

SECTION 6 ROUGH GRADING

A. GENERAL ROUGH GRADING REQUIREMENTS

1. General

- a. Removal of topsoil and subsoil.
- b. Cutting, grading, filling and rough contouring the site.

2. References

- a. ANSI/ASTM D698 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb (2.49 Kg) Rammer and 12 inch (304.8 mm) Drop.
- b. ANSI/ASTM D1556 - Test Method for Density of Soil in Place by the Sand-Cone Method.
- c. ANSI/ASTM D1557 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 lb. (4.54 Kg) Rammer and 18 inch (457 mm) Drop.

3. Submittals

Submit under the Standard Contract Provisions.

4. Project Record Documents

Accurately record actual locations of utilities remaining, by horizontal dimensions.

B. PRODUCTS

1. Materials

a. Topsoil

Excavated material, graded, free of roots, rocks larger than 1 inch, subsoil, debris, and large weeds.

b. Subsoil

Excavated material, graded, free of lumps larger than 6 inches, rocks larger than 3 inches, and debris.

C. EXECUTION

1. Examination

- a. Verify site conditions under provisions of Standard Contract Provisions.

- b. Verify that survey benchmark and intended elevations for the work are as indicated.

2. 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.
- 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 benchmarks, sidewalks, paving and curbs from excavation equipment and vehicular traffic.
- g. Maintain Access to the existing parking areas at all times.
- h. Maintain Access to the existing facilities at all times.

3. Topsoil Excavation

- a. Excavate topsoil from areas to be further excavated, re-landscaped, or re-graded.
- b. Stockpile in a separate area on site. Excess topsoil not being reused, is to remain the property of the Owner, and will be placed at a designated location on site, seeded and mulched for stabilization.
- c. Do not excavate wet topsoil.
- d. Stockpile topsoil to depth not exceeding 8 feet. Protect from erosion.

4. Subsoil Excavation

- a. Excavate subsoil from areas to be further excavated, re-landscaped or re-graded.
- b. Stockpile in area designated on site as space permits. All other material to be wasted on site as space permits without encroachment on property lines or streams. Excess material must be removed and disposed of as incidental to the Contract.
- c. Do not excavate wet subsoil.
- d. Stockpile subsoil and protect from erosion.

5. Filling

- a. Fill areas to contours and elevations with unfrozen materials. If adequate or suitable material is not available on site, the Contractor must supply it at no additional cost to the Owner.

- b. Subsoil and Topsoil Fill: Place and compact material in continuous layers not exceeding 12 inches compacted depth, compacted to 95 percent.
 - c. Maintain optimum moisture content of fill materials to attain required compaction density.
 - d. Slope grade away from building minimum 2 inches in 10 ft., unless noted otherwise.
6. Tolerances
- a. Top Surface of Subgrade: Plus or minus 1/10 ft.
7. Field Quality Control
- a. Tests and analysis of fill material will be performed in accordance with ANSI/ASTM D698 and/or D1557.
 - b. Compaction testing will be performed in accordance with ANSI/ASTM D1556 and/or D1557 and/or ANSI/ASTM D698 whichever is applicable.
 - c. If tests indicate work does not meet specified requirements, remove work, replace and retest at no cost to Owner.

END OF SECTION