

ARBORICULTURAL  
SPECIFICATIONS AND  
STANDARDS MANUAL

CITY OF  
GREENVILLE, ILLINOIS

## Arboricultural Specifications Manual

### Authority

Pursuant to authority granted under "An Ordinance Establishing Article VI of Chapter XVIII of the Revised Ordinances of the City of Greenville, Illinois, No. 2373", adopted by the City Council of the City of Greenville, Illinois on the 9th day of May, 1995, and approved by the Mayor of the City of Greenville, Illinois, on the 9th day of May, 1995, the City Arborist having had the advice and assistance of the Tree Committee, established in the said Ordinance, hereby promulgates the following as the Arboricultural Specifications and Standards of Practice for the City of Greenville, Illinois, hereinafter called the Arboricultural Specifications and Standards Manual.

### A Policy

1. All work on public trees shall comply with the "Tree Ordinance" of the City of Greenville, Illinois, and this Arboricultural Specifications and Standards Manual.
2. The Arboricultural Specifications and Standards Manual shall be adhered to at all times, but it may be amended at any time that experience, new research, or laws indicate that improved methods or circumstances make it advisable, and only then with the advice and assistance of the City of Greenville Tree Committee, all as provided for in the above said Ordinance No. 2373.
3. The policy of the City of Greenville Tree Committee and the City Arborist shall be to cooperate at all times with the public, property owners, other municipal departments, and with appropriate not-for-profit organizations.

### B. Species, Cultivars or Varieties

1. The following Table I contains a list of tree species or their varieties acceptable and approved for planting on City property.
2. Unacceptable tree species or their varieties contained in the following Table II shall not be planted on City-owned property, except in special locations where because of characteristics of adaptability or landscape effect they can be used to public "advantage.
3. Other tree species or their varieties not listed in the foregoing Table I may be planted on City-owned property, but only desirable trees of good appearance, beauty and adaptability that are generally free from injurious insects, diseases or other limitations may be planted.
4. Where certain planting sites have been assigned a particular species or variety, only the designated species or variety shall be planted on such sites, unless the plan is revised by the City Arborist with the advice and assistance of the Greenville Tree Commission.  
The Tree Committee, in conjunction with the City Arborist, shall review, at least once every two years, the species, cultivars and varieties listed on Table I to determine whether any should be removed or whether certain new species, cultivars or varieties of proven adaptability and value should be added; and the Tree Committee shall similarly review the trees listed in Table II to determine whether any should be removed or whether certain new species, cultivars or varieties should be added thereto.

### . C. Planting Stock Requirements

## 1. Size

Unless otherwise specified by the City Arborist all medium to large deciduous trees and their cultivars or varieties shall conform to American Association of Nurserymen Standards, shall be free of branches to a point not more nor less than sixty (60) percent of their height, be at least  $1\frac{1}{4}$  to  $1\frac{1}{2}$  inches in diameter at a point six (6) inches above ground level, and be at least eight (8) to ten (10) feet in height when planted.

All *small* deciduous trees and their cultivars or varieties shall be at least five (5) feet in height and have at least six (6) branches on the upper half of the trunk.

## 2. Grade

Unless otherwise allowed for specific reasons, all trees shall have comparatively straight trunks, well developed leaders and tops, and the roots shall not only be characteristic of the species, cultivar or variety, but also shall exhibit evidence of proper nursery pruning practices. They shall have acceptable balance between top and root. At the time of planting, all trees must be free of mechanical injuries, and other objectionable features that tend to affect the future form and beauty of the plant.

## 3. Location and Spacing

Based on a 40-year cycle, no tree which will attain a trunk diameter greater than fifteen (15) inches shall be planted in a treelawn less than five (5) feet in width. In tree lawns less than five (5) feet in width, or where overhead lines or building setback presents a special problem, the selection of planting site and *species* shall be determined by the City Arborist.

Where there is a treelawn less than five (5) feet in width, it is recommended that legal steps be taken to obtain easement rights to plant beyond the sidewalk on private property.

Trees shall be planted at least fifteen (15) feet from driveways and alleys, and at street intersections.

No tree shall be planted closer than ten (10) feet to a utility pole to allow room for line maintenance.

Spacing of trees shall be determined by the City Arborist in accordance with **local conditions; the species, cultivars or varieties** used, and their mature height, spread and form. Generally, all large trees, at maturity, shall be spaced forty (40) to sixty (60) feet, center-to-center; all medium sized trees shall be spaced a minimum of thirty-five (35) feet, center-to-center and all small trees shall be spaced a minimum of twenty-five (25) feet, center-to-center.

All planting on unpaved streets without curbs or sidewalks must have approval of the City Arborist, who shall determine the location of the tree, so that it will not be injured or destroyed when the street is curbed and paved, or when sidewalks are constructed.

## 4. Methods of Planting and Support

Most small, deciduous trees and shrubs may be moved bare-rooted unless otherwise indicated. Roots of bare-rooted trees and shrubs must be protected

against drying out.

All coniferous trees shall be moved balled and burlaped. Balled roots should be prevented from drying out at the surface of the ball and they should be protected against freezing.

Pits for the planting of bare-root plants shall be at least twelve (12) inches larger in diameter than the diameter of the root system in order to accommodate the roots without crowding. For balled trees, the pits should be a minimum of twelve (12) inches larger than the diameter of the ball of soil to allow proper backfill.

Plants shall be planted no deeper than previously grown, with due allowance for settling.

In poorly drained soil, artificial drainage shall be provided the root system of any species intolerant of wet sites, or a species tolerant of wet sites shall be used.

Top soil, compost, peat moss, or an acceptable soil mixture shall be placed about the roots of bare-root stock, or in the backfill around balled stock. When the planting is completed, the entire root area shall be thoroughly saturated with water and burlap wrappings shall be cut.

Although pruning should be done to develop a balance with the root system, excessive pruning at the time of transplanting should be avoided.

Tree trunks shall be suitably wrapped and guyed, or supported in an upright position, according to accepted arboricultural practices. The guys or supports shall be installed so that they will neither girdle or cause serious injury to the tree nor endanger public safety.

#### D. Early Maintenance

##### 1. General

Newly planted trees, shrubs and other plants require special maintenance for one or two growing seasons following planting. All maintenance practices shall follow approved arboricultural standards.

##### 2. Watering

Ample soil moisture shall be maintained following planting. A thorough watering once in five (5) to ten (10) days, depending on soil type and drainage provisions, is usually adequate during the growing season. A soil auger can be used to check the adequacy of moisture in the soil ball and/or backfill.

##### 3. Fertilization

Adequate quantities of the essential nutrient elements should be available after new root growth starts. However, provision of good drainage and adequate moisture of the backfill, or the soil ball on balled plants, is more important than fertilization immediately following planting.

##### 4. Insect and Disease Control

Frequent and thorough inspections shall be made to determine when measures for the control of insects and diseases shall be taken. Plants are in a weakened condition following transplanting and they **are more susceptible to insects,**

**especially borers, and disease** than are vigorously growing trees. Where it is necessary to spray, insecticides or fungicides shall be used that are labeled for the purpose intended.

5. Pruning

Pruning newly planted trees shall consist of removing dead, broken or injured branches; the suppression of rank, uneven growth that affects form. Water sprouts shall be removed when they reach the diameter of a pencil.

Pruning shall be practiced as often thereafter as needed to assure sturdy crotch development.

Tree crowns should be elevated as growth characteristics and location indicate. Newly planted trees need not have lower branches removed until they are well established.

**E. General Maintenance**

1. Pruning and Removal

No topping or dehorning of trees shall be permitted, except by written permission of the City Arborist. Proper cabling and bracing shall be substituted for this practice wherever possible.

All large, established trees shall be pruned to the following height to allow free passage of pedestrians and vehicular traffic: At least seven (7) feet over sidewalks and a minimum clearance of fourteen (14) feet over all streets.

It shall be the policy of the City Arborist to cooperate with the municipal or utility lighting engineer, and vice versa, in the placement and selection of lighting standards and the development of a system of tree pruning that will give effective street illumination.

All cuts shall be made with a saw or pruner and only at the nodes or crotches. No stubs shall be left. No spurs or climbing irons shall be used in the trees, except when trees are to be removed.

All dead branches shall be removed; branches that cross or rub should be pruned to eliminate the problem.

All wounds over three (3) inches in diameter shall be treated with a suitable tree-wound dressing.

To prevent the spread of infectious diseases, all pruning tools must be disinfected before being used on a new tree. Whenever streets are to be blocked off to public service, all police and fire departments shall be notified of the location and length of time the street will be blocked. Notifications shall be given these departments upon the removal of such barriers or if such barriers are to remain longer than originally expected.

To protect the public from danger, suitable street and sidewalk barriers, highway cones, or signs shall be used when pruning a tree. Signals, flares or flasher lights shall be placed on all barriers or obstructions remaining in the street after dark.

The stumps of all removed trees shall be cut to at least six (6) inches below the ground level, the soil cavity shall be filled with soil and the area leveled.

## 2. Spraying

Suitable precautions shall be taken to protect and warn the public that spraying is being done.

Spraying shall be done only for the control of specific diseases or insects, with the proper materials in the necessary strength, and applied at the proper time, to obtain the desired control. All spraying practices shall conform to federal and state regulations.

Dormant oil sprays shall not be applied to Sugar Maple, Japanese Maple, Beech, Flowering Dogwood, Hickory, Walnut, and most crabapple trees. Dormant oil sprays shall be applied only when the air temperature is at least 40 degrees for a period of twenty-four (24) hours after spraying.

## 3. Fertilization

Fertilization of public trees shall follow the recommendations of the Natural History Surveyor or other accepted arboricultural standards.

Methods of application of fertilizers shall be specified by the City Arborist.

## 4. Cavities

Extensive cavity work should be performed on trees only if they are of sufficiently high value to justify the cost. All cavity work shall conform to the National Arborist Association or other acceptable arboricultural standards.

## 5. Cabling and Bracing

As a general rule, cables should be located above the crotch at a point approximately two-thirds (2/3) of the distance between the crotch and tops of the branch ends. Rust-resistant cables, thimbles, and lags should be used. The ends of a cable should be attached to hooks or eyes of lags or bolts inserted near the ends of the branches; thimbles must be used in the eye splice in each end of the cable. In no instance shall cable be wrapped around a branch.

All cabling and bracing practices with screw rods shall follow National Arborist Association or other accepted arboricultural standards.

## F. Tree Protection

### 1. Construction Zone

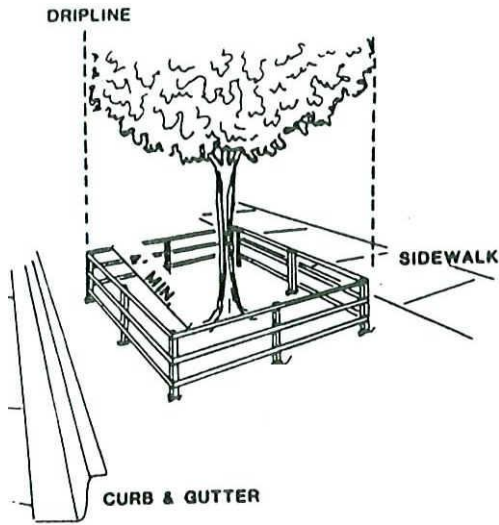
It is the responsibility of the permit holder, as a condition of permit, to protect all public trees located on the adjacent public right-of-way that may reasonably be expected to be affected or damaged by construction activities. Existing trees subject to construction damage shall be boxed, fenced, or otherwise protected before any work is started. The trees to be protected, the method of protection, and the dimensions involved shall be determined by the City Arborist conjunctly with the permit holder or his/her agent. Once assembled, no boxing, fencing or other protection device shall be removed without prior approval of the City Arborist, and there will be no construction activity or material within the **enclosure**.

Dimensions: small trees, as determined by the City Arborist, shall be boxed or

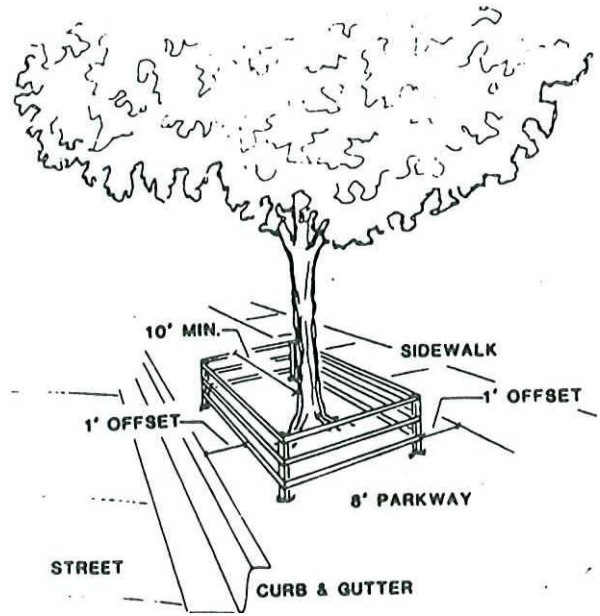
fenced in such a manner as to encompass the entire drip line area of the tree (Figure 1). In no case shall the enclosure be less than two (2) feet from the centerline of the tree. Medium to large trees shall be boxed or fenced in a manner determined by the City Arborist based on sound arboricultural practices. In no case shall the protective device be closer than ten (10) feet from the centerline of the tree except in those portions bordered by the public sidewalk or curb, in which case the protective device shall be offset one (1) foot wherever possible (Figure 2).

## 2. Utility Installations (Underground)

All installations of underground utilities upon the public right-of-way are subject to approval by the City. Any and all installations that impact on public trees due to underground conflicts (roots) are specifically subject to the review and approval of the City Arborist before the project starts.

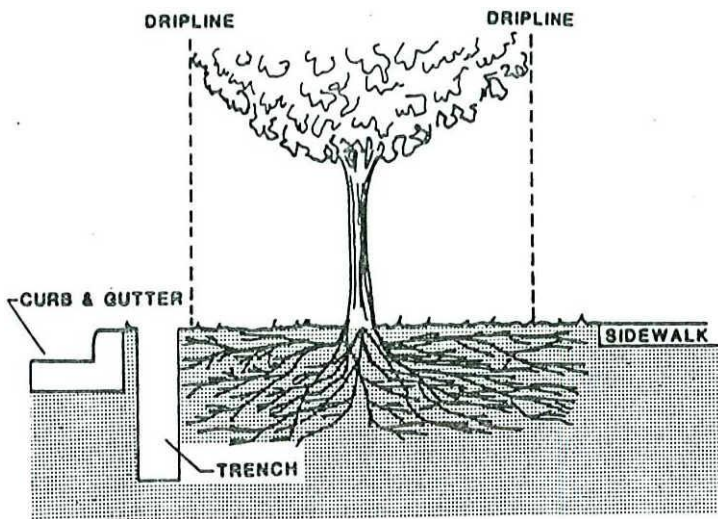


**FIGURE 1 - SMALL TREES**  
 MINIMUM FENCING REQUIREMENTS



**FIGURE 2 - MEDIUM TO LARGE TREES**  
 MINIMUM FENCING REQUIREMENTS

Trenching Small Trees: Open trenching in the root zone area of a public tree is prohibited except in cases where the trenching falls outside the dripline of the tree involved (Figure 3). In some instances, exceptions may be allowed if in the opinion of the City Arborist the impact of trenching upon the tree will be negligible.



**FIGURE 3 - SMALL TREES**  
 TRENCHING REQUIREMENTS



Trenching and Tunneling - Medium to Large Trees: When the dripline of trees becomes extensive or overlapping, the only reasonable means of utility installation on the public right-of-way is a combination of trenching and tunneling. This applies particularly to trees in excess of five (5) inches in diameter. All trees in excess of five (5) inches in diameter where there is insufficient space to bypass the dripline by trenching must be tunneled. In no case shall the tunnel be less than two feet in depth. When the tunneling procedure is required, the Distance of the tunnel from the face of the tree is determined by the diameter of the tree 4 feet from the ground line. Unless specified otherwise by the City Arborist, all dimensions apply as illustrated in Figure 4 with the accompanying table.

Since the cutting of larger roots is unavoidable in a trenching operation, all roots over two (2) inches in diameter must be cut cleanly and painted with an appropriate tree wound dressing. All trenches should not stay open longer than necessary and must be properly barricaded.

## G. Container Planting

### 1. Installation Requirements

No container may be placed in a manner which on public property where such would constitute a visibility hazard.

The planting medium shall be of sufficient volume to support and sustain plant materials, and the design and construction details shall be approved by the City Arborist.

### 2. Maintenance of Containers

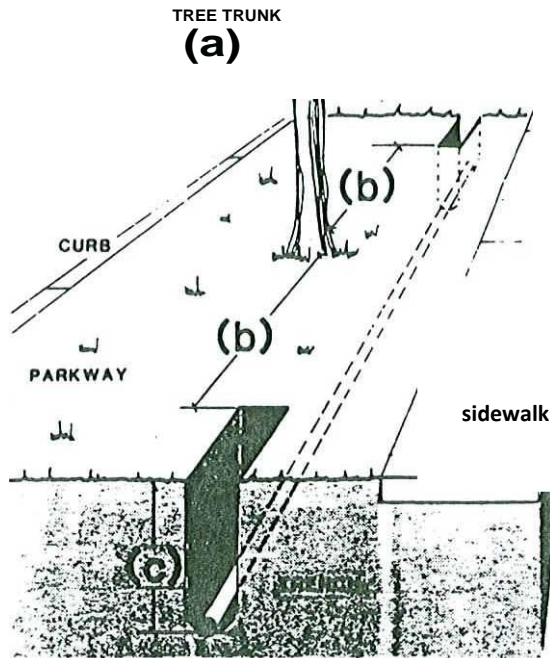
Containers, plants and their maintenance become the responsibility of the abutting property owner.

All costs arising from the establishment, maintenance or removal of plants or plant containers are to be borne by the abutting property owner..

Containers, plants and their contents must be maintained in the condition specified by original design at all times. Any planter not serving its designed aesthetical function shall be replanted or removed.

### 3. Notice to Replant or Remove

Any container and/or plant material not maintained to quality and designed standard, as required by the City Arborist, is hereby declared a nuisance. Anyone failing to abate such a nuisance after



**FIGURE 4 - MEDIUM TO LARGE TREES**  
**TRENCHING AND TUNNELING REQUIREMENTS**

Specifications for Trenching and Tunneling for the  
 Installation of Public Utilities

Tree Diameter (a)	Distance of Tunnel from Face of Tree Trunk - Each Side (b)	Recommended Depth of Tunnel or Trench ©
5 - 9"	6'	2 ½'
10 - 14"	10'	3'
15 - 19"	12'	3 ½'
20" or more	15'	4'

notice is given shall be guilty of a misdemeanor and the City Arborist may remove such nuisance.

H. Amendments

The City Arborist shall have the authority to modify, amend, or extend, with the advice and assistance of the City of Greenville Tree Committee, the Arboricultural Specifications and Standards of Practice Manual at any time that experience indicates improved methods or whenever circumstances make it advisable.

**TABLE I - PAGE 1**  
**LARGE TREES**  
**SPACING: 40' minimum**  
**PARKWAY WIDTH: 8' minimum**

Scientific Name	Common Name	Cultivars
<b>Acer saccharum</b>	Sugar Maple	'Green Mountain' 'Fairview' 'Goldspire'
<b>Alnus incana</b>	Tag Alder	
<i>Celtis occidentalis</i>	Hackberry	
<i>Celtis laevigata</i>	Sugar Hackberry	
<i>Fagus grandifolia</i>	<b>American Beech</b>	
<i>Fagus sylvatica</i>	European Beech	
<b>Fraxinus americana</b>	White Ash	'Autumn Applause' 'Autumn Purple' 'Champaign County'
<b>Fraxinus pennsylvanica</b>	Green Ash	'Honeyshade' 'Marshall Seedless' 'Summit'
<i>Fraxinus quadrangulata</i>	Blue Ash	
<i>Ginkgo biloba</i>	Ginkgo (male)	
<i>Gymnocladus dioicus</i>	Kentucky Coffee (male)	
<i>Liquidambar styraciflua</i>	Sweetgum	
<i>Liriodendron tulipifera</i>	Tuliptree	
<i>Magnolia acuminata</i>	Cucumber Tree	
<i>Platanus acerifolia</i>	London Plane	
<i>Quercus alba</i>	White Oak	
<i>Quercus bicolor</i>	Swamp White Oak	
<i>Quercus imbricaria</i>	Shingle Oak	
<b>Quercus rnacrocarpa</b>	Bur Oak	
<b>Quercus coccinea</b>	Scarlet Oak	
<i>Quercus robur</i>	English Oak	
<i>Quercus rubra</i>	Red Oak	
<i>Quercus shumardii</i>	Shumard Oak	
<i>Quercus muehlenbergii</i>	Chinquapin Oak	
<i>Sassafras albidum</i>	Sassafras	
<i>Taxodium distichum</i>	Bald Cypress	
<b>Tilia americana</b>	Basswood	
<i>Tilia heterophylla</i>	Beetree Linden	
<i>Tilia cordata</i>	Littleleaf Linden	'Chancellor' 'Greenspire'
<i>Tilia euchlora</i>	<b>Crimean Linden</b>	
<i>Tilia platyphyllos</i>	Bigleaf Linden	
<i>Tilia tomentosa</i>	Silver Linden	
<i>Tilia petiolaris</i>	Pendent Silver Linden	



# TABLE I - PAGE 2

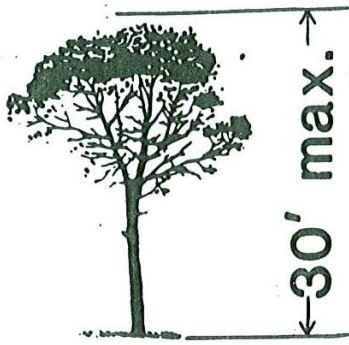
## MEDIUM TREES

**SPACING: 35' minimum**

**PARKWAY WIDTH: 6' minimum**

Scientific Name	Common Name	Cultivars
Acer platanoides	Norway Maple Red	
<b>Acer rubrum</b>	Red Maple	'Autumn Flame' 'October Glory' 'Red Sunset' 'Schlesinger' 'Scarlet Sentinel' 'September Song' 'Armstrong' 'Bowhall'
Alnus glutinosa	Black Alder	
Betula nigra	River Birch	
Carpinus betulus	European Hornbeam	
Cercidiphyllum japonicum	Katsuratree	
Cladrastic lutea	Yellowwood	
Corylus colurna	Turkish Filbert	
Eucommia ulmoides	Hardy Rubber Tree	
Maclura pomifera	Osage Orange (male)	
Magnolia kobus	Kobus Magnolia	
Nyssa sylvatica	Black Gum	
Phellodendron amurense	Amur Cork Tree	
Prunus sargentii	Sargent Cherry	
Pyrus calleryana	Bradford Pear	'Aristocrat' 'Chanticleer' "Redspire"
Quercus acutissima	Sawtooth Oak	
Sophora japonica	Pagodatree	
Zelkova serrata	Zelkova Tree	

Medium sized trees are better suited for planting on normal City parkways than their larger counterparts. Large trees require more living space, and for this reason it is recommended that they be planted on the private side of the sidewalk whenever possible. The overall objective of proper tree selection is to select the right tree for the right location in order that one may benefit from the tree without being subject to future maintenance liabilities or hazards.



# TABLE I – PAGE 3

**SMALL TREES**  
**SPACING: 25' minimum**  
**PARKWAY WIDTH: 5' minimum**

Scientific Name	Common Name	Cultivars
Acer ginnala	Amur Maple (tree form)	
Acer Palmatum	Japanese Maple	
Acer Pennsylvanicum	Striped Maple	
Amalanchier canadensis	Shadblow Serviceberry (tree form)	
Amalanchier grandiflora	Apple Serviceberry (tree form)	
Amalanchier laevis	Allegheny Serviceberry (tree form)	
Carpinus caroliniana	American Hornbeam	
Cercidiphyllum japonicum	Katsura Tree	
Cornus florida	Flowering Dogwood	
Cornus kousa	Japanese Dogwood	
Crataegus sp.	Hawthorn (Thornless) (disease resistant)	
Halesia carolina	Carolina Silverbell	
Koelreuteria paniculata	Goldenrain Tree	
*Malus sp.	Flowering Crab	See Appendix A
Ostrya virginiana	Ironwood	
Syringa japonica	Japanese Tree Lilac	

Small trees are appropriate in parkway locations where due to space limitations larger trees cannot be properly utilized without creating spacing conflicts with existing trees. Height limitations imposed by overhead utilities also necessitate the use of appropriate small trees in order to avoid line conflicts and the necessity of excessive utility trimming that results in disfigured trees. On the whole, small trees which tend to be more ornamental than their larger counterparts can create an added aesthetic dimension to the streetscape.

\*Selected cultivars or varieties of suitable form and resistant to scab disease (see Appendix A for listing of recommended crabs for local use).

Table II

The following *is* a listing of trees more or less common to our area that are not suitable as street or parkway trees. Their lack of suitability *is* based on undesirable growth habits, fruiting habits, form, susceptibility to serious diseases, propensity to storm damage, and a host of other limitations too numerous to mention. The limitations listed for each tree or *species* group are not all-inclusive, and lists only the more serious problems encountered locally. In essence, there are far too many superior street or parkway trees listed in Table I to warrant the use of any of the trees listed in Table II except under special circumstances.

Though many of the trees listed in Table II are presently growing on our parkways as the result of previously unrestricted plantings, they do constitute a maintenance liability to the City and as such upon removal should be replaced with species listed in Table I.

Scientific Name	Common Name	Problem or Limitation
Abies sp.	Fir	Form - visibility hazard
Acer negundo	Boxelder	Fast growing, weak wooded
Acer platanoides	Norway Maple	Local problem, verticillium wilt
<b>Acer saccharinum</b>	Silver/Soft Maple	Subject to rot/storm damage
Aesculus sp.	Horsechestnut	Foliar diseases, leaf blotch
Ailanthus altissima	Tree of Heaven	Weak wooded, aggressive
Albizzia sp.	<b>Mimosa</b>	Not hardy, disease prone
Betula sp.	Birch	<b>Environmental stress, borers</b>
Catalpa sp.	Catalpa	Littering fruit
Diospiros	<b>Persimmon</b>	Littering fruit
Gleditsia sp.	Honeylocust	Serious disease/insect problem
Juglans sp.	Walnut	Littering fruit
Juniperus sp.	Juniper	Form - visibility hazard
Malus sp.	Common Apple	Littering fruit, disease prone
Morus sp.	Mulberry	Littering fruit
Picea sp.	Spruce	Form - visibility hazard
Pinus sp.	Pine	Form - visibility hazard
Platanus occidentalis	Sycamore (Amer.)	Disease - twig blight
Populus sp.	Poplar	Fast growing, weak wooded
Prunus sp.	Cherry and Plum	Littering fruit, disease prone
pyrus sp.	Common Pear	Littering fruit
Quercus palustris	Pin Oak	Iron chlorosis
Robinia sp.	Black Locust	Shallow rooted, borers
Salix sp.	willow	Weak wooded, storm damage
Thuja sp.	Arbor-vitae	Form - visibility hazard
Ulmus sp.	Elm	Serious disease, Dutch Elm

APPENDIX A

The following selections or cultivars of flowering crabs are recommended for local use based on adaptability and resistance to foliar diseases. Not all are suitable as parkway or street trees because of growth habits or characteristics that pose visibility or other obstruction problems. However, most selections listed may also be used to good landscape advantage on the homegrounds, provided that a local source is available.

Malus Cultivar	Flower	Fruit	Form	Size	Comments
M. 'Adams'	carmine to pink	5/8" red	Rounded, dense	20-25'	Persistent fruit
M. baccata Jackii	Slight pink to white	½" purplish red	Upright, spreading	30-40'	Large size
M. 'Baskatong'	Reddish purple	1" reddish purple	Spreading, arching	25'	
M. 'Beverly'	Dark red to white	½" - ¾" bright red	Upright, spreading	15-25'	Good street tree
M. 'Bob White'	Pink to white	5/8" yellow	Rounded	15-20'	Persistent fruit
M. 'Calloway'	Deep pink to red	1" red	Rounded	15-20'	
M. 'Candied Apple'	Red to pink	5/8" bright red	Horizontal, weeping	10-15'	
M. 'Centurian'	Red to rose red	5/8" glossy red	Narrow, upright	25'	Good narrow tree
M. 'Coralburst'	Rose pink	½" bronze	Rounded	8'	Dwarf habit
M. 'David'	Pink to white	½" scarlet-red	Compact	15-20'	Good foliage
M. 'Dolgo'	Pinkish to white	1 ¼" - 1 ½" bright red	Open	40'	Fruit makes jelly
M. 'Donald Whyman'	Pink to white	3/8" bright red	Compact, rounded	15-20'	Good bird food
M. 'Floribunda'	Deep pink to white	3/8" red and yellow	Rounded, dense	25'	Japanese Crab
M. 'Golden Hornet'	White	1" yellow	Compact	15-20'	Persistent fruit
M. 'Harvest Gold'	White	2/3" golden	Upright	20'	Good street tree
M. 'Henry Kohankie'	White and pinkish	1 ¼" red	Rounded	20'	
M. hupehensis	White	3/8" red	Vase shape	25'	Picturesque
M. 'Indian Magic'	Red to rose pink	½" glossy red	Rounded	15-20'	Outstanding fruit
M. 'Katherine'	Pink to white	2/5" yellow	Loose open	20'	Double flower
M. 'Liset'	Crimson to rose red	5/8" glossy crimson	Rounded	15-20'	Excellent red
M. 'Mary Potter'	Pink to white	3/8" yellow	Rounded	10'	Shrub-like
M. 'Milton Baron'	White	Red	Rounded	15-20'	
M. 'Ormiston Roy'	Apple-pink to white	3/8" yellow	Rounded, dense	25-30'	Persistent fruit
M. 'Pink Spire'	Pink	½" maroon	Upright, oval	15'	

## APPENDIX A

<b>Malus Cultivar</b>	<b>Flower</b>	<b>Fruit</b>	<b>Form</b>	<b>Size</b>	<b>Comments</b>
M. 'Prince George'	Rose pink	No fruit	Upright, dense	15-20'	Double flower
M. 'Profusion'	Purplish red	½" oxblood red	Upright, spreading	25'	
M. 'Red Baron'	Dark red	Dark red	columnar upright		Compact grower
M. 'Red Jewel'	White	½" cherry red	Horizontal branching	15'	Good fruiting
M. 'Red Splendor'	Pink	½" red	Upright, spreading	20'	Persistent fruit
M. 'Robinson'	Deep pink	3/8" glossy dark red	Upright	20-25'	Vigorous grower
M. sargentii	White	¼" dark red	Horizontal	8'	Shrub-like
M. 'Snowdrift'	Red to white	3/8" orange-red	Oval, dense	15-20'	Good street tree
m. 'Sugar Tyme'	Pink to white	½" rich red	Upright, oval		Persistent fruit
M. "Tschonoski"	White	1" dull, yellow-brown	Upright, oval	30'	Good foliage
M. 'Veitchii'	White	½" purple-brown	Upright, narrow	20'	
M. 'White Angel'	White	½" scarlet red	Rounded	20-25'	Good flower, fruit
M. 'White Cascade'	White	¼" lime-yellow	Pendulous	12-15'	Weeping
M. 'winter Gold'	Carmine to white	½" yellow	Broadly pyramidal	20'+	Outstanding fruit
M. Zumi 'Calocarpa'	White	3/8" brilliant red	Rounded	25'	One of the best



