least 5 feet and preferably 6 feet wide. The spacing of the trees should be 30 to 40 feet apart.

Common name (Botanical)	Size (H X W)	Under overhead wires?	Minimum planter strip width	Comments
American Hophornbeam (<i>Ostrya virginiana</i>)	45' X 25'	NO	5'	Hop-like flowers

Autumn gold Gingko (Gingko biloba 'Autumn Gold')	45' X 35'	NO	5'	Brilliant fall yellow color
Baumann horse chestnut (Aesculus hippocastanum 'Baumannii')	40' X 40'	NO	8'	Seedless variety, showy flowers; examine other seedless varieties
Black Tupelo (Nyssa sylvatica)	35' x 20'	NO	5'	Chunky bark, adaptable to wet, clay-ish soils; all cultivars acceptable
Colorado blue spruce (Picea pungens 'Glauca')	40' x 25'	NO	10'	EVERGREEN – drought tolerant species
Crimson King maple (Acer platanoides 'Crimson King')	40' x 35'	NO	5.5'	Attractive purple foliage – may not be used as a standalone street tree species
Elm hybrids – 'Emer 1', 'Morton stalwart', 'Emerald Sunshine', 'Frontier', 'Homestead', 'New Horizon', 'Patriot', 'Pioneer' 'Prospector', 'Triumph'	Varies – generally 40' x 30'	NO	6.5'	Use of all Ulmus hybrids here acceptable, all have resistance to Dutch Elm Disease and phloem necrosis. Mature heights and widths vary
Hardy rubber tree (Eucommia ulmoides)	45' x 45'	NO	6'	Dark, lustrous green foliage, drought tolerant
Hedge maple (Acer campestre 'Evelyn')	35' X 35'	NO	5'	Cultivar: Evelyn' has a strong upright form – this cultivar only authorized for use
Hinoki Cypress (Chamaecyparis obtusa)	50' X 15'	NO	8'	EVERGREEN
Honey locust (Gleditsia triacanthos)	45' X 35'	NO	5'	Many cultivars available
Katsura tree (Cercidiphyllum japonicum)	45' X 45'	NO	5'	Beautiful leaf shape, attractive form
Lacebark elm (Ulmus parvifolia) – all cultivars	40-50' X 35'	NO	5'	Resistant to Dutch Elm Disease; 'Allee Elm' preferred, all cultivars and hybrids of Ulmus parvifolia acceptable
Linden/Basswood (Tilia Americana, Tilia hybrids)	Varies	NO	6'	All cultivars, hybrids of Tilia promoted; good sub for ash trees, tolerant to urban conditions
Cork Tree (Phellodendron amurense 'Macho')	40' X 40'	NO	5'	Fruitless variety, handsome chunky bark; cultivars 'His Majesty' and 'Longenecker' also

Mayabei Maple (Acer miyabei)	40' x 40'	NO	6'	Underused maple tree, yellow fall color
Norway Maple (Acer platanoides 'Emerald Queen')	50' X 40'	NO	6'	Fast growing maple
Oriental spruce (Picea orientalis)	50' X 25'	NO	10'	EVERGREEN – Fine needles, golden cultivars have great gold color
Persian Parrotia (Parrotia persica)	30' x 20'	NO	5'	Drought tolerant tree, should be used more often
Pistache tree (Pistacia chinensis)	30' x 30'	NO	5'	Great orange-red fall color
River Birch (Betula nigra)	40' x 35'	NO	5'	Exfoliating bark – year-round interest
Serbian Spruce (Picea omorika)	50' X 20'	NO	10'	EVERGREEN – Nice, narrow evergreen tree
Sourwood (Oxydendrum arboretum)	30' X 15'	NO	5'	Brilliant fall red color, good sub for red maple
Turkish filbert (Corylus columnar)	40' X 25'	NO	5'	Tight, formal crown, strong leader. Should not be used near sidewalks due to nut production
Yellowwood (cladrastis kentukea)	35' x 35'	NO	5'	Long clusters of white flowers
Zelkova 'Village Green' (Zelkova serrata 'Village Green')	40' X 40'	NO	6'	Vase shaped, tight branch angles; good elm substitute; also try 'Green Vase', 'Halka'

12.10 Class IV - Large Street Trees

These large trees should only be used in large planting areas. Due to their large canopy and or extensive root system the tree lawn should be at a minimum of 6.5' feet and preferably 8-10 feet wide. Large street trees shall be used on all major and minor arterials where no overhead utilities exist, and the minimum tree lawn width is present to support adequate rooting volume; street trees from other lists may also be intermixed as well. There should be a minimum spacing of 30 to 40 feet between trees.

Common name (Botanical)	Size (H X W)	Under overhead wires?	Minimum planter strip width	Comments
American Elm (Ulmus americana – ‘Valley Forge’, ‘Princeton’, ‘New Harmony’, ‘Jefferson’)	Varies – 70’ X 65’ common	NO	8.5’+	NOTE: only Dutch Elm Disease resistant cultivars allowed; stately, arching branches, a classic American street tree
Atlas cedar (Cedrus atlantica)	60’ X 40’	NO	10’	EVERGREEN – Stately tree, very broad over time
Austrian Pine (Pinus nigra)	50’ x 25’	NO	.10’	Evergreen
Bald cypress (Taxodium distichum)	70’ X 25’	NO	8.5’	Deciduous conifer, tolerates wet conditions well
Blackjack oak (Quercus marilandica)	50’ X 30’	NO	6’	Interesting club-shaped leaf
Bur oak (Quercus macrocarpa)	55’ X 45’	NO	6’	Broad, irregular growth
Deodar cedar (Cedrus deodara)	70’ X 40’	NO	10’	EVERGREEN – Excellent evergreen, pendulous branches and form
English oak (Quercus robur)	60’ X 40’	NO	5’	Sturdy tree
European beech (Fagus sylvatica ‘Riversii’, ‘Roseomarginata’, ‘Asplenifolia’)	60’ X 45’	NO	6’	Beautiful, long-lived trees, ‘Riversii’ – purple leaf, tricolor should be used often and for contrast
Grand fir (Abies grandis)	65’ X 20’	NO	10’	EVERGREEN- PNW native, prefers dry sites
Hackberry (Celtis occidentalis)	50’ X 35’	NO	6.5’	Tolerant to urban conditions
Kentucky coffeetree (Gymnocladus dioicus – ‘Espresso’)	60’ X 35’	NO	6.5’	Large, bi-pinnately leaves
Oregon white oak (Quercus garryana)	60’ X 40’	NO	6’	Only oak native to NW; should be used only in well-draining, rocky soils
Pin oak (Quercus palustris)	55’ X 40’	NO	6’	Branches have a distinctive droop overtime
Planetree/Sycamore (Platanus x acerifolia – ‘Bloodgood’, ‘Exclamation’, ‘Columbia’ or ‘Yarwood’)	50’ X 40’	NO	8’	Strong, large tree with maple-like leaves. Tolerates urban conditions. Should be used in large planter strips in excess of 6.5’
Ponderosa pine (Pinus ponderosa)	100’+ X 35’	NO	10’	EVERGREEN – PNW native to eastern side of state, colorful bark, very drought tolerant

Red Oak (<i>Quercus rubra</i>)	60' X 45'	NO	6'	Good street tree
Scarlet Oak (<i>Quercus coccinea</i>)	60' X 45'	NO	6'	Large tree, leaf similar to red oak
Sugar Maple (<i>Acer saccharum</i> – 'Bonfire', 'Commemoration', 'Legacy')	55' X 40'	NO	6'	Great fall color with all Sugar maples, should be used alongside contrasting evergreens
Swamp white oak (<i>Quercus bicolor</i>)	60' X 45'	NO	6'	All cultivars of <i>Quercus bicolor</i> promoted
Sycamore maple (<i>Acer pseudoplatanus</i>)	50' X 30'	NO	6.5'	Purple leaf cultivar 'atropurpureum' accepted for use
Texas red oak (<i>Quercus buckleyi</i>)	40' x 40'	NO	6'	Great drought tolerant tree, should be used more often
Tulip tree (<i>Liriodendron tulipifera</i>)	60' X 35'	NO	6.5'+	Fast growing, yellow fall color
Western white pine (<i>Pinus monticola</i>)	100'+ X 35'		10'	EVERGREEN – lighter color needles

12.11 Class V Prohibited Trees

These trees shall not be used for street tree plantings due to overuse, aggressive root system, weak branching habit, disease or pest susceptibility or other problems that are compounded when planted near the street and sidewalk. Many of these trees are useful in other planting situations.

- A. **Ash** (*Fraxinus spp.*) – *Fraxinus* and all cultivars shall not be used due to the spreading risk of emerald ash borer (EAB), which kills all *Fraxinus* trees. No EAB resistant cultivars are known.
- B. **Big Leaf Maple** (*Acer macrophyllum*) – Useful in many other native areas throughout the city
- C. **Black Locust** (*Robinia pseudoacacia*) – Invasive plant species in the PNW.
- D. **Flowering Pear** (*Pyrus calleryana*) – Similar to *Acer rubrum*, flowering pear trees are prohibited currently due to overuse and due to susceptibility to storm damage and short life span.
- E. **Populus spp.** – prohibition includes all trees in the *Populus* genus, including poplars, cottonwoods, aspens, etc.
- F. **Red Alder** (*Alnus rubra*) - Useful in many other native areas throughout the city.
- G. **Red Maple** (*Acer rubrum*, *Acer x freemanii*) – *Acer rubrum* and all cultivars of this species are currently not allowed due to vast over-use throughout the city. This exclusion includes *Acer x freemanii* and all cultivars of the *freemanii* hybrid as well.
- H. **Salix spp.** – (willows)
- I. **Silver Maple** (*Acer saccharinum*) – This maple species is prone to extensive decay and branch breakages as well as a shallow, aggressive root system.
- J. **Sweetgum** (*Liquidambar Sp.*) – Sweetgum has been traditionally overused, does not stand up well generally to storms/wind and commonly lift and break sidewalks.

K. **‘Thundercloud’ Plum** (*Prunus cerasifera* ‘Thundercloud’) – This specific cultivar is prohibited due to vast overuse as well as susceptibility to storm damage and pruning induced water sprout production, even when conducting routine light pruning.

L. **Tree of Heaven** (*Ailanthus altissima*)

13.0 LANDSCAPE BUFFERS: The following identifies several landscape types and the general application in relation to the land use category of the project site and the abutting zone(s). Each landscape type is described in section 14. This shall be used to determine the landscaping requirements as set forth in PMC and this document. The requirements here shall be used in determining landscaping along the frontage of a site (e.g., street side, front yard landscaping), as well as interior parking lot, parking perimeter, interior perimeter and zone transition landscaping, where required.

13.1 Required Landscape Types for Perimeter Lot Lines (all zones where PMC 20.58.005 (2) applies (All zone districts except RS districts))

The following requirements shall be used:

A. Type I landscaping when ML, MP and MR zones abuts any other zone district. Type I is also specified under PMC 20.26.500.

B. Type II landscaping, all front and street side yard(s) landscaping areas, unless a Type I landscaping treatment is otherwise specified or conditioned.

C. Type II landscaping along interior property lines where two differing zone districts abut each other, unless otherwise specified by PMC. All sites shall contain a 6’ perimeter landscape buffer.

D. Type III landscaping along interior property lines where common zoning boundaries abut each other. All sites shall contain a 6’ interior lot line perimeter landscape buffer, unless a larger landscape buffer is specified by PMC. For the purposes of applying type III interior landscaping outlined in this section, the following groupings of zones shall be considered common zoning designations:

(1) CG, CL, CB, OP, MED, FAIR

(2) ML, MP, MR

(3) RM-10, RM-20, RM-CORE, MX

E. Type IV landscaping shall apply to all paved areas where PMC 20.58.005 (1) applies. In no event shall any perimeter landscaping count toward type IV landscaping requirements.

14.0 LANDSCAPE TYPES - PERIMETER BUFFERS: The following are descriptions of the landscape types that are identified by Table 1. The land use category of the project site and its abutting zone(s) establishes the minimum buffer as illustrated in Table 1. There may be other site and use specific landscape and buffer options available as outlined in the PMC. Each landscape type is a general outline designed to achieve the stated functional and aesthetic purposes and may have site specific variations. The described buffer shall be provided by each project within the lot line set-back or easement area. All buffers abutting rights-of-way that

include a fence or wall shall have the vegetation on the 'street side' of the fence or wall and if applicable, maintain the required clear sight triangle as described in appendix 20.7.

The landscaping treatments shown below are intended to achieve large canopy, functional trees in all situations where large trees are appropriate. The largest tree shall be used for the planting space available. Landscaping treatments are intended to provide a varied visual aesthetic with trees, shrubs and ground covers (excluding turf grass) as the dominant visual theme.

14.1 Type I: Visual Barrier

Purpose: Type I landscaping is intended to provide a very dense visual barrier to separate and reduce potential conflicts between adjoining uses and zones. The required screen may consist of plant material, masonry or wood walls compatible with the site, appropriate fencing or in combination as described below. Plant selection and spacing shall be appropriate for the site, species type and consistent with best management practices and the intent of this chapter. The 100 percent site obscuring zone shall be from ground level to a minimum of six feet above the lot line and/or adjoining grade whichever will best provide the required visual barrier from off-site vantage points. The site obscuring zone may be expanded by the Director based on the need for additional screening or to provide additional physical separation.

Descriptions:

Type Ia

Type Ia is intended to be used in scenarios where more than 15 feet of landscaping yard width is present, particularly if used pursuant to PMC 20.26.500 as a zone transition landscaping area. Two staggered rows of evergreen trees (of differing species) with evergreen and deciduous shrubs arranged to provide 100 percent visual separation from ground level up to six feet within three years from time of installation. Native conifers shall be used. Appropriate shrub masses and living ground cover (excluding turf grass) shall provide 75 percent ground area coverage within three years. A six-foot-high masonry wall or wood opaque fence shall be established and maintained along the common property line at either edge of the landscape buffer. Type 1d also may be used in lieu of this standard for specific land uses and situations where additional screening is warranted, as determined by the Director. Bio-swaes or rain gardens may be placed within these landscaping areas as long as they are designed to meet the intent of this section.

Type Ib

An alternative to a Type Ia, the Type Ib is intended to provide additional flexibility in design, while still achieving the screening separation intended by a Type I screen. Type Ib may be used if designed to achieve this overall intent. A combination of evergreen and not more than 25 percent deciduous trees at least 45 feet tall at maturity spaced appropriately along with shrubs and a 100 percent sight-obscuring fence or wall to provide a visual barrier from the ground to six feet. The placement and/or material of the fence or wall should not detract from the intent of this chapter. Appropriate shrub masses and living ground cover (excluding turf grass) shall provide 75 percent ground area coverage within three years. In addition to uniform spacing, when it will better satisfy the intent of this chapter and/or the Comprehensive Plan, trees may

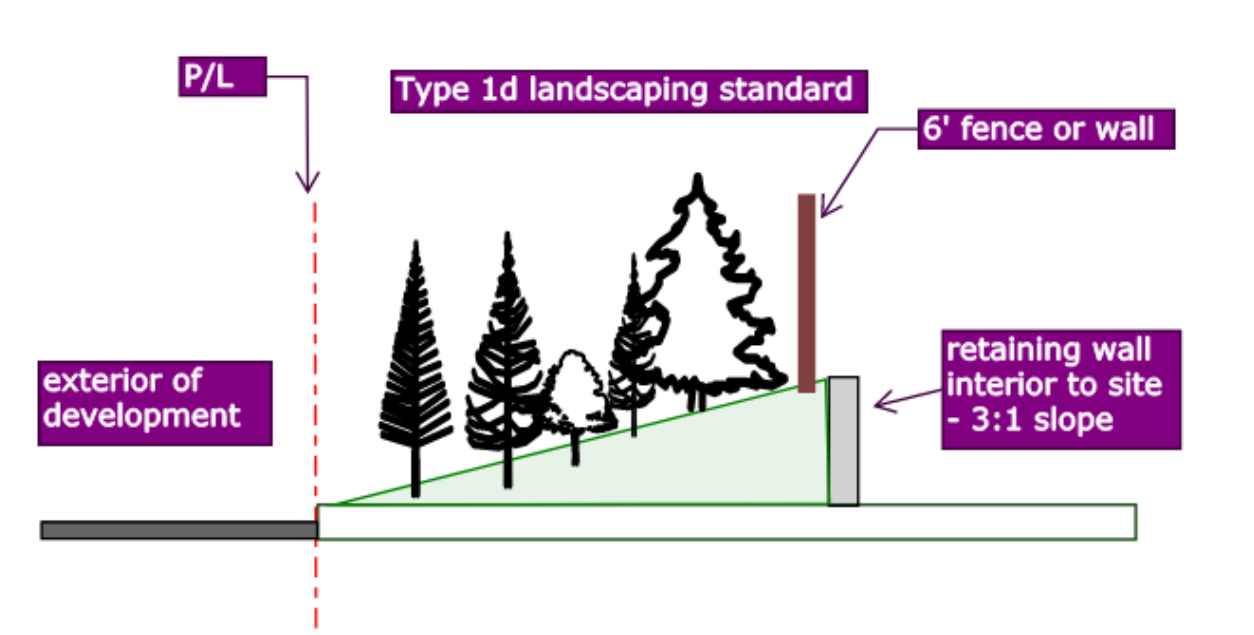
be grouped, spaced irregularly or clustered provided that the tree masses are balanced with shrub groupings. Bio-swales or rain gardens may be placed within these landscaping areas as long as they are designed to meet the intent of this section.

Type 1c

Type 1c should be used only in scenarios where adequate width is not present to establish a full Type 1 buffer (e.g., less than 15 feet of width). A continuous evergreen hedge (e.g., arborvitae, Leyland cypress, etc.) that will provide 100 percent screening from ground level to 6 feet within three years of installation and one row or more of deciduous trees (at least 45 feet tall at maturity) planted at suitable intervals for the species to form a continuous canopy. Appropriate shrub masses and living ground cover (excluding turf grass) shall provide 75 percent ground area coverage within three years. Bio-swales or rain gardens may be placed within these landscaping areas as long as they are designed to meet the intent of this section.

Type 1d

Type 1d shall be implemented with a berm and retaining wall system in specific situations where providing additional visual separation and screening of land uses (such as light to heavy industrial uses, commercial land uses abutting or adjacent to residential, conditionally permitted uses, etc.). All plant materials shall follow Type 1a standards or PMC 20.26.500.



Slopes with a width to height ratio up to a maximum of three to one (3:1), not to exceed 6', shall be used. The placement and material of the earthen berm and any associated retaining mechanism shall not detract from the intent of this chapter. Bio-swales or rain gardens may be placed within these landscaping areas as long as they are designed to meet the intent of this section.

14.2 Type II:

Purpose: Type II landscaping is intended to be primarily used along the frontage of development sites subject to PMC 20.58 and the VMS; this landscaping treatment is meant to be used to provide high quality landscaping along site frontages to complement development and street scape character. The type II treatment also is intended to provide function, often to screen abutting parking areas. The type IIa treatment will provide a visual separator and medium to large trees will define the overhead plane (where overhead utilities aren't present) between similar use areas or other areas needing separation but not substantial visual or physical separation; type IIb shall be used in areas where more substantial screening is designed due to the nature of the on-site use. Street trees may substitute for trees required under all type II landscape treatments in the event that no suitable planter strip exists within the abutting right-of-way area; when a suitable right-of-way planter strip exists, street trees shall be placed in the right-of-way.

Descriptions:

Type IIa

The type IIa treatment standard is intended to apply most often to non-residential commercial and mixed-use development. A single row of medium to large trees (or small trees if overhead utilities are present) suitably spaced in association with a 50/50 mix of evergreen and deciduous shrubs to provide the minimum 75 percent visual separation up to a height of 4.5 feet above the local grade within three years. Trees shall be planted at intervals of no greater than 30 feet. Appropriate shrub masses and living ground cover shall provide 75 percent ground area coverage within three years. Shrubs shall be placed at 5–7-foot center intervals throughout the planting area, with ground cover plantings placed at 18-36" on-center intervals. Shrubs shall be alternated, modulated and designed to provide a visual variation in height, depth, contrasting colors and textures. No turf grass shall be planted within the required landscape yard (typically 10-12' for front and street side yard areas, see PMC 20.58.005 (2)). Bio-swales or rain gardens may be placed within these landscaping areas as long as they are designed to meet the intent of this section.

Type IIb

The type IIb landscaping treatment shall be used in ML, MP and MR zone districts, or where industrial uses, conditional uses or uses utilizing outdoor storage of materials are proposed. The type IIb treatment will provide more substantial screening when compared with type IIa. One row of medium to large trees, with at least 50 percent being evergreen, and a continuous installation of evergreen shrubs planted at 5' minimum on-center intervals. Trees shall generally be planted at intervals of no greater than 30 feet. Spacing may adjusted to better suit the selected species and installation size while still achieving the intended result of a canopy over the visual separator. Bio-swales or rain gardens may be placed within these landscaping areas as long as they are designed to meet the intent of this section.

In addition to uniform spacing, when it will better satisfy the intent of this chapter and/or the Comprehensive Plan, trees may be grouped, spaced irregularly or clustered provided that the tree masses are balanced with shrub groupings. The evergreen shrubs shall be at least five-gallon

nursery stock at the time of planting and have the capability to achieve a height of six feet or more above the planting grade within three years. Evergreen shrubs may be intermixed with deciduous to provide visual interest and variety.

Appropriate shrub masses and living ground cover shall provide 75 percent ground area coverage up to a height of five (5') feet within three years. An appropriate fence or wall that provides at least 75 percent uniform sight obscuring from the ground to six foot may be substituted for the continuous evergreen plantings, where determined to be appropriate. No turf grass shall be included within a Type IIb buffer area.

Type IIc

Under the type IIc standard, a type IIa or IIb may be installed on an earthen berm or use an existing or developed change of elevation to provide up to 50 percent of the required screen height. Height of shrubs and/or fencing may be proportionately reduced while still maintaining the required screening height and visual density. Slopes with a width to height ratio up to a maximum of three to one (3:1) may be used if soil stability and erosion have been properly addressed. The placement and material of the earthen berm and any associated retaining mechanism shall not detract from the intent of this chapter. Bio-swales or rain gardens may be placed within these landscaping areas as long as they are designed to meet the intent of this section.

Type II d

Type II d is intended to apply to auto dealership/outdoor vehicle display establishments only. A single row of deciduous trees at no more than 50' on center shall be planted in the landscape yard along the front and street side yards for auto dealerships, unless street trees exist along the frontage of the site (between curb and sidewalk), in which case no trees are required. If trees are required, they may be irregularly grouped or clustered as to provide openings for vehicle displays toward abutting street right-of-way; the total quantity of trees required (based on total site frontage length and required 50' on-center spacing) shall not be reduced if the clustering option is used. The required landscaping yards along the front and street side yard shall consist of clustered groupings of low growing shrubs and ground covers that provide 50 percent ground coverage within 5 years of planting. Turf grass may be used in association with clusters of shrubs/ground covers. Vehicles shall not be displayed within the landscape yard along the front or street side yard. Bio-swales or rain gardens may be placed within these landscaping areas as long as they are designed to meet the intent of this section.

14.3 Type III:

Purpose: Type III landscape provides a 75 percent visual buffer at three feet above the adjoining grade and a continuous overhead vegetation canopy to soften the appearance between compatible uses and building elevations. The type III treatment shall not be used along the frontage of any site subject to the requirements of this document and the PMC and is intended primarily on the interior of sites with compatible/common zoning designations and/or uses. All type III landscape designs shall represent the use of NW native trees, shrubs and ground cover plant species that provide a native, wildflower-rich landscape area that utilizes native plant

species that bloom in successive timeframes throughout the growing season. This is intended to promote local biological diversity and provide pockets of landscape area to benefit pollinator species. Selections from the following shrub species, in addition to other acceptable native plants that meet the criteria of providing blooming plants throughout the growing season, may be utilized to meet the type III requirements:

- **Early season (April/May):**
 - Osoberry (*Oemlaria cerasiformis*)
 - Oregon grape (*Mahonia aquifolium*)
 - Evergreen Huckleberry (*Vaccinium ovatum*)
 - Red elderberry (*Sambucus racemosa*)
- **Early/Mid-season (May/June):**
 - Ninebark (*Physocarpus capitatus*)
 - Twinberry (*Lonicera involucrate*)
 - Red Flowering Currant (*Ribes sanguineum*)
 - Snowberry (*Symphoricarpos albus*)
- **Mid-season (June/July):**
 - Nootka rose (*Rosa nutkana*)
 - Mockorange (*Philadelphus lewisii*)
 - Rugosa rose (*Rosa rugose*)
- **Late-season (August+):**
 - Douglas spirea (*Spiraea douglassi*)
 - Oceanspray (*Holodiscus discolor*)

Descriptions:

Type IIIa

A minimum of one row of trees, consisting generally of native deciduous trees but may include up to 50 percent native evergreen conifer trees that will create a grouped cluster of canopy coverage. Appropriate native flowering shrubs (see list above) shall provide 75 percent visual buffering from the ground to six feet above abutting area grade. One shrub shall be provided at 7.5' minimum on center spacing intervals – species shall be alternated and successive species of blooming native shrubs for early, mid/early, mid and late season shall be used. Additional shrubs and live NW native ground cover species shall cover at least 75 percent of planting area within three years. At least one tree shall be provided for each 40 lineal feet. Tree spacing may be adjusted to better suit the selected species and installation size while still achieving the intended result of clustered canopy grouping over the lower planting in a timely manner. Bio-swales or rain gardens may be placed within these landscaping areas as long as they are designed to meet the intent of this section.

Type IIIb

Installation of landscape type IIIa on an earthen berm, existing or developed elevation change or site appropriate planter. NW native shrub, ground cover and tree species selection and design criteria, as described above in the 'IIIa' standard, shall be utilized. The available planting width shall be a minimum of six feet. The top elevation of the built structure or

earthwork shall not be more than three feet above the finished parking area grade. Soil slope within the planting area shall not to exceed a width to height ratio of (3:1). Appropriate shrubs and living ground cover shall cover at least 75 percent of the ground area within three years. Bio-swales or rain gardens may be placed within these landscaping areas as long as they are designed to meet the intent of this section.

14.4 Type IV: Parking Lot Landscaping

Purpose: Type IV landscapes will be used to provide visual relief and shading while maintaining clear sight lines for vehicular movement within surface parking areas. Perimeter landscaping shall not be included in calculation to satisfy the required interior landscaping as required in PMC 20.58 (Appendix 20.2).

Description:

Type IV

Type IV - Interior parking lot - The design of the Type IV landscaping treatment shall reflect the need to spread vegetation throughout a development site's paved areas to provide shading critical to reducing the heat island effect created by paved surfaces, reduce stormwater runoff, reduce glare from reflective surfaces, improve air quality, provide visual breaks to large, paved areas and improve general appearance of off-street parking areas and development sites. The design of landscaping internal to parking lots shall reflect the use of landscaping strips and islands; no perimeter landscaping shall be counted toward the Type IV requirement. A landscaping 'island' is defined two ways: **perimeter islands** and **internal islands**.

1. A perimeter landscaping island is defined as an area which extends/protrudes out perpendicularly from a perimeter landscape buffer into a paved area.
2. An internal landscape island is defined as a landscaping area completely internal to a parking lot (e.g., stand-alone landscaping area not abutting a perimeter landscape area).

Given the harsh growing environment of a parking lot, the design shall reflect the use of continuous, connected landscaping areas, adequate soil depths and volume and the use of trees, shrubs and ground covers which are adapted to site conditions. **See appendix 20.15 for an example site plan for the type IV design standards (below).**

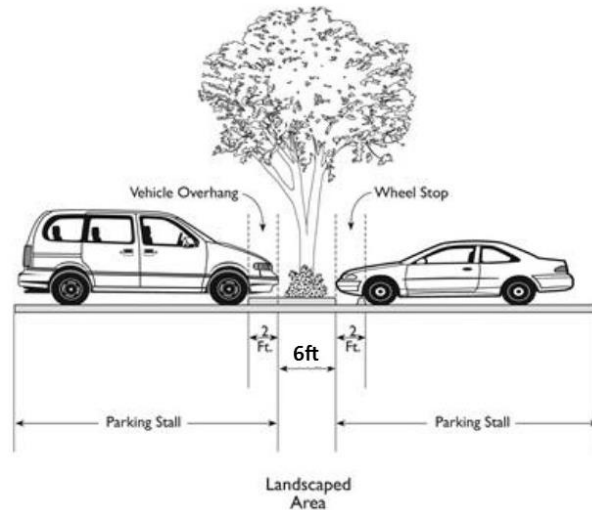
Type IV Design Standards

A. No more than eight (8) parking spaces shall be placed consecutively without a landscaping island.

- (1) All perimeter landscape islands shall be a minimum of 12' wide with a minimum depth of each landscape island to match the abutting stall depth. Each perimeter island shall include a minimum of one (1) tree selected from the Class III or Class IV Street tree list shown in section 12.9 or 12.10.
- (2) All internal landscape islands shall be a minimum of 15' in width with a minimum depth of each landscape island to match the abutting stall depth. Each internal island shall include a minimum of two (2) trees selected from the Class III or Class IV street tree list shown in section 12.9

or 12.10.; fifty percent (50%) of trees in internal islands shall be Class III or Class IV evergreen conifers.

- (3) 'Head-to-head' parking stalls and internal landscape islands shall be separated by a 'connector landscaping strip' a minimum of 6' in width (see image). The 6' connector strip shall include a tree every 20', selected from the Class II (narrow) street tree list (see section 12.8). All 'head-to-head' parking stalls internal to a parking lot shall have internal island 'end caps' to separate the parking stalls from abutting drive aisles. These 'end cap' islands shall follow the requirements for internal islands (size, dimensions, required landscaping, etc.).



- (4) **Option to reduce landscape island dimensions:**
- i. Type IV landscape islands may be reduced in width if an equal dimension of the reduced landscaping island is replaced with under pavement soil cells. In no event shall a landscape island be reduced to less than eight (8) feet in width.
 - ii. Structural plant soils – often called “CU-structural soil”, or equivalent - may be provided in lieu of structural soil cells so long as the volume of structural plant soils provided is 1.5X the soil volume that would otherwise be provided in structural soil cells as required by this option to reduce design option. The project landscape architect shall provide a cross section detail of installation of all structural plant soils, including geotechnical interface with adjacent under pavement soils.

B. All parking lot island planter area dimensional requirements are exclusive of extruded curbing bordering the planting area. For example, a perimeter landscape island required at 12' in width relates to the required open soil planter area – exterior curbing would add additional dimensions to the island.

C. Landscaping islands apply to all striped parking and storage areas, including heavy truck trailer parking. For large, paved areas which trigger parking lot landscaping under PMC 20.58.005, but may not contain vehicle striping for vehicle parking, staff will use reasonable discretion and flexibility in site designing to allow larger consolidated/ grouped islands to spread out evenly through the paved areas, ensuring landscaping meets the intent of the type IV design standards and meets the minimum landscape requirements in PMC 20.58.005.

D. Underground utilities shall not be designed to cross below any perimeter or internal island in a manner which would prohibit or off-set the required tree planting(s); crossings of underground utility lines through connector landscaping strips shall be minimized to angled or perpendicular crossings and shall not follow the path of the landscaping strip. Such utility crossings shall also be offset as to avoid displacing required trees.

E. Internal parking lot lighting poles and fixtures shall be located to minimize future conflicts with parking lot trees – parking lot lights shall be placed 10' from any parking lot tree required under the type IV standard.

F. Other aboveground civil utilities (e.g., fire department connections, hydrants, etc.) shall only be placed into parking lot islands when required for life-safety purposes. Case planner shall consult with Fire Code Official and Building Division prior to allowing hydrants in locations which would otherwise eliminate trees from parking lot landscape islands.

G. No parking space shall be placed further than 50 feet from a tree.

H. All parking spaces facing each other (e.g., 'head-to-head') shall be designed with a wheel stop to prevent damage to trees and vegetation within the 6' connector strip. The overhang area shall be landscaped with appropriate ground covers. All trees shall be planted a minimum of 2.5' from inside edge of all wheel stops or parking curbs.

I. All landscaping strips and islands internal to the site's paved areas/parking lots shall be designed and installed using a minimum of 1.5' (18") of topsoil depth; Subsoils below the topsoil layer shall be scarified at least 6 inches with some incorporation of the upper material to avoid stratified layers.

J. All internal landscape islands and connector strips shall include a double row (horizontally) of structural soil cells – often called "Silva Cells", or equivalent - along the perimeter of all internal islands in parking stall areas only (under the pavement directly abutting the outer edge of the landscape island) to provide additional soil volume for tree growth. The landscape architect shall provide manufacturer's installation details for internal parking lot landscaping soil installation, including required structural soil cells, on the final landscape plan set. See section 8.2 for soil quality standards.

K. All landscaping islands and connector strips shall be designed using either evergreen and deciduous shrub masses spacing at tight on-center intervals (designed to provide 90 percent coverage in 3 years) that will prevent foot traffic and associated soil compaction into these landscaping areas.

L. An 18" striped buffer area between the edge of the parking stall and any internal or perimeter landscaping island curbing shall be provided to allow for adequate door swing area. All parking stalls abutting landscape islands shall be the standard stall width dimensions (see PMC 20.55.035).

M. Designed walk-thru pathways (minimum of 2 walk-through paths, 5' in width between each internal island through the connector landscaping strips shall be integrated into landscaping design to allow for designated access points for foot traffic. These walk-thru pathways are intended to be designed as a surface walkway through the landscaping area. Shrub species selection shall reflect the use of plant materials that will create a barrier to foot traffic as to channel pedestrians through designated walk-through zones. If the walk-thru pathways are designed to create a break in the continuous landscape connector strip, the pavement under the

walk-thru zone shall connect the landscape strip via the use of structural soil cells, as to achieve to the intent of continuous, connected landscaping throughout the parking lot.

N. Irrigation shall be provided in all landscape islands.

14.5 Special Landscaping Designs (SLD)

SLD-01 - Landscaping in front of blank walls, industrial development (Implementing standards - PMC 20.26.400 code requirement) - Minimum 12' wide of landscaping strip along the entire length of all walls associated with development subject to PMC 20.26.400. Species shall be an alternating mixture of evergreen and deciduous trees, chosen from the class II, III or IV street tree list. Ground cover and shrub mix shall be designed to provide depth, variation in height of vegetation at maturity, variety and contrast in color and texture and shall be so designed as to provide 100 percent coverage over the planting area within 5 years.

All trees and vegetation shall be chosen based on the building elevation the landscaping abuts; ex: the north side of a warehouse with blank wall treatment shall be designed with trees, shrubs and ground covers which are adapted grow in shaded conditions, while a south facing elevation shall use vegetation adapted to full sun conditions.

SLD-02 – Landscaping in storm water control facilities (Implementing standards - PMC 20.58.005 (3) code requirement). Landscaping of storm water ponds and other storm water control or treatment facilities (e.g., rain gardens, bio-swales, bio-filtration cells, etc.) shall be designed to use native and/or climate adaptable plant materials to provide 100% ground coverage and 75% visual coverage within five (5) years of installation. In order to reduce maintenance requirements, the use of turf lawn is prohibited in these areas, unless part of a water treatment structure (e.g., bio-swale) where grass is required by the project engineer for water quality treatment purposes.

Ground covers shall be spaced at 18" intervals and shrubs at 3-5' intervals, or as specified by the project landscape architect, to meet the 100% ground coverage and 75% visual coverage requirement within five (5) years. Groupings or clusters of native evergreen and native deciduous trees shall be integrated into the overall design. NW native shrubs and ground cover plant species that provide a native, wildflower-rich landscape area that utilizes native plant species that bloom in successive timeframes throughout the growing season shall be used in all storm pond areas.

This is intended to promote local biological diversity and provide pockets of landscape area to benefit pollinator species. Selections from the following shrub species, in addition to other acceptable native plants the meet the criteria of providing blooming plants throughout the growing season, may be utilized to meet the SLD-02 requirements:

- **Early season (April/May):**
 - Osoberry (*Oemlaria cerasiformis*)
 - Oregon grape (*Mahonia aquifolium*)
 - Evergreen Huckleberry (*Vaccinium ovatum*)
 - Red elderberry (*Sambucus racemosa*)
- **Early/Mid-season (May/June):**
 - Ninebark (*Physocarpus capitatus*)
 - Twinberry (*Lonicera involucrate*)

- Red Flowering Currant (*Ribes sanguineum*)
- Snowberry (*Symphoricarpos albus*)
- **Mid-season (June/July):**
 - Nootka rose (*Rosa nutkana*)
 - Mockorange (*Philadelphus lewisii*)
 - Rugosa rose (*Rosa rugose*)
- **Late-season (August+):**
 - Douglas spirea (*Spiraea douglassii*)
 - Oceanspray (*Holodiscus discolor*)

15.0 **GENERAL REVISION:**

15.1 **Administrative Exceptions or Modifications**

The policies set forth in this document are not intended to be arbitrary or to inhibit creative solutions. Projects may justify approval of alternative methods for compliance with the standards. Conditions may arise where normal compliance is impractical or impossible, or when maximum achievement of the City's objectives can only be obtained through alternative compliance. The Director shall have the authority to approve landscape plans or any proposed alternate site-specific plans, and may modify these standards to meet site-specific conditions as detailed in PMC Chapters 11, 20 and 21. Additionally, landscape requirements may be modified by the Director when existing conditions on or adjacent to the project site, such as significant topographic differences, existing native vegetation, existing significant individual, groups or stands of vegetation, existing structures or utilities would render application of these requirements ineffective. The Director may allow deviations also, when necessary, because of special circumstances relating to the size, shape, topography, unusual natural features, location or surroundings of the subject property

- A. Exceptions, modifications and deviations from the standards in the VMS may be approved through an Alternative Methods Request application.
- B. Requests for alternate compliance shall be accompanied by sufficient explanation and justification, written and/or graphic, to allow appropriate evaluation and decision.
- C. Revisions to a submitted or approved plan may also be required if the Director determines that the landscaping has or will likely fail to perform as intended and will not achieve the goals and intent of this document, the Comprehensive Plan or the PMC.

15.2 **Overlay Districts**

Within Special Overlay Districts that have been established as described in section 5.3, landscaping requirements may be modified provided a landscaping plan consistent with the intent of this document and the applicable adopted area overlay document, is approved by the Director.

15.3 **Conflicts**

If the provisions of this document conflict with other ordinances or regulations, the more stringent limitation or requirement shall govern or prevail to the extent of the conflict. In the event that, because of lot configuration, adjacent land use, or special circumstances, more

landscaping is required to meet the intent of this document, the Comprehensive Plan or the PMC, such landscaping shall be installed.

16.0 COMPLETION OF INSTALLATION - SURETY: All landscape installation shall be completed in accordance with the approved final landscape plan as part of the requirement of issuance of the Final Certificate of Occupancy with the following exception:

16.1 Surety for Delayed Landscape Installation

In the event that weather, seasonal factors or other significant extenuating conditions do not allow for the installation of the approved landscaping prior to issuance of a Final Certificate of Occupancy, the property owner shall provide the Director with documented assurance that the landscaping will be completed within six months of issuance of the Final Certificate of Occupancy. For the purpose of this policy, “documented assurance” means: an assignment of funds or other means of surety acceptable to the Director equal to one hundred and fifty percent (150%) of the estimated material and installation costs. Such surety shall be accompanied by a letter which stipulates the owner will complete installation of all development landscape requirements no later than six months after the issuance of the Final Certificate of Occupancy or owner shall forfeit documented assurance for the purpose of completing the landscape installation. Upon satisfactory installation of the landscape within the six-month period, the Director shall release the surety except with the conditions described in section 16.2.

16.2 Large Project Surety or Warranty

If the landscape has been installed and is accepted by staff as part of the Final Certificate of Occupancy and the project is classified as being ‘large’ in size per the current City of Puyallup Fee Schedule or identified as having a potentially high risk for plant loss or is of significant community importance, the owner shall provide the City with a surety for the landscaping as follows: 100 percent of the cost of material and installation for the project landscape in an assignment of funds or alternately, provide a written warranty guaranteeing maintenance and plant replacement for one full growing season after installation to be provided by a landscape firm licensed to do business in the City of Puyallup.

17.0 MAINTENANCE SURETY AND ENFORCEMENT: After the completion of one full growing season following installation of an approved landscape plan, the project site will be reviewed for conformity with the approved final landscape plan. If during the project’s landscape review there is significant discrepancies from the approved plan found, such discrepancies shall be noted and placed in the project file. Notification of any required plant replacement or landscape rehabilitation will be sent to the property owner. All projects shall replace plant material and perform rehabilitation work in a timely manner to conform with the final landscape plan. Additional landscape reviews shall take place as needed. No action by staff, including satisfactory surety or warranty release, relieves the property owner from the duties and responsibilities of the required on-going maintenance and/or additional plant replacement for the life of the project.

17.1 Release of Surety with Plan Conformity

All projects required by section 16.2 to supply surety for landscaping and all non-conforming projects as described in section 17.2 will be reviewed after one full growing season from time of last material installation. If the landscape is found to be in accord with the approved landscape or rehabilitation plan and all materials are in satisfactory conditions, the property owner may submit a request in writing to the Community Development Department that the landscape surety be released or the warranty dissolved.

17.2 Surety Held on Non-Conforming Landscapes

All projects supplying landscape surety as required by section 16.2 will be reviewed after one full growing season from the time of installation. If during the review there are significant discrepancies from the approved plan found, such discrepancies shall be noted and placed in the project file. Notification of the landscape rehabilitation requirements will be sent to the property owner and/or warranty provider. It is the responsibility of the property owner to ensure the identified discrepancies are corrected. All projects notified of non-conforming landscapes will be review again for plan conformity during the next regular review period. If the landscaping does not satisfy the approved plan by the end of the second full growing season from time of installation and if no other arrangements have been made by the owner and such arrangements approved by the Director, staff shall apply the surety or enforce the warranty to provide for the total cost of satisfying the approved plan. If the total cost is greater than the amount of the surety, or the warranty is found to be unenforceable, the property owner shall be liable for all costs incurred to achieve plan conformity. Surety for all non-conforming landscapes shall be held until such time as the project is deemed to be in conformance. At such time the project is in conformance as described in section 17.1, the owner may submit a request to the Community Development Department for the release of any remaining surety and/or the warranty dissolved.

18.0 EFFECTIVE DATE: The policies, procedures and standards set forth in this document shall be in full force and effective immediately upon being signed by the Development Services Director and City Manager and shall remain in effect until amended or repealed.

19.0 DEFINITIONS: All words not specifically defined in this section shall have the meaning commonly or logically associated therewith. The following terms, phrases, words and their derivations shall have the meaning given herein. When not inconsistent with the context, words used in the present tense include the future, and words in the singular number include the plural number. The word "shall" is always mandatory and not merely suggestive.

(1) *Adjacent* means any lot or property contiguous with or within 500' of a proposed development site.

(2) *Alley* is a public or private way permanently reserved as a secondary means of accessing a property.

(3) *American Association of Nurserymen* is the national association of nursery workers responsible for setting national standards for plant material.

(4) *American Standard for Nursery Stock* are national standards for plant material and practices set by the American Association of Nurserymen referred to as ANSI Z60, 1-1990 or its adopted successor.

(5) *Arboriculture* pertains to the growing and maintenance of trees for functional and aesthetic purposes, such as specimen trees, street trees and shade trees.

(6) *Caliper* is the diameter of any tree trunk measured at a specified height, usually 6 inches above natural grade or the up-slope side of the tree if less than 4 inches in caliper and 12 inches above grade if tree caliper is greater than 4 inches.

(7) *Certified arborist* means a professional with academic and field experience that has been certified by a recognized national arboricultural organization such as the International Society of Arboriculture.

(8) *City* refers to the municipal government of Puyallup Washington.

(9) *Critical Root Zone* is the circular area measured from the center of the tree having a radius that is 1 foot for each inch of stem diameter of the tree measured at four and one-half (4.5) feet above the natural grade or the circular area equal to the greatest extent of the tree foliage or drip line, whichever is greater.

(10) *Diameter Breast Height (DBH)* is the tree's diameter measured four and one-half feet above the natural grade.

(11) *Director* shall mean the Director of the Development Services Department or that person's designee which is empowered in certain situations to have the authority of decision.

(12) *Established Tree* is any tree that has been established and growing in one location for two full growing seasons.

(13) *Full Growing Season* is the time from spring to fall, during which consecutive frost-free days occur.

(14) *International Society of Arboriculture (ISA)* is the society dedicated to the health and welfare of trees through research, education and practice.

(15) *Local Electric Utility* Puget Sound Energy.

(16) *Minor Pruning* consists of trimming or cutting out of water sprouts, suckers, twigs, or branches less than two (2) inches in diameter, or which constitutes less than ten percent of the tree's foliage bearing area. Removal of similar amounts of broken or dead wood is included within this definition

(17) *Planting Strip* is the area between the curb and the adjacent sidewalk or the curb and the outer edge of the street right-of-way or a designated easement in which street trees may be planted.

(18) *Person* is any public or private individual, group, company, firm, corporation, partnership association, society or other combination of human beings whether natural or legal.

(19) *Street Tree* shall mean any tree which is located on property within the right-of-way or in an easement established for that purpose in the City of Puyallup.

(20) *Substantial Pruning* consists of trimming or cutting out of branches two (2) inches in diameter or greater; root pruning; or trimming or cutting out of branches or limbs constituting greater than 10 percent of the tree's foliage bearing area.

(21) *Topping* The indiscriminate cutting of tree branches to stubs or to lateral branches that are not large enough to assume the terminal role. Other names for topping include "heading," "tipping," "hat-racking," and "rounding over." Strategic reduction pruning cuts where a lateral bud or branch is selected to assume terminal growth shall not be considered topping; reduction cuts are common near overhead utility lines.

(22) *Tree* is any self-supporting woody perennial plant which normally attains an overall height of at least fifteen (15) feet at maturity. It may have one main stem or trunk, or multiple stems or trunks.

(23) *Urban Forest* consists of the trees planted within the street rights-of-way within the City of Puyallup. For the purpose of the regulations and standards specified in this document, the urban forest shall include vegetation installed by the City of Puyallup public lands and rights-of-way controlled by the City of Puyallup unless specifically noted otherwise.

(24) *Vegetation* includes trees, shrubs, grasses, vines or other plant material on or encroaching upon City rights-of-way or other areas identified or controlled by this document.

20.0 APPENDIX:

- 20.1 PUYALLUP MUNICIPAL CODE 11.28
- 20.2 PUYALLUP MUNICIPAL CODE 20.58
- 20.3 NATIVE LANDSCAPE PLAN EXAMPLES
- 20.4 PLANTING AND ROOT BARRIER DETAIL
- 20.5 STANDARD TREE PROTECTION DETAIL
- 20.6 VIEW CORRIDOR TREE TRIMMING EXAMPLES
- 20.7 SIGHT TRIANGLE DIAGRAM
- 20.8 TREE REMOVAL, PRUNING AND PLANTING APPLICATIONS
- 20.9 DOE BMP T5.13
- 20.10 TREE PROTECTION STANDARDS ON CONSTRUCTION SITES
- 20.11 ANSI A300, Z60.1 STANDARDS (*AVAILABLE ELECTRONICALLY AT CITY*)
- 20.12 ANSI Z133.1 SAFETY STANDARDS
- 20.13 LANDSCAPING PLAN EXAMPLE
- 20.14 WHY TOPPING HURTS TREES
- 20.15 TYPE IV DESIGN STANDARDS – SAMPLE SITE PLAN