

TREE CARE 101

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CITY OF SAMMAMISH URBAN FOREST MANAGEMENT PLAN

PUBLIC EDUCATION WORKSHOP #3

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TREE CARE 101

Best management practices for home tree care

Identifying and managing tree disease

How to identify and manage native species

Tree selection for different types of sites

Best Management Practices for Home Tree Care



Trees don't like changes to their environment



Drought Stress



Raising the grade around trees kills roots



So does lowering the grade



Sunscald



Sunscald-Summer and Winter



White Trunk Wrap



Sapsucker Damage



Soil Compaction



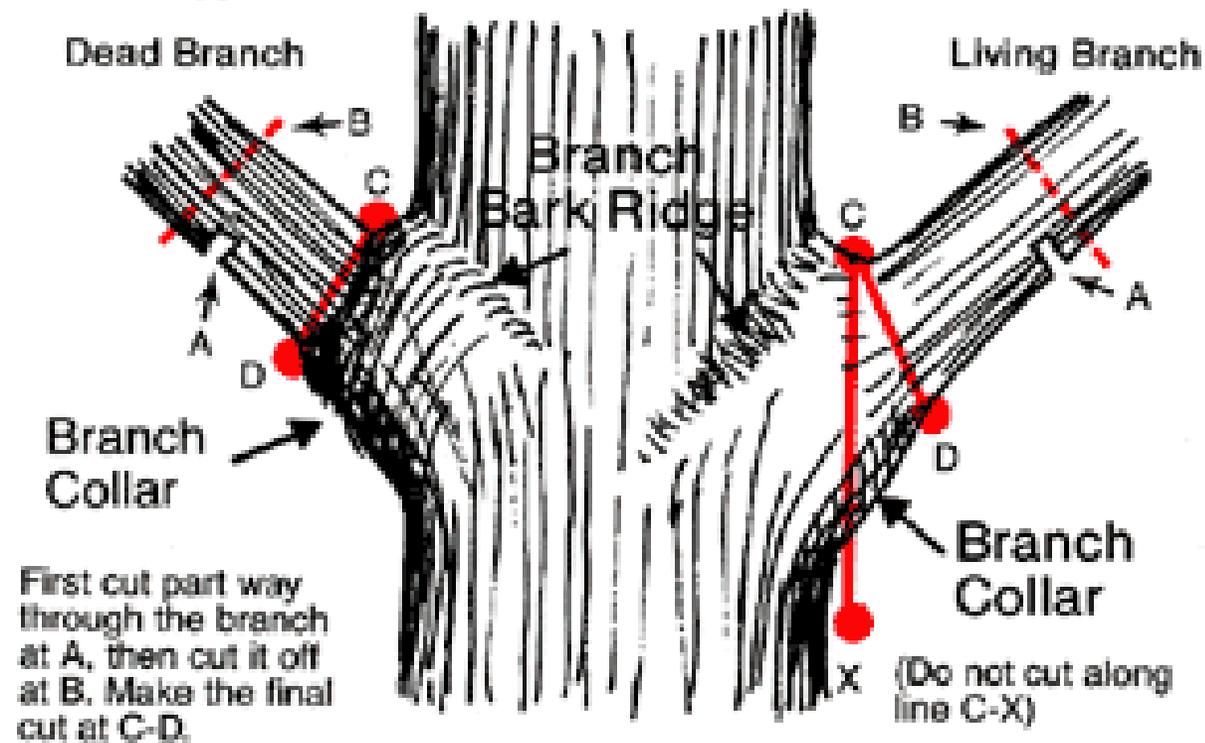
Pruning



Structural Pruning

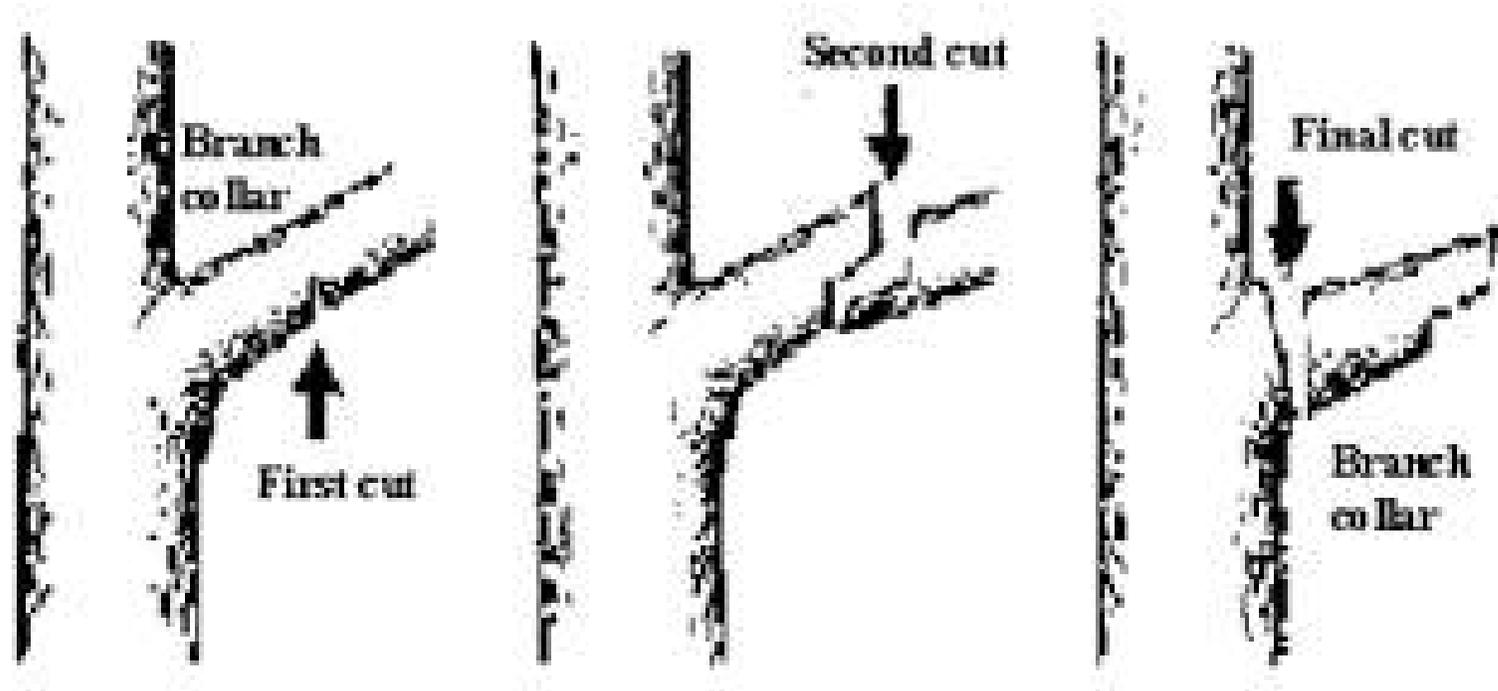


How to correctly make a pruning cut



Hardwoods

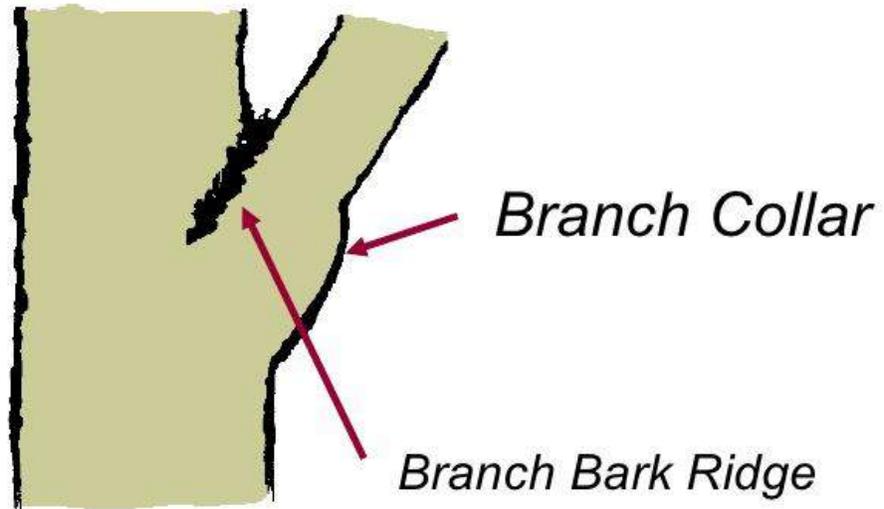
Here's the process



What you don't want to happen



Protect the branch collar and bark ridge





Natural target pruning cuts: Use caution to not nick or injure the branch bark ridge.

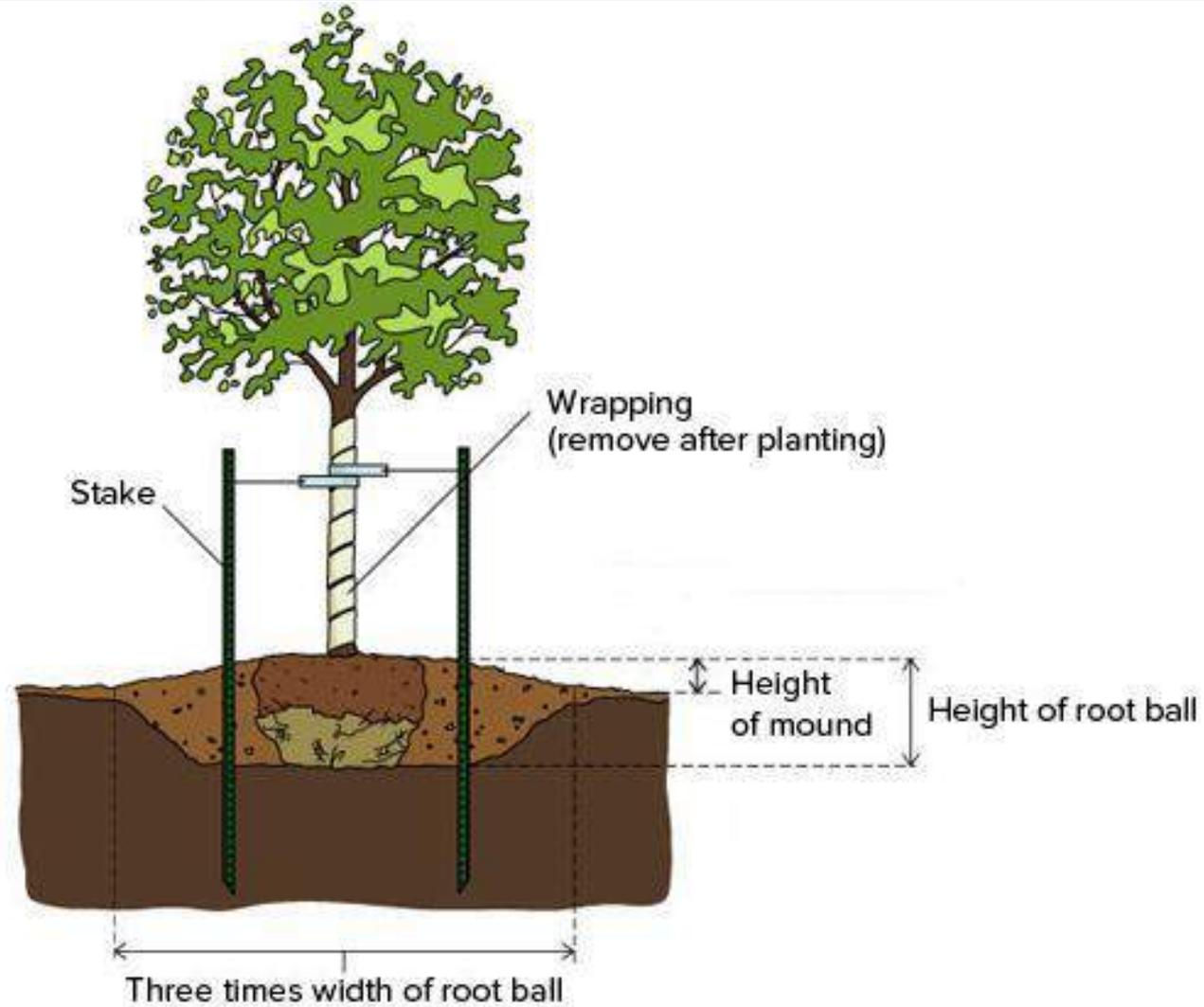


With proper cut,
Woundwood grows over
pruning wound



Pruning cut nicked branch
bark ridge on bottom. Note
how *woundwood* fails to grow
in this area.

Tree Planting



Tree Staking after Planting



Tree Staking



IDENTIFYING AND MANAGING TREE DISEASE



Powdery Mildew



Brown Rot



Verticillium Wilt



Anthracnose



How to Manage for Fungal Disease - Cultural

Cultural Methods

Prune out dead or infected branches

Rake and destroy fallen leaves from spring to fall

Don't let irrigation wet the canopy (leaves)

Choose disease resistant cultivars

Chemical

Develop a spray program based on the species. This will take several applications at the right times of year

Insects/Pests



Hemlock Woolly Adelgid



Cooley Spruce Gall Adelgid



Douglas fir Sequoia Pitch Moth



Douglas fir Sequoia Pitch Moth



Bronze Birch Borer



BBB



Bark Beetle Galleries



Western Tent Caterpillar



How to Manage for Pests

Most of our pest issues are aesthetic and not compromising to tree health or longevity, such as aphids, adelgids, pitch moths and tent caterpillars.

Significant infestations of aphids and adelgids can be treated with an insecticidal soap purchased from most lawn and garden stores.

Remove tent caterpillar infestations by pruning off the limb the nest is attached to and dispose of properly (submerge in bucket of soapy water or burn)

Bark beetles normally are a secondary issue and will attack stressed trees only, the exception being the Bronze Birch Borer

How to Identify and Manage Native Species

Douglas fir

Western hemlock

Western red cedar

Big leaf maple

Black cottonwood

Red alder

Scouler's willow, Cascara, bitter cherry, Sitka spruce, Shore pine, Western white pine, grand fir, Madrone, Oregon ash, P. dogwood, P. crabapple

Douglas fir



DF Bark



DF Cone



Douglas fir Traits



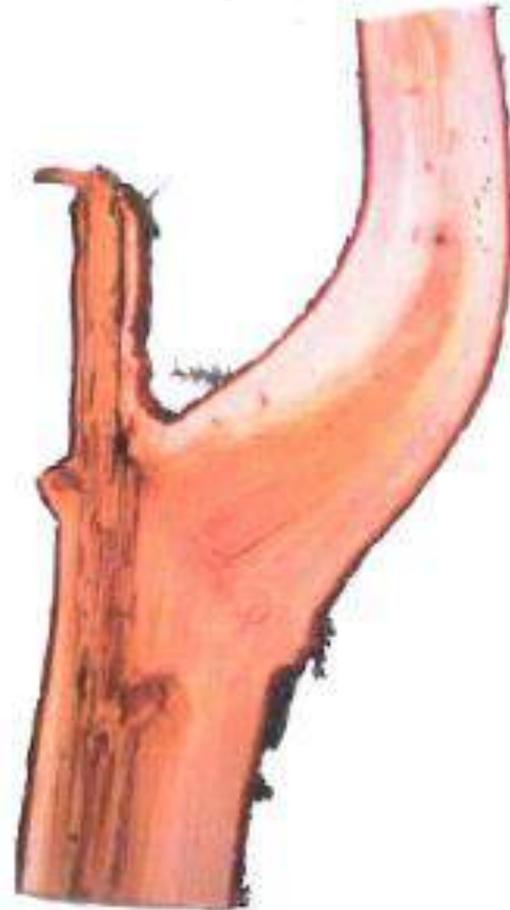
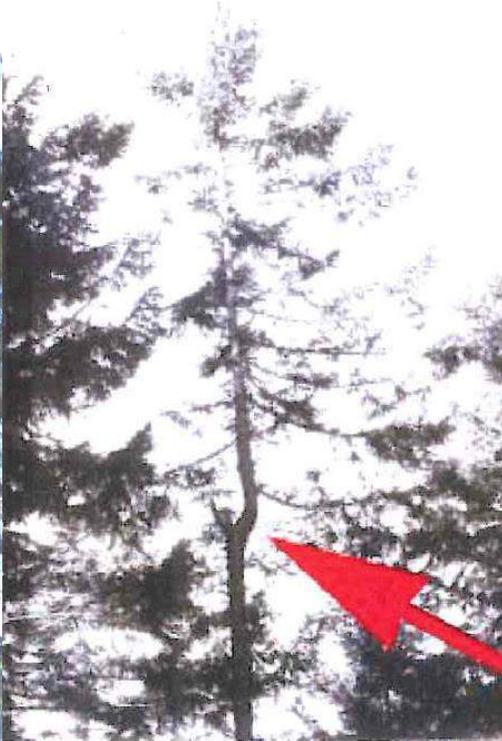
Branch failures Common



Cambium Ruptures



Crooks and Forks



Susceptible to Root Disease



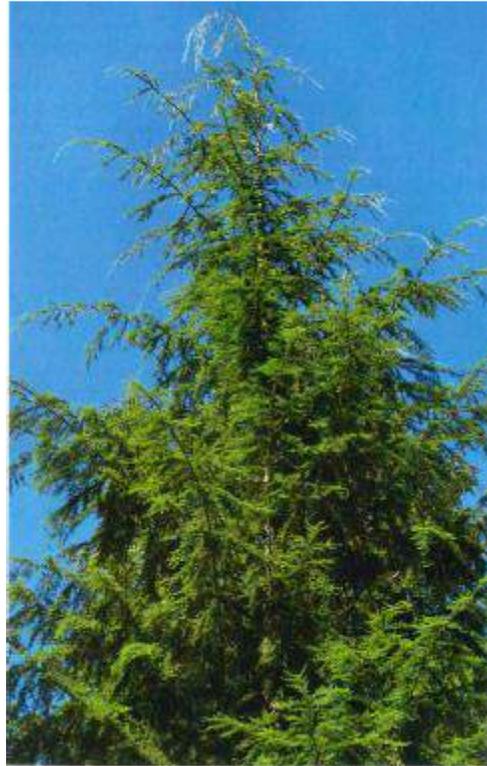
Schweinitzii Root Disease



Laminated Root Rot



Western Hemlock



WH bark and foliage



WH



WH Traits



WH – Root Disease



WH – Frost Cracks



WH - Mistletoe



Wester Red Cedar



WRC



Cedar Traits



WRC



WRC



WRC – Forked Tops



WRC



WRC - Sunscald



Big leaf maple



Big leaf maple



BLM Bark



BLM Traits



BLM – problematic forked stems



BLM – branch failures



BLM Diseases



BLM – *Kretzschmaria duesta*



BLM – *Ganoderma applanatum*



BLM Decline



Black Cottonwood



Cottonwood Traits



CW



CW



Red alder



Red Alder Traits



RA – Natural Decline



RA – Nitrogen Fixer

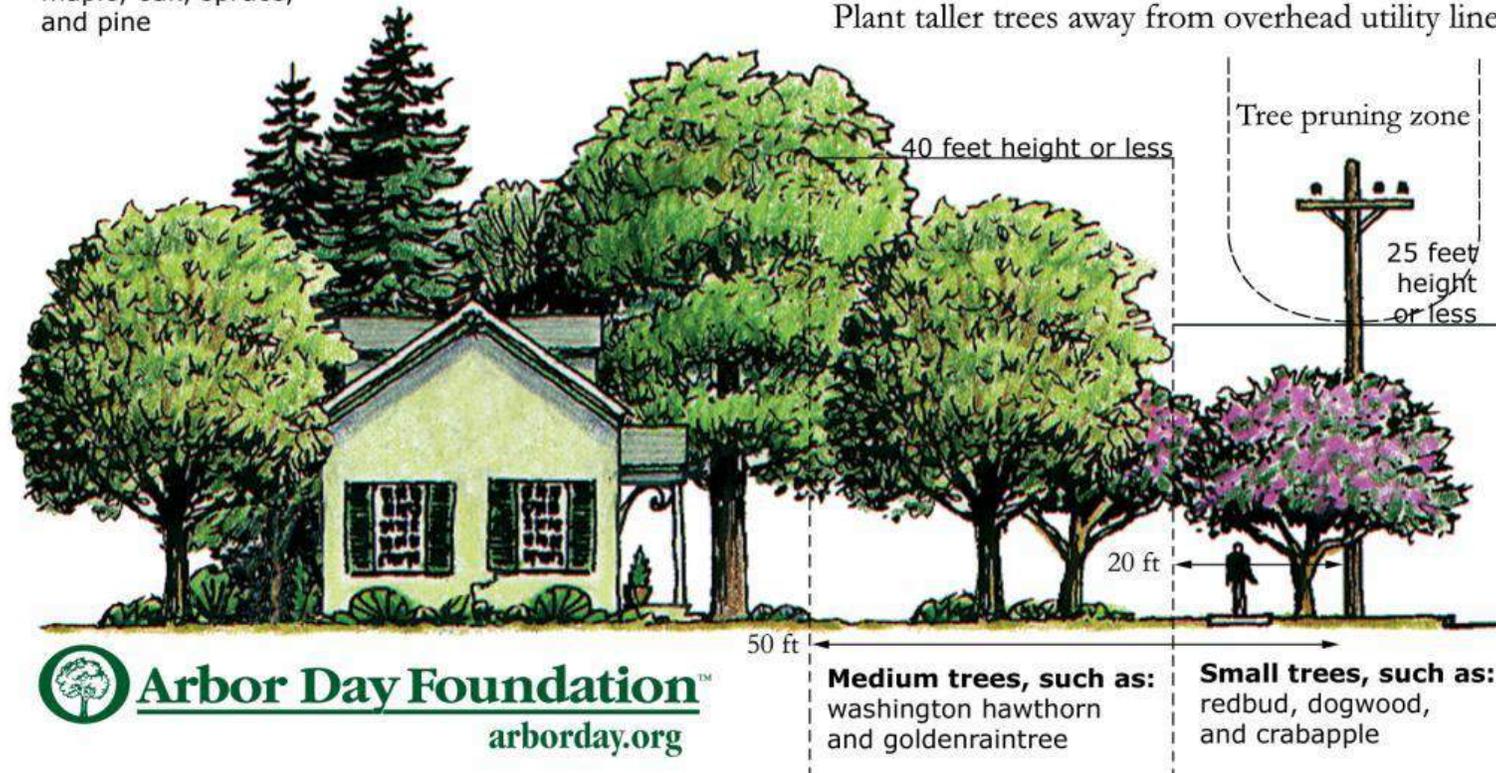


Tree Selection Guidelines

Tall trees, such as:
maple, oak, spruce,
and pine

Plant the right tree in the right place

Plant taller trees away from overhead utility lines



Plant the Right Tree in the Right Place

For safety, plant taller trees away from overhead utility lines



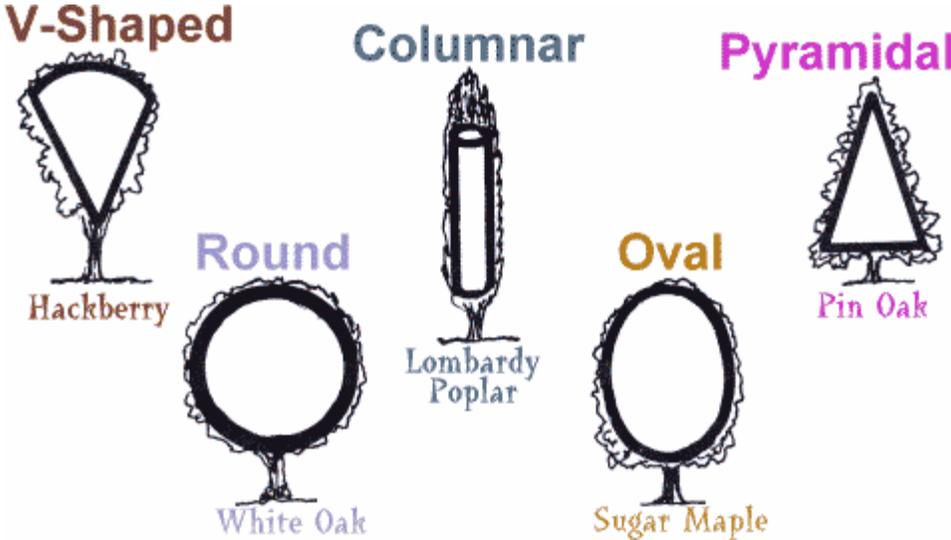
Consider Growth Habit and Size



Consider Rate of Growth

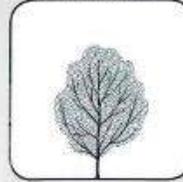


Consider Tree Form or Growth Traits



Acer pensylvanicum
(Striped Maple)

Acer pensylvanicum
Striped Maple



Zone: 3
Height: 25'
Spread: 20'
Shape: Upright spreading, broadly oval
Foliage: Dark green
Fall Color: Yellow

A wonderful tree for a cool, shady garden, the green and white vertically striped bark is especially outstanding in the winter. Very cold hardy, its foliage turns soft yellow in the fall.

Acer platanoides
(Norway Maple)

Acer platanoides 'National 2000'
ChampTree™ Norway Maple



Zone: 4
Height: 55'
Spread: 40'
Shape: Upright spreading to broadly oval
Foliage: Medium green
Fall Color: Yellow

A majestic Norway Maple growing in Michigan produced the scions from which this handsome tree is propagated. Identified by the Champion Tree Project as the national champion, the original tree certainly has proven longevity and vigor.

Acer platanoides 'Cleveland'
Cleveland Maple



Zone: 4
Height: 40'
Spread: 30'
Shape: Upright oval, dense
Foliage: Medium green
Fall Color: Yellow

Cleveland is a good selection for city use, being a little more compact and upright than the species.



Conquest™ Maple

Acer platanoides 'Columnar'
Columnar Norway Maple



Zone: 4
Height: 35'
Spread: 15'
Shape: Narrow, upright, with ascending branches
Foliage: Dark green
Fall Color: Yellow

True to its name, this cultivar produces a column of green foliage. It is ideal for street use where buildings demand a narrow tree. It develops stout branches which grow stiffly upward, almost parallel to the main stem, which gives it a bold appearance in winter.

Acer platanoides 'Conzani'
Conquest™ Maple



Zone: 4
Height: 40'
Spread: 20'
Shape: Narrow oval
Foliage: Reddish-purple in spring becoming bronze-purple
Fall Color: Bronze-orange

Of lighter purple foliage color and intermediate in form between Crimson King and Crimson Sentry, this upright tree grows quickly with a sturdy trunk caliper. Its narrowly oval shape at maturity is ideal for street use.

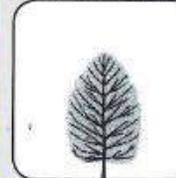
Acer platanoides 'Crimson King'
Crimson King Maple



Zone: 4
Height: 40'
Spread: 35'
Shape: Oval when young, becoming rounded
Foliage: Deep purple
Fall Color: Maroon to reddish-bronze

The most commonly used cultivar of the purple-leaved Norway Maples, Crimson King retains its purple foliage color well from spring until fall.

Acer platanoides 'Crimson Sentry'
Crimson Sentry Maple



Zone: 4b
Height: 25'
Spread: 15'
Shape: Compact and dense, pyramidal to oval
Foliage: Deep purple
Fall Color: Maroon to reddish-bronze

This bud sport of Crimson King shares the deep purple leaf color of its parent, but matures to a much smaller ultimate size. A very compact, heavily branched, upright tree.

Acer platanoides 'Deborah'
Deborah Maple



Zone: 3b
Height: 45'
Spread: 40'
Shape: Broadly oval to rounded
Foliage: Reddish-purple in the spring, becoming dark bronze-green in the summer
Fall Color: Bronze

Deborah is a beautiful tree in spring and early summer when new leaves unfold, red tinted then purplish as they expand. In summer the tree becomes dark bronze-green.



Columnar Norway Maple

Consider Future Maintenance



Trees don't live forever



Questions?

