

# Approved Street Tree Planting List For The Borough of Chambersburg



Approved by  
The Borough of Chambersburg  
Municipal Shade Tree Commission  
February 2022

Choosing and planting a tree with care improves the quality of life for our whole community.

Our street trees:

- Provide beauty
- Invoke community pride
- Improve our physical and mental health
- Reduce energy costs
- Limit runoff into our waterways
- Provide habitats for wildlife
- Increase property values

This list has been produced by Tree Vitalize, a Pennsylvania Department of Conservation & Natural Resources partnership. Trees are divided into groups of small, medium, and large. Each page describes the required width of tree lawn (the strip of grass between the sidewalk and curb) needed for the corresponding selections. The list suggests which trees are suitable under utility wires and provides information on each tree's shape, tolerance to salt and urban conditions, fall color, and flowers. Additionally, this list provides helpful information to you regarding how to plant, water, care for, and prune your new tree.

It is important to examine each planting site to find an appropriate selection of tree and best possible placement. The Shade Tree Commission is here to help you decide which trees are the best options for you. Please contact us to set up a free consultation:

(Jamia Wright: 717-251-2437 or [boroughsecretariesoffice@chambersburgpa.gov](mailto:boroughsecretariesoffice@chambersburgpa.gov)).

The following trees have been identified as **INVASIVE** by The Pennsylvania Department of Conservation & Natural Resources and The Shade Tree Commission strongly discourages their use **ANYWHERE** within The Borough of Chambersburg.

DO **NOT** PLANT THE FOLLOWING SELECTIONS:

- Amur Maple (Acer ginnala)
- Norway Maple (Acer platanoides)
- Sycamore Maple (Acer pseudoplatanus)
- European Black Alder (Alnus glutinosa)
- Tree-of-Heaven (Ailanthus altissima)
- Mimosa (Albizia julibrissin)
- Japanese Angelica Tree (Aralia elata)
- Paper Mulberry (Broussonetia papyfera)
- White Mulberry (Morus alba)
- Princess-Tree or Empress-Tree (Paulownia tomentosa)
- Amur Cork Tree (Phellodendron amurense)
- Japanese Cork Tree (Phellodendron japonicum)
- Lavella Cork Tree (Phellodendron lavalleyi)
- Callery Pear or Bradford Pear (Pyrus calleryana)
- Bee-Bee Tree (Tetradium daniellii)
- Siberian Elm (Ulmus pumila)



## MEDIUM DECIDUOUS TREES

Mature height 30' to 50'  
 Minimum tree lawn 3'  
 Most suitable under wires

	Native to Pennsylvania	Form	Some salt tolerance	Harsh urban conditions	Fall color	Flowers	Notes
<b>American Hophornbeam</b>	●	C			●	●	sensitive to deicing salt; interesting bark
<b>Birch</b>							general — susceptible to bronze birch borer
River Birch – ‘Heritage’	●	C	●				better resistance to borer; chose street tree form; sensitive to alkaline soil
<b>Carolina Silverbell</b>		R				●	chose street tree form; sensitive to alkaline soil; white flowers
<b>Cherry</b>							general — species sensitive to pollution and stresses
Sargent Cherry		R	●		●	●	toughest of Japanese cherries; pink flowers
Sargent Cherry – ‘Columnar’		U	●		●	●	upright form; good for tight places
Yoshino		V					choose street tree form; white flowers
<b>Golden Rain Tree</b>		R	●		●	●	flowers can be slippery on slopes; can localize as a weed
<b>Honey Locust</b>							general — tough urban tree
‘Imperial’	●	V	●	●	●		smaller growing
<b>Hornbeam</b>							
American	●	C/R			●		good for small shady spaces; sensitive to drought and heat
European Hornbeam – ‘Fastigiata’		U/C			●		upright form good for narrow places; sensitive to drought and heat
<b>Horsechestnut</b>							
Ruby Red Chestnut – ‘Briotii’		R	●			●	sensitive to drought and heat; attractive red flowers
Ruby Red Chestnut – ‘Fort McNair’		R	●			●	sensitive to drought and heat; pinker flowers
<b>Maple</b>							
Hedge – True Species		R	●	●	●		small with tree-like form; can localize as a weed
Hedge – ‘Queen Elizabeth’		R	●	●	●		upright form; sensitive to cold; can localize as a weed
Shantung – ‘Norwegian Sunset’		U			●		sun loving; drought tolerant; orange-red fall color
Shantung – ‘Pacific Sunset’		U			●		sun loving; drought tolerant; orange-red fall color
<b>Oak</b>							
Sawtooth Oak		R	●		●		intolerant of alkaline soils; can produce large nutcrop; can localize as a weed
<b>Purple Robe Black Locust</b>	●	R	●	●		●	weak branch structure; purple flowers
<b>Sassafras</b>	●	C/R			●	●	prefers moist, deep soils; select street tree form
<b>Yellowwood</b>		S	●		●	●	weak branch structure; sensitive to drought; can have low branches

### NOTES

Names in single quotes indicate a cultivar or hybrid.

‘Spring Snow’ is Spring Snow Crabapple.

‘Queen Elizabeth’ is Queen Elizabeth Hedge Maple.

See web, *Landscape Tree Factsheets* (H. Gerhold), or *Manual of Woody Plants* (M. Dirr) for much more information and photos about cultivars and other trees.

### TREE FORMS



C = Conical

R = Rounded

S = Spreading

U = Upright

V = Vase

## LARGE DECIDUOUS TREES

Mature height over 30'  
 Minimum tree lawn 5'  
 Not suitable under wires

	Native to Pennsylvania	Form	Some salt tolerance	Harsh urban conditions	Fall color	Flowers	Notes
<b>Bald Cypress</b>	●	V/C			●		sensitive to alkaline soils; reddish fall color
<b>Blackgum</b>	●	C			●		beautiful orange/red fall color; sensitive to alkaline soils
<b>Catalpa</b>	●	R	●			●	weaker branch structure; large leaves; white flowers
<b>Dawn Redwood</b>		C			●		similar to bald cypress; less sensitive to alkaline soils
<b>Elm</b>							general — no elm resistant to elm yellows; plant in very small numbers; many cultivars and hybrids
‘Accolade’		S	●				good resistance to Dutch elm disease
‘New Harmony’		S	●				good resistance to Dutch elm disease
‘Valley Forge’		S	●				good resistance to Dutch elm disease
<b>Ginkgo</b>							general — tough urban tree; all have beautiful yellow fall color
‘Autum Gold’		C		●	●		select male trees only; limited fruit
‘Lakeview’		C		●	●		select male trees only; conical form
‘Princeton Century’		U		●	●		select male trees only; upright form
<b>Hackberry</b>	●						general — tough urban tree
‘Prairie Pride’	●	R	●	●	●		rugged tree; good branch structure
‘Magnifica’	●	R	●	●	●		better resistance to leafhoppers
<b>Hardy Rubber Tree</b>		R	●	●	●		cold sensitive — can be killed by cold winters
<b>Hickory</b>							general — prefers moist soils; nuts can be messy
Bitternut	●	U/R			●		better for moist sites; intolerant of drought
Pignut	●	R	●		●		better for dryer/harsher sites
Shagbark	●	R					interesting bark; fairly adaptable
<b>Honeylocust</b>							general — tough urban tree
‘Shade Master’	●	S	●	●	●		vigorous growth, less fruiting and thorns; yellow fall color
Skyline’	●	S	●	●	●		upright branching; better yellow fall color
<b>Japanese Pagoda Tree</b>		R				●	
‘Regent’		R				●	some resistance to leafhoppers; smaller growing; white flowers
<b>Japanese Scholar Tree</b>		R				●	fruit can be messy; white flowers in summer
<b>Katsura Tree</b>		C			●		select street tree form; drought sensitive
<b>Kentucky Coffeetree</b>		S	●	●	●		tough urban tree; seed pods can be messy
‘Expresso’		S	●	●	●		less pods than true species
<b>Linden</b>							general — typically on cool moist sites; aphids can be messy
American Basswood	●	C/R			●		somewhat sensitive to drought and salt; fragrant yellow flowers
American – ‘Redmond’	●	C/R			●		conical form; sensitive to drought and salt; intolerant of salt; fragrant yellow flowers
Littleleaf – ‘Glenlevin’		C			●		conical form; fast growing; sensitive to heat and drought; fragrant yellow flowers
Littleleaf – ‘Greenspire’		C			●		more upright form; sensitive to heat and drought; fragrant yellow flowers
Silver		C			●		conical; leaves dark green with silver underside; more resistant to aphids
Silver – ‘Sterling’		C					better tolerance to heat and drought; more resistant to aphids
<b>Magnolia</b>							
Cucumbertree	●	C			●		large dark green leaf; prefers moist, winter sheltered sites; tolerates alkaline soils; yellow flowers
Southern		R	●		●		holds leaves all winter; cold sensitive; plant only in southeastern PA in sheltered placed; white flowers

## LARGE DECIDUOUS TREES (continued)

Mature height over 30'  
 Minimum tree lawn 5'  
 Not suitable under wires

	Native to Pennsylvania	Form	Some salt tolerance	Harsh urban conditions	Fall color	Flowers	Notes
<b>Maple</b>							general — many cultivars and hybrids
Red Maple	●	R			●		many cultivars; some may not be native
Red – 'Autumn Flame'		R		●	●		fast growing; brilliant red fall color
Red – 'Bowhill'		U			●		orange to red fall color
Red – 'October Glory'		R		●	●		red fall color
Red – 'Red Sunset'		R		●	●		red to scarlet fall color
Red/Silver – 'Autumn Blaze'		R		●	●		beautiful red fall color; hybrid
Red/Silver – 'Celebration'		R		●	●		beautiful yellow to red fall color; hybrid
Red/Silver – 'Scarlet Sentinel'		U		●	●		beautiful yellow to red fall color; hybrid
<b>Oak</b>							
Bur	●	R/S	●				massive, stout tree; tolerates alkaline soils
English		R/S	●				tolerates drought and slightly alkaline soils
Red	●	R	●		●		fast growing after established; intolerant of alkaline soils; bacterial leaf scorch; reddish fall color
Shingle	●	R			●		intolerant of alkaline soils; reddish fall color
Shumard		C/R			●		moderate to fast growing; intolerant of alkaline soils; brilliant red fall color
Swamp White	●	R	●	●	●		tougher than white oak; transplants better than white oak; orange-gold fall color
White	●	R			●		can be hard to transplant; red fall color
Willow Oak	●	S	●				cold sensitive; requires acidic soil
<b>Sweetgum</b>		C/R			●		requires acid soil; fruit can be messy; attractive reddish fall color
'Rotundiloba'		C	●		●		sensitive to cold; less fruit than true species; reddish fall color
<b>Sycamore and Relatives</b>							
American	●	S	●		●		attractive bark and structure; susceptible to anthracnose; yellowish fall color
London Planetree – 'Bloodgood'		S			●		tough urban tree; high resistance to anthracnose; yellowish fall color
<b>Tuliptree/Yellow Poplar</b>	●	U/R			●	●	impressive tall growing tree; attractive yellow fall color
<b>Zelkova</b>							
'Halka'		V	●				better branch structure; planted as substitute for American elm
'Village Green'		V	●				better branch structure; planted as substitute for American elm

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# How to Plant Your Tree

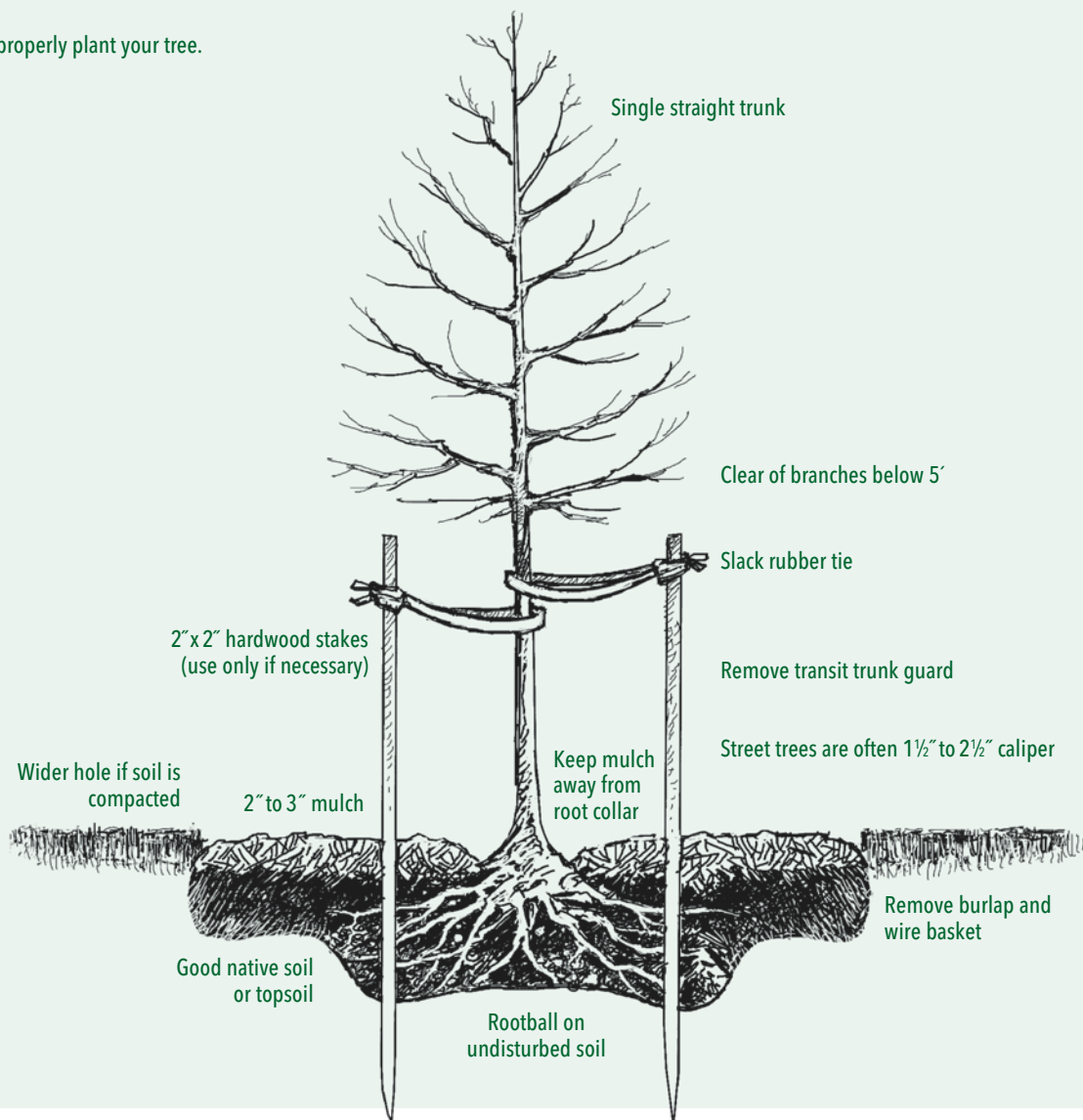
## WHEN TO PLANT: TIMING

The best time to plant most trees is in the early spring and fall, but because of increased mortality some trees, such as all bare root nursery stock, as well as oaks, zelkova, tulip poplar, and dogwood, should not be planted in fall. If planted early in the fall, the tree will begin some root growth, while planting in the spring allows for an entire growing season before the tree goes dormant. When planting in spring, wait until soils are unfrozen, but plant early enough so tree roots can begin to grow before the hot, dry summer. If needed, B&B and containerized nursery stock can be planted after leafing-out in late spring or early summer, but correct irrigation must be provided. In all cases, do not forget to water your trees during hot, dry weather.

## HOW TO PLANT: THE PLANTING PROCESS

Techniques for planting B&B, container and bare-root trees do not differ greatly. Remove any tree wrap used to protect the tree trunk during transit and gently place a B&B tree into the planting hole to avoid breaking the root ball. Always handle a B&B tree by the root ball- not by the tree trunk. If the root ball falls apart, many small roots are damaged or desiccated and the roots cannot adequately absorb water and nutrients. A common cause of new tree death and failure is planting too deep. Because of cultivation at the nursery, B&B trees may have soil piled on top of the root collar (where the tree trunk flares out to the roots), causing trees to be planted too deep. Identify the root collar on all trees and plant the tree at a height at which the

How to properly plant your tree.



flare is even with or slightly above surrounding soil. The large roots of the newly planted tree should be about one inch underground. If the root collar cannot be found after removing burlap and a small amount of loose soil, the tree should not be planted. Once a B&B tree is in the hole, cut and remove all twine from the trunk and either cut and remove or slide burlap to the bottom of the hole. To prevent root girdling (cutting off of circulation) of tree roots in wire baskets, cut and remove at least the top one-third, or two tiers, of wire and remove it from the planting pit. Be careful, especially if children are involved in planting, the ends of cut baskets are very sharp.

Containerized trees are grown in a lightweight artificial soil media and can have some amount of circling roots around and within the container. Gently cut or break-up circling roots to promote root growth into the surrounding soil. If a tree has been growing in a container for too long and there are too many circling roots, it should not be planted.

Because there is no soil to protect roots, bare root tree roots are very susceptible to drying out before planting. Use tarps, bags, irrigation, and shade to protect bare-root tree roots from heat and desiccation before planting. Bare root trees should be planted as quickly as possible and planting bare root trees requires extra planning, especially when using volunteers. When planting bare root trees, spread tree roots evenly without kinking in a saucer

shaped hole. Immediately cover with soil and water immediately and during periods of heat and low rain.

Attempt to backfill all planted trees with the soil you removed from the planting hole. If the soil is poor, or full of debris, use high quality topsoil similar to the surrounding soil. For containerized and B&B trees, backfill two-thirds of a planting hole then lightly compact the soil with foot pressure. Continue backfilling until the hole is filled up to the root collar.

After your tree is planted, stake, mulch, irrigate, and prune as discussed in *Establish and Care of Your Tree* below.

#### TREE RISK ASSESSMENT

As trees grow larger and heavier, tree risk assessment is important, especially in landscapes where tree failure may hurt people or damage property. Risk is the combination of the likelihood of an event and the severity of potential consequences. Tree risk is assessed so that a tree can be removed or treated before any failure of roots, trunk, or branches resulting in consequences takes place. When assessing tree risk, possible targets, site factors, tree health and species profiles, common loads or forces on a tree, and defects and decay of branches, trunk, root collar, and roots are all assessed. Tree risk assessment categorizes risk by the likelihood of a tree part failure, the likelihood of a failure striking a target, and the consequences of a tree part striking a target.

## Establish and Care for Your Tree

In general, newly planted trees take about one year per inch of trunk caliper (trunk diameter 6 inches above the ground) to become established with sufficient root growth. A large 3 inch caliper tree will require irrigation during dry weather for three years. Proper mulching is very important and helps a tree become established and grow.

For establishment, newly planted trees need as many leaves as possible to provide for maximum photosynthesis which fuels root establishment and growth. At planting, prune only dead or broken branches. Prune newly planted trees to enhance and correct branch structure over a number of years, not all at once. Do not fertilize trees at planting. Wait until the second or third year when the tree roots can uptake the fertilizer and to avoid burning young roots. Irrigate all newly planted trees.

Don't forget about your tree! Many people care for trees

for the first month after planting, but trees need care for much longer. Your tree is an investment that will provide many benefits in the future. For good establishment and growth, continue to irrigate, mulch, and protect your tree from vandalism, lawn mowers, string trimmers, and other hazards.

#### STAKING

Because of their weight most B&B trees do not need staking. Staking is necessary for containerized and bare root trees and may be necessary for B&B if trees are very large, planted on slopes, planted in a very windy area, or require protection from vandalism. Stake trees properly by hammering two tall stakes into the ground beyond the root ball area. Secure the tree with flexible, soft ties. Provide 1 inch of play in ties to allow the tree to move which helps develop a strong trunk and root system. Remove the stakes



and ties after 6 to 12 months. When stakes and ties are not removed, the ties can girdle (cut off circulation) the tree trunk. Wire ties or rubber garden hose should not be used.

### WATERING

To ensure root establishment and growth of a new tree, water correctly. A 2 or 2½-inch caliper tree should receive 25 to 40 gallons of water each time it is irrigated. The need for watering increases during hot, dry weather, but gradually decreases in successive years as a tree's roots becomes established. Water should be applied slowly and deeply until it reaches the bottom of the root ball; not just the top few inches of soil. This can be done by using large perforated containers called TREEGATORS or by using 5-gallon plastic buckets with several small holes in the sides, close to the bottom. When using a hose, allow the water to trickle out for at least an hour, and move the hose several times. Watering young trees is extremely important, but it's just as important not to water too much. Excessive watering, combined with poor drainage, deprives roots of oxygen and can kill them. The symptoms of overwatering are the same as those for drought: wilting, loss of leaves, and poor growth.



TREEGATORS provide newly planted trees adequate water during hot, dry periods.

### MULCHING

Mulch is important and will vertically amended soils over time. Spread a 2 to 3 inch layer of composted, coarse mulch around the base of a tree to help conserve moisture, reduce soil compaction, reduce weeds, and protect from lawnmowers and string trimmers. For oaks, maples, and other deciduous trees, the best material for mulch is course, composted deciduous wood chips. For conifers,

Lawn mowers, string trimmers, and over mulching kills trees.



needle straw and coarse composted pine chips can be used. Never pile a cone or volcano of mulch around a tree! Rodents and insects will over-winter in mulch piles and feed on the trunk. Overly thick mulch piles prevent water and air from reaching tree roots and can cause problems with fungal diseases. Don't use geotextile or plastic sheets under mulch because they impede the passage of air and water, inhibiting root growth and function.

### MULCHING DONE RIGHT

- Apply no more than 2 to 3 inches of mulch around, but not touching, the tree trunk
- Do not apply mulch cones or volcanos
- Mulch outward from a tree trunk to a reasonable distance; at least to the edge of the planting hole
- Maintain a 2 to 3 inch layer by removing and replacing old mulch annually
- Remove and replace mulch that has been compacted by pedestrian or other traffic

### FERTILIZING

Do not apply fertilizer during the first year after planting. Fertilizer may burn tender roots, promote top growth before the root system becomes well-established, or simply be leached from the soil before roots can uptake it. If required, based on the results of a soil test, fertilize the second or third year after planting. A soil test determines how much nitrogen (N), phosphorus (P), and potassium (K) are present in a soil. These nutrients are important in tree growth and condition. A bag of fertilizer lists three numbers on the package that tell you the amount of NPK that is provided; for example, 10-8-6. The first number is the percentage of nitrogen, second the percentage of phospho-

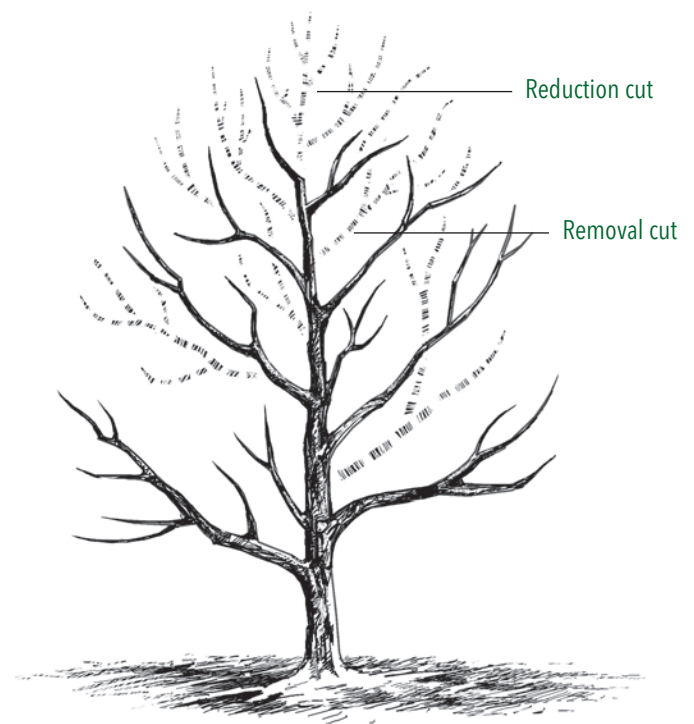
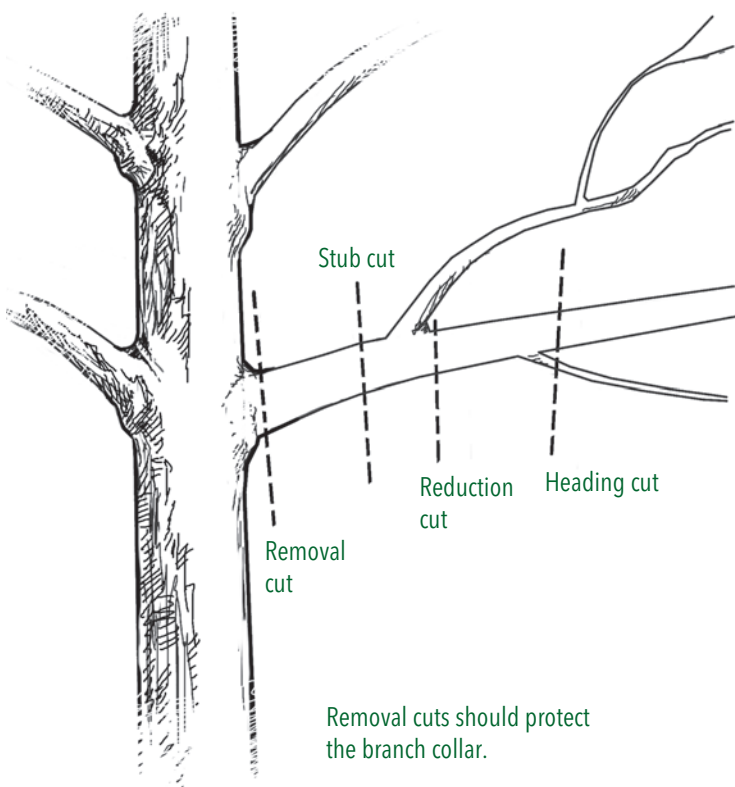
rus, and third the percentage of potassium. To protect roots and provide for reasonable top growth, use a slow-release fertilizer that has a low proportion of nitrogen, such as 10-8-6. For newly planted trees, recommendations for the amount of fertilizer are based on the number of cubic yards of canopy. Recommendations for larger, older trees are per 1,000 square-feet of canopy. One simple recommendation is to evenly spread two cups of 10-8-6 fertilizer under the canopy of young trees.

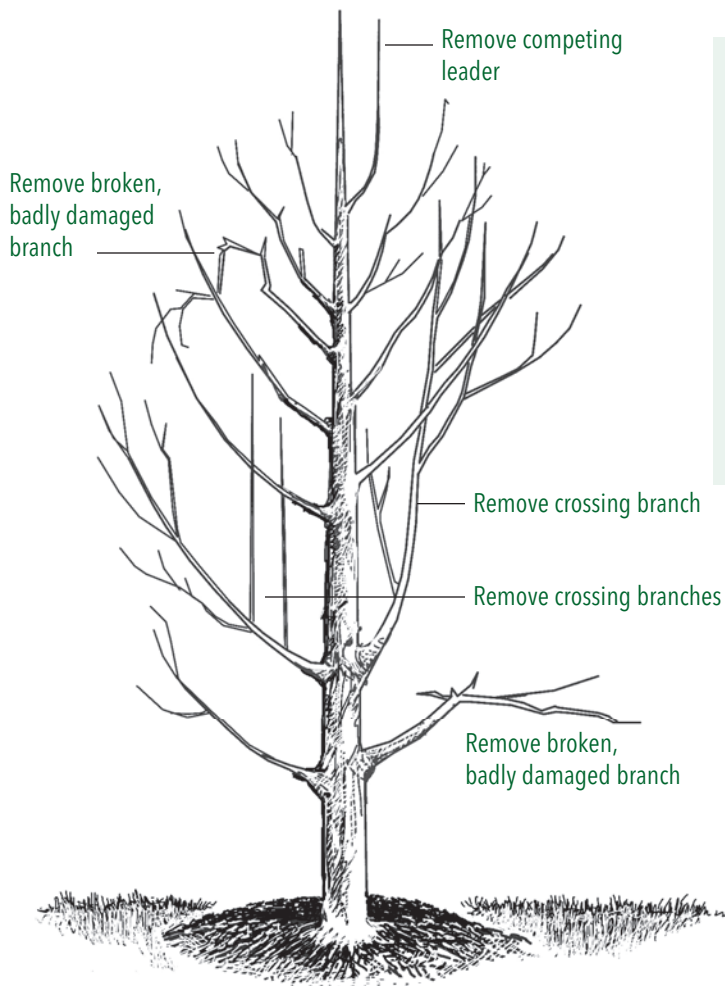
## PRUNING

Trees do not “heal.” They generate new cells in new places and compartmentalize. Trees use chemically and physically altered cells, such as thicker cell walls, to limit the spread of decay (CODIT or Compartmentalization of Decay in Trees). As a result, trees tend to internalize decay in the wood of trunks and limbs. Trees produce new cells in wound wood to cover, not heal, wounds. In some places on trunks and limbs trees grow reaction and response wood (denser wood and increased diameter of stems) to provide for strength in trunks and limbs in response to gravity, wind, and other common forces. Correct pruning supports a tree’s ability to remain healthy and limit decay and other structural problems like poor branching unions. It also helps trees better resist the forces of wind, snow, and ice.

Only removal cuts that remove a limb at its origin on trunk or branch and reduction cuts that shorten a limb back to a limb large enough to resume growth and hormonal dominance (prune back to a limb that is at least one-third the diameter of the limb being pruned) should be used in pruning. Heading and stub cuts that are used to “top,” shear, or round-over trees should never be used on live trees and only used when a tree is being removed. Pruning should never leave stubs and should always protect and enhance the natural form of the tree. Understanding and using proper pruning practices is essential; poor pruning results in decay and other damage that will cause major limb breakage and other problems over the life of the tree.

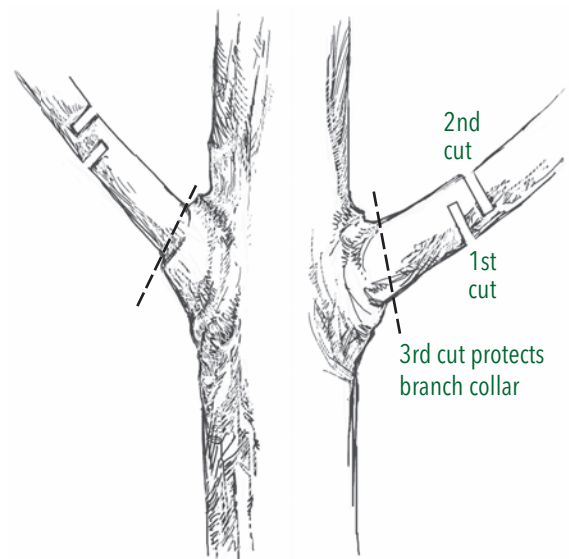
Pruning is a common and important tree maintenance activity for both younger and older trees. Pruning a younger tree is done to remove dead and diseased branches and to help develop or train a strong and permanent branch structure typical of the species of tree. Newly planted trees need as many leaves as possible to support photosynthesis and growth. Prune young trees sparingly immediately after planting, removing only dead and damaged branches. Wait to begin necessary corrective pruning (removing crossing branches that grow back into the center of the tree, and narrow branch unions not typical of the





### IMPORTANT TIPS FOR TREE PRUNING

- Remove dead, diseased, and broken limbs anytime
- Avoid pruning in spring when leaves are emerging
- Prune after leaves are shed and in summer after new leaves have hardened
- Do not prune conifers in the heat of summer
- Wait to begin corrective pruning and training until after the first two years of growth
- Use natural target pruning and the three-cut method
- Prune with sharp tools appropriate for the branch size
- To avoid problems with decay, do not apply wound dressing or paint



Prune young trees judiciously.

species) and training until two seasons of growth. As a rule, small pruning cuts do less damage to a tree than larger cuts. This is one reason why proper pruning (training) of young trees is critical. Waiting to prune a tree until it is mature is expensive and often creates the need for large cuts that are prone to decay. Pruning older trees is done to remove dead, damaged, and weak branches and to properly distribute limbs and foliage that supports structure, health, and growth.

Judicious and strategic pruning is essential on trees of any age. Learn where and how to properly make pruning cuts before picking up a pruning tool. Each pruning cut has the potential to hurt tree structure and health, so always have a reason before making a cut. Always protect the limb's branch collar (the weaving of branch and trunk wood) by using natural target pruning. Use the three-cut method for any branch you cannot support with your free hand (usually 1 inch or larger in diameter). This method prevents bark stripping. To complete the three-cut method:

The three-cut method should be used to remove large branches.

- 1) Saw a notch on the underside of large limbs several inches from the trunk.
- 2) Next, on top of branch, make your next cut just beyond the undercut to remove the bulk of the branch.
- 3) Make the final cut outside the bark collar.

Although forest trees grow quite well with only nature's pruning, landscape trees require a higher level of care to maintain their health, structure, and aesthetics.