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Indiana Community
Tree Selection Guide

Recommendations by

Indiana's City Foresters
&

IDNR, Community & Urban Forestry

Printed on Recycled Paper

City of Greendale
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Greendale IN 47025
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Trees are extremely important in our cities, towns, and neighborhoods. They comprise our urban forest and offer Indiana residents a multitude of benefits.



Trees:

- ✦ Provide shade and cooling in the summer
- ✦ Slow winter winds
- ✦ Screen unsightly views
- ✦ Provide oxygen
- ✦ Clean our air
- ✦ Reduce noise
- ✦ Increase property values

Plan Before You Plant

Before a tree is planted in the urban landscape, the project needs to be planned with care. Tree planters in cities and towns need to always determine whether the planting site is on public property. (If it is, a permit may be needed to plant since a public tree ordinance may be in effect. There may also be a city forester available to help select the right tree for the right place.)

Technical information is needed for cities, towns, non-profits, and tree boards to determine what tree is best suited for a particular site. This guide can help. While it is not an all inclusive list, it will help users. It will also help planters select the right tree for the right place.



For Technical Support Contact:

- ✦ IDNR, Community & Urban Forestry, 317-915-9390; inurbfor@indy.net
- ✦ City Forester—may be available in your community. Contact your municipality to check.
- ✦ Indiana Urban Forest Council, 765-608-1941
- ✦ Purdue University Cooperative Extension Service—in your county, www.ces.purdue.edu/1-888-398-4636
- ✦ Soil and Water Conservation District (SWCD)—in your county
- ✦ Electric Utility—Indiana’s major utilities have foresters who can advise regarding tree planting under power lines.

For additional information;

IDNR, Community & Urban Forestry
317-915-9390
urbanforestry@dnr.IN.gov

Indiana Urban Forest Council, Inc.
317-920-9303
www.iufc.org

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Websites

There are many websites that offer tips on tree selection, identification, planting and care.

Indiana DNR, Division of Forestry; www.in.gov/dnr/forestry/
International Society of Arboriculture; www.treesaregood.com
National Arbor Day Foundation; www.arborday.org
Tree Link; www.treelink.org
Purdue University; www.ces.purdue.edu/extmedia/FNR/FNR-FAQ-18-W.pdf
USDA Forest Service, Northeast Area; www.na.fs.fed.us/pubs/
USFS Plants Database. www.plants.usda.gov/

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IDNR, DIVISION OF FORESTRY
COMMUNITY & URBAN FORESTRY
TREE PLANTING SPECIFICATIONS RECOMMENDED BY
THE INTERNATIONAL SOCIETY OF ARBORICULTURE

Tree Planting Guidelines For Balled - Burlapped

Final pointing of lines of planting. Place only evergreen plants, un-directional bushes, and bushes or shrub branches.

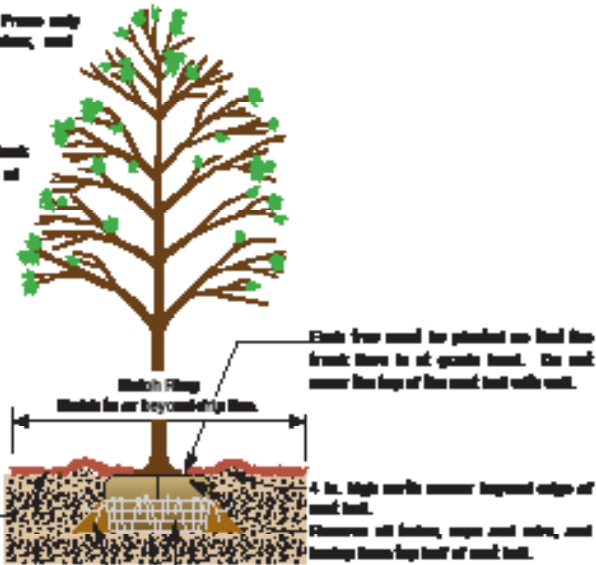
Water trees only if in a windy site.

Wrap tree trunks only if it is in a high wind exposure. Remove wraps at end of winter.

If possible - mark the north side of the tree in the nursery and relate this to true north at the site when appropriate.

In wet or slowly draining areas - position the plant 1-2 inches above grade.

2 ft. outside the soil plane needs to be covered with free drain. Maintain the outside mulch-free for a minimum of three years after planting.



Each tree must be planted so that the trunk stays in at grade level. Do not cover the top of the root ball with soil.

2 ft. outside the soil plane needs to be covered with free drain. Maintain the outside mulch-free for a minimum of three years after planting.

Shade bags and ground mulch from steady with best practice so that mulch does not shift.

For plantings, and consult by pointing or pointing.

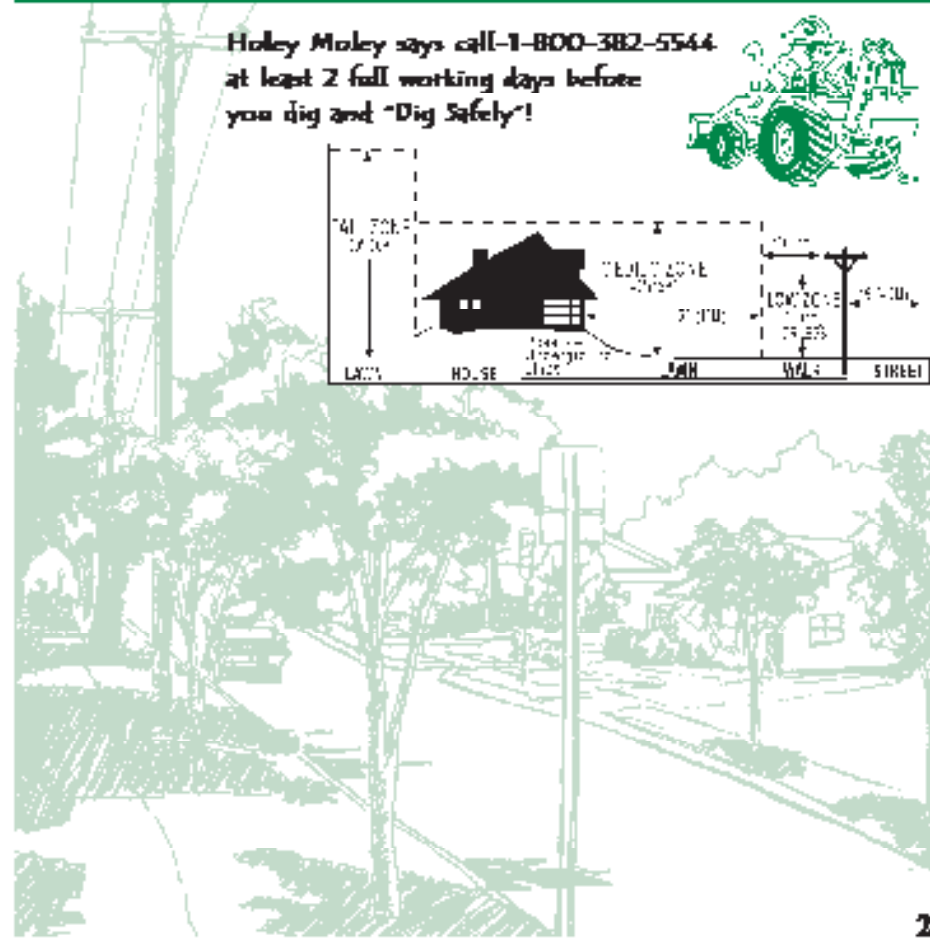


March 2004

RIGHT TREE RIGHT PLACE CONSIDERATIONS

- ☘ Look up, down, all around, above and below ground! What utilities, structures, signs, and other infrastructure are present?
- ☘ How large is the planting area? What size tree will fit there—WHEN IT GROWS UP?
- ☘ Consider mature height and width.
- ☘ If any utilities are present, consult the utility. What trees do they recommend for planting in the utility easement?
- ☘ Consider the trees' function. Is it for shade, screen or buffer?
- ☘ What moisture, light, and air pollution issues are in the area?
- ☘ What is the soil like? Will it accommodate trees and plants?

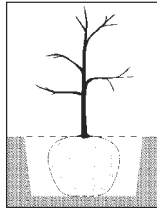
Holey Moley says call-1-800-382-5544
at least 2 full working days before
you dig and "Dig Safety"!



Users Guide

Definitions

Balled and Burlapped A tree dug out of the ground with a ball of soil around the roots. The soil ball is usually covered with burlap and wrapped with string or wire baskets for support.



Bare-root A tree dug out of a loose growing medium with no soil around the roots. Some trees are sold as bare-root.

Berry A fleshy fruit, with one to many seeds; developed from a single ovary.

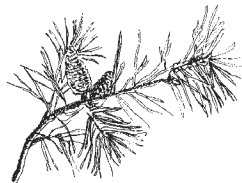


Characteristic Traits or qualities of a tree, such as its leaf color, flowers, fruit, shape, size, structure, etc.

City Forester This person employed by the community is also called urban forester, city arborist, beautification manager etc. They are in charge of managing the trees in the community and implementing the urban forestry program usually with a volunteer, advisory committee called a tree board or commission.

Clump Form A tree that has more than one trunk.

Conifer A cone-bearing tree or shrub, often evergreen, usually with needle-like leaves.



Container-grown A tree raised in a pot that is removed before planting. Many are sold by nurseries in this (potted) form.

Cultivar A variety of plant that is grown for its specific characteristics that may not be present with the original species.

Easy to transplant

Certain species are easier to transplant than others. Transplanting time can also affect tree survival. Certain trees are best transplanted in spring because of slow recovery time after planting. The majority of the trees are best planted in the fall.

Cultivars

A named plant selection from which identical or near-identical plants can be produced through vegetative reproduction or cloning. They are often superior in quality.

Fruit or Seed

Tree fruiting may be considered a positive or negative. Positives can be fruit shape and color and the attraction of birds and other wildlife. Negatives are large falling fruit that causes excessive ground litter.

Showy flowers

All trees flower, however, some are more conspicuous than others. Typically, ornamental trees are selected for their showy flowers. Most ornamental trees are in bloom for one to three weeks starting in early spring while others begin blooming in early summer.



Site

The location where the tree will be planted.

Fall color

Fall leaf color can create interesting views. Different types of trees can create a color collage of yellow, red, orange, and purple. This may be a consideration in the design of a landscape.

Tree Characteristics

All trees have certain characteristics that enable them to thrive in the right site. The following characteristics are listed in the key and the user can determine what tree will fit into the chosen site based on these characteristics.

Native

A tree species that grows naturally in the region that it is being planted.

Useful range

When selecting a tree to plant, consider the different climates in Indiana. Northern regions normally have colder winters than southern regions which can affect tree survival. Certain trees may be better suited for planting in one climate over another. The State of Indiana has been divided into three regions: North, Central, and South.

Drought tolerant

A drought tolerant selection may need to be considered when a site lacks sufficient water where heat stress may occur. Examples would be an open sunny location, parking lot or a street.

Wet tolerant

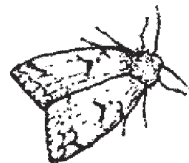
A wet tolerant tree selection may need to be considered when a site will have excessive moisture present. An example would be an area that floods or holds excessive soil moisture. A site with high clay soil may retain excessive water.

Salt tolerant

Salt tolerant trees may be needed when planted in locations where there is exposure to road salt spray or run off. Examples include areas along major thoroughfares, along salted sidewalks, and in parking lots.

Insect and disease prone

Insects and diseases can affect almost every tree. Most trees have specific problems, however, these may vary across different regions of the state. Severity of problems may change greatly from year to year. Tree selection should be made from disease resistant species in your area.



Deciduous

A tree that drops its leaves every year.

Easement

A portion of land where utilities are located that can be publicly or privately owned.

Evergreen

A tree that retains green leaves throughout the year.

Exotic Species

A tree species that has been imported from another region and does not grow naturally in the region it is being planted.

Foliage

The leaves of a tree.

Fruit

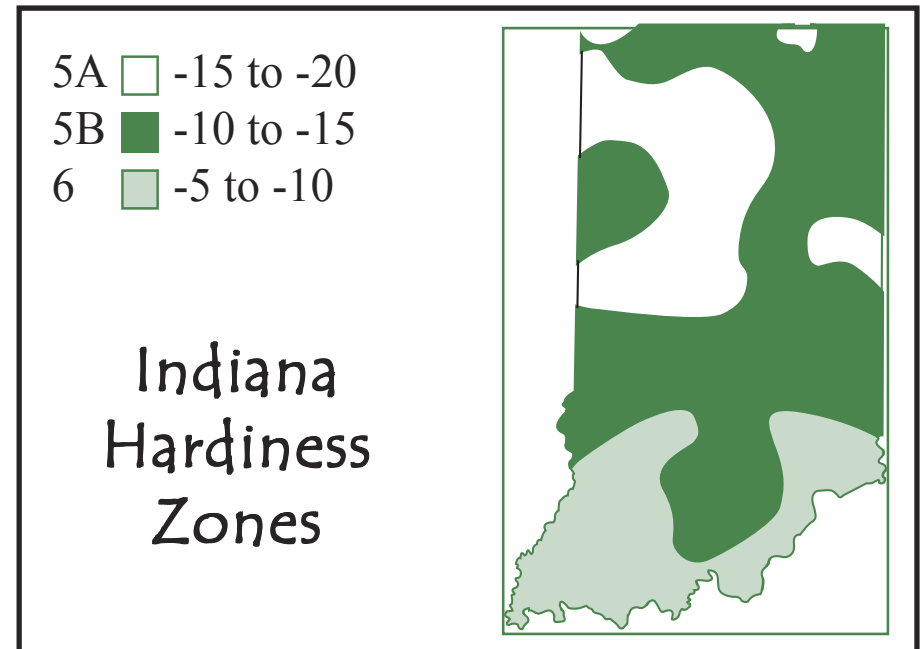
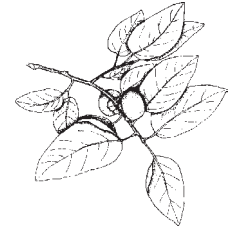
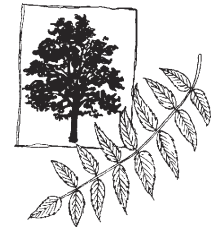
The fully developed ovary of a flower containing one or more seeds.

Habit

The characteristic growth form or general shape of a plant.

Hardiness Zone

Used to indicate geographic limits of cold hardiness.



Hybrid The offspring of two parent trees belonging to different species, subspecies, genera, or clones.

Maturity The point of being fully grown and reaching the potential height and width.

Native Species A tree species that grows naturally in the region that it is being planted.

Nut A hard, bony, one-celled fruit that does not split, such as an acorn.

Ordinance, Tree An enforceable tool for the city that mandates proper tree care, gives force and direction to professional tree care performed by anyone in the community on public trees, and gives size and placement planting requirements for small, medium, and large trees to enhance, preserve, and protect the health of the urban forest.

Public Right-of-Way Area between private property line and the street owned by a town or city.

Root The underground portion of a tree that serves to anchor and absorb water and minerals from the soil.

Seed A fertilized, ripened ovule, almost always covered with a protective coating and contained in a fruit.

Semi-evergreen A plant that retains at least some green foliage well into winter.

Shrub A woody, perennial plant, smaller than a tree, usually with several stems or trunks. Some can be grown as small trees if pruned properly.

Site The location where the tree will be planted.

Species A population of plants or animals whose members reproduce by breeding with each other.

Specimen A tree placed conspicuously alone in a prominent place to show off its ornamental qualities.



	Native	Useful range	Drought tolerant	Wet tolerant	Salt tolerant	Insect & disease susceptible	Easy to transplant	Cultivated varieties	Fruit	Showy flower	Fall color
	1	2	3	4	5	6	7	8	9	10	11
N	all	Y	M	Y	M	Y	Y	Y	N	Y	
N	all	Y	M	Y	N	Y	N	Y	N	Y	
N	all	N	N	M	N	Y	N	Y	N	Y	
Y	all	N	M	N	Y	N	Y	Y	Y	Y	
N	all	M	M	M	N	M	Y	Y	N	Y	
Y	all	N	Y	N	N	N	N	Y	N	Y	
N	all	N	Y	N	M	N	N	Y	N	Y	
Y	C-S	M	M	N	N	Y	N	Y	Y	Y	
N	all	Y	M	N	N	N	N	Y	N	Y	
Y	all	Y	N	N	Y	Y	Y	Y	Y	Y	
Y	all	Y	M	N	Y	Y	Y	Y	Y	Y	
N	C-S	Y	N	M	N	Y	N	N	N	N	
N	all	Y	N	N	N	Y	N	Y	N	Y	
N	all	M	M	N	M	M	Y	Y	Y	Y	
Y	all	Y	Y	N	N	N	N	Y	N	Y	
N	C-S	M	M	M	N	N	Y	Y	N	Y	
N	all	Y	N	M	M	Y	Y	Y	Y	Y	
N	all	M	N	Y	Y	Y	Y	Y	Y	Y	

TABLE KEY:
 Y=yes
 N=no
 M=Moderate tolerance
 All=all regions
 C/S=Central to South
 F=female

Medium Tree Tips

- ? Grow to be a 25-40 foot tree at maturity.
- ? Check for mature size before planting near utility lines.
- ? Recommended for areas around the home, yard and with tree lawns that are 4 ft. or greater.
- ? Plant at least 25-35 feet away from structures.

	Native	Useful range	Drought tolerant	Wet tolerant	Salt tolerant	Insect & disease susceptible	Easy to transplant	Cultivated varieties	Fruit	Showy flower	Fall color
	1	2	3	4	5	6	7	8	9	10	11
N	all	Y	N	Y	N	Y	Y	Y	Y	Y	
N	all	Y	M	Y	M	N	N	Y	N	Y	
N	all	Y	M	Y	M	M	N	Y	Y	Y	
Y	all	Y	N	N	M	Y	Y	Y	Y	Y	
Y	all	Y	Y	Y	M	Y	N	Y	Y	Y	
N	all	N	N	Y	M	Y	Y	Y	Y	Y	
N	all	N	Y	N	Y	Y	Y	Y	Y	Y	
N	all	V	V	V	V	V	Y	Y	Y	Y	
N	all	V	V	V	V	V	Y	Y	Y	Y	
N	all	Y	N	Y	N	Y	Y	Y	Y	Y	
all	Y	Y	Y	N	Y	N	Y	Y	Y	Y	
Y	all	Y	Y	N	M	Y	N	Y	Y	Y	
N	all	Y	M	N	Y	Y	Y	Y	Y	Y	
Y	all	Y	Y	M	Y	Y	N	Y	Y	Y	

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 C/S=Central to South
 F=female
 V=varies with cultivar

Small Tree Tips

- ? Generally can be planted under and near power lines.
- ? Check mature height and spread before planting.
- ? Recommended for lawn widths 3 ft. or greater.



25 - 40 ft.

MEDIUM TREES

	Genus	Species	Common name
MAPLE	<i>Acer</i>	campestre	Hedge Maple
	<i>Acer</i>	maximowiczianum	Nikko Maple
	<i>Acer</i>	triflorum	Three-Flowered Maple
SERVICEBERRY	<i>Amelanchier</i>	species	Serviceberry
HORNBEAM	<i>Carpinus</i>	betulus	European Hornbeam
	<i>Carpinus</i>	caroliniana	American Hornbeam
KATSURA	<i>Cercidiphyllum</i>	japonicum	Katsura Tree
YELLOWWOOD	<i>Cladrastis</i>	kentukea (lutea)	Yellowwood
FILBERT	<i>Corylus</i>	colurna	Turkish Filbert
HAWTHORN	<i>Crataegus</i>	crus-galli	Cockspur Hawthorn
	<i>Crataegus</i>	phaenopyrum	Washington Hawthorn
	<i>Crataegus</i>	viridis	Winter King Green Hawthorn
RUBBER	<i>Eucommia</i>	ulmoides	Hardy Rubber Tree
MAACKIA	<i>Maackia</i>	amurensis	Amur Maackia
MAGNOLIA	<i>Magnolia</i>	species	Magnolia
HORNBEAM	<i>Ostrya</i>	virginiana	Hop Hornbeam
CORKTREE	<i>Phellodendron</i>	amurense	Amur Corktree
PEAR	<i>Pyrus</i>	calleryana	Callery Pear
LOCUST	<i>Robinia</i>	x ambigua	Purple Robe Locust

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Street Tree

Trees growing in the public street right-of-way that is usually owned by a town or city.



Structure

An item that could hinder the proper growth of a tree such as a building, manholes, utility poles, utility meters, hydrants, catch-basins, stop signs etc.

Tree lawn

The space where street trees are planted, usually in the public-right-of-way and between the street and sidewalk.

Tree

A deciduous or coniferous woody plant that is characteristically more than twelve (12) feet in height when it reaches maturity and has fewer than six (6) main stems and most often one main stem.

Tree, large

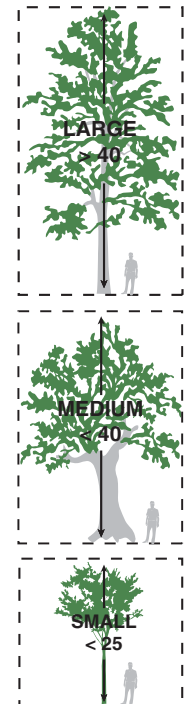
A tree that can attain a mature height of over **40 feet** at maturity.

Tree, medium

A tree that can attain a mature height of **25 to 40 feet** at maturity.

Tree, small

A tree that can attain a mature height of **less than 25 feet at maturity**. Only small trees should be planted under power lines.



Utilities

A public service line such as gas, electric, sewer and phone. These lines can be above ground and/or below ground.

Variety

A population of trees differing slightly but consistently from the typical form of the species and occurring naturally. More loosely applied to forms produced in cultivation.

Woody Plants

Plants that have hard rather than fleshy stems and produce buds that survive above ground in winter.



25 ft. or less

SMALL TREES

	Genus	Species	Common name
MAPLE	<i>Acer</i>	ginnala	Amur Maple
	<i>Acer</i>	griseum	Paperbark Maple
	<i>Acer</i>	tartaricum	Tartarian Maple
REDBUD	<i>Cercis</i>	canadensis	Eastern Redbud
DOGWOOD	<i>Cornus</i>	alternifolia	Pagoda Dogwood
	<i>Cornus</i>	kousa	Kousa Dogwood
CHERRY	<i>Cornus</i>	mas	Cornelian Cherry
CRABAPPLE	<i>Malus</i>	species	Crabapples
CHERRIES	<i>Prunus</i>	species	Cherries
LILAC	<i>Syringa</i>	reticulata	Japanese Tree Lilac
	<i>Viburnum</i>	lantana	Wayfaring Tree
VIBURNUM	<i>Viburnum</i>	lentago	Nannyberry Viburnum
	<i>Viburnum</i>	plicatum tomentosum	Doublefile Viburnum
	<i>Viburnum</i>	prunifolium	Blackhaw Viburnum

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40 ft. and greater

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			Native		Useful range		Drought tolerant		Wet tolerant		Salt tolerant		Insect & disease susceptible		Easy to transplant		Cultivated varieties		Fruit		Showy flower		Fall color	
			1	2	3	4	5	6	7	8	9	10	11											
LARGE TREES																								
MAPLE	<i>Acer</i>	nigrum	Black Maple		Y	all	N	N	N	N	Y	N	Y	N	Y									
	<i>Acer</i>	rubrum	Red Maple		Y	all	N	Y	N	N	Y	Y	Y	N	Y									
	<i>Acer</i>	saccharum	Sugar Maple		Y	all	N	N	N	N	Y	Y	Y	N	Y									
	<i>Acer</i>	x freemanii	Freeman Maple		N	all	Y	Y	Y	N	Y	Y	Y	N	Y									
CHESTNUT	<i>Aesculus</i>	hippocastanum	Horse Chestnut		Y	all	M	M	M	Y	M	Y	Y	Y	Y									
	<i>Aesculus</i>	glabra	Ohio Buckeye		Y	all	M	M	M	Y	M	Y	Y	Y	Y									
	<i>Aesculus</i>	x carnea	Red Horse Chestnut		N	C-S	Y	Y	Y	Y	N	Y	Y	Y	Y									
ALDER	<i>Alnus</i>	glutinosa	Black Alder		N	all	N	Y	N	Y	Y	Y	Y	N	N									
BIRCH	<i>Betula</i>	nigra	River Birch		Y	all	N	Y	M	N	M	Y	Y	N	Y									
	<i>Carya</i>	cordiformis	Bitternut Hickory		Y	all	M	M	M	N	N	N	Y	N	Y									
HICKORY	<i>Carya</i>	glabra	Pignut Hickory		Y	all	Y	M	M	N	N	N	Y	N	Y									
	<i>Carya</i>	laciniosa	Shellbark Hickory		Y	all	Y	Y	M	N	N	N	Y	N	Y									
	<i>Carya</i>	ovata	Shagbark Hickory		Y	all	Y	M	M	N	N	N	Y	N	Y									
	<i>Carya</i>	tomentosa	Mockernut Hickory		Y	all	M	M	M	N	N	N	Y	N	Y									
HACKBERRY	<i>Celtis</i>	laevigata	Sugar Hackberry		N	C-S	Y	Y	N	N	Y	Y	Y	N	Y									
	<i>Celtis</i>	occidentalis	Common Hackberry		Y	all	Y	Y	N	N	Y	Y	Y	N	Y									
BEECH	<i>Fagus</i>	grandifolia	American Beech		Y	all	N	N	N	N	N	N	Y	N	Y									
GINKGO**	<i>Ginkgo</i>	biloba	Ginkgo		N	all	Y	M	M	N	M	Y	Y-F	N	Y									
HONEYLOCUST	<i>Gleditsia</i>	triacanthos	Honeylocust		Y	all	Y	Y	Y	Y	Y	Y	Y	N	Y									
KENTUCKY COFFEE	<i>Gymnocladus</i>	dioicus	Kentucky Coffee Tree		Y	all	Y	M	M	N	M	N	Y-F	N	Y									
SWEETGUM	<i>Liquidambar</i>	styraciflura	Sweetgum		Y	C-S	M	Y	M	N	M	Y	Y	N	Y									
(State tree) TULIP	<i>Liriodendron</i>	tulipifera	Tulip Tree		Y	all	M	M	N	Y	M	N	Y	Y	Y									
REDWOOD	<i>Metasequoia</i>	glyptostroboides	Dawn Redwood		N	all	M	N	N	N	M	Y	Y	N	Y									
BLACK GUM	<i>Nyssa</i>	sylvatica	Black Gum		Y	all	Y	Y	Y	Y	N	N	Y	N	Y									
SYCAMORE	<i>Platanus</i>	occidentalis	Sycamore		Y	all	Y	Y	Y	Y	Y	Y	N	Y	N	Y								
PLANETREE	<i>Platanus</i>	x acerifolia	London Planetree		N	all	Y	Y	Y	Y	Y	Y	Y	N	N									
OAK	<i>Quercus</i>	alba	White Oak		Y	all	M	N	Y	N	M	N	Y	N	Y									
	<i>Quercus</i>	bicolor	Swamp White Oak		Y	all	M	Y	M	N	M	N	Y	N	Y									
	<i>Quercus</i>	imbricaria	Shingle Oak		Y	all	Y	Y	M	M	M	N	Y	N	N									
	<i>Quercus</i>	macrocarpa	Bur Oak		Y	all	Y	M	M	N	M	N	Y	N	N									
	<i>Quercus</i>	robur	English Oak		N	all	M	M	Y	N	M	Y	Y	N	N									
	<i>Quercus</i>	rubra (borealis)	Nothorn Red Oak		Y	all	M	N	Y	Y	Y	N	Y	N	Y									
CYPRESS	<i>Quercus</i>	shumardii	Schumard Oak		Y	all	Y	M	M	N	M	N	Y	N	Y									
	<i>Taxodium</i>	distichum	Bald Cypress		Y	all	N	Y	Y	N	M	Y	Y	N	Y									
LINDEN	<i>Tilia</i>	cordata	Littleleaf Linden		N	all	M	M	N	Y	Y	Y	Y	N	Y									
	<i>Tilia</i>	tomentosa	Silver Linden		N	all	M	M	M	Y	Y	Y	Y	N	Y									
	<i>Tilia</i>	x euchiora	Crimean Linden		N	all	M	M	N	Y	Y	Y	Y	N	N									
ZELKOVA	<i>Zelkova</i>	serrata	Japanese Zelkova		N	all	M	Y	M	N	M	Y	N	N	Y									

TABLE KEY:
 Y=yes
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 All=all regions
 C/S=Central to South
 F=female

Large Tree Tips

- Grow to be over 40 feet at maturity.
- Recommended for streets with no overhead restrictions and with tree lawns 4-6 ft. or more in width.
- Recommended for large areas such as parks, school yards, homeowner yards.
- Plant at least 1/2 the mature height of the tree from structures.
- **DO NOT PLANT UNDER OR NEAR POWER LINES.**

** Female fruits are messy/smells bad.