

USACE-Certified Laboratory Certification

Afghan Geotechnical Engineering Material Testing Laboratory Services (Afghan GEM)

Lab ID: LCP-038

Issue date: June 3rd, 2021

Expiry date: Mar 2nd, 2022

This extension letter confirms an additional 9-months certification for the CMTC Lab, which is located at House #118, Behind Emperatory Hotel, End of 200 Bed Military Hospital, Mazar-e-Sharif, Afghanistan. This laboratory should now be considered as **USACE-Certified for a period of 9-months** from the date of this letter. This laboratory should now be considered as certified for use by the US Army Corps of Engineers Transatlantic Afghanistan District (USACE TAA) and other clients, for all tests listed in Table 1 to Table 5, as attached to this letter. This certification will be included with records that are maintained at the ABA and USACE TAA Headquarters in Bagram Airbase, Afghanistan. Retaining the certification will require yearly inspections by the ABA. This certification is also contingent upon the following conditions:

- A. Continued employment of the below individual while without his oversight, the laboratory will require recertification:
 - a. Mr. Ahmad Zubair Rasuly the laboratory manager;
- B. If the calibration certificates of equipments expire or become invalid as per the relevant standard;
- C. If the laboratory is moved to a new location, it will require recertification; and
- D. If the laboratory fails to comply by the approved lab quality management plan, safety standards, and other criteria set forth in the most up-to-date ABA lab certification manual, the lab certification may be suspended.

For verification and good standing of this certification please check our online directory of laboratories at http://aba.af/lcp_directory.php. The inspection and certification process for Afghan GEM adhered to procedures outlined by the Materials Testing Center (MTC), which is located at the Geotechnical and Structures Laboratory (GSL), U.S. Army Engineer Research and Development Center (ERDC) in Vicksburg, Mississippi, USA. The MTC is the USACE-authorized agency for certifying laboratories for use in quality control testing for USACE construction projects. To facilitate construction in Afghanistan, the USACE TAA has authorized the ABA to conduct laboratory certifications with strict adherence to MTC protocol. Qualifications of the authors for conducting these certifications include: 12 years of laboratory experience, 12 years of teaching classes on construction materials, and six years of teaching university-level construction classes.

Certified to perform 80 tests, as shown on attached sheets and summarized as:

Table 1: 17

Table 2: 16

Table 3: 20

Table 4: 22

Table 5: 5

Regards,



Ferdaws Khaliqi, PMP

ABA-Laboratory Certification Program Manager
(ABA-LCP)

Afghan GEM Certified Laboratory Tests

Table 1. List of Certified Soil Tests

No	Test Method	Test Procedure Title
1	ASTM D421	Standard Practice for Dry Preparation of Soil Samples for Particle-Size Analysis and Determination of Soil Constants
2	ASTM D422	Standard Test Method for Particle Size Analysis of Soils
3	ASTM D698	Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft ³ (2,700 Kn-m/m ³))
4	ASTM D854	Standard Test Methods for Specific Gravity of Soil Solids by Water Pycnometer
5	ASTM D1140	Standard Test Methods for Amount of Material in Soils Finer than No. 200 (75µm) Sieve
6	ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method
7	ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort
8	ASTM D1586	Standard Test Method for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils
9	ASTM D1883	Standard Test Method for CBR (California Bearing Ratio) of Laboratory-Compacted Soils
10	ASTM D2216	Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
11	ASTM D2487	Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
12	ASTM D3282	Standard Practice for Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purpose
13	ASTM D4318	Standard Test Methods Liquid & Plastic Limits & Plasticity Index
14	ASTM D4718	Standard Practice for Correction of Unit Weight and Water Content for Soils Containing Oversize Particles
15	ASTM D4944	Standard Test Method for Field Determination of Water (Moisture) Content of Soil by the Calcium Carbide Gas Pressure Tester
16	ASTM D6951	Standard Test Methods for Dynamic Cone Penetration (DCP) in Shallow Pavement
17	AASHTO T224	Standard Method of Test for Correction for Coarse Particles in the Soil Compaction Test



Table 2. List of Certified Aggregate (Fine and Coarse) Tests

No	Test Method	Test Procedure Title
1	ASTM C29	Standard Test Method for Unit Weight and Voids in Aggregate
2	ASTM C70	Standard Test Method for Surface Moisture in Fine Aggregate
3	ASTM C88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
4	ASTM C117	Standard Test Method for Materials Finer than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing
5	ASTM C127	Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate
6	ASTM C128	Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Fine Aggregate
7	ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
8	ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
9	ASTM C142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates
10	ASTM C535	Standard Test Method for Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
11	ASTM C566	Standard Test Method for Total Evaporable Moisture Content of Aggregate by Drying
12	ASTM C702	Standard Practice for Reducing Samples of Aggregate to Testing Size
13	ASTM C75	Standard Practice for Sampling of Aggregates
14	ASTM D2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate
15	ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
16	ASTM D5821	Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate

Table 3. List of Certified Cement, Grout, Mortar, & Concrete Tests

No	Test Method	Test Procedure Title
1	ASTM C31	Standard Practice for Making and Curing Concrete Test Specimens in the Field
2	ASTM C39	Standard Test Method for Compressive Strength of Cylindrical
3	ASTM C42	Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
4	ASTM C143	Standard Test Method for Slump of Hydraulic-Cement Concrete
5	ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
6	ASTM C174	Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Cores
7	ASTM C109	Compressive Strength of Hydraulic Cement Mortar (Using 2-in. [50 mm] Cube Specimens)
8	ASTM C187	Standard Test Method for Normal Consistency of Hydraulic Cement

No	Test Method	Test Procedure Title
9	ASTM C191	Standard Test Methods for Time of Setting of Hydraulic Cement by Vicat Needle
10	ASTM C192	Standard Practice for Making and Curing Test Specimens in Laboratory
11	ASTM C231	Standard Test Method for Air Content of Freshly Mixed Concrete by Pressure Method
12	ASTM C617	Standard Practice for Capping Cylindrical Concrete Specimens
13	ASTM C642	Standard Test Method for Density, Absorption, and Voids in Hardened Concrete
14	ASTM C805	Standard Test Method for Rebound Number of Hardened Concrete
15	ASTM C1064	Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete
16	ASTM C184	Standard Test Method for Fineness of Hydraulic Cement by the 150- μ m (No. 100) and 75- μ m (No. 200) Sieves
17	ASTM C188	Standard Test Method for Density of Hydraulic Cement
18	ASTM C451	Standard Test Method for Early Stiffening of Hydraulic Cement (Paste Method)
19	ASTM C1019	Sampling and Testing Grout
20	ASTM C1437	Standard Test Method for Flow of Hydraulic Cement Mortar

Table 4. List of Certified Asphalt Cement and Asphalt Concrete Tests

No	Test Method	Test Procedure Title
1	ASTM D5	Standard Test Method for Penetration of Bituminous Materials
2	ASTM D36	Standard Test Method for Softening Point
3	ASTM D70	Standard Test Method for Density of Semi-Solid of Bituminous Materials
4	ASTM D92	Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester
5	ASTM D113	Standard Test Method for Ductility of Bituminous Materials
6	ASTM D140	Standard Practice for Sampling Asphalt Materials
7	ASTM D546	Standard Test Method for Sieve Analysis of Mineral Filler for Asphalt Paving Mixtures
8	ASTM D979	Standard Practice for Sampling Bituminous Paving Mixtures
9	ASTM D2041	Standard Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
10	ASTM D2172	Standard Test Methods for Quantitative Extraction of Bitumen From Bituminous Paving Mixtures
11	ASTM D2489	Standard Test Method for Estimating Degree of Particle Coating of Asphalt Mixtures
12	ASTM D2726	Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures
13	ASTM D3203	Standard Test Method for Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures

No	Test Method	Test Procedure Title
14	ASTM D3549	Standard Test Method for Thickness or Height of Compacted Bituminous Paving Mixture Specimen
15	ASTM D3665	Standard Practice for Random Sampling of Construction Materials
16	ASTM D5361	Standard Practice for Sampling compacted Bituminous Mixtures for Laboratory Testing
17	ASTM D5444	Standard Test Method for Mechanical Size Analysis of Extracted Aggregate
18	ASTM D6084	Standard Test Method for Elastic Recovery of Bituminous Materials by Ductilometer
19	ASTM D6926	Standard Practice for Preparation of Bituminous Specimens Using Marshall Apparatus
20	ASTM D6927	Standard Test Method for Marshall Stability and Flow of Bituminous Mixtures
21	AASHTO T182	Standard Method of Test for Coating and Stripping of Bitumen-Aggregate Mixtures
22	AASHTO T230	Standard Method of Test for Determining Degree of Pavement Compaction of Bituminous Aggregate Mixtures

Table 5. List of Certified Stone, Bricks & Masonry Units Tests

No	Test Method	Test Procedure Title
1	ASTM C67	Standard Test Methods for Sampling and Testing Brick
2	ASTM C97	Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone
3	ASTM C140	Standard Test Method for Sampling and Testing Concrete Masonry Units Related Units
4	ASTM C170	Standard Test Method for Compressive Strength of Dimension Stone
5	ASTM C1552	Standard Practice for Capping Concrete Masonry Units, Related Units and Masonry Prisms for Compression Testing