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Town of Southborough Street Tree Guidelines



Prepared for
Town of Southborough
Massachusetts

Prepared by



Engineers
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Introduction

This document is intended to be used as a guide in the selection of street trees in Southborough, MA. It includes lists of recommended street tree species within three categories;

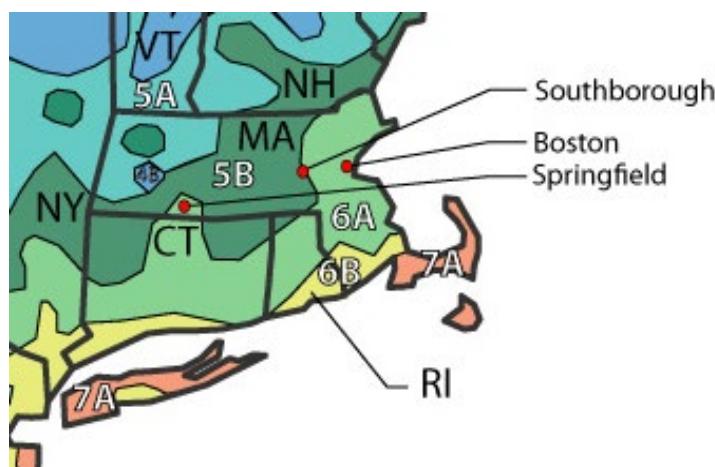
- Broad shade trees
- Upright or narrow trees
- Small trees.
- Specimen trees

In addition, general information on planting locations and tree selection, and fact sheets of each recommended tree species are provided.

RECOMMENDED STREET TREE SPECIES

The tree species included in this guide are comprised of native species and cultivars of native species. These selected trees typically exhibit some tolerance to pollution, droughty conditions, or compacted soils and are generally easy to maintain. The recommended street tree lists include the Botanical (or Latin) name of the plant and names of any recommended cultivars. Lists also include the common name of the plant, and abbreviated notes on the species. As many distinct plants may share the same common name, the botanical name is used to uniquely identify plant species. For some species named *varieties* or *cultivars* are recommended in preference to the regular species. A *cultivar* is a cultivated variety of a plant that has been selected and given a unique name because of desired characteristics. Some desirable characteristics in street trees might be showier flowers, narrow shape, or increased disease resistance. These cultivated characteristics are usually quite distinct from similar plants of the same species. In the recommended tree lists' notes, trees native to North America are indicated with the letter 'N'. Native trees are often preferred because they are typically better adapted and hardier to the climate where they are native. Another indicator of plant hardiness to a region is the species' USDA plant hardiness zone range. The plant hardiness zone indicates the average annual minimum temperature range at which a particular species will survive. Southborough lies between zones 6 and 5, as shown on the map below, so all recommended trees are hardy to zone 5. See the individual species fact sheets for details of each species.

USDA Plant Hardiness Zones



Zone	Temperature Range	Sub Zones
3	-35 to -40	A
	-30 to -35	B
4	-25 to -30	A
	-25 to -20	B
5	-20 to -15	A
	-15 to -10	B
6	-10 to -5	A
	-5 to 0	B
7	0 to 5	A
	5 to 10	B

SELECTING PLANTING LOCATIONS AND TREE SPECIES

Planting Area

It is often not possible to provide an ideal growth area for street trees. Whenever possible, a good rule of thumb is to provide a 30'x30' ground space area for large trees, 15'x15' for upright trees, and 7'x7' for small ornamental trees. Specimen trees should also provide for a 30'x30' ground space area. If planting in a lawn strip along a roadway, a minimal width for this lawn strip would be 8' for large trees, 6' for upright or narrow trees, and 4' for small trees. In any case, lawn strips must be a minimum 4' wide (excluding curb width) to allow adequate growth of tree trunks. When planting in tree pits within sidewalks, provide planting areas that are 4' x 6' x 3' deep at a minimum for each tree and consider providing perforated aeration/watering tubes in the pits.

Planting Location

Some possible physical conflicts to consider when locating tree plantings are buildings, signage, sidewalks and pedestrians, cars, snow storage, overhead wires, and underground utilities.

1. Overhead Wires and Utilities

- a. Always call dig-safe to locate utility lines in the area being considered for tree planting before digging.
- b. If there is less than 8'-10' horizontal clearance to a utility or building obstruction above or below grade, consider another location for the tree.
- c. Avoid planting trees under or near overhead wires (OHW). If this cannot be accommodated and there is less than 8' horizontal clearance from the wires use small ornamental trees under or near the wires. If the location is constrained by OHW's but will allow for at least 8'-15' horizontal clearance then narrow trees may also be considered.
- d. Avoid planting trees over underground utility lines and structures, especially if it is likely the lines will need repair or construction work. Most trees are sensitive to root damage or disturbance and repair work might even necessitate removal of trees. If trees must be planted over utilities keep in mind that the trees will need a minimum 3' planting depth over the utility. Some utilities such as gas lines may leak and kill tree plantings. Other utilities such as steam lines may emit heat which will also kill tree plantings. Conversely older segmented utility lines such as sewers may be prone to intrusion and damage from roots of trees planted too closely.
- e. Provide 15' horizontal clearance from street lights.

2. Sidewalks

- a. Where sidewalks exist, in order to provide an improved growing condition a priority should be placed upon locating trees in green spaces at the back of sidewalk (far side from the roadway) or in front yards rather than in tree pits or narrow lawn strips at the edge of roadways. These areas at the back of sidewalk provide more room for root growth, greater protection from root compaction and snow storage and less exposure to road salt.

- b. Sidewalks must maintain a minimum clear path to meet ADA requirements (as of this writing that is 3.5'). To provide a minimum 4' wide tree pit in a sidewalk and a 3.5' passage requires a minimum 7.5' sidewalk, not including any curb width.
- c. In cases where trees are required to be planted either in green strips between sidewalk and road edge or in tree pits within sidewalks, they should be located so that the center of trunk is no less than 2' from walk or curb. 4' or more from walk or curb is preferred.
- d. Trees should be located to avoid possible injury to pedestrians from lower branches should provide a 6'-8" branching height when directly adjacent to sidewalks. New Broad Shade and Upright Street trees in the 3" caliper range can usually be purchased with a 6'-8" branching height. Ornamental trees or trees with small size at installation and hence with smaller lower branching canopies should be located further away from walks.
- e. Think carefully about the use of trees with fleshy fruit or other fruit litter in areas with a lot of pedestrian activity like public plazas or play areas.

3. Buildings in Urban Conditions where the sidewalk meets the building face.

- a. Use upright, narrow, trees where they must be planted close to buildings. This will help to minimize conflicts with branches.
- b. Do not plant trees in front of building entries.
- c. If possible, use trees to frame storefront signage or display windows. Avoid planting directly in front of signage and try to maintain some visibility for merchants.

4. Vehicular Issues

- a. When locating trees near street intersections consider the mature size of the tree and how they may impact sight lines of vehicles turning corners.
- b. A minimum 4' wide planting strip or tree pit can accommodate vehicular door swing where street trees are planted next to on-street parking.
- c. Most vehicles have a bumper overhang past the edge of parking areas of 2-3.5'. Where trees will be planted near head-in parking, provide at least 4' clearance from the edge of pavement or face of curb to the tree. This will prevent trees from being struck or damaged by vehicles.
- d. Consider snow-plow operations and snow storage locations when locating trees. Where snow plows might be expected to push toward the tree planting area, a clearance of 10' is ideal but a minimum 5' from the edge of pavement can also help minimize damage to tree trunks.

ASIAN LONG-HORNED BEETLE INFORMATION

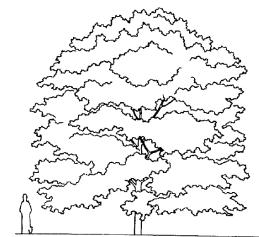
Also, listed below for reference is a list of known hosts of the Asian Long-horned Beetle. At the time this street tree document was prepared, Asian Long-horned Beetle infestation had not extended into Southborough but remains a concern in the region. This list is provided for informational purposes.

Significant hosts of ALB (as of this writing)

Maple (Acer species)
Horsechestnut (Aesculus species)
Willow (Salix species)
Elm (Ulmus species)
Birch (Betula species)
Mimosa (*Albizia julibrissum*)
Hackberry (Celtis species)
Ash (Fraxinus species)
Sycamore and Plane tree (Platanus species)
Mountain Ash (Sorbus species)
Poplar (Populus species)

BROAD SHADE TREES

The following trees are recommended for unconfined spaces such as lawns, parks, yards, and wide landscape buffers. Ideal growth area is 30'x30'x3'D. They can also be used as street trees provided they are planted in an adequate space on the outside of sidewalks. More specific information for each tree can be found on the following pages.



Botanical Name	Common Name	Notes
<i>Acer rubrum</i>	Red Maple	N, IST
<i>Liquidambar styraciflua</i>	Sweetgum	N, IST, consider fruitless cultivars such as 'Rotundiloba'
<i>Nyssa sylvatica</i>	Black Tupelo	N, MST
<i>Ostrya virginiana</i>	American Hornbeam	N, IST
<i>Quercus rubra</i>	Red Oak	N, MST,
<i>Quercus palustris</i>	Pin Oak	N, IST, pendulous lower branches preclude use in pedestrian areas
<i>Ulmus americana</i> <i>Use Dutch Elm Disease resistant varieties such as 'Valley Forge'</i>	American Elm	N, MST, upright vase shape makes it ideal for streets with pedestrians and truck traffic.

NOTE: There are many native oak trees, not included in the list above or in the tree fact sheets, such as *Quercus coccinea* – Scarlet Oak, *Quercus alba* – White Oak, and *Quercus bicolor* - Swamp White Oak, which might also be suitable for a street tree planting if sufficient room is provided for their mature growth.

Key to Notations

C – denotes columnar or very narrow variety of a tree species

N – denotes native to North America

ST – denotes salt tolerant

MST – denotes moderate salt tolerance

IST – denotes intolerant to salt

var. – denotes variety or cultivar



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Acer rubrum

Red Maple, Swamp Maple

Aceraceae (Maple)

Hardy range 4A to 10B

Height 50' to 75' / 15.20m to 22.80m

Spread 40' to 60' / 12.20m to 18.20m

Growth rate Fast

Form Oval, rounded and upright or erect

Exposure Full shade to full sun

Persistence Deciduous

Bloom Color Red

Bloom Time Spring and Winter

Leaf Color Green

Fall Color Orange, red and yellow

Fruit Color Red The fruit is dry and elongated.

Environment This plant tolerates some drought and flooding,

sensitive to salt. This plant will grow in dry to wet or submerged soil.

Suitable soil is well-drained/loamy, sandy or clay. The pH

preference is an acidic to neutral (less than 6.8 to 7.2) soil.



©2006 Horticopia, Inc.
(Fall color shown)

Liquidambar styraciflua

**Sweetgum, Sweet Gum, Red Gum, American Sweet
Gum, Red Sweet Gum, American Sweetgum
Hamamelidaceae (Witch Hazel)**

Hardy range 5B to 9B

Height 50' to 75' / 15.20m to 22.80m

Spread 35' to 50' / 10.60m to 15.20m

Growth rate Average

Form Oval and pyramidal

Exposure Partial shade or partial sun to full sun

Persistence Deciduous

Bloom Color Green and yellow

Bloom Time Spring

Leaf Color Green

Fall Color Orange, purple, red and yellow

Fruit Color Brown

The fruit is dry and round.

Environment

This plant tolerates some drought, and occasional wetness.

This plant will grow in dry to occasionally wet soil.

Suitable soil is well-drained/loamy, sandy or clay.

The pH preference is an acidic to slightly alkaline (less than 6.8 to 7.7) soil.



Van Den Berk Nurseries

Nyssa sylvatica

Black Tupelo, Black Gum

Nyssaceae

Hardy range 5A

Height 30' to 60'

Spread 20' to 40'

Growth rate Slow to medium

Form Pyramidal when young, becoming rounded with age

Exposure Full sun

Persistence Deciduous

Leaf Color Green

Fall Color Yellow, orange, red, purple

Fruit Color Blue, black drupes

Environment

This plant tolerates some drought, flooding and some salt.

Suitable soil is moist and well drained.

The pH preference is an acidic (5.5 to 6.5) soil.



2005 © Peter M. Dziuk

Minnesota Wildflowers

Ostrya virginiana

American Hophornbeam

Betulaceae (Birch Family)

Hardy range 3B to 9

Height 30' to 50'

Spread 20' to 30'

Growth rate Slow

Form Oval to pyramidal in youth, oval to rounded with age

Exposure Full sun, tolerates partial shade

Persistence Deciduous

Leaf Color Green

Fall Color Yellow

Fruit Color Greenish-white pods hanging in clusters (looks like hops, hence the common name)

Environment

This plant tolerates some drought, intolerant of salt.

Suitable soil is moist and well drained.

The pH preference is slightly acidic soil.

Michael Dirr (author of the Manual of Woody Landscape Plants) notes it has performed well in city plantings.



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Quercus palustris

Pin Oak, Swamp Oak

Fagaceae (Beech Family)

Type Tree, woody plant

Hardy range 4A to 8A

Height 50' to 75' / 15.20m to 22.80m

Spread 35' to 50' / 10.60m to 15.20m

Growth rate Average

Form Pyramidal

Exposure Full sun

Persistence Deciduous

Bloom Color Brown

Leaf Color Green

Fall Color Copper and red

Fruit Color Brown

The fruit, a ½" nut, is dry, oval and round.

Environment

This plant tolerates some drought and flooding, sensitive to salt.

This plant will grow in dry to wet or submerged soil.

Suitable soil is well-drained/loamy, sandy or clay.

The pH preference is an acidic to neutral (less than 6.8 to 7.2) soil.

Michael Dirr notes it as somewhat tolerant of city conditions.



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Quercus rubra

Quercus rubra syn. *Quercus borealis*

Red Oak, Northern red Oak

Fagaceae (Beech Family)

Hardy range 3B to 8A

Height 50' to 75' / 15.20m to 22.80m

Spread 50' to 75' / 15.20m to 22.80m

Growth rate Fast

Form Rounded

Exposure Full sun

Persistence Deciduous

Bloom Color Brown

Leaf Color Green

Fall Color Red

Fruit Color Brown

The fruit, a $\frac{3}{4}$ -1" nut, is dry, oval and round.

Environment

This plant tolerates drought and some salt.

This plant will grow in very dry soil.

Suitable soil is well-drained/loamy, sandy or clay.

The pH preference is an acidic to slightly alkaline (less than 6.8 to 7.7) soil.



Wikimedia Commons

Ulmus Americana 'Valley Forge'

American Elm

Ulmaceae (Elm Family)

Hardy range 3

Height 60' to 80'

Spread 40' to 80'

Growth rate Medium to fast

Form Vase shaped

Exposure Full sun

Persistence Deciduous

Bloom Color Green

Bloom Time Spring

Leaf Color Green

Fall Color Yellow

Fruit Color Brown

The fruit is dry and round.

Environment

This plant tolerates drought, occasional wetness and some salt.

This plant will grow in very dry to occasionally wet soil.

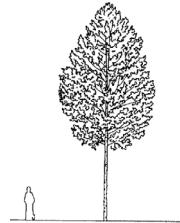
Suitable soil is well-drained/loamy, sandy or clay.

The pH preference is variable.

'Valley Forge' is resistant to Dutch Elm Disease.

UPRIGHT OR NARROW TREES

The following trees are recommended for use on streets where pedestrian walks and proximity to buildings pose constrained space conditions. Trees noted with C are columnar or narrow and are particularly suitable for use in areas with 8-15' clearance to buildings and OHWs. Ideal growth area averages 15'x15'x3'D. More specific information for each tree can be found on the following pages.



Botanical Name	Common Name	Notes
<i>Acer rubrum</i> var. <i>Karpick</i>	Karpick red maple	N, MST, C
<i>Amelanchier grandiflora</i> 'Robin Hill'	Robin Hill Serviceberry	N, C
<i>Liquidambar styraciflua</i> 'Slender Silhouette'	Sweetgum	N, IST, C
<i>Quercus palustris</i> var. 'Green Pillar'	Fastigiate Pin Oak	N, MST, C

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var. – denotes variety or cultivar



Image copyright Henry Dgerhold / PSU

Acer rubrum 'Karpick®'

Karpick Red Maple

Aceraceae (Maple Family)

Hardy range 4A to 8B

Height 40' to 50' / 12.20m to 15.20m

Spread 15' to 20' / 4.60m to 6.00m

Growth rate Fast

Form Columnar, oval and upright or erect

Exposure Partial shade or partial sun to full sun

Persistence Deciduous

Bloom Color Red

Bloom Time Spring

Environment

This plant tolerates some drought, flooding and a little salt.

This plant will grow in dry to wet or submerged soil.

Suitable soil is well-drained/loamy, sandy or clay.

The pH preference is an acidic to neutral (less than 6.8 to 7.2) soil.



Image from Van Den Berk Nurseries

Amelanchier x grandiflora 'Robin Hill'

Robin Hill Apple Serviceberry

Rosaceae (Rose Family)

Hardy range 4A to 7A

Height 15' to 30' / 4.60m to 9.20m

Spread 15' to 20' / 4.60m to 6.00m

Growth rate Slow

Form Upright or erect and vase shaped

Exposure Partial sun to full sun

Persistence Deciduous

Bloom Color Pink

Bloom Time Spring

The flowers are very showy.

Leaf Color Green and purple

Fall Color Red and yellow

Fruit Color Red

The fruit is fleshy and round (1/4 – 1/3" diameter).

Environment

This plant tolerates some flooding.

Suitable soil is well-drained/loamy, sandy or clay.

The pH preference is an acidic to neutral (less than 6.8 to 7.2) soil.



Image by Wikimedia Commons, D. Stang

Liquidambar styraciflua 'Slender Silhouette'

Slender Silhouette Sweetgum
Hamamelidaceae (Witch Hazel)

Hardy range 5B to 9B

Height 45' to 50'

Spread 10'

Growth rate Fast

Form Narrow, columnar

Exposure Partial sun to full sun

Persistence Deciduous

Bloom Color Green and yellow

Bloom Time Spring

Leaf Color Green

Fall Color Orange, purple, red and yellow

Fruit Color Brown

The fruit is 1" in diameter and can pose a maintenance issue.

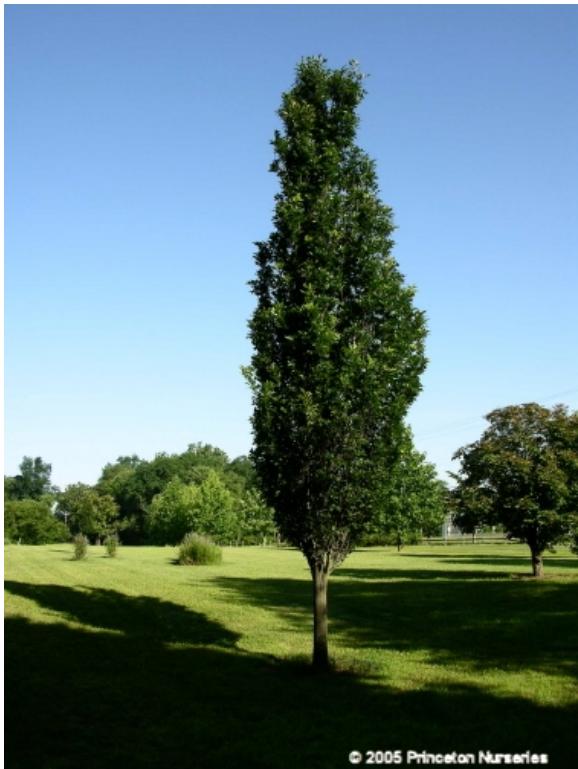
Environment

This plant tolerates occasional drought, and occasional wetness.

This plant will grow in occasionally dry to occasionally wet soil.

Suitable soil is well-drained/loamy.

The pH preference is an acidic soil.



© 2005 Princeton Nurseries

Quercus palustris 'Green Pillar'

Fastigiate Pin Oak

Fagaceae (Beech)

Hardy range 4A to 8A

Height 50' to 75' / 15.20m to 22.80m

Spread 12'-15'

Growth rate Average

Form Narrow, columnar

Exposure Full sun

Persistence Deciduous

Bloom Color Brown

Leaf Color Green

Fall Color Red

Fruit Color Brown

The fruit is dry, oval and round.

Environment

This plant tolerates some drought, flooding and some salt.

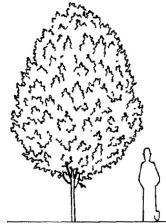
This plant will grow in dry to wet or submerged soil.

Suitable soil is well-drained/loamy, sandy or clay.

The pH preference is an acidic to neutral (less than 6.8 to 7.2) soil.

SMALL TREES

The following trees are recommended for use *under* or near overhead wires, in confined spaces, or for ornamental accent. Ideal growth area averages 7'x7'x3'D. More specific information for each tree can be found on the following pages.



Botanical Name	Common Name	Notes
<i>Amelanchier x grandiflora</i> var. 'Robin Hill'	Improved varieties of single-stem Serviceberry	N, MST, Select or specify single-stem, tree-form plants for use along streets.
<i>Cercis canadensis</i>	Eastern Redbud	N
<i>Crataegus crusgali</i> var. <i>inermis</i>	Thornless Cockspur Hawthorn cultivars	N, MST

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IST – denotes intolerant to salt

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Image from Van Den Berk Nurseries

Amelanchier x grandiflora 'Robin Hill'

Robin Hill Apple Serviceberry

Rosaceae (Rose Family)

Hardy range 4A to 7A

Height 15' to 30' / 4.60m to 9.20m

Spread 15' to 20' / 4.60m to 6.00m

Growth rate Slow

Form Upright or erect and vase shaped

Exposure Partial sun to full sun

Persistence Deciduous

Bloom Color Pink

Bloom Time Spring

The flowers are very showy.

Leaf Color Green and purple

Fall Color Red and yellow

Fruit Color Red

The fruit is fleshy and round.

Environment

This plant tolerates some flooding.

Suitable soil is well-drained/loamy, sandy or clay.

The pH preference is an acidic to neutral (less than 6.8 to 7.2) soil.



Image from G&S Trees

Cercis canadensis

Eastern Redbud

Fabaceae (Pea Family)

Hardy range 4 to 9

Height 20' to 30'

Spread 25' to 35'

Growth rate Medium

Form Flat-topped to rounded

Exposure Full sun to light shade

Persistence Deciduous

Bloom Color Pink

Bloom Time Spring

Leaf Color Green

Fall Color Yellow, yellow-green

Fruit Color Brown

The fruit in 2-3" long pods.

Environment

This plant tolerates some drought, some salt.

This plant will grow in occasionally dry to normal soil.

Suitable soil is well-drained/loamy, sandy or clay.

The pH preference is an acidic to alkaline (less than 6.8 to more than 7.7) soil.



Image from Landmark Nursery

Crataegus crus-galli var. *inermis*

Thornless Cockspur Hawthorn

Rosaceae (Rose)

Hardy range 4A to 7A

Height 15' to 25' / 4.60m to 7.60m

Spread 15' to 25' / 4.60m to 7.60m

Growth rate Slow

Form Pyramidal and rounded

Exposure Full sun

Persistence Deciduous

Bloom Color White

Bloom Time Spring

Leaf Color Green

Fall Color Red

Fruit Color Red

The fruit is fleshy and round.

Environment

This plant tolerates drought, some salt.

This plant will grow in very dry soil.

Suitable soil is well-drained/loamy, sandy or clay.

The pH preference is an acidic to alkaline (less than 6.8 to more than 7.7) soil.

SPECIMEN TREES

The following trees are recommended for use in lawn and park areas set well back from sidewalks and roadsides along the outside of the public right of way. More specific information for each tree can be found on the following pages.

Botanical Name	Common Name	Notes
<i>Acer saccharum</i>	Sugar Maple	N
<i>Amelanchier laevis 'Clump'</i>	Clump Allegheny Serviceberry	N
<i>Betula nigra</i>	River Birch	N
<i>Carpinus caroliniana</i>	American Hornbeam (Musclewood)	N
<i>Cornus florida 'Appalachian Spring'</i>	Appalachian Spring Flowering Dogwood	N
<i>Liriodendron tulipifera</i>	Tuliptree	N
<i>Magnolia virginiana</i>	Sweetbay Magnolia	N
<i>Quercus bicolor</i>	Swamp White Oak	N
<i>Tilia americana</i>	Basswood	N

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Image from Flickr, James St. John

Acer saccharum

Sugar Maple

Aceraceae (Maple)

Hardy range 3 to 9

Height 45' to 75'

Spread 35' to 70'

Growth rate Slow to medium

Form Oval to round

Exposure Full sun

Persistence Deciduous

Bloom Color Yellow

Bloom Time Spring

Leaf Color Green

Fall Color Yellow, orange, red

Fruit Color Brown

Environment

This plant tolerates some drought, sensitive to salt.

This plant will grow in occasionally dry to normal soil.

Suitable soil is well-drained/loamy, sandy or clay.

The pH preference is slightly acidic soil.



Image from Halka Nurseries

Amelanchier laevis 'Clump'

Clump Allegheny Serviceberry
Rosaceae (Rose Family)

Hardy range 4 to 8

Height 15' to 25'

Spread 15' to 25'

Growth rate Slow

Form Rounded crown

Exposure Partial shade or full sun

Persistence Deciduous

Bloom Color White

Bloom Time Spring

Leaf Color Green

Fall Color Yellow, yellow-green

Fruit Color Black

Environment

This plant tolerates some drought and is sensitive to salt.

This plant will grow in dry soil.

Suitable soil is well-drained/loamy, sandy or clay.

The pH preference is an acidic soil.



Image from Better Blooms

Betula nigra

River Birch

Betulaceae (Birch)

Hardy range 4 to 9

Height 40' to 50'

Spread 30' to 40'

Growth rate Medium to fast

Form Pyramidal to oval

Exposure Full sun to light shade

Persistence Deciduous

Bloom Color Brown

Bloom Time Spring

Leaf Color Green

Fall Color Yellow

Fruit Color Brown

Environment

This plant tolerates some drought and flooding.

This plant will grow in occasionally dry to normal soil.

Suitable soil is well-drained/loamy, sandy or clay.

The pH preference is an acidic (less than 6.5) soil.



Image from Great Plains Nursery

Carpinus caroliniana

American Hornbeam, Musclewood
Betulaceae (Birch)

Hardy range 3 to 9

Height 20' to 35'

Spread 20' to 35'

Growth rate Slow

Form Rounded, spreading

Exposure Part shade to full shade

Persistence Deciduous

Bloom Color Green

Bloom Time Spring

Leaf Color Green

Fall Color Yellow to orange/red

Fruit Color Green

Environment

This plant tolerates some drought and occasional flooding.

This plant will grow in occasionally dry to normal soil.

Suitable soil is well-drained/loamy, sandy or clay.

The pH preference is an acidic (4.0-5.6) soil.



Image from Fox River Nursery

Cornus florida 'Appalachian Spring'

Appalachian Spring Flowering Dogwood
Cornaceae (Dogwood Family)

Hardy range 5 to 9

Height 15' to 20'

Spread 15' to 20'

Growth rate Medium

Form Flat-topped to rounded

Exposure Full sun to part shade

Persistence Deciduous

Bloom Color White

Bloom Time Spring

Leaf Color Green

Fall Color Red, purple

Fruit Color Red

The fruit is berry-like.

Environment

This plant will grow in normal to moist soil.

Suitable soil is well-drained/loamy.

Highly resistant to anthracnose.



Image from Flickr, Jim Linwood

Liriodendron tulipifera

Tuliptree, Tulip Poplar

Magnoliaceae (Magnolia Family)

Hardy range 4 to 9

Height 70' to 90'

Spread 35' to 50'

Growth rate Medium to fast

Form Pyramidal when young, oval with age

Exposure Full sun

Persistence Deciduous

Bloom Color Pale green, tulip shaped

Bloom Time Spring

Leaf Color Green

Fall Color Yellow

Fruit Color Brown

The fruit is cone-like.

Environment

This plant tolerates some flooding, and is sensitive to salt.

This plant will grow in normal soil to moist soil.

Suitable soil is well-drained/loamy.



Image from Woodlawn Trees

Magnolia virginiana

Sweetbay Magnolia

Magnoliaceae (Magnolia Family)

Hardy range 5 to 9

Height 10' to 20'

Spread 10' to 20'

Growth rate Medium to fast

Form Loose when young to pyramidal with age

Exposure Full sun to shade

Persistence Deciduous

Bloom Color White

Bloom Time Spring

Leaf Color Green

Fall Color Semi-evergreen

Fruit Color Red

Environment

This plant tolerates some flooding.

This plant will grow in occasionally normal to moist soil.

Suitable soil is well-drained/loamy.

The pH preference is an acidic soil.



Image from Flickr, Bruce Kirchoff

Quercus bicolor

Swamp White Oak

Hardy range 4 to 9

Height 50' to 60'

Spread 50' to 60'

Growth rate Medium

Form Round-topped

Exposure Full sun to light shade

Persistence Deciduous

Bloom Color Green

Bloom Time Spring

Leaf Color Green

Fall Color Red

Fruit Color Brown

Environment

This plant tolerates flooding.

This plant will grow in normal to moist soil.

Suitable soil is well-drained/loamy.

The pH preference is an acidic soil.



Image from Flickr, Virens

Tilia americana

Basswood

Hardy range 2 to 8

Height 60' to 80'

Spread 30' to 60'

Growth rate Medium to fast

Form Pyramidal in youth, oval to rounded with age

Exposure Full sun

Persistence Deciduous

Bloom Color Light Yellow

Bloom Time Spring

Leaf Color Green

Fall Color Pale yellow

Fruit Color Brown

Environment

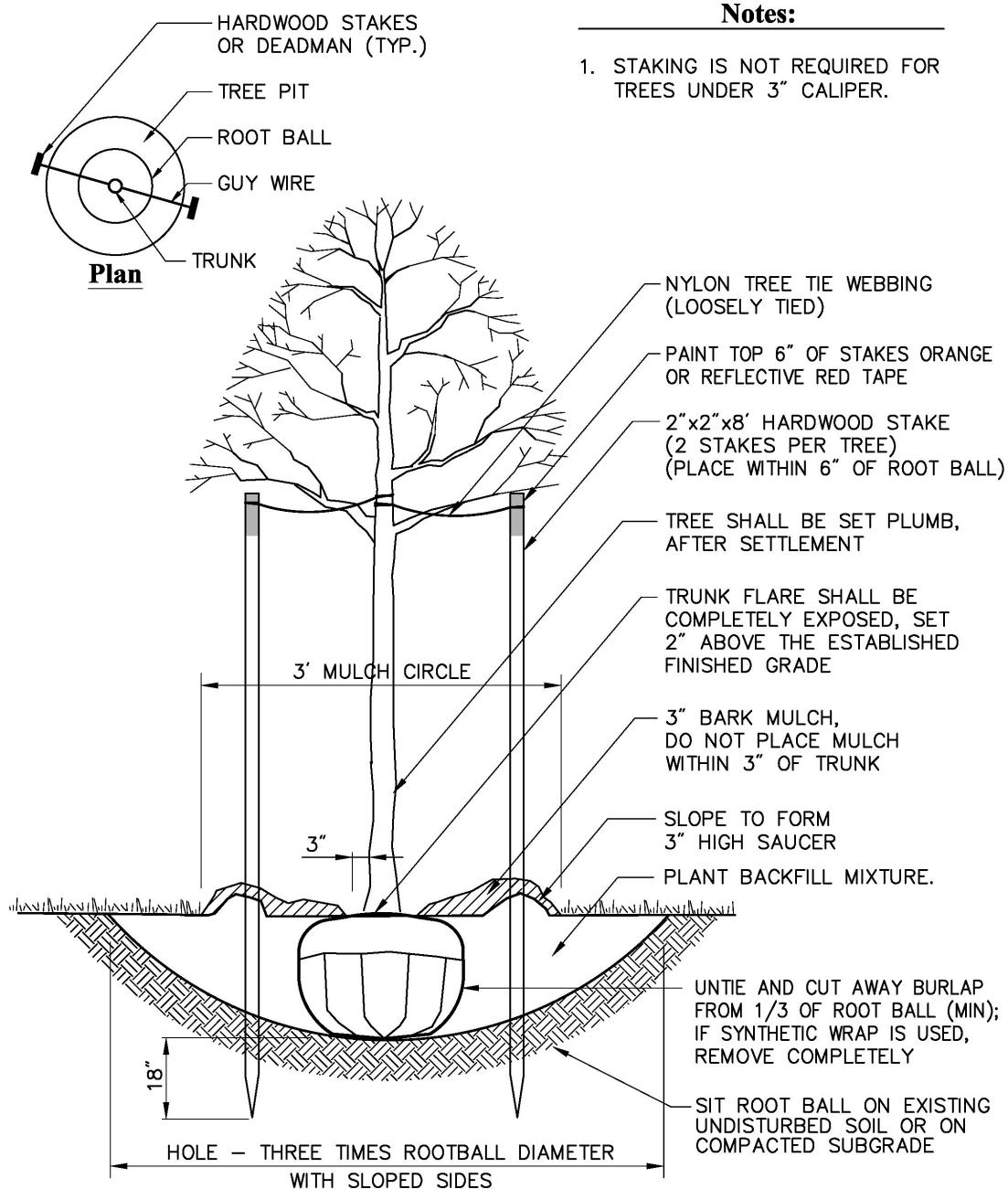
This plant tolerates some drought, occasional flooding.

This plant will grow in normal to moist soil.

Suitable soil is well-drained/loamy, clay.

The pH preference is variable.

TREE PLANTING DETAIL



Tree Planting (For Trees Under 4" Caliper)

6/08

N.T.S.

Source: VHB

REV LD_602