



SCOPE OF WORK

1.0 INTENT

The intent and of this invitation to bid is to establish an annual requirements contract for the purchase of live trees for the beautification of all municipal facilities, street medians, and parks.

Vendors must have a physical location within fifty (50) driving miles of the City of Arlington. All materials bid must comply with applicable federal, state, county, and local regulations governing landscape materials.

The City reserves the right to make an award to either one vendor whose proposal is the best value for the City, or to multiple vendors, at the City's discretion.

2.0 TREE SPECIES

Species anticipated for purchase, listed by typical frequency of purchase. As this is an annual contract, the exact species that will be ordered is not known. Purchases will be based on need throughout the contract period. Container sizes are not set for each species; however, canopy species will typically be ordered in 30 or 45-gallon container sizes and ornamental species will typically be purchased in 15 or 30-gallon container sizes.

Canopy Species		
Scientific Name*	Common Name	Type
Quercus virginiana	Live Oak	Canopy
Taxodium distichum	Bald Cypress	Canopy
Taxodium ascendens	Pond Cypress	Canopy
Quercus shumardii	Shumard Oak	Canopy
Ulmus parvifolia	Lacebark Elm*	Canopy
Ulmus crassifolia	Cedar Elm	Canopy
Quercus macrocarpa	Bur Oak	Canopy
Pistacia chinensis	Chinese Pistache	Canopy
Quercus muehlenbergii	Chinquapin Oak	Canopy
Pinus eldarica	Afghan/Eldarica Pine	Canopy
Ulmus pennsylvanica	Green Ash	Canopy
Magnolia grandiflora	Southern Magnolia	Canopy
Magnolia grandiflora 'Little Gem'	Little Gem Magnolia	Canopy
Quercus polymorpha	Mexican White Oak	Canopy
Pinus taeda	Loblolly Pine	Canopy
Pinus elliotii	Slash Pine	Canopy
Acer truncatum	Shantung Maple*	Canopy
Carya illinoensis	Pecan	Canopy
Liquidambar styraciflua	Sweetgum	Canopy

*Scientific name is the primary name field unless otherwise noted.



Ornamental Species		
Scientific Name*	Common Name	Type
Lagerstroemia indica	Crape Myrtle	Ornamental
Cercis canadensis	Redbud	Ornamental
Chilopsis linearis	Desert Willow	Ornamental
Vitex agnus-castus	Vitex/Lilac Chastetree	Ornamental
Chitalpa tashkentensis	Chitalpa*	Ornamental
Prunus mexicana	Mexican Plum	Ornamental
Styphnolobium affine	Eve's Necklace*	Ornamental
Morella cerifera	Wax Myrtle	Ornamental
Ilex sp.	Savanna Holly*	Ornamental
Ungnadia speciosa	Mexican Buckeye	Ornamental
Diospyros texana	Texas Persimmon	Ornamental
Cornus drummondii	Roughleaf Dogwood	Ornamental

*Scientific name is the primary name field unless otherwise noted.

3.0 PLANT MATERIALS

Unless specifically noted, all trees shall be of specimen quality, exceptionally heavy, symmetrical, and so trained or favored in development and appearance as to be unquestionably and outstandingly superior in form, compactness, and symmetry. They shall be sound, healthy, vigorous, well branched, and densely foliated when in leaf; free of disease and insects, eggs, or larvae; and shall have healthy, well-developed root systems. They shall be free from physical damage or other conditions that would prevent vigorous growth.

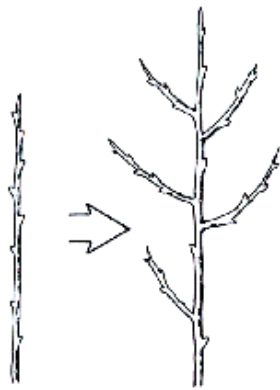
Trees with multiple leaders, unless specified, will be rejected. Trees with a damaged or crooked leader, bark abrasions, sunscald, disfiguring knots, insect damage, or cuts of limbs over 3/4 in. in diameter that are not completely closed will be rejected.

Inspection of the crown, trunk and roots shall find the following characteristics:

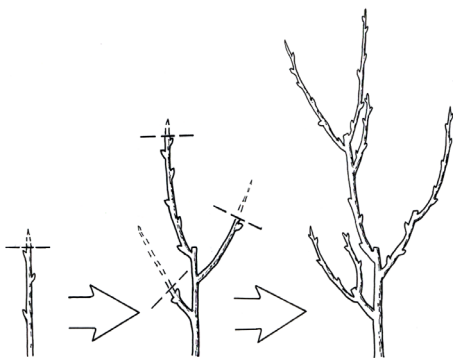
- **Crown Form:** The form or shape of the crown is typical for a young specimen of the species/cultivar. The crown is not significantly deformed by wind, pruning practices, pests or other factors.
- **Leaves:** The size, color and appearance of leaves are typical for the time of year and stage of growth of the species/cultivar. Leaves are not stunted, misshapen, tattered, discolored (chlorotic or necrotic) or otherwise atypical.
- **Branches:** Shoot growth (length and diameter) throughout the crown is typical for the age/size of the species/cultivar. Trees do not have dead, diseased, broken, distorted or other serious branch injuries.
- **Trunk:** The tree trunk should be straight, vertical and free of wounds (except properly made pruning cuts), sunburned areas, conks (fungal fruiting bodies), wood cracks, bleeding areas, signs of boring insects, galls, cankers/lesions and girdling ties.



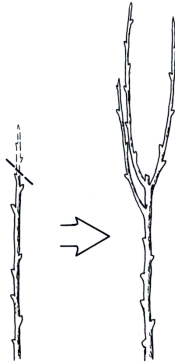
- Tree height and trunk diameter are typical for the age, species/cultivar and container size.
- **Roots:** The root system is free of injury from biotic (insects, pathogens, etc.) and abiotic agents (herbicide toxicity, salt injury, excess irrigation, etc.). Root distribution is uniform throughout the soil mix or growth media and growth is typical for the species/cultivar.
- **Central Leader:** Trees shall have a single, relatively straight central leader and tapered trunk, free of co-dominant stems and vigorous, upright branches that compete with the central leader. If the original leader has been headed, a new leader at least $\frac{1}{2}$ (one-half) the diameter of the original leader shall be present.



MAINTAINING A SINGLE, CENTRAL LEADER IS PREFERABLE.



HEADING AND RETAINING A LEADER IS ACCEPTABLE.

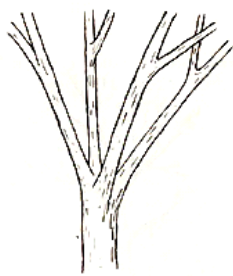


HEADING WITHOUT RETAINING A LEADER IS UNACCEPTABLE.

- **Main Branches (scaffolds):** Branches should be distributed radially around and vertically along the trunk, forming a generally symmetrical crown typical for the species.
 - Main branches shall be well spaced



PREFERABLE



UNACCEPTABLE

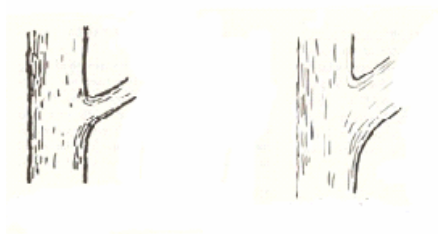


PREFERABLE



UNACCEPTABLE

- Branch diameter shall be no greater than $\frac{2}{3}$ the diameter of the trunk, measured 1" above the branch





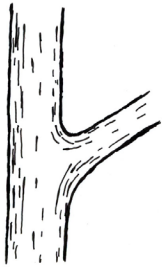
Preferable

Unacceptable

Preferable

Unacceptable

- The attachment of scaffold branches shall be free of included bark



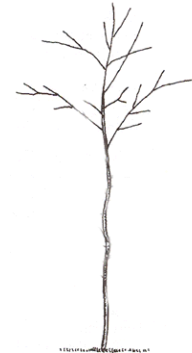
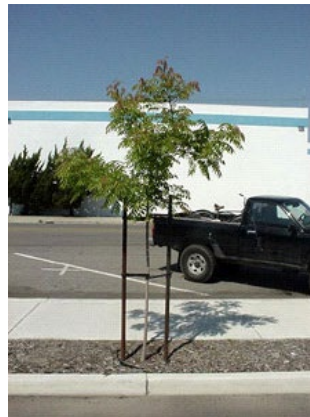
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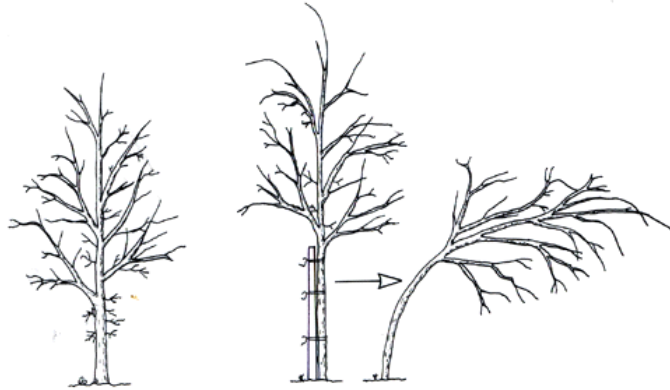
- **Temporary Branches:** Temporary branches should be present along the lower trunk, particularly for trees less than 1-1/2" (one and one-half inches) in trunk diameter. They should be no greater than 3/8" (three-eighths inch) in diameter and no larger than 2/3 the diameter of the main stem 1" above the junction. Reduction cutting, or heading, of temporary branches should be evident to limit branch growth.



Preferable

Unacceptable

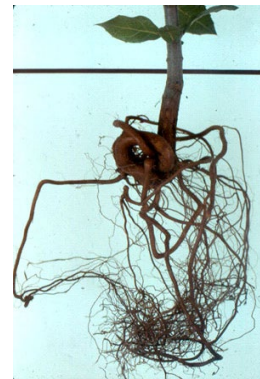
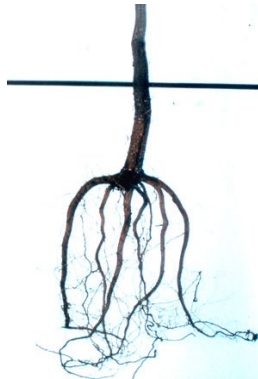
Trunk diameter and taper shall be sufficient so that the tree will remain vertical without the support of a nursery stake.



The trunk shall be free of wounds (except properly-made pruning cuts), sunburned areas, conks (fungal fruiting-bodies), wood cracks, bleeding areas, signs of boring insects, galls, cankers and/or lesions.

Trunk diameter at 6" (six inches) above the soil surface shall be within the diameter range shown for each container size below:

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.



Preferable

Unacceptable

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.



Preferable

Unacceptable

The upper-most roots or root collar shall be within 1" (one inch) above or below the soil surface.



Preferable

Unacceptable

The root ball periphery should be free of large circling and bottom-matted roots. The acceptable diameter of circling peripheral roots depends on species and size of root ball. The maximum acceptable size should be indicated for the species (if necessary).



Preferable

Unacceptable

At time of inspection and delivery, the root ball shall be moist throughout. The crown shall show no signs of moisture stress as indicated by wilted, shriveled or dead leaves or branch dieback. The roots shall show no signs of excess soil moisture conditions as indicated by poor root growth, root discoloration, distortion, death or foul odor.

The buyer reserves the right to reject trees that do not meet specifications as set forth in these guidelines or as specified by the buyer. If a particular defect or substandard element or characteristic can be easily corrected, appropriate remedies shall be required. If destructive inspection of a root ball(s) is to be done, the buyer and seller should have a prior



agreement as to the time and place of inspection, minimum number of trees or percentage of a species or cultivar to be inspected and financial responsibility for the inspected trees.

Caliper measurements shall be taken on the trunk 6 in. above the natural ground line for trees up to and including 4 in. in caliper, and 12 in. above the natural ground line for trees over 4 in. in caliper. Height and spread dimensions specified refer to the main body of the plant and not from branch tip to branch tip. Plants shall be measured when branches are in their normal position.

If a range of sizes is given, no plant shall be less than the minimum size, and no less than 50 percent of the plants shall be as large as the maximum size specified. Measurements specified are minimum sizes acceptable after pruning, where pruning is required. Plants that meet measurements but do not possess a standard relationship between height and spread, according to the American Standards for Nursery Stock, shall be rejected.

Size: Provide plant material in accordance with dimensional relationship requirements of the American Standard for Nursery Stock (ANSI Z60.1) for kind and type of plant material required. Plant material of larger size than specified may be used if acceptable to City's representative; in which case, increase size of root balls proportionately and at no additional cost to owner.

Requirements for Balled & Burlap Stock: Provide trees dug with firm, natural ball of earth in which they are grown. Provide freshly dug trees to the greatest extent possible. Provide ball size of not less than diameter and depth recommended by ANSI Z60.1 for type and size of tree required. Increase ball size or modify ratio of depth to diameter as required to encompass fibrous and feeding root system necessary for full recovery of trees subject to unusual or non-typical conditions of growth, soil conditions, or horticultural practice.

Requirements for Container Grown Stock: Provide healthy, vigorous, well-rooted plant materials established in container in which they are sold. Established container stock is defined as a tree grown in or transplanted into a container and

grown in the 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. Use rigid containers that will hold ball shape and protect root mass during shipping. Provide trees established in containers of not less than minimum sizes recommended by ANSI X60.1 for kind, type, and size trees required.

Protection: Any property damage during delivery resulting from, arising out of, or caused by the operations of the vendor will be repaired or replaced by the vendor at no cost to the owner.

4.0 MEASUREMENTS

Measure trees with branches, trunks or canes in their normal position. Do not prune to obtain required sizes. Take caliper measurements six inches (6") above ground for trees up to and including four inches (4") caliper size, and twelve inches (12") above ground for larger sizes. Measure main body of all plant material of height and spread dimensions, do not measure from branch or root tip to tip.



5.0 INSPECTION

City's representative may choose to inspect plants either at place of growth or when delivery is made for compliance with requirement for genus, species, variety, size, and quality. Such approval shall not impair the right of inspection and rejection during progress of the work. City's representative retains the right to further inspect plants for size and condition of balls and root systems, insects, injuries, and latent defects, and to reject unsatisfactory or defective materials at the time of delivery. Vendor will remove any rejected plant materials immediately from project site and replace with acceptable material at no additional cost to the City.

All field grown deciduous trees shall be marked to indicate the trees north orientation in the nursery. Place a 1-in. diameter spot of white paint onto the north side of the tree trunk within the bottom 12 inches of the trunk. **Failed Inspections shall be remedied as identified herein.**

The City reserves the right to pick up trees on an as-needed basis. However, delivery of trees will include unloading and moving trees to the instructed holding area in preparation of planting.

6.0 LIQUIDATED DAMAGES

LIQUIDATED DAMAGES: Unless otherwise provided, the Contractor will pay the City \$500 a day, compounding each day beginning the first day the specifications are not met, this includes but is not limited to, failure to off load the deliveries, maintain the work schedule including delays due to the breakdown of equipment, failure to show or meet delivery times, or to meet the specifications as identified in the Remedies for Non-Performance. The job start date will be identified within the Notice to Proceed letter with the exception of any written pre-authorized time extensions.

Execution under these Bid/Project Specifications shall constitute a binding agreement and understanding by the City and Contractor that \$500.00, is the minimum value of the costs and actual damage(s) caused by failure of the Contractor to complete the work within the allotted time frame, and that such sum is not to be considered as a penalty, but shall be deemed, taken and treated as reasonable liquidated damages, since it would be impractical and extremely difficult to

assess the actual damages caused by the Contractor's delay. It is agreed that such sum(s) may be deducted from payments due the Contractor if such delay occurs.

The nature of the contract is such that the overall project may be separated into one or more smaller projects, each with its own Notice to Proceed letter being issued, or as mutually agreed upon. Each Notice to Proceed letter shall have a maximum number of calendar days (as agreed upon in advance by the City and the Contractor) identified to allow the completion of said project(s).

The parties agree that damages consequent to a breach of this section are not readily ascertainable at the time of execution of this contract and agree that either two and one half percent of the total contract amount (1%) or \$500.00, whichever is greater per incident is an amount proportionate to the cost incurred by the City as a result of such breach. The parties agree that this amount is not intended as punitive damages.

7.0 REMEDIES FOR NON-PERFORMANCE

Failure on the part of the Contractor during the term of this contract in one or more area(s) would be reasonable cause for the Contract Coordinator or designee to issue a Notice to Cure (NTC) warning, in addition to liquidated damages as



required. Area(s) can include, but are not limited to, non-performance of service in accordance with the specifications herein; having more than two (2) failed inspections; provide materials of which is poor quality; failure to meet delivery time; failure to maintain work schedule; failure to install materials as specified; or failure to show.

Furthermore, the Contractor shall conduct operations in a manner that reflects favorably on the City. Calls from citizens concerning poor performance will be verified and if deemed correct the contractor shall be notified. Continued performance issues will result in cancellation of the contract.

It is the goal of the City to resolve disputes at the most minimal level, therefore,

Should minor failure(s) occur during the term of the contract the following will apply; minor is defined as less than 4 hours of work.

- Inspector will verbally warn and give Contractor instructions to correct minor failure(s), as well as record the corrective action internally. Upon correction as specified, the Contractor will continue on schedule with no written warning.

More than two (2) verbal warnings for the same failure within the term of the contract, or a failure to comply with verbal warning(s) shall be sufficient reason for the Contract Coordinator or designee to issue a NTC warning. Some known, but not all cures will be as follows:

- When Contractor fails to maintain the required rate of services per the City's scheduled demand the first time, then Contractor shall respond to NTC by supplying the Contract Coordinator a thorough schedule identifying the service schedule per location effected by NTC, unless otherwise identified within the NTC.
- When Contractor fails to maintain the required rate of services per the City's scheduled demand subsequently, suspension of further work or cancelation due to material breach may be incurred.
- Failure to cure within forty-eight (48) hours or as identified within the NTC, or as mutually agreed upon, or more than three (3) NTC for same incidents as specified in the NTC, will result in the following:
 - Additional projects may be suspended until the Assigned Project Area(s) are corrected in whole
 - If suspension occurs, Contractor will be required to remediate all failure(s) before continuing future work within the City.
 - Each day of suspension will count as a calendar day (workday), if applicable.
 - In the event the Contractor fails to correct in whole the NTC and to the satisfaction of the City, or fails to correct rejected, or unauthorized work after receiving the NTC, the City shall exercise all rights, including the right to terminate the Contract due to material breach in whole or part with cause.
 - The Contractor shall pay all costs and attorney fees incurred by the City in the enforcement of any provision herein or within this document
- All responses to the NTC must be in writing by the Contractor and submitted electronically to the City's Contract Coordinator within five (5) calendar days. It is fully understood by the Contractor that after reasonable and



documented attempts between both, the Contractor and City, to bring any failures/unacceptable work to an acceptable level, the City reserves the right to notify Prime Contractor that the City has the intent to hire a third party Contractor. The City may hire a third party contractor, at any costs to repair any unacceptable sites(s) within the Assigned Project Area(s) deemed unacceptable in part or whole, in an effort to stay on schedule. This may include but is not limited to, full removal and replacement of rejected, unauthorized or condemned installations, trees or other materials at the (Prime) Contractor's whole expense which will be deducted from any monies due, or to become due, to the Prime Contractor.