
PART 1 GENERAL**1.1 SUMMARY**

- A. Section Includes:
1. Trees.
 2. Aggregate Mulch.
 3. Related Materials.

1.2 REFERENCES

- A. ANSI — American National Standards Institute: Z60.1 — American Standard for Nursery Stock, Current Edition.
- B. ICBN — International Code of Botanical Nomenclature.
- C. ICNCP — International Code of Nomenclature of Cultivated Plants.
- D. ASTM — American Society for Testing Materials: D 1557 — Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort.
- E. Sunset Western Garden Book, edited by Kathleen Norris Brenzel, Sunset Publishing Corporation, 2007.

1.3 DEFINITIONS

- A. Plant Height: Measurement of main body height, not measurement to top branch tip.
- B. Plant Spread: Measurement of main body diameter, not measurement from branch tip to tip.
- C. Caliper: Trunk diameter measured at a point 6 inches above natural ground surface for trees up to 4 inches in caliper, and measured at a point 12 inches above natural ground surface for trees over 4 inches in caliper.

1.4 SUBMITTALS

- A. LEED Submittals:
1. Within 30 days of Contract award, assemble and submit all LEED material information on the “LEED Material Tracking Spreadsheets” and forms provided in the Project Manual, together with all supplemental documentation as required by LEED.
- B. Environmental Submittals:
1. Credit MR 5.1 and 5.2: Product data indicating location of extraction and processing and location of manufacture. Include a statement indicating projected costs for each product being extracted, processed, and manufactured within 500 air miles of the Project Site.
- C. Samples:
1. Aggregate Mulch — 1/2-pound bag.

1.5 INFORMATIONAL SUBMITTALS

- A. General Submittal Requirements: Refer to Section 01 33 00.
- B. Plant Material Photographs:
1. At least 14 days prior to submittal of plant material location data, submit three color photographs each of representative plants of each type of plant material.
 2. Include a scale object in each photograph such as a tape measure or person.
- C. Plant Material Location Data:
1. Quantities and sizes of each plant material type at each nursery or other place of growth.

2. Address, phone number, and contact person for each nursery or other place of growth.

1.6 QUALITY ASSURANCE

- A. Regulatory Requirements:
 1. Meet requirements of applicable laws, codes, and regulations required by authorities having jurisdiction over Work.
 2. Provide for inspections and permits required by federal, state and local authorities in furnishing, transporting, and installing materials.
- B. Pre-Installation Meeting: Prior to installing plants and planting soils, schedule and conduct a meeting with the Owner's Representative to review the critical aspects, including sequence of operations for the soil mix installation and plant material installation.

1.7 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Handling Plants:
 1. Do not lift or handle container plants by tops, stems or trunks.
 2. Do not bind or handle plants with wire or rope.
 3. Pad trunk and branches where hoisting cables or straps may contact.
- B. Anti-Desiccant:
 1. Spray plant material in full leaf immediately before transporting with anti-desiccant, pending approval of Owner's Representative.
 2. Meet requirements of anti-desiccant manufacturer's current printed application instructions
- C. Plant Storage Prior to Installation:
 1. Protect plant root balls from sun and drying winds.
 2. Keep root balls moist.
 3. Keep sun-sensitive plants shaded.
 4. Anchor plants to prevent damage from strong winds.

1.8 SITE CONDITIONS

- A. Environmental Requirements: Protect plant material being stored on site from sun and drying winds.
- B. Existing Conditions:
 1. Prior to Work commencement, review and clearly mark in field horizontal and vertical locations of public existing underground utilities and structures with respective utility companies.
 2. Prior to Work commencement, review and clearly mark in field horizontal and vertical locations of private underground utilities and structures with the Owner's Representative.

1.9 WARRANTY

- A. Warranty Period: Warrant that plant material will be healthy and in vigorous, flourishing condition of active growth two years from date of Substantial Completion, as outlined in Division 1.
- B. Delays: Delays in completion of planting operations which extend the planting into more than one planting season shall extend the Warranty Period correspondingly.
- C. Condition of Plants: Plants shall be free of dead or dying branches and branch tips, with foliage of a normal density, size and color.
- D. Incorrect Materials:
 1. During Warranty Period, replace at no additional cost to the Owner, plants revealed as being untrue to name.
 2. Provide replacements of a size and quality to match the planted materials at the time the mistake is discovered.

- E. Replacements:
1. As soon as weather and seasonal conditions permit, replace at no additional cost to the Owner, dead plants and plants not in a vigorous, thriving condition, as determined by the Owner's Representative or Arborist during and at the end of Warranty Period.
 2. Apply requirements of this Section to replacements.

PART 2 PRODUCTS

2.1 MANUFACTURERS AND SUPPLIERS

- A. American Soil, Richmond CA; (510) 292-3000.;TMT, (408) 432-9040 ; or equal.

2.2 SUBSTITUTIONS

- A. Plant Material: Accepted substitute plants shall be true to species and variety and shall meet requirements of this Section except that plants larger than specified may be used, if accepted by the Owner's Representative, and at no additional cost to the Owner.

2.3 MATERIALS

- A. General Plant Requirements:
1. Growing Practices: Nursery grown in accordance with best horticultural industry practices.
 2. Nomenclature: Plant nomenclature shall meet requirements of ICBN and ICNCP.
 3. Climatic Growing Conditions: Grown under climatic conditions similar to those of project for at least two years unless otherwise accepted by the Owner's Representative.
 4. Container Growth Limitations: Container stock excluding annuals shall have been grown in the containers in which delivered for at least six months, but not over two years.
 5. Root Ball Size: Meet or exceed requirements of ANSI Z60.1.
 6. Branching: Structurally strong, able to stand upright without stakes or guys on a windless day; exceptionally heavy, symmetrical, tightly knit, so trained or favored in development and appearance as to be superior in form, number of branches, compactness and symmetry.
 7. Vigor: Sound, healthy and vigorous, well branched and densely foliated when in leaf.
 8. Disease and Pests: Free of disease, insect pests, eggs, or larvae.
 9. Root System: Healthy well-developed root systems, free of kinked, circling, girdling and center roots, root-bound condition and cracked or broken root balls.
 10. Plant Size: Measure plants when branches are in their normal upright position.
 11. Pruning: Do not prune, thin or shape plants before delivery without acceptance by the Owner's Representative.
 12. Unacceptable Conditions: Multiple leaders, unless specified, damaged or crooked leaders, bark abrasions, sunscald, disfiguring knots, or fresh cuts of limbs over 3/4-inch diameter which have not completely callused.
- B. Water: Clean, fresh, potable and free of toxic elements.
- C. Aggregate Mulch for Planting Areas:
1. 3/8" to 5/8" crushed granite, color to match stone paving, no fines.
- D. Anti-Desiccant: Commercially available spray protective coating, designed to reduce plant transpiration loss, which produces a moisture retarding barrier not removable by rain or snow.

2.4 SOURCE QUALITY CONTROL

- A. Advanced Olive and Redwood Tree Procurement:
1. Within 60 days of award of Contract, notify Owner's Representative in writing of the availability or lack thereof of the specified plant material.
 2. Procure trees and arrange for contract growing as required to ensure that plant material is available in the quantities and sizes specified, and of the quality specified, at time of installation.
 3. Verify plant branching requirements with Owner's Representative prior to contract growing.
 4. Owner's Representative will review advanced procured trees prior to initial purchase and at end of the first growing season.

5. Prior to delivery of advanced procured plant material to site, coordinate and schedule a final review of the plant material at the place of growth.
 6. Review and acceptance of the advance-procured plant material at the place of growth does not cancel the right of the Owner's Representative to reject plant material at the site, if damage or unacceptable conditions are found that were not detected at the place of growth.
- B. Plant Material Review and Tagging:
1. Trees will be reviewed, photographed and tagged using irremovable tags by the Owner Representative at the nursery, or other place of growth prior to delivery of trees to site.
 2. Representative at the nursery, or other place of growth prior to delivery of trees to site.
 3. At the Owner's Representative's discretion, shrubs may or may not be reviewed, photographed, and tagged by the Owner's Representative at the nursery or other place of growth.
 4. Tagging of plant material at the nursery or place of growth does not affect the right of the Owner's Representative to reject plant material at the site, if damage or unacceptable conditions are found that were not detected at the nursery, place of growth, or in the submitted photographs.

PART 3 EXECUTION

3.1 EXAMINATION

- A. General: Examine site and verify that conditions are suitable to receive Work and that no defects or errors are present which would cause defective installation of products or cause latent defects in workmanship and function.
- B. Fine Grading and Soil Preparation: Verify that planting soils have been accepted and will be available.
- C. Verification of Subgrade Surface Drainage: Verify positive surface drainage of subgrade is achieved and subdrainage piping installed.
- D. Notification: Before proceeding with Work, notify the Owner's Representative in writing of unsuitable conditions.

3.2 PREPARATION

- A. Protection of Existing Conditions:
1. Use every possible precaution to prevent damage to existing conditions to remain such as structures, utilities, plant materials and walks on or adjacent to the site of the Work.
 2. Provide barricades, fences or other barriers to protect existing conditions to remain from damage during construction.
 3. Use every possible precaution to prevent excessive compaction of planting area soil within or adjacent to the areas of Work.
 4. Do not store materials or equipment, permit burning, or operate or park equipment under the branches of existing plants to remain.
 5. Submit written notification of damaged plants and structures to the Owner's Representative immediately.

3.3 PLANT LAYOUT

- A. Trees:
1. Locate trees in tree wells and planters as indicated on Drawings and accepted by Owner's Representative.
 2. Contact the Owner's Representative to review locations in field prior to excavating plant pits and installing irrigation.
 3. Do not install plants or install irrigation until the Owner's Representative has accepted plant locations.

3.4 PLANTING AND BACKFILL OPERATIONS

- A. Protection of Plants Prior to Installation:
1. Protect plant root balls from sun or drying winds.
 2. Keep root balls of plants that cannot be planted immediately upon delivery in the shade, well-protected and well-watered.
- B. Removal of Containers and Plant Placement:

1. Remove bottom of box carefully and set tree on pit bottom centered on accepted horizontal location using cables attached to box sides. Rotate tree to position acceptable to Owner's Representative. Install tree plumb. Remove sides of box.
- C. Root Ball Scarification:
1. After removing container from plant, scarify side of root ball to prevent root-bound condition.
 2. Loosen root ball soil surface as accepted by Owner's Representative without damaging roots or breaking root ball.
- D. Cutting Circling Roots:
1. If circling roots are encountered at root ball sides, notify the Owner's Representative for field review.
 2. Upon the Owner's Representative's acceptance, cut roots on 4 sides of root ball 90 degrees apart at no additional cost to the Owner.
 3. Use a cleaned, sharp nurseryman saw.
 4. Cut roots by sawing down sides of root ball 90 degrees to root ball surface and 2 inches into root ball.
 5. Keep saw sharp to cut roots cleanly.
- E. Remove bottom limbs up to 8 foot height as approved by Owner's Representative.
- F. Soil Mix Placement: Refer to Section 32 91 13, Planting Soil Preparation.
- G. Settled Plant Adjustment: Raise plant root balls which settle so that top of root balls are at the specified elevation relative to adjacent finished grade

3.5 GUYING SYSTEM

- A. Boxed Trees: Based on the root mass contained in a FULLY ROOTED-OUT 96" box, stabilization should not be necessary. Confirm extent of rooting with Owner's Representative of all material prior to installation to verify if rootball guying is required.
- B. Inspections: Inspect trees bi-monthly for first 6 months after installation and adjust as required to assume straight and plumb position.

3.6 MULCH INSTALLATION

- A. Depth: Install a uniform depth mulch layer over planting areas as shown on Drawings.
- B. Surface: Rake mulch surface smooth.

END OF SECTION