

CITY OF POST FALLS
TREE STANDARDS
MANUAL

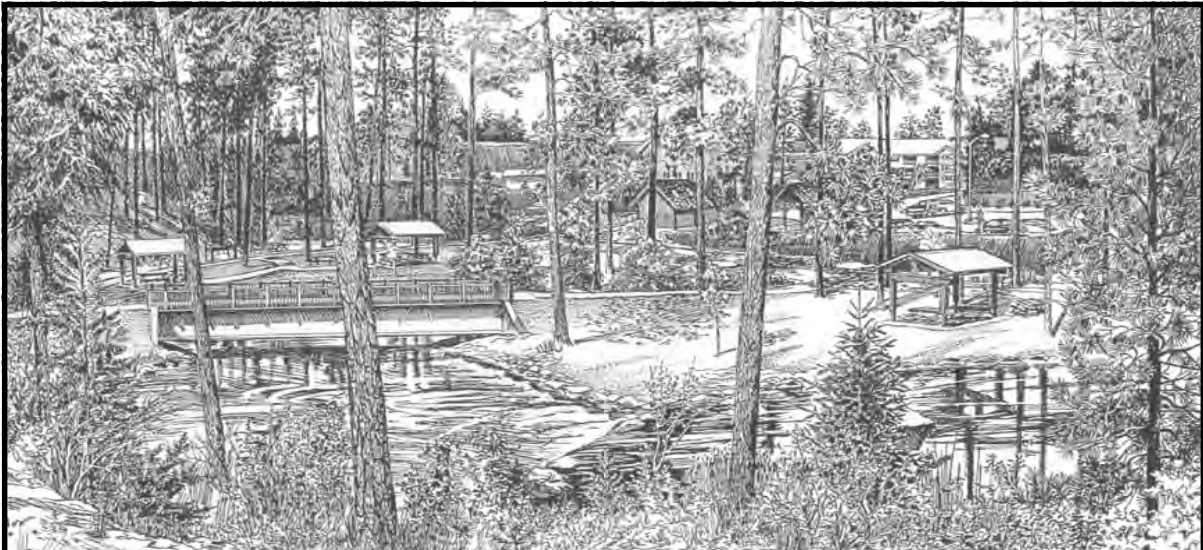


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MISSION STATEMENT

***“TO PROTECT AND ENHANCE THE
URBAN FOREST RESOURCE OF
POST FALLS FOR THE SOCIAL,
ENVIRONMENTAL AND ECONOMIC
BENEFITS OF THE COMMUNITY.”***

Post Falls Urban Forestry Commission



***FALLS PARK POND AND IT'S
SURROUNDING NATIVE VEGETATION.***

By Bev Jaquish



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INTRODUCTION



The City of Post Falls' urban forest consists primarily of Ponderosa Pine. As the City grows and develops, its trees become more varied, requiring new management practices. The City recognizes these changes and is promoting tree care.

The public has become increasingly aware of the benefits of trees and is more interested in promoting trees for a better urban community. Trees produce oxygen and filter storm water, reducing underground pollutants. They conserve energy by reducing sun radiation and providing thermal cover. Trees increase property values, visually soften architectural elements and beautify the environment. Trees and their proper management can provide a wellspring of benefits to the community and many generations to come.

The City of Post Falls offers this manual of standards to provide information to the community about the proper care and maintenance of public trees. This manual is intended for use by citizens, developers, landscape contractors, City staff, and utility companies for the planting and maintenance of the City's public trees. The information contained in this manual was compiled from a variety of sources, including other municipalities and nationally published urban forestry materials.

These standards reflect Post Falls' commitment to plant, replant and maintain a healthy and diverse community forest.

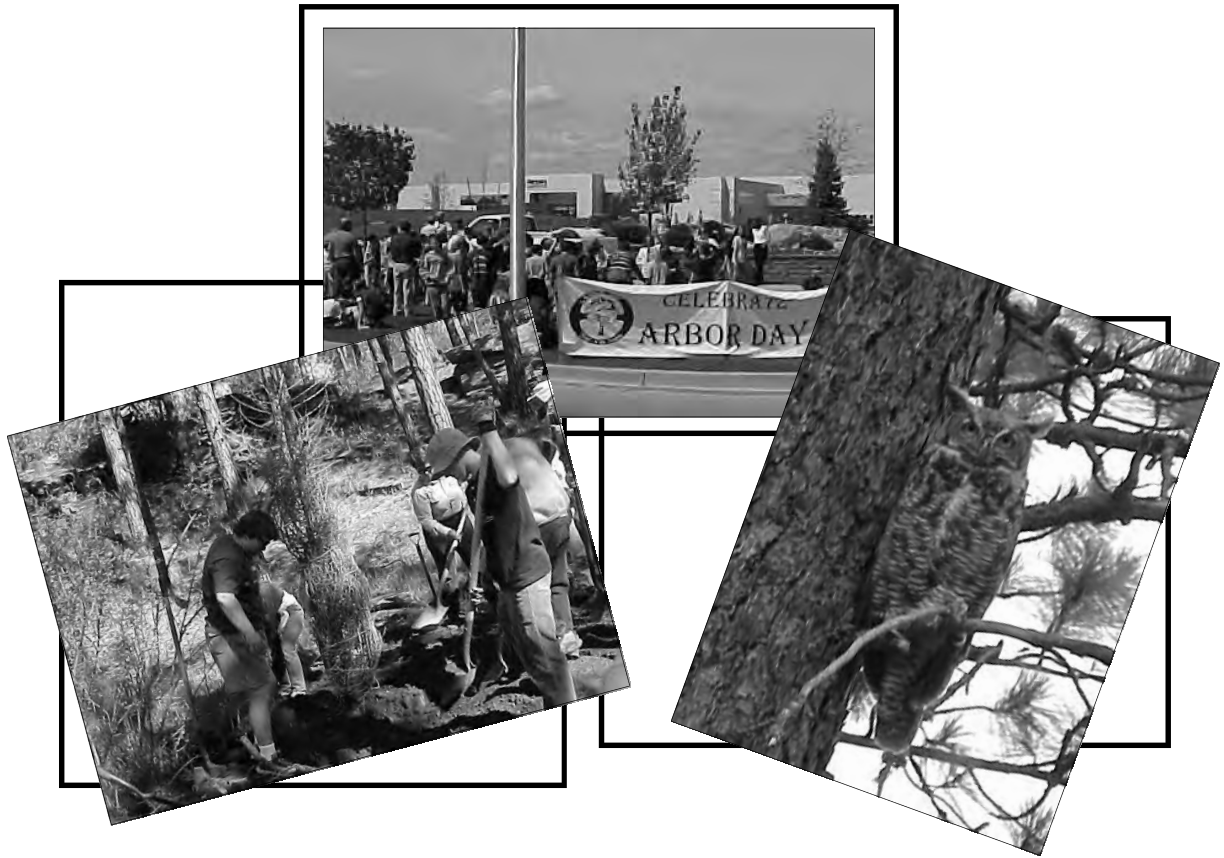
The manual is divided into the following parts:

- I Public Tree Standards and Specifications for Planting, Maintenance, Pruning, and Protection
- II City of Post Falls Approved Street Tree Planting List
- III City of Post Falls Tree Planting Details

ACKNOWLEDGMENTS

*The National Arbor Day Foundation's Tree City USA Bulletins
for the graphics contained in this manual.*





SECTION I. PUBLIC TREE STANDARDS AND SPECIFICATIONS

Chapter 1

GENERAL GUIDELINES

1. The specifications in this manual are the minimum standards for planting, pruning, maintenance and protection of all public trees. They apply whether the work is performed contractually, by City employees, or by private individuals. Exceptions to these standards must be by written approval of the City.
2. It is unlawful for any person to engage in the commercial business of cutting, trimming, pruning, removing, spraying or otherwise treating public trees within the City without the supervision of an I.S.A. Certified Arborist .
3. All traffic and safety rules must be observed while working on public trees.

Chapter 2

DEFINITIONS

When the words “shall” and “will” appear in this manual, they have a mandatory meaning. The use of “may” is permissive. Words not defined in this section shall have their common and ordinary meaning.

DIRECTOR: The Director of the Department of Parks and Recreation.

CALIPER: The diameter of the tree’s trunk measured six inches above the ground up to and including four-inch caliper size. If the caliper at six inches above the ground exceeds four inches, the caliper should be measured at twelve inches above the ground.

CERTIFIED ARBORIST: A person in possession of current Certified Arborist credentials from the International Society of Arboriculture.

COMMUNITY FOREST: The sum of all of the trees and other vegetation in and around the City of Post Falls.

DRIPLINE: The area directly under the tree’s canopy where the essential root mass is found (Figure 1).

HAZARD TREE: A tree identified by the Director to be an unacceptable risk to cause personal injury or property damage.



Figure 1 – Dripline

INJURIOUS PEST OR DISEASE: Organisms that are capable of seriously damaging the form, structural integrity, or life of a tree.

ISA: International Society of Arboriculture.

LANDSCAPING: 1. Aesthetically pleasing space using ground cover, shrubs, trees, building materials, or a combination thereof. 2. To add such enhancements.

NATURAL AREA TREES: Trees located in minimally managed or minimally developed open space areas of the City which predominantly contain native tree species.

PARK TREES: All trees in public parks and in all areas owned by the City, excluding those trees in the public rights-of-way.

PERSON: Any individual, firm, partnership, corporation, association, company, municipal corporation or other governmental entity or organization of any kind.

PLANTING STRIP: The area within the street right-of-way that can be landscaped, including the following (Figure 2):

- A.) *The area 2 feet from the sidewalk, curb or undeveloped street edge.*
- B.) *The area in the median strip or swale .*
- C.) *The area between the curb and the sidewalk.*

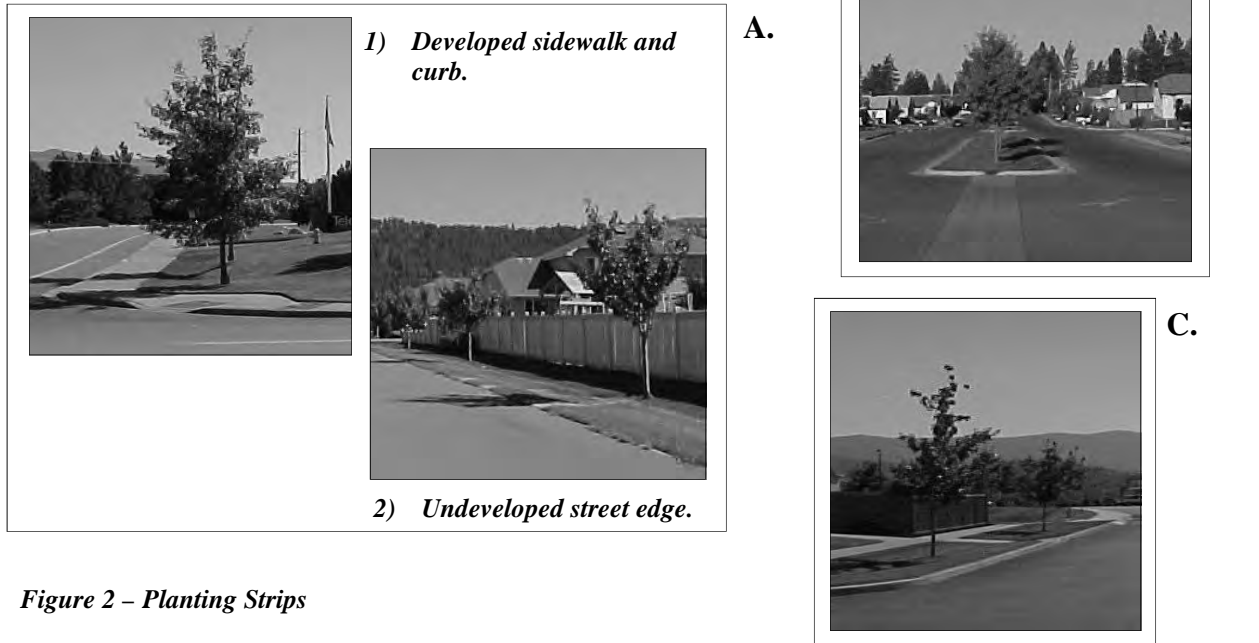


Figure 2 – Planting Strips

POST FALLS URBAN FORESTRY COMMISSION: An advisory commission appointed by the Mayor and approved by the City Council to assist the City in the management of the community forest.

PRIVATE TREE: A tree that is the responsibility of a private landowner.

PRUNING: The careful and systematic removal of plant stems, dead or alive, for purposes of safety, clearance, aesthetics, and the overall health of the plant.

PUBLIC RIGHT-OF-WAY: Improved or unimproved public property owned by, dedicated to, or deeded to, the public or for the public’s use, for the purpose of providing vehicular, pedestrian and other public use. Such public property includes, but is not limited to, streets, alleys, sidewalks, easements for public utilities, cut and fill slopes, and public open space.

PUBLIC TREE: A tree that is located on City property, public right-of-way or easements within the City of Post Falls.

ROOT BARRIER: A device or material designed to re-direct root growth mechanically or chemically.

STREET TREE: Any tree with 51% of its trunk within the public right-of-way.

TOPPING: The improper pruning and severe cutting back of limbs within a tree's crown, or the removal of the top portion of the trunk of a coniferous tree. (Figure 3).



Figure 3 – A topped Silver Maple.

TREE APPRAISAL: To quantify a dollar value for a tree by using accepted national standards.

TREE CLASSES: The following are tree classes (Figure 4):

Class I: Small trees which do not attain a mature height of more than 30 feet. Typical spacing is 15-30 feet.

Class II: Medium sized trees, 30-60 feet in mature height. Typical spacing is 30-40 feet.

Class III: Large trees, more than 60 feet in mature height. Typical spacing is 40-50 feet.

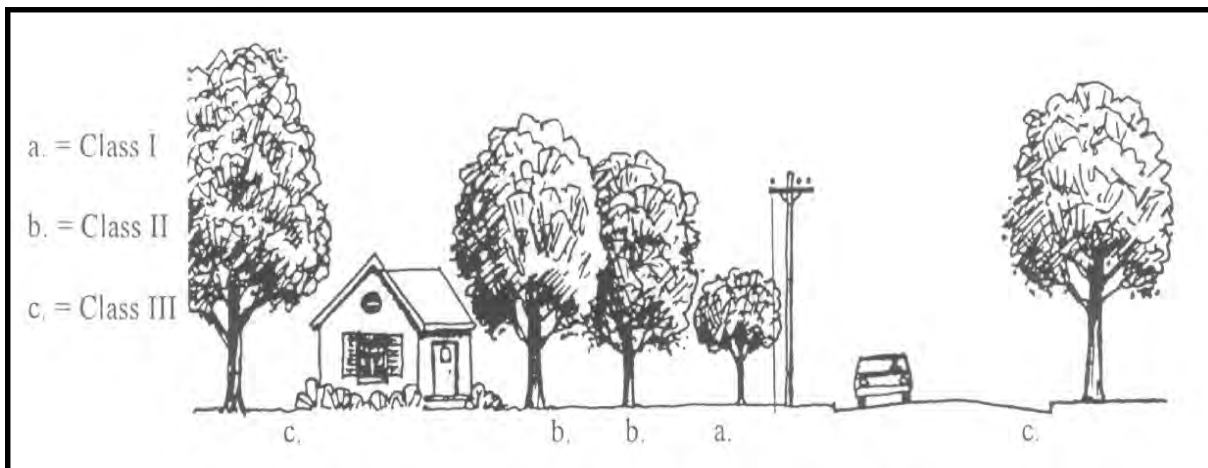
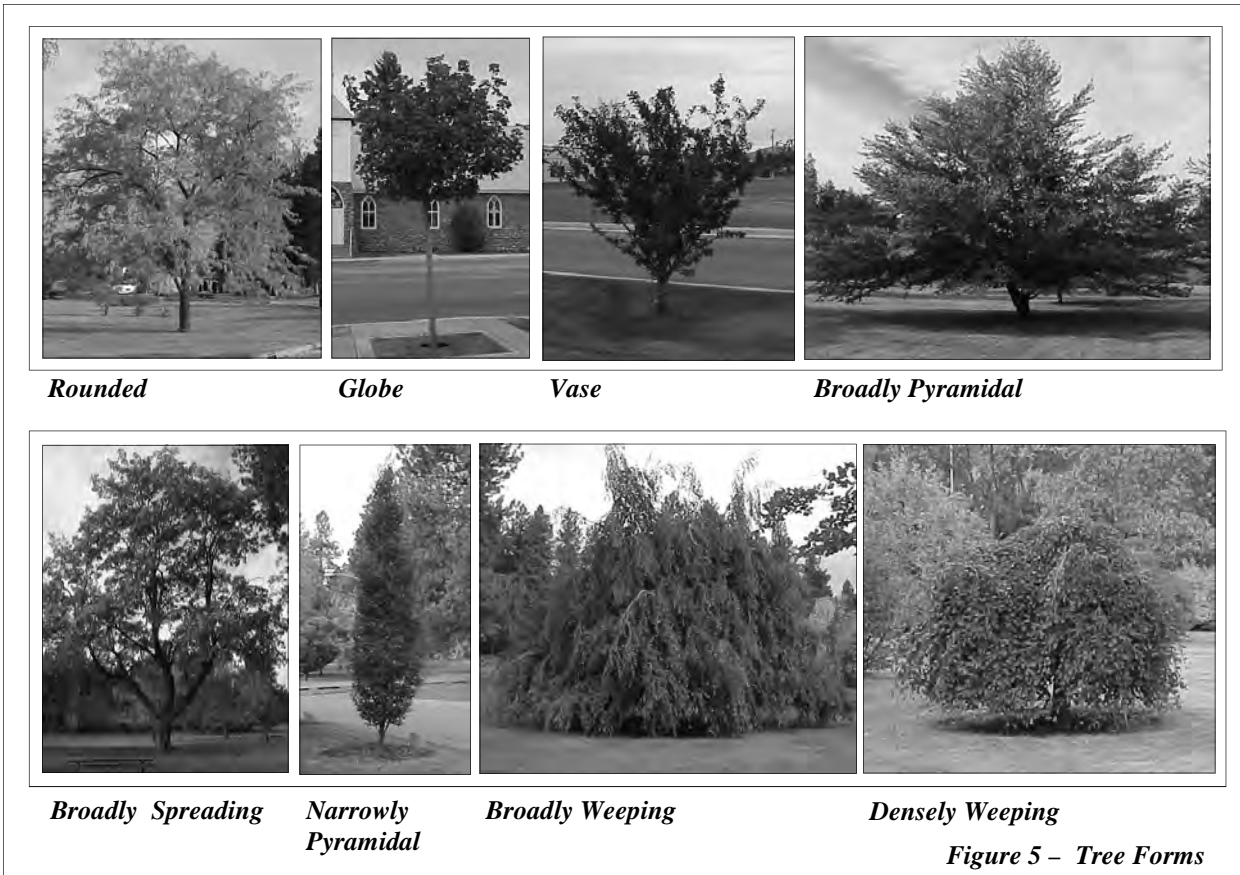


Figure 4 – Tree Classes

TREE FORM: The visual shape of a tree's crown based on the genetic or cultivated characteristics of that tree species (Figure 5).

TREE REMOVAL: The complete removal of a tree including the grinding of the stump and the cleanup of all debris material.



TREE RING: The area at the base of the tree that is cleared of competing turf and weeds, and maintained with a mulch material (Figure 6).

TREE SERVICE: Commercial services provided for the care of trees, including, but not limited to: planting, removing, pruning, or engaging in technical arboriculture practices.



Figure 6 – Tree ring

TREE STANDARDS: The set of specifications concerning the planting, care and maintenance of trees as found in this Tree Standards Manual for the City of Post Falls.

URBAN FOREST: The sum of all of the trees and other vegetation in and around the City of Post Falls.



Chapter 3

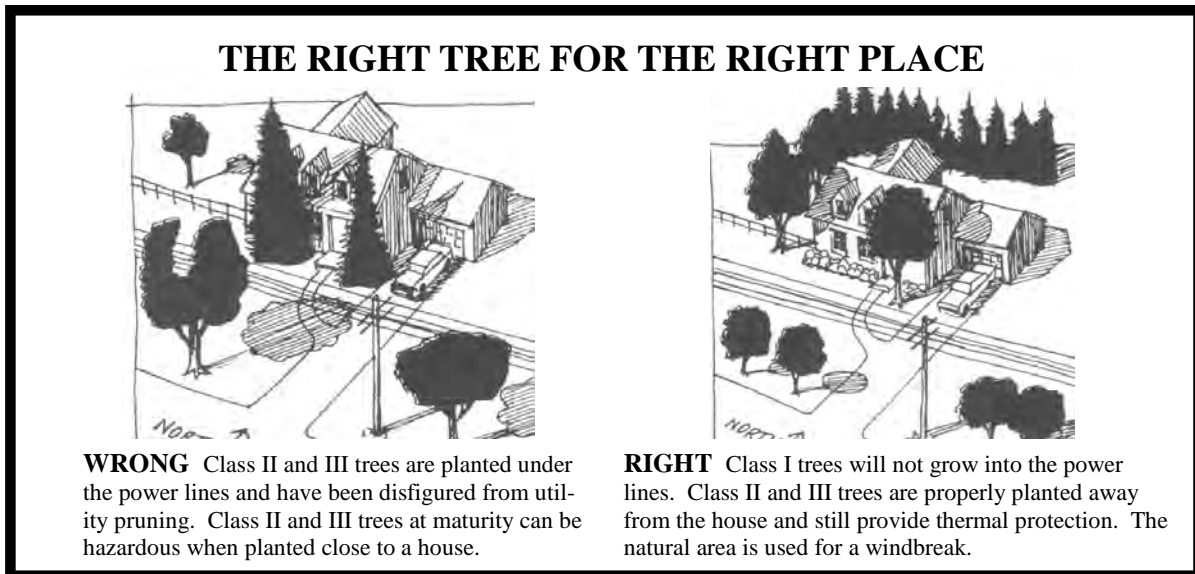
PLANTING

Planting Guidelines for Public Trees

The City encourages species and age class diversity in managing our City's park and street trees. Plantings with a variety of trees are not subject to large scale losses from disease or natural life cycles. City policy for public trees is to plant "the right tree in the right place."

Site factors to be considered are:

- 1) the type of location to be planted (natural or developed area)
- 2) the mature height and width of the tree
- 3) the size of the planting strip
- 4) the presence of overhead wires



Public trees should not be planted where they will obstruct or interfere with buildings or public improvements, or interfere with traffic or public safety. Public trees should not be planted in the following places unless approved by the Director:

- Within 2' of an existing curb face
- Within 4' of any building or structure
- Within 4' of a meter vault box
- Within 4' of residential driveways, or 6' of commercial driveways
- Within 10' of fire hydrants and utility poles
- Within 10' of a public sanitary sewer, water line or sprinkler head
- Within 10' of an alleyway access
- Within 20' of street light standards
- Within 20' in front of a stop or yield sign

Established areas New street tree plantings are at the discretion of the individual property owner acting in accordance with this Tree Standards Manual. Property owners are encouraged to consider existing trees and landscaping when choosing trees to plant.

New development During its review of the development plans, the City will approve the number and type of trees to be planted.

Public projects All public projects will follow these standards.

1. All trees and shrubbery near streets must comply with the vision clearance standards in Post Falls Municipal Code Chapter 10.52 (Maintenance of Intersection Visibility.) Any new tree may not be planted within the 40' triangle at unmarked street intersections, except where engineering standards indicate otherwise (Figure 7).
2. A root barrier device may be required if trees are planted within 4' of the sidewalk or curb.
3. **All street trees that are removed must be replaced**, unless otherwise approved by the Director.
4. The minimum sizes for trees to be planted in rights-of-way are 1½-inch caliper for Class I trees and 2-inch caliper for Class II and III trees, unless otherwise approved by the City.
5. Containerized or ball and burlap stock may be used for public trees. **The person (or other entity) that planted the tree is responsible for replacing the tree if it dies within three years.**



Figure 7 – Vision clearance
A vision clearance triangle is 40' from the intersection's road or curb edge.



“Think before you plant.” Good planning is the key to a successful life of a tree.

PROBLEM:



This is a maze of overhead power lines and guy wires.



This tree will grow into the wires within 7 to 10 years.

SOLUTION: *A small Class I tree should be planted on this site.*

Street Tree Spacing and Location Guidelines

- The City encourages spacing trees so that canopies will touch when they are mature. The City may approve wider spacing if it is necessary for safe use of the street or sidewalk, or for other good reason. When space is limited, or to achieve specific design effects, closer spacing may be approved. **Class I trees should be planted in small planting areas and under public utility wires.** The City encourages planting Class II and Class III trees wherever practical. (Figure 8)



Figure 8 – Street tree spacing

- Where the planting strip is between the sidewalk and the property line, street trees should be planted 3-7 feet behind the walk, depending on the species selected. In undefined planting strips, street trees should be planted 3-5 feet from the curb. If there are no curbs or sidewalks, the future improvements should be considered when planting (refer to fig. 9).

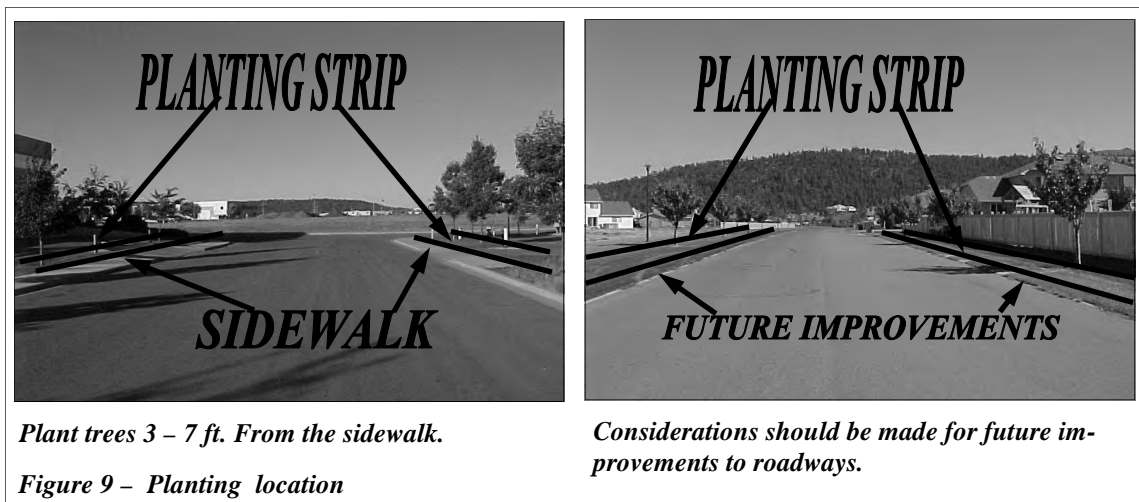
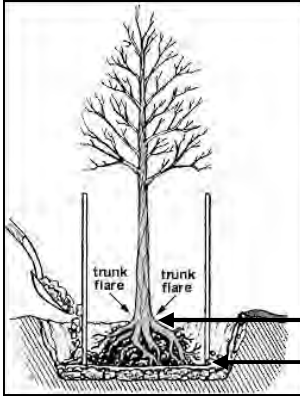


Figure 9 – Planting location

- Street trees must have a minimum planting strip of 16 sq. ft.. **Street trees planted under an overhead utility line must not exceed 30 feet in height at maturity.** Any street tree to be planted that does not meet these standards must have prior approval from the Director.

Planting Methods

NOTE: Before digging, contact Kootenai County One Call, a free utility locator service, 1-800-428-4950, at least 2 working days before breaking ground.



1. All planting holes should be 2-5 times the diameter of the root ball of the tree. Dig the hole only to the depth of the roots. The tree should be centered in the hole and positioned so that the root flare is at or slightly above soil level. (refer to figure 10) It may be necessary to dig below the existing soil level to find the root flare.

Figure 10 – Digging planting holes Dig only as deep as the root mass. Measure from the root flare, the first structural root, to the bottom of the roots.

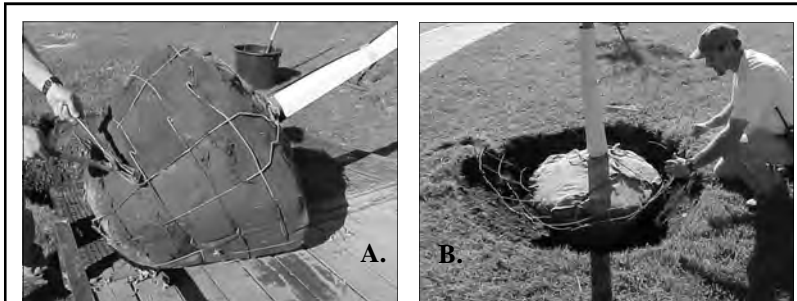


Figure 11 – Planting— Remove bottom tier of wire basket before placing tree in hole. Once tree is in place, cut basket sides and remove.

2. Remove all wire baskets, burlap, containers, twine, tags, wire or tree wrap to the maximum extent possible (refer to figure 11). Straighten any circling roots (container stock).



Figure 12 – Planting

3. Backfill the hole to half full then saturate with 5 gallons or more of water to fill all holes and cavities around the roots. Finish filling the hole and slowly water again with another 5 gallons, or more. More soil may be needed to be added after the water has drained and the fill has settled (refer to figure 12).

4. Cover the tree ring area of the newly planted tree with 2-4 inches of aged woody organic mulch material. The mulch should be pulled 3 inches back from the trunk of the tree. Bark, wood chips, or recycled composted and screened yard debris are recommended mulch materials. (refer to figure 13)



Figure 13 – Planting

5. Stake new trees *only* if it is necessary for added stability. Ties should only be tight enough to support the tree. They should not prevent swaying, which strengthens the trunk. Tie material should be flexible and at least 1-inch wide where it touches the tree. **All ties, stakes and tree wrap should be removed within a year.** If the tree still requires support, adjust the tie system. (refer to figure 14)



Figure 14 – Good staking

6. **New trees need to be watered to a depth of 18 inches at least once a week during the first three growing seasons if they are to become well established.** During periods of drought, new trees will need more frequent watering. At least ten (10) gallons of water per application, usually more, will be needed. A slow soak is more effective than applying water all at once. (Soil should be moist to the depth of 18” – 24”) Proper mulching helps conserve soil moisture.

7. Maintain mulched tree rings or install adequate edging material to **keep turf, weeds, string trimmers and mowers out of the ring.** (Trimmers and mowers may irreparably damage the base of the tree.)

Quality of Plant Materials

High quality plant materials are desired for plantings. The minimum acceptable standard for plant materials shall conform to the American Association of Nurserymen’s **American Standard For Nursery Stock**, (ANSI Z60.1 – 2004) and will be true to name and type. Broken, damaged, diseased or substandard tree stock will not be allowed to be planted in the right-of-way. Trees planted must be free from bark damage, decay, sunscald, insect pests or other objectionable disfigurements. (refer to figures 15 and 16)

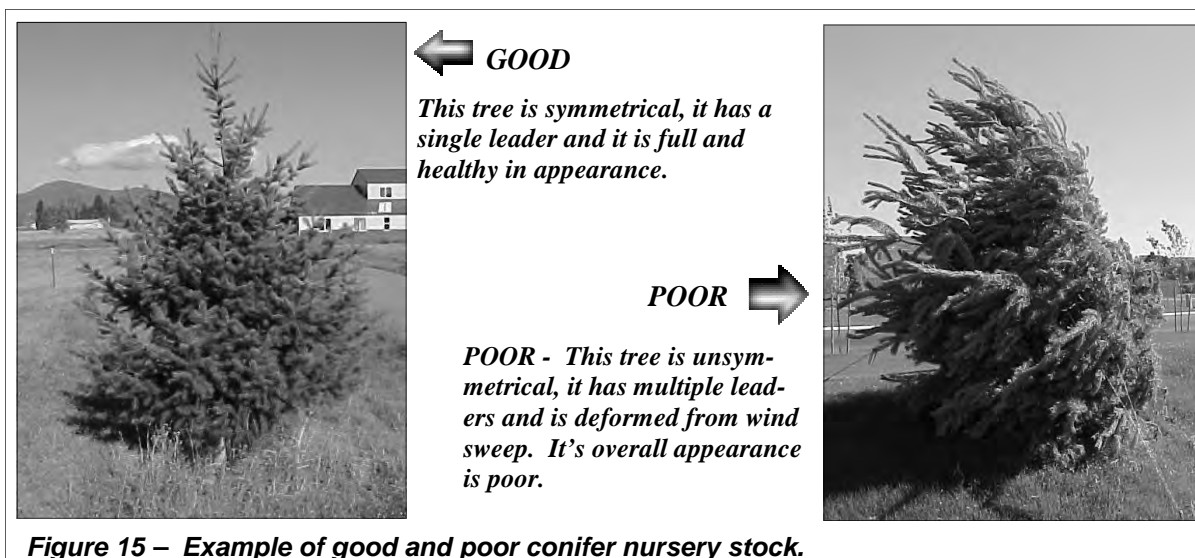
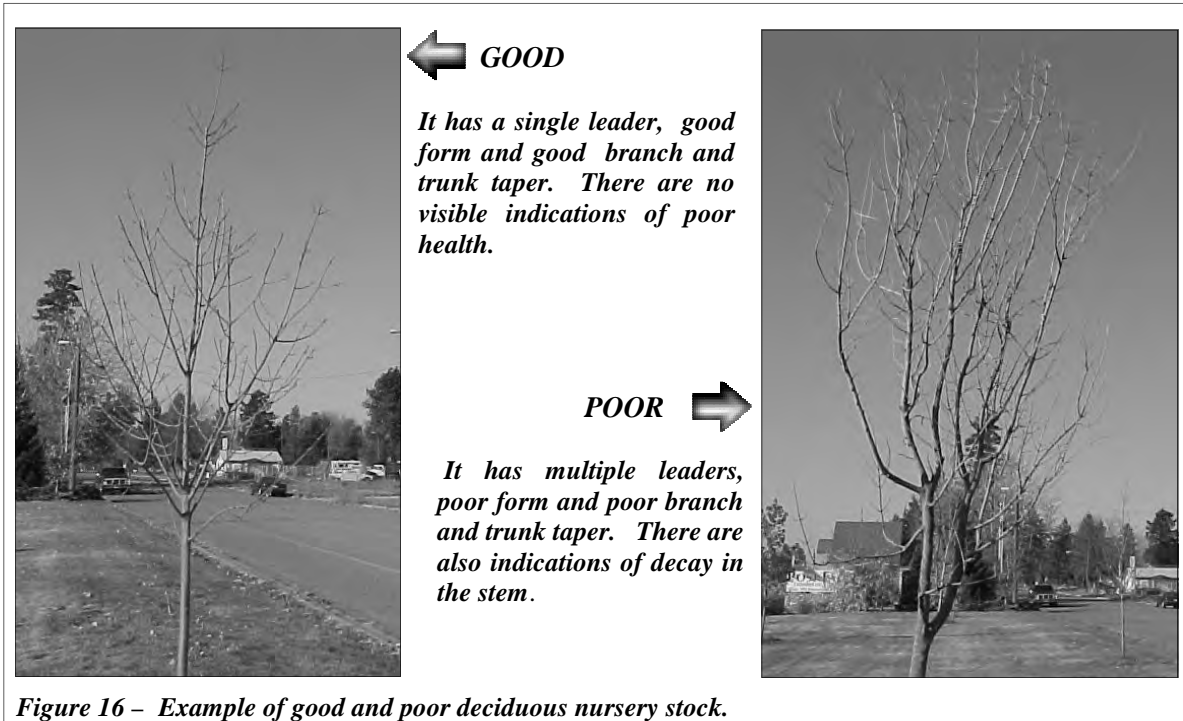


Figure 15 – Example of good and poor conifer nursery stock.



Quality of Work

- The best time to plant trees is spring or late fall when the trees are dormant. Ball and burlap or containerized stock may be planted successfully most of the year except during very hot and dry periods of the summer.
- Handle tree stock carefully, to avoid causing damage during planting.
- If any bark is damaged or branches broken during planting, the damage should be properly treated immediately. Trees that are so badly damaged that it is doubtful they will survive or grow properly must be replaced.

Do not cause a public hazard while planting a street tree. Make sure to:

1. Barricade open planting holes if they are left unattended.
2. Clean up debris promptly.
3. Keep access corridors clear.

Acceptance

- **All street tree plantings must be in accordance with this manual unless otherwise authorized by the Director.**
- **Unacceptable planting must be corrected to the standards of this manual. If the corrective measures are done by the City, the costs will be charged to the contractor, landowner or the primary developer of the project.**

 Chapter 4

PRUNING



It is unlawful for any person to engage in the commercial business of cutting, trimming or pruning public trees within the City without the supervision of an ISA Certified Arborist.

Pruning Guidelines for Public Trees

- Trees must not be pruned in a way that will endanger their health.
- Branches and foliage of street trees must not interfere with safe public passage. They should be pruned so that clearance over streets is at least 12 feet and at least 8 feet over pedestrian areas.
- Remove sprouts and suckers growing on the trunk to at least 8 feet above the ground.
- When dead or broken limbs endanger the public or property, they must be promptly and properly removed. It is not necessary to get authorization prior to the work when the pruning is needed immediately for safety.
- To protect the future welfare of the tree, any pruning of the roots of a street tree must have prior approval from the City.

PROPER PRUNING WILL MAKE A DIFFERENCE!

These two trees are the same species, Green Ash, and are about the same age. The tree on the left is a healthy specimen with good natural tree form. The tree on the right has numerous insect and disease problems and very poor tree form.



← GOOD

This tree has been properly pruned. Dead and dying limbs and larger limbs that were crowding other limbs have been pruned from the tree.

POOR →

This tree has been improperly pruned by “topping”. All the major limbs have been removed over many years. Poorly attached limbs, “suckers”, grow back and create hazards.

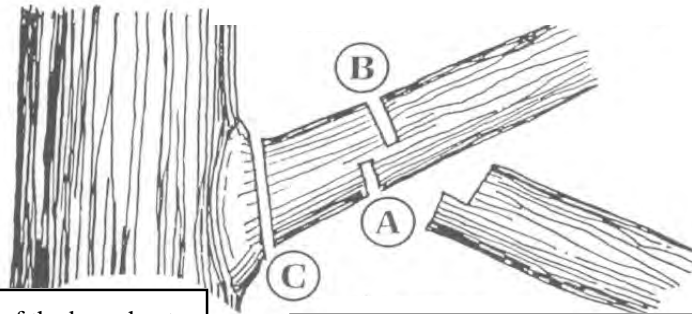


Methods of Pruning

The standard for pruning public trees is ANSI Z133.1, ANSI A300 Tree Care Operations and I.S.A. Tree Pruning Guidelines. Copies are on file in the Urban Forester's office. **Public trees are to be pruned by an International Society of Arboriculture Certified Arborist unless otherwise approved by the Director. Topping is an unacceptable arboriculture practice and is strictly prohibited under Post Falls' Municipal Code 12.32.050 (refer to fig. 17).**

When pruning, it is often easy to damage the tree further by tearing or stripping the bark on the underside of limbs. Not only is this unsightly but it also enlarges the pruning wound and prevents the tree from healing the wound properly. By following the Three Step Method of Pruning this won't happen!

A Cut part way through the branch from beneath at a point one or two feet from the trunk or major limb.



B Make a second cut on the top of the branch, at a distance of 1/3 to 1/2 the diameter of the limb from the first cut. This should allow the length of the limb to fall from its own weight and be removed.

C Complete the pruning by making a final cut next to the trunk or limb just outside the branch collar with the lower edge further away from the trunk or limb than at the top.

Figure 17 – Three Step Method of Pruning

Quality of Work/Pruning

- Make all final pruning cuts in a way that encourages natural callus growth to cover the wound. (Just outside the branch collar – refer to “C” above)
- Make all final pruning cuts in a way that prevents the bark and wood from tearing back. (refer to A – C above)
- Use sharp and clean tools. Disinfect tools when working with trees that have infectious disease.
- Clean up branches, logs, or any other debris promptly.
- The use of climbing spurs or spike shoes on public trees is prohibited.
- Never leave any severed or partially cut branches in the canopy of the tree.



Chapter 5

TREE REMOVAL

All tree removals on public property must be approved by the director.

If the Director does not agree with the removal of a right-of-way tree but the adjacent controller insists on removing the tree, the tree will be appraised and the appraised value of the tree will be assessed to the landowner.

Guidelines for the Removal of Public Trees

Public Safety

Proper safety procedures are required to ensure public safety when removing trees. Signage, flagging and other public safety practices should follow Idaho Code.

Quality of Work

- All debris must be removed from the sidewalk and street as soon as possible. Merchantable trees or firewood material will be removed at a time which is agreeable to both the landowner and the Director. All other debris must be removed by the end of the day it is produced.
- The stump and primary roots must be ground to at least 8” below the soil surface. The time period for grinding will be determined by the landowner and the Director. To prevent a public safety hazard, the stump hole must be back filled immediately after the grinding.

Replacement Policy

- Replacement of a public tree shall be required when removal of a public tree occurs.



Chapter 6

MAINTENANCE

Clarification of Responsibility

Street trees:

Appropriate care and maintenance of trees and landscaping in the right-of-way is the responsibility of the landowner of the adjacent property, except where the City takes responsibility. Street trees in the following areas are the responsibility of the City:

1. Both sides of 4th Avenue from Spokane Street to Falls Park
2. Both sides of Spokane Street from 4th Avenue to 2nd Avenue
3. The median on Empire Blvd.

Park trees and natural area trees:

Trees in developed open space areas, parks, and all other areas owned by the City are the responsibility of the City.

Maintenance Standards

- The health of public trees should be promoted by providing adequate inspection, monitoring, and maintenance.
- Any public tree, which poses a threat to other trees in the community because of a disease or insect infestation, should be treated to control the spread of the problem. Whenever possible, the use of integrated pest management is recommended.
- The standards for planting and maintenance in this manual are applicable to all park and natural area trees. Public trees will be pruned by ANSI and ISA specifications.

Street trees: All street trees should be inspected by the Director to determine their condition and maintenance needs. Any needed maintenance should be scheduled. Heavily damaged or disfigured street trees should be removed and replaced as soon as practical.

Park trees: All park trees in developed open space areas should be inspected annually to determine their condition and maintenance needs. Any needed maintenance should be scheduled. Park trees will be replaced when necessary to meet the goals of the park management plan.

Natural area trees: Natural area trees should be inspected as necessary to determine their condition and need for maintenance. Needed maintenance should be scheduled. The maintenance plan should consider the integrity and needs of the stand and existing plant community.

Whenever practical, improve wildlife habitat during the maintenance of natural areas. Where woody debris or tree stumps provide valuable habitat, they are exempt from the requirement to clean up debris. Nurse wood for tree regeneration may be left on site.



Replanting native vegetation.



Chapter 7

PROTECTION AND PRESERVATION OF PUBLIC TREES

General Guidelines

Abusing or destroying any public tree is prohibited under Post Falls Municipal Code 12.32.50. This includes breaking stakes or supports for a public tree, burning or encouraging any burning near the trunk, defacing it, or attaching signs or notices, nails, screws, or other such devices.



Vandalism to a Ponderosa Pine.

Notify the City before:

1. Attaching or installing any metal materials, cable, wires or other foreign objects to public trees.
2. Excavating soil or trenches, or filling soil within the dripline of a public tree.
3. Treating the soil within the root zone of a public tree with a soil sterilant.

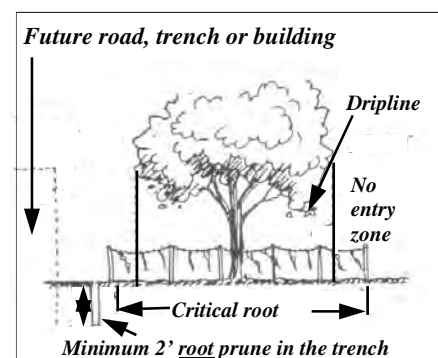
During Construction

- Site or landscape plans for any development should show all existing public trees to be saved and those to be removed should be marked on the plans. Every effort should be made to preserve desirable trees. The Director will provide information about appropriate ways of preserving the trees.
- Public trees to be saved should be marked prominently during the construction, repair, alteration, or removal of any building or structure. When the trunks of saved trees are likely to be damaged, they should be protected with fencing. To avoid soil compaction around the root zones, fencing should include the area under the dripline of the trees. (Figure 18)

During construction, protect public trees by;

- 1) *Pruning limbs in the way of the construction.*
- 2) *Fertilizing, watering and aerating the trees to minimize stress.*
- 3) *Fencing trees and natural areas to prevent compaction.*
- 4) *Adding a temporary 3" mulch layer to prevent compaction.*

Figure 18 – Protecting the root zone



- Any trenching within the dripline of public trees must be done by hand to tunnel under and preserve the main support roots. (Figure 19)

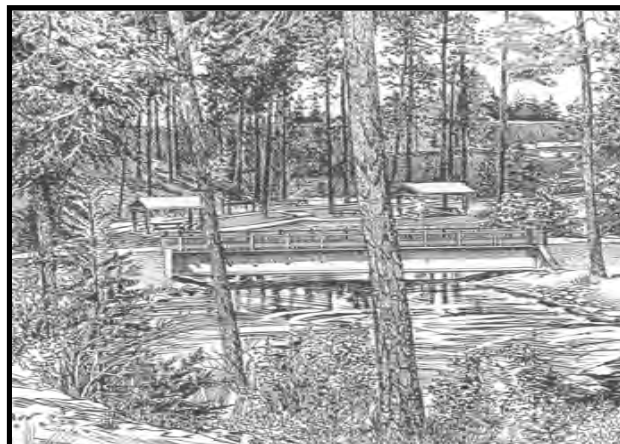
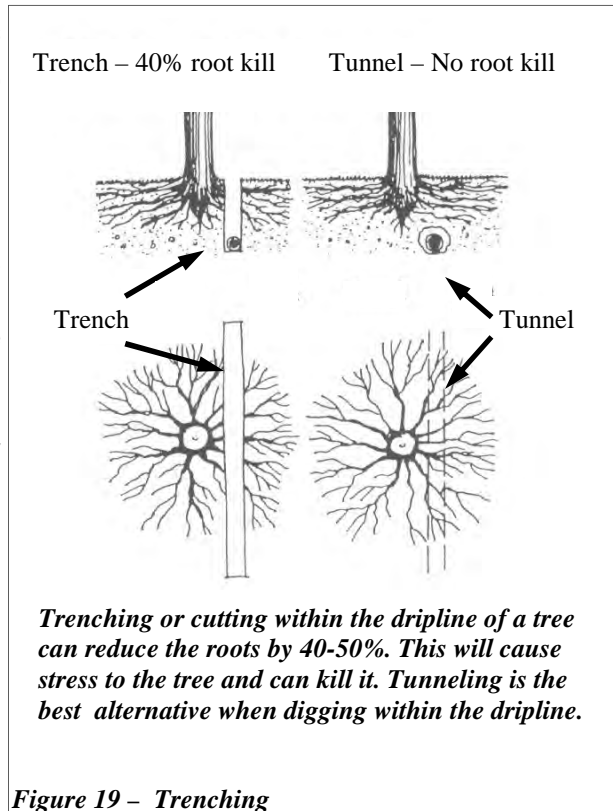
- Curb cuts should not be closer than 6 feet from the trunk of the tree. Paving should be at least 2¹/₂ feet from the tree trunk.

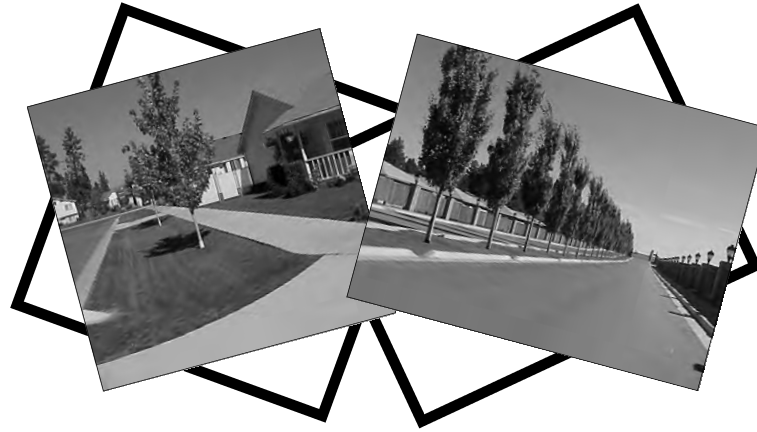
- Avoid cutting surface roots wherever possible. Sidewalks and paving should be designed to avoid such damage.

- Avoid disturbing the soil within the dripline of trees such as removing the top soil, compacting the soil or adding fill dirt.

- Excavation or trenching requiring root cuts should be done rapidly to minimize drying out the cut root. Make smooth, flush cuts on tree roots. Back fill before the roots have a chance to dry out, and water the tree immediately. Irrigation may be necessary throughout the hot and dry summer season.

- In the interest of preserving public trees, Public Works Department will coordinate with Parks and Recreation by notifying them of any applications for new curb, gutter, walkway or driveway installations, or other improvements which might require the removal of, or cause injury to, any public tree, or interfere with the goals of the City's street tree plan.





SECTION II. CITY OF POST FALLS APPROVED STREET TREE PLANTING LIST



The approved street tree list was produced by the Urban Forestry Commission to encourage the planting of diverse species of trees within the City of Post Falls. In the past, trees planted in Post Falls have been limited to fast growing and short lived broad leaved species. These planted species combined with the numerous residual Ponderosa Pine that line the City's streets have created a lack of diversity in the City's urban forest.

To create a healthy, diverse urban forest, the community needs to actively plant new trees in open spaces and replace old trees as they die. The City's Urban Forestry Commission has put together the following list of approved street trees to make this task easier for the community. These species were selected based on the growing zone (hardy in USDA Zone 5 or colder) and overall health and low maintenance. The list provides the botanical and common name, the crown height and width, the width of the planting strip, the form of the tree, its swale suitability, the fall color, the water requirements and potential problems or benefits of the tree. Care should be taken when selecting cultivars of the species, as some do not retain the characteristics of the parent species.

Post Falls Approved Street Tree List

CLASS I Small trees which normally do not reach a large height or trunk diameter. They are appropriate for small spaces including planting strips of no less than 4 feet in width. **Only small trees that grow less than 25 feet may be planted beneath power lines.** Typical spacing at 15 - 30 feet.

BOTANICAL NAME	COMMON NAME	S W A L E	HEIGHT (FEET)	SPREAD (FEET)	PLANT STRIP WIDTH (FEET)	F O R M	C O L O R	W A T E R	P L U S	M I N U S
<i>Acer buergeranum</i>	Trident Maple		20 - 25	20 - 25	4	R	G	M	S	
<i>Acer ginnala</i>	Amur Maple	Yes	15 - 20	15 - 20	4	R	G	L	ES	i
<i>Acer griseum</i>	Paperbark Maple		20 - 30	10 - 25	4	O	G	L	S	
<i>Acer tartaricum</i>	Tartarian Maple		15 - 20	15 - 20	4	R	G	L	S	
<i>Acer truncatum</i>	Purpleblow Maple		20 - 25	20 - 25	4	R	G	L	S	
<i>Amelanchier grandiflora</i>	Apple Serviceberry		20 - 25	15 - 20	4	R	F	L	WS	fi
<i>Amelanchier laevis</i> 'Snow Cloud'	Snow Cloud Allegheny Serviceberry	Yes	15 - 25	15 - 25	4	I	G	L	W	i
<i>Cercis canadensis</i>	Redbud		20 - 30	20 - 25	4	R	F	L	ES	id
<i>Cornus kousa</i>	Kousa Dogwood		15 - 25	15 - 20	4	V	G	M	WS	I
<i>Cornus mas</i> (tree cultivar)	Corneliancherry Dogwood		20 - 25	15 - 20	4	O	G	M	WS	
<i>Cotinus coggygria</i>	Smoke Tree		10 - 15	15 - 20	4	I	G	L	SE	
<i>Crataegus species</i>	Hawthorn	Yes	20 - 30	18 - 25	4	O	G	L	WS	ID
<i>Maackia amurensis</i>	Amur Maackia		20 - 30	20 - 30	4	R	I	L	S	
<i>Malus species</i> (disease resistant)	Flowering Crabapple	Yes	15 - 25	15 - 25	4	M	F	L	WS	ID
<i>Parrotia persica</i>	Persian Parrotia		20 - 30	15 - 25	6+	O	G	M	SE	
<i>Prunus cerasifera</i>	Purple-leaf Plum		15 - 25	15 - 20	4	R	F	M	SE	id
<i>Prunus serrulata</i>	Japanese Flowering Cherry		20 - 25	20 - 25	4	V	F	L	WS	Id
<i>Prunus virginiana</i>	Common Chokecherry		20 - 30	18 - 25	4	O	I	L	WS	fi
<i>Oxydendrum arbureum</i>	Sourwood		25 - 30	15 - 25	4	R	G	L	SE	
<i>Syringa reticulata</i>	Japanese Tree Lilac		20 - 30	15 - 25	4	O	I	M	ES	id
<i>Xanthoceras sorbifolium</i>	Yellowhorn		25 - 30	15 - 25	4	C	I	L	WS	d
<i>Zelkova serrata</i> 'Schmidtlow'	Wireless Zelkova		20 - 25	15 - 20	4	V	G	L	S	

Post Falls Approved Street Tree List

CLASS II Medium trees, **30 - 60 feet in height**. Usually planted for their shade and general landscape uses. Not suitable under utility lines or close to buildings.
Typical spacing at 30 - 40 feet.

BOTANICAL NAME	COMMON NAME	S W A L E	HEIGHT (FEET)	SPREAD (FEET)	PLANT STRIP WIDTH (FEET)	F O R M	C O L O R	W A T E R	P L U S	M I N U S
<i>Acer rubrum</i>	Red Maple	Yes	40 - 50	30 - 40	4+	O	G	M	ES	R
<i>Aesculus hippocastanum</i>	Horsechestnut		40 - 60	40 - 50	6+	R	I	M	WS	FI
<i>Betula nigra</i> (Heritage cultivar)	River Birch	Yes	40 - 60	40 - 60	4+	R	F	H	WS	id
<i>Carpinus betulus</i>	European Hornbeam		40 - 60	30 - 40	6+	P	F	L	ES	
<i>Celtis occidentalis</i>	Common Hackberry	Yes	40 - 60	40 - 60	6+	V	F	L	WS	d
<i>Cercidiphyllum japonicum</i>	Katsuratree		40 - 60	20 - 30	6+	O	G	L	ES	
<i>Corylus colurna</i>	Turkish Filbert		40 - 50	15 - 35	6+	P	G	L	ES	
<i>Fagus sylvatica</i>	European Beech		50 - 60	35 - 45	6+	P	G	L	WE	
<i>Fraxinus americana</i>	White Ash	Yes	50 - 60	35 - 45	6+	O	F	M	WS	ID
<i>Fraxinus pennsylvanica</i>	Green Ash	Yes	50 - 60	30 - 40	6+	O	F	L	WS	ID
<i>Ginkgo biloba</i>	Ginkgo (male trees only)		40 - 60	30 - 50	6+	P	G	M	ES	
<i>Gleditsia tricanthos</i>	Thornless Honeylocust	Yes	30 - 60	40 - 50	4+	I	I	M	ES	ID
<i>Koelreuteria paniculata</i>	Goldenraintree		30 - 40	30 - 40	4+	R	F	L	ES	
<i>Nyssa sylvatica</i>	Black Tupelo	Yes	30 - 50	20 - 30	4+	P	G	M	ES	i
<i>Ostrya virginiana</i>	Ironwood		25 - 40	25 - 40	4+	R	I	M	ES	
<i>Prunus maackia</i>	Amur Chokecherry		30 - 45	20 - 25	4+	R	F	M	S	i
<i>Prunus sargentii</i>	Sargents Cherry		30 - 40	20 - 35	4+	R	G	L	WS	Id
<i>Pyrus calleryana</i>	Callery Pear	Yes	25 - 35	20 - 30	4+	O	G	M	ES	d
<i>Tilia americana</i>	American Linden		40 - 60	30 - 40	4+	P	I	M	SE	Id
<i>Tilia cordata</i>	Littleleaf Linden		40 - 60	30 - 40	4+	P	F	L	SE	Id
<i>Zelkova serrata</i>	Zelkova		50 - 80	50 - 60	4+	V	F	L	SE	i

Post Falls Approved Street Tree List

CLASS III Large trees, **more than 60 feet in height**, requiring a wide area at maturity. Many of these trees are long lived. Recommended for open areas. Not suitable under utility lines or close to buildings. Typical spacing at 40 - 50 feet. **Planting strip of 8 feet or more.**

BOTANICAL NAME	COMMON NAME	S W A L E	HEIGHT (FEET)	SPREAD (FEET)	PLANT STRIP WIDTH (FEET)	F O R M	C O L O R	W A T E R	P L U S	M I N U S
<i>Acer x freemanii</i>	Freeman Maple	Yes	60 - 75	35 - 45	8 +	O	G	M	S	i
<i>Acer saccharum</i>	Sugar Maple		50 - 70	30 - 60	8 +	R	G	M	EW	Ri
<i>Catalpa speciosa</i>	Northern Catalpa		50 - 70	30 - 50	8 +	I	I	L	ES	Fi
<i>Fagus grandifolia</i>	American Beech		50 - 70	40 - 60	8 +	O	G	L	WE	fd
<i>Gymnocladus dioicus</i>	Kentucky Coffeetree	Yes	50 - 75	40 - 50	8 +	O	I	L	ES	fi
<i>Liriodendron tulipifera</i>	Tuliptree		70 - 90	35 - 50	8 +	O	G	M	S	i
<i>Platanus x acerifolia</i>	London Planetree	Yes	75 - 100	75 - 100	8 +	I	I	L	E	F
<i>Quercus bicolor</i>	Swamp White Oak	Yes	50 - 70	50 - 70	8 +	R	I	L	WS	fi
<i>Quercus macrocarpa</i>	Bur Oak	Yes	70 - 80	70 - 80	8 +	R	I	L	WS	fi
<i>Quercus palustris</i>	Pin Oak	Yes	60 - 70	25 - 40	8 +	P	F	H	ES	id
<i>Quercus robur</i>	English Oak	Yes	60 - 80	25 - 40	8 +	R	G	H	ES	id
<i>Quercus rubra</i>	Red Oak		60 - 75	50 - 60	8 +	R	G	L	WS	fi
<i>Sophora japonica</i>	Pagoda Tree		50 - 75	50 - 75	8 +	R	F	M	ES	is
<i>Ulmus parvifolia</i>	Lacebark Elm		40 - 50	35 - 40	8 +	R	F	M	S	i

FORM

C = Columnar
O = Oval
V = Vase
M = Mixed
P = Pyramidal
I = Irregular.
R = Rounded

FALL COLOR

G = Good
F = Fair
I = Insignificant

WATER NEEDS

H = High
M = Medium
L = Low

PLUSES

W = Wildlife
E = Energy saver
S = Street tree
B = Windbreak

MINUSES

I = Insects
D = Disease
R = Root problems
F = Falling Debris

Lower case letters indicate minor problem.

TREES NOT PERMITTED FOR STREET TREES

BOTANICAL NAME	COMMON NAME	REMARKS
<i>Robinia pseudoacacia</i>	black locust	Brittle wood, extremely susceptible to locust borer sprouts from the roots. thorny
<i>Salix</i> species	willow species	Soft wood subject to decay and breakage, shallow roots, invades sewer and water lines.
<i>Populus</i> species	poplars, aspen and cottonwood	Soft wood subject to decay and breakage, shallow roots, invades sewer and water lines.
<i>Ginkgo biloba</i> (female trees)	Ginkgo (female trees)	Very bad smelling fruit
<i>Acer negundo</i>	boxelder	Soft wood subject to decay and breakage, box-elder bug infestations are a nuisance
<i>Ulmus</i> species	elm species	Dutch elm disease
<i>Betula papyrifera & pendula</i>	paper & weeping birch	Susceptible to bronze birch borer and the disease it carries. Almost all in Post Falls are gone.
<i>Juglans nigra</i>	black walnut	Heavy aphid infestations, messy seeds and toxic to other plants.
<i>Gleditsia triacanthos</i>	thorned honeylocust	Hazardous thorny branches, messy seed pods. (thornless cultivars are acceptable)
<i>Fraxinus excelsior</i>	European ash	Prone to disease and die-back
<i>Acer saccharinum</i>	Silver Maple	Weak structure, messy habit, aggressive roots
	CONIFERS*	In general, the canopy is too wide and dense for use as a street tree.

* Refer to conifer list on next page.

CONIFERS Although *not suitable* as street trees. for planting under power lines, between the curb and sidewalk or in median strips in the center of the right-of-way, this list of conifers is included as a guide in selecting species appropriate to the North Idaho climate. Conifers are allowed for planting in open areas or a minimum of **15 feet from a curb and out of the right-of-way.**

BOTANICAL NAME	COMMON NAME	HEIGHT (FEET)	SPREAD (FEET)	PLANT STRIP WIDTH (FEET)	FOR M	COL OR	WA-TER	P L U S	M I N U S
<i>Abies grandis</i>	Grand Fir	60 - 70	8 - 12	20+	P	I	M	SB	i
<i>Abies concolor</i>	Concolor Fir	60 - 70	8 - 12	20+	P	I	M	SB	
<i>Abies lasiocarpa</i>	Subalpine Fir	40 - 60	6 - 10	20+	P	I	H	SB	
<i>Thuja occidentalis</i>	Eastern Arborvitae	30 - 40	10 - 20	20+	P	I	M	SB	i
<i>Pseudotsuga menziesii</i>	Douglas-Fir	40 - 80	15 - 25	20+	P	I	M	SB	i
<i>Juniperus scopulorum</i>	Rocky Mountain Juniper	30 - 50	5 - 15	20+	P	I	L	SB	
<i>Larix occidentalis</i>	Western Larch	60 - 80	8 - 12	20+	P	G	M	SB	
<i>Pinus sylvestris</i>	Scotch Pine	50 - 70	30 - 40	20+	P	I	L	SB	
<i>Picea pungens</i>	Colorado Spruce	50 - 80	20 - 35	20+	P	I	M	SB	
<i>Picea abies</i>	Norway Spruce	50 - 70	25 - 30	20+	P	I	M	SB	
<i>Picea omorika</i>	Serbian Spruce	50 - 70	15 - 25	20+	P	I	M	SB	

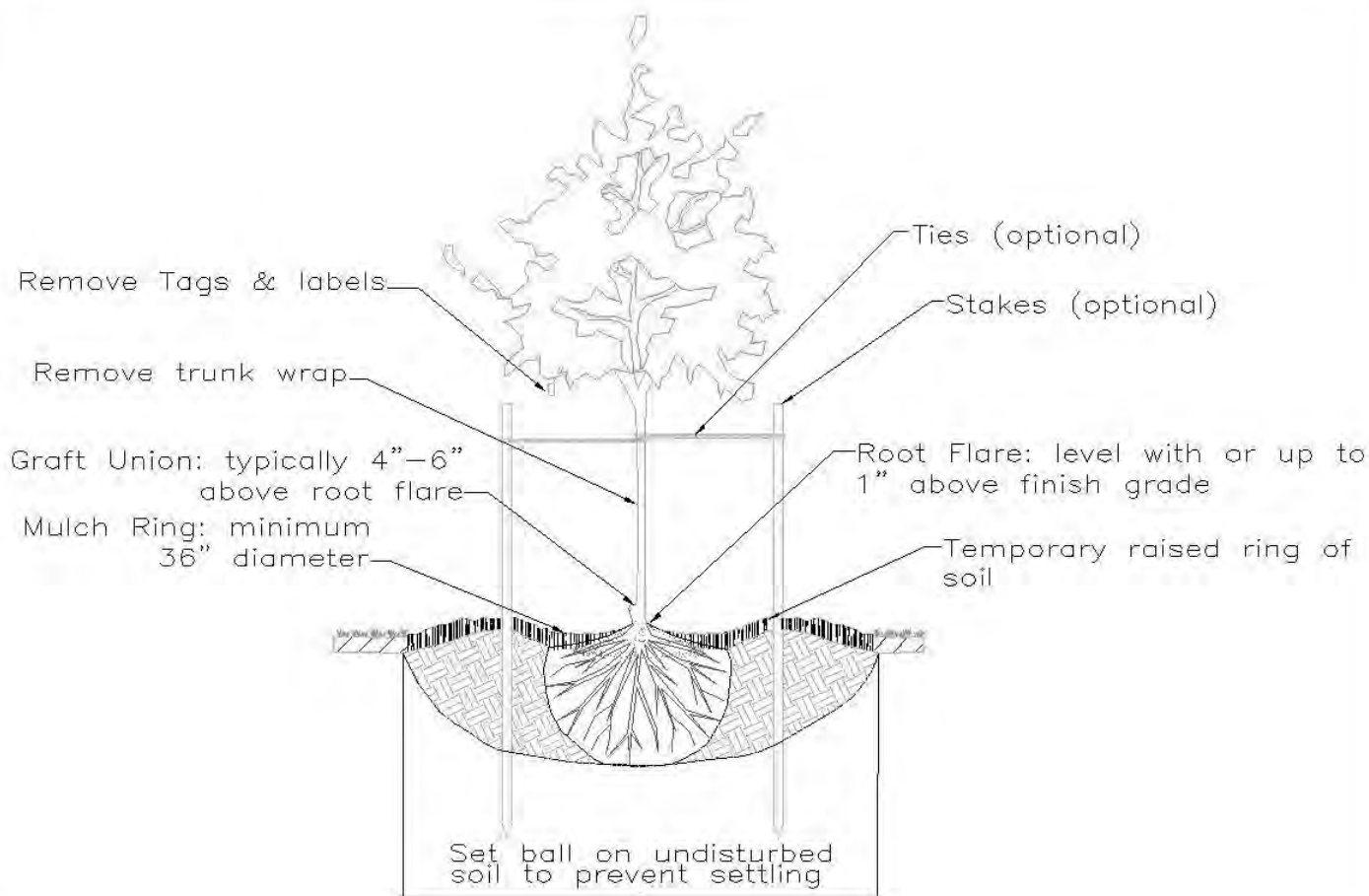


SECTION III. TREE PLANTING DETAIL



The tree planting details were produced by members of Community Canopy, a partnership for tree care education, and adopted by the Post Falls Urban Forestry Commission. The specifications were developed to encourage best planting practices in Post Falls and neighboring communities. Proper planting gives new trees a healthy start to growing to their mature potential, which then provide maximum environmental and aesthetic benefit to the community.

Separate planting details are provided for balled-and-burlapped, container, and bare-root tree stock.



Dig hole 2-3 times the width of root ball. Roughen sides to disturb glazing.

Planting Notes:

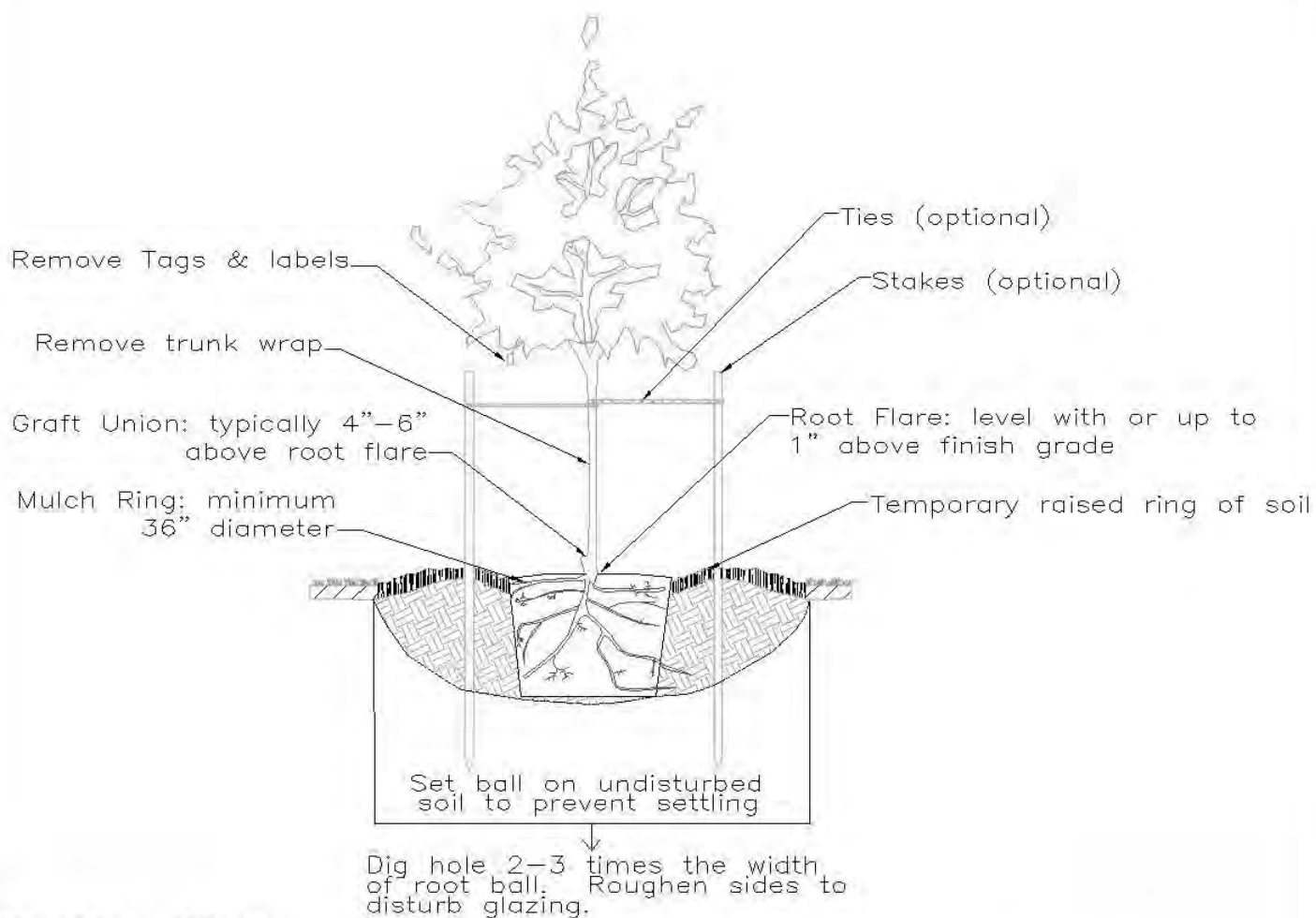
1. Plant materials must meet the minimum acceptable standard set by the American Association of Nurserymen's American Standard for Nursery Stock, ANSI Z60.1. Broken, damaged, diseased, or substandard stock are prohibited from being planted in the public rights-of-way and will be rejected.
2. Only Class I (small growing) trees are permitted to be planted under or within fifteen feet (15') of overhead utility lines.
3. Prune only broken or damaged branches.
4. Do not apply fertilizer at time of planting.
5. The root flare is the point where the topmost structural root emerges from the trunk. The depth of the root ball shall be measured from the root flare to the bottom of the ball. Handle B&B plants carefully when transferring to planting hole. Do not drop. Lift or carry by holding the root ball, not the trunk.
6. Remove any excess soil from top of root ball to expose the root flare. Plant with root flare level with or up to 1" above finish grade.
7. Remove all wire baskets and rope from root ball. Be careful to keep root ball intact.
8. Remove burlap from upper 1/2 (minimum) of the root ball and remove from planting hole.
9. Straighten or cut and remove any circling roots.
10. Backfill planting hole 2/3 full with existing soil, settle with water, continue to fill with soil, water again. Water thoroughly after installation to eliminate air pockets.
11. Construct a temporary raised ring of soil at edge of root ball to contain water. Remove or breach before winter.
12. Construct mulch ring with minimum 36" diameter of aged woody material to a depth of 2-4"; leave 3" bare ground between mulch and tree trunk.
13. Stakes and ties are optional. Use only if necessary for stability. Set stakes parallel to prevailing wind and outside of root ball. Ties must be wide (minimum 1") flexible belt-like strapping. Do not use rope or wire. Do not over-tighten around tree. Ties should be tight enough to support the tree while allowing it to sway. Remove stakes and ties within one year.
14. Trees benefit when irrigated separately from turf. Water new trees during summer months to a depth of 12"-18" once per week (about 5 gallons of water per caliper inch) for the first 3 growing seasons. During periods of drought, new trees may need more frequent watering.

Balled and Burlapped (B+B) Planting Detail

COMMUNITY CANOPY Adopted: August 21, 2008

Endorsed by: City of Coeur d'Alene, City of Post Falls, City of Hayden, Spokane County Conservation District





Planting Notes:

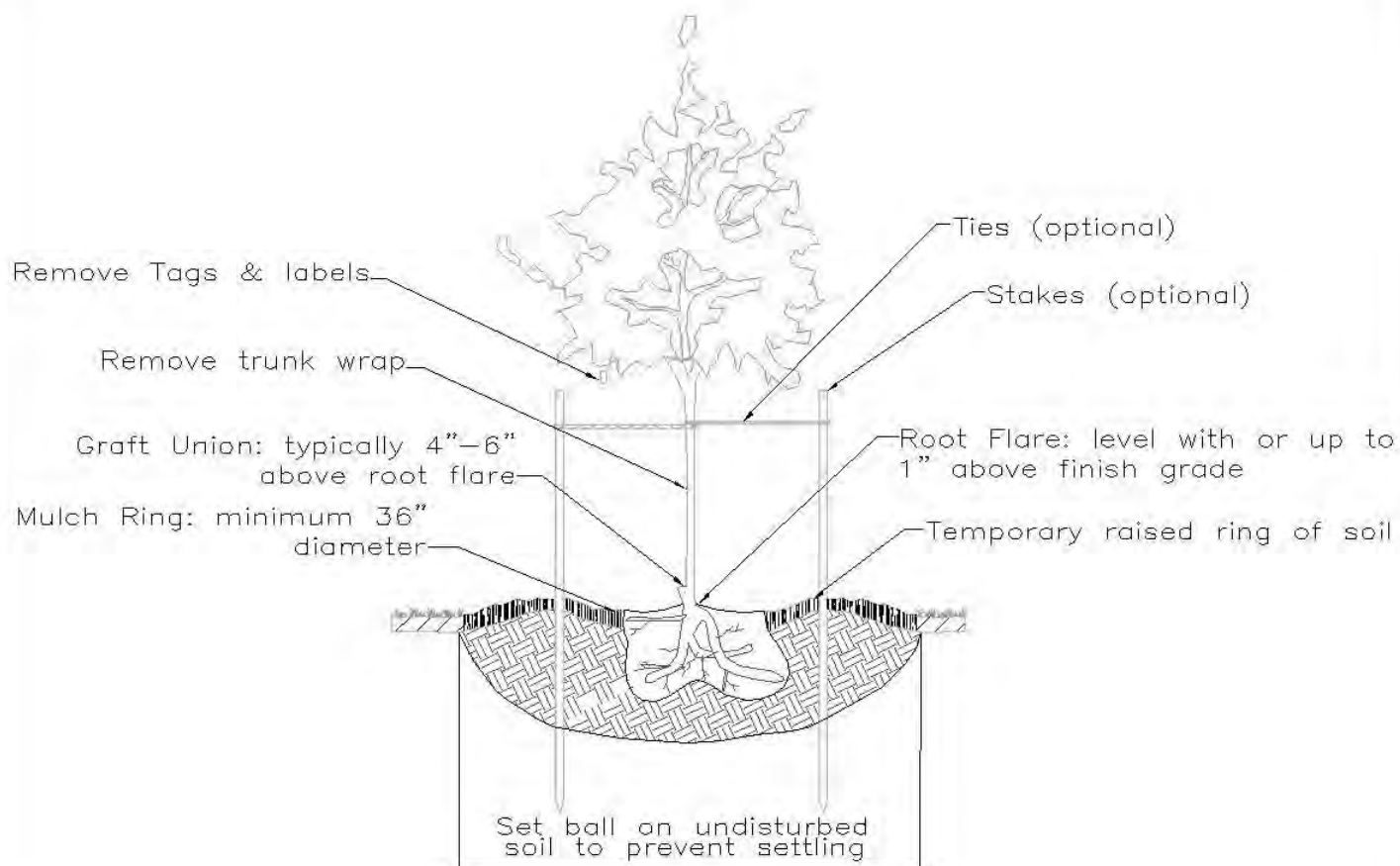
1. Plant materials must meet the minimum acceptable standard set by the American Association of Nurserymen's American Standard for Nursery Stock, ANSI Z60.1. Broken, damaged, diseased, or substandard stock are prohibited from being planted in the public rights-of-way and will be rejected.
2. Only Class I (small growing) trees are permitted to be planted under or within fifteen feet (15') of overhead utility lines.
3. Prune only broken or damaged branches.
4. Do not apply fertilizer at time of planting.
5. The root flare is the point where the topmost structural root emerges from the trunk. The depth of the root ball shall be measured from the root flare to the bottom of the ball.
6. Remove any excess soil from top of root ball to expose the root flare. Plant with root flare level with or up to 1" above finish grade.
7. Remove container from root ball.
8. Straighten or cut and remove any circling roots and scarify the edge of the root ball.
9. Backfill planting hole 2/3 full with existing soil, settle with water, continue to fill with soil, water again. Water thoroughly after installation to eliminate air pockets.
10. Construct a temporary raised ring of soil at edge of root ball to contain water. Remove or breach before winter.
11. Construct mulch ring with minimum 36" diameter of aged woody material to a depth of 2–4"; leave 3" bare ground between mulch and tree trunk.
12. Stakes and ties are optional. Use only if necessary for stability. Set stakes parallel to prevailing wind and outside of root ball. Ties must be wide (minimum 1") flexible belt-like strapping. Do not use rope or wire. Do not over-tighten around tree. Ties should be tight enough to support the tree while allowing it to sway. Remove stakes and ties within one year.
13. Trees benefit when irrigated separately from turf. Water new trees during summer months to a depth of 12"–18" once per week (about 5 gallons of water per caliper inch) for the first 3 growing seasons. During periods of drought, new trees may need more frequent watering.

CONTAINER PLANTING DETAIL

COMMUNITY CANOPY Adopted: August 21, 2008

Endorsed by: City of Coeur d'Alene, City of Post Falls, City of Hayden, Spokane County Conservation District





Set ball on undisturbed soil to prevent settling
 ↓
 Dig hole 2–3 times the width of root ball. Roughen sides to disturb glazing.

Planting Notes:

1. Plant materials must meet the minimum acceptable standard set by the American Association of Nurserymen's American Standard for Nursery Stock, ANSI Z60.1. Broken, damaged, diseased, or substandard stock are prohibited from being planted in the public rights-of-way and will be rejected.
2. Only Class I (small growing) trees are permitted to be planted under or within fifteen feet (15') of overhead utility lines.
3. Prune only broken or damaged branches.
4. Do not apply fertilizer at time of planting.
5. The root flare is the point where the topmost structural root emerges from the trunk. The depth of the root mass shall be measured from the root flare to the bottom of the lowest roots.
6. Plant with root flare level with or up to 1" above finish grade.
7. Remove all packing material from roots.
8. Straighten or cut and remove any circling roots. Build mound of soil to support center of tree. Spread roots over mound, extending radially from the trunk and distributing them evenly in the planting hole.
9. Backfill planting hole 2/3 full with existing soil, settle with water, continue to fill with soil, water again. Water thoroughly after installation to eliminate air pockets.
10. Construct a temporary raised ring of soil at edge of root zone to contain water. Remove or breach before winter.
11. Construct mulch ring with minimum 36" diameter of aged woody material to a depth of 2–4"; leave 3" bare ground between mulch and tree trunk.
12. Stakes and ties are optional. Use only if necessary for stability. Set stakes parallel to prevailing wind and outside of root zone. Ties must be wide (minimum 1") flexible belt-like strapping. Do not use rope or wire. Do not over-tighten around tree. Ties should be tight enough to support the tree while allowing it to sway. Remove stakes and ties within one year.
13. Trees benefit when irrigated separately from turf. Water new trees during summer months to a depth of 12"–18" once per week (about 5 gallons of water per caliper inch) for the first 3 growing seasons. During periods of drought, new trees may need more frequent watering.

BARE-ROOT PLANTING DETAIL

COMMUNITY CANOPY Adopted: August 21, 2008

Endorsed by: City of Coeur d'Alene, City of Post Falls, City of Hayden, Spokane County Conservation District

