



**USACE CERTIFICATE
OF
LABORATORY VALIDATION**



DIW Group, Inc. dba Specialized Engineering

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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:

13 DEC 2020 AT 11:08 HOURS

ALL METHODS LISTED ON THIS CERTIFICATE OF VALIDATION WILL EXPIRE ON 10/13/2022

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

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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 µm (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 142 - Opt - Clay Lumps
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 - C 1252 - Opt - Uncompacted Void Content of Fine Aggregate (as influenced by particle shape, surface texture, and grading)
Aggregate - D 2419 - Opt - Sand Equivalent Value
Aggregate - D 4791 - Opt - Flat and Elongated Particles in Course Aggregate
Aggregate - D 5821 - Opt - Percentage of Fractured Particles in Coarse Aggregate

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 2950 - Req - Density of Bituminous Concrete in Place by Nuclear Methods
Bituminous - D 3203 - Req - Percent Air Voids
Bituminous - D 3666 - Opt - Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials
Bituminous - D 4867 - Req - Effect of Moisture
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

CEMENT

Cement - C 1222 - Opt - Evaluation of Laboratories Testing Hydraulic Cement

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 157 - Opt - Length Change of Concrete and Mortars
 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 496 - Opt - Splitting Tensile Strength
 Concrete - C 511 - Opt - Moist Cabinets, Moist Rooms, Water Storage Tanks
 Concrete - C 617 - Opt - Capping Cylindrical Specimens
 Concrete - C 642 - Opt - Density, Absorption, and Voids
 Concrete - C 803 - Opt - Penetration Resistance of Hardened Concrete
 Concrete - C 805 - Opt - Rebound Number of Hardened Concrete
 Concrete - C 1064 - Req - Temperature of Concrete
 Concrete - C 1077 - Opt - Concrete and Concrete Aggregate Testing Standards (Quality Standards)
 Concrete - C 1152 - Opt - Acid-Soluble Chloride in Concrete
 Concrete - C 1202 - Opt - Electrical Indication of Concrete to Resist Chloride Ion
 Concrete - C 1218 - Opt - Water-Soluble Chloride in Concrete
 Concrete - C 1231 - Opt - Unbonded Caps
 Concrete - C 1542 - Opt - Measuring Length of Concrete Cores
 Concrete - C 1567 - Opt - Potential Alkali Silica Reactivity Cementitious Materials and Aggregate Accelerated Mortar Bar Method

MASONRY

Masonry - C 67 - Opt - Sampling and Testing Brick and Structural Clay Tile
 Masonry - C 140 - Req - Sampling and Testing Concrete Masonry and Related Units
 Masonry - E 329 - Opt - Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection
 Masonry - C 511 - Opt - Mixing Rooms, Moist Cabinets, Cure Tanks
 Masonry - C 780 - Req - Evaluation of Mortars for Plain and Reinforced Unit Masonry
 Masonry - C 1019 - Req - Sampling and Testing Grout
 Masonry - C 1093 - Opt - Masonry Testing Standard (Quality Standards)
 Masonry - C 1314 - Opt - Compressive Strength of Masonry Prisms
 Masonry - C 1552 - Opt - Capping Concrete Masonry Units and Related for Compression Testing

ROCK

Rock - D 4543 - Req - Preparing Rock Core Specimens and Determining Tolerances
 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 698 - Req - Compaction Characteristics by Standard Effort
 Soils - D 1140 - Req - Material Finer than 75 μ 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 1883 - Req - CA Bearing Ratio (CBR)
 Soils - D 2216 - Req - Water Content
 Soils - D 2487 - Req - Classification of Soils
 Soils - D 3740 - Opt - Soil and Rock Testing Standards (Quality Standard)

Soils - D 4318 - Req - Liquid & Plastic Limits & Plasticity Index
Soils - D 4943 - Opt - Shrinkage Factors of Cohesive Soils by the Water Submersion Method
Soils - D 4972 - Opt - pH of Soils
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 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