

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Preparation of topsoil.
 - 2. Topsoil bedding.
 - 3. Trees, plants, and ground cover.
 - 4. Mulch.
 - 5. Fertilizer.
 - 6. Pruning.
 - 7. Maintenance.

- B. Related Sections:
 - 1. Section 31 23 17 - Trenching: Rough grading over trench cut.
 - 2. Section 31 23 23 - Fill: Rough grading of site.
 - 3. Section 32 05 13 - Soils for Exterior Improvements: Topsoil material.
 - 4. Section 32 84 00 - Planting Irrigation.
 - 5. Section 32 91 19 - Landscape Grading: Preparation of subsoil and placement of topsoil in preparation for the Work of this section.

1.2 REFERENCES

- A. American National Standards Institute:
 - 1. ANSI A300 - Tree Care Operations - Tree, Shrub and Other Woody Plant Maintenance - Standard Practices.
 - 2. ANSI Z60.1 - Nursery Stock.

1.3 DEFINITIONS

- A. Weeds: Vegetative species other than specified species to be established in given area.

- B. Plants: Living trees, plants, and ground cover specified in this Section, and described in ANSI Z60.1.

1.4 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

- B. Product Data: Submit list of plant material sources, data for fertilizer and other accessories.

1.5 CLOSEOUT SUBMITTALS

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.
- B. Operation and Maintenance Data: Include pruning objectives, types and methods; types, application frequency, and recommended coverage of fertilizer.

1.6 QUALITY ASSURANCE

- A. Tree Pruning: ANSI A300 Pruning Standards for Woody Plants.

1.7 QUALIFICATIONS

- A. Nursery: Company specializing in growing and cultivating plants with three years documented experience.
- B. Installer: Company specializing in installing and planting plants with three years documented experience.
- C. Tree Pruner: Company specializing in performing work of this section with minimum three years documented experience.
- D. Maintenance Services: Performed by installer.

1.8 PRE-INSTALLATION MEETINGS

- A. Section 01 30 00 - Administrative Requirements: Pre-installation meeting.
- B. Convene minimum one week prior to commencing work of this section.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.
- B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.
- C. Protect and maintain plant life until planted.
- D. Deliver plant life materials immediately prior to placement. Keep plants moist.
- E. Plant material damaged as a result of delivery, storage or handling will be rejected.

1.10 ENVIRONMENTAL REQUIREMENTS

- A. Section 01 60 00 - Product Requirements: Environmental conditions affecting products on site.
- B. Do not install plant life when ambient temperatures may drop below 40 degrees F or rise above 90 degrees F.

- C. Do not install plant life when wind velocity exceeds 30 mph.

1.11 COORDINATION

- A. Section 01 30 00 - Administrative Requirements: Requirements for coordination.
- B. Install plant life after and coordinate with installation of underground irrigation system piping and watering heads specified in Section 32 84 00.

1.12 WARRANTY

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for warranties.
- B. Furnish one year manufacturer warranty for trees, plants, and ground cover.

1.13 MAINTENANCE SERVICE

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for maintenance service.
- B. Maintain plant life for three months after Date of Substantial Completion.
- C. Maintain plant life immediately after placement until plants are well established and exhibit vigorous growing condition. Continue maintenance until termination of warranty period.
- D. Maintenance includes:
 - 1. Cultivation and weeding plant beds and tree pits.
 - 2. Applying herbicides for weed control. Remedy damage resulting from use of herbicides.
 - 3. Remedy damage from use of insecticides.
 - 4. Irrigating sufficient to saturate root system.
 - 5. Pruning, including removal of dead or broken branches.
 - 6. Disease control.
 - 7. Maintaining wrapping, guys, turnbuckles, and stakes. Adjust turnbuckles to keep guy wires tight. Repair or replace accessories when required.
 - 8. Replacement of mulch.

PART 2 PRODUCTS

2.1 TREES, PLANTS, AND GROUND COVER

- A. Planting Stock:
 - 1. Species: In accordance with Standardized Plant Names, official code of American Joint Committee on Horticulture Nomenclature.
 - 2. Identification: Label individual plants or each bundle of plants when tied in bundles.
 - 3. Plants: No. 1 Grade conforming to "American Standard for Nursery Stock" of American Association of Nurserymen (AAN); well-branched, vigorous and balanced root and top growth; free from disease, injurious insects, mechanical wounds, broken branches, decay and other defects.
 - 4. Trees: Furnish with reasonably straight trunks, well balanced tops, and single leader.

5. Deciduous plants: Furnish in dormant state, except those specified as container grown.

B. Trees Plants and Ground Cover: Species and size identifiable in plant schedule, grown in climatic conditions similar to those in locality of the Work.

2.2 SOIL MATERIALS

A. Topsoil: As specified in Section 32 05 13.

2.3 SOIL AMENDMENT MATERIALS

A. When soil tests indicate soil amendment, apply soil conditioners or fertilizers to amend soil to specified conditions.

1. Tree Fertilizer: Containing fifty percent of elements derived from organic sources; of proportion necessary to eliminate deficiencies of topsoil.

B. Peat Moss: Shredded, loose, sphagnum moss; free of lumps, roots, inorganic material or acidic materials; minimum of 85 percent organic material measured by oven dry weight, pH range of 4 to 5; moisture content of 30 percent.

C. Water: Clean, fresh, and free of substances or matter capable of inhibiting vigorous growth of plants.

2.4 MULCH MATERIALS

A. Mulching Material: Composted, shredded hardwood bark, dark brown in color.

2.5 ACCESSORIES

A. Wrapping Materials: Burlap.

B. Stakes: Softwood lumber, pointed end.

C. Cable, Wire, Eye Bolts: Non-corrosive, of sufficient strength to withstand wind pressure and resulting movement of plant life.

D. Plant Protectors: Rubber sleeves over cable to protect plant stems, trunks, and branches.

E. Decorative Cover: See plan for schedule.

F. Membrane: 20 mil thick, black polyethylene.

2.6 TOP SOIL MIX

A. Top Soil Mix: Uniform mixture of 1 part peat and 3 parts topsoil by volume.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Verify prepared subsoil and planters are ready to receive work.
- C. Saturate soil with water to test drainage.
- D. Verify required underground utilities are available, in proper location, and ready for use.

3.2 PREPARATION OF SUBSOIL

- A. Prepare subsoil to eliminate uneven areas. Maintain profiles and contours. Make changes in grade gradual. Blend slopes into level areas.
- B. Remove foreign materials, weeds and undesirable plants and their roots. Remove contaminated subsoil.
- C. Scarify subsoil to depth of 3 inches where plants are to be placed. Repeat cultivation in areas where equipment, used for hauling and spreading topsoil, has compacted subsoil.
- D. Dig pits and beds three times wider than plant root system.

3.3 PLACING TOPSOIL

- A. Spread topsoil to minimum depth of 4 inches over area to be planted. Rake smooth.
- B. Place topsoil during dry weather and on dry unfrozen subgrade.
- C. Remove vegetable matter and foreign non-organic material from topsoil while spreading.
- D. Grade topsoil to eliminate rough, low or soft areas, and to ensure positive drainage.
- E. Install topsoil into pits and beds intended for plant root balls, to minimum thickness of 6 inches.

3.4 PLANTING

- A. Place plants for best appearance.
- B. Set plants vertical.
- C. Remove non-biodegradable root containers.
- D. Set plants in pits or beds, partly filled with prepared plant mix, at minimum depth of 6 inches under each plant. Remove burlap, ropes, and wires, from top half of root ball.

E. Place bare root plant materials so roots lie in natural position. Backfill soil mixture in 6 inch layers. Maintain plant life in vertical position.

F. Saturate soil with water when pit or bed is half full of topsoil and again when full.

3.5 PLANT SUPPORT

A. Brace plants vertically with plant protector wrapped guy wires and stakes to the following:

Tree Caliper	Tree Support Method
1 inch	1 stake with one tie
1 - 2 inches	2 stakes with two ties
2 - 4 inches	3 guy wires with eye bolts and turn buckles
Over 4 inches	4 guy wires with eye bolts and turn buckles

3.6 TREE PRUNING

A. When pruning trees is required, lightly prune trees in accordance with ANSI A300 Maintenance Pruning Type: Crown Cleaning.

3.7 FIELD QUALITY CONTROL

A. Plants will be rejected when ball of earth surrounding roots has been disturbed or damaged prior to or during planting.

END OF SECTION