

SUGGESTED TREES FOR MONMOUTH COUNTY

Department of Public Works and Engineering, Division of Shade Tree
04/01/2023



Recommendations for street trees and locations within the Monmouth County Right of Ways (ROW).
Issue 2

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SUGGESTED TREES FOR MONMOUTH COUNTY

The following is a list of suggested tree species compiled by the Monmouth County Department of Public Works and Engineering, and the Division of Shade Tree. This is a general list and is not all encompassing. Monmouth County has many diverse habitats and soil types. We recommended that you consult a licensed landscape architect or licensed tree expert to determine all site constraints in selecting a tree appropriate for each site.

Please note that trees listed may be susceptible to deer browsing and damage. It is our recommendation that you refer to current lists available and industry recommendations from nursery and agricultural groups on plant and trees that maybe least likely to be damaged by deer. Initially we have used Rutgers Cooperative Extension's fact sheets for landscape plants rated by deer resistance. This resource can be found at their web site (<http://njaes.rutgers.edu/deerresistance>). Local deer herds vary in each location. Deer are apt to try some plants that have been previously identified as not previously observed ad palatable to deer. Deer protection against foraging and antler rubbing is encouraged.

Insect and pest infestations such as gypsy moth, pine beetle, emerald ash borers, spotted lantern fly and new upcoming pests yet to be identified will appear in the landscape. There accumulation of pest populations and feeding habits will affect specific and a range of tree species. The short and long term affects can be intense and problematic. Be cautious and take great care when working in Ash tree removals.

Tree placement in the streetscape:

Monmouth County Department of Public Works and Engineering, and the Division of Shade Tree recommends that new trees are planted in large areas where possible; on the opposite side of the sidewalk and to provide a "clear zone" for vehicular correction as needed on various speed rated roadways. We are finding that trees that have been historically planted in tree lawns (space between curb and sidewalk) may not make sense to replace. Undersized tree lawns are not adequate for healthy long term tree growth. Replacement of trees in existing undersized trees lawns is discouraged.

Currently Monmouth County Shade Tree plants its new trees in areas that are twelve to twenty five feet away from the edge of pavement this accommodates a "clear zone" for driver recovery on county roadways and Rights of Way. Tree placement distances are measured from edge of pavement and are dependent on the type of tree. For example: A shade type tree, larger with overhead canopy, is planted 25 feet away whereas an ornamental type, smaller stature tree sometimes wider, is planted 12-15' away. Of course, there are other site constraints such as sight visibility at intersection and driveway, pedestrian access and visibility, utilities (overhead and buried), other easements, as well as soil type, topography, drainage, and sun exposure that are all major factors in street tree planting locations.

Proposed tree locations are required to be submitted for review and can be included in plans submitted through the Monmouth County Department of Public Works and Engineering, Shade Tree Division, and the Monmouth County Planning Board. Often proposed trees in the County Right of Way, are typically part of subdivision application and submitted through the Monmouth County Planning Board. Other plantings in the County Right of Way can be associated with road opening permits, tree replacement requirements, plans submitted by interested stakeholders, municipal shade tree commissions, groups of interested homeowners or other State, local government with plans, lists and locations. All proposed trees are reviewed by Monmouth County Department of Public Works and Engineering, County Shade Tree

Division and Monmouth County Department of Public Works and Engineering's Landscape architect prior to planting.

The following items are typically reviewed for proposed plantings:

1. Planting are to avoid sight triangles and dedicated easements.
2. Plantings are located to not impeded access to bridges, storm pipe headwalls, utility access and easements, paper streets, and driveway access areas.
3. Planting may occur within the tree lawn areas between existing sidewalk and back of curb provided that the area is a minimum of 6' wide and 8-10' length. The 6'x 8' minimum is in effort to provide a minimum available soil volume for trees on county roads and right of way.
4. Tree pit grates are prohibited on county roads.
5. For trees that are not part of a downtown street tree planting: Typically, proposed trees must be planted 12-25' from the edge of the road pavement to allow for a clear "driver recovery zone" for errant drivers.
6. All trees must not be placed on any buried utility including and not limited to storm water vaults, any utility conduit or pipe, gas, electric, sewer, communications. Proposed tree locations must be clear of buried utilities and access covers.
7. Trees must attain minimum distances from the following: 10 ft from a driveway, septic tank, septic field, fire hydrant and streetlight; 6 ft from cleanout or access to sewer; 6-10ft from in-ground water meters, and other buried meters
8. Certain species are prohibited on county roads. Refer to Suggested Species list.
9. It is the Homeowners responsibility to water, feed, and mulch trees in ROW adjacent to their lots.
10. The county is not responsible for curbs, and sidewalks, and all damage to walking surfaces, materials caused by trees. It is the responsibility of the municipality and or the homeowner.
11. In some cases, trees in the County ROW are identified for removal by the County and will be removed without notice.

Proposed tree locations considerations:

In an established downtown tree locations are reviewed on a case by case basis. For example, existing street trees, new trees may be installed in improved tree pits and trees are added to continue the existing street tree pattern. Improved tree pits include but are not limited to:

- New tree pit areas, with a minimum opening of 5'x8' to 6'x10' area, for new trees and increased soil volumes.
- Cutting away existing sidewalk for expanding a tree pit will be performed by applicant, or municipality or by others.
- Tree Pits with additional soil volumes may require the addition of subsurface soil vaults structures (prepared by others) that increase soil volume and support sidewalks. Sidewalks are typically the jurisdiction of the municipality.

Increases in soil volume do not mean an increased depth, as much as increased width. Minimum depths are 20-24" and typically based on the rootball height. Added soil vaults beneath adjacent sidewalks areas is a desirable solution where it makes sense with existing site conditions. Adding the vaults could include other items such as added drainage systems and inclusion of active and passive irrigation for newly planted trees.

In existing streetscape on county roadways, tree grates are not desirable and uncovered tree pits with soil and wood mulch is recommended. Should tree grates exist in various municipalities on county roadways, they typically are not replaced, repaired, or modified to keep flat with adjacent surfaces and modified to increase openings for trunk growth. This is not done by the County. Tree grates are considered a streetscape amenity and is to be maintained and cared for by the municipality. The goal of the tree pit is to provide the maximum soil volume available to a tree, as well as clean water. The tree pit must allow that tree to reach a reasonable size and maintain good health, allowing for tree to be stable and provide good canopy.

Narrow tree lawns or islands must be avoided when possible. New and replacement trees in an existing narrow tree lawn areas will require tree pit expansion. At times the existing tree pit in a narrow tree lawn should be expanded to provide a minimum width of six feet. We recommend a typical minimum tree pit size of six by eight feet in tree lawns. On the opposite side of the walk two to three times the diameter of the tree's rootball where possible. Attaining the minimum size may require cutting, removing, shifting, and reconstructing sidewalks.

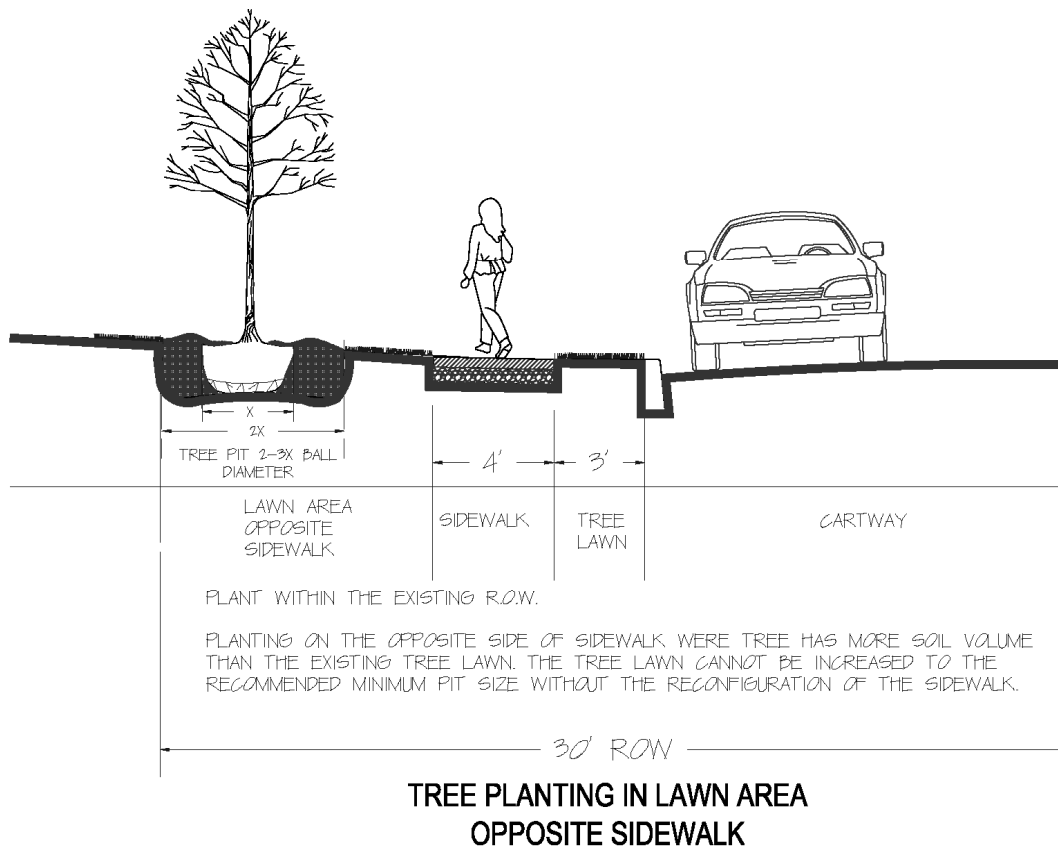
When changing a sidewalk all minimum widths for walks must be provided pursuant to NJDOT and current ADA Guidelines and meet your local municipalities' specifications. Proper permits from local municipalities must be attained prior to any work.

Suggested tree location placement (photo and drawing):

Photo of tree lawn with large shade trees on opposite side of sidewalk and shorter street tree beneath overhead utilities



Photo of tree lawn with medium sized street trees (no overhead utilities)



SUGGESTED STREET TREES FOR MONMOUTH COUNTY

NOTE: This list is for general information purposes only and does not address the varied and specific existing conditions of your site. Please seek the professional advice of a NJ licensed landscape architect or a licensed tree expert for final tree species appropriate for your specific site.

Group A

Trees to be planted in tree lawns greater than 6 feet (72") wide or on large lawn areas opposite the sidewalk.

Recommended Native Species

Maple, Freeman	<i>Acer x freemanii</i>
Maple, Red	<i>Acer rubrum</i>
Hackberry, Common	<i>Celtis occidentalis</i>
Hackberry, Hybrid	<i>Celtis x 'Magnifica'</i>
Locust, Honey (thornless variety)	<i>Gleditsia triacanthos var. inermis</i>
Coffee Tree, Kentucky	<i>Gymnocladus dioica</i>
Gum, Sweet	<i>Liquidambar styraciflua</i>
Tulip Tree	<i>Liriodendron tulipifera</i>
Gum, Sour	<i>Nyssa sylvatica</i>
Sycamore	<i>Platanus occidentalis</i>
Oak, White	<i>Quercus alba</i>
Oak, Swamp White	<i>Quercus bicolor</i>
Oak, Scarlet	<i>Quercus coccinea</i>
Oak, Shingle	<i>Quercus imbricaria</i>
Oak, Bur	<i>Quercus macrocarpa</i>
Oak, Pin	<i>Quercus palustris</i>
Oak, Willow	<i>Quercus phellos</i>
Oak, Chestnut	<i>Quercus prinus</i>
Oak, Northern Red	<i>Quercus rubra</i>
Cypress, Bald	<i>Taxodium distichum</i>
Linden, American	<i>Tilia americana</i>
Elm, American (Dutch Elm's resistant selections only)	<i>Ulmus americana</i>

Some Acceptable Non-Native Species

Katsura Tree	<i>Cercidiphyllum japonicum</i>
Rubber Tree, Hardy	<i>Eucommia ulmoides</i>
Beech, European	<i>Fagus sylvatica</i>
Ginkgo (<u>Males Only</u>)	<i>Ginkgo biloba (<u>Males Only</u>)</i>
Redwood, Dawn	<i>Metasequoia glyptostroboides</i>
Oak, Sawtooth	<i>Quercus acutissima</i>
Oak, English	<i>Quercus robur</i>
Pagoda Tree, Japanese	<i>Styphnolobium japonicum</i>
Linden, Littleleaf	<i>Tilia cordata</i>
Linden, Silver	<i>Tilia tomentosa</i>
Planetree, London	<i>Platanus x acerifolia</i>
Elm, Lacebark	<i>Ulmus parvifolia</i>
Zelkova, Japanese	<i>Zelkova serrata</i>

Group B

Ornamental trees to be planted in tree lawns or on large lawn areas opposite the sidewalk.

Recommended Native Species

Birch, River (single stem)
Hornbeam, American
Yellowwood, American
Hop Hornbeam, American
Cherry, Choke

Betula nigra
Carpinus caroliniana
Cladrastis kentukea
Ostrya virginiana
Prunus virginiana

Some Acceptable Non-Native Species

Hornbeam, European
Hornbeam, European 'Fastigiata'
Filbert, Turkish
Maackia, Amur
Cherry, Sargent
Cherry, Kwanzan
Cherry, Autumn Flowering
Cherry, Yoshino

Carpinus betulus
Carpinus betulus 'Fastigiata'
Corylus colurna
Maackia amurensis
Prunus sargentii
Prunus serrulata 'Kwanzan'
Prunus subhirtella 'Autumnalis'
Prunus x yedoensis

Group C

Trees to be planted in tree lawns or on large lawn areas opposite the sidewalk.

Recommended Native Species

Serviceberry
Serviceberry, Allegheny
Redbud, Eastern
Dogwood, Flowering (limited as street tree)
Dogwood, Aurora
Dogwood, Constellation
Dogwood, Celestial
Dogwood, Stellar Pink
Dogwood, Ruth Ellen
Silverbell, Carolina
Sourwood
Cherry, Choke

Amelanchier
Amelanchier laevis
Cercis canadensis
Cornus florida
Cornus 'Rutban'
Cornus 'Rutcan'
Cornus 'Rutdan'
Cornus 'Rutgan'
Cornus 'Rutlan'
Halesia tetraptera
Oxydendrum arboreum
Prunus virginiana

Some Acceptable Non-Native Species

Maple, Trident
Maple, Tatarian
Dogwood, Kousa
Stewartia, Korean
Stewartia, Japanese
Snowbell, Japanese
Lilac, Japanese Tree

Acer buergerianum
Acer tataricum
Cornus kousa
Stewartia koreana
Stewartia pseudocamellia
Styrax japonicus
Syringa reticulata

Trees under or near overhead utilities (typically smaller than 25' in height)

Recommended Native Species

Serviceberry, Apple
Serviceberry, Allegheny
Serviceberry, Shadblow
Redbud, Eastern
Dogwood, Flowering
Dogwood, Aurora
Dogwood, Constellation
Dogwood, Celestial
Dogwood, Stellar Pink
Dogwood, Ruth Ellen
Silverbell, Two-winged
Silverbell, Carolina
Sourwood
Cherry, Choke

Amelanchier x grandiflora
Amelanchier laevis
Amelanchier canadensis
Cercis canadensis
Cornus florida
Cornus 'Rutban'
Cornus 'Rutcan'
Cornus 'Rutdan'
Cornus 'Rutgan'
Cornus 'Rutlan'
Halesia diptera
Halesia tetraptera
Oxydendrum arboreum
Prunus virginiana

Some Acceptable Non-Native Species

Maple, Trident
Maple, Tatarian
Dogwood, Kousa
Stewartia, Korean
Stewartia, Japanese
Snowbell, Japanese
Snowbell, Fragrant
Lilac, Japanese Tree

Acer buergerianum
Acer tataricum
Cornus kousa
Stewartia koreana
Stewartia pseudocamellia
Styrax japonicus
Styrax obassia
Syringa reticulata

Large evergreens for screening (not on street)

Recommended Native Species

Holly, American
Cedar, Eastern Red
Spruce, White
Spruce, Colorado
Pine, Shortleaf
Pine, Pitch
Pine, Eastern White
Pine, Virginia
Arborvitae, Eastern

Ilex opaca
Juniperus virginiana
Picea glauca
Picea pungens
Pinus echinata
Pinus rigida
Pinus strobus
Pinus virginiana
Thuja occidentalis

Some Acceptable Non-Native Species

Cypress, Leyland
Spruce, Norway
Pine, Himalayan
Arborvitae, Western, Giant

X Cupressocyparis leylandii
Picea abies
Pinus griffithi
Thuja plicata

Trees for occasionally wet sites

Recommended Native Species

Maple, Red
Birch, River
Hornbeam, American
Cedar, Atlantic White
Gum, Sweet
Magnolia, Swamp
Gum, Sour
Sycamore
Oak, Swamp White
Oak, Pin
Oak, Willow
Cypress, Pond
Cypress, Bald

Acer rubrum
Betula nigra
Carpinus caroliniana
Chamaecyparis thyoides
Liquidambar styraciflua
Magnolia virginiana
Nyssa sylvatica
Platanus occidentalis
Quercus bicolor
Quercus palustris
Quercus phellos
Taxodium ascendens
Taxodium distichum

Invasive and weak wooded species Prohibited on County Roads

Box Elder
Maple, Norway
Maple, Sycamore
Maple, Silver
Tree of Heaven
Mulberry, Paper
Ash, species (all)
Poplar, White
Poplar, Carolina
Cottonwood, Eastern
Aspen, Bigtooth
Poplar, Black
Poplar, Lombardy
Aspen, European
Aspen, Quaking
Pears, Callery
Locust, Black
Willow, White
Willow, Golden Weeping
Willow, Weeping
Willow, Hankow
Willow, Black

Acer negundo
Acer platanoides
Acer pseudoplatanus
Acer saccharinum
Ailanthus altissima
Broussonetia papyrifera
Fraxinus American, pennsylvanica
Populus alba
Populus x canadensis
Populus deltoides
Populus grandidentata
Populus nigra
Populus nigra 'Italica'
Populus tremula
Populus tremuloides
Pyrus calleryana
Robinia pseudoacacia
Salix alba
Salix alba 'Tristis'
Salix babylonica
Salix matsudana
Salix nigra

SUGGESTED SPECIES FOR THE SHORE AREAS

(Adapted from *Landscaping at the Seashore*, Rutgers Cooperative Extension Bulletin № 433, June 1985)

Following is a list of suggested species compiled by the Monmouth County Department of Public Works and Engineering, and the Division of Shade Tree for seashore areas in the County. This is a general list and should not be considered all encompassing. Monmouth County's seashores include diverse planting habitats and microclimates. We recommend consulting a licensed landscape architect or licensed tree expert to determine what is appropriate for a specific site. Please note that trees listed may be susceptible to deer browsing and it is also recommended you refer to the Rutgers Cooperative Extension's Fact Sheet for landscape plants rated by deer resistance found at their web site <http://njaes.rutgers.edu/deerresistance>). Minimum tree pit sizes shall be two to three times the diameter of the rootball.

NOTE: This list is for general information purposes only and does not address the varied and specific existing conditions of your site. Please seek the professional advice of a NJ licensed landscape architect and or a licensed tree expert for final tree types appropriate for your specific site.

The Shore Area will be described as four zones for planting purpose they are as follows:

Shore Zone 1: Oceanfront exposed to salt spray and wind, adjacent to beach or back of dune

Shore Zone 2: First ocean block

Shore Zone 3 Landward, second and third blocks from the ocean

Shore Zone 4: Bayside, All plants in Shore Zones 1-3 are generally suitable for Zone 4.

Shore Zone 1: Oceanfront exposed to salt spray and wind

Trees and Shrubs (Not for Streets)

Recommended Native Trees

Cedar, Eastern Red

Juniperus virginiana

Recommended Native Shrubs

Holly, Inkberry

Waxmyrtle, Southern

Bayberry, Northern

Plum, Beach

Sumac, Shining

Sumac, Staghorn

Sumac, Smooth

Ilex glabra

Myrica cerifera

Myrica pensylvanica

Prunus maritima

Rhus copallina

Rhus typhina

Rhus glabra

Some Acceptable Non-Native Shrubs

Hydrangea, Bigleaf

Juniper, Pfitzer

Hydrangea macrophylla

Juniperus chinensis 'Pfitzeriana'

Native Grasses

Beachgrass, American

Bluestem, Little

Ammophila brevigulata

Andropogon scoparius

Shore Zone 2: First ocean block (Possibly for some Street uses)

Recommended Native Tall Trees

Hackberry, Common
Locust, Honey (thornless variety)
Holly, American
Cedar, Eastern Red
Pine, Pitch
Planetree, London

Celtis occidentalis
Gleditsia triacanthos var. *inermis*
Ilex opaca
Juniperus virginiana
Pinus rigida
Platanus x acerifolia

Some Acceptable Non-Native Tall Trees

Ginkgo (male only)
Spruce, Colorado

Ginkgo biloba
Picea pungens

Recommended Native Small Trees

Serviceberry, Shadblow
Arborvitae, Eastern
Viburnum, Blackhaw

Amelanchier canadensis
Thuja occidentalis
Viburnum prunifolium

Some Acceptable Non-Native Small Trees

Cherry, Japanese Flowering

Prunus serrulata & cultivars

Shore Zone 3: Landward second and third block from ocean (Street Use)

Recommended Native Tall Trees

Maple, Red
Cedar, Atlantic White
Persimmon, Common
Gum, Sweet
Gum, Sour
Pine, Pitch
Pine, Virginia
Oak species
Sassafras

Acer rubrum
Chamaecyparis thyoides
Diospyros virginiana
Liquidambar styraciflua
Nyssa sylvatica
Pinus rigida
Pinus virginiana
Quercus sp.
Sassafras albidum

Recommended Native Small Trees

Dogwood, Flowering
Magnolia, Swamp
Cherry, Choke
Viburnum, Nannyberry

Cornus florida
Magnolia virginiana
Prunus virginiana
Viburnum lentago

Shore Zone 4: All plants suitable for Shore Zones 1-3

SUGGESTED PINELAND TYPE PLANTINGS

Monmouth County south of Route 537 has a similar plant ecology to the pinelands. This region is known for its coniferous forests and sandy and acidic soils. Specific tree species perform better in these areas than others. Although not part of the Pinelands National Reserve, the Monmouth County Department of Public Works and Engineering, and the Division of Shade Tree recommend the use of native species where possible.

Following is a list of suggested species compiled by Monmouth County Department of Public Works and Engineering, and the Division of Shade Tree for pineland type plantings. This is a general list and not all encompassing. Some species may be more suited for naturalization and reforestation areas. Others may be used in the landscape and as street plantings. We recommend consulting a landscape architect or tree expert to determine what is appropriate for a specific site. Also please note that trees listed may be susceptible to deer browsing and it is recommended you refer to the Rutgers Cooperative Extension's Fact Sheet for landscape plants rated by deer resistance found at their web site (<http://njaes.rutgers.edu/deerresistance>). Minimum tree pit sizes shall be two to three times the diameter of the rootball.

NOTE: This list is for general information purposes only and does not address the varied and specific existing conditions of your site. Please seek the professional advice of a NJ licensed landscape architect and or a licensed tree expert for final tree types appropriate for your specific site.

Recommended Native Conifers

Cedar, Atlantic White
Cedar, Eastern Red
Pine, Shortleaf
Pine, Pitch
Pine, Virginia

Chamaecyparis thyoides
Juniperus virginiana
Pinus echinata
Pinus rigida
Pinus virginiana

Recommended Native Deciduous Trees

Maple, Red
Holly, American
Gum, Sweet
Magnolia, Swamp
Gum, Sour
Oak, White
Oak, Scarlet
Oak, Blackjack
Oak, Chestnut
Oak, Post
Sassafras

Acer rubrum
Ilex opaca
Liquidambar styraciflua
Magnolia virginiana
Nyssa sylvatica
Quercus alba
Quercus coccinea
Quercus marilandica
Quercus prinus
Quercus stellata
Sassafras albidum

Recommended Native Small Trees

Serviceberry, Shadblow
Plum, Beach
Oak, Bear
Oak, Dwarf Chestnut

Amelanchier canadensis
Prunus maritima
Quercus ilicifolia
Quercus prinoides