

# EXPECTED IMPLEMENTATION JULY 2021

## 145 GEOSYNTHETIC REINFORCEMENT (REV 11-06-20) (FA 1-8-21) (7-21)

ARTICLE 145-6 is deleted and the following substituted:

### 145-6 Acceptance Program.

**145-6.1 General Requirements:** Meet the requirements of 120-10 except delete the requirements of 120-10.1.4.1, 120-10.1.6, 120-10.2 and 120-10.3.

**145-6.2 Maximum Density Determination:** Determine the maximum QC density in accordance with FM 1-T180. When compacting A-3 or A-2-4 materials to meet the alternate acceptance criteria in 145-6.3.1.1, determine the maximum density in accordance with FM 1-T099. Perform gradation tests on the sample collected in accordance with AASHTO T27 and FM 1-T011.

**145-6.3 Density Testing Requirements:** Ensure compliance with the requirements of nuclear density testing in accordance with FM 1-T238. Determine the in-place moisture content for each density test. Use FM 5-507 (Determination of Moisture Content by Means of a Calcium Carbide Gas Pressure Moisture Tester), or FM 5-535 (Laboratory Determination of Moisture Content by Granular Soils by Use of a Microwave Oven) for moisture determination.

**145-6.3.1 Acceptance Criteria:** For select backfill, obtain a density in each LOT of at least 95% of the maximum density as determined by FM 1-T180.

**145-6.3.1.1 Optional Acceptance Criteria for A-3 and A-2-4 Materials:** Obtain a minimum density of 100% of the maximum dry density as determined by FM 1-T099. The combined width from both reinforced fill volume and retained fill material may be considered the same LOT if both volumes comprise the same material and both are compacted with the same procedure, lift thickness, equipment and compacting effort.

**145-6.4 Frequency:** Conduct sampling and testing at a minimum frequency listed in the table below. The Engineer will perform verification sampling and tests at a minimum frequency listed in the table below.

Table 145-2		
Test Name	Quality Control (QC)	Verification
Maximum Density	One per soil type	One per soil type
Density	One per LOT	One per four LOTs
Soil Classification, Gradation, LL & PI	One per Maximum Density	One per Maximum Density
Organic Content	One per soil type	One per soil type

In addition, test for pH at a minimum frequency of one test per soil type at point of placement according to 145-3. The Engineer will collect enough material to split and create two separate samples and retain one for resolution at point of placement until LOTs represented by the samples are accepted.

# EXPECTED IMPLEMENTATION JULY 2021

**D** **145-6.5 Test Selection and Reporting:** Determine test locations including stations and offsets, using the random number generator approved by the Engineer. Do not use notepads or worksheets to record data for later transfer into the Earthwork Records System (ERS) section of the Department's database. Notify the Engineer upon successful completion of QC testing on each LOT.

SUBARTICLE 145-7.1 is deleted and the following substituted:

**R** **145-7.1 Maximum Density Determination:** The Engineer will collect enough material to split and create two separate samples and retain one for resolution until LOTs represented by the samples are accepted. The Engineer will meet the requirements of 120-10.4.1 except replace FM 1-T099 with FM 1-T180. If the Contractor selects the optional acceptance criteria, the Engineer will verify the QC results of FM 1-T099 in accordance with 120-10.4.1.

**A**

**F**

**T**