

Update: November 2013

THE FOLLOWING ITEMS ARE SPECIAL PROVISIONS TO  
THE CITY OF SAN ANTONIO  
STANDARD SPECIFICATIONS FOR CONSTRUCTION  
DATED NOVEMBER 2013

1. Item 804 New Tree & Shrub Planting and Maintenance.....4 pages

General

1. None

Standard Specifications

1. Adding Item 804 – New Tree & Shrub Planting and Maintenance Specifications (dated November 2013) in its entirety.

**ITEM**

**804 New Tree & Shrub Planting and Maintenance**

**804.1 DESCRIPTION:** *This item shall govern the procedure for selecting planting and maintaining trees and other vegetation to be used as enhancements or for mitigation on a construction project*

**804.2 SELECTION OF TREES:**

- A. Size-grading of trees is in accordance with the Texas Association of Nurseryman Grades and Standards. Following is a summary (caliper is measured by a “slot” type caliper, “pincer” type caliper or a diameter tape):
- B. For Shade trees caliper takes precedence. Caliper is measured at 6 inches above soil level in the pot ground for trees up to and including 4 inch caliper size, and 12 inches above the ground for larger trees
- C. For flowering trees, height takes precedence for trees up to 6 feet in height and then caliper
- D. Trees will be a minimum of 2 inch caliper and/or 6 feet in height unless specified.
- E. Trees will be straight, single trunked unless specified or approved.
- F. Trees will be containerized/boxed /balled and burlaped/b&b
- G. No species substitution unless authorized
- H. Trees will be free of insect and diseases with a well-developed rootball no girdling roots
- I. For palm trees, measurement will be by overall height or trunk height and will specify to species or to type; palmate or pinnate
  - If a tree transplant or ball and burlap is approved or specified, it must have been grown out in a nursery for at least 2 growing seasons and ball size must comply with ANSI

**804.3 PLANTING:**

- A. Excavate pits, beds and trenches with vertical sides and with bottom of excavation slightly raised at center to provide proper drainage
- B. Depth of the excavated area is to be the same as the length of the root ball so that the top of the root flare is at the ground surface level. Minimum depths shall be measured from finished grade
- C. Width of excavation must be a minimum of 3 times the diameter of the root ball.
- D. Loosen hard subsoil in bottom of excavation
- E. Fill excavation for tree/plant with water and allow it to percolate out before planting.
- F. Use excavated parent soil material in the backfill mixture at a ratio of 70:30 with the soil amendment as specified in item 802. Particle size of backfill material must be less than 4 inch diameter

- G. Saturate with water when the pit or bed is half full of backfill and again when full.
- H. Cover excavation area with mulch as specified in item 802
- I. Water to prevent soil from drying out
- J. Plants will be rejected if the ball of earth surrounding roots has been disturbed or damaged prior to or during installation. Replacement tree/plant to be of equal or better quality
- K. Control growth of weeds. Apply a glyphosate type (Round-up 41%) herbicide in the excavated area in accordance with manufacture's label instructions

**804.4 QUALITY ASSURANCE:**

- A. All tree installation work shall be performed by a single firm specializing in tree transplanting work, with a minimum of 3 years experience in the acceptable performance of similar work to that specified. The firm performing the work shall have the following minimum certifications.
- B. Texas Nurseryman & Landscape Association (TNLA) certification
- C. Be licensed for application and use of pesticides
- D. Meet state requirements for insurance
- E. Must be bonded

**804.5 TREE MAINTENANCE POST TRANSPLANTATION:**

**WATERING THE TREE:**

- A. The key to newly planted tree survival is providing adequate water
- B. Contractor shall water the newly planted trees weekly until the end of the one-year warranty. Contractor shall provide a schedule and method of watering the trees to the City for the project
- C. Initially, a newly planted tree needs to be properly watered with an adequate amount to pack the soil, to remove root-drying air and to moisten the root ball.
- D. On adequately draining soils, 5 gallons of initial water should be enough.
- E. Fast draining soils may need more frequent watering than a slow draining soil.
- F. Critical period to provide adequate water during the annual growing season, between late spring and autumn
- G. Use of Gatorbags is acceptable method of irrigation. Follow prescribed irrigation schedule for proper establishment

**804.6 MULCHING THE TREE:**

- A. Mulching a newly planted tree ensures that moisture is available to roots over time and reduces grass competition
- B. Good mulch (organic materials like leaves, bark, needles and fine wood chips) should ring the tree base (over the critical root zone) but never touch the trunk of the tree. Use local/native hardwood mulch. No fertilizer is necessary when quality composted mulch is used
- C. Maintain the mulch level with no more than 4 inches of material over the roots; mulch should not touch the trunk of the tree. A 3' to 6' minimum radius of mulch should be placed around the tree (the wider the better)

**804.7 STAKING THE TREE:**

- A. Not all newly planted trees need staking to remain standing straight. Stake only if the root ball is unstable or the tree trunk is bending. Use only loosely-tied wide straps (recommend use of 'Chain-Lock' staking system) and limit the number of straps to a minimum for support
- B. Use tree stakes only when needed. Every tree does not require automatic staking.
- C. Inspect all stakes and straps during spring and autumn for loose fit and alter to prevent trunk damage. All straps should be removed after the first or second year

**804.8 INSPECTING TREE HEALTH:**

- A. Checking a tree's health should be done by a certified arborist, a Landscape Architect or registered Landscape Professional an expert. Things that can be done to alert of tree health problems
- B. When inspecting a tree consider the following:
- C. Is the current year's growth much less than past years' growth? Although fast growth does not necessarily mean good health, a dramatic reduction in growth rate may be an indication of poor health
- D. Are there dead limbs, odd colors on leaves and bark or a patchy canopy. These tree symptoms can be the first indicators that a tree is unhealthy and should be inspected in detail
- E. Remember that planting a healthy tree in the beginning is the best way to assure its future health

**804.9 PRUNING THE TREE:**

- A. Prune only critical branches that are either dead or broken after planting. Remove multiple leaders to leave only one central stem. (may be best to postpone pruning to avoid transplanting shock due to loss of leaves)
- B. Prune only critical branches and/or eliminate extra leaders in the tree's first year. Prune lightly in Year 2 or 3

**804.10 REPLACEMENT:**

- A. Any dead trees or shrubs during the warranty period shall be replaced by the contractor at no cost to the city
- B. At the end of the one-year warranty, any tree or shrub that is not in good condition as determined by the city arborist and project manager shall be replaced by the contractor at no cost to the city

**804.11 MEASUREMENT:**

Tree installations will be measured by the number and size of trees/plants (cost should include installation, warranty, mulch, irrigation/gatorbags, monitoring/treatments as needed, staking, etc.)

**804.12 PAYMENT:**

Payment shall be made per each of the type and size of tree specified on the bid proposal

**804.13 BID ITEM:**

Item 804 – New Tree & Shrub Planting and Maintenance