

Section 01562

TREE AND PLANT PROTECTION

PART 1 G E N E R A L

1.01 SECTION INCLUDES

- A. Tree and plant protection and maintenance.
- B. Planting new trees and relocating and replanting existing trees.
- C. Maintenance of planted or replanted trees.

1.02 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit name and experience of qualified Arborist, proposed for use on the Work, to Project Manager.

1.03 PROJECT CONDITIONS

- A. Preserve and protect existing trees and plants, that are to remain; from damage to foliage, branches, trunk, or roots; that could result from construction operations.
- B. Do not remove any Tree unless Parks and Recreation Department grants written permission for removal. Chapter 33, Article VI of the City of Houston Code of Ordinances (the "Code") defines Tree.
- C. Prevent following types of damage:
 - 1. Compaction of root zone by foot, vehicular traffic, or material storage.
 - 2. Trunk damage from equipment operations, material storage, or from nailing or bolting.
 - 3. Trunk and branch damage caused by ropes or guy wires.
 - 4. Root poisoning from spilled solvents, gasoline, paint, and other noxious materials.
 - 5. Branch damage due to improper pruning or trimming.
 - 6. Damage from lack of water due to:

- a. Cutting or altering natural water migration patterns near root zones
 - b. Failure to provide adequate watering
7. Damage from alteration of soil pH factor caused by depositing lime, concrete, plaster, or other base materials near roots
8. Cutting of roots larger than 1-1/2 inches in diameter

1.04 DAMAGE ASSESSMENT

- A. When a Tree, defined by the Code, other than those permitted for removal, are destroyed or badly damaged as result of construction operations, remove and replace with same size, species, and variety. Replace trees larger than 8 inches in diameter with 8-inch diameter tree of same species and variety.
- B. Contract Price shall be reduced by the amount determined by Parks and Recreation Department using the formula in the Code.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Asphalt Paint: Emulsified asphalt or other adhesive, elastic, antiseptic coating formulated for horticultural use on cut or injured plant tissue, free from kerosene and coal creosote.
- B. Burlap: Suitable for use as tree wrapping.
- C. Fertilizer: Liquid containing 20 percent nitrogen, 10 percent phosphorus, and 5 percent potash.
- D. Obtain Project Manager approval of replacement trees.

PART 3 EXECUTION

3.01 PROTECTION AND MAINTENANCE OF EXISTING TREES AND SHRUBS

- A. Trees within Project area, except for trees shown on Drawings or directed by Project Manager to be removed and relocated, are to remain in place. Protect from damage and maintain trees that are to remain.

- B. Perform the following for trees or shrubs that are to remain:
1. Trim trees and shrubs under supervision of a professional tree surgeon or horticulturist.
 - a. Prune trees according to International Society of Arbor culture specifications.
 - b. Prune trees and shrubs requiring pruning for construction operations for balance and to maintain proper form and branching habit.
 - c. Cut limbs at branch collar and remove stubs. Do not gouge outer layer of tree structure or trunk.
 - d. Prior to construction, prune all trees to remain of new or recent growth to maintain basic branching form of trees. Base extent of pruning upon proximity of pavement to trunk and size of tree blockouts and requirements of construction adjacent to tree.
 - e. Limit pruning of young branches to the maximum extent possible. Maintain older branches that provide basic form of tree. Prune in the presence of Project Manager.
 - f. Paint exposed, living tissue of cuts over 3/4" in diameter with tree paint.
 2. Use extreme care to prevent excessive damage to root systems.
 - a. Cut tree roots in construction area smoothly with a trencher before excavating. Do not allow ripping of roots with backhoes or other equipment.
 - b. Temporarily cover exposed roots with wet burlap to prevent roots from drying out.
 - c. Cover exposed roots with soil as soon as possible.
 3. Prevent damage or compaction of root zone (area below drip line) by construction activities.
 - a. Do not allow equipment to scar trunks or limbs
 - b. Do not store construction materials, vehicles, or excavated material under drip line of trees.
 - c. Do not pour liquid materials under drip line.
 4. Water and fertilize remaining trees and shrubs to maintain their health during construction period.
 - a. Water landscaping during construction operations at least once every seven days in cold months and once every four days in hotter months.
 - b. Saturate soils to at least 6 to 8 inches beneath surface.
 5. Water areas currently being served by private sprinkler systems while systems are temporarily taken out of service to maintain health of existing landscapes.

6. With Project Manager's permission, shrubs to remain may be temporarily transplanted and returned to original positions under supervision of professional horticulturist.

3.02 PROTECTION

A. Protection of Trees or Shrubs in Open Area:

1. Install steel drive-in fence posts in protective circle, approximately 8 feet on center, not closer than 4 feet to trunk of trees or stems of shrubs.
2. Insert steel drive-in fence posts a minimum of 3 feet into ground, leaving a minimum of 5 feet above ground.
3. Mount fluorescent orange construction fence on fence posts.
4. For trees or shrubs in paved areas, use movable posts consisting of two 1/2-inch minimum diameter concrete-filled steel pipe mounted in rubber automobile tires filled with concrete.

B. Provide timber wrap protection for trees in close proximity to equipment when work is required within construction fencing.

1. Wrap trunk with a layer of burlap.
2. Install vertical 5 to 6 foot long 2 by 4's or 2 by 5's, spaced 3 to 5 inches apart, around circumference of tree trunk.
3. Tie burlap in place with 12 to 9 gauge steel wire.

3.03 RELOCATING AND PLANTING NEW TREES

- A. Employ a qualified Arborist, acceptable to Project Manager, to plant and to move and relocate trees. Arborist must be normally engaged in the field and have a minimum of five years experience.**

3.04 MAINTENANCE OF NEWLY PLANTED TREES AND REPLANTED TREES

- A. Provide proof of capability to water trees during dry periods.**

- B. Maintain newly planted trees, in healthy condition until end of one-year warranty and Surface Restoration Bond periods.**

1. Straighten leaning trees.

2. Replace dead trees or trees that, in the opinion of Project Manager, have become unhealthy, unsightly or have lost their natural shape as result of additional growth, improper pruning, maintenance or weather conditions, within four weeks of notice from Project Manager.
3. When a tree must be replaced, a new warranty period shall commence on date of tree replacement, and Project Manager's approval. Minimum warranty period shall be one year.
4. Dispose of rejected trees.

END OF SECTION