

City of Norco

Urban Forest Specifications and Standards



Department of Public Works

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1. Intent and purpose.

The City recognizes the economic, environmental and aesthetic importance of the trees and plantings within the community. It shall be the City's policy to utilize applicable techniques, methods and procedures required to preserve, when feasible, all trees and plantings on City property. This chapter is part of a comprehensive plan developed in the best interest of the Norco community to regulate the planting and maintenance of trees in or adjacent to streets and within easements, in rights-of-way and other public places within the City, to provide for orderly development and protection of public facilities, and to regulate the removal of trees that contribute significantly to the value of land, preservation of resources, and quality of life in the City of Norco.

The purpose of this section is to assure that a single tree species on any given street will be planted, maintained, trimmed, and replaced if damaged, in a uniform manner to develop a consistent and formal streetscape, providing a canopy effect appropriate to the nature of development adjacent to the street. The installation, maintenance and replacement standards established in this section are intended to implement an effective Urban Forestry Program to protect the health, safety, and welfare of the community.

2. Definitions.

a. "Approved Street Tree" shall mean any tree hereafter planted within any street right-of-way or easement adjacent thereto which conforms to the Approved Street Tree List and which is planted in accordance with this Chapter. "Approved Street Tree" shall also mean any existing tree within the right-of-way or easement adjacent thereto which conforms to the established species and location in any given area, and which was planted as a required street tree under the provisions of any improvement agreement, or as otherwise approved by the Director of Public Works, or any tree of the approved species and in an acceptable location which was or may be planted as a replacement.

b. "Approved Street Tree List" is a list that shall be maintained by the Public Works Department containing the botanical and common names of all trees authorized to be planted in the public right-of-way or tree planting easements. The list may be revised to include other suitable trees, trees to be planted for evaluation purposes, or to exclude trees deemed to be unsuitable.

c. "Maintenance" shall mean planting, pruning, staking, cabling, treating for pests and disease, removing, or any other act that nurtures the street tree population, sustains tree life and health, and promotes public safety.

d. "Other Plantings" shall mean any trees, shrubs, grass or ground cover other than public landscaping, planted within street right-of-way or easements or in proximity thereto, or on adjoining property.

e. "Owner/Occupant" shall mean any person owning property, as shown on the last equalized assessment roll for City taxes, or the lessee tenant, or other person having control or possession of the property.

f. "Tree Pruning" shall refer to the removal of diseased, dead, dying, decayed, interfering or obstructing branches, or the training of young trees to control growth and enhance performance or function in the landscape, and by developing and preserving tree structure, health and stability. No more than 25% of the tree canopy should be removed within a growing season.

g. "Street Tree Planting" shall mean the planting of City street trees within the public right-of-way, in parks and in easements dedicated to tree planting. Street trees shall be planted in residential neighborhoods within tree planting easements in suitable vacant planting sites, which avoid conflicts with underground utilities and hardscapes.

h. "Tree Removal" means either 1) complete removal, such as cutting a tree to the ground and grinding the stump; or 2) taking any action that would lead to the death of a tree or cause permanent damage that may compromise tree health and stability. Tree removal may include, but shall not be limited to, severe pruning or topping, poisoning, over watering, under watering, trenching, excavating, or altering the soil grade around the tree trunk.

i. "Tree Topping" is the removal of large branches to a stub, or smaller lateral not large enough to assume a terminal role. Tree topping is not an approved tree pruning practice for City street trees or protected trees, and is considered tree removal under this Chapter.

j. "Unapproved Street Tree" shall mean any tree planted within street right-of-way or easements or in proximity thereto, or on adjoining property, which does not qualify as an Approved Street Tree.

3. General provisions--Installation and maintenance.

a. The purpose of this chapter is to preserve parkway trees, to regulate the maintenance and removal of such trees, and to establish the varieties, minimum size, methods, and location for the planting thereof, and other related matters.

b. The City Council, by resolution, shall establish an Approved Street Tree List containing the botanical and common names of all trees authorized to be planted in the public right-of-way or tree planting easements adjacent thereto. The list shall be reviewed periodically by the Public Works Department and the Streets, Trails and Utilities Commission, and may be modified by recommendation to the City Council.

c. The Streets, Trails and Utilities Commission shall be tasked with recommending the appropriate species or variety of tree planted within the public street right-of-way or established street or access easements as specified in the Urban Forest Specifications and Standards

d. Street trees shall be planted in conformance with the adopted street tree resolution and in accordance with departmental standard specifications.

e. A working manual entitled "Urban Forest Specifications and Standards" illustrating the standards established herein shall be maintained and updated periodically by the Public Works Department for use by employees and for distribution to developers and builders.

f. The Director of Public Works shall be responsible for administering and enforcing the provisions of this Chapter. He or she shall undertake maintenance and planting programs and controls as may be required to carry out the provisions of this Chapter consistent with facilities and resources available. He or she may designate certain representatives to administer any portion of this Chapter.

4. Planting of Trees, Removal, and Replacement

a. Consistent with the availability of resources, the Public Works Department shall initiate and administer a program to provide for the planting, maintenance, care, removal, and replacement of Approved Street Trees.

b. Except for an emergency, which shall be an imminent threat of injury to persons or property, a tree may not be removed without the review and approval of the Director of Public Works or his/her representative.

c. Trees with attributes most appropriate to their location and surroundings will be selected by the Director of Public Works or his/her representative from the Approved Street Tree List. Trees planted in the public right-of-way and tree planting easements shall conform to the City street tree planting standard detail.

d. The current resident, or if there is no current resident, then the owner shall be responsible for the adequate watering and protection of City street trees in tree planting easements.

e. It shall be unlawful for any person to plant or remove any tree in any public right-of-way without first obtaining a written permit from the Public Works Department. Said permit shall specify the location and variety of trees or plants to be planted or removed.

f. Street trees or Other Plantings that are required to be planted by a subdivider or developer in accordance with plans and specifications approved by the City, may be planted without a permit, provided, however, that such trees and plantings shall conform to City approved plans and specifications and shall be planted under the supervision of the Public Works Department.

5. Tree installation standards.

a. Unless otherwise specified, all trees shall be furnished in 15-gallon containers. The trees shall be of the size normally expected for commercially available nursery stock of 15-gallon size for the required species. Diameters shall be measured six inches above the crown root. The caliper of the tree must be between an inch (1") and one and one-half inches (1-1/2") in diameter and the height of the tree will not exceed eight feet, and the width three feet. All trees shall be in a healthy growing condition at the time of planting and shall be approved by the Director of Public Works or his/her representative at the site prior to planting.

b. All plants shall be healthy, have a normal configuration and be well-rooted. The roots shall show no evidence of having been restricted, free from insect pests, grown in nurseries which have been inspected by the State Department of Agriculture. All plants shall be Number One grade of their normal species or variety unless otherwise specified. They shall have normal well-developed branch systems and vigorous root systems. Plants shall be free from disfiguring knots, injuries, abrasions of the bark, sun scalding or other objectionable disfigurements. Plants not conforming to the requirements herein shall be considered as defective, and such plants, whether in place or not, will be marked as rejected and shall be removed immediately and replaced with suitable plants.

c. All trees shall be submitted to the Director of Public Works or his/her representative for review and approval prior to installation. Where required, street encroachment permits shall be obtained from the City prior to installation.

d. The installing contractor shall guarantee all trees for a period of one year from the date of acceptance. Irrigation systems will be required. The Director of Public Works or his/her representative must approve the design and make of these systems.

6. Installation.

a. All trees shall be planted in accordance with spacing and location designated on the plans or in the special provisions or as directed by the Director of Public Works or his/her representative.

b. Holes for planting trees shall be excavated four times the rootball diameter. The holes should never be deeper than the rootball. Soft fill dirt should not be added to the bottom of the hole. Trees should be planted slightly shallow, one to two inches of the rootball higher than the original grade. The exposed ball should be covered with two to four inches of mulch.

c. The hole shall be backfilled with same soil that came out of the hole. No soil amendments will be added.

d. The soil around the ball shall be worked so that no air pockets are left. (Large pockets of air can cause the roots to dry out.) The soil around the ball will be firmed so that the tree is vertical and adequately supported, but the soil will not be packed down. The hole will be watered while it is backfilled. In non-turf areas, the remaining soil will be mounded into a dike on the outer edge of the hole to collect water over the root zone. All tags or labels shall be removed so that they will not girdle the trunk or branches as the tree grows.

e. When planted, the tree shall be staked in the manner prescribed by the City. Parkway trees shall be planted at approximately 40-foot intervals and shall maintain a minimum distance of ten feet from any utility, meter, sewer lateral, streetlight standard or fire hydrant within the parkway. All trees shall maintain a minimum distance of 25 feet from a drive apron, corner, or intersection.

f. Trees shall be planted in line with the existing trees, or midway between the back of the curb and the near edge of the equestrian trail or standard sidewalk. If a curb, trail and/or sidewalk has not been constructed, trees shall be planted on a line equivalent thereto, or as directed by the Director of Public Works or his/her representative.

g. Trees shall be planted with the ball of earth surrounding the roots intact. Containers shall be removed without injury to roots and without breaking the ball of earth surrounding the roots. Root-bound trees will be rejected.

h. No person shall remove or relocate any tree or plant without prior authorization and permit from the Director of Public Works or his/her representative. Any tree removed without permission from the City shall be replaced by the violator with a new tree at the discretion of the Director of Public Works.

7. Staking and tying of trees.

a. All 15-gallon trees shall be held vertically with two eight or ten-foot lodgepole stakes. Stakes will be two-inch lodgepole pine treated with copper naphthanate. A rubber or vinyl cinch tie or approved equal shall be nailed to the stakes with roof nails. Hoses or wires shall not be used for tying. Ties shall be placed six inches above the top flex point on the tree trunk.

b. Trunks of trees shall be secured to hold the trees upright without injury for a period of 12 months from date of installment. The method of staking and tying shall be as approved by the Director of Public Works or his/her representative.

8. Trimming and pruning of trees.

a. Following the planting of trees, pruning should be limited. Broken or damaged limbs should be removed. Some limbs can be removed for structural stability or appearance as necessary. (Ord. 772, 2001; Ord. 567 Sec. 1 (part), 1986)

b. It shall be unlawful for any person, other than City personnel, to trim any Approved Street Tree without first obtaining a permit from the Public Works Department. The permit shall be issued when the Public Works Department finds that pruning is necessary and that the proposed method is satisfactory. A permit is not required for removing sucker growth, watersprouts, low hanging branches lower than 8 feet from the ground.

9. Watering of trees after installation.

Proper watering is the key to survival of newly planted trees. A slow, gentle soaking of the root zone is preferable. Excess water accumulation in the planting hole is a leading cause of transplant death. Watering must be appropriate for soil type and drainage.

10. Maintenance and guarantee of trees.

a. The builder/developer shall maintain all trees until maintenance is assumed by the City and further, the builder/developer shall guarantee all trees for a period of one year after the acceptance of the improvements by the City, and shall replace in kind all trees that have died or which have failed to show visible signs of root establishment and growth during said one-year period. The Director of Public Works or his/her representative shall inspect each tree at the end of the one-year period and report to the builder/developer as to the acceptability of each tree planted. Unacceptable trees shall be replaced. Upon completion of such inspection and any required replacement, the City shall accept the trees for maintenance by the City, excluding watering. The one-year warranty guarantees the public improvements for a one-year period after City acceptance and shall include an amount to be determined by the Director of Public Works to cover the replacement of trees at the end of the one-year period.

b. It shall be the responsibility of the property owner to water all trees located in a parkway abutting his/her property as necessary to promote healthy growth, to protect the improvements within the parkway, and to do such trimming as can be done from the ground to preserve the neat appearance and unobstructed use of the parkway.

c. Sucker growth, water sprouts and young overhanging branches on mature trees may be removed to a height of eight feet by the owner/occupant.

d. The City shall be responsible for all maintenance of median divider parkways and shall be responsible for all major pruning or other tree surgery and the control and treatment of insect pests and disease as funds are available.

Approved Specimen Listing

Street Tree Listing (non SCE areas)

Botanical Name

Common Name

| | |
|--------------------------|---|
| Agonis flexuosa | Peppermint Tree, Australian Willow Myrtle |
| Albizia julibrissin | Silk Tree, Mimosa |
| Brachychiton acerifolius | Flame Tree, Australian Flame Tree |
| Celtis sinensis | Chinese Hackenberry-Yunnan Hackenberry |
| Cercis occidentalis | Western Redbud, CA Redbud, Judas Tree |
| Chionanthus retusus | Chinese Fringe Tree |
| Chitalpa tashkentensis | Chitalpa |
| Geijera carfviflora | Australian Willow, Wilga |
| Jacaranda mimosifolia | Jacaranda Tree |
| Koelreuteria bipinnata | Chinese Flame Tree |
| Koelreuteris paniculata | Golden Rain Tree |
| Liquidamber styraciflua | American Sweet Gum |
| Liriodendron tulipifera | Tulip Tree, Yellow Poplar |
| Magnolia grandiflora | Southern Magnolia, Bull Bay |
| Pinus canariensis | Canary Island Pine |
| Pistachia chinensis | Chinese Pistache |
| Platanus X acerifolia | London Plane Tree |
| Podocarpus gracilior | Fern Pine, African Fern Pine |
| Tabebuia avellaneda | Pink Trumpet Tree |
| Tipuana tipu | Tipu Tree |
| Tristania coferta | Brisbane, Pink or Australian Brush Box |
| Zelkova serrata | Sawleaf Zelkova |

Agonis flexuosa

General Notes

Peppermint Tree is a very useful tree in temperate coastal areas as an evergreen specimen or shade tree. It tolerates heat but not extreme cold.

Has fragrant Leaf.

Native to Western Australia.

Family: *Myrtaceae*

Tree Characteristics

Spreading or Weeping with a Low Canopy.

Rounded or Vase Shape.

Has Evergreen foliage.

Height: 25 - 35 feet.

Width: 15 - 30 feet.

Growth Rate: 24 to 36 Inches per Year.

Longevity 40 to 150 years.

Leaves Lanceolate, Medium to Light Green, No Change, Evergreen.

Flowers Showy. White. Flowers in Spring or Summer. Has perfect flowers (male and female parts in each flower).

Brown Capsule, Small (0.25 - 0.50 inches), fruiting in Fall.

Bark Red Brown, Exfoliating or Furrowed.

Shading Capacity Rated as Moderate in Leaf.



Albizia julibrissin

General Notes

Fast growing, but messy because of fruit and flower litter. Caterpillars are more of a problem back east than in California. Shade tree tolerant of a variety of conditions.

Native to Southwestern and Eastern Asia.

Family: *Fabaceae*

Tree Characteristics

Spreading with a Low Canopy.

Rounded, Umbrella or Vase Shape.

Has Deciduous foliage.

Height: 20 - 35 feet.

Width: 20 feet.

Growth Rate: 36 Inches per Year.

Longevity Less than 50 years.

Leaves Bipinnately Compound, Light Green, Bronze or Gold, Deciduous.

Flowers Showy. Pink or Rose. Flowers in Spring or Summer. Has perfect flowers (male and female parts in each flower).

Prolific, Brown Pod, Very Large (Over 3.00 inches), fruiting in Fall, Winter or Summer.

Bark Dark Gray, Smooth.

Shading Capacity Rated as Low to Moderately Dense in Leaf.

Shading Capacity Rated as Low out of Leaf.

Litter Issue is Flowers and Dry Fruit.



Brachychiton acerifolius

General Notes

This partly deciduous tree has showy red or orange flowers.

Native to East Coast of Australia.

Family: *Malvaceae*

Previously listed in the *Streculiaceae* family.

Tree Characteristics

Erect or Spreading and requires ample growing space.

Conical Shape.

Has Partly Deciduous foliage.

Height: 60 feet.

Width: 30 feet.

Growth Rate: 24 to 36 Inches per Year.

Longevity 50 to 150 years.

Leaves Ovate to Palmately Lobed, Glossy Medium Green, Partly Deciduous.

Flowers Showy. Orange or Red. Flowers in Spring or Summer. Has perfect flowers (male and female parts in each flower).

Brown Follicle, Very Large (Over 3.00 inches), fruiting in Summer or Fall.

Bark Green, Smooth.

Shading Capacity Rated as Dense in Leaf.

Litter Issue is Dry Fruit.



Celtis sinensis

General Notes

Deciduous tree growing to 65 feet in height. Often used for bonsai and in ornamental gardens. Fruit attracts birds. Similar to *C. occidentalis* but smaller.

Native to Eastern Asia.

Family: *Cannabaceae*

Tree Characteristics

Spreading and requires ample growing space.

Rounded or Umbrella Shape.

Has Deciduous foliage.

Height: 40 - 65 feet.

Growth Rate: 24 Inches per Year.

Longevity Greater than 150 years.

Leaves Ovate, Medium Green, Gold, Deciduous.

Flowers Inconspicuous. Flowers in Spring. Has separate male and female flowers on the same tree (monoecious).

Orange or Purple Drupe, Very Small (Under 0.25 inches), fruiting in Summer or Fall Edible.

Bark Mottled, Light Gray, Smooth.

Shading Capacity Rated as Dense in Leaf.

Shading Capacity Rated as Moderate out of Leaf.

Litter Issue is Dry Fruit.



Cercis occidentalis

General Notes

Western Redbud is a commonly used native shrub found in riparian canyons and tolerates dry conditions. It blooms best in full sun. Otherwise, it is quite reliable once established.

Native to California foothills, Arizona, and Utah.

Family: *Fabaceae*

Tree Characteristics

Erect or Spreading with a Low Canopy.

Rounded or Umbrella Shape.

Has Deciduous foliage.

Height: 10 - 20 feet.

Width: 10 - 20 feet.

Growth Rate: 24 to 36 Inches per Year.

Longevity 40 to 150 years.

Leaves Round, Blue Green, Gray Green or Medium Green, Red, Gold or Multicolored, Deciduous.

Flowers Showy. Purple. Flowers in Spring.

Prolific, Brown or Purple Pod, Large (1.50 - 3.00 inches), fruiting in Summer or Fall.

Bark Dark Brown or Red Brown, Scaly.

Shading Capacity Rated as Moderate in Leaf.

Shading Capacity Rated as Moderate out of Leaf.

Litter Issue is Dry Fruit.



Geijera parviflora

General Notes

Makes good street tree; noninvasive roots, casts light shade. Moderate growth rate. Pendulous habit. These Australian trees have water-filled leaves that are fire resistant.

Native to Australia.

Family: *Rutaceae*

Tree Characteristics

Erect or Weeping with a Low Canopy.

Oval Shape.

Has Evergreen foliage.

Height: 30 feet.

Width: 20 feet.

Growth Rate: 24 to 36 Inches per Year.

Longevity 50 to 150 years.

Leaves Lanceolate to Linear, Medium Green, No Change, Evergreen.

White. Flowers in Spring or Fall. Has perfect flowers (male and female parts in each flower).

Mostly Green Capsule, Small (0.25 - 0.50 inches), fruiting in Summer Wildlife use it.

Bark Dark Brown or Light Green, Rough.

Shading Capacity Rated as Moderate in Leaf.

Litter Issue is Dry Fruit.



Jacaranda mimosifolia

General Notes

Seed capsules are often used in decorative arrangements. Hardy to 25 degrees F.

Native to Northwestern Argentina and Bolivia.

Family: *Bignoniaceae*

Tree Characteristics

Spreading with a High Canopy.

Oval, Rounded, Umbrella or Vase Shape.

Has Deciduous to Partly Deciduous foliage.

Height: 40 - 50 feet.

Width: 20 - 30 feet.

Growth Rate: 24 Inches per Year.

Longevity 40 to 150 years.

Leaves Pinnately Compound Odd, Light Green, Deciduous to Partly Deciduous.

Flowers Showy. Blue or Lavender. Flowers in Spring, Summer or Fall. Has perfect flowers (male and female parts in each flower).

Brown Capsule, Large (1.50 - 3.00 inches), fruiting in Summer or Fall Wildlife use it.

Bark Light Green or Light Gray, Furrowed or Smooth.

Shading Capacity Rated as Moderately Dense in Leaf.

Shading Capacity Rated as Moderate out of Leaf.

Litter Issue is Flowers and Dry



Koelreuteria bipinnata

General Notes

Good shade tree.

Native to Asia.

Family: *Sapindaceae*

Tree Characteristics

Spreading with a Low Canopy.

Rounded, Umbrella or Vase Shape.

Has Deciduous foliage.

Height: 20 - 40 feet.

Width: 15 - 30 feet.

Growth Rate: 12 to 24 Inches per Year.

Longevity 50 to 150 years.

Leaves Bipinnately Compound, Medium Green, Bronze or Gold, Deciduous.

Flowers Showy. Yellow. Flowers in Summer or Fall. Has perfect flowers (male and female parts in each flower).

Prolific, Orange, Red or Rose Capsule, Large (1.50 - 3.00 inches), fruiting in Fall.

Bark Light Green, Fissured.

Shading Capacity Rated as Moderate in Leaf.

Shading Capacity Rated as Moderate out of Leaf.

Litter Issue is Dry Fruit.



Liquidambar styraciflua

General Notes

Resistant to oak root fungus.

Native to Eastern United States.

Family: *Hamamelidaceae*

Tree Characteristics

Erect or Spreading and requires ample growing space.

Conical Shape.

Has Deciduous foliage.

Height: 80 feet.

Width: 40 feet.

Growth Rate: 24 to 36 Inches per Year.

Longevity Greater than 150 years.

Leaves Lobed and Palmate, Dark Green, Red, Gold, Purple or Multicolored, Deciduous.

Flowers Inconspicuous. Flowers in Spring. Has separate male and female flowers on the same tree (monoecious).

Prolific, Brown, Beige or Mostly Green Capsule with Winged Seeds, Large (1.50 - 3.00 inches), fruiting in Fall Wildlife use it.

Bark Light Green or Light Gray, Furrowed.

Shading Capacity Rated as Moderate in Leaf.

Shading Capacity Rated as Moderate out of Leaf.

Litter Issue is Dry Fruit.



Liriodendron tulipifera

General Notes

Aphids can be very troublesome; cause honeydew drip. Requires a moderate amount of water. Has fragrant Bark and Flower.

Native to Eastern United States.

Family: *Magnoliaceae*

Tree Characteristics

Erect or Spreading and requires ample growing space.

Conical or Oval Shape.

Has Deciduous foliage.

Height: 60 - 80 feet.

Width: 40 feet.

Growth Rate: 36 Inches per Year.

Longevity Greater than 150 years.

Leaves Lobed, Light Green, Bronze or Gold, Deciduous.

Flowers Showy. Fragrant Green, Orange or Yellow. Flowers in Spring or Summer.

Brown Cone of Samaras, Large (1.50 - 3.00 inches), fruiting in Fall Wildlife use it.

Bark Dark Gray or Light Green, Fissured.

Shading Capacity Rated as Moderately Dense in Leaf.

Shading Capacity Rated as Moderately Low out of Leaf.

Litter Issue is Dry Fruit.



Magnolia grandiflora

General Notes

Little Gem Magnolia has a compact and is smaller version of other commonly used Magnolias. It blooms at a young age and leaf drop is fairly common.

Has fragrant Flower.

Native to Southeastern United States.

Family: *Magnoliaceae*

Tree Characteristics

Erect or Spreading and requires ample growing space.

Oval, Rounded or Umbrella Shape.

Has Evergreen foliage.

Height: 60 - 80 feet.

Width: 50 - 60 feet.

Growth Rate: 24 Inches per Year.

Longevity Greater than 150 years.

Leaves Elliptic to Broadly Ovate, Glossy Dark Green, No Change, Evergreen.

Flowers Showy. Fragrant White. Flowers in Spring, Summer or Fall.

Prolific, Purple or Red Follicle, Very Large (Over 3.00 inches), fruiting in Summer or Fall.

Bark Light Green, Fissured.

Shading Capacity Rated as Dense to Very Dense in Leaf.

Litter Issue is Flowers, Dry Fruit and leaves.



Pinus canariensis

(Canary Island Pine)
Pinaceae (Pine family)
Origin: Canary Island

General Notes

Resistant to Oak Root Fungus.

Native to Canary Islands of Spain.

Family: *Pinaceae*

Tree Characteristics

Erect or Weeping and requires ample growing space.

Columnar or Conical Shape.

Has Evergreen foliage.

Height: 50 - 80 feet.

Width: 20 - 35 feet.

Growth Rate: 36 Inches per Year.

Longevity 50 to 150 years.

Leaves Needle, Blue Green or Dark Green,
No Change, Evergreen.

Flowers Inconspicuous.

Brown Cone, Very Large (Over 3.00 inches),
fruiting in Winter.

Bark Red Brown, Fissured.

Shading Capacity Rated as Moderate to
Dense in Leaf.

Litter Issue is Dry Fruit.



Pistachia chinensis

General Notes

Resistant to oak root fungus. Needs good drainage. Although it can grow to 60 feet it is most commonly shorter in cultivation. Has fragrant Leaf.

Native to China.

Trees may be referred to as male or female.

Family: *Anacardiaceae*

Tree Characteristics

Erect or Spreading with a High Canopy.

Oval, Rounded or Umbrella Shape.

Has Deciduous foliage.

Height: 25 - 35 feet.

Width: 25 - 35 feet.

Growth Rate: 24 Inches per Year.

Longevity Greater than 150 years.

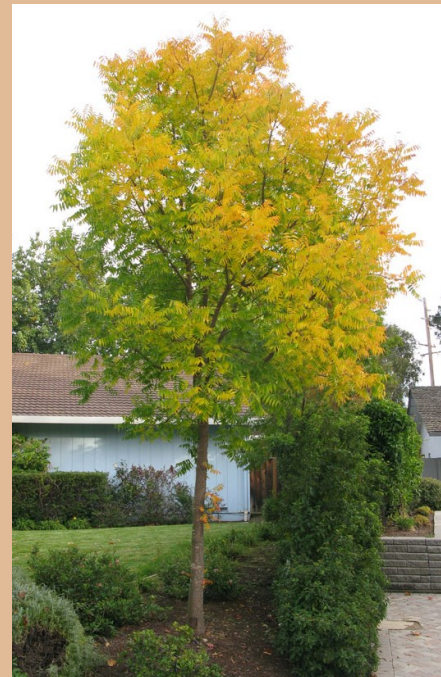
Leaves Pinnately Compound Even with Oblong to Elliptic Leaflets, Medium Green, Red, Gold, Orange or Multicolored, Deciduous.

Flowers Inconspicuous. Flowers in Spring. Trees may be sold as male or female.

Prolific, Red or Mostly Blue Drupe, Medium (0.50 - 1.50 inches), fruiting in Summer or Fall.

Bark Dark Brown, Light Gray or Light Green, Furrowed or Scaly.

Shading Capacity Rated as Moderately



Platanus acerifolia

General Notes

A tough, durable tree; can tolerate severe pruning and smog.

Native to Spain.

Family: *Platanaceae*

Tree Characteristics

Erect or Spreading and requires ample growing space.

Oval, Rounded or Umbrella Shape.

Has Deciduous foliage.

Height: 70 - 85 feet.

Width: 50 - 70 feet.

Growth Rate: 36 Inches per Year.

Longevity Greater than 150 years.

Leaves Palmate, Medium Green, Bronze or Gold, Deciduous.

Flowers Inconspicuous. Flowers in Spring or Winter. Has separate male and female flowers on the same tree (monoecious).

Prolific, Brown or Mostly Green Achene, Medium (0.50 - 1.50 inches), fruiting in Summer.

Bark Cream, Light Green, Light Gray or Multicolored, Exfoliating or Smooth.

Shading Capacity Rated as Dense in Leaf.

Shading Capacity Rated as Moderately Low out of Leaf.

Litter Issue is Dry Fruit, Twigs and Bark.



Podocarpus gracilior

General Notes

Branches droop but resist breakage. Needs good drainage. Also known as *Podocarpus falcatus*.

Native to Uganda, Ethiopia and Kenya.

Trees may be referred to as male or female.

Family: *Podocarpaceae*

Tree Characteristics

Erect and requires ample growing space.

Oval or Rounded Shape.

Has Evergreen foliage.

Height: 50 - 65 feet.

Growth Rate: 12 to 36 Inches per Year.

Longevity Greater than 150 years.

Leaves Lanceolate to Linear, Blue Green, Gray Green or Dark Green, No Change, Evergreen.

Flowers Inconspicuous. Flowers in Spring. Has either male or female flowers (dioecious). Trees may be sold as male or female.

Green to Purple Cone, Small (0.25 - 0.50 inches), fruiting in Fall.

Bark Light Gray, Furrowed or Smooth.

Shading Capacity Rated as Moderately Dense in Leaf.

Litter Issue is Dry Fruit.



Tabebuia avellanedae

General Notes

Branches don't droop and resist breakage. National tree of Paraguay. A spectacular spring and winter flowering tree. Long brown fruit pods open lengthwise releasing small winged seeds.

Native to South America.

Family: *Bignoniaceae*

Tree Characteristics

Rounded or Vase Shape.

Has Deciduous foliage.

Height: 35 - 40 feet.

Growth Rate: 24 or More Inches per Year.

Leaves Palmately Compound, Green, No Change, Deciduous.

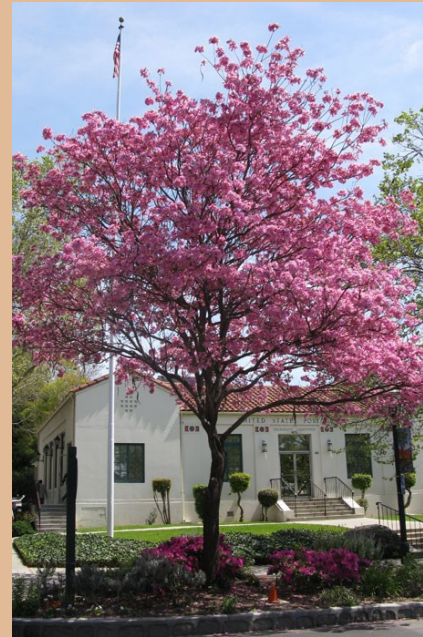
Flowers Showy. Pink, Purple, Lavender-Pink. Flowers in Spring or Winter. Has perfect flowers (male and female parts in each flower).

Brown Pod, Very Large (Over 3.00 inches), fruiting in Winter or Spring.

Bark Brown to Gray.

Shading Capacity Rated as Moderate to Moderately Dense in Leaf.

Shading Capacity Rated as out of Leaf.



Tipuana tipu

General Notes

A medium sized flowering legume tree for mild climates.

Native to Bolivia and Southern Brazil.

Family: *Fabaceae*

Tree Characteristics

Erect or Spreading with a High Canopy.

Oval, Rounded or Umbrella Shape.

Has Deciduous to Partly Deciduous foliage.

Height: 25 - 50 feet.

Width: 25 - 50 feet.

Growth Rate: 24 to 36 Inches per Year.

Longevity 50 to 150 years.

Leaves Pinnately Compound Odd, Light Green, Bronze or Gold, Deciduous to Partly Deciduous.

Flowers Showy. Orange or Yellow. Flowers in Summer. Has perfect flowers (male and female parts in each flower).

Brown Pod, Large (1.50 - 3.00 inches), fruiting in Summer or Fall.

Bark Dark Brown or Light Green, Fissured.

Shading Capacity Rated as Moderately Dense in Leaf.

Shading Capacity Rated as Moderate out of Leaf.

Litter Issue is Flowers and Dry Fruit.



Lophostemon confertus

General Notes

Drought resistant once established. Smog tolerant. May be a larger tree in warmer areas.

Native to Australia.

Family: *Myrtaceae*

Tree Characteristics

Erect or Spreading and requires ample growing space.

Oval or Rounded Shape.

Has Evergreen foliage.

Height: 30 - 50 feet.

Width: 10 - 30 feet.

Growth Rate: 24 to 36 Inches per Year.

Longevity 50 to 150 years.

Leaves Ovate, Medium Green, No Change, Evergreen.

Flowers Showy. White. Flowers in Spring. Has perfect flowers (male and female parts in each flower).

Brown or Red Capsule, Small (0.25 - 0.50 inches), fruiting in Summer.

Bark Striking, Light Green, Red Brown or Multicolored, Exfoliating or Smooth.

Shading Capacity Rated as Moderately Dense in Leaf.

Litter Issue is Dry Fruit.



Zelkova serrata

General Notes

Somewhat more resistant to Dutch Elm Disease than most elms. 'Musashino' is a very upright cultivar, growing to 45 feet and spreading to only 20 feet.

Native to Eastern Asia.

Family: *Ulmaceae*

Tree Characteristics

Erect or Spreading and requires ample growing space.

Rounded or Umbrella Shape.

Has Deciduous foliage.

Height: 50 - 65 feet.

Width: 50 - 65 feet.

Growth Rate: 24 to 36 Inches per Year.

Longevity 50 to 150 years.

Leaves Oblong to Ovate, Medium Green, Bronze, Red, Gold or Multicolored, Deciduous.

Flowers Inconspicuous. Brown Drupe, Very Small (Under 0.25 inches), fruiting in Fall.

Bark Dark Brown, Light Gray or Light Green, Smooth.

Shading Capacity Rated as Moderate to Dense in Leaf.

Shading Capacity Rated as Moderate to Dense out of Leaf.

Litter Issue is Dry Fruit.



Approved Specimen Listing

Trees Suitable for Planting Under “Wires”

Botanical Name

Common Name

Bauhinia blakeana

Cercis canadensis

Callistemon citrinus

Eucalyptus torquata

Eriobotrya deflexa

Chionanthus retusus

Chitalpa tashkentensis

Koelreuteris paniculata

Metrosideros excelsus

Photinia fraseri

Pyrus kawakamii

Podocarpus henkelii

Stenocarpus sinuatus

Tristania laurina

Hong Kong Orchid

Eastern Redbud

Lemon Bottlebrush

Eastern Redbud

Bronze Loquat

Chinese Fringe Tree

Chitalpa

Golden Rain Tree

New Zealand Christmas Tree

Photinia

Evergreen Pear

Long Leafed Yellowwood

Firewheel

Water Gum

Bauhinia blakeana

General Notes

A hybrid between *Bauhinia purpurea* × *Bauhinia variegata*.

Exotic-looking flowering tree for frost free areas. This hybrid tree does not produce fruit. Its flowers are 5 to 6 inches in diameter, larger than on other Blakeana.

Has fragrant Flower.

Native to Hong Kong.

Family: *Fabaceae*

Tree Characteristics

Umbrella Shape.

Has Partly Deciduous foliage.

Height: 20 - 40 feet.

Width: 20 - 25 feet.

Growth Rate: 12 to 24 Inches per Year.

Longevity 40 to 150 years.

Leaves Lobed and Palmate, Gray Green, Partly Deciduous.

Fragrant Pink, Purple or Rose. Flowers in Fall or Winter. Has perfect flowers (male and female parts in each flower).

Fruitless.

Bark Dark Gray or Light Gray, Smooth.

Shading Capacity Rated as Moderate in Leaf.



Cercis Canadensis

General Notes

Utility friendly tree.

Eastern Redbud is a commonly used single or multi-trunk tree, effective as a flowering or foliage accent, in lawns or residential garden settings. Leaves are an attractive lemon in fall. It blooms best in full sun, where it receives moderate moisture. It may require light top-trimming of vigorous top shoots to maintain its height below 25'.

Native to Eastern United States.

Family: *Fabaceae*

Tree Characteristics

Erect or Spreading with a Low Canopy.

Rounded or Umbrella Shape.

Has Deciduous foliage.

Height: 25 - 35 feet.

Width: 25 - 35 feet.

Growth Rate: 36 Inches per Year.

Longevity 40 to 150 years.

Leaves Round, Medium to Light Green, Gold, Deciduous.

Flowers Showy. Pink or Rose. Flowers in Spring.

Bark Dark Brown or Red Brown, Scaly.

Shading Capacity Rated as Moderately Low in Leaf.

Litter Issue is Dry Fruit.



Callistemon citrinus

General Notes

Lemon Bottlebrush is commonly grown as a shrub, or as a single trunk tree standard. It is a tough, reliable evergreen species, attractive by nature of its red brushlike flower plumes, though it is considered quite common and not especially exciting otherwise. It is especially attractive to hummingbirds. Has fragrant Leaf.

Native to Queensland, New South Wales and Victoria in Australia.

Family: *Myrtaceae*

Tree Characteristics

Erect or Spreading with a Low Canopy.

Oval or Rounded Shape.

Has Evergreen foliage.

Height: 20 - 25 feet.

Width: 25 feet.

Growth Rate: 36 Inches per Year.

Longevity 40 to 150 years.

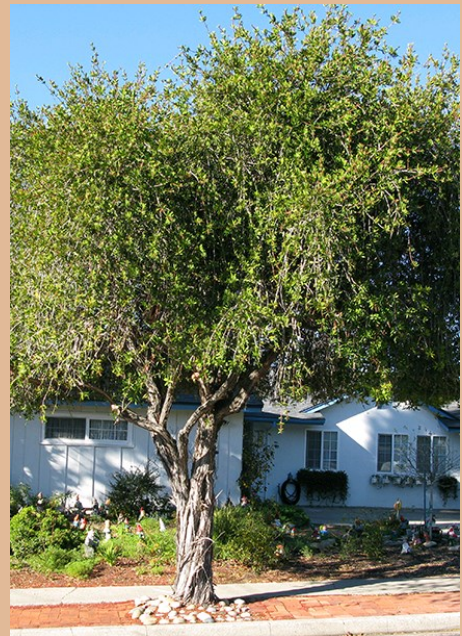
Leaves Lanceolate, Medium Green, No Change, Evergreen.

Flowers Showy. Red. Flowers in Spring or Summer.

Bark Light Green or Light Gray, Exfoliating or Striated.

Shading Capacity Rated as Dense in Leaf.

Litter Issue is Flowers.



Eucalyptus torquata

General Notes

Hardiness estimate: 17-22 degrees F.

Has fragrant Leaf.

Native to Western Australia.

Family: *Myrtaceae*

Tree Characteristics

Columnar Shape.

Has Evergreen foliage.

Height: 20 - 35 feet.

Width: 15 - 30 feet.

Growth Rate: 24 Inches per Year.

Longevity 50 to 150 years.

Leaves Lanceolate, Light Green, No Change, Evergreen.

Flowers Showy. Red or Yellow. Flowers in Fall, Winter, Spring or Summer. Has perfect flowers (male and female parts in each flower).

Purple or Red Capsule, Small (0.25 - 0.50 inches), fruiting in Spring, Summer or Fall
Wildlife use it.

Bark Red Brown, Blocky or Scaly.

Shading Capacity Rated as Moderate in Leaf.

Litter Issue is Dry Fruit.



Eriobotrya deflexa

General Notes

Its shiny bronzy green new foliage with reddish highlights is quite attractive, and it rarely sets fruit. Large panicles of deep pink flowers are showy in the spring. It looks best with regular pruning to maintain its shape, and regular deep watering to promote healthy growth. Native to Taiwan and Southern Vietnam.

Family: *Rosaceae*

Tree Characteristics

Erect or Spreading with a Low Canopy.

Rounded, Umbrella or Vase Shape.

Has Evergreen foliage.

Height: 15 - 25 feet.

Width: 15 - 25 feet.

Growth Rate: 36 Inches per Year.

Longevity 50 to 150 years.

Leaves Oblong, Glossy Medium to Dark Green, No Change, Evergreen.

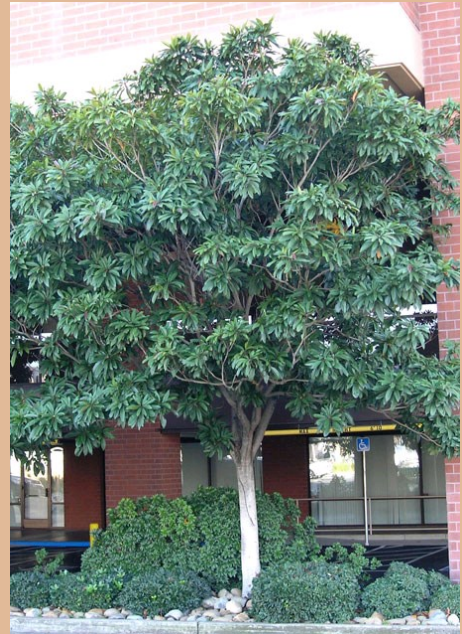
Flowers Showy. White. Flowers in Spring. Has perfect flowers (male and female parts in each flower).

Yellow or Mostly Green Pome, Medium (0.50 - 1.50 inches), fruiting in Summer.

Bark Light Green, Exfoliating or Smooth.

Shading Capacity Rated as Moderately Dense in Leaf.

Litter Issue is Wet Fruit.



Chionanthus retusus

General Notes

Its spring flowering is quite impressive, and is attractive in fall, with the reddish berries seen amongst the yellow fall foliage. It is a very clean looking tree. It is easily maintained below 25' in height.

Has fragrant Flower.

Native to China, Korea, and Japan.

Family: *Oleaceae*

Tree Characteristics

Rounded or Umbrella Shape.

Has Deciduous foliage.

Height: 10 - 20 feet.

Width: 6 - 12 feet.

Growth Rate: 24 Inches per Year.

Longevity 40 to 150 years.

Leaves Ovate, Medium to Light Green, Gold, Deciduous.

Flowers Showy. Fragrant White. Flowers in Summer. Has perfect flowers (male and female parts in each flower).

Purple or Mostly Blue Drupe, Medium (0.50 - 1.50 inches), fruiting in Fall or Winter.

Shading Capacity Rated as Moderately Low in Leaf.

Shading Capacity Rated as Moderately Low out of Leaf.

Litter Issue is Wet Fruit.



Chitalpa tashkentensis

General Notes

Chitalpa is an unusual small flowering accent tree, especially useful in riparian or native garden settings, usually multi-trunked or low-branching. It blooms best in full sun, when it receives moderate moisture. It becomes taller in half shade. It generally remains below 25' in height.

Family: *Bignoniaceae*

Tree Characteristics

Low Canopy.

Rounded, Umbrella or Vase Shape.

Has Deciduous foliage.

Height: 25 - 35 feet.

Width: 30 feet.

Growth Rate: 36 Inches per Year.

Longevity 40 to 150 years.

Leaves Lanceolate to Ovate, Gray Green, Gold, Deciduous.

Flowers Showy. Lavender. Flowers in Spring, Summer or Fall. Has perfect flowers (male and female parts in each flower).

Brown, Beige or Mostly Green Capsule, fruiting in Fall Wildlife use it.

Bark Light Green, Scaly.

Shading Capacity Rated as Moderate in Leaf.

Shading Capacity Rated as Low out of Leaf.

Litter Issue is Flowers and Wet Fruit.



Koelreuteris paniculata

General Notes

Drought and smog tolerant. A hardy, attractive tree.

Native to Asia.

Family: *Sapindaceae*

Tree Characteristics

Spreading with a Low Canopy.

Rounded, Umbrella or Vase Shape.

Has Deciduous foliage.

Height: 20 - 35 feet.

Width: 25 - 40 feet.

Growth Rate: 12 to 24 Inches per Year.

Longevity 50 to 150 years.

Leaves Pinnately Compound Odd, Medium to Dark Green, Bronze or Gold, Deciduous.

Flowers Showy. Yellow. Flowers in Summer. Has perfect flowers (male and female parts in each flower).

Prolific, Brown or Yellow Capsule, Large (1.50 - 3.00 inches), fruiting in Fall.

Bark Dark Brown or Light Green, Fissured.

Shading Capacity Rated as Moderately Low in Leaf.

Shading Capacity Rated as Low out of Leaf.

Litter Issue is Dry Fruit.



Metrosideros excelsus

General Notes

Drought resistant and smog tolerant. Forms areal roots that descend to the ground and take root. These can become extra trunks that provide additional support. Resistant to salt spray. A good coastal tree. Can grow taller if conditions are right.

Native to New Zealand.

Family: *Myrtaceae*

Tree Characteristics

Erect or Spreading with a Low Canopy.

Oval or Rounded Shape.

Has Evergreen foliage.

Height: 30 - 35 feet.

Width: 30 - 35 feet.

Growth Rate: 24 Inches per Year.

Longevity 50 to 150 years.

Leaves Oblong to Ovate, Glossy Dark Green or White, No Change, Evergreen.

Flowers Showy. Red. Flowers in Spring or Summer. Has perfect flowers (male and female parts in each flower).

Brown or Gray Capsule, Small (0.25 - 0.50 inches), fruiting in Summer or Fall.

Bark Dark Brown.

Shading Capacity Rated as Moderate to Dense in Leaf.

Litter Issue is Dry Fruit.



Photinia franseri

General Notes

Fraser Photinia is used as either a single or multi-trunk trunk tree standard. Its shiny reddish evergreen foliage and flowers in the summer make it quite attractive. It is very durable, and tolerates heat, moderate dryness as well as poor soils. It is mildew resistant and has brightly colored new growth.

Has fragrant Flower.

Native to Asia.

Family: *Rosaceae*

Tree Characteristics

Oval Shape.

Has Evergreen foliage.

Height: 12 - 20 feet.

Width: 8 - 12 feet.

Growth Rate: 24 to 36 Inches per Year.

Longevity 50 to 150 years.

Leaves Ovate, Glossy Dark Green, No Change, Evergreen.

Flowers Showy. Fragrant White. Flowers in Spring. Has perfect flowers (male and female parts in each flower).

Fruitless.

Bark Dark Brown or Light Gray, Smooth.

Shading Capacity Rated as Dense in Leaf.



Pyrus kawakamii

General Notes

Handsome tree when well maintained.

Native to Taiwan and China.

Family: *Rosaceae*

Tree Characteristics

Spreading with a Low Canopy.

Rounded or Umbrella Shape.

Has Evergreen to Partly Deciduous foliage.

Height: 15 - 30 feet.

Width: 15 - 30 feet.

Growth Rate: 24 to 36 Inches per Year.

Longevity 50 to 150 years.

Leaves Elliptic to Ovate, Glossy Medium Green, No Change, Evergreen to Partly Deciduous.

Flowers Showy. White. Flowers in Spring or Winter. Has perfect flowers (male and female parts in each flower).

Brown or Mostly Green Pome, Very Small (Under 0.25 inches), fruiting in Spring or Summer.

Bark Dark Brown or Light Green, Blocky or Furrowed.

Shading Capacity Rated as Dense in Leaf.

Shading Capacity Rated as Moderate out of Leaf.

Litter Issue is Dry Fruit.



Podocarpus henkelii

General Notes

Drooping dark green foliage. Branches droop but resist breakage. Needs regular watering.

Native to South Africa.

Trees may be referred to as male or female.

Family: *Podocarpaceae*

Tree Characteristics

Conical Shape.

Has Evergreen foliage.

Height: 25 - 35 feet.

Growth Rate: 12 to 36 Inches per Year.

Leaves Lanceolate, Dark Green, No Change, Evergreen.

Flowers Inconspicuous. . Has either male or female flowers (dioecious). Trees may be sold as male or female.

Green Cone.

Shading Capacity Rated as Dense to Very Dense in Leaf.



Stenocarpus sinuatus

General Notes

Firewheel Tree is an unusual subtropical tree for temperate regions, often sought after for its dark glossy green leaves and very unusual flowers. Once established, it becomes rather durable. The leaves are attractive and the unusual flowers look like a pinwheel.

Native to Australia.

Family: *Proteaceae*

Tree Characteristics

Erect with a Low Canopy.

Oval Shape.

Has Evergreen foliage.

Height: 30 feet.

Width: 15 feet.

Growth Rate: 12 Inches per Year.

Longevity 50 to 150 years.

Leaves Ovate, Glossy Medium Green, No Change, Evergreen.

Flowers Showy. Red or Yellow. Flowers in Fall.

Brown Follicle, Large (1.50 - 3.00 inches)
Wildlife use it.

Bark Dark Brown, Light Green, Red Brown or Orange, Exfoliating, Furrowed or Smooth.

Shading Capacity Rated as Dense in Leaf.

Litter Issue is Dry Fruit.



Tristania laurina

General Notes

Can be trained as a single or multi-trunked tree. Slow growing tree, so planting a larger specimen is desirable.

Has fragrant Flower and Leaf.

Native to Australia.

Family: *Myrtaceae*

Tree Characteristics

Low Canopy.

Oval or Rounded Shape.

Has Evergreen foliage.

Height: 20 - 35 feet.

Width: 15 - 30 feet.

Growth Rate: 12 Inches per Year.

Longevity 40 to 150 years.

Leaves Lanceolate to Ovate, Glossy Medium Green, No Change, Evergreen.

Flowers Showy. Fragrant Yellow. Flowers in Spring or Summer. Has perfect flowers (male and female parts in each flower).

Brown or Red Capsule, Small (0.25 - 0.50 inches), fruiting in Summer or Fall.

Bark Striking, Cream, Dark Brown, Red Brown or Multicolored, Exfoliating or Smooth.

Shading Capacity Rated as Dense to Very Dense in Leaf.

Litter Issue is Dry Fruit.

