## Section 705. — ROCK

08/01/19–FP14

### 705.02 Riprap Rock.

CAUTIONARY STATEMENT

Note:

When designing riprap structures within the limits of a water channel consider the effect of voids and water flow. Revise gradation requirements if necessary to choke the riprap to ensure water flows over rather than under the riprap.

Consult your COTR or Hydraulics and Materials Engineers.

Riprap may also requiring choking when covered by topsoil or aggregates.

WFL Specification 03/31/16 7050010

Include in projects that require Rock Buttress construction under Section 252.

### 705.05 Rock for Buttresses.

Delete paragraph (a)(2) and include the following:

**(2)** Apparent specific gravity, AASHTO T 85 2.50 min.

WFL Specification 03/31/16 7050020

Include in projects that require Rockery construction under Section 252.

### 705.06 Rock for Rockeries.

Delete paragraph (a) and include the following:

**(a)** Apparent specific gravity, AASHTO T 85 2.50 min.

WFL Specification 08/01/19 7050030

Include the following when check dams are required.

### 705.08 Filter Rock.

(Added Subsection)

Furnish hard, durable, angular rock that is resistant to weathering and water action and free of organic or other unsuitable material. Angular rock is characterized by sharp, clean edges at the intersections of relatively flat surfaces. Do not use shale, rock with shale seams, or other fissile or fissured rock that may break into smaller pieces in the process of handling and placing. Conform to the following:

**(a)** Apparent specific gravity, AASHTO T 85 2.40 min.

**(b)** Absorption, AASHTO T 85 4.0 percent max.

**(c)** Soundness of aggregate using sodium sulfate,

AASHTO T 104 (5 cycles) 12 percent loss max.

**(d)** Los Angeles abrasion, AASHTO T 96 50 percent max.

**(e)** Rock particle intermediate dimension (width) and

minimum dimension (thickness) ⅓ longest dimension

 (length) min.

**(f)** Gradation Table 705-4

Table 705-4

Gradation Requirements for Filter Rock

|  |  |  |
| --- | --- | --- |
| Percent of Rock by Mass | Range of Intermediate Dimensions,(1) inches (millimeters) | Range of Rock Mass,(2) pounds (kilograms) |
| 20 | 6-8 (150-200) | 21-49 (10-22) |
| 30 | 5-6 (125-150) | 12-21 (5-10) |
| 40 | 3-5 (75-125) | 2.6-12 (1-5) |
| 10 | 2-3 (50-75) | 0.8-2.6 (0.4-1) |

(1) The intermediate dimension is the longest straight-line distance across the rock that is perpendicular to the rock’s longest axis on the rock face with the largest projection plane.

(2) Rock mass is based on a specific gravity of 2.65.