



PICKENS COUNTY

SOUTH CAROLINA



COMMUNITY DEVELOPMENT

BUILDING CODES ADMINISTRATION • STORMWATER MANAGEMENT • PLANNING

Requirements for placing "Fill" for foundation systems:

J107.5 Compaction.

All fill material shall be compacted to 90 percent of maximum density as determined by ASTM D1557, Modified Proctor, in lifts not exceeding 12 inches (305 mm) in depth.

704.7 Soils.

The special inspections for existing site soil conditions fill placement and load-bearing requirements shall follow Sections 1704.7.1 through 1704.7.3. The approved soils report, required by Section 1802.2, shall be used to determine compliance.

Exception: Special inspections not required during placement of fill less than 12 inches (305 mm) deep.

1704.7.1 Site preparation.

Prior to placement of the prepared fill, the special inspector shall determine that the site has been prepared in accordance with the approved soils report.

1704.7.2 During fill placement.

During placement and compaction of the fill material, the special inspector shall determine that the material being used and the maximum lift thickness comply with the approved report, as specified in Section 1803.5.

1803.5 Compacted fill material.

Where footings will bear on compacted fill material, the compacted fill shall comply with the provisions of an approved report, which shall contain the following:

1. Specifications for the preparation of the site prior to placement of compacted fill material.
2. Specifications for the preparation of the site prior to placement of compacted fill material.. Specifications for material to be used as compacted fill.
3. Test method to be used to determine the maximum dry density and optimum moisture content of the material to be used as compacted fill.
4. Maximum allowable thickness of each lift of compacted fill material.
5. Field test method for determining the in-place dry density of the compacted fill.
6. Minimum acceptable in-place dry density expressed as a percentage of the maximum dry density determined in accordance with Item 3.
7. Number and frequency of field tests required to determine compliance with Item 6.

Exception: Compacted fill material less than 12 inches (305 mm) in depth need not comply with an approved report, provided it has been compacted to a minimum of 90 percent Modified Proctor in accordance with ASTM D 1557. The compaction shall be verified by a qualified inspector approved by the building official."

ASTM D 1557 = 97.5% of the ASTM D6998 value plus 10.75 pounds and ASTM D 698 are similar standards and are used interchangeably for compaction requirements. ASTM D 1557 as referred to in the Building Code is the Modified Proctor method. ASTM D 698 is the Standard Method (12400 ft-lbf/ft³) and ASTM D 1557 is the Modified Method (56000 ft-lbf/ft³).

The "approved report" referred to above specifies that the relationship between the maximum dry density as determined by the Standard Proctor and the modified Proctor varies only with the materials used. The selection of the method (either ASTM D698 for Standard Proctor or ASTM D 1557 for Modified Proctor) to use depends on the materials (generally, granular materials use the Modified Proctor), as well as the expected capability of the compaction equipment (based on the location, application, and accessibility of equipment).

Also, Pickens County's Flood Damage Prevention Ordinance, Article IV, Section B-Specific Standards, provision 12-Fill refers to ASTM D 698 and certified by a registered professional engineer.