

Selecting Trees for along our Streets and Roads

The Green Valley Institute exists to help the Quinebaug-Shetucket National Heritage Corridor communities and citizens sustain their environment and quality of life while growing their economics.

We are a non-regulatory organization dedicated to:

- Improving the knowledge base from which land use and natural resource decisions are made,
- Building local capacity to protect and manage natural resources as our region grows.

The GVI was created through a formal partnership of the Quinebaug-Shetucket National Heritage Corridor and the University of Connecticut's College of Agriculture and Natural Resources, University of Massachusetts' Cooperative Extension System and other partners.



QUINEBAUG-SHETUCKET
HERITAGE CORRIDOR, INC.
Preserving the Last Green Valley



University of
Connecticut
College of Agriculture
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We tend to take trees for granted, perhaps because they are everywhere around us. We see them along our rural roads, streets and highways, in woods and yards. They seem to grow and do well without our help. But the growing conditions in an roadside environment is very different from a rural one. Air pollution, lack of sufficient soil for good root growth, insufficient moisture to the roots - not to mention being used as a bike rack – all serve to increase the stress for the tree along a road.

The urban forest is a unique environment, and requires special attention. Urban forestry acknowledges that the trees growing in an urban area are out of their natural element and need special care.

Value of Urban Trees

The value of urban trees adds far more to our quality of life than the effort to select, plant and maintain them. Trees provide many ecological or environmental benefits.



A short list includes:

- Reduced noise and visual pollution
- Increased shade can reduce energy costs by 10-50%
- Decreased storm water runoff
- Reduction of CO₂, and other greenhouse gases
- Cleaner air
- Better water quality
- Lower water treatment costs
- Stabilized soil
- Increased wildlife habitat
- Smog reduction

Trees also provide many cultural benefits as well, including:

- Increasing real estate values
- Enhancing our main thoroughfares
- Adding to the scenic quality for tourists
- Increasing pedestrians in retail business areas
- Providing a calming influence



Understand the Site

Just as in a rural forest, with its interdependent ecosystem of trees, soils, plants and animals, the urban forest is also an ecosystem. The layout of plazas, buildings, streets, underground utilities, trees and parks define the urban ecosystem. Each specific site also is a micro-environment, a windy corner is a different climate than a sheltered spot. Heat and glare, strong winds, air pollution and road salt runoff all can have considerable negative effects on the health of a tree. Trees planted near building corners, and in wind tunnels created by tall buildings, can suffer from excessive drying. The urban forest is a difficult place for a tree to grow, making wise choices in tree selection will increase a tree's life span and reduce the cost of long-term maintenance.

Look at the potential site and ask yourself

How much space is there between the road and a building or the next tree?

Are there overhead wires?

Will a tree get enough sun to grow?

Will it be surrounded by impervious surfaces and not get needed water?

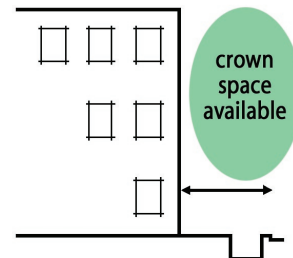
How much space is there for the canopy to develop?

What other tree species are nearby?

What is the biggest root area you can provide?

Will it become a bike rack?

Would it block a storefront?



Once you have answered those questions, the list on the reverse will give you a list of trees that might be appropriate for that situation.

The table below lists trees that have a track record of success in stressful conditions and are recommended for consideration in planting areas near streets and roads. They are grouped by the crown space available at a particular site, the left column are taller trees for sites without overhead wires, and the right column are trees that shorter at maturity and are appropriate for an area with typical overhead wires.

Possible option if crown area is **10' wide**, and there are **NO** overhead wires:

Quercus robur 'Fastigiata'

Possible option if crown area is **10' wide**, and there **ARE** overhead wires:

none.

Possible option if crown area is **15' wide**, and there are **NO** overhead wires:

trees listed above and to the right, and

Acer rubrum 'Armstrong'

Tilia cordata 'Chancellor'

Possible option if crown area is **15' wide**, and there **ARE** overhead wires:

Acer buergerianum

Crataegus phaenopyrum 'Fastigiata'

Crataegus x lavallei

Malus spp.

Syringa reticulata

Possible option if crown area is **20' wide**, and there are **NO** overhead wires:

trees listed above and to the right, and

Acer x Freemanii 'Armstrong'

Corylus colurna

Ginkgo biloba 'Fastigiata'

Sophora japonica 'Fastigiata'

Tilia x euchlora

Ulmus 'Homestead'

Possible option if crown area is **20' wide**, and there **ARE** overhead wires:

trees listed above, and

Crataegus phaenopyrum

Maackia amurensis

Ostrya virginiana

Possible option if crown area is **25' wide**, and there are **NO** overhead wires:

trees listed above and to the right, and

Cercidiphyllum japonicum

Fraxinus pennsylvanica 'Summit'

Ginkgo biloba

Pyrus calleryana 'Aristocrat'

Quercus palustris

Quercus robur 'Fastigiata'

Tilia americana 'Redmond'

Tilia tomentosa

Possible option if crown area is **25' wide**, and there **ARE** overhead wires:

trees listed above, and

Acer buergerianum

Acer campestre

Crataegus viridis 'Winter King'

Possible option if crown area is **35' wide**, and there are **NO** overhead wires:

trees listed above and to the right, and

Acer rubrum 'October Glory'

Acer x Freemanii 'Autumn Blaze'

Aesculus flava (octandra)

Aesculus x carnea

Celtis occidentalis

Gleditsia triacanthos var. *inermis*

Liquidambar styraciflua

Platanus x acerifolia 'Bloodgood'

Quercus coccinea

Quercus x shumardii

Sophora japonica

Tilia cordata

Tilia cordata 'Chancellor'

Tilia x euchlora

Ulmus 'Homestead'

Possible option if crown area is **35' wide**, and there **ARE** overhead wires:

only the trees listed above

Possible option if crown area is **50' wide**, and there are **NO** overhead wires:

trees listed above and to the right, and

Quercus robur

Quercus rubra

Ulmus parvifolia

Zelkova serrata

Possible option if crown area is **50' wide**, and there **ARE** overhead wires:

only the trees listed above

Steps to Success:

1. Select a tree that is the right tree for that site from the list above; if the available space is small, a large round tree just won't fit.
2. Provide the best root environment. Roots only survive where there is sufficient oxygen and water for growth, and primarily rely on getting that within the top two feet of soil. It's important to maximize the root space and increase water infiltration by:
 - Enlarging the tree well dimension if planting in an impervious area
 - Use porous pavement, such as dry laid bricks in surrounding sidewalk so water can penetrate to the soil below
 - Combine the planting area for several trees into one continuous planting strip, tree roots will happily share root space
 - If there is a park or lawn nearby, let the roots 'borrow' the adjacent soil by planting at the back of a sidewalk instead of at the curb side
 - Consider using structural soil products that provide for root space under sidewalks
3. Follow proper planting techniques and make sure root flare is at, or slightly above, ground level.
4. Water at least twice a week during the first two months, and during dry spells in the first two years.

Additional Information:

Green Valley Institute: www.GreenValleyInstitute.org

University of Connecticut's Plant Database: www.hort.uconn.edu/plants/

This fact sheet was derived from *Urban Tree Selection Manual* a publication of the University of Connecticut, College of Agriculture and Natural Resources, available for \$5 +\$2.50 shipping and handling, from the Resource Store (860) 486-3336



A publication of the Green Valley Institute.
Please contact us at 860-486-1215 to schedule a workshop on this topic.