

SECTION 329120 - EXPANDED SLATE PLANTER MEDIA

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections apply to work of this section.

1.2 SUMMARY

- A. Section Includes:

- 1. Structural Soil for the entire site including within the right-of-way.

- B. Related Sections:

- 1. Section 312000 "Earth Moving" for excavation, filling and backfilling, and rough grading.
 - 2. Section 319100 "Planting Soils" for plants.
 - 3. Section 329300 "Plants" for border edge restraints.
 - 4. Section 334600 "Subdrainage" for subsurface drainage.

1.3 DEFINITIONS

- A. Finish Grade: Elevation of finished surface of planting soil.
- B. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- C. Engineered Soil: Manufactured soil that is modified with soil amendments free of pathogens and produce a soil mixture best for plant growth.
- D. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or top surface of a fill or backfill before planting soil is placed.
- E. Subsoil: Usually all soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.
- F. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil, but in disturbed areas such as urban environments, the surface soil can be subsoil.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
 - 1. Expanded Slate Planter Media: Include product label and manufacturer's installation instructions specific to this Project.

Carolina Stalite Company 800-898-3772 www.permatill.com

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer.
 - 1. Product Certificates: For soil amendments from manufacturer.
 - 2. Material Test Reports
- B. Submit manufacturer's technical product data and certified laboratory test results for the following:
 - 1. Expanded Slate Fines
 - 2. USGA Rootzone Sand
 - 3. Compost
 - 4. Pine Bark Fines
- C. Sample: Provide one (1) quart of media in heavy duty clear resealable plastic freezer storage bags labeled, "Planter Media", and the type and the project name.

1.6 QUALITY ASSURANCE

- A. Provide media mix prepared by a firm regularly engaged in the production of the specified items.
- B. Preinstallation Conference: Conduct at the Project site.

1.7 DELIVERY, STORAGE AND HANDLING:

- A. When stockpiling finished planting mix, cover with plastic tarps to prevent drying out or soil separation from rainfall.
- B. Install planting media within 48 hours of mixing.
- C. Do not deliver or place soil in frozen, wet, or muddy conditions.

PART 2 – PRODUCTS

2.1 GENERAL PRODUCT REQUIREMENTS:

- A. Provide a planter media using the four components listed below that meet specifications as follows:
 - 1. Expanded Slate fines 50%
 - 2. USGA Rootzone sand 25%
 - 3. Compost 15%
 - 4. Pine Bark Fines 10%
- B. Provide expanded slate from Carolina Stalite Company, Salisbury, NC;877-737-6284;
www.permatill.com

- C. Compaction: When calculating the volume necessary for the project, add approximately 22% to the calculated volume to allow for compaction which occurs during installation in addition to the natural settling process.

2.2 PLANTER MEDIA COMPONENTS:

A. Rotary Kiln Expanded Slate Fines

- 1. Only non-hazardous fuels such as coal or natural gas may be used to process the slate.
- 2. Unit Dry Weight loose: 58 lb./c.f. (ASTM C29)
- 3. Gradation:

| Sieve Size | % Retained |
|---------------|--------------------------|
| #4 | 4-8% |
| #8 | 28-38% |
| #16 | 46-58% |
| #30 | 63-75% |
| #50 | 74-84% |
| #100 | 82-90% |
| Fine Material | 2.79-3.53 % passing #200 |

B. USGA Rootzone Sand

Grain Size Distribution (ASTM C136-95A)

| Sieve Size | % Retained on Sieve |
|--------------|---------------------|
| 2.00 mm | <3% |
| 1-2 mm | 10% max |
| 0.5 -1 mm | 45% max |
| .25 -.5 mm | 35% - 75% |
| .15 -.25 mm | 15% max |
| .05 - .15 mm | 5% max |

C. Food Waste Compost

- 1. Humus material shall have an ash content of no less than 8 percent and no more than 40 percent.
- 2. The pH of the organic matter shall be between 5.5 and 7.5
- 3. The salt content shall be less than 10 millimho/cm at 25 degrees C, (Ece<10) on a saturated paste extract.
- 4. Types of acceptable composted products can be derived from the following feed stocks: food waste, low in salts, low in heavy metals, free from weed seeds, free of pathogens and other deleterious materials.
- 5. Composted woody plant products are conditionally acceptable as a bulking agent (stable humus must be present).
- 6. Sludge-based materials are not acceptable including municipal sewage sludge bio-solids.
- 7. The organic amendment must have a Carbon/Nitrogen ratio of <25:1.
- 8. The compost shall be aerobic without malodorous presence of decomposition products.
- 9. From 75 to 100 percent organic amendment particles shall pass the 4.0 mm sieve size
- 10. From 45 to 65 percent moisture measured via wet-weight basis.
- 11. Free of stones, debris, plant material.
- 15. Organic amendment must test between 5 to 8 on Solvita Maturity Test
- 16. Metals and contaminants must meet or exceed US EPA Standard 40

D. Pine Bark Fines

- 1. Pine bark screened to minus 1/2"

3.0 PREPARATION:

A. Drainage

1. Install underdrain system, with sock or soil separator fabric, according to drawings and connected to storm drain.
2. Line the base and sides of the planters with a drainage board/ filter material such as J-drain or equal.

3.3 INSTALLATION OF PLANTER MEDIA:

A. General:

1. Install irrigation and drains ensuring the media is properly compacted under and around each pipe.

B. Placing and Compacting Media:

1. Place media in horizontal lifts not exceeding 12 inches depth. Lightly compact using foot pressure or mechanical means. Additional compaction may be required should the field Landscape Architect determine additional compaction is necessary to insure stability of the layer. Continue placing and compacting 12 inch lifts until the specified depth is reached.

3.4 TREE PIT PREPARATION:

A. Tree Pit Excavation:

1. Excavate the tree pit using the following procedure:
 - a. Excavate the planter media to a depth equal to the height of the root ball of the tree to be planted. Remove the media to within no more than one foot of the edge of the planter area.
 - b. Place the tree in the pit and backfill as described below as soon as possible. No tree pit shall remain excavated for more than 2 hours unless forms are used.

B. Tree Pit Backfill Planting Mix:

1. Backfill tree pit using the following procedure:
 - a. Remove any wooden forms. Immediately place the tree in the pit
 - b. Hand tamp the planting mix in 12 inch lifts until the pit is filled to the specified grade.
 - c. Do not use excavated media as engineered fill to support paving or structures. Excess excavated planter media mix may be used for other planting backfill operations.
 - d. Mulch as specified

3.5 CLEANING AND PROTECTION:

A. Use Roadboarding for rubber tired vehicles on the brick paving surfaces if planting occurs after paving is installed.

B. Broom clean paved areas and cover stockpiled material after each day's operations.

END OF SECTION 329120