
TREE AND PLANT PROTECTION

PART I: GENERAL

1.1 GENERAL REQUIREMENTS

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

1.2 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. 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 one and one-half inches (1-1/2 In) in diameter.

1.3 DAMAGE ASSESSMENT

- A. When a Tree, 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 eight inches (8 In) in diameter with an eight inch (8 In) diameter tree of same species and variety.
- B. Contract Price shall be reduced by the amount determined by Parks and Recreation Department if the tree is not replaced.

1.4 REFERENCES

- A. ISA – International Society of Arboriculture.

PART II: PRODUCTS

2.1 MATERIALS

- A. Burlap: Suitable for use as tree wrapping.
- B. Fertilizer: Liquid containing twenty percent (20%) nitrogen, ten percent (10%) phosphorus and five percent (5%) potash.
- C. Obtain the Project Manager's approval of replacement trees.

PART III: EXECUTION

3.1 PROTECTION AND MAINTENANCE OF EXISTING TREES AND SHRUBS

- A. Trees within the Project area, except for trees shown on the Drawings or directed by the 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 Arboriculture 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 the Project Manager.
 - 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 (7 D) in cold months and once every four days (4 D) in hotter months.
 - b. Saturate soils to at least six inches (6 In) to eight inches (8 In) 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 the Project Manager's permission, shrubs to remain may be temporarily transplanted and returned to original positions under supervision of professional horticulturist.

3.2 PROTECTION

- A. Protection of Trees or Shrubs in Open Area:
 1. Install steel drive-in fence posts in protective circle, approximately eight feet (8 Ft) on center, not closer than four feet (4 Ft) to trunk of trees or stems of shrubs.
 2. Insert steel drive-in fence posts a minimum of three feet (3 Ft) into ground, leaving a minimum of five feet (5 Ft) 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 one-half inch (2-1/2 In) 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 five foot (5 Ft) to six foot (6 Ft) long, two inch by four inch (2 In x 4 In) or two inch by five inch (2 In x 5 In) studs, spaced three inches (3 In) to five inches (5 In) apart, around circumference of tree trunk.
 3. Tie burlap in place with twelve (12) gauge to nine (9) gauge steel wire.

3.3 RELOCATING AND PLANTING NEW TREES

- A. Employ a qualified Arborist, acceptable to the 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 (5 Yrs) experience.
- B. Verify that the trees to be planted are acceptable to the City and listed in Section 01565 – Authorized Tree List.

- 3.4 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 bond.
 - 1. Straighten leaning trees.
 - 2. Replace dead trees or trees that, in the opinion of the 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 (4 Wks) of notice from the Project Manager.
 - 3. When a tree must be replaced, a new warranty period shall commence on date of tree replacement, and the Project Manager's approval. Minimum warranty period shall be one year (1 Yr).
 - 4. Dispose of rejected trees.

END OF SECTION