



**USACE CERTIFICATE  
OF  
LABORATORY VALIDATION**



**MC Squared C-43 Laboratory**

**3338 Congen Road  
Labelle, FL,  
Scott Willing  
(813) 623-3399**

has demonstrated, by abbreviated audit of its AASHTO accreditation, or by inspection of required records, equipment, procedures, facilities, and/or final reports, its proficiency to perform testing of construction materials, as established by the quality standards of AASHTO R 18 guidance and the requirements of the applicable ASTM standards.

**THIS USACE CERTIFICATE OF LABORATORY VALIDATION IS ACCURATE AS OF ITS DATE AND TIME OF  
GENERATION:**

**01 DEC 2020 AT 11:12 HOURS**

**ALL METHODS LISTED ON THIS CERTIFICATE OF VALIDATION WILL EXPIRE ON 11/02/2022**

PLEASE CONFIRM THE CURRENT VALIDATION STATUS OF THIS LABORATORY USING THE SEARCH FEATURE ON  
OUR PUBLIC WEBSITE: <https://mtc.erdcdren.mil>

Chad A. Gartrell, PE, Director  
USACE Materials Testing Center  
Vicksburg, Mississippi, USA

**AGGREGATE**

Aggregate - D 75 - Opt - Sampling  
Aggregate - C 88 - Opt - Sulfate Soundness  
Aggregate - C 117 - Req - Material Finer than 75  $\mu$ m (No. 200) Sieve  
Aggregate - C 127 - Req - Specific Gravity & Absorption in Coarse Aggregate  
Aggregate - C 128 - Req - Specific Gravity & Absorption in Fine Aggregate  
Aggregate - C 131 - Opt - Los Angeles Abrasion Resistance on Small-Size Coarse Aggregate  
Aggregate - C 136 - Req - Sieve Analysis of Aggregates  
Aggregate - C 566 - Opt - Total Moisture Content  
Aggregate - C 702 - Opt - Reducing Samples to Testing Size  
Aggregate - C 1077 - Opt - Concrete and Concrete Aggregate Testing Standards (Quality Standards)

**CONCRETE**

Concrete - C 31 - Req - Making and Curing Test Specimens in the Field  
Concrete - C 39 - Req - Compressive Strength of Cylindrical Specimens  
Concrete - C 42 - Opt - Drilled Cores and Sawed Beams  
Concrete - C 138 - Req - Unit Weight and Air Content by Gravimetric  
Concrete - C 143 - Req - Slump  
Concrete - C 172 - Req - Sampling  
Concrete - C 231 - Req - Air Content by Pressure \*\*\*required if C173 not performed\*\*\*  
Concrete - C 470 - Opt - Molds for Forming Concrete Test Cylinders Vertically  
Concrete - C 511 - Opt - Moist Cabinets, Moist Rooms, Water Storage Tanks  
Concrete - C 617 - Opt - Capping Cylindrical Specimens  
Concrete - C 1064 - Req - Temperature of Concrete  
Concrete - C 1077 - Opt - Concrete and Concrete Aggregate Testing Standards (Quality Standards)  
Concrete - C 1231 - Opt - Unbonded Caps

**MASONRY**

Masonry - C 109 - Req - Compressive Strength of Cement Mortars Using Cube Specimens  
Masonry - C 1019 - Req - Sampling and Testing Grout

**SOILS**

Soils - API 13 - Opt - API 13B-1 Drilling Fluid (Berntonite Slurry) Test Methods (SG, Visc, pH, Filtrate Loss, Sand Cont)  
Soils - D 421 - Req - Dry Preparation for Particle Size Distribution & Soil Constants  
Soils - D 422 - Req - Particle Size Analysis  
Soils - D 558 - Req - Moisture-Density of Soil-Cement  
Soils - D 559 - Req - Wetting & Drying Soil-Cement  
Soils - D 698 - Req - Compaction Characteristics by Standard Effort  
Soils - D 1140 - Req - Material Finer than 75  $\mu$ m (No. 200) Sieve  
Soils - D 1556 - Req - Density & Unit Weight by Sand Cone  
Soils - D 1557 - Req - Compaction Characteristics by Modified Effort  
Soils - D 2168 - Req - Calibration of Laboratory Mechanical-Rammer Soil Compactors  
Soils - D 2216 - Req - Water Content  
Soils - D 2487 - Req - Classification of Soils  
Soils - D 2488 - Req - Description & Identification of Soils (Visual-Manual Procedure)  
Soils - D 2937 - Req - Density by Drive Cylinder Method  
Soils - D 2974 - Req - Moisture, Ash, & Organic Matter of Peat & Other Organic Soils  
Soils - D 3740 - Opt - Soil and Rock Testing Standards (Quality Standard)  
Soils - D 4253 - Req - Maximum Index Density by Vibratory Table  
Soils - D 4254 - Req - Minimum Index Density  
Soils - D 4318 - Req - Liquid & Plastic Limits & Plasticity Index  
Soils - D 4643 - Req - Determination of Water Content of Soil by Microwave Oven  
Soils - D 4972 - Opt - pH of Soils  
Soils - D 5084 - Req - Hydraulic Conductivity using a Flexible Wall Permeameter  
Soils - D 6913 - Req - Particle-Size Distribution of Soils Using Sieve Analysis  
Soils - D 6938 - Req - Density and Water Content by Shallow Depth Nuclear Method