

# Plant a Tree

An Alaskan guide to tree selection, planting & care



Illustration Copyright © Robert O'Brien

Right tree, Right place, Right way

# Select the right place for your tree

Consider soil conditions, exposure to sun and wind, human activity, drainage, hardiness zone and space constraints. Most roots grow in the top 4 to 18 inches of soil and far beyond the drip line. How much space will your tree need above and below ground when it is mature?

- Evergreen trees planted between a building and prevailing winds serve as a windbreak.

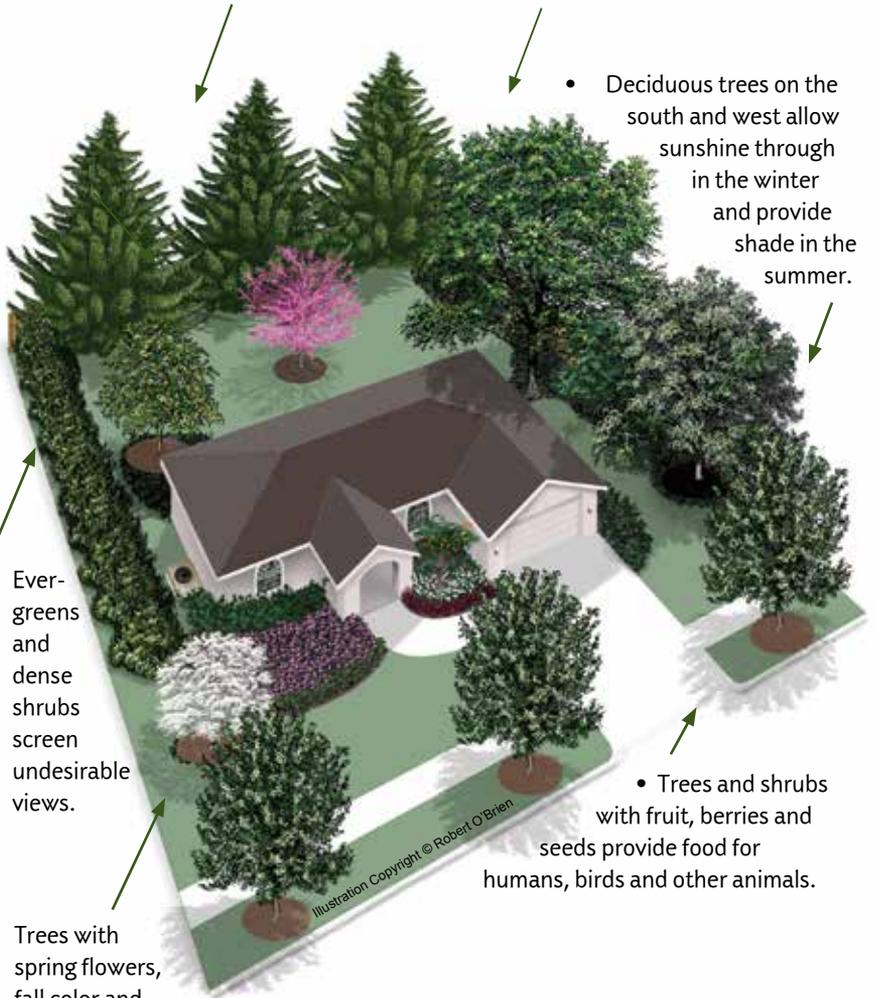
- Trees with large canopies intercept rain and snowfall and reduce runoff and erosion.

- Deciduous trees on the south and west allow sunshine through in the winter and provide shade in the summer.

- Evergreens and dense shrubs screen undesirable views.

- Trees and shrubs with fruit, berries and seeds provide food for humans, birds and other animals.

- Trees with spring flowers, fall color and attractive bark accent landscapes.



# Avoid sites where your tree will cause problems or be damaged

**Don't:**

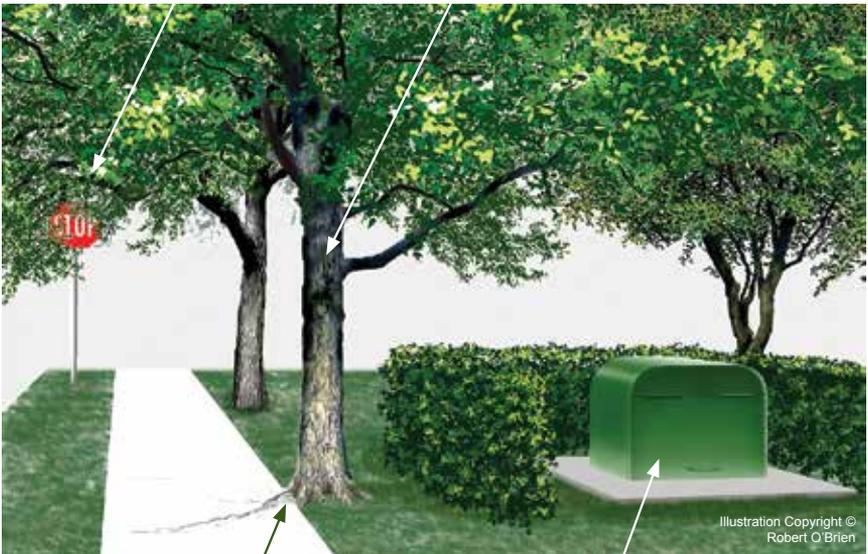
- Create shade where you want sunlight.
- Block desirable views.
- Plant where snow is stored or slides from roofs.
- Encroach on neighboring property.



- Trees planted too close to buildings and chimneys drop debris on roofs and are fire hazards.

- Avoid blocking traffic signs and sightlines at intersections and driveways.

- Trees planted too close together can't achieve mature size and shape.



- Give trees space to reach mature size without damaging driveways, streets, sidewalks or trails.

- Don't block access to utility transformers.

# Select a Good Quality Tree

The right tree will be an asset that increases in value as it ages, while a poor quality tree will require more maintenance and may become a liability.

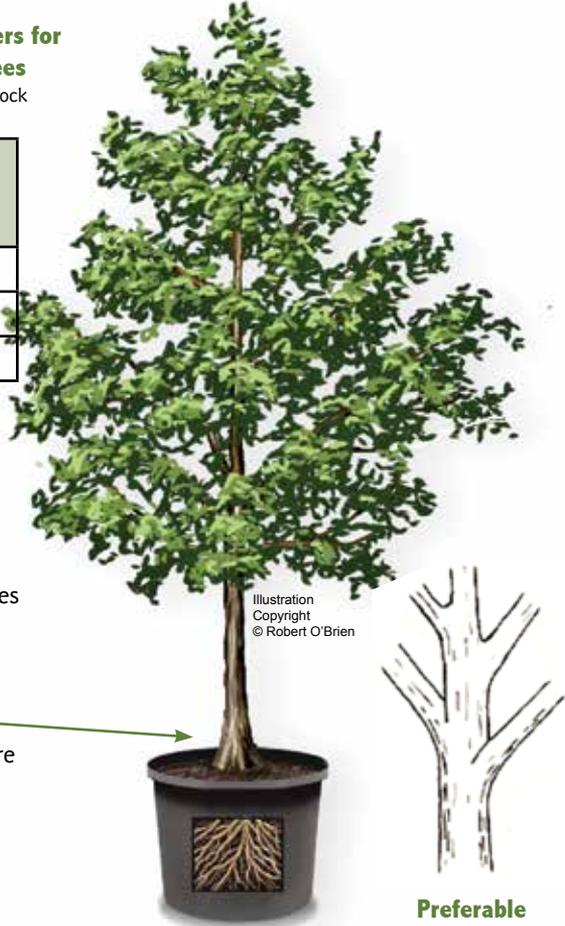
## A High Quality Tree:

- Most species, except those with rounded crowns, like crabapple, have one central leader (trunk).
- Tree is free of wounds and incorrect pruning cuts – no stubs or flush cuts.
- Branches are evenly spaced and form wide angles with the trunk (45-90 degrees).
- Trunk stands upright without the support of stakes.
- Roots fill container but are not circling the root ball. Roots are white or light brown and healthy.
- Trunk flare (where roots begin) is at or near surface and there are several roots at least as big around as a pencil in top 3 inches of soil.

## Minimum root ball diameters for selected sizes of shade trees

(American Standard for Nursery Stock ANSI Z60.1 – see back page)

Caliper (trunk diameter 4" above ground)	Minimum root spread
1"	16"
2"	24"
3"	32"

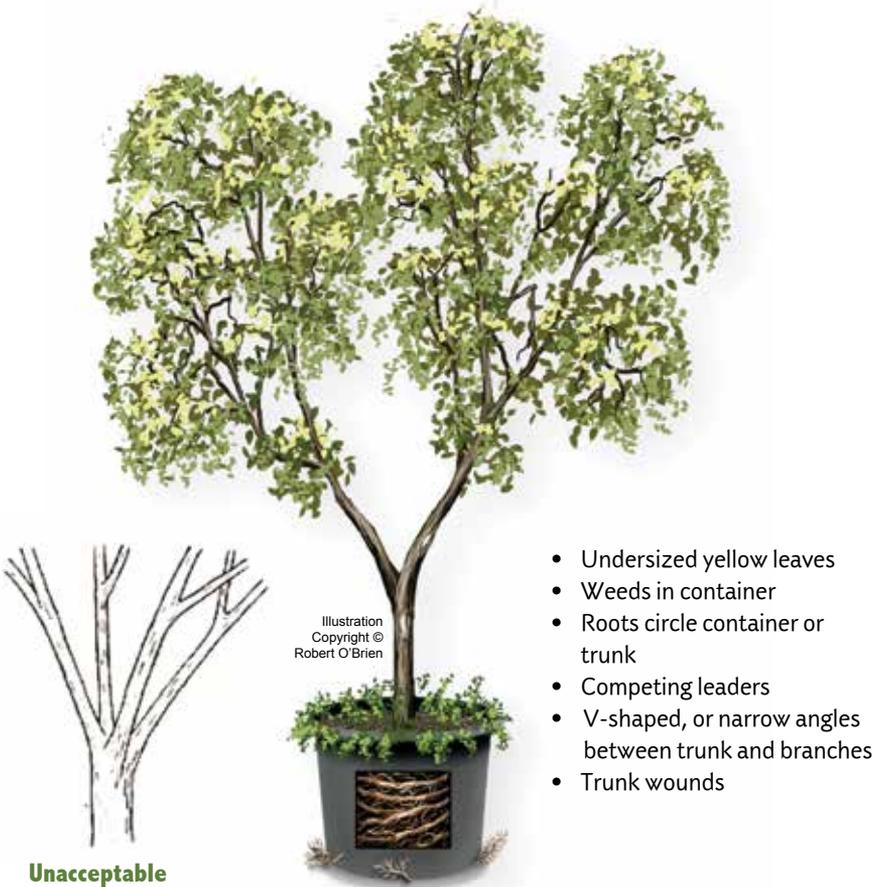


- Branches form wide angles with trunk
- Branches well-spaced around trunk
- Trunk flare above soil
- Roots fill container but are not pot-bound
- No weeds

# Avoid a Poor Quality Tree

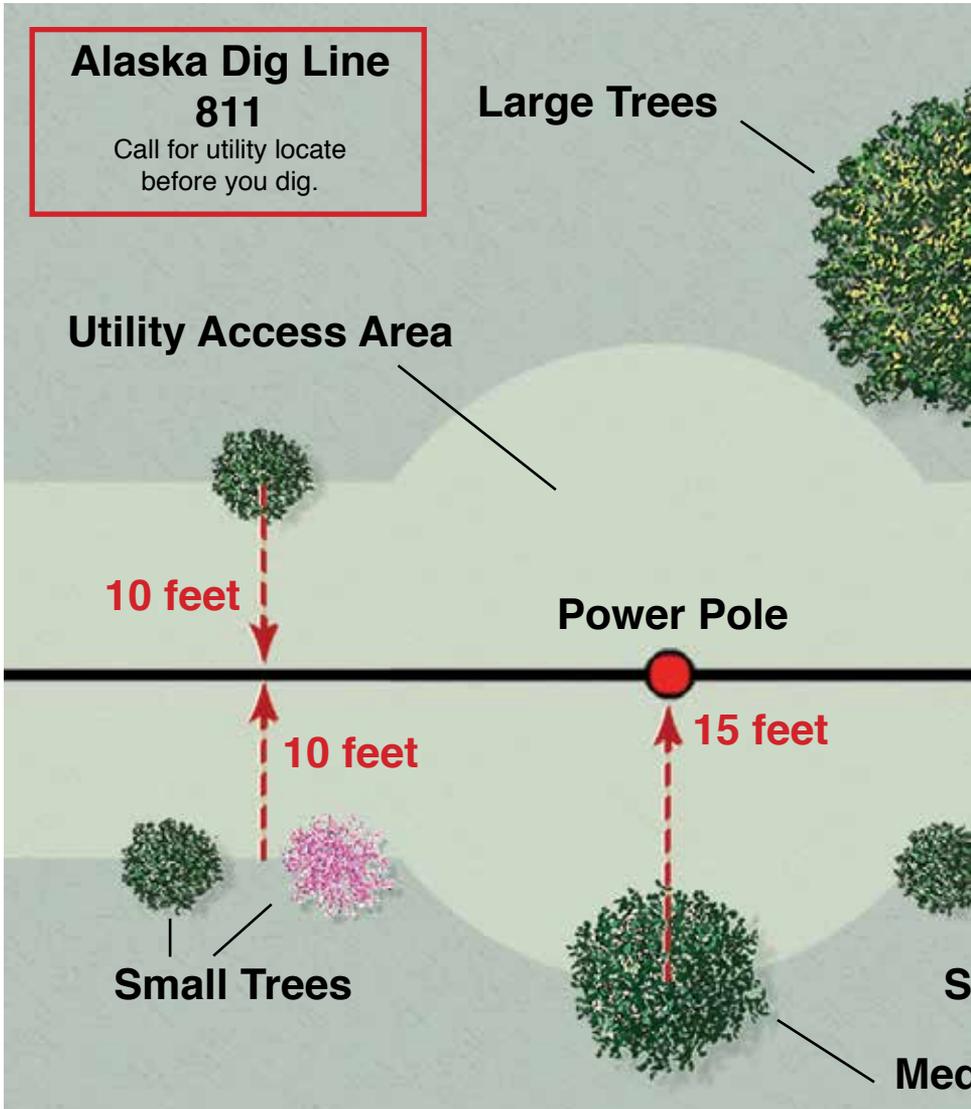
## A Poor Quality Tree:

- Roots are pot-bound or circling trunk or inside of container.
- Trunk flare is below surface of soil; no major roots in top 3 inches of soil.
- There is more than one leader (main trunk) or branches that squeeze against trunk.
- Angles between branches and trunk are narrow; as tree grows it may crack and split apart.
- Leaves are undersized and yellow.
- Weeds are growing in container; may be invasive and/or difficult to remove.
- Trunk has wounds from mechanical damage or incorrect pruning.
- There are signs of insects or disease damage to leaves or branches.
- Conifers are sheared like Christmas trees.



# Trees and utilities need space

Plant trees and shrubs where they will not interfere with, or block access to, overhead or underground utility lines, poles or transformer boxes. Leave an 8-foot-wide corridor directly under lines free of any trees or shrubs to allow access to utility equipment and workers.



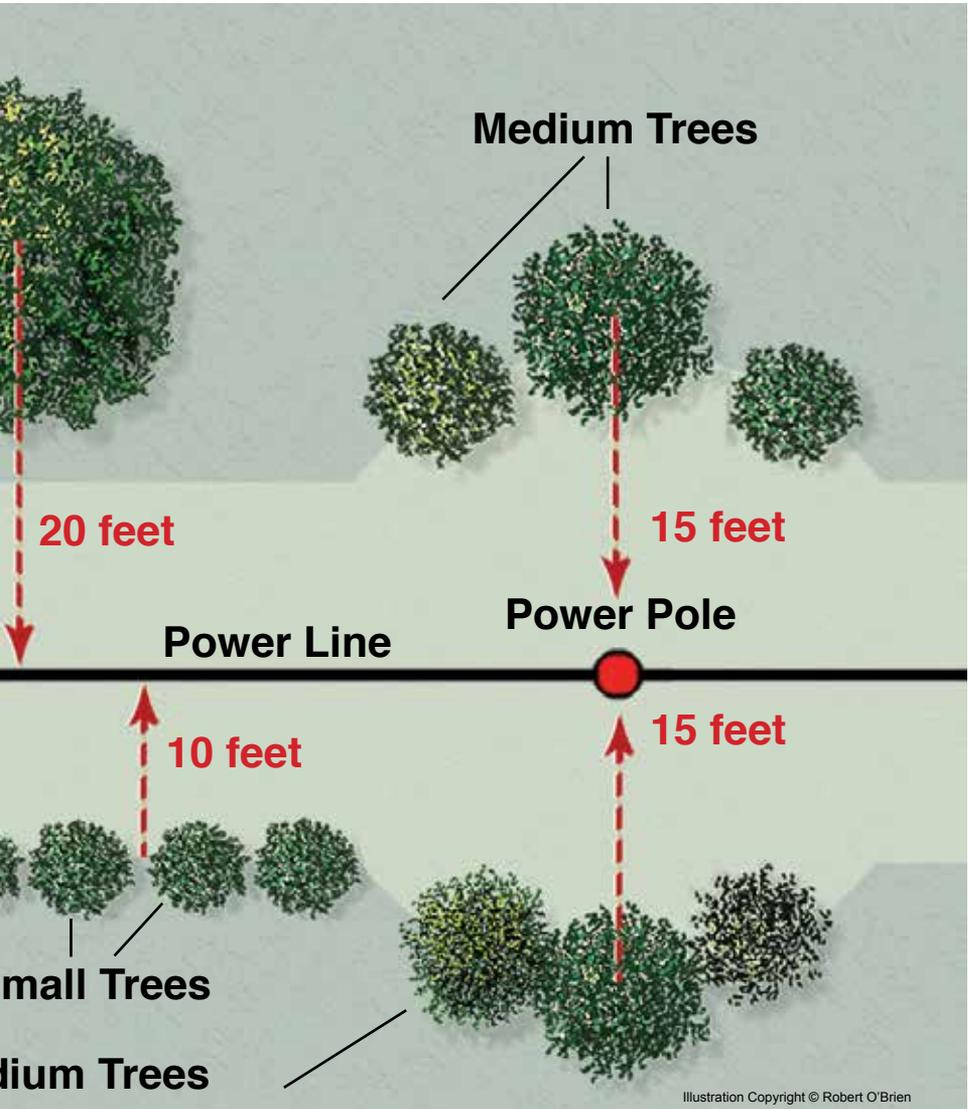
# Tree height at maturity

Large tree  
25 feet and taller

Medium tree  
15 to 24 feet

Small tree  
up to 14 feet

For detailed information on tree species, including mature heights in Alaska, see [www.alaskaplants.org](http://www.alaskaplants.org).



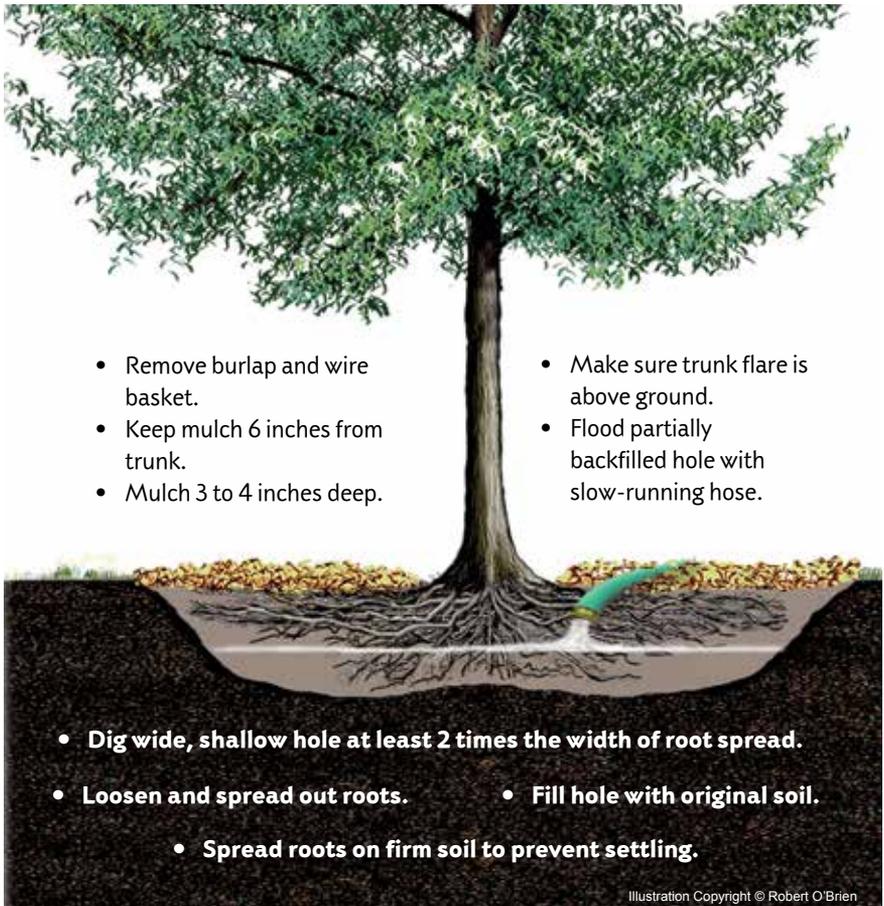
# Plant it right

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- Prepare a planting hole that encourages the roots to spread and grow into the surrounding soil.
- Before digging hole, remove all twine, tags and wrap from around the trunk and cut away and remove the container, wire basket and/or burlap.
- Locate the trunk flare, where the first major root extends out from the trunk. Remove soil from top of root ball until main root system is exposed.
- You may soak the root ball in a large tub of water to remove soil. This allows you to find and cut circling or damaged roots and remove weeds and soil that may be different from soil on site. It will also be lighter and easy to plant.
- Remove vegetation and loosen soil in a saucer-shaped area at least two times the spread of the roots and no deeper than height from base of trunk flare to bottom of roots. Remove large rocks and roughen the sides and bottom of the hole. The hole will be wide and shallow.
- Separate and spread the roots so that they will grow out into the surrounding soil. Prune roots that are diseased, damaged or circling the container or root ball with clean cuts back to white, healthy tissue.
- Set the tree in the hole on solid ground so that it does not settle. The trunk flare must be just above ground level. Roots of trees planted too deeply may not get enough water and oxygen, and as the tree grows, the roots and trunk may decay, causing the tree to die or fail.
- If soil is very poor or compacted, you may mix some topsoil with existing soil, creating a transition to surrounding soil. Roots growing in a hole filled with amended soil and surrounded by poor soil may circle the planting hole and become "pot-bound," rather than spreading out. Trees can grow successfully in rocky soil.
- Use water to settle the soil as you backfill in 1/3 increments. Do not compact soil or damage roots by walking on wet soil.
- Stake only if needed to stabilize the roots. Use smooth, wide, flexible material for ties that support the tree but allow it to sway; trees grow stronger root systems and trunks if allowed some wiggle room. Never place wire around the trunk, even in a rubber hose. Secure ties as low on the trunk as they can be placed to stabilize roots, about one-third of the way up, generally just above lowest branch on deciduous trees. Remove ties within one year or as soon as roots are anchored and tree is stable without ties.

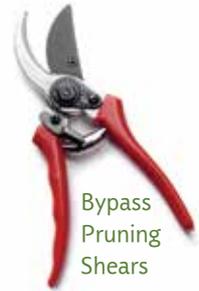
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- Apply mulch 3 to 4 inches deep in a circle extending 2 to 3 feet from the trunk or to the drip line. Mulch improves the soil, reduces compaction, holds moisture, moderates soil temperatures and discourages injury from lawn mowers and weed whips. Keep mulch 6 inches away from the trunk. Water well after mulching.
- Prune only dead and damaged branches at planting. See page 9 for details on pruning during the second growing season.
- Fertilizer is not recommended for newly planted trees. Test soil the year after planting and watch for symptoms indicating that additional nutrients are needed.



# Prune your tree

- Begin pruning to develop a strong structure in the second or third growing season.
- Do not top trees, make cuts flush with the trunk or leave stubs.
- For larger branches, cut outside the branch collar (swollen area at base of branch).
- Do not remove more than one-fourth of a tree's live foliage in a season.
- For most species, the tree should have a single trunk. Remove dead and defective branches and select the best leader and branches before further pruning for form.
- Where possible, favor branches that form 10 o'clock or 2 o'clock angles with the trunk.
- Conifers need little pruning; prune to maintain one central leader.
- Painting pruning cuts or any wound doesn't prevent or reduce decay and may interfere with tree's natural ability to seal the wound.
- Use sharp bypass pruning shears and a pruning saw, which has teeth that cut when you pull.
- If you can't prune with both feet on the ground, hire an arborist.
- Never prune trees or branches within 10 feet of a utility line.



When shortening a small branch, make the cut at a lateral bud or branch. Favor a bud that will produce a branch growing in the desired direction (usually outward). Make a sharp, clean cut at a slight angle about 1/4 inch beyond the bud.



Correct Pruning Cut



Too Close



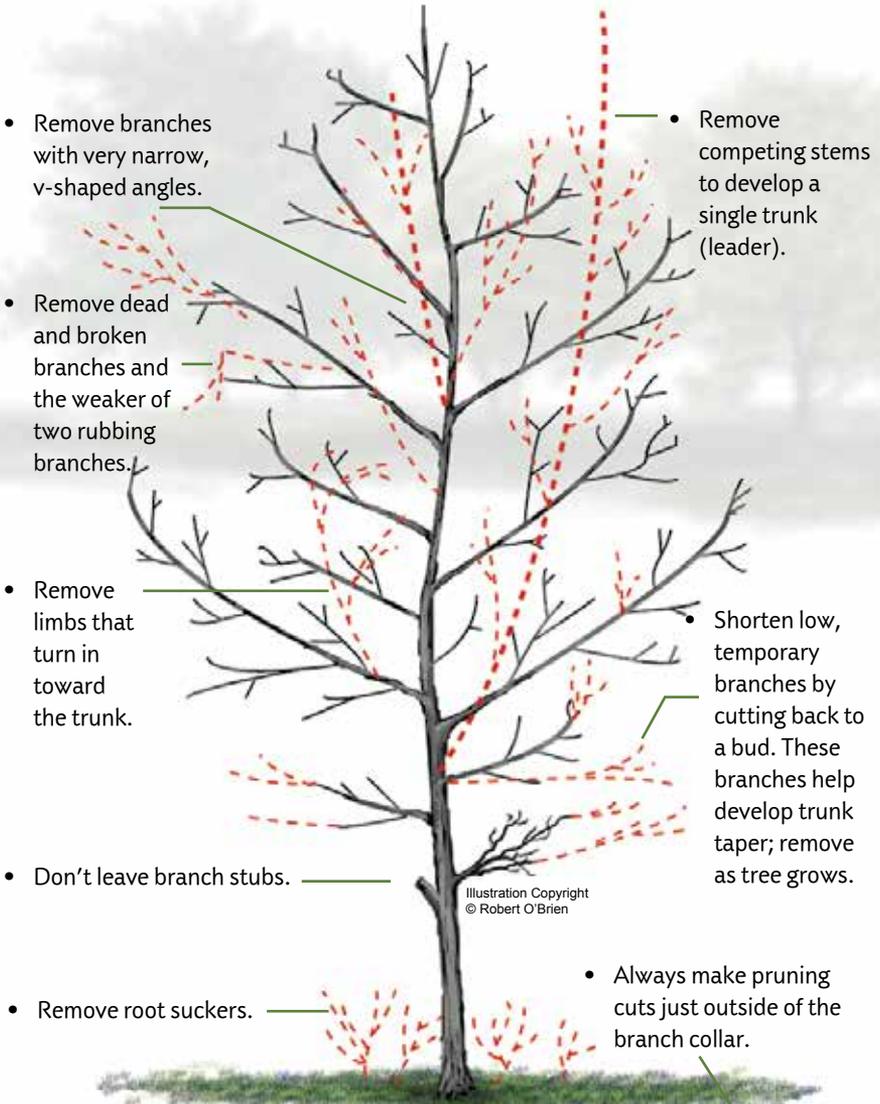
Too Long



Too Slanted

(Arbor Day Foundation)

# Remove branches shown with dotted lines



For more pruning information, including large branches, see:  
<http://forestry.alaska.gov/community/links.htm>



# Care for your tree

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- Water trees during the first five years after planting if soil 4 inches down is dry.
- Apply, as needed, 2 to 4 gallons of water for each inch of caliper, twice a week. For example, give a 2-inch caliper tree 4 to 8 gallons twice weekly during the growing season. Water slowly until soil is moist to a depth of 12 inches.
- If tree is staked, check ties regularly to be sure the trunk is not damaged. Remove ties after one growing season or as soon as roots are well anchored.
- Most landscape trees do well with little or no fertilizer. Use only if symptoms, such as little growth, indicate a need. First, be sure symptoms are not due to other causes, such as tree is planted too deep or needs more frequent watering.
- If symptoms indicate a need, apply slow release fertilizer in spring, early summer or late fall and follow product directions. Don't fertilize a stressed tree.
- Do not use de-icing salt near tree roots or where it will drain into the root zone. Remember, roots spread far beyond the drip line.
- Perennials and shrubs may be planted along with the tree, but don't plant annuals or bulbs where repeated digging can damage shallow tree roots. Don't plant anything over roots of newly planted trees.
- Do not compact the soil or spread additional soil over tree roots or around the trunk.
- Keep lawn mowers and weed whips away from tree trunks to avoid damage. Mulch reduces the need for weeding near trees.
- Improve the health of your trees by maintaining a layer of mulch, 3 to 4 inches deep to the drip line and 6 inches away from the trunk. Fallen leaves may be left on the ground to serve as mulch.
- Contact a qualified arborist to prune large trees or provide special services. Hire only an ISA certified arborist who is insured and can provide references.

For more information:

Landscape Plants for Alaska: [www.alaskaplants.org](http://www.alaskaplants.org)

Trees are Good: [www.treesaregood.org/treecare/treecareinfo.aspx](http://www.treesaregood.org/treecare/treecareinfo.aspx)

Community Forestry (see publications and resources): <http://forestry.alaska.gov/community>



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