

## SECTION 32 91 00

### OPERATIONS AND MAINTENANCE OF PLANTINGS

#### **PART 1 GENERAL**

##### **1.01 WORK INCLUDED**

- A. Section includes maintaining the following items through final acceptance:
  - 1. Irrigation System.
  - 2. Lawns and Grasses.
  - 3. Seed areas.
  - 4. Landscaping.

##### **1.02 RELATED SECTIONS AND DOCUMENTS**

- A. Section 32 84 00: Irrigation Systems.
- B. Section 32 92 00: Lawns and Grasses.
- C. Section 32 90 00: Landscaping.

##### **1.03 SUBMITTALS**

- A. Contractor to submit written reports to the Owner of landscape maintenance work.
  - 1. Provide a written report to Owner for each maintenance activity.
  - 2. Provide at least one report per month regardless of extent of problems or activity, through landscape maintenance period.
  - 3. Report form should include inspection for each type of plant, license number, etc.
- B. Contractor to submit to the Owner the name and composition of herbicides, fertilizers, fungicides, growth retardants and other chemicals and mixtures used in landscape maintenance operations.
- C. Contractor to notify the Owner minimum one (1) week prior to the following:
  - 1. Request for irrigation system adjustment (Contractor requests adjustment; Owner performs controller adjustment).
  - 2. Irrigation system spring start-up and fall winterization.
  - 3. Fertilization or the broad application of any chemicals or insecticides of any kind.
- D. Contractor shall responsible to review the maintenance activity of the Owner throughout the landscape maintenance period and notify the Owner, in writing, of deficiencies in desired operations. Failure to notify Owner of deficiencies will prohibit Contractor from relief of responsibility for dead or damaged work.
  - 1. Contractor shall make no repair or take corrective action for discrepancies unless authorized to do so by Owner in writing.

##### **1.04 QUALITY ASSURANCE**

- A. Applicable Codes and Standards:
  - 1. Abide by the codes, specifications, and standards of all governmental and industry regulations including but not limited City, County, State of Colorado, and the standards of the American Association of Nurserymen (ANN), American Society for Testing and Materials (ASTM), National Plumbing Code (NPC), Colorado Technical Plumbing Code, Uniform Building Code (UBC), Sprinkler Irrigation Association (SIA), National Electric Code (NEC), American Sod Producers Association

(ASPA), United States Department of Agriculture (USDA), and the Association of American Seed Control Officials (AASCO).

2. All labor shall be United States citizens or have current, valid work permits for work within the United States.
  3. At all times when work is being performed, Contractor shall have an individual who has successfully completed the Standard First Aid and Personal Safety Course (intermediate level) offered by the American Red Cross or other training as accepted by the Owner.
  4. No chemicals or fertilizers shall be utilized on the work without a state licensed operator in attendance.
- B. Equipment:
1. All equipment shall be well maintained and equipped with current safety features including audible reverse warning, trimming guards, etc.
- C. Contractor shall replace, at no cost to Owner, plant material that dies. This guarantee included plant materials that are damaged due to Contractor's operations.
- D. Warranty for replacement plants shall be extended for an additional year beyond replacement planting date.

#### **1.05 MAINTENANCE PERIOD**

- A. Required maintenance for all items shall extend until date of final acceptance of the entire project. This period will last through a minimum of two lawn cuttings for sodded areas.
- B. After acceptance of the entire project, the Contractor will assume responsibility for maintenance for 24 months. A 24 month warranty will begin at date of acceptance of all landscape construction.

### **PART 2 PRODUCTS**

#### **2.01 FERTILIZER FOR GRASS**

- A. Fertilizer shall be a urea-based only mixture with the following chemical composition: 20-10-5 2% iron.

### **PART 3 EXECUTION**

#### **3.01 IRRIGATED TURF**

- A. Fertilization:
1. Maintenance fertilization is in addition to that required by installation specifications.
  2. Fertilize sodded areas four (4) weeks after installation, but not later than October 15. On established irrigated turf, apply two (2) times per year, once between March 15 and April 15 and once between September 1 and September 15 and as necessary outside of that timeframe to ensure the health of the sod.
  3. Application rate of one (1) lb. nitrogen per 1,000 square feet.
  4. All fertilizer applications shall occur using a commercial spreader on a calm, dry morning. The sod should be moist. Never fill the spreader over the lawn areas or when "on". Sweep all concrete and asphalt areas that may have been pelleted with fertilizer.
- B. Weeding and insect control:
1. Contractor shall be responsible for weed and insect control during the maintenance period. Apply herbicides, insecticides, and fungicide as necessary.
  2. No application shall occur during school hours if children are present.
  3. Prior to the application of these chemicals, a notice of the time of application shall be posted at each building entrance and the facility manager of the school must be notified.
- C. Mowing:
1. Cut turf with a sharp, well-maintained mower.

2. Keep grass an average of 2-1/2" height; cut when clippings will measure approximately 1/2" or 1/4 of the grass plant. Never cut off more than 1/3 of the plant height.
3. Between May 1 and September 15, cut newly installed sod a minimum of once every week and as needed outside of that timeframe to preserve the health of the grass.
4. If mowing creates clippings, remove immediately.
5. Areas around walks, buildings, curbs, walls, rocks, plants, lights, or other structures must be trimmed by hand or mechanical trimmer each time the grass is cut.
6. All cuttings must be done diagonal to the way the sod was laid.
7. Clean cuttings from walks, plazas, drives, etc.

D. Aeration:

1. Contractor shall be responsible for aerating the grass a minimum of two times per year and as necessary after that to maintain the health of the grass.

**3.02 DRY LAND TURF AREAS**

- A. Maintain turf height at 4" with mowing and/or mechanical trimmer.
- B. Control weeds by use of spot herbicides or mechanical trimmer. Include bindweed, thistle control and control of designated State of Colorado noxious weeds.
- C. Fertilize between April 1 and April 30 with same application rate as for irrigated turf.
- D. Remove debris in dryland grass area at each time of maintenance service.
- E. Provide DPS approved signage to mark the dryland area for mowing and public information.

**3.03 SEEDED AREAS**

- A. General: Maintenance shall begin immediately after each area is seeded and continue through the landscape maintenance period. During this time, be responsible for watering, mowing, spraying, weeding and related work as necessary to ensure that seeded areas are established and continue in a vigorous, weed-free growing condition.
- B. Watering: Water irrigated areas until stand of grass is established. After grass is established, water irrigated grass at a regular schedule as approved by Owner. Native and dryland grasses are not required to be watered unless otherwise specified.
- C. Weed Control: As required for native seed/dryland grasses only after turf establishment using selective herbicides or mechanical string trimmers or mowers.
- D. Insect and Disease Control: As required, apply insecticide and fungicide.
- E. Fertilize with a starter fertilizer.
- F. Aerate as necessary with a minimum of a Spring and Fall aeration.

**3.04 TREE AND SHRUB CARE**

- A. Contractor shall inspect plant material on a bi-weekly basis.
- B. Immediately remove dead plants, dead parts of plants and tree suckers and leafing on main stems.
- C. Each spring, no later than June 1, trim winter dieback and undesirable shoots, and correct branching problems.
- D. Each deciduous tree trunk shall be wrapped between October 15 and November 31 of each year. Remove between April 1 and May 1 each spring.

**3.05 WINTER WATERING**

- A. Contractor shall water plant material areas to adequately sustain plant materials through the winter.

**3.06 VANDALISM**

- A. Contractor shall notify the DPS immediately of apparent vandalism, including graffiti, in areas of landscape maintenance responsibility.

**END OF SECTION 32 91 00**