

## **Section 7 - Excavation**

### **A. GENERAL EXCAVATION REQUIREMENTS**

#### **1. General**

The work covered by this section of the specifications is excavation for new wall and column foundations, spread foundations, grade beams, roadways/access roads, parking areas, slabs on grade and underground utilities as indicated on the Contract Drawings.

#### **2. Field Measurements**

The Contractor is responsible for verifying that the survey benchmark and intended elevations for the work are as indicated.

### **B. EXECUTION**

#### **1. Preparation**

- a. Identify required lines, levels, contours and datum.
- b. Identify known underground, above ground and aerial utilities. Stake and flag locations.
- c. Notify utility companies to remove and/or relocate utilities, if necessary.
- d. Protect above and below grade utilities which are to remain.
- e. Protect plant life, lawns and other features remaining as a portion of final landscaping.
- f. Protect bench marks, sidewalks, paving, and curbs from excavation equipment and vehicular traffic.

#### **2. Excavation**

- a. All excavation work is to be in accordance with the Pennsylvania Department of Labor and Industry "Regulations for Trenches and Excavations".
- b. Excavate to the elevations and dimensions shown on the Contract Drawings. Extend excavations a sufficient distance from walls, spread foundations and grade beams to allow for the installation of forms and services.
- c. Brace and shore the sides of excavations as necessary.
- d. Machine slope sides of excavations to the materials angle of repose or less until shored.

- e. Excavation cuts shall not interfere with the normal 45 degree bearing splay of foundations.
- f. Grade top perimeter of excavation to prevent surface water from draining into excavation.
- g. Hand-trim excavation. Remove loose matter.
- h. Remove lumped subsoil, boulders, and rock up to 1/3 c.y. measured by volume.
- i. Notify Engineer of unexpected subsurface conditions and discontinue affected work in area until notified to resume work.
- j. Correct unauthorized excavation at no extra cost to Owner.
- k. Correct areas over-excavated by error in accordance with Standard Contract Provisions.
- l. Stockpile excavated material in an area designated on site by the Engineer. If no on-site area is available, the Contractor is responsible for wasting the excess material off site at no additional cost to the Owner.
- m. Excavations for foundations shall extend to the elevations indicated on the Contract Drawings or to the elevation necessary to achieve a minimum bearing capacity of 2000 PSF, but not less than 3'-0" below the proposed finished grade.
- n. Blasting is not permitted.
- o. Backfill spaces excavated for but not occupied by structures with material indicated on the Contract Drawings.

### 3. Field Quality Control

Provide for visual inspection of all foundation bearing surfaces. Foundation excavations shall be approved by the Engineer's representative prior to placing concrete.

### 4. Protection

- a. Protect excavations by any methods required to prevent cave-in or loose soil from falling into the excavation.
- b. Protect the bottom of excavations and soil adjacent to and beneath foundations from freezing.

### 5. Sequence of Work

Perform all work in accordance with the sequence given in the Special Conditions of this Contract and as coordinated with the General Contractor.

6. Soil Conditions

No boring logs are included in this specification.

END OF SECTION