

## **General Conditions**

### **Scope:**

To secure plant materials and services for the planting of trees in the City of Syracuse.

### **Method of Measurement:**

Planting shall be measured by the number of plants of each kind, size or quality which are counted in place as having been completed and accepted. Progress payments for work satisfactorily performed in the excavation of plant pits and plant beds and for furnishing and placing backfill may be made in amounts not to exceed twenty percent (20%) of the unit price bid for the respective plants.

### **Estimated Quantity:**

The City shall provide the estimated total quantities to be used for the planting periods which will be used to formulate the basis for the unit bid price in the Form of Bid.. For some species, the Form of Bid may ask for a unit price for any species cultivar. Final cultivar choice will be determined at the time of order by the City Arborist or authorized representative.

The City of Syracuse does not guarantee any specific amount and shall not be held responsible for any deviation from the quantities estimated and provided herein. As stated, the quantity is approximate, but in any event, the contract shall cover the City's requirements whether more or less than the estimated amount.

### **Planting Season:**

The Spring planting season shall be from April 1<sup>st</sup> until May 31<sup>st</sup> and the Fall planting season shall be from October 1<sup>st</sup> through November 30<sup>th</sup> depending on weather conditions.

### **Tree Planting:**

For each order, the City Arborist, or authorized City representative, will provide the Contractor with a list of B&B trees to be planted. This list will contain the location, species, quantity, and size of all trees to be furnished and installed.

### **Priority of Planting:**

The order of priority of trees to be planted may be varied by the City Arborist or an authorized representative at any time. The City Arborist also reserves the right to change the location of trees to be planted, if and when a location change becomes necessary due to utility or other conflicts.

### **Responsibility:**

The Contractor will be responsible for all damage to existing features, utilities, and traffic.

1. Existing Features: The Contractor shall take all necessary precautions to preserve existing features such as curbs, walks, fences, roads, plantings, grounds and property while performing. The Contractor shall, at his own expense, restore all damage of injured items to a condition equal or better than the original by rebuilding, repairing, or replacing. Damaged turf shall be scarified, fertilized, and seeded.
2. Utilities: The Contractor shall notify and coordinate his work with appropriate public service concerns when water lines, gas lines, utility wires, sewer lines, or other structures are to be affected by the work. **The Contractor shall notify Dig Safely New York at least 72 hours prior to planting.** The Contractor will be held responsible for all damage to underground or above ground utilities while performing the work called for under this contract. The Contractor shall, at his own expense, restore all damage or injured items to a condition that meets the approval and all applicable codes or standards of the party concerned.
3. Traffic: Planting operations shall be conducted with a minimum of interference with vehicular traffic, pedestrian traffic and bystanders. Contractor shall be responsible for all maintenance of traffic and securing all street occupancy and all other necessary permits.
4. Excavations: All planting holes or excavations are to be filled in by the end of the day's work. No excavations are to be left open overnight. The contractor is responsible for disposal of any excess excavation material generated by planting.
5. Water: Water, if required, can be accessed through Syracuse Water Department or other Municipal Water Departments through a permit. The location and usage rates for this water will be determined by the Water Owner.

#### Definitions of Terms:

1. Nursery Source: The site from which the plant materials are dug.
2. Temporary Storage Area: The area where the plant materials are stockpiled after delivery but prior to planting.
3. Construction Site: Each specific, individual location where the tree is to be planted.

#### Certificates:

- A. Nursery Dealer Registration Certificate: The Contractor shall have a valid Nursery Dealer Registration Certificate as required by Article 14 of the New York State Agriculture and Markets Law.

- B. Inspection Certificate: The Contractor shall be responsible for all certificates of inspection of trees which may be required by Federal, State or other authority to accompany shipments of trees.

Nursery Source:

- A. The Contractor shall inform the City Arborist or an authorized representative of the source of origin of all plant materials which are to be used in this contract. Unless otherwise approved in writing, plant material must be grown in locations no warmer than Zone 6a and within 300 miles of Syracuse. As shipments of plant materials arrive at the Temporary Storage Area, a copy of the invoice for plant materials to be used in this contract shall be forwarded to the City Arborist.
- B. Due to the increased incidence of specific diseases and insects in certain regions of the State and County, the City of Syracuse reserves the right to eliminate certain species or to request the Contractor to select an alternate Nursery Source, when evidence or research furnished by New York State College of Environmental Science and Forestry, New York State Department of Agriculture and Markets, or Onondaga County, Co-operative Extension indicates that plant materials from a specific region of the State or County might adversely affect plant materials.
- C. The Contractor shall furnish the Nursery Source supplier with a copy of the specifications for the trees. The Contractor shall be entirely responsible to see that acceptable plant materials conforming to all specifications are supplied and delivered to the Temporary Storage Area.

Street Tree Standards:

The Contractor shall pay specific attention to Section 1 - Plant Materials and Section 3 - Planting.

- A. All plant material shall have straight trunks having a deviation from the vertical which is characteristic of the kind with well branched symmetrical tops.
- B. Shade Trees shall have their lowest branches six (6) feet to eight (8) feet from the ground. Small upright trees shall be single stemmed with their lowest branches four (4) feet to five (5) feet from the ground.

Schedule of Work:

- A. Provide the City Arborist with proof of having ordered the trees within seven (7) working days after notice to proceed.
- B. Based on the weather, the City Arborist or authorized representative will direct the Contractor to begin furnishing and/or planting trees. The contractor shall then proceed by planting or delivering a minimum of 20% of the total amount of trees ordered per week.

Additional Information:

Should the bidder require any additional information, please contact:

Stephen Harris, City Arborist  
ISA Arborist & Municipal Specialist  
Syracuse Department of Parks, Recreation & Youth Programs  
412 Spencer St  
Syracuse, NY 13204  
(315) 473-4330 x3014  
[sharris@syrgov.net](mailto:sharris@syrgov.net)

**SECTION 1 – PLANT MATERIALS**

**1.01 GENERAL**

A. Scope of Work: The purpose of this section is to outline the essential properties of plant materials which are to be supplied by the Contractor for use in this contract. As a minimum requirement, all plant materials shall conform to the current standards of the American Association of Nurserymen. Specific items covered under this section include:

1. Plant Material Ball
2. Size
3. Measurement
4. Health
5. Type
6. Form
7. Quality

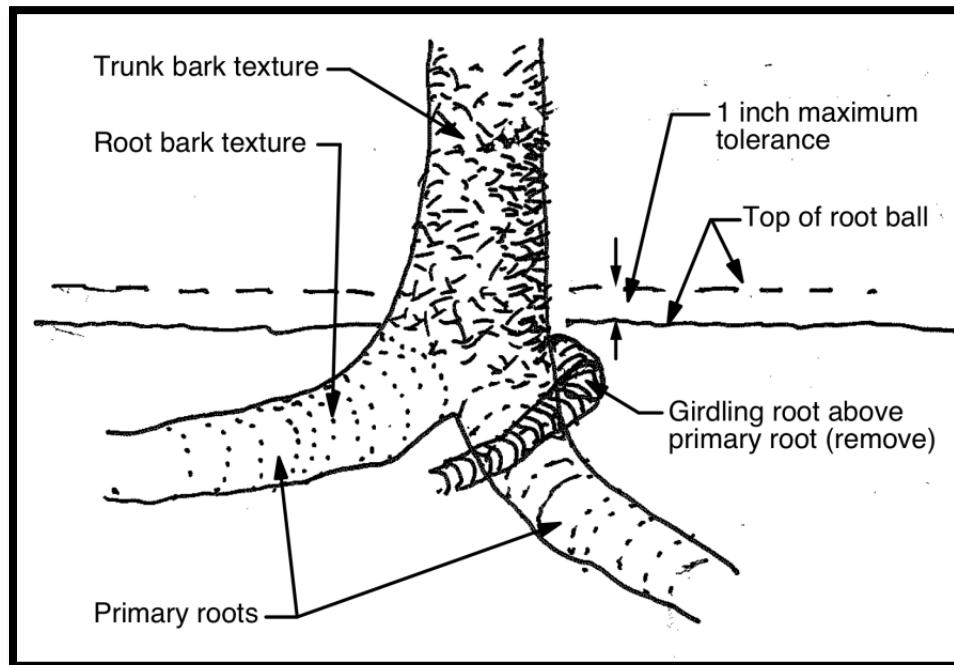
**1.02 EXECUTION**

**I. BALLED & BURLAP FURNISHED AND INSTALLED**

A. Plant Material Root Ball: All trees shall comply with **ANLA ANSI Z60.1-2004 American Standards for Nursery Stock** and specifically paragraph 1.6.3 (Root Ball Depths) of these standards and as modified below.

1. No trees shall be accepted that are harvested from wild or naturally regenerated sources.
2. Trees harvested and shipped as balled and burlap will be rejected at the temporary storage area if root flare is not within one inch of the top of the ball or if there are any girdling roots above the primary roots. No exceptions will be made.

3. For the purpose of these specifications, the root flare shall be considered the point where the trunk diameter begins to enlarge immediately above the point where two or more primary roots divide from the trunk or immediately above the point where the trunk bark pattern changes to a circular root bark pattern – whichever is deeper.
4. Primary roots are considered roots that are at least  $\frac{1}{2}$  the trunk diameter at the point where the root divides from the trunk. Any roots that emerge above the primary roots shall not be considered as primary roots if they are less than  $\frac{1}{2}$  the diameter of the trunk.
5. All soil that is above the root flare shall be removed in the nursery prior to harvesting. All roots found in the soil above the root flare shall be removed prior to harvesting.
6. All girdling roots above the primary roots including any girdling roots found in the remaining soil shall be removed.
5. Figure 1 graphically defines the above requirements.



*Figure 1: Girdling Root Requirements as Defined in Section 1.02A*

1. For the purpose of assisting with the use of this specification, Paragraph 1.6.3 of the **ANLA ANSI Z60.1–2004 American Standards for Nursery Stock** is provided below.

**Measurement:** Depth of the ball is measured from the top of the ball, which in all cases shall begin at the root flare (see Figure 2). Soil above the root flare, from

being deeply planted in the nursery as a young plant, as a result of maintenance practices in the nursery, or added during harvest, shall not be included in ball depth measurement, and should be removed.

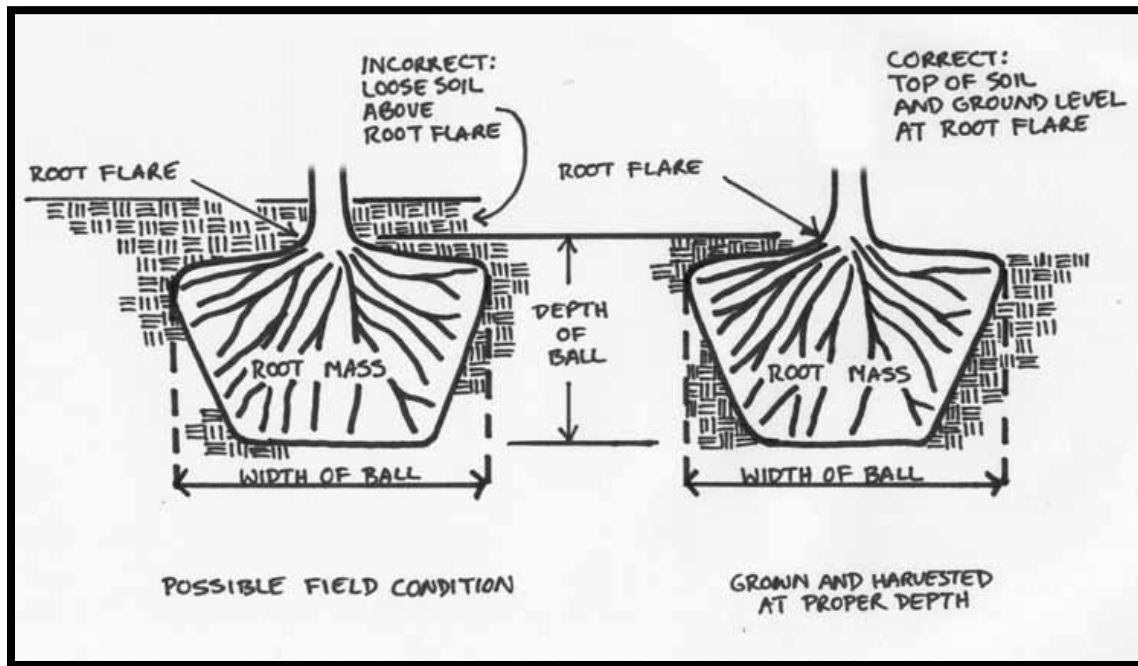


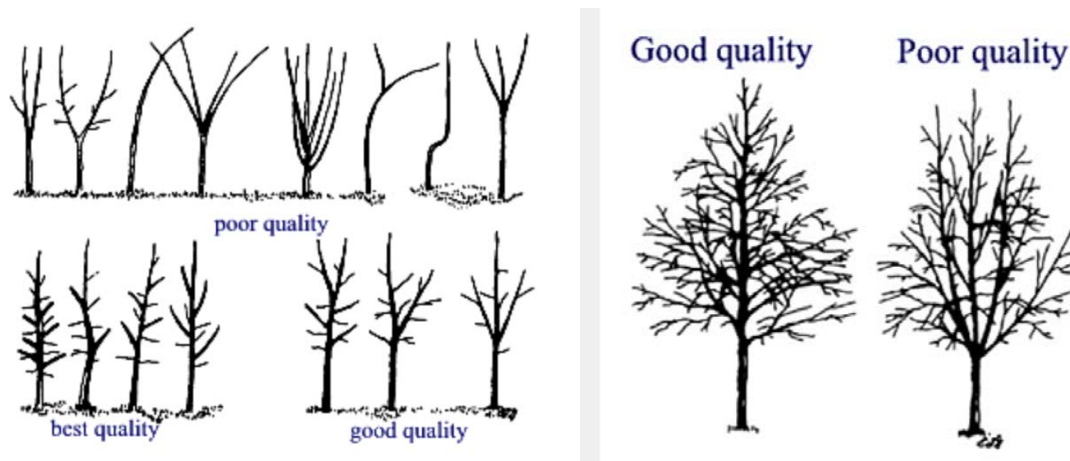
Figure 2: Root Ball Depths as Defined in Section 1.02A

2. Prior to harvesting any plant material, the landscape contractor shall submit a letter of certification signed by the landscape contractor and the supplying nursery, for approval by the City Arborist or authorized representative, that all nursery stock will be prepared and harvested in compliance with this specification including Section 1.02A "Plant material Root ball".
- B. **Plant Material Ball:** Plants shall be dug with a firm, natural ball of earth, of sufficient diameter and depth to encompass the fibrous and feeding root system necessary for complete recovery of the plant. No manufactured balls will be accepted. Balls shall be firmly wrapped with burlap and bound with twine, cord, or wire mesh. The ball of earth shall be free of all pests, disease, eggs, or larvae. Care should be taken to avoid damage to the root system. Plants with balls that have been cut, split, or in any way damaged will be rejected.
- C. **Size:** All plants shall conform to the measurements on the bid sheet. Exceptions are as follows:
1. Plants larger than specified on the bid sheet may be used if approved by the City Arborist or authorized representative at no additional cost. If the use of larger plants is approved, the spread of roots or ball of earth shall be increased in proportion to the size of the plant to meet the American Standard for Nursery Stock.

2. When plants of a specified size are not available within a reasonable distance or zone, a smaller size may be used, upon request of the Contractor, only if approved by the City Arborist or authorized representative in writing prior to planting. If a smaller size is agreed upon, the unit price of the tree will be reduced proportionally as agreed upon by both the Contractor and City Arborist. In any other situation, undersized plants will not be accepted.
- D. Measurement: Dimensions of trees and shrubs shall conform to the American Standard for Nursery Stock, latest edition.
- E. Health: All plant materials shall be hardy under climatic conditions similar to those of Syracuse, New York. All plants shall be healthy, nursery grown stock, free of all pests, disease, eggs, or larvae. They shall be sound, vigorous and well branched. Trees planted in leaf shall, at the time of planting, have at least 95% of their foliage in a vigorous and healthy condition in order to be accepted. The above percent of foliage is based on a well-forced, natural head according to the American Standard for Nursery Stock.
- F. Type/Species: All plant materials shall bear a plastic strip tag imprinted with the Botanical name of the species as it appears on the bid sheet. These tags shall be removed at time of planting and disposed off-site.
- G. Form: All trees shall be strongly main-stemmed stock easily trained to satisfactory adult form.
1. Shade Trees: All plant materials shall have straight trunks having a deviation from the vertical which is characteristic of the kind, with well branched symmetrical tops with their lowest branches six (6') feet to eight (8') feet from the ground. Trees with a crooked leader, crooked trunk, multiple leaders, or cut back leader, will not be accepted. Trees shall not be pruned before delivery.
  2. Small Upright Trees: Shall be single stemmed and have a normal growth and be typically characteristic of their respective kind. Trees shall have a well-branched symmetrical top with their lowest branches four (4') feet to five (5') feet from the ground. Trees with a crooked leader, crooked trunk, multiple leaders, or cut back leader, will be rejected. Trees shall not be pruned before delivery.
- H. Quality: Trees shall be nursery grown and bear evidence of proper nursery care including adequate transplanting and root pruning. Trees shall not have cuts of limbs that are not healing and not cuts over 3/4", which have not completely calloused over, no cut back crowns, and no abrasions of the bark. Trees shall be of specimen quality. Trees with a damaged leader or damaged trunk will not be accepted.
- I. Trunk structure: Shade trees that are large at maturity, and most evergreen trees, with the best quality have a dominant or central leader or trunk up to the top of the canopy. Shade trees of lesser quality have two or more leaders or trunks; they could split apart as they grow older. Small ornamental trees can have several trunks.

J Branch structure: The better quality, large-maturing shade trees (lower extreme left) have all branches less than about two-thirds the trunk diameter. Poor quality shade trees (lower left center) have larger upright branches. Trees such as crape myrtle and other small-maturing trees can have several trunks. Trees with extensive defects in branches such as cracks and included bark (lower right) represent lesser quality than trees free of these potential problems.

*Reference: Section 2 - Shade and Flowering Trees of American Standard for Nursery Stock (ANSI Z60.1-2014).*



*(Note: Trees are drawn without leaves or small diameter branches to show their trunk and branch structure only. The end portions of large diameter branches are also cut off to save space in the illustration. These drawings apply to evergreens as well as deciduous trees).*

## **SECTION 2 – INSPECTIONS**

### **2.01 GENERAL**

- A. **Scope of Work:** The items included under this section allow for the City Arborist, or an authorized representative, to make periodic inspections at the temporary storage area, and to inspect all trees while they are being planted at individual construction sites.

### **2.02 EXECUTION**

- A. **Inspection of Nursery Stock:** After an order has been placed and prior to digging the tree, the City Arborist reserves the right to visit, inspect, and/or tag trees that are to be dug for the order that has been placed.
- B. **Arrival of Plant Material:** Insofar as possible, the Contractor shall notify the City Arborist, or an authorized representative, of the dates and times that shipments of plant materials are to arrive at the temporary storage area. Once a shipment arrives, a copy of the invoice shall be sent to the City Arborist.



- C. Inspection at Temporary Storage Area: After the City Arborist has been notified of the date trees are scheduled to arrive, he or an authorized representative shall visit the Temporary Storage area either on the day plant materials arrive, or as soon after as possible. The purpose of this visit is to check the plant material for proper root collar depth and root ball depth from root collar. Rejected plant material will be painted red by the City Arborist, or an authorized representative, to signify that this material should not be planted.

The Contractor shall provide a foreman or job supervisor with a substantial knowledge of plant materials and a complete understanding of the specifications, so that only trees which meet the specifications are introduced into the temporary storage area for use in the contract.

- D. Notification of Planting: The Contractor shall inform the City Arborist of his intent to begin planting at least forty-eight (48) hours prior to the date that planting is to begin.
- E. Planting Procedures: During the planting operation, the City Arborist, or an authorized representative, can answer any questions regarding proper planting procedures. The foreman shall be informed at this time of any item relating to the planting procedures, which do not conform to the specifications, and correction of these items shall then be made in the presence of the City Arborist. Items that are not corrected immediately will be placed on a punch list. All punch list items must be corrected in the presence of the County or authorized representative.
- F. Location Changes: In the event of a rejection or need for a location change, the City Arborist, and/or authorized representative, shall re-pot the tree. In the event that an acceptable new location cannot be found the same day, the Contractor shall transport the tree back to the temporary storage area.

The Contractor, at its own option, may inspect planting locations prior to arrival on site with the trees to be planted. There will be no additional cost for trees returned to the temporary storage facility for later planting.

- G. Plant Materials: The Contractor shall be responsible to ensure that only those plant materials meeting the specifications as outlined in the General Specifications – Street Tree Standards and Section 1 – Plant Materials are delivered to each individual planting site. Questions regarding straightness of trunk, crown balance, or acceptability for becoming a suitable street tree shall be directed to the City Arborist or authorized representative prior to or during planting. The County will attempt to inform the Contractor as soon as possible of any trees that do not appear to be acceptable, in an effort to eliminate the planting of materials that do not meet the specifications and will ultimately be unacceptable. Since some items cannot be viewed or judged until the crown is open and work completed, judgment for acceptable or non-acceptable trees will be made by the City Arborist only when all work is completed at each individual planting site.

## **SECTION 3 - PLANTING**

### **3.01 PLANTING:**

- A. **Scope of Work:** The work covered under this section consists of furnishing and planting all plant materials shown on the planting plans, planting notices, and as directed by the City Arborist or an authorized representative. The work shall include all labor, plant materials, planting items, and equipment necessary to complete the work as specified.

### **3.02 MATERIALS:**

A. **Tree Planting Soil:**

1. Unless directed otherwise by an authorized representative of the City, planting holes shall be backfilled with the excavated soil uniformly blended with 5 to 10% leaf compost.
2. Where existing soils at a construction site are not suitable for reuse as tree planting soil, topsoil meeting the following requirements shall be used. A certification of the source and properties of the topsoil shall be submitted prior to its initial usage. As shown on the bid form, furnishing topsoil and removing the existing unsuitable soil is an additional pay item and will be measured on a per tree basis.
  - a. **Quality:** All topsoil for this contract shall be furnished from approved off-site sources, and shall be neutral, fertile, characteristic of productive soils in the vicinity, without admixture or subsoil, clean, free from clay, lumps, stones, stumps, roots, debris, no similar substances two inches (2") or more in greatest dimension, obtained from well drained source and free from toxic substances harmful to plant growth. Depth to which topsoil may be stripped shall be subject to approval at its source by the City Arborist, or an authorized representative.
  - b. **Sampling:** The City Arborist may take at its discretion, topsoil samples at any time during the course of the Contract. Topsoil samples shall be tested by an independent laboratory, and test results shall indicate that the samples have:
    - i. A pH of between 5.5 to 7.5
    - ii. An organic content of from 5 to 15 percent (5-15%)
    - iii. Particle gradation such that not less than 20% or more than 80% pass the #200 sieve.
  - c. Topsoil not meeting these requirements so determined by the Arborist shall be immediately removed from the site and not incorporated into the work
3. Site decompaction and remediation may be necessary. City Arborist or authorized representative will specify the extent and nature of remediation. Typical remediation

involves decompaction of existing subbase to a 3 foot depth and the incorporation of 10% total volume of compost. Excess subbase material shall be hauled away.

B. Leaf Compost: Leaf Compost shall conform to the following specifications:

- a. Organic matter for amending existing soils shall be a stable, humus-like material produced from the aerobic decomposition and curing of leaf compost, composted for a minimum of one year (12 months). The leaf compost shall be free of debris such as plastics, metal, concrete or other debris. The leaf compost shall be free of stones larger than 1/2", larger branches and roots. Wood chips over 1 inch in length or diameter shall be removed by screening. The compost shall be a dark brown to black color and be capable of supporting plant growth with appropriate management practices in conjunction with addition of fertilizer and other amendments as applicable, with no visible free water or dust, with no unpleasant odor, and meeting the following criteria as reported by laboratory tests. Prior to its initial use, submit certified reports documenting the source and properties of the leaf compost.
  - a. The ratio of carbon to nitrogen shall be in the range of 12:1 to 25:1.
  - b. Stability shall be assessed by the Solvita procedure (version 4.0). The compost must achieve a maturity index of 6 or more as measured by the Solvita scale.
  - c. Pathogens/Metals/Vector Attraction reduction shall meet 40 CFR Part 503 rule, Table 3, page 9392, Vol. 58 No. 32, and applicable New York State requirements for applications to soils with human activity.
  - d. Organic content shall be at least 20 percent (dry weight). One hundred percent of the material shall pass a 3/8-inch (or smaller) screen. Debris such as metal, glass, plastic, wood (other than residual chips), asphalt or masonry shall not be visible and shall not exceed one percent dry weight. Organic content shall be determined by weight loss on ignition for particles passing a number 10 sieve.
  - e. pH: The pH shall be between 6.5 to 7.2 as determined from a 1:1 soil-distilled water suspension using a glass electrode pH meter American Society of Agronomy *Methods of Soil Analysis*, Part 2, 1986.
  - f. Salinity: Electrical conductivity of a one to five soil to water ratio extract shall not exceed 2.0 mmhos/cm (dS/m).
  - g. The compost shall be screened to 3/8 inch maximum particle size and shall contain no more than 3 percent material finer than 0.002mm as determined by hydrometer test on ashed material.

C. Mulch: Mulch shall consist of shredded hardwood bark and wood fiber free of foreign materials, ranging in size from 1/2" to 3".

D. Heeling in Materials:

1. Moist Topsoil: See Paragraph 3.02 A.
2. Wet Straw: As approved by City Arborist.
3. Mulch: See Paragraph 3.02 C.

E. Trunk Protection: A tree protection device of similar size, material and character of ArborGard tree protectors manufactured by EdgePro shall be placed around the trunk of every tree. Drainage tile, corrugated cardboard and plastic spiral tree wraps are not acceptable. Choice of tree guard material must be approved by City Arborist or an authorized representative.

F. Stakes and Guys:

- a. Upright and Guy Stakes: Rough-sawn, sound, new **hardwood**, free of knots, holes, cross grain, and other defects, 2-in x 2-in x 8-ft length, pointed at one end.
- b. Flexible Ties: Wide rubber or elastic bands or straps of length required to reach stakes.
- c. Tree-Tie Webbing: UV-resistant polypropylene or nylon webbing with brass grommets.
- d. Proprietary Staking-and-Guying Devices: Proprietary stake and adjustable tie systems to secure each new planting by plant stem; sized as indicated and per manufacturer's written recommendations.
- e. Products: Subject to compliance with requirements, **available products that may be incorporated into the Work include, but are not limited to, the following:**
  - i. Arborbrace; ArborBrace Tree Guying System.
  - ii. Decorations for Generations, Inc.; Mega Stake System.
  - iii. Arbortie, Deep Root Partners, L.P. 530 Washington Street San Francisco, CA 94111 (800) 458-7668, [info@deeprout.com](mailto:info@deeprout.com)

### 3.03 EXECUTION

A. Protection:

1. B&B trees shall be watered within forty-eight (48) hours of being dug at the nursery, and if stored for longer, heeled in appropriate materials and regularly watered thereafter.
2. Protect plants at all times from sun, drying winds or freezing temperatures. The balls of plants that cannot be planted within forty-eight (48) hours of delivery and shall be covered with approved heeling in material, and shall be kept adequately watered. During extended hot dry periods, all plants shall be watered as necessary until planted.
3. Plants shall not be bound with wire or rope at any time so as to damage the bark or break branches. Plants shall be lifted and handled from the bottom of the ball only. Plants moved with a ball will not be accepted if the ball is cracked or broken before or during planting operations.
4. Plants shall be completely covered with a tarp during all transportation of plant material. Failure to do so will result in the rejection of all plant material at the Contractor's expense.

5. Protect plant materials at all times from injury to bark and branches while the material is being loaded or unloaded, or while material is in transport. Plant materials, which become injured or injured by mechanical equipment or as a result of improper protection will be rejected.

B. Pruning of Plant Materials:

1. Trees pruned before their arrival will be rejected unless such pruning is specified or approved. Pruning may be done before or after planting at the direction of the City Arborist or authorized representative. Pruning shall be done with clean, sharp tools. All trees shall be pruned in a manner to preserve the natural character of the tree.
2. All trees shall be pruned to remove all dead wood, broken or badly bruised branches, and all sucker growth. Overlapping branches shall be removed to prevent rubbing.
3. **UNDER NO CIRCUMSTANCES SHALL THE CENTRAL LEADER BE REMOVED.** A tree whose main central leader has been pruned out or damaged will be rejected.

C. Planting of All Materials:

1. Location of Work:

- A. Street Trees: Planting notices, which contain species, address, and written location, will be supplied to the Contractor for all street trees which are to be planted. Discrepancies in planting locations will be resolved by the City Arborist or authorized representative prior to planting. Payment will not be made for any tree planted in a location other than the one noted on the planting notice, unless the Contractor has received prior written permission. Trees which cannot be planted (e.g., due to conflicts with underground utilities) will be replotted by the City Arborist.
  - B. Other Locations: Planting plans/locations for all other areas (e.g., parks) will be supplied to the Contractor. The City Arborist, or an authorized representative will stake all tree locations that are included on these planting plans in the field.
2. Workmanship: The Contractor shall furnish all equipment and competent personnel with adequate supervision at all times to perform the work in an efficient and workmanlike manner. A representative in authority other than a crew foreman shall be available for contact locally at all times.
  3. Daily Notification of Planting: Each day that the Contractor is planting, the Contractor shall contact the City Arborist before 9:00 AM that morning and inform him of the planting locations that the crews will be starting in. The Contractor may inform the City Arborist by calling 315-473-4330 ext. 3014 between 7:00 AM and 10:00 AM and leaving a message on his voice mail. Failure to contact the City Arborist may result in trees requiring replanting at the Contractor's expense or in trees being rejected. **The**

**Contractor shall complete a daily planting report, every day that planting occurs, with all of the locations planted that day. This report must be faxed to the City Arborist at 315-428-8513 by 9:00 AM the following day.**

4. Root/Tree/Stump Removal: The Contractor shall remove dead /dying trees, and stumps six (6") inches in caliber or under as well as any roots that encroach on the designated locations of trees to be planted, as evaluated by the City Arborist. It is estimated that approximately one to three percent of planting sites will have stumps 6" or less that will require removal. In addition, approximately five percent of sites may have the remnants of ground-out stumps in the subsurface, such that hand excavation may not be possible.
5. Preparation in Planting the Hole: Holes shall be excavated approximately six inches (6") deeper than depth of ball. The diameter of the hole shall be at least twice the diameter of the root ball. The bottom of hole shall be backfilled with existing soil as defined under number six below, then compacted in one-foot lifts until final depth of hole is equal to the depth of the ball minus one inch (1"). Excess soil shall be hauled and disposed off-site. Contractor shall demonstrate that suitable measuring devices are being used to verify this requirement. Holes excavated with power equipment must have the sides and bottom scored and broken by hand shoveling to eliminate glazing of the sides and bottom. **TREES PLANTED TOO DEEPLY SHALL BE REPLANTED AT THE CONTRACTOR'S EXPENSE – THE ROOT FLARE OF ALL TREES MUST BE VISIBLE AND AT GRADE.**
6. Tree Planting Soil in Tree Pits: Backfill for plant pit shall be tree planting soil as described in section 3.02.A. Planting soil should be used to form plant saucers as shown on the typical shade tree planting details.
7. Plant Material Ball: Prior to planting, wire baskets shall be removed from the upper two-thirds of the ball of plant materials. All rope and burlap shall be removed from the top and upper two-thirds of the sides of all plant material balls. The remaining wire, rope, and burlap shall be cut to allow for root growth.
8. Mulching: All trees shall be mulched as shown on the typical shade tree details. Mulch shall be placed a maximum of 4 inches deep and shall be kept 3 to 6 inches from the tree trunk. Trunk flare shall be visible after mulching.
9. Watering: Each tree shall be watered within an hour of completion of planting with approximately 15 gallons of clean water. The ground shall be thoroughly saturated to remove all air pockets to the approval of the City Arborist. Contractor must maintain on the job site at all times, a sufficient quantity of water to perform the above operations.
10. Clean Up: All wraps, ropes, ties, tags and flagging tape of any kind tied around the trunk of the tree shall be removed. The tag identifying the tree species may be left on a branch in the canopy of the tree. Stones, debris, tools, equipment, rope, pruned branches, tree debris, etc., shall be removed from the site upon completion of work. Excess soil outside the saucer area shall be removed and the area raked smooth. The entire area

shall be left in a neat and sightly condition. Paved areas shall be swept clean. This shall be the Contractor's responsibility at the completion of planting prior to final acceptance of the work.

11. Straightening existing trees: Contract may be called in to straighten trees planted within their warranty period that are leaning. If roots need to be cut they shall be done so with a sharp cutting tool. Trees shall be set straight, back filled and mulched.
12. Moving planted trees: At times, recently planted trees must be moved due to unexpected circumstances (emergency infrastructure repair or installation of new infrastructure). In these circumstances, the moving or transplanting these trees is not fault of the contractor. Contractor will provide a time and materials cost rate for these transplants. Trees that are moved under these circumstances shall not retain their warranty. City Arborist or authorized will direct which trees shall be moved and when.
  - A. Contractor shall water tree fully prior to transplanting.
  - B. The location that tree is to be transplanted to shall be pre-bud.
  - C. Contractor shall retain as much of original root ball package when transplanting tree.
  - D. Roots shall be covered in soil and moisture maintained until planting.

### 3.04 PERFORMANCE

Due to the seasonal nature of the work of this contract and because of the importance of planting trees within specified seasons, it is imperative that adequate performance by the Contractor is assured. It is a specific requirement of the contract that the following performance standards apply, unless otherwise approved by the City Arborist:

1. Planting under the contract shall begin as directed by the City Arborist and continue until the quantity required under the contract is completed or the season ends, unless otherwise directed by the City Arborist.
2. During the planting season and after the sites have been given to the Contractor, the Contractor shall be prepared to plant a minimum of eighty (80) sites per week. When instructed by the City Arborist, the Contractor shall plant any priority planting sites within one (1) week of notification.
3. If the Contractor fails to initiate and maintain these levels of productivity, the County reserves the right to assess liquidated damages of 20% of the value of the uncompleted work (the difference between the minimum required production as defined above and the actual weekly production) based on the average unit bid price. Furthermore, the Contractor's failure to meet the above minimum performance requirements may be considered a material breach of this contract and result in the default of the Contractor in accordance with this agreement.

## SECTION 4 - MAINTENANCE & FINAL INSPECTION

### 4.01 GENERAL:

A. Scope of the Work: The items covered under this section include the following:

- A. Maintenance
- B. Final Inspection
- C. Warranty

#### 4.02 EXECUTION:

##### A. Maintenance:

1. The Maintenance Period shall begin immediately after each plant is planted and shall continue for one (1) year from the acceptance of the planting.
2. All wire shall be removed from the upper two-thirds of the root ball prior to planting. All burlap and ropes shall be removed from the top and upper two thirds (2/3) of the root ball. Plants shall be watered, mulched, pruned, fertilized, and all gullies and washouts repaired, and any other work necessary to satisfactorily maintain the material until the Maintenance Period is over.
3. Settled plants shall be reset to proper grade position. Plants which lean shall be reset plumb and straight. Planting saucer shall be restored and dead material removed. Defective work shall be corrected as soon as possible after it becomes apparent, and as weather and season permits. Upon completion of planting and prior to acceptance, the Contractor shall remove from the site excess soil and debris, and repair any damage to lawns, landscaping, structures, etc. resulting from planting operations.

##### B. Final Inspection:

1. Non-acceptable Plant Materials: Upon receipt of the final billing, the City shall make an inspection of all plant materials on the final billing. A list of non-acceptable plant materials noting each discrepancy will be sent to the Contractor.
2. Punch List Items: Upon receipt of the final billing, a final inspection shall be made of all planting locations in this contract. A punch list shall be submitted to the Contractor containing a list of all items which require correction. All punch list items must be completed within 30 days.
3. Acceptance: Final acceptance and start of the guarantee period shall be from the date of final payment.

##### C. Warranty:

1. The Contractor shall guarantee the health, physical condition, and species of all plant materials furnished and planted under this contract for a period of one (1) year following the acceptance of the plant material and final payment. The Contractor shall agree to replace all plant materials which are dead, not true to name, in an impaired condition, or do not have at least 75% of their foliage in a vigorous and healthy condition. The



aforementioned percent of foliage is based on a well-formed Natural Head according to the American Association of Nurserymen.

2. Trees purchased by the City of Syracuse and planted by the Contractor are not subject to the above Guarantee clause.
3. Replacements: At the end of the first growing season, the City Arborist shall make an inspection of all trees in the contract and a list of trees requiring replacement shall be given to the Contractor. These trees shall all be replaced during the next planting season during the above mentioned planting season dates.
  2. All replacements shall be plants of the same type and size as specified in the plant list or substitutes of similar cost. The cost of all replacement shall be born by the Contractor.
4. All replacement shall be plant materials as specified in Plant Materials. All replacements shall comply with Nursery Quality stock specifications within this document.
5. Vandalized trees or trees purchased by the City of Syracuse and planted by the Contractor are not subject to the above Replacement clause.
6. Contractor will not have to replace a warranty tree a second time if warranty tree dies, unless the tree it replaced was already dead at planting. (For example, tree planted in spring without leaves never leafs out and must be replaced. The replacement tree will be considered the first tree planted