

## SECTION 320190.16

### LANDSCAPE MAINTENANCE FOR TWELVE MONTHS

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. Section includes requirements for twelve month landscape maintenance for the following:
  - 1. Watering trees and grass.
  - 2. Monitoring adjustment and minor repair of the landscape irrigation system.
  - 3. Mowing, edging and trimming of lawn areas.
  - 4. Monitoring, fertilizing, weeding, and cultivating of lawn areas.
  - 5. Pruning and trimming of plant material.
  - 6. Weed, cultivating and cleaning of planting beds.
  - 7. Application of fertilizers, insecticides, and herbicides.
  - 8. General site clean up; removal of trash and products of maintenance.
  - 9. Replacement of trees, shrubs, groundcovers, sod and hydromulch.
  - 10. Sediment removal from bayou high water.
  - 11. Extra services as needed.
  
- B. Related Sections
  - 1. Planting Irrigation Systems – Section 328400
  - 2. Turfs and Grasses - Section 329200
  - 3. Trees, Shrubs, and Ground Covers - Section 329313

##### 1.2 DEFINITIONS

- A. Backfill: The earth used to replace or the act of replacing earth in an excavation.
- B. Finish Grade: Elevation of finished surface of planting soil.
- C. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- D. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
- E. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill, before placing planting soil.
- F. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.

### **1.3 EXTRA SERVICES**

- A. All services not covered under this contract shall be considered "extra services" and will be charged for separately according to the nature of the item of work. The consent and authorization of the Owner or their authorized representative must be obtained prior to the performance or installation of such "extra services" items and prior to purchase of any chargeable materials.
- B. Plant replacements as a result of flood damage.

### **1.4 MAINTENANCE REQUIREMENTS**

- A. Begin maintenance after each plant and lawn portion is installed.
- B. Maintenance period shall begin upon inspection and approval at Substantial Completion by phase and shall be for twelve (12) months.
- C. Sprinkler Irrigation System: Maintenance of the sprinkler irrigation system shall consist of monitoring and adjustment of the duration and frequency of the watering schedule, adjustment of heads for coverage and elevation, repair of leaks in both mains and lateral lines and all other work required to establish a complete working sprinkler irrigation system.
- D. Trees, Shrubs, Groundcovers and Vines: Maintenance of new planting shall consist of watering, cultivating, weeding, mulching, re-staking, tightening and repairing of guys, resetting plants to proper grades or upright position, restoration of the planting saucer, and furnishing and applying such sprays and invigorants as are necessary to keep the plantings free of insects and disease and in thriving condition.
- E. Lawns: Maintenance of new lawns shall consist of mowing, edging, raking, watering, weeding, fertilizing, and repair of all erosion reseeding, resodding, necessary to establish a uniform stand of the specified grasses.

### **1.5 PROTECTION**

- A. Protect planting areas and lawns at all times against damage of all kinds for duration of maintenance period. Maintenance includes temporary protection fences, barriers and signs as required for protection. If any plants become damaged or injured, because sufficient protection was not provided, treat or replace as directed by Owner at no additional cost to Owner.

### **1.6 NEGLECT AND VANDALISM**

- A. Turf, shrubs, trees or plants that are damaged or killed due to contractors operations, negligence or chemicals shall be replaced at no expense to the Owner. If plant damage or death is caused by conditions beyond the contractor's control, replacement shall be at the Owner's expense.

- B. Sprinklers or structures that are damaged due to the contractor's operations must be replaced by the contractor promptly. Likewise, damage to the irrigation system by others shall be corrected immediately by the contractor, at the Owner's expense.
- C. All man made water damage, resulting from Contractor's neglect shall be corrected at Contractor's expense.
- D. All damage to or thefts of landscaping and irrigation installations not caused or allowed by the contractor shall be corrected by the contractor at the Owner's expense upon receipt of written authorization to proceed.

### **1.7 EMERGENCIES**

- A. Answer emergency or complaint calls regarding conditions in landscaped areas regarding fallen trees or branches or shrubs or trees that obstruct the trail or other pavement within 1 hour and correct the problem or place warning signs and advise the Owner of the need for major work to be performed within 4 hours of the initial contact.
- B. Answer emergency calls regarding the landscape irrigation system failure or need of repair.

### **1.8 FINAL ACCEPTANCE**

- A. Work under this Section will be accepted by Owner's representative upon satisfactory completion of all work, including maintenance, but exclusive of the required guaranteed sprinkler irrigation obligations, replacement of plant materials and lawns under the Warranty Period. Upon Final Acceptance, the Owner will assume responsibility for maintenance of the work.

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS**

- A. Fertilizers, soil amendments, equipment, or other materials required for installed items shall match those already in use.
- B. Samples of all materials not specified under other Sections of these Specifications shall be submitted for review by Owner's representative prior to use.

## **PART 3 - EXECUTION**

### **3.1 REQUIRED EQUIPMENT**

- A. Employ the necessary maintenance equipment.

### **3.2 WATERING**

- A. It shall be the responsibility of the Contractor to assure that the correct watering of plant materials is being accomplished through the following irrigation services:
1. Regular deep watering to all new trees until there are definite signs that the trees have established themselves and new growth is apparent. Deep watering shall be accomplished with hoses and water truck equipment.
  2. Frequent watering to the lawn areas to insure against drying. This may be accomplished as above, by hand watering or portable sprinklers.

### **3.3 LANDSCAPE IRRIGATION SYSTEM**

- A. Monitor and program the automatic controlling devices to provide optimum moisture levels in all planted areas.
1. Irrigation cycles shall be set to take place prior to sunrise (usually 4:00 - 5:00 am) unless otherwise instructed by the Owner, except during visits of grounds maintenance personnel; during such visits the irrigation system may be operated as desired by those personnel.
  2. If there is more than one irrigation controller, do not program to water during the same time period as over-draft of water meters will result. Set controllers so that one finishes watering cycle before next starts watering cycle. During periods of high rainfall, set controllers to "dry mode" until irrigation is needed. Do not switch controller to "off", as this will stop time clock.
  3. Complete sprinkler system servicing shall be performed as required to maintain sprinklers in correct operating condition, including all required labor. Operation of sprinklers shall be monitored on a bi-monthly basis to assure proper cover and operation.
  4. Adjust sprinklers to avoid damage to windows and buildings. Make repairs and alterations to the sprinkling system and water lines. All sprinklers repairs such as cleaning of heads or breaks caused by the Contractor shall be the Contractor's responsibility.
  5. Perform minor additions, subtractions and/or adjustments to irrigation equipment (i.e., addition of spray head or riser extension) as may be required in order to conform to the irrigation requirements herein specified. Such additions, subtractions and/or realignments to irrigation system equipment shall not materially reduce the extent or value of the irrigation system equipment, and shall be accomplished after securing approval of the Owner.
  6. Supplemental irrigation beyond that which can be provided by the irrigation system shall be provided by the grounds maintenance firm as required in order to assure optimum moisture levels.
  7. Sediment removal from project site as a result of bayou tide rising and receding by use of project stand pipes.

### **3.4 MAINTENANCE OF TURF AREAS**

- A. Mowing lawn/grass areas shall be accomplished with sharp, properly adjusted mowers of the correct size for the various areas.
- B. Mowing frequency shall be as per the Landscape Maintenance Program. Blade heights shall be set according to the following schedule:
  - 2 Inches Initial Mowing
  - 2-1/2 Inches April - November
- C. In the event of a prolonged rainy period and a surge of leaf growth is anticipated, the mower height may be re-adjusted to prevent "scalping" or skinning of lawn on preceding cuts.
- D. Lawn shall be edged evenly at all walks, headers and other structures as per Landscape Maintenance Program.
- E. Until the establishment of the turf, the Contractor will be responsible for replacing soils that have eroded onto the paved areas. Residual soils on paving will be removed and if not mingled with objectionable materials, may be re-used in eroded areas.
- F. Immediately upon observing any lawn grass spreading into shrub or groundcover areas, the Contractor shall initiate a program of mechanical removal and maintain this program throughout the maintenance period.
- G. Any lawn grass appearing in paved areas shall receive an application of soil sterilant according to manufacturer's direction. The sterilant shall be approved and will not be detrimental structurally to paved areas.
- H. Special effort shall be given to the control of fire ants infesting the site. After control is accomplished, the ant mounds shall be lowered and tamped to the existing grade.
- I. Removal of debris from the site unrelated to horticultural maintenance (paper, bottles, cans, "Pirate" signs, etc.) shall be the responsibility of the maintenance Contractor and limited to areas designated.

### **3.5 MAINTENANCE OF TREES, SHRUBS, AND GROUNDCOVERS**

- A. Contractor shall adjust and tighten as required all tree staking and guying. Removal as directed by Owner's Representative.
- B. Contractor shall deep water all new trees until there are definite signs the trees have established themselves and are pushing out new growth.
- C. Watering basins shall be removed by Contractor after the trees have established themselves or as directed by Owner's representative. Basins are normally removed one year from time of planting.

- D. Contractor shall be continuously alert for signs of insect presence or damage or the presence or damage from plant fungi. Upon locating such evidence, the Contractor shall report it to the Owner's representative and take action as directed.

### **3.6 MAINTENANCE FREQUENCY SCHEDULE**

- A. Mowing, Edging, Trimming, Litter Cleanup, and Watering Monitoring: Four visits per month for 12 months.
- B. Top-dress Fertilizer: Thirty days after seeding and/or sodding.
- C. Mulching, Weeding, Weed Control, and Guying Adjustment: As required each visit.
- D. Reseeding: As required upon notice.
- E. Tree and Plant Replacement: As required each visit.
- F. Trash and Debris Removal: Collect all trash and debris at each visit and dispose of off-site.

**END OF SECTION 320190.16**