

## SECTION 605

### PLANTING

#### I. GENERAL

##### 1.1. DESCRIPTION OF WORK

The Contractor shall furnish all labor, supervision, material (except as herein provided), tools, equipment, supplies, and services; and, shall perform all Work necessary for furnishing and planting trees, shrubs, vines, and other plants of the kinds, sizes, and quantities specified in the Contract Documents or by the Owner and maintaining and replacing plants as specified herein.

##### 1.2. SUBMITTALS

- A. Prior to use or placement, the Contractor shall submit certifications in the form of affidavits from the material suppliers, together with supporting data, attesting that the plants conform to the requirements of the *American National Standard for Nursery Stock (ANSI Z-60.1*, by the American Association of Nurserymen, Inc., and these specifications.
- B. No change in the quantity, size, kind, or quality of plants from those specified will be permitted without the approval of the Owner. When requesting permission to substitute, the Contractor shall submit written evidence that the specified plants are not available and shall suggest substitute plants that conform to the requirements of the Contract Documents. The Contractor shall indicate the reduced cost, if any, that will accrue to the Owner as a result of the substitution. The Owner may delete plants in lieu of approving substitutions.

#### II. EXECUTION

##### 2.1. PROCEDURES

- A. Plant locations and outlines of areas to receive plants shall be staked or marked in ample time to allow inspection and approval by the Owner before digging is started. Unforeseen conditions such as the location of traffic signs and drainage items may necessitate adjustments in plant locations, and such adjustments will be permitted when approved by the Owner.
- B. Planting:
  - 1. If underground obstructions or any other unforeseen subsurface conditions that would be detrimental to plant growth are encountered, the Owner may require that plant pits be enlarged or relocated or that the plants be deleted from the project.
  - 2. Drainage requirements for trees or shrubs on slopes steeper than 3:1 will be determined by percolation tests, with no more than 3 tests per slope, as designated by the Owner. Slope for this test is determined to be from cut to fill points as shown in the Contract Documents.
  - 3. Sides of pits that become plastered or glazed shall be scarified. Surplus excavation and unsuitable material shall be properly disposed of in accordance with Section 303.

4. The entire area of the plant bed shall be cultivated to a depth of at least 4-inches by a rotary cultivator before plant pits are excavated. Grass, sod, and weeds shall be removed from the bed. Rocks, clods, roots, and other objectionable material remaining on the surface shall be removed and properly disposed of. Unless authorized by the Owner, soil excavated from plant pits shall not be used in the bed. Individual planting pits shall not be dug until after the bed is prepared to the satisfaction of the Owner. Upon completion of planting, the bed shall be hand raked to an even surface and neatly edged. Mulch shall be applied to the entire cultivated area.
5. Installing plants and backfilling:
  - a. Plants shall be installed in pits on a soil mixture conforming to the requirements of *VDOT Road and Bridge Specifications Section 244.02* that has been placed and tamped to the proper depth. Bare roots of plants shall be spread out in a natural position. Broken or bruised roots shall be pruned. The soil mixture shall then be filled in around roots and tamped. Tamping around root balls shall be performed using a mattock handle or similar round-ended instrument. Foot tamping will be permitted in the bottom of pits before plants are installed, around root balls when there is ample room to accommodate the foot without damage to the ball, and in the planting of bare-root plants after roots have been covered with the soil mixture.
  - b. Backfill in pits shall be saturated with water. The amount of water applied and method of application shall be to the satisfaction of the Owner. Failure to water properly at the time each plant is installed will be cause for rejection of the plant. Frozen backfill shall not be used.
  - c. After positioning plants in the planting pit and prior to backfilling, a minimum of one-third from the top of the ball, the root ball wrapping materials, except metal root ball cages, shall be cut and dropped to the bottom of the pit. The root ball wrapping materials shall not be removed from under the root ball. Metal root ball cages shall be cut and removed to approximately 6-inches below finished grade. Wrapping materials within root ball cages shall be cut or unwrapped to the same elevation as the cage.
  - d. Potted plants shall not be removed from their container until immediately before planting. Containers shall be removed by approved methods that will not damage roots or loosen soil balls.
  - e. When planted, watered, and fully settled, plants shall be vertical and shall stand at a height flush with or slightly above the height at which they were growing.
  - f. No soil shall be placed on top of the root ball.
6. Roots of bare-root plants shall be kept covered with moist burlap or other approved material prior to planting. Forest tree seedlings and forest tree transplants shall be carried in a container filled with sufficient mud to puddle roots. When seedling roots have been coated with a protective material, the seedlings shall be protected in accordance with the U. S. Forest Service's recommendations relative to treatment of seedling roots while seedlings are being planted. Plants will be rejected if their roots are exposed to drying conditions at any time.

- C. Immediately after installation of each plant, a saucer shall be formed around the plant pit. Soil used to form the saucer shall be compacted by tamping to prevent runoff of water from the pit. Saucers will not be required for plant beds, forest tree seedlings, or forest tree transplants.
- D. Mulch shall be applied uniformly over the entire area of the plant pit or plant bed within 48 hours after completion of planting. Mulch shall be anchored in a manner satisfactory to the Owner. Mulch will not be required for forest tree seedlings or forest tree transplants.
- E. Each tree shall be staked or guyed immediately following planting.
- F. Plants that have been freshly pruned before delivery will be rejected. Plants shall be pruned by trained individuals either immediately before or within 48 hours after they are planted. Pruning of trees and shrubs shall consist of removing broken and dead limbs. Pruning shall be performed with tools and equipment specifically designed for the pruning to be performed.

## 2.2. CARE OF PLANTS

- A. Plant care shall begin immediately after each plant is satisfactorily installed and shall continue until final acceptance. Care shall include but not be limited to replacing displaced mulch within 7 Days, repairing and reshaping water rings or saucers, maintaining stakes and guys as originally installed, watering when needed or directed, and performing any other work required to keep plants in a healthy condition. Dead, defective, or rejected plants shall be removed and replaced at the Contractor's expense.
- B. Establishment Period:
  - 1. The establishment period will begin on the date that an inspection by the Owner confirms that plants have been installed in accordance with the requirements of these specifications and that dead or defective plants have been replaced to the satisfaction of the Owner.
  - 2. During the establishment period, living plants shall be watered as frequently as is necessary to maintain an adequate supply of moisture within the root zone at all times. Water shall not be applied at a force that will displace mulch. The Owner may require the use of watering needles or other approved methods to prevent displacement of mulch and runoff of water. The Owner will make periodic inspections to ascertain the moisture content of the soil. When notified by the Owner that watering is required, the Contractor shall begin watering within 48 hours with sufficient labor and equipment and shall continue to water daily where and as directed, without delays or interruptions, to ensure that the root zone does not become dry at any time. The quantity of water supplied shall not be in excess of that normally required to ensure optimum growing conditions. The Owner may require or suspend watering at any time.
  - 3. Work, except watering, shall begin within 10 Days after the Owner notifies the Contractor that the establishment period has begun.
  - 4. Plants shall be pruned and mulch shall be replaced as required by the Owner.
  - 5. Stakes, guys, and eroded plant saucers shall be repaired or replaced and removed when no longer required.

6. Plant beds and mulched areas around plants shall be kept free from grass and weeds, including root growth.
7. Grass and other vegetation shall be cut between individual plant pits that are not in beds to heights as indicated in Section 608, Table 608-1.
8. Herbicides may be used when approved by the Owner.
9. Additional work, including pruning and seasonal spraying with approved insecticides and fungicides, shall be performed to ensure plant survival as approved or directed by the Owner.
10. Dead plants shall be removed immediately at the Contractor's expense.

C. Termination of Establishment Period:

1. The establishment period shall end 12 months following the initiation of the establishment period.
2. Dead, missing, or defective plants shall be replaced as directed by the Owner. The Owner shall be notified when replacement is started.

2.3. GUARANTEE

The Contractor's performance bond, furnished in accordance with the requirements of the General Conditions, shall provide for necessary maintenance during the establishment period and replacements in kind, or with a substitute acceptable to the Owner, for plants that are not in a healthy growing condition or that have died back to the crown or beyond the normal pruning limit.

**III. MEASUREMENT FOR PAYMENT**

- A. Plants will be measured by an actual count of living plants in a healthy growing condition.
1. Payment will be made at the unit price bid per type and size of plant. Replacements for plants lost during the establishment period because of theft, damage, or destruction caused by persons or equipment belonging to persons or organizations other than those engaged in performing the work or during delivery of plants will be paid for at the rate of 2 times the contract unit price per each. This price shall include all costs associated with replacement.
  2. The unit bid price per plant shall include furnishing and delivering plants and planting material; preparing planting pits and beds; forming saucers; planting; watering; applying fertilizer; backfilling with approved soil mixture; staking; guying; wrapping; pruning; applying mulch (except to areas designated in the Contract Documents as plant beds); replacing plants; cutting or mowing; repairing, replacing and removing stakes when no longer needed; guys and tree wrap and maintaining plants in a healthy condition until final acceptance.
- B. Mulching and replacement mulch in designated planting beds will be measured and paid in units of 100 square feet of surface area. The unit bid price per shall include furnishing, delivering, and

applying mulch. No separate payment will be made for applying mulch around plants that are not in cultivated plant beds

End of Section