SECTION 700

700. LANDSCAPING

700. General

A. The standards contained in this section apply to all landscaping placed within the public ROW. Replacement trees shall also adhere to these standards.

B. The standards contained in this section may be superseded for projects within Plan Districts. For such projects, refer to the relevant Plan District within the Community Development Code. Plan District boundary information is available on the City website.

C. A Public Works Right-of-Way Permit or Public Infrastructure Permit is required prior to planting in the public ROW. Within a development, the property owner or their landscape contractor shall schedule a pre-planting inspection of the holes and trees with the City Inspector. Upon completion of the tree planting, they shall notify the City Inspector in order to schedule a final inspection.

D. No person shall remove or replace a street tree without first obtaining a permit from the City, specifically authorizing the removal or replacement.

E. Any tree that was planted within the ROW prior to December 2011 may remain, unless identified as a hazard tree.

F. Except under overhead utility lines where more extensive pruning may be necessary to protect the utility lines and crews, any pruning of trees growing within the ROW shall adhere to Subsection 750.

G. Unless superseded by a Plan District requirement, tree grates shall not be used unless they are needed to make a narrow sidewalk meet ADA regulations. The installation of tree grates requires City approval. Tree grates shall be “Urban Accessories OT Title-24” or approved equal.

H. Tree species shall be selected in accordance with Tables 700.1 through 700.3. Non-approved trees may be removed and replaced at the owner’s expense.

Table 700.1 – Approved Street Tree Species for Areas 3' Wide or Less

Common Name	Scientific Name	Shape	Min. Power Offset	Height	Spread	Color	Fall Color
Pyramidal European Hornbeam	Carpinus betulus var. Fastigiata	Dense compact, narrow when young, becoming oval	10	30'	25'	Dark green	Yellow
Eastern Redbud	Cercis canadensis	Low branching, somewhat flat topped	None	30'	30'	Medium green	Yellow
Glorybower Tree	Clerodendrum trichotomum	Oval, rounded umbrella	None	20'	20'	Dark green	Gold
Chinese Dogwood	Cornus kousa chinensis	Widely vase shaped to rounded layered branches	None	30'	20'	Medium green	Reddish
Dogwood (Hybrid)	Cornus kousa x nuttallii Var. Starlight or Venus	Upright, oval	10'	30'	20'	Dark green	Red to purple-red
Columnar Beech	Fagus sylvatica var. DaWyck Purple	Columnar, fastigiate	10'	50'	10'	Purple	Coppery-bronze
Mayfield Ginkgo	Ginkgo biloba var. Mayfield (MALE ONLY)	Narrow, columnar	10'	30'	12'	Light green	Golden-yellow
Sunburst Honeylocust	Gleditsia triacanthos	Irregular, somewhat rectangular outline	10'	30'	35'	Bright yellow tip growth	Yellow Brown
Crape Myrtle	Lagerstroemia indica	Varies	10'	20'	20'	Dark green	Yellow to red
Prairifire Crabapple	Malus var. Prairifire	Upright spreading, rounded	None	20'	20'	Purple becoming reddish green	Bronze
Tschonoskii Crabapple	Malus tschonoskii	Upright, narrowly oval	None	28'	14'	Silvery green to green	Orange, red, and purple
Canada Red Chokecherry	Prunus virginiana var. Shubert	Upright spreading, rounded	10'	30'	20'	Green purple	Red to reddish purple
Skyrocket English Oak	Quercus robur var. Fastigiata	Narrow, fastigiate	10'	45'	15'	Dark green	Yellow brown
Japanese Stewartia	Stewartia pseudocamelia	Pryamidal to oval	None	30'	20'	Medium to dark green	Orange, red, and purple
Big Leaf Snowbell	Styrax obassia	Oval	None	25'	20'	Dark green	Yellowish

Table 700.2 – Approved Street Tree Species for Areas 3’ – 6’ Wide

Common Name	Scientific Name	Shape	Min. Power Offset	Height	Spread	Color	Fall Color
Hedge Maple	Acer campestre	Dense and rounded	10’	30'	30'	Dark green, glossy	Yellowish
Armstrong Maple	Acer freemanii	Narrow	10’	45'	15'	Green	Yellow-orange
Amur Maple	Acer ginnala	Upright, oval	None	55'	45'	Medium green	Orange to orange-red
Crimson Sentry Maple	Acer platanoides var. Crimson Sentry	Compact, dense, pyramidal to oval	10’	25'	15'	Deep purple	Maroon to reddish bronze
Bowhall Red Maple	Acer rubrum var. Bowhall	Broad oval, round	10’	40'	40'	Green	Yellowish orange to red
Pacific Sunset Maple	Acer truncating	Upright spreading, rounded crown	10’	30'	25'	Dark green, smooth, very glossy	Yellow orange to bright red
Katsura	Cercidiphyllum japonicum	Oval, pyramidal	10’	60'	60'	Green	Yellow
Tricolor Beech	Fagus sylvatica var. Purpurea Tricolor	Broad, rounded pyramid	10’	40’	30’	Purple	Copper
Summit Green Ash	Fraxinus pennsylvanica var. Summit	Upright branching, narrow oval	10’	45'	25'	Medium green	Yellow
Princeton Sentry Ginkgo	Ginkgo biloba var. Princeton Sentry	Narrowly pyramidal	10’	40'	15'	Green	Bright yellow
Saratoga Ginkgo	Ginkgo biloba var. Saratoga	Dense, pyramidal	10’	40’	20’	Emerald green	Gold
Sunburst Honeylocust	Gleditsia triacanthos	Irregular, somewhat rectangular	10’	40'	35'	Bright yellow tip growth	Yellow-brown
Crimson Spire Oak	Quercus alba x Q. robur var. Crimschmidt	Columnar, tightly fastigiate	10’	45'	15'	Dark green to bluish-green	Rusty red
Emerald Sunshine Elm	Ulmus propinqua	Vase	10’	35’	25’	Green	Yellow
Green Vase Zelkova	Zelkova serrata var. Green Vase	Vase, rounded	10’	40'	40'	Deep green	Rusty red

Table 700.3 – Approved Street Tree Species for Areas 6' Wide or Greater

Common Name	Scientific Name	Shape	Min. Power Offset	Height	Spread	Color	Fall Color
European Beech	Fagus sylvatica	Broadly pyramidal to oval	25'	50'	40'	Dark green, glossy	Bronze
Autumn Purple Ash	Fraxinus americana var. Purple Autumn	Rounded	25'	45'	40'	Green, textured	Reddish Purple
Patmore Ash	Fraxinus pennsylvanica	Symmetrical upright branches, oval head	25'	45'	35'	Dark green, glossy	Yellow
American Hophornbeam	Ostrya virginiana	Upright oval	25'	40'	25'	Dark green	Yellow
Persian Parrotia	Parrotia persica	Broadly pyramidal to rounded	25'	30'	20'	Green, textured	Yellow, orange, and red
Scarlet Oak	Quercus coccinea	Upright spreading, open, broadly oval	25'	50'	40'	Dark green, glossy	Red
Northern Red Oak	Quercus rubra	Rounded	25'	50'	45'	Dark green	Red

710. Street Tree Quality and Condition Standards

A. A street tree shall have a straight and upright trunk perpendicular to the ground with the lowest scaffold branches a minimum height of 5 feet above the ground. (Scaffold branches are the primary limbs radiating from the trunk of a tree from which all subordinate branches grow.) Any structural pruning of the scaffold branches to obtain the above clearance or required appearance must have been performed the year prior to digging the tree.

B. Street trees shall be grown to the standards and specifications of the American Standard for Nursery Stock (ANSI Z-60.1-1996), published by the American Association of Nurserymen.

C. Street trees shall be provided reasonably free from insects and disease, decay, major structural defects, and damage to the bark, the trunk, all branches, and the root system. The term "reasonably free" is as defined by nursery industry standards for street trees.

D. Street tree scaffold branches shall be well proportioned and pointing upward where they attach to the main trunk, with an average spacing of at least six inches. Trees with a main trunk branch "Y" are not acceptable.

E. Street trees shall be a minimum of 1.5 inches in caliper and shall be a minimum of 10 feet tall at the time the trees are dug.

F. Trees shall be transported and provided in the following condition at time of planting.

1. Balled and burlapped or in wire baskets, providing:

a) The trees have a tight, sound root ball with firm attachment of the trunk. Trees with trunks loosely attached to the root ball will not be accepted.

b) The root ball size and condition conform to the standards and specifications of the American Standard for Nursery Stock (ANSI Z-60.1-1996), published by the American Association of Nurserymen.

c) The root balls have not been allowed to dry out at any time. Any trees stressed from lack of sufficient water will not be accepted.

d) The trees have a well-developed root system and are not root-bound or have circling/girdling roots.

2. In a container, providing:

a) The trees are free of circling, girdling roots, i.e. root-bound.

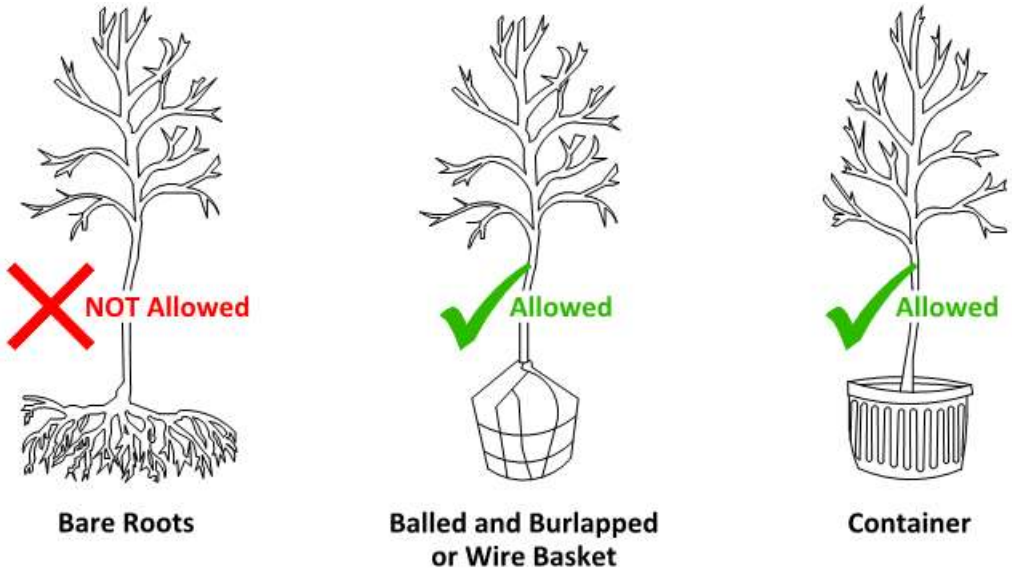
b) The trees have roots extending to the inside edges of the container.

c) The trees have been grown in the container for a maximum of one year.

G. Bare root trees are not allowed.

H. Trees that need pruning of dead, broken, or split branches to meet the requirements in this standard shall not be planted.

Figure 710.1 – Street Tree Condition



720. Planting Location, Spacing, and Clearances

720.1. Location

A. On streets without sidewalks, tree locations shall accommodate future sidewalks.

B. Trees locations shall accommodate current and future utility line corridors.

C. No tree shall be planted within a landscape strip or median planter less than 2.5 feet wide.

D. Trees shall be centered in landscape strips between the sidewalk and the street curb.

E. Trees shall not be planted over existing or future underground utility lines.

720.2. Spacing

A. Tree spacing shall equal the *Spread* dimension shown in Tables 700.1 through 700.3.

720.3. Clearances

A. All landscaping (trees and shrubs) shall be maintained to meet the requirements for vision clear zones at intersections and along streets and sidewalks. See Subsection 230.5.1 and the *Roadside Vegetation Management Program* page on the City website.

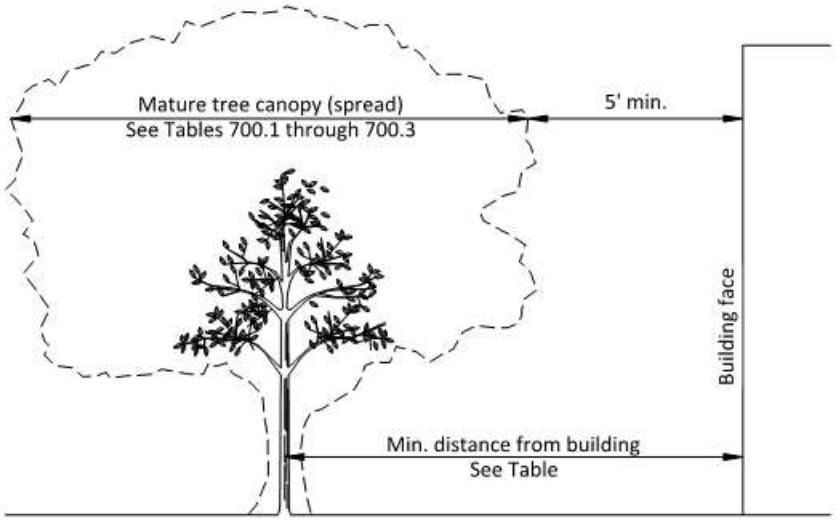
B. Street trees shall meet the clearance requirements shown in Table 720.1.

C. Trees and shrubs shall meet the minimum clearances from buildings shown in Figure 720-1.

Table 720.1 - Minimum Street Tree Planting Clearances

Feature	Minimum Distance From Feature		
	Small tree (up to 35’ ht.)	Medium tree (up to 60’ ht.)	Large tree (over 60’ ht.)
Public intersections	35 feet	35 feet	35 feet
Alley and Private intersections	15 feet	15 feet	15 feet
Courtesy walks/sidewalks	2 feet	3 feet	4 feet
Driveways	5 feet	5 feet	10 feet
Fire hydrants	5 feet	5 feet	5 feet
Manholes and catch basins	5 feet	10 feet	10 feet
Water meters	5 feet	5 feet	5 feet
Utility boxes	5 feet	5 feet	5 feet
Utility poles	5 feet	10 feet	10 feet
Street lights	15 feet	20 feet	25 feet
Stop signs	At least 35 feet. Shall not visually block sign		
Regulatory signs	Shall not visually block sign.		

Figure 720.1 - Minimum Building Clearances



Tree Size	Minimum Distance from Building*
Small trees (potential growth of up to 35’ ht.)	5 feet
Medium trees (potential growth of up to 60’ ht.)	10 feet
Large trees (potential growth of over 60’ ht.)	15 feet
Shrubs	3 feet

*Trees planted 10 feet or closer to a building shall have an impenetrable root barrier installed near the building. The root barrier shall run the length of the planting area or the structure, and reach a depth of at least twenty-four (24) inches.

730. Planting Requirements

A. Trees shall be planted in accordance with Std. Drg. No. 730-1.

740. Establishment Period Maintenance and Care Requirements

A. The Establishment Period is the period of time a developer, contractor, builder, and or property owner is obligated to provide 1) maintenance meeting the requirements of this subsection and 2) maintenance assurance by means of a maintenance bond. The abutting property owner is responsible for street tree maintenance after the Establishment Period. The Establishment Period shall begin on the date of final acceptance of the trees by the City and shall extend for two years from that date.

B. Each tree shall receive regular weekly watering as needed to ensure the trees are not stressed during the hotter portions of the growing season (from April 15th through October

15th). Water shall be provided in a manner that allows penetration into the soil around the tree.

C. Stakes and ties shall be maintained and repaired as needed. Stakes and ties shall be removed at the end of the Establishment Period if the trees are well rooted into the native soil and are able to withstand local wind conditions.

D. A minimum 3 foot diameter planting area around each tree shall be maintained with a layer of medium or medium-fine bark mulch 2-4 inches deep. The bark mulch shall be kept at least 2 inches away from the trunk of the tree and be kept free of weeds.

E. Additional structural pruning shall be performed at the end of the Establishment Period. A strong scaffold branch structure shall be developed by pruning to select the primary scaffold branches. In addition to the requirements of Section 750, the structural pruning shall also adhere to the following:

1. Trees shall be pruned to remove subordinate branches that are crossing, damaged, diseased, broken, or have included bark.

2. Trees shall not be topped or reduced in height.

3. Trees shall be pruned to meet all the clearance requirements of Subsection 720.3.

4. Pruning shall be performed according to the ANSI A-300 pruning standards and specifications established for trees at planting (5.4.1) and for trees during the first three years after planting (5.4.2).

5. Trees shall be pruned so at least 2/3 of the tree's height is foliage and canopy with the remaining 1/3 being the trunk.

F. Any tree falling into one of the following conditions shall be replaced. The new tree shall have a new establishment period of two years starting on the date it is accepted by the City.

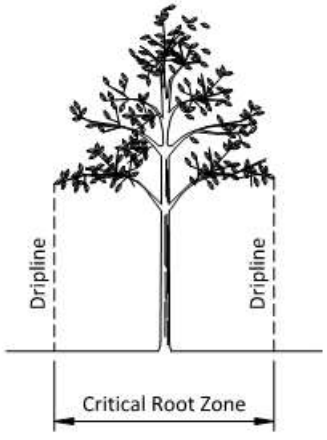
1. Dead Tree. Any tree that has no live growth originating in all or a portion of the scaffolding branches.

2. Stressed Tree. Any tree that has lost 50 percent or more of its total foliage or has a reduction of 50 percent of normal leaf size for that species.

3. Non-Approved Trees. Any tree variety not listed in Table 700.1 through 700.3.

G. No activity detrimental to the tree's roots is allowed within the tree's Critical Root Zone, as defined in Figure 740.1.

Figure 740.1 – Critical Root Zone



750. Tree Pruning Standards

A. Tree pruning shall meet the ANSI A-300 pruning standards.

B. All work shall be performed following Oregon Safety and Health Administration (OSHA) regulations and following the ANSI Z-133.1 and the ANSI A-300.

C. Pruning shall be deemed necessary when such action is to:

1. Correct structural problems, remove deadwood, and decayed parts.

2. Comply with the City of Hillsboro *Municipal Code*.

3. Correct a safety or health problem.

4. Maintain required clearances.

D. All tree work performed near electrical lines shall conform to the National Electrical Safety Code, ANSI Z-133.1, and OAR 437-002-0301 through 0311.

E. Trees shall be pruned in a manner that retains well-spaced, inner lateral branches so as to allow the trunk taper to be developed as needed for the strength of the branch attachment.

F. No tree shall have more than 20 percent of its canopy removed in any one pruning or in any one year.

G. No hooks, spikes, or climbing gear, which pierces the trunk of a tree, shall be used.

760. Private Irrigation System Crossings

A. This Subsection applies to all private irrigation systems crossing the public ROW. Such crossings shall be avoided wherever possible.

B. Crossings shall be show in the permit review plans submitted to the City.

C. The crossing shall be included in the project's record drawings (see Section 120.6). If the crossing is relocated after acceptance of the record drawings, the Developer/Owner shall obtain a ROW permit prior to commencing work. Prior to final inspection of the ROW permit, the Developer/Owner shall update the record drawings at their own expense.

D. The Owner/Developer (or Homeowner's Association if applicable) shall be responsible for repairing, at their own expense, any damage to the public infrastructure that is associated with the repair, replacement, or maintenance of the private irrigation crossing.

E. All irrigation piping, and associated communication wire, shall be placed in a pipe sleeve. Sleeves shall be minimum of 4 inch ductile iron or C900 PVC.

F. A gate valve, enclosed by a box marked "Irrigation" and having a green lid, shall be provided at both ends of the crossing.

G. Minimum depth of cover to the top of the pipe shall be 36 inches.

H. Backfill the pipe zone with imported riverbank sand and the rest of the trench with crushed ¾-inch minus rock, compacted in 6-inch lifts.

I. The letters “IR” shall be stamped into the top surface of the curbs on each side of the roadway where the crossing is installed. See Subsection 230.9.C.

J. Place a 14 gauge blue trace wire above the entire length of the sleeve.