

## **SECTION 32 91 13 - SOIL PREPARATION- TOPSOIL**

### **PART 1 GENERAL**

#### **1.01 DESCRIPTION**

The specified work includes the furnishing of all materials, equipment, and labor necessary for the installation of topsoil; and all related items required to complete the work shown on the drawings and as herein specified.

#### **1.02 RELATED WORK**

Section 32 84 00 Irrigation System (design build by owner)

Section 32 91 00 Plant Material and Planting

#### **1.03 QUALITY ASSURANCE**

Topsoil shall be a natural, fertile, friable soil constituting the "A" horizon from naturally well drained areas. It shall not be excessively acidic or alkaline nor contain toxic substances that may be harmful to plant growth. Topsoil shall be without admixture of subsoil and shall be reasonably free from clay clods, stones, roots or similar substances one inch or more in diameter, debris, or other objects that may be a hindrance to planting operations. Topsoil shall meet all physical and chemical criteria and requirements. Contractor shall test topsoil and amend topsoil for pH, drainage capabilities and for organic qualities suited to provide organic topsoil. Soil testing shall be accomplished by a soil testing lab sponsored and run by the State (Commonwealth) of Virginia or other suitable lab on approval.

#### **1.04 SUBMITTALS**

A. Submit the following test reports to the Owner:

1. Soil Analysis of topsoil brought from outside sources. Topsoil should be tested by an independent laboratory to determine it's suitability for landscape use. The following suggested testing methodology and criteria are recommended.
  - a. pH factor.
  - b. Mechanical analysis (composition).
  - c. Percentage of organic content.
  - d. Recommendations on type and quantity of additives required to establish satisfactory pH and bring supply of nutrients to satisfactory level for planting.

#### **1.05 PROJECT CONDITION**

- A. The Contractor shall be notified in writing by the owner or his authorized representative when to commence work. Thereafter, operations shall be conducted under favorable weather conditions which are normal for such work as determined by accepted practice in the locality of the project. At the option of, and on the full responsibility of the Contractor, operations may be conducted under unseasonable conditions without additional compensation.
- B. The Contractor shall be familiar with the alignment of existing or new utility lines, ducts and buried cables. The Contractor shall field check the location of utilities

before any installation of material. The Contractor shall be responsible for all damage resulting from neglect or failure to comply with this requirement. If discrepancies occur, consult the Owner. Changes shall be made in only upon written notification by the Owner.

- C. Protect existing utilities, paving, and other facilities from damage caused by operations.
- D. All work shall be accomplished under the direction of a competent, experienced foreman.

## **PART 2 PRODUCTS**

### **2.01 MATERIALS**

#### **A. Topsoil**

1. Soil texture will be USDA **sandy loam** approximating the following particle size distribution and requirements:

Approximate Particle Distribution	
Gravel	Trace
Coarse to medium sand	40-65%
Fine to very fine sand	10-20%
Silt	10-15%
Clay	10-20%

Soluble salt level: Less than 844 ppm (.67 mmho/cm)

Percent organic matter: 4 to 8%, by weight.

Soil pH: 5.5 - 6.5

2. Topsoil to be from Isle of Wight Materials, P.O. Box 216, Carrollton, Virginia 23314, or approved equal.
3. Substitutions will not be accepted unless specifically approved in writing by the owner or his authorized representative. Proposed substitutes shall be of the nearest equivalent as specified, having the same essential characteristics. Proposed substitutes of lesser cost shall have an equitable adjustment of contract price.
3. Soil amendments as per Section 02490 at planting beds.

## **PART 3 EXECUTION**

### **3.01 EXECUTION**

- A. Topsoil shall be furnished by the Contractor at his expense. The Contractor shall furnish sufficient topsoil to properly install all work as specified herein, and as shown on the drawings.
- B. Layout. The Contractor is responsible for verifying all site conditions in the field. If discrepancies occur consult the Owner. Necessary adjustments shall be made only

after approval by the Owner.

- C. Obstructions Below Ground. Underground construction, obstructions or debris when insufficient to accommodate proper topsoil coverage, where such conditions are encountered in excavation, and where the debris, concrete, or other obstruction cannot be broken and removed by hand methods in the course of digging. No changes shall be made without the prior approval of the Owner.
- D. Drainage. Drainage may also be provided by drilling holes through non-porous subsoil at the bottom excavations to a depth to assure percolation, or by any other method approved by the Landscape Architect. If these conditions occur, consult Owner prior to proceeding.
- E. Excess Excavated Soil shall be disposed of where and as directed by the Owner or his authorized representative.

### **3.02 INSTALLATION**

A. Topsoil. Contractor is responsible for all topsoil to be installed to a depth of four inches minimum in lawn areas and 16" depth at shrub beds and tree areas as requested on related plans and be maintained throughout entire site as indicated. Topsoil shall be placed at the edges of pavement as to allow for the installation of sod so that the top of mowed grass is of equal height of pavement. If discrepancies occur consult the Owner. Necessary adjustments shall be made only after approval by the Owner.

### **3.03 MAINTENANCE**

- A. Maintenance shall begin immediately following the last operation of installation and shall continue in accordance with the following requirements.
  - 1. Topsoil shall be protected and maintained by the Contractor until installation of planting is complete and has been accepted. Maintenance shall include erosion prevention, settling and other necessary operations to maintain proposed grades.

### **3.04 INSPECTION FOR ACCEPTANCE**

- A. Inspection of the topsoil to determine completion of contract work, exclusive of the possible replacement, will be made by the owner or his authorized representative upon written notice requesting such inspection submitted by the Contractor at least ten (10) days prior to the anticipated date.
- B. Acceptance. After inspection, the Contractor will be notified in writing by the owner or his authorized representative of acceptance of all work, to guarantee or, if there are any deficiencies, of the requirements for completion of the work. Work remaining to be done shall be subject to reinspection before acceptance. The owner will, after acceptance, accept the responsibility for maintenance.

### **3.05 CLEAN UP**

- A. Clean Up of Site. At the end of each day's work, the Contractor shall remove all trash and other debris resulting from his operations. Also, the Contractor shall police the entire site and remove all forms of existing rubbish, including wire, cans, and piles of dead grass, all of which shall be removed from the site.

**END OF SECTION**