CHAPTER G13

TOPSOIL FOR PLANTING

PERFORMANCE

A. Basic Function:

1. Supply topsoil suitable for the establishment and long-term health of the planted areas of the project. Provide depths and soil types as indicated in the Schematic Plans and Conceptual Documents, all addenda, and bid alternatives as described therein.

2. Stockpile and protect onsite soils in compliance with the requirements of the City of Seattle Stormwater, Grading and Drainage Control Code.

3. Excavation spoils, when they meet the appropriate criteria, may be used or amended to be used as topsoil for planting to establish finish grades within plating areas.

4. In addition to the requirements of this Chapter, comply with all applicable requirements as defined elsewhere in this document.

B. Design Criteria:

1. USDA Soil Texture to be a Sandy Loam.

2. Percentages of soil component particle sizes shall be established in the soil analysis report and meet general specifications for sandy loam.

3. ASTM D 5268, PH range from 5.5 – 7.0

4. Heavy metal concentrations shall be below the WSDA per load limits.

5. Soil structure shall be loose, friable and not subject to consolidation or compaction.

6. The water percolation/infiltration rate of the disturbed soil sample shall be a minimum of 0.4 inches per hour.

7. Soil should contain less than 100 plant parasitic nematodes per 100 cc of soil.

8. Minimal weed seed or other weed propagules should be present, based on germination testing of a representative sample.

9. Soil shall be relatively free of soil-borne plant pathogens.

10. Non-soil components should be less than 1% by volume (i.e. plastic, rocks, glass, etc.) and shall not be harmful to plant growth. Non-soil components shall not be 1 inch or larger in any dimension.

11. Soil mix shall contain sufficient quantities of available nitrogen, potassium, phosphorus, calcium, magnesium, sulfate, copper, zinc, manganese, iron, and boron to support normal plant growth. In the event of a nutrient deficiency, the necessary type and quantity of materials must be added prior to planting.

C. Substantiation:

1. The Design-Builder shall submit the following documents for verification of products used on site:

   a. Materials List:

      1) Submit a complete list of materials proposed to be furnished and installed demonstrating conformance with the requirements specified. Include names and addresses of all suppliers.
b. Soil and Organic Amendment Tests:
   1) Provide the following analyses of organic materials and soil amendments, from an
      accredited soils testing laboratory.
      a. An analysis of the chemical and physical characteristics including pesticides and
         heavy metals.
      b. A fertility analysis and recommendations for fertilizer types and application rates.
   c. Submit laboratory results of all amendment analysis to Architect prior to beginning any soil
      amendment placement. Costs of testing will be paid for by Contractor.

d. Soil Materials
   1) Submit 0.25 cu. ft. samples of the following at least 30 days prior to beginning work for
      the approval of the Architect:
      a. Cedar Grove Compost or approved equal
      b. Soil mix for planting beds
      c. Soil mix for turf areas
      d. Bark Mulch

e. Fertilizers
   1) Submit manufacturer's analysis of all fertilizers for the approval.

f. Certificates:
   1) Deliver certificates to University.

2. QUALITY ASSURANCE

   a. Tests and Inspections:
      1) Provide test results for chemical and physical characteristics of all items listed under
         submittals.

   b. The Design-BUILDER shall maintain construction and inspection records in order to ascertain
      that the work is accomplished in accordance with the terms and in the manner proposed on
      the approved plans and otherwise in accordance with the requirements of the Contract
      documents.

PRODUCTS

D. Amended Topsoil:

   1. Amend existing in-place surface soil to produce topsoil that meets the physical properties listed
      in this Section 2.02. Verify suitability of surface soil to produce topsoil. Clean surface soil of
      roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
      a. Surface soil may be supplemented with imported topsoil from off-site sources. Obtain
         topsoil displaced from naturally well-drained construction or mining sites where topsoil
         occurs at least 4 inches (100 mm) deep; do not obtain from agricultural land, bogs or
         marshes.

      2. Physical performance properties: In addition to the general properties listed in this section:
         a. Organic matter – 2% to 5%.
         b. Sand – 75% to 85%.
c. Clay – 5% to 15%.

E. Imported Topsoil:

1. Import topsoil from off-site sources. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches (100 mm) deep; do not obtain from agricultural land, bogs or marshes.

2. Physical performance properties: In addition to the general properties listed in this section:
   a. Organic matter – 2% to 5%.
   b. Sand – 75% to 85%.
   c. Clay – 5% to 15%.

3. Suppliers:
   a. Pacific Topsoils, Inc., TEL 1-800-884-SOIL.
   b. Cedar Grove, TEL 1-877-SOILS-4U.
   c. Or equivalent.

END OF CHAPTER G13
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