

Street Tree Planting and Selection Guide

River Heights City, Utah

September 2008

Trees are a valuable component of our city. Trees clean the air we breathe, muffle city noise, harbor wildlife in their canopies, cool houses with their dense shade and increase property values. But perhaps most of all, trees provide a natural beauty which softens the harsh city landscape. Trees truly enhance the quality of life for all River Heights City residents.

Unfortunately, not all trees are properly planted and cared for. Growth characteristics including height, spread and branching structure limit the usefulness of some trees in certain locations. Streets, buildings, and sidewalks also limit the space available for tree growth and must be considered when selecting a tree. The goal of River Heights City is to select trees that are well matched to planting sites so they survive and becomes assets to the community.

Planting Guide

The best way to ensure a healthy and safe street tree is to start by planting the tree correctly. There are a few things to remember when planting. Follow these planting directions:

1. Select one of the species in the Tree Selection Guide for planting.
2. Before choosing the planting location contact Blue Stakes (800-532-5000) for location of underground utilities.
3. Dig the planting hole at least twice the width of the root ball and as deep as the root ball.
4. Prune circling or protruding roots and remove any twine from the canopy.
5. Handle root ball with extreme care. Minimize as much as possible any crumbling, cracking and splitting of the root ball.
6. After gently placing the tree in the hole, remove wire and burlap if stability of the root ball allows. If not, remove only the top two rows of wire and an equal amount of burlap. Cut vertical slits in the burlap that remains. Do not fold burlap into the hole.
7. Use the soil removed from the hole to backfill. Minimize air pockets by removing soil clumps, rocks, sod and folded burlap.
8. Thoroughly water. Allow water to soak deeply into the site.
9. Place three to four inches of mulch over the planting site. Avoid direct contact between mulch and the trunk of the tree.
10. Check moisture content of the backfill and root ball weekly to determine how much and how often to water.
11. To remove a tree from a container, gently lay it down. Push on the sides and bottom of the container to break contact between the root ball and container. Hold the trunk near the surface of the soil and push/pull the container away from the root ball. Slide the container off the root ball. Do not pull on the trunk. If the root ball is too large for this process it may be necessary to cut the container off after the tree is placed in the planting site.

Utah State University Extension Bulletin NC 460, *Selecting and Planting Landscape Trees*, is an excellent reference. Visit the extension website at <http://extension.usu.edu> or call USU at (801) 797-2251.

Tree Selection Guide

Learning about a tree's shape, mature height and spread will help in selecting the right tree for the right location. Consider the planting site. Does the location have adequate irrigation? Are there any overhead wires? How wide is the park strip? Once the location has been considered, it is then time to select a tree that will best fit the location.

The trees in this guide are generally tolerant of local temperature and moisture extremes (hardiness) and have characteristics that make them useful as street trees. Each tree in the guide is listed with its botanical and common names followed by a short narrative with general information. All of the trees have been divided into classes dependent on the height, width and spacing requirements that the trees will need at maturity. These divisions are described as follows:

Class I Trees

These are small trees which normally do not reach a large height or trunk diameter. Most can be planted beneath power lines and in parking strips down to four feet wide. Typical spacing between Class I trees is twenty-five feet.

Botanical & Common Name	Height	Spread	Growth Rate	Remarks
<i>Acer campestre</i> Hedge Maple	25'	25'	Slow	A small tree that withstands urban conditions and is long lived. Foliage is dark green on top and fuzzy underneath. Leaves turn yellow and remain late into autumn.
<i>Acer ginnala</i> Amur Maple	15'	10'	Medium	Fall color is red to orange. Very cold hardy.
<i>Acer grandidentatum</i> Bigtooth Maple	25'	15'	Slow	This maple is native to our canyons and is adapted to our climate. Foliage turns brilliant red in the fall. Selections of tree-like forms should be used for street plantings.
<i>Acer griseum</i> Paperbark Maple	25'	20'	Slow	A graceful tree with cinnamon colored bark which peels away to reveal reddish brown shades. Fall color is reddish brown.
<i>Acer tataricum</i> Tatarian Maple	20'	15'	Slow to Medium	An oval-shaped, drought-tolerant tree with brilliant red or red-orange fall color.
<i>Aesculus pavia</i> Red Buckeye	20'	25'	Medium	A tree with brilliant red flowers in April to May and coarse-textured green leaves. Cannot tolerate dry soils.
<i>Cereis Canadensis</i> Eastern Redbud	25'	25'	Medium	Trunk is usually branched at the base with ascending branches and bright pink flowers in early May. Heart shaped leaves. Not a long lived tree.
<i>Crataegus phaenopyrum</i> Washington Hawthorn	25'	25'	Medium	Leaves emerging in spring are reddish-purple changing to glossy dark green in summer. Flower display beginning in May while fruit sets in late summer and colors bright red in September.
<i>Crataegus laevigata</i> English Hawthorn	15'	15'	Slow	This hawthorn has attractive flowers, fruit and growth habit. It grows with very few thorns, Choose nursery stock with a strong central leader for best results along street.
<i>Crataegus crus-galli 'inermis'</i> Cockspur Hawthorn	20'	20'	Slow	This is a thornless variety of hawthorn that is native to the eastern U.S. Glossy deep green foliage with persistent red fruit. A good choice for locations near power lines.
<i>Koelreuteria paniculata</i> Goldenrain Tree	25'	20'	Fast	Large hanging yellow flowers in summer and papery lantern-like seed pods make this tree quite unique. Fall color is crimson, bronze.
<i>Malus spp.</i> Flowering Crabapple	25'	20'	Fast	A very popular group of trees with varying degrees of white or red flowers. "Spring Snow" is a fruitless variety.
<i>Prunus virginiana</i> 'Canada Red' Canada Red Cherry	25'	20'	Medium	Leaves emerge green and turn purple as the season progresses. Good natural branching characteristics, Suckering often occurs following establishment.
<i>Syringa reticulata</i> Japanese Tree Lilac	25'	15'	Medium	Stiff branches and reddish brown bark, Attractive fragrant summer flowering.
<i>Prunus serrulata</i> Flowering Cherry	25'	15'	Medium	Upright vase to rounded shape. Spreading branches with beautiful floral displays. Deep green foliage is attractive in spring and summer.
<i>Prunus ceressifera</i> Flowering Plum	20'	15'	Medium	Upright to spreading branch habit. Beautiful floral displays are white and leaves are red purple. Short lived.

Class II Trees

Trees that are usually considered medium sized and are normally planted for their shade and aesthetic contribution. These trees are not for planting under power lines or in parking strips less than six feet wide. Typical spacing between this class of tree is 30 – 40 feet.

Botanical & Common Name	Height	Spread	Growth Rate	Remarks
<i>Acer plantanoides</i> Norway Maple	45'	35'	Medium	Dark green summer foliage can turn yellow in fall. A very popular and well known tree casting dense summer shade. Many different varieties are available.
cv. 'Columnare' Columnar Norway Maple	40'	15'	Medium	A dense, columnar variety of the species.
cv. 'Cleveland' or 'Emerald Queen'	45'	30'	Fast	Upright oval-headed form with superior branching habit.
cv. 'Globosum' Globe Norway Maple	20'	20'	Slow	Low crowned form of the species. Good for use near overhead utility wires.
<i>Acer pseudoplatanus</i> Sycamore Maple	30'	25'	Medium	A tree with very similar characteristics as Norway Maple. Leaves resemble the leaves of the American Sycamore.
<i>Acer nigrum</i> Black Maple	45'	25'	Slow	Similar in characteristics to the sugar maple but more tolerant of climatic conditions in River Heights. Foliage has a drooping form and fall color is good.
<i>Aesculus x carnea</i> Red Horsechestnut	40'	35'	Slow	This tree is valued for its flowering in the spring. More heat and drought tolerant than most other Horsechestnuts.
<i>Aesculus octandra</i> Yellow Buckeye	40'	25'	Slow	Symmetrical and attractive.
<i>Celtis occidentalis</i> Common Hackberry	45'	35'	Fast	Stately tree with a straight trunk and bright green foliage turning yellow in the fall. A reliable tree under windy conditions. Vase shaped form.
<i>Pyrus calleryana</i> Flowering Pear	30'	25'	Fast	An outstanding flowering tree with glossy leaves that turn scarlet in the fall. Spring flowering is white.
cv. 'Aristocrat'	40'	28'	Fast	Grows fast; pyramidal form.
cv. 'Chanticleer'	40'	16'	Fast	More compact and upright; fall color is red-purple.
<i>Fraxinus pennsylvanica</i> Green Ash	60'	40'	Fast	This tree is extremely hardy and grows under many different conditions. Reliable and tough in the urban landscape.
cv. 'Marshall Seedless'	45'	35'	Fast	A seedless variety of green ash.
cv. 'Patmore'	55'	45'	Fast	Crown is broader than Marshall.
cv. 'Urbanite'	35'	20'	Fast	Seedless with deep green leaves turning deep bronze.
<i>Ginkgo biloba</i> Maidenhair Tree	50'	35'	Medium	Distinctive fan-shaped light green leaves are soft in appearance, Autumn color is bright yellow, Ginkgo is one of the most ancient trees on earth.
cv. 'Princeton Sentry'	45'	25'		
cv. 'Autumn Gold'	40'	30'		
<i>Gleditsia triacanthos 'inermis'</i> Thornless Honeylocust	45'	40'	Fast	A hardy tree with finely textured leaves. Produces filtered shade. Tolerant of salt, heat, drought, and other urban stresses.
cv. 'Shademaster'	50'	30'		Leaves dark green and persistent. Yellow fall color.
cv. 'Skyline'	45'	35'		Leaves dark green. Yellow fall color.
cv. 'Sunburst'	40'	35'		New leaves are bright yellow at ends of branches.
<i>Gymnocladus dioica</i> Kentucky Coffeetree	55'	30'	Medium	Open spreading tree that is tolerant of drought, heat, and wind. Seed pods may become a maintenance consideration.

cv. 'Espresso'				Mostly seedless, more vase-shaped than the species.
<i>Morus alba</i> White Mulberry	35'	30'	Medium	Tolerant of heat and alkaline soil. Select only fruitless varieties as fruiting mulberries produce fruit that stains sidewalks and cars.
<i>Metasequoia glyptostroboides</i> Dawn Redwood	70'	35'	Fast	Fern-like foliage gives this tree a fine texture. Bark is reddish-brown and scaly. Lower limbs must be removed on trees planted in parking strips.
<i>Phellodendron amurense</i> Amur Corktree	40'	30'	Fast	Interesting furrowed bark. Canopy casts filtered shade. Thrives under urban conditions. Tolerant of dry soils.
cv. 'Macho'				This seedless form has good growth characteristics.
<i>Sorbus aucuparia</i> European Mountain Ash	25'	20'	Medium	An ornamental tree with white flowers in summer followed by orange berries in the fall and winter.
<i>Sophora japonica</i> Japanese Pagoda Tree	35'	30'	Fast	Round headed tree with yellow flowers in clusters in late August. Tolerant of urban conditions. Fruit may become a maintenance consideration.
<i>Aesculus glabra</i> Ohio Buckeye	30'	30'		Broad, rounded form with flowers that are green yellow in mid-May. Leaves drop early. Red brown to orange.
<i>Carpinus betulus</i> European Hornbeam	40'	30'	Medium	An exceptional tree for street planting. Formal appearance and seldom needs pruning. Fall color is yellow orange. Bark is smooth gray.
cv. 'Fastigiata'				More compact and narrow than the natural forms.
<i>Cladastis kentukea</i> Yellowwood	40'	40'	Medium	Tolerant of many soil conditions. Fragrant white flowers in May.
<i>Fagus sylvatica</i> European Beech	30'	25'	Slow	Dark green to purple glossy foliage. Bark is smooth gray. Variety 'Pendula' should not be planted in parking strips.
cv. 'Asplenifolia'				Cut leaf variety that is fern like and gold-brown in the fall.
cv. 'Autropunica'				Has purplish-bronze or copper colored leaves.
cv. 'Riversii'				Dark purple leaves that turn bronze in the fall.
cv. 'Roseo Marginata'				Leaves are green edged with pink and cream colors.

Class III Trees

Many of these trees are long-lived and attain large height and trunk diameter. When selecting a tree from this class, be sure you have ample room to accommodate it at maturity. These trees are not for planting under power lines or parking strips less than 10 feet wide. Typical spacing between Class III trees is 40 – 60 feet.

Botanical & Common Name	Height	Spread	Growth Rate	Remarks
<i>Aesculus hippocastanum</i> Common Horsechestnut	60'	45'	Medium	Casts dense summertime shade. Showy flowers in May.
cv. 'Baumannii'				Long-lasting flowers and seedless.
<i>Catalpa speciosa</i> Northern Catalpa	60'	40'	Fast	A fast growing tree with heart-shaped leaves and conspicuous white flowers in June. Can withstand hot, dry conditions. Fruit is a long pod.
<i>Fagus grandiflora</i> American Beech	60'	55'	Slow	Thin, smooth gray bark. Very similar to the European Beech, but larger and has bigger leaves. Golden bronze fall color.
<i>Liquidambar styraciflua</i> Sweetgum	60'	45'	Fast	Glossy green star-shaped leaves that turn yellow in the fall. Twigs have cork-like bark. Fruit is a spiny ball which may be a maintenance concern.
cv. 'Moraine'				Hardy variety with fast growth and red fall color.
<i>Liriodendron tulipifera</i> Tulip Tree	80'	45'	Fast	A large tree of the magnolia family. Flowers born high in the tree. Leaves are bright green and resemble a tulip. Its fast growth can lead to weak wood.

<i>Quercus bicolor</i> Swamp White Oak	50'	35'	Medium	An open headed tree that is excellent for moist or wet soils. Foliage is green on top and dusty white on bottom. Leaves turn brown in the fall.
<i>Quercus macrocarpa</i> Bur Oak	70'	65'	Slow	A grand tree with large lobed leaves. Adaptable to a wide range of conditions and is tolerant of dry soils, air pollution and temperature extremes. A valuable tree for urban wildlife.
<i>Quercus robur</i> English Oak	55'	45'	Fast	A stately tree with small lobed leaves, Thick bark is furrowed and gray, Tolerant of many soil conditions, A long-lived tree.
cv. 'Fastigiata'				Upright, columnar form of the species.
<i>Quercus rubra</i> Northern Red Oak	50'	45'	Medium	A strong tree with dense green foliage that turns to red in the fall. A valuable tree for urban wildlife.
<i>Tilia Americana</i> American Linden	55'	35'	Medium	Large, heart-shaped leaves cast dense summer shade. Fragrant flowers appear in the summertime.
cv. 'Redmond'				A pyramidal form and fast growth.
<i>Tilia cordata</i> Littleleaf Linden	45'	40'	Medium	A compact pyramidal tree with sturdy upright growth. More heat and drought tolerant than other lindens. Dense foliage produces dense summertime shade.
cv. 'Chancellor'	50'	20'		Upright oval with yellow fall color.
cv. 'Glenleven'	50'	35'		Upright narrow form that is dense and symmetrical.
cv. 'Greenspire'	40'	30'		Larger leaves and more spreading than the species.
cv. 'Corzam'	40'	15'		Upright pyramidal form with smaller, thicker leaves.
<i>Tilia tomentosa</i> Silver Linden	60'	40'	Medium	White underside of leaves give this tree its name. Tolerates heat and drought well. Trunk is smooth and gray.
cv. 'Green Mountain'				Rapidly growing tree that is heat and drought tolerant.
cv. 'Sterling'				Excellent form and resistant to leaf eating insects.
<i>Platanus x acerifolia</i> London Planetree	90'	60'	Fast	A towering tree with strong roots and branches. Bark peels off in patches. Hardy and attractive in winter.
cv. 'Bloodgood'				A common disease resistant form.
<i>Ulmus parvifolia</i> Lacebark Elm	50'	30'	Medium	The tree has flaky bark and smaller leaves than the American Elm. It is often confused with Siberian Elm, which is not approved for planting in parking strips.
cv. 'Ohio'				More cold hardy than the species.
<i>Zelkova serrata</i> Japanese Zelkova	70'	70'	Fast	A handsome, vase-shaped member of the elm family. Fall color is yellow orange. Adaptable to different soil conditions and tolerant of drought and wind.
cv. 'Halka'				Resembles American Elm.
cv. 'Green Vase'				Rapid growth and good vase shaped form.
cv. 'Village Green'				Rapid growth and insect resistant.

Trees Prohibited for Planting within City Parking Strips or Near Streets

The following species are not to be planted in any parking strip in River Heights City without the written consent of the City Forester. These trees exhibit characteristics including but not limited to: extreme insect or disease susceptibility, soft or brittle wood, and/or limited cold or heat hardiness. Such problems often lead to excessive maintenance costs, hazards to other trees and potential public safety hazards.

Botanical & Common Name	Remarks
<i>Acer negundo</i> Box Elder Maple	Soft wood that is subject to decay. Harbor box elder bugs which are a nuisance.
<i>Acer saccharinum</i> Silver Maple	Becomes chlorotic in local soils. Soft wood and decay problems.
<i>Ailanthus altissima</i> Tree of Heaven	Very brittle wood and weak branching. Seeding makes this tree invasive.

<i>Eleagnus augustifolia</i> Russian Olive	Thorns, fruit and growth habit are unsuitable for street tree use.
<i>Gleditsia triacanthos</i> Thorned Honeylocust	Hazardous thorny branches. Messy seed pods. Select thornless varieties for planting along City streets.
cv. 'Sunburst'	Susceptible to many pests.
<i>Populus</i> Cottonwood, Aspen and Poplars	Trees in this family have soft wood and are subject to decay. Shallow roots.
<i>Robinia pseudoacacia</i> Black Locust	Extremely susceptible to boring insects. Brittle wood.
<i>Robinia ambigua</i> 'Purple Robe' Purple Robe Locust	Very brittle wood. Susceptible to boring insects.
<i>Salix</i> Willow	Soft wood subject to decay. Shallow roots. Ahpids.
<i>Ulmus pumila</i> Siberian Elm	Brittle wood and weak branching. Invasive spread from seeding. Commonly referred to as Chinese Elm.
Evergreens	Block clear vision between pedestrians and vehicle traffic. Often spread too wide for parking strips.
Orchard Trees	Fruit drop on sidewalks can be hazardous to pedestrians and a maintenance concern.