



USACE CERTIFICATE  
OF  
LABORATORY VALIDATION



**Alliance Geotechnical Group, Inc.**

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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:**

**15 JUN 2021 AT 09:28 HOURS**

**ALL METHODS LISTED ON THIS CERTIFICATE OF VALIDATION WILL EXPIRE ON 06/14/2023**

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

A handwritten signature in black ink, appearing to read "Chad A. Gartrell", is written over a horizontal line.

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

## AGGREGATE

Aggregate - C 29 - Opt - Unit Weight and Voids in Aggregate  
Aggregate - C 40 - Opt - Organic Impurities  
Aggregate - C 88 - Opt - Sulfate Soundness  
Aggregate - C 117 - Req - Material Finer than 75  $\mu\text{m}$  (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 - E 329 - Opt - Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection  
Aggregate - C 535 - Opt - Los Angeles Abrasion Resistance on Large Size Coarse Aggregate  
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)  
Aggregate - D 2419 - Opt - Sand Equivalent Value  
Aggregate - D 3666 - Opt - Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials

## BITUMINOUS

Bituminous - E 329 - Opt - Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection  
Bituminous - D 2041 - Req - Theoretical Maximum Specific Gravity & Density (Rice)  
Bituminous - D 2726 - Req - Bulk Specific Gravity and Density  
Bituminous - D 3203 - Req - Percent Air Voids  
Bituminous - D 3666 - Opt - Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials  
Bituminous - D 5444 - Req - Mechanical Size Analysis of Extracted Aggregate  
Bituminous - D 6307 - Req - Asphalt Content of Hot-Mix Asphalt by Ignition Method  
Bituminous - D 6925 - Req - Relative Density of Asphalts by Superpave Gyrotory Compactor  
Bituminous - D 6926 - Req - Preparation of Bituminous Specimens using Marshall  
Bituminous - D 6927 - Req - Marshall Stability and Flow of Bituminous Mixtures

## 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 78 - Opt - Flexural Strength by Third Point Loading  
Concrete - C 138 - Req - Unit Weight and Air Content by Gravimetric  
Concrete - C 143 - Req - Slump  
Concrete - C 172 - Req - Sampling

Concrete - C 173 - Req - Air Content by Volumetric \*\*\*required if C231 not performed\*\*\*  
Concrete - C 174 - Opt - Concrete Thickness by Drilled Cores  
Concrete - C 192 - Opt - Making and Curing Test Specimens in Laboratory  
Concrete - C 231 - Req - Air Content by Pressure \*\*\*required if C173 not performed\*\*\*  
Concrete - E 329 - Opt - Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection  
Concrete - C 511 - Opt - Moist Cabinets, Moist Rooms, Water Storage Tanks  
Concrete - C 617 - Opt - Capping Cylindrical Specimens  
Concrete - C 803 - Opt - Penetration Resistance of Hardened Concrete  
Concrete - C 1064 - Req - Temperature of Concrete  
Concrete - C 1074 - Opt - Estimating Concrete Strength by Maturity Method  
Concrete - C 1077 - Opt - Concrete and Concrete Aggregate Testing Standards (Quality Standards)  
Concrete - C 1231 - Opt - Unbonded Caps

## ROCK

Rock - D 7012 - Req - Compressive Strength & Elastic Moduli of Rock Core Specimens

## SOILS

Soils - E 329 - Opt - Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection  
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 698 - Req - Compaction Characteristics by Standard Effort  
Soils - D 854 - Req - Specific Gravity of Soils  
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 2166 - Req - Unconfined Compressive Strength  
Soils - D 2216 - Req - Water Content  
Soils - D 2435 - Req - One-Dimensional Consolidation Properties  
Soils - D 2487 - Req - Classification of Soils  
Soils - D 2488 - Req - Description & Identification of Soils (Visual-Manual Procedure)  
Soils - D 2850 - Req - Unconsolidated, Undrained Strength in Triaxial Compression  
Soils - D 3080 - Req - Direct Shear Test in Consolidated Drained Conditions  
Soils - D 3740 - Opt - Soil and Rock Testing Standards (Quality Standard)  
Soils - D 4318 - Req - Liquid & Plastic Limits & Plasticity Index  
Soils - D 4546 - Req - One-Dimensional Swell or Settlement Potential  
Soils - D 4767 - Req - Consolidated-Undrained Triaxial Compression  
Soils - D 5084 - Req - Hydraulic Conductivity using a Flexible Wall Permeameter  
Soils - D 6938 - Req - Density and Water Content by Shallow Depth Nuclear Method

## **SPRAYED FIRE RESISTIVE**

Sprayed Fire Resistive - E 329 - Opt - Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection

Sprayed Fire Resistive - E 605 - Opt - Thickness and Density of Sprayed Fire Resistive Material (SFRM) Applied to Structural Members

Sprayed Fire Resistive - E 736 - Opt - Cohesion Adhesion of Sprayed Fire Resistive Materials Applied to Structural Members