

VILLAGE OF TOLONO  
CHAMPAIGN COUNTY, ILLINOIS

Ordinance No. 96-2

TOLONO TREE ORDINANCE

A revision of an ordinance for the creation of  
tree standards for Public Right of Ways

Adopted by the Board of Trustees  
of  
The Village of Tolono  
This 2nd day of April, 1996

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Published in pamphlet form by authority of the President and Board of Trustees of the Village of Tolono, Champaign County, Illinois, this 2nd day of April, 1996.

**ORDINANCE NO. 96-2  
REVISION TO THE ORDINANCE FOR THE  
CREATION OF TREE STANDARDS FOR PUBLIC RIGHT OF WAYS  
AS ADOPTED UNDER THE MUNICIPAL CODE  
OF THE VILLAGE OF TOLONO,  
CHAMPAIGN COUNTY, ILLINOIS**

**WHEREAS:**

1. The Village Board for the Village of Tolono is charged with preserving the health, safety and welfare of the public; and
2. It is responsible for safety and welfare issues concerning public right of ways.
3. It previously adopted Ordinance No. 93-2 "Creation of Tree Standards For Public Right of Ways" known as the Tolono Tree Ordinance and has determined it in the best interest of the public in the preservation of health, safety and welfare to revise said ordinance.

Be it hereby ordained by the Village Board of Trustees of the Village of Tolono, County of Champaign, State of Illinois that the "Tolono Tree Ordinance" as described above is hereby revised and amended to read in whole, as follows:

**STANDARDS FOR PLANTING TREES IN PUBLIC RIGHT-OF-WAYS IN  
TOLONO, ILLINOIS**

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- I. POLICY**
- II. PLANTING LOCATIONS**
- III. KINDS OF TREES**
- IV. QUALITY OF TREES**
- V. PLANTING PROCEDURES**

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**I. POLICY**

- (1) These Standards are to be considered as the Standards (And Establishing a Shade Tree Committee) and (An Ordinance Requiring Owners to Maintain Parkways).
- (2) These standards apply to the planting of trees by the Department of Street & Alley individuals, business, or other organizations on right-of-ways owned and maintained by the Village of Tolono.
- (3) Exceptions to these standards can only be made with the ADVANCE approval of the Village Board. Anyone seeking an exception must seek a hearing before the Village of Tolono Shade Tree Committee.

- (4) These standards take effect when approved by the Village Board.

## II. PLANTING LOCATIONS

- (1) Species and cultivars that exceed a trunk diameter of 15" at breast height within 40 years are NOT to be planted where the parkway is less than 5 feet wide.
- (2) Trees must be planted at least 10 feet from driveways and alleys, 10 feet from fire hydrants, 10 feet from utility poles, 35 feet from intersections, 35 feet from traffic signals, and 5 feet from a property line.
- (3) Trees planted under utility lines must be of species and cultivars whose height at maturity will not interfere with the lines.
- (4) Trees planted along existing Village streets are to be spaced at 30'-40' intervals for medium to large tree species and 20'-35' for small tree species.
- (5) There should be adequate space allowed for a sidewalk when trees are planted along unpaved streets or along streets without curbing.
- (6) When sufficient space is not available for a public right-of-way as a result of street widening or buried utilities, trees may be planted on private property not more than 10 feet from the public right-of-way if the property owner gives permission by signing a memorandum of understanding with the Village. This ordinance provides that it is the responsibility of the property owner to provide for all maintenance, including pruning, watering, and removal, during the existence of such trees.
- (7) Trees may be planted by the Village along publicly-owned sidewalks that go through subdivisions, not following streets, when the Village Board Shade Tree Committee deems the planting beneficial to the community as a whole. The trees may be planted either on public right-of-ways or on private property subject to the provisions of Section II (6) of this ordinance.

## III. KINDS OF TREES

- 91) Appendix A gives a list of trees approved for planting along public right-of-ways in Tolono. Only trees on this list may be used.
- (2) Appendix B gives a list of trees prohibited; these may not be used except when a specific exception has been granted under I (3) above.
- (3) Any tree species not listed on either the Approved, or species noted on the Prohibited list for which consent has been given by the Building Inspector.

#### IV. QUALITY OF TREES

- (1) All trees must be true to species, variety, and/or cultivar, and each plant must be labeled when delivered.
- (2) All trees must have normal trunks, leaders, tops, and branches typical of the species, variety, or cultivar, and exhibit evidence of proper nursery pruning practices.
- (3) All trees must be certified free of insect pests and diseases by the Department of Agriculture, Division of Entomology, State of Illinois.
- (4) All trees must be free of mechanical injuries and not show evidence of recent or previous wounds on the trunk.
- (5) All trees must be nursery grown and must have received proper fertilizing, watering, top and root pruning as is normally needed for that particular kind of tree. Plants must have been grown in nursery conditions for the past 2 years under soil and climate conditions similar to that of Tolono, Illinois.
- (6) All plants must be balled-and-burlapped. The twine used to tie the burlap must not be plastic. The balls should be of firm earth from the original soil in which the tree grew in the nursery. No trees with broken, loose, or manufactured balls are acceptable.
- (7) Plants on the list of approved medium to large trees must have trunks at least 1 1/2" in diameter measured 6" above the ground and a soil ball of at least 24" in diameter. Plants on the list of small trees must be at least 1" in diameter measured 6" above the ground and have a soil ball of at least 18" in diameter.

#### V. PLANTING PROCEDURES (See Attachment "C")

- (1) The planting hole should be 4 times larger in diameter than the diameter of the root ball and the same depth as the height of the root ball.
- (2) The root ball should be placed in the hole so that the plants are planted with the top of the ball flush with not more than 1" higher than the top of the hole.
- (3) After placing the plant in the hole, the hole should be filled with backfill so that no air pockets are left beneath or around the ball. The backfill should be tamped so that it is packed firmly.
- (4) The twine holding the burlap around the ball must be cut and the burlap loosened from around the top of the ball. Do NOT attempt to remove the burlap from beneath the ball. Any plastic or treated burlap used to protect the ball during shipment must be removed before planting.
- (5) The trunks should be vertical after planting.

- (6) Excess soil should be removed from the site and a layer of mulch placed around the tree.
- (7) Plants should be watered at the time of planting.
- (8) A lawn-mower guard of the type approved by the Shade Tree Committee should be placed around the base of the trunk.
- (9) Staking is not typically recommended; however, when necessary, follow current recommendations.
- (10) Plants should be judiciously pruned after planting to remove broken, weak, and interfering branches and multiple leaders.

## VI. 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 with 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 dictate. Newly planted trees need not have lower branches removed until they are well established.

## VII. GENERAL MAINTENANCE

### (1) Pruning and Removal

No topping or dehorning of trees shall be permitted, except by written permission of the Village Maintenance Supervisor. 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 Village Maintenance Supervisor 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 are 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 Survey or other accepted arboricultural standards.

Methods of application of fertilizers shall be specified by the Village Maintenance Supervisor.

(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.

VIII 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 Village Maintenance Supervisor 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 Village Maintenance Supervisor, and there will be no construction activity or material within the enclosure.

Dimensions: Small trees, as determined by the Village Maintenance Supervisor, shall be boxed or fenced in such a manner as to encompass the entire drip line area of the tree (Appendix D 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 Village Maintenance Supervisor 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) wherever possible (Appendix D Figure 2).

(2) Utility Installations (Underground)

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

IX. ENFORCEMENT

In the event any of the provisions of the above ordinance are violated, the Village shall have the authority to seek any one or any combination of the following remedies:

- A. Injunctive Relief.
- B. A fine for each violation in an amount not to exceed \$100.
- C. Entitlement to have any tree removed which is in violation with the cost of said removal as a lien against the abutting property and judgement against the party responsible for the violation.

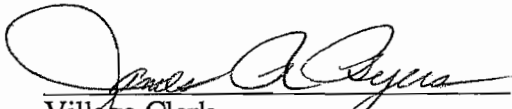
The foregoing remedies shall be available to the Village following a determination by a Village Building Inspector that the ordinance has been violated, and a ten day notice to abate has been served upon the owner of the adjacent property and/or violator, personally or by certified mail addressed to the owner or resident at the abutting property, and/or violator's address with a copy by first class mail. Notwithstanding any notice requirements or any other rights or requirements provided by law, the Village shall be entitled to removal of any violating trees as is deemed appropriate by the tree inspector.


X. ENFORCEABILITY

In the event that any portion of the foregoing ordinance is deemed invalid, the remaining provisions shall be enforceable to the extent allowed by law.

Passed, approved and adopted by the President of the Board of Trustees of the Village of Tolono, this 2nd day of April, 1996.

ATTEST:

  
Village Clerk

  
President



APPENDIX A - TREES APPROVED FOR PLANTING ALONG  
PUBLIC RIGHT-OF-WAYS IN TOLONO, ILLINOIS

MEDIUM TO LARGE TREES (HEIGHT 40' AND UP)

Acer nigrum - Black Maple  
Acer rubrum - Red Maple  
Acer saccharum - Sugar Maple  
Alnus cordata - Italian Alder  
Alnus glutinosa - European Alder  
Celtis laevigata - Sugar Hackberry  
Celtis occidentalis - Hackberry  
Cercidiphyllum japonicum - Katsura Tree  
Cladrastis lutea - Yellowwood  
Corylus colurna - Turkish Filbert  
Eucommia ulmoides - Hardy Rubber Tree  
Fraxinus americana - White Ash  
Fraxinus excelsior - "Hessei" - Hesse European Ash  
Fraxinus quadrangulata - Blue Ash  
Ginkgo biloba - Maidenhair Tree (only male trees approved)  
Gymnocladus dioicus - Kentucky Coffee Tree (only male trees approved)  
Liquidambar styraciflua - Sweetgum  
Liriodendron tulipifera - Tulip Tree  
Magnolia acuminata - Cucumber Tree  
Nyssa sylvatica - Sour Gum, Black Tupelo  
Phellodendron amurense - Amur Corktree  
Pyrus calleryana - Any of the cultivars, including "Aristocrat" and "Redspire"  
Sassafras albidum - Sassafras  
Quercus alba - White Oak  
Quercus bicolor - Swamp White Oak  
Quercus coccinea - Scarlet Oak  
Quercus imbricaria - Shingle Oak  
Quercus macrocarpa - Burr Oak  
Quercus robur - English Oak  
Quercus rubra or borealis - Red Oak  
Taxodium distichum - Baldcypress  
Tilia americana - American Basswood  
Tilia x euchlora - Crimean Linden  
Tilia tomentosa - Silver Linden  
Ulmus parvifolia - Lacebark Elm  
Zelkova serrata - Japanese zelkova

SMALL TREES (LESS THAN 35' TALL)

Acer buergerianum - Trident Maple  
Acer campestre - Hedge Maple  
Acer ginnala - Amur Maple  
Acer griseum - Paperbark Maple  
Acer miyabei - Miyabe Maple  
Acer tataricum - Tatarian Maple  
Amelanchier arborea - Shadbush, Serviceberry  
Amelanchier laevis - Shadbush, Serviceberry  
Carpinus betulus - European Hornbeam  
Carpinus caroliniana - Hornbeam, Ironwood  
Cornus alternifolia - Pagoda Dogwood  
Cornus florida - Flowering Dogwood  
Crataegus species - Hawthorns; only thornless cultivars are approved  
Halesia carolina - Carolina Silverbell  
Koelreuteria paniculata - Goldenraintree  
Magnolia virginiana - Laurel or sweetbay magnolia  
Malus species and varieties - Crabapple (only varieties and cultivars resistant to scab disease and fireblight are approved)  
Ostrya virginiana - Hophornbeam, Musclewood  
Prunus sargentii - Sargent Cherry  
Prunus serrulata - Japanese Flowering cherry  
Staphylea trifolia - American Bladdernut  
Syringa reticulata - Japanese Tree Lilac

APPENDIX B - TREES PROHIBITED FOR PLANTING ALONG PUBLIC  
RIGHT-OF-WAYS IN TOLONO, ILLINOIS

NOTE: There are some trees on this list of prohibited plants that are excellent for use in yards and parks; however, for one reason or another, such as being evergreen or producing an abundance of undesirable fruits, they are not suitable for planting along streets. Species on this list and species not included on the approved lists may, under certain circumstances, be planted along streets if ADVANCE approval is given by the Street and Alley Dept. and the Shade Tree Committee. The reasons for including species on the prohibited list is given below in parentheses.

- Abies species - All species and varieties of firs (evergreen)  
Acer negundo - Box elder (weak wood, disease problems)  
Acer platanoides - Norway maple (disease problems)  
Acer saccharinum - Silver maple (weak wood, disease problems)  
Aesculus glabra - Ohio buckeye (messy fruit)  
Aesculus hippocastanum - Horsechestnut (messy fruit)  
Ailanthus altissima - Tree-of-heaven (weak wood, extremely weedy)  
Albizia julibrissin - Mimosa tree, Silk tree (not hardy)  
Betula papyrifera - Paper-bark birch, White birch, canoe birch  
(disease problems and insect pests)  
Betula pendula - European white birch (disease problems, insect pests)  
Betula nigra - River birch, red birch (disease problems, insect pests)  
Carya species - All species and varieties of hickories and pecans  
(messy fruit)  
Castanea species - All species and varieties of chestnuts (messy fruit)  
Catalpa bignonioides - Catalpa (weak wood, messy fruit)  
Catalpa speciosa - Catalpa (weak wood, messy fruit)  
Cercis canadensis - Redbud (weak crotching, difficulty in "raising"  
for vehicular traffic)  
Crataegus species - Hawthorns (thorns), thornless varieties are  
acceptable  
Elaeagnus angustifolia - Russian olive (disease problems)  
Fagus grandiflora - American beech (messy fruit, too large)  
Fagus sylvatica - European beech (messy fruit, too large); columnar  
forms are acceptable  
Fraxinus pennsylvanica - Green ash  
Ginkgo biloba - Female ginkgo trees (messy fruit); male trees  
acceptable  
Gleditsia triacanthos - Honey locust (disease problems, insect pests)  
Gymnocladus dioica - Female Kentucky coffee tree (messy fruit); male  
trees are acceptable  
Ilex opaca - American holly (evergreen, insect pests)  
Juniperus species - All species and varieties of junipers and cedars  
(evergreen)

- Juglans species - All species and varieties of walnuts, butternuts, and pecans (messy fruit)
- Maclura pomifera - Osage orange, Hedge-apple (thorns, messy fruit); thornless, male varieties are acceptable
- Magnolia x soulangiana - Saucer magnolia (low branching and spread)
- Malus species - All large-fruited apples and apples susceptible to scab disease and fire blight.
- Morus species - All (messy fruit)
- Paulownia tomentosa - Empress Tree, Royal Paulownia (not Hardy)
- Picea species - All species and varieties of spruces (evergreen)
- Pinus species - All species and varieties of pines (evergreen)
- Platanus x acerifolia - London plane tree (disease problems)
- Platanus occidentalis - Sycamore (disease problems)
- Populus species - All (weak wood, messy fruit)
- Prunus species - All cherries and plums, except as on approved lists (disease problems, messy fruit, short-lived)
- Pseudotsuga menziesii - Douglas fir (evergreen)
- Pyrus communis - All large-fruited pears (disease problems, messy fruit)
- Quercus palustris - Pin oak (often has iron chlorosis locally)
- Robinia pseudoacacia - Black locust (messy fruit, disease problems and insect pests)
- Salix species - All willows (weak wood, messy)
- Sophora japonica - Japanese pagoda tree (questionably hardy)
- Sorbus aucuparia - Mountain ash (fire blight)
- Thuja species - All species and varieties of arborvitae (evergreen)
- Tilia cordata - Littleleaf linden (branch angles, difficulty in "raising" for vehicular clearance)
- Tsuga species - All hemlocks (evergreen)
- Ulmus americana - American elm (Dutch elm disease)
- Ulmus pumila - Siberian elm, erroneously called Chinese Elm (weak wood, messy)
- Ulmus rubra or fulva - Red elm, Slippery elm (disease problems)

TREES BY COMMON NAMES

NOTE: The official lists are those above using the more precise scientific names; these lists of trees by common names are unofficial but are provided for the convenience of the lay person.

MEDIUM TO LARGE TREES APPROVED FOR PLANTING IN TOLONO

Ash - Blue  
White  
Hesse European  
Alder - European  
Italian  
Baldcypress  
Basswood - American  
Black tupelo  
Corktree - Amur  
Cucumber Tree  
Elm - Lacebark  
Filbert - Turkish  
Ginkgo - Only male trees  
Hackberry  
Hardy Rubber Tree  
Japanese Zelkova  
Katsura Tree  
Kentucky Coffee Tree - Only male trees  
Linden - American  
Crimean  
Silver  
Maidenhair Tree (Ginkgo) - Only male trees  
Maple - Black  
Red  
Sugar  
Oak - Burr  
English  
Red  
Scarlet  
Shingle  
Swamp white  
White  
Sassafras  
Sour Gum  
Sugar Hackberry  
Sweetgum  
Tuliptree  
Yellowwood

SMALL TREES APPROVED FOR PLANTING IN TOLONO

Bladdernut - American  
Carolina silverbell  
Cherry-Sargent, Japanese flowering  
Crabapple (only those resistant to apple scab and fire blight)  
Dogwood - Flowering  
    Pagoda  
European hornbeam  
Golderraintree  
Hophornbeam  
Hornbeam  
Ironwood  
Japanese tree lilac  
Magnolia - Laurel or Sweetbay  
Maple - Amur  
    Hedge  
    Miyabe  
    Paperbark  
    Tatarian  
    Trident  
Musclewood  
Serviceberry - Tree form  
Shadbush

TREES PROHIBITED FOR PLANTING ALONG STREETS  
IN  
TOLONO, ILLINOIS

Apple - All large-fruited apples and apples susceptible to scab  
    disease and fire blight  
Arborvitae - All  
Ash - Green  
Beech - All except columnar species  
Birch - All  
Box elder  
Buckeye, Ohio  
Catalpa  
Cedar - All  
Cherry - All except on approved lists  
Chestnut - All  
Cottonwood - All  
Crab apple - see restrictions under "Apple"  
Douglas fir  
Elm - American  
    Red or Slippery  
    Siberian  
Empress tree  
Fir - All  
Ginkgo - Female trees

Hawthorn - All except thornless varieties  
Hedge-apple  
Hemlock - All  
Hickory - All  
Holly, American  
Horsechestnut  
Japanese pagoda tree  
Juniper - All  
Kentucky Coffee Tree - Female  
Linden - Littleleaf  
Locust - Black  
          Honey  
London Plane Tree  
Magnolia - Southern or Evergreen, Saucer  
Maple, Norway  
Maple, Silver  
Mimosa tree  
Mountain Ash  
Mulberry - All  
Oak - Pin  
Osage orange  
Pear - All large-fruited pears  
Pecan  
Pine - All  
Plum - All  
Poplar - All  
Redbud  
Royal Paulownia  
Russian olive  
Silk tree  
Spruce - All  
Sycamore - All  
Tree-of-heaven  
Walnut - All  
Willow - All

# Technical Update

## THE BEST WAY TO PLANT TREES

Gary A. Moll

AFA Vice President for Urban Forestry

Phillip Rodbell

AFA Staff Urban Forester

During the 1990s major changes are needed in public policy and personal lifestyle to improve the ecological health of our community forests. Tree planting is one of the simplest ways to start the decade on the right foot.

Planting a tree is an important positive action, but there are right and wrong ways to do things. Before planting, the species and individual specimen must be carefully selected and strategically located on the lot so that it does the most environmental good.

Major changes are needed in both the way we think about trees and the way we plant them. The *American Forestry Association*, in cooperation with the *National Urban Forest Council*, has drawn up new guidelines for how to plant a tree, and unless you've been reading a lot of research information lately, you will find many surprises.

So what do we propose? Plant so that roots have a chance to grow into the surrounding soil and produce healthy, vigorous branches, foliage, and roots. Instead of a planting hole, what's needed is a large planting area that is wide but not deep and where the soil is loose and accommodating for root growth. The larger the area, the better. Here is how it is done (see Figure 1):

After selecting a suitable location, mark out a planting area that is five times the diameter of the planting ball. Use a rototiller or shovels to loosen and mix the soil in this entire area to a depth of about 12 inches. Organic matter can be added to the loosened soil as long as the new material is used uniformly throughout the area.

In the center of the prepared area, dig a shallow hole to set the tree, root ball and all. The hole should allow the root ball to sit on solid ground rather than loose soil. Once the ball is set in the hole, its upper surface should be level with the existing soil.

After the tree is properly situated, cut and remove the rope or wires holding the burlap in place and securing any part of the tree. Position the tree so that it is perpendicular to the ground and the main stem is growing straight up.

Backfill around the root area, and gently pack the soil to prevent major air pockets, but it is a mistake to pack the soil too hard. Water can be used instead of your foot to help the soil settle and prevent overpacking. Rake the soil even over the entire area, and cover it with two to four inches of mulch—bark, wood chips, old sawdust, pine needles, leaf mold, or the like. Some mulches decompose quickly and will have to be replenished once or twice a year. Maintaining the mulch layer carefully will improve tree growth substantially.

Some planting recommendations suggest mounding the soil

at the outer edge of the planting ring to form a water-holding berm. The berm will help hold water, but it may also encourage the root growth to remain within the berm, close to the tree. So berms are not recommended here—mulch should hold the water adequately.

It is best not to stake the tree, but if wind is a problem or the tree starts to lean, support it with a flexible stake so that the trunk will sway in the wind. The movement is necessary for building the trunk's strength. Remove the stake and wire after one year since leaving wire or string around the tree can kill it.

Do not wrap the trunk with "protective" tape. It will slow the tree's ability to adapt to the site and provide a cozy home for insects. The tape is often held in place with thin thread at top and bottom, which will strangle a tree just as wire will. Tree bark needs air and sunlight in order to build a healthy protective sheath. A tree shelter (e.g., TUBEX® or some other translucent material) is preferable to tape as it allows oxygen and sunlight to enter while protecting the tree from the assorted nicks of daily life.

We admit that tree planting is a more involved process than was once thought. New information requires more thought and more labor, but the result is also very rewarding. We estimate young trees can grow twice as fast when planted correctly and will live at least twice as long as trees improperly set out.

The old ways suggested digging a hole six inches wider and deeper than the root ball (Figure 2). Up until a couple of years ago, the experts also suggested that community tree planters mix peat moss and other soil amendments with the soil backfill. None of this is recommended today.

Over the last few years we have been searching for clues to the declining health of community trees, and we have discovered that planting methods are a major culprit. Some old-timers wrinkle their foreheads and look skeptical when the old methods are challenged. They can take you out and show you tree after tree that survived and is doing fine, thank you.

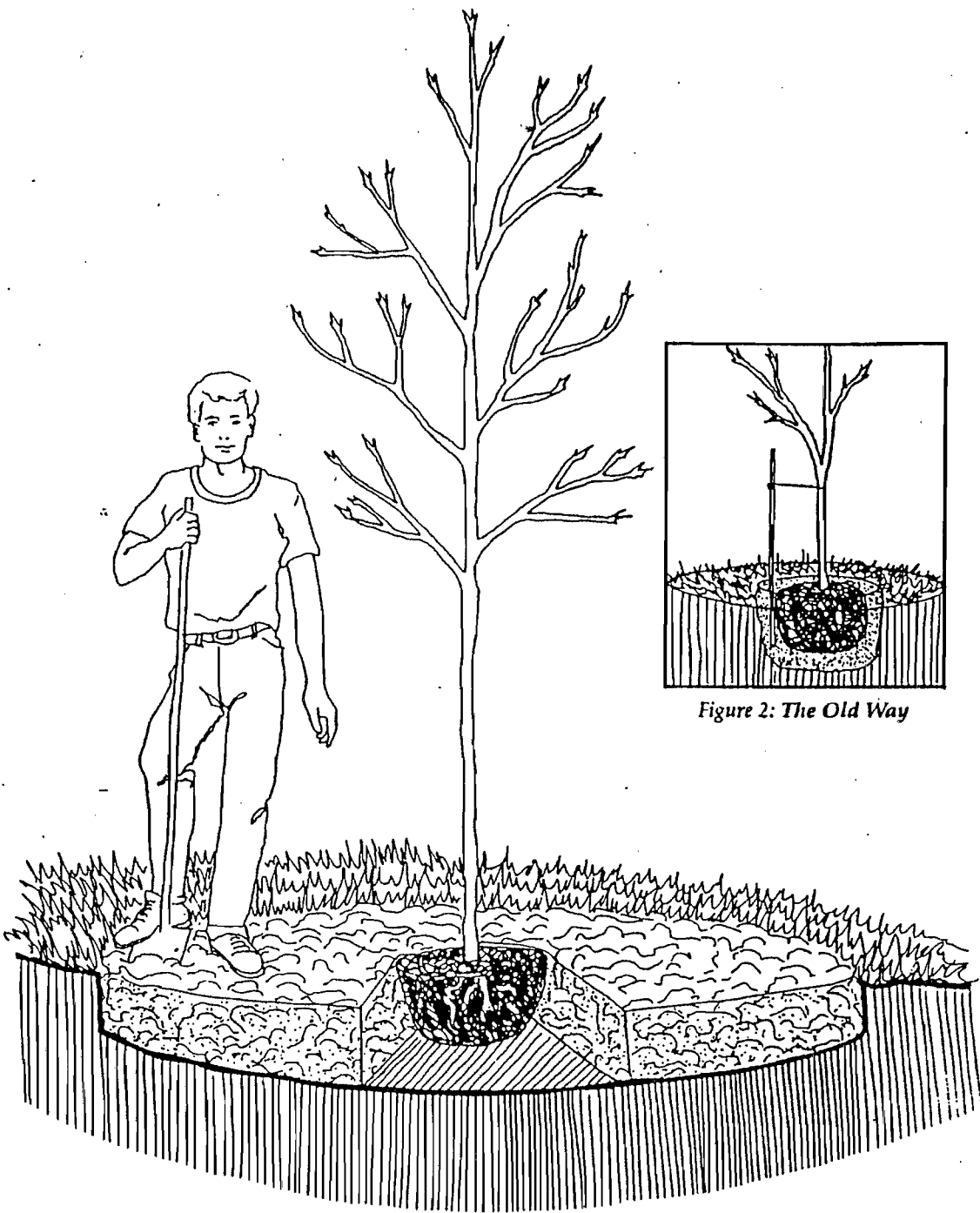
So why do we feel so confident that planting techniques need updating? The main reason is that home construction has changed from what it was in the "good old days." Bigger earth-moving equipment is used in today's housing developments and less hand labor. Because of the heavier construction equipment, the soil in the average yard is less fertile and more compacted.

Digging a hole in dense, compacted soil and filling the hole with peat moss and other soil amendments is like creating a pot for the tree that soon becomes a coffin. The roots grow outward in the good soil, and the tree does fine until the roots



**Figure 1: The New Way.**

The preparation of the planting area is critical to tree survival and vigorous growth. Rather than digging a hole, prepare a planting area five times the diameter of the root ball. Set the tree on undisturbed solid ground in the center of the area so that the upper surface of the root ball is level with the surrounding soil. Cut and remove all wires or rope holding the burlap in place. Preferably, the tree should not be staked and "protective" tape should not be wrapped around the stem. Use water to pack or settle the soil around the root ball, and apply a two- to four-inch layer of mulch over the entire area. Do not create a water-holding berm by mounding the soil at the outer edge of the planting area.



**Figure 2: The Old Way**

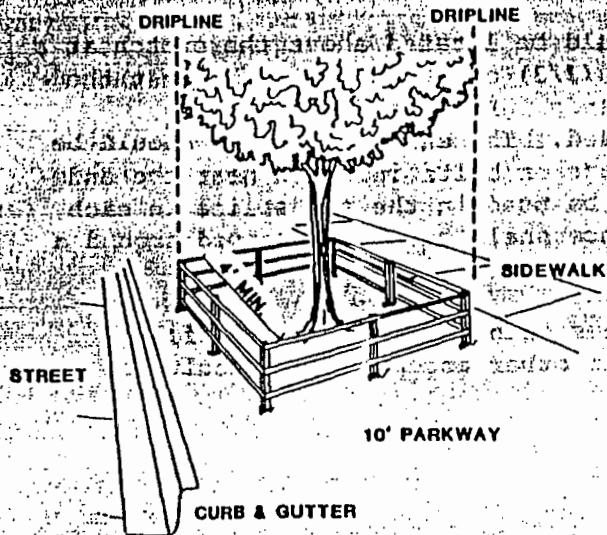
reach the original soil and the outward growth stops. Instead of spreading into the yard, the roots encircle the planting pit. The "pot" soon fills with roots, and the health of the tree declines.

The crown continues to grow, but the roots do not. Once the tree becomes root bound, its ability to maintain itself during a drought or survive a flood is limited—leading to decline that is often terminal.

We hope to have spurred your interest in planting trees the right way. Part of that planting job is selecting a suitable

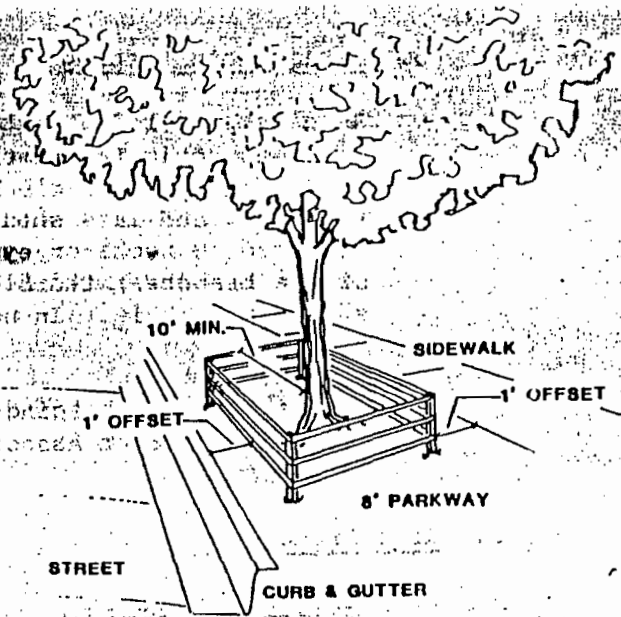
planting location. That first step in the process is not covered here. Please check the March 1990 issue of *AMERICAN FORESTS* for details.

The tree-planting checklist includes asking if the tree is grown to nursery standards, carefully selecting the species, properly locating it on your lot, and then following our new planting recommendations. In addition to watering it when necessary and standing guard against errant vehicles, it might not hurt to talk to the tree occasionally. A kind word never hurt anyone.



**FIGURE 1 - SMALL TREES**

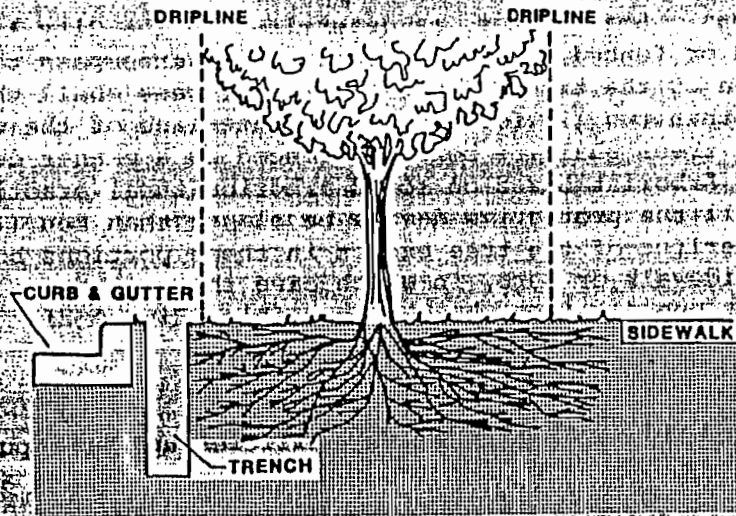
**MINIMUM FENCING REQUIREMENTS**



**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**