



TOWN OF LEESBURG, VIRGINIA REQUEST FOR QUOTATION

FALL TREE PLANTING 2016 RFQ No. 08308-FY17-09 August 25, 2016

The Town of Leesburg is requesting written price quotations for the tree plantings at various locations in Leesburg as described below. Quotes may be emailed to aoster@leesburgva.gov, or mailed or hand delivered to: Town of Leesburg, Attn: Andy Oster, Construction Manager, Office of Capital Projects, 25 W. Market Street, Leesburg, VA 20176.

Quotes must be received by 3:00 p.m., Thursday, September 8, 2016.

Background

The work performed under this contract involves providing and planting trees, shrubs, and grasses at locations throughout the Town of Leesburg. Planting locations include Battlefield Parkway, Browns Meadow Court, East Market Street, Hope Parkway, Plaza Street, South King Street, Sycolin Road, Woodberry Road and several other locations within the Town.

The work under this contract must be completed by November 15, 2016.

Scope of Work

Provide all materials, labor, and equipment to plant trees (mulch incidental), and some soil conditioning (topsoil) and fertilizer. There will be removal of grass and weeds from the areas for planting; staking of the trees is required for the first year.

Questions

Questions should be emailed to CapitalBidQuestions@leesburgva.gov, no later than 3:00 p.m., Thursday, September 1, 2016.

Notice of Addenda

Any addenda to this RFQ will be posted on the Town's Bid Board (<http://www.leesburgva.gov/bidboard>) and eVA (<https://eva.virginia.gov/>). A courtesy email will be sent to those firms who have registered on the Bid Board. It is the firm's responsibility to provide a correct email address for the bid board and to be aware of any addenda.

Contractor's Responsibility

- Use attached bid form and spreadsheet to provide quote (pages 3-7)
- All work must be completed by **November 15, 2016**. Once the work has begun the contractor must remain on site to finish the project.

- Insurance
 - Liability, 1M; combined single limit/each occurrence in the primary policy or through the use of Umbrella or Excess Limits.
 - Automobile, 1M; combined single limit per occurrence in the primary policy or through the use of Umbrella or Excess Limits.
 - Workers Comp, Statutory.
 - Name Town as an additional insured and provide a copy of the additional insured endorsement.

General Requirements

- All materials shall be of first quality stock, vigorous, fully branched, and have root balls or containers meeting all American Nurseryman's Assoc. standards. All material shall be free of detectable insect or disease pests. An owner's representative will inspect the materials in the vendors' lot, prior to approving delivery.
- All labor shall be performed under the supervision of an experienced on-site foreman or supervisor fluent in English. All planting and construction practices shall be as noted on the list/plans and/or according to the best practices of the trade.
- Vendor must meet maintenance and warranty requirements as listed in attached Landscaping Specifications.

Submission of Quotes

Offerors are to submit:

- A minimum of three client references for which similar work has been performed.

Negotiations with the Lowest Bidder

Unless all bids are cancelled or rejected, the Town reserves the right granted by 2.2-4318 of the *Code of Virginia* to negotiate with the lowest responsive, responsible bidder to obtain a contract price within the funds available. Funds available shall mean those funds which were budgeted for this contract prior to the issuance of the written Request for Quote. Negotiations with the low bidder may include both modifications of the bid price and the Scope of Work/Specifications to be performed. The Town shall initiate such negotiations by written notice to the lowest responsive, responsible bidder that its bid exceeds the available funds and the Town wishes to negotiate a lower contract price. The times, places, and manner of negotiating shall be agreed to by the Town and the lowest responsive, responsible bidder.

Site Visit

Should you require a site visit, please contact Andy Oster, Construction Manager at 703-737-7006 to make an appointment.

Your interest in doing business with the Town of Leesburg is appreciated.

**TOWN OF LEESBURG, VIRGINIA
OFFICE OF CAPITAL PROJECTS
25 WEST MARKET STREET
LEESBURG, VIRGINIA 20176**

**FALL TREE PLANTING 2016
RFQ No. 08308-FY17-09**

**SUBMIT A SIGNED BID FORM BY EMAIL, MAIL OR IN PERSON TO
ANDY OSTER, CONSTRUCTION MANAGER,
OFFICE OF CAPITAL PROJECTS**

QUOTES ARE DUE NO LATER THAN 3:00 pm, Thursday, September 8, 2016.

THE UNDERSIGNED CERTIFIES THAT (CONTRACTOR NAME):

IS CURRENTLY REGISTERED WITH THE VIRGINIA STATE BOARD OF CONTRACTORS AS REQUIRED BY THE CODE OF VIRGINIA. CERTIFICATE NUMBER _____ WAS ISSUED ON THE _____ DAY OF _____, _____. THE UNDERSIGNED FURTHER CERTIFIES THAT THE REGISTRATION FEE AND ALL RENEWAL FEES REQUIRED UNDER LAW HAVE BEEN PAID. THE CONTRACTOR AGREES TO FURNISH ALL NECESSARY LABOR, EQUIPMENT, MATERIALS, AND ALL THINGS NECESSARY TO PERFORM THE WORK AS SET FORTH IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AT THE FOLLOWING PRICES: (ALL PRICES INCLUDE PROVISION AND INSTALLATION).

<u>SUBMITTED BY:</u>	
VENDOR NAME:	
ADDRESS:	
CITY/STATE/ZIP:	
AUTHORIZED SIGNATURE:	
PRINT NAME AND TITLE:	
TELEPHONE NO:	FACSIMILE NO.:
STATE CORPORATION COMMISSION ID #	
TAX ID NUMBER (FIN/SSN):	VA. CONTRACTOR LICENSE #:
THIS FIRM IS A: (INSERT NAME OF STATE): _____	
<input type="checkbox"/> CORPORATION <input type="checkbox"/> GENERAL PARTNERSHIP <input type="checkbox"/> LTD LIABILITY COMPANY	<input type="checkbox"/> LIMITED PARTNERSHIP <input type="checkbox"/> UNINCORPORATED ASSOC. <input type="checkbox"/> SOLE PROPRIETORSHIP
E-MAIL ADDRESS:	LEESBURG BPOL #:

ADDENDA

Bidder acknowledges receipt of the following ADDENDA, which have been considered in the preparation of this bid.

Addendum No. _____
 Addendum No. _____
 Addendum No. _____
 Addendum No. _____
 Addendum No. _____

Dated: _____
 Dated: _____
 Dated: _____
 Dated: _____
 Dated: _____

RFQ Fall Tree Planting 2016 Bid Document

Brown's Meadow/Woodberry Road Drainage Improvements Project							
Common Name	Botanical Name	Size	Remarks	Qty	Unit	Unit Cost	Total
Large Canopy & Street Trees							
Black Gum	<i>Nyssa sylvatica</i>	2" cal	B&B	1	EA	\$	\$
Paperback Maple	<i>Acer griseum</i>	2" cal	B&B	1	EA	\$	\$
Red Maple - October Glory	<i>Acer rubrum</i>	2" cal	B&B	1	EA	\$	\$
River Birch	<i>Betula nigra</i>	2" cal	B&B	1	EA	\$	\$
Evergreen Trees							
American Holly	<i>Ilex opaca</i>	6' -7'	B&B	2	EA	\$	\$
Atlantic White Cedar	<i>Chamaecyparis thyoides</i>	6'-7'	B&B	2	EA	\$	\$
Chinese Juniper	<i>Juniperus chinensis</i>	6'-7'	B&B	2	EA	\$	\$
Eastern Red Cedar	<i>Juniperus virginiana</i>	6'-7'	B&B	1	EA	\$	\$
Fosters Holly	<i>Ilex xattenuate</i>	6'-7'	B&B	2	EA	\$	\$
Hinoki False Cypress	<i>Chamaecyparis obtuse</i>	6'-7'	B&B	2	EA	\$	\$
Leyland Cypress	<i>Cupressus leylandii</i>	6'-7'	B&B	1	EA	\$	\$
Southern Magnolia	<i>Magnolia grandiflora</i>	6'-7'	B&B	1	EA	\$	\$
Understory Trees							
American Hophornbeam	<i>Ostrya virginiana</i>	2" cal	B&B	1	EA	\$	\$
Crepe Myrtle (Pink)	<i>Lagerstroemia</i>	6'-7'	B&B	2	EA	\$	\$
Flowering Crabapple	<i>Malus 'snowdrift'</i>	6'-7'	B&B	1	EA	\$	\$
Fig Tree	<i>Ficus</i>	5 gal	Container	1	EA	\$	\$
Korean Dogwood	<i>Cornus kousa</i>	6'-7'	B&B	3	EA	\$	\$
Serviceberry	<i>Amelanchier spp</i>	6'-7'	B&B	2	EA	\$	\$
Sweetbay Magnolia	<i>Magnolia virginiana</i>	6'-7'	B&B	1	EA	\$	\$

Brown's Meadow/Woodberry Road Drainage Improvements Project (continued)							
Shrubs and Grasses							
Bamboo	Fargesia rubusta "Campbell"	5 gal	Container	5	EA	\$	\$
Blueberry Bush	Duke	3 gal	Container	1	EA	\$	\$
Blueberry Bush	Blue Crop	3 gal	Container	1	EA	\$	\$
Blueberry Bush	Jersey	3 gal	Container	1	EA	\$	\$
Blueberry Bush	Earliblu	3 gal	Container	1	EA	\$	\$
Texas Scarlet Quince	Chaenomeles x superba "Texas Scarlet"	5 gal	Container	2	EA	\$	\$
Brown's Meadow/Woodberry Road Drainage Improvements Project Subtotal							\$

Hope Parkway Extension Project							
Common Name	Botanical Name	Size	Remarks	Qty	Unit	Unit Cost	Total
Large Canopy & Street Trees							
Japanese Zelcova	Zelcova serrata	2" cal	B&B	11	EA	\$	\$
Lacebark Elm	Ulmas parvifolia	2" cal	B&B	11	EA	\$	\$
Princeton Elm	Ulmus Americana "Princeton"	2" cal	B&B	10	EA	\$	\$
Sugar Maple	Acer saccharum	2" cal	B&B	11	EA	\$	\$
Hope Parkway Extension Project Subtotal							\$

Other Leesburg Locations							
Common Name	Botanical Name	Size	Remarks	Qty	Unit	Unit Cost	Total
Large Canopy & Street Trees							
Black Gum	Nyssa Sylvatica	2" cal	B&B	23	EA	\$	\$
Japanese Zelcova	Zelcova serrata	2" cal	B&B	4	EA	\$	\$
Male Ginkgo	Ginkgo biloba	2" cal	B&B	2	EA	\$	\$
Princeton Elm	Ulmas americana "Princeton"	2" cal	B&B	20	EA	\$	\$
Red Oak	Quercus rubra	2" cal	B&B	1	EA	\$	\$
Understory Trees							
Carolina Silverbell	Halesia carolina	6'-7'	B&B	4	EA	\$	\$
Chinese Fringetree	Chionanthus retucus	6'-7'	B&B	18	EA	\$	\$
Crepe Myrtle	Lagerstroemia indica	6'-7'	B&B	5	EA	\$	\$
Japanese Dogwood	Cornus Kousa	8'-10'	B&B	1	EA	\$	\$
Japanese Snowbell	Styrax japonica	6'-7'	B&B	4	EA	\$	\$
Red Bud	Cercis canadensis	6'-7'	B&B	12	EA	\$	\$
Red Bud – Forest Pansy	Cercis canadensis	2" cal	B&B	1	EA	\$	\$
Shadblow Serviceberry	Amelanchier canadensis	6'-7'	B&B	12	EA	\$	\$
Shrubs and Grasses							
Little Princess Spirea	Spiraea japonica "little princess"	3 gal	Container	70	EA	\$	\$
Other Leesburg Locations Subtotal							\$
Grand Total							\$

TOWN OF LEESBURG
LANDSCAPING SPECIFICATIONS

RELATED DOCUMENTS

Construction drawings and general provisions of Contract, including General and Special Conditions, Instructions to Bidders and Division 1 Specifications Sections, apply to this section.

SUMMARY

Extent of tree planting is indicated on drawings.

Types of work required include following:

Furnishing trees and shrubs.

Preparing planting pits and beds including excavation, backfilling, and disposal of surplus and unsuitable excavated material.

Planting trees including fertilizing, mulching, trimming, guying, and wrapping.

Maintaining trees and shrubs.

SUBMITTALS

General: Submit the following in accordance with General Conditions Section 7, Submittals.

Product certificates of inspection, as may be required by governing authorities are to accompany shipments. For standard products, submit manufacturer's certified analysis. For other materials, submit analysis by a recognized laboratory made in accordance with methods established by Association of Official Agricultural Chemists, wherever applicable.

Planting schedule indicating anticipated dates and locations for each type of planting.

Maintenance instructions recommending procedures to be established by Town for maintenance of landscape work after acceptance.

QUALITY ASSURANCE

General: Comply with applicable federal, state, county, and local regulations governing landscape materials and work.

Employ only experienced personnel familiar with required work. Provide adequate supervision by qualified foreman.

Substitutions: Do not make substitutions of tree materials. If required landscape material is not obtainable, submit to town proof of non-availability and proposal for use of equivalent material.

When authorized, adjustment of contract amount (if any) will be made by change order.

Provide quantity, size, genus, species and variety of trees indicated; comply with applicable requirements of ANSI Z60.1, "American Standard for Nursery Stock".

Locate trees in compliance with requirements, and obtain Town's acceptance of their visual qualities before they are planted.

Measurements: Measure trees with branches and trunks or canes in their normal position. Do not prune to obtain required sizes. Take caliper measurements 6 inches above ground for trees up to 4 inches caliper size, and 12 inches above ground for larger sizes. Measure main body of tree for height and spread dimensions, do not measure from branch or root tip-to-tip.

Inspection: Town shall inspect trees at site before planting for compliance with requirements for genus, species, variety, size and quality. Town retains right to inspect trees further for size, and condition of balls and root systems, insects, injuries, and latent defects and to reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees immediately from project site.

DELIVERY, STORAGE AND HANDLING

Delivery of Trees: Provide freshly dug trees to the greatest extent possible. Do not prune before delivery, except as approved by Urban Forester. Provide adequate protection of root systems, and balls from drying winds and sun. Do not bend or bind-tie trees in such a manner as to damage bark, break branches or destroy natural shape. Provide protective covering during delivery. Do not drop balled and burlapped stock during delivery.

Immediately after digging bare-root stock, pack root system in wet straw, hay, or other suitable material to keep root system moist until planting.

Deliver trees after preparations for planting have been completed and plant immediately. If planting is delayed more than 6 hours after delivery, set trees in shade (if stored on an asphalt surface, the trees must be placed on an insulating layer of wood chips no less than 6 inches deep), protect from weather and mechanical damage, and keep root moist as follows:

Heel-in bare root stock. Soak roots in water for 2 hours if dried out.

Set balled stock on ground and cover ball with soil, peat moss, sawdust or other acceptable material.

Do not remove container-grown stock from containers before time of planting.

Periodically water root system of trees stored on site with a fine mist spray. Water as often as necessary to maintain root systems in a moist condition.

JOB CONDITIONS

Timing: Plant trees during normal seasons for such work in location of project:

Plant frost-tender trees only after danger of frost is past (May-June) or sufficiently before frost season (October-December) to allow for establishment before first frost. Do not plant in frozen ground. Dates are subject to local conditions and authorization by Town.

Coordination with Lawns: Plant trees after final grades are established and before planting of lawns, unless otherwise acceptable to Town. If planting of trees occurs after lawn work, protect lawn areas and promptly repair damage to lawns resulting from planting operations.

SPECIAL PROJECT WARRANTY

Warranty trees, for a period of one year after date of substantial completion, against defects including unsatisfactory growth or decline from improper handling, but excepting defects resulting from neglect by Town, abuse or damage by others, or unusual phenomena or incidents beyond Contractor's control.

TREE AND SHRUB MATERIAL

General: Provide nursery grown trees, except as otherwise indicated, grown in a recognized nursery in accordance with good horticultural practice, with healthy root systems developed by transplanting or root pruning. Provide only healthy, vigorous stock free of disease, insects, eggs, larvae, and defects such as knots, sunscald, injuries, abrasions, and disfigurement.

Size: Provide trees of the sizes indicated in planting List and in accordance with dimensional relationship requirements of ANSI Z60.1 for kind and type of trees required. Trees of larger size than specified may be used if acceptable to Town; in that case, increase size of roots or balls proportionately.

Label each tree with securely attached waterproof tag bearing legible designation of botanical and common name.

Where formal arrangements or consecutive order of trees are shown, select stock for uniform height and spread, and label with number to assure symmetry in planting.

DECIDUOUS TREES

Size: Provide trees of height and caliper indicated.

Where shade trees are required, provide single-stem trees with straight trunk and intact leader as recommended by ANSI Z60.1 for size and kind of trees required.

NURSERY STOCK SPECIFICATIONS FOR SHADE TREES

In an effort to have the best available trees planted within the Town of Leesburg the following standards will apply to all trees planted within the Town limits.

Tree Health – As typical for the species/cultivar, tree shall be healthy and vigorous, as indicated by an inspection for the following:

- All plant material shall be sound, free of disease and insects, eggs or larvae.
- Crown form
- Foliage density
- Length of shoot growth
- Twig dieback
- Root appearance
- The relationship between caliper, height and root ball shall conform to the American Standard for Nursery Stock ANSI Z60.1.

Crown – Trees shall have a symmetrical form as typical for the species/cultivar and growth form.

- Central Leader: Trees shall have a single, relatively straight central leader and tapered trunk free of codominant stems; and vigorous, upright branches that compete with the central leader. If the original leader has been headed, a new leader at least one-half the diameter of the original leader shall be present (Figures 1—3). (Note: This section applies to single-trunk trees, as typically used for street or landscape planting. These specifications do not apply to plants that have been specifically trained in the nursery—for example, topiary, espalier, multistem, or clump, or unique selections such as contorted varieties.) Live crown ratio (distance from bottom of canopy to tree top/tree height) should be at least 60%.

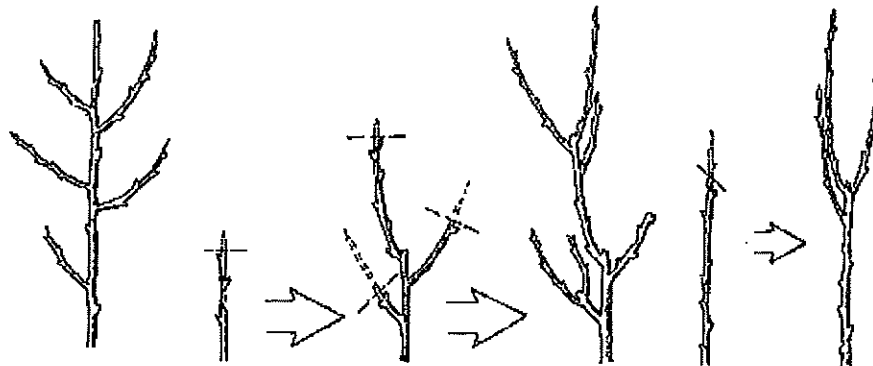


Figure 1. Not topped is preferable

Figure 2. Heading back and retaining a central leader is acceptable.

Figure 3. Topping without retaining a central leader is not acceptable.

Main Branches (Scaffolds):

Branches should be distributed radially around and vertically along the trunk, forming a generally symmetrical crown typical for the species. Minimum vertical spacing may be specified.

- a. Main branches, for the most part, shall be well spaced.
- b. Branch diameter shall be no larger than two-thirds the diameter of the trunk, measured 1 inch above the branch (Figure 4).
- c. The attachment of scaffold branches shall be free of included bark (Figure 5). Branches shall diverge from the trunk at a wide angle except in cultivars that normally grow in narrow, upright forms.

Figure 4. Preferable diameter (left); unacceptable branch diameter (right)

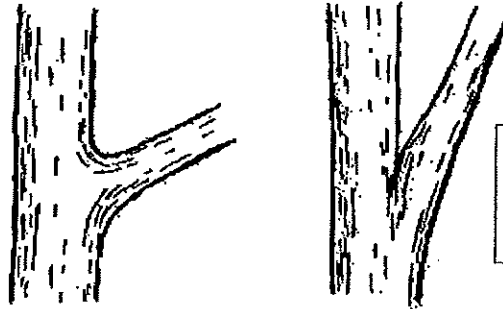
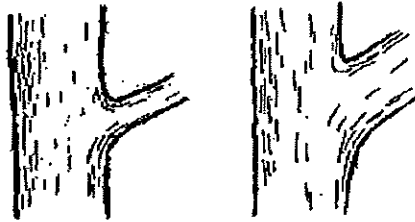


Figure 5. Scaffold branches should be free of included bark; preferable (left); not acceptable (right)

- Temporary Branches: Temporary branches should be present along the lower trunk, particularly for trees less than 1-1/2 inches in trunk diameter. They should be no greater than 3/8 inch in diameter and no greater than one-half the diameter of the trunk at the point of attachment. Heading of temporary branches is sometimes necessary to limit their growth.

Trunk

- Trunk diameter and taper shall be sufficient so that the tree will remain vertical without the support of a nursery stake. It shall be straight to near straight (less than a 5 degree bend).
- The trunk shall be free of wounds (except properly made pruning cuts), sunburned areas, conks (fungal fruiting-bodies), wood cracks, bleeding areas, and signs of boring insects, galls, cankers and/or lesions. Pruning cuts of limbs over 3/4 inch in diameter that are not completely closed will be rejected.

Roots

- The trunk, root collar (root crown), and large roots shall be free of circling and/or kinked roots. Soil removal near the root collar may be necessary to inspect for circling and/or kinked roots. There shall be no roots greater than 1/10 diameter of the trunk circling more than one-third the way around in the top half of the root ball. Roots larger than this may be cut provided they are smaller than one-third the trunk diameter. There shall be no kinked roots greater than 1/5 the trunk diameter. Roots larger than this can be cut provided they are less than one-third the trunk diameter.

- The tree shall be well rooted in the soil mix. When the container is removed, the root ball shall remain intact. When the trunk is carefully lifted, both the trunk and root system shall move as one. The trunk should bend when gently pushed, not pivot at or below soil line.
- The point where the top-most primary root in the root ball emerges from the trunk shall be visible at the soil surface.

The above trunk and root ball specifications shall apply to evergreen and multi-stem trees as well. An additional branch specification for evergreen trees will be expressed, as the internode spacing shall not be greater than 12" apart.

Where small trees of upright or spreading type of required, provide trees with single stem, branched or pruned naturally according to species and type, and with relationship of caliper and branching recommended by ANZI Z60.1, unless otherwise indicated.

Where shown as "clump", provide trees with 3 or more main stems starting from ground.

Provide balled and burlapped deciduous trees.

Container-grown deciduous trees will be acceptable in lieu of balled and burlapped deciduous trees, subject to the specified limitations for container stock.

REQUIREMENTS FOR B&B STOCK

General: Where indicated to be balled and burlapped, provide trees dug with firm, natural ball of earth in which they are grown.

Provide ball size of not less than diameter and depth recommended by ANSI Z60.1 for type and size of tree required.

Wrap and tie earth ball as recommended by ANSI Z60.1 for size of balls required. Drum-lace balls with a diameter of 30 inches or greater.

REQUIREMENTS FOR CONTAINER GROWN-STOCK

General: Where specified as acceptable, provide healthy, vigorous, well-rooted trees or shrubs established in the container in which they were sold. Provide balled and burlapped stock when required trees exceed maximum size recommended by ANSI Z60.1 for container-grown stock.

Established container stock is defined as a tree transplanted into container and grown in container for a length of time sufficient to develop new fibrous roots, so that root mass will retain its shape and hold together when removed from container. Any plant that has become root-bound in their container shall be rejected.

Containers: Use rigid containers that will hold ball shape and protect root mass during shipping.

Provide trees established in containers of not less than minimum size recommended by ANSI Z60.1 for kind, type, and size of trees required.

NEW TOPSOIL

Provide topsoil with a minimum pH of 6.5-7.5 that is fertile, friable, naturally loamy, surface soil; reasonably free of subsoil, clay lumps, brush, weeds, and other litter and free of roots, stumps, stones larger than 2 inches in any dimension, and other extraneous or toxic matter harmful to plant growth.

Obtain topsoil from local sources or from areas having similar soil characteristics to that found at site. Obtain topsoil from naturally well-drained sites where topsoil is at least 4 inches deep; do not obtain from bogs or marshes.

TRANSPLANT INOCULANT

Provide at time of planting a transplant supplement that contains a mycorrhizal inoculant, appropriate for the species planted, and root biostimulants.

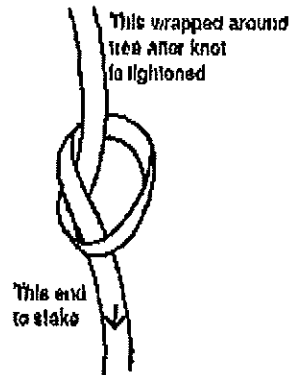
MISCELLANEOUS MATERIALS

Mulch: Double-shredded hardwood, free from any debris or foreign matter that would be injurious to plant growth.

Anti-Desiccant: Emulsion type, film-forming agent designed to permit transpiration, but retard excessive loss of moisture from plants. Deliver in manufacturer's fully identified containers and mix in accordance with manufacturer's instructions.

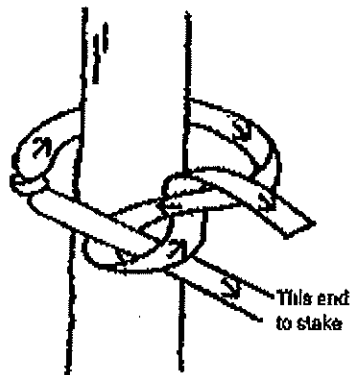
Guying and staking materials: Ground anchors shall be arrowhead shaped earth anchors of malleable iron castings, aluminum castings, or stamped steel. Guying material shall be a wide fabric tape such as ArborTie[®], attached to the tree per the manufacturer's prescribed method (steps 1-4). Vertical supporting stakes shall be sound, uniform oak or cedar. They shall be a minimum of 2X2 inches in diameter, 8 feet long, and pointed at one end.

Step 1



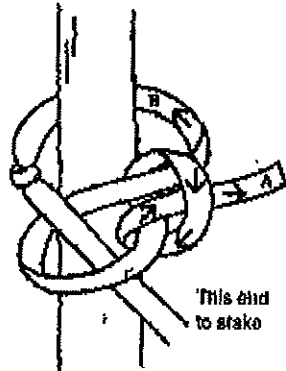
Tie a simple knot 18" - 24" (depending on diameter of tree) from either end of the lags.

Step 2



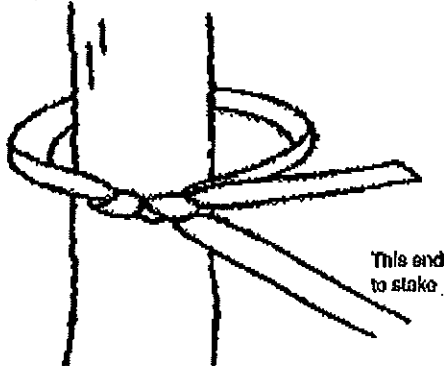
Wrap this end around tree. Begin the above knot below that was tied in Step 1.

Step 3



Follow motion of tape above, finishing the knot by pulling tightly on points A and B at the same time.

Step 4



Slide knot just completed up the knot tied in Step 1.

Fasten free end to stake or anchor.

Caution: DO NOT wrap tape around trunk, encircling trunk with tape.

Provide wood warning flaps for each guy, at least 2 inches wide by ½ inch thick by 12 inches long. Paint with luminescent white paint.

INSTALLATION OF PLANT MATERIALS

Layout individual tree locations and areas for multiple plantings. Stake locations and outline areas, and secure Town's acceptance before start of planting work. Make minor adjustments as may be requested by Town.

Excavation: Excavate pits, beds, and trenches with sloping sides and with bottom of excavation

slightly raised at center to provide proper drainage.

For balled and burlapped trees, make excavations approximately 2-3 times as wide as ball diameter. Locate the top-most root and measure to the base of the root ball to determine the correct depth for excavation.

Place root ball on undisturbed subsoil at a depth equal to or slightly less than the height of the root ball. The root crown should not exceed 2 inches above finished grade.

For container-grown stock, excavate as specified for balled and burlapped stock, except conform to container depth.

Dispose of subsoil removed from landscape excavations. Do not mix with planting soil or use as backfill.

Obstructions: If rock, underground construction, or other obstructions are encountered in excavation for planting of trees, notify Town. New locations may be selected by Town, or change order may be issued to direct removal of obstructions at least 6 inches below required planting depth.

Drainage: If subsoil conditions indicate retention of water in planting areas, as shown by seepage or other evidence indicating presence of underground water, notify Town before backfilling. A change order may be issued to direct installation of drain tile or other measures beyond drainage requirement indicated.

PREPARATION OF PLANTING SOIL

Before mixing, clean excavated topsoil of roots, plants, sods, stones, clay lumps, and other extraneous materials harmful or toxic to plant growth.

Mix soil amendments and with topsoil at rates specified.

For pit or trench backfill, mix planting soil before backfilling and stockpile at site.

Setting and Backfilling:

Set balled and burlapped stock on undisturbed subsoil plumb and in center of pit or trench with top-most root at same elevation as adjacent finished landscape grades. Root crown should not exceed 2 inches above finished grade. Remove burlap from sides and tops of balls but do not remove from under balls. Remove pallets, if any, before setting. Remove top 1/2 of wire baskets. Do not use stock if ball is cracked or broken before or during planting operation. When set, place additional backfill around base and sides of ball, and work each layer to settle backfill and eliminate voids of air pockets. When excavation is approximately 2/3 full, water thoroughly before placing remainder of backfill. Repeat watering until no more is absorbed. Water again after placing final layer of backfill.

Set container-grown stock as specified for balled and burlapped stock, except cut cans on 2 sides with a metal cutter, remove bottoms of wooden boxes before setting. Carefully remove cans and sides of wooden boxes after partial backfilling so as not to damage root balls.

Dish top of backfill to allow for mulching.

Mulch pits trenches, and planted areas. Provide not less than following thickness of mulch, and work into top of backfill and finished level with adjacent finish grades. Provide 2 inches thickness of mulch. Do not mulch within 6 inches of tree trunks.

Apply anti-desiccant using power spray to provide an adequate film over trunks, branches, stems, twigs, and foliage.

If deciduous trees are moved in full-leaf, spray with anti-desiccant at nursery before moving and again in 2 weeks after planting.

Prune only dead or damage branches in accordance with standard arboricultural practice. Unless otherwise directed by Town, do not cut tree leaders, and remove only injured or dead branches from flowering trees.

Guy and stake trees immediately after planting.

Stake trees of 2 inches through 5 inches caliper. Stake trees of less than 2 inches caliper only as required to prevent wind "tip-out". Use stakes or length required to penetrate at least 18 inches below bottom of backfilled excavation and to extend to at least 8 feet above grade. Set stakes vertical and space to avoid penetrating balls or root masses. Support trees with wide fabric tape. Allow enough slack to avoid rigid restraining of tree. Provide not less than one stake for trees 10 feet to 12 feet high and 2 inches or less in caliper, except no fewer than 2 shorter stakes may be used for low-branched trees. Use no fewer than 2 stakes for trees over 12 feet and less than 4 inches caliper size, and use no fewer than 3 stakes for trees of 4 inches to 5 inches caliper size. Space stakes equally around trees.

Guy trees of 5 inches and larger caliper located in lawn or planting areas and at least 10 feet away from pavement. Use no fewer than 3 guys for trees of 5 inches to 6 inches caliper and securely attach to stakes at least 2 inches by 4 inches by 30 inches long driven to grade. For trees over 6 inches caliper, anchor guys to deadmen 8 inches diameter and 48 inches long buried at least 36 inches below grade.

Attach wood warning flaps to each guy wire located 30 inches above finished grade.

MULCHING

Mulching is established as a cubic yard pay item. This item is to be utilized where fill is to be installed over existing exposed tree roots. The locations will be as directed by the project arborist in coordination with the Town Urban Forrester.

MAINTENANCE AND WARRANTY

General: Prune, water, cultivate, and weed during the one-year maintenance period as required for healthy growth. Restore planting saucers. Tighten and repair stake and guy supports, and reset trees and shrubs to proper grades or vertical position as required. Restore or replace damaged wrappings. Spray as required to keep trees free of insects and disease.

Remove and replace trees found to be dead or unhealthy during the one-year warranty period. The warranty period will begin after acceptance and last for a period of 365 calendar days. Make replacements during planting season following end of warranty period. Replace trees that are in doubtful condition at end of warranty period unless, in opinion of Architect, it is advisable to extend warranty period for another growing season.

Contractor to remove all stakes and guy supports within (1) growing season.

END OF SECTION