

USACE-Certified Laboratory Certification For

Reno Construction & Construction Material Testing Laboratory

Lab ID: LCP-011

Issue date: June 18th, 2021

Expiry date: June 17th, 2022

This letter confirms the completion of inspection and certification for the Reno Geotech & Construction Materials Testing Lab, which is located at House #15, Street #6, opposite of Kianat Private Boys High School, Shama Square, Khoshal Khan, Kabul, Afghanistan. This laboratory should now be considered as **USACE-Certified for a period of 12-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 Expeditionary District (USACE- TAE) and other clients, for all tests listed in Table 1 to Table 6, as attached to this letter. This certification will be included with records that are maintained at the ABA and USACE-TAE Headquarters. 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. Asadullah Salih 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 Reno 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 has authorized the ABA to conduct laboratory certification evaluations 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 81 tests, as shown on attached sheets and summarized as:

Table 1: 22
Table 2: 14
Table 3: 20
Table 4: 18
Table 5: 5
Table 6: 2

Regards,



Ferdaws Khaliqi, PMP

ABA-Laboratory Certification Program Manager
(ABA-LCP)

Reno Construction & Construction Material Testing Laboratory Certified Tests

Table 1. List of 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
3	ASTM D698	Compaction Characteristics by Standard Effort
4	ASTM D854	Standard Test Method for Specific Gravity of Soil by Water Pycnometer
5	ASTM D1140	Material Finer than 75 μm (No. 200) Sieve
6	ASTM D1556	Density & Unit Weight by Sand Cone
7	ASTM D1557	Compaction Characteristics by Modified Effort
8	ASTM D1883	California Bearing Ratio (CBR)
9	ASTM D2166	Standard Test Method for Unconfined Compressive Strength of Cohesive Soils
10	ASTM D2216	Standard Test Methods for Laboratory Determination of Water Content of Soil and Rock by Mass
11	ASTM D2487	Standard Practice for Classification of Soils for Engineering Purpose
12	ASTM D2488	Standard Practice for Description of and Identification of Soils (Visual-Manual Procedure)
13	ASTM D3282	Standard Practice for Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purpose
14	ASTM D4318	Liquid & Plastic Limits & Plasticity Index
15	ASTM D4643	Determination of Water Content of Soil by Microwave Oven
16	ASTM D1143	Standard Test Method for Piles Under Static Axial Compressive Load
17	ASTM D6951	Standard Test Method for Use of the Dynamic Cone Penetrometer in Shallow Pavement Applications
18	ASTM D4944	Standard Test Method for Field Determination of Water (Moisture) Content of Soil by the Calcium Carbide Gas Pressure Tester
19	ASTM D1586	Standard Test Method for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils
20	ASTM D1587	Standard Practice for Thin-Walled Tube Sampling of Soils for Geotechnical Purposes
21	ASTM D2435	Standard Test Methods for One-Dimensional Consolidation Properties of Soils Using Incremental Loading
22	ASTM D3080	Standard Test Method for Direct Shear Test of Soils Under Consolidated Drained Conditions



Table 2. List of Aggregate (Fine and Course) Tests

No	Test Method	Test Procedure Title
1	ASTM C29	Standard Test Method for Bulk Density (Unit Weight) and Voids in Aggregate
2	ATSM C88	Standard Test Method for Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate
3	ASTM C117	Standard Test Method for Material Finer than 75 μm (No. 200) Sieve in Mineral Aggregate by Washing
4	ASTM C127	Standard Test Method for Relative Density (Specific Gravity) & Absorption in Coarse Aggregate
5	ASTM C128	Standard Test Method for Relative Density (Specific Gravity) & Absorption in Fine Aggregate
6	ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
7	ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
8	ASTM C142	Standard Test Method for Clay Lumps and Friable Particles in Aggregate
9	ASTM C535	Standard Test Method for Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
10	ASTM C566	Standard Test Method for Total Evaporable Moisture Content of Aggregate by Sieve and Oven
11	ASTM D75	Standard Practice for Sampling Aggregate
12	ASTM D2419	Standard Test Method for Sand Equivalent Value of soil and Fine Aggregate
13	ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
14	ASTM D5821	Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate

Table 3. List of 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 Concrete Specimens
3	ASTM C42	Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
4	ASTM C109	Standard Test Method for Compressive Strength of Hydraulic Cement Mortars
5	ASTM C143	Standard Test Method for Slump of Hydraulic –Cement Concrete
6	ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
7	ASTM C174	Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Cores
8	ASTM C185	Standard Test Method for Air Content of Hydraulic Cement Mortar
9	ASTM C187	Standard Test Method for Amount of Water Required for Normal Consistency of Hydraulic Cement Paste
10	ASTM C188	Standard Test Method for Density of Hydraulic Cement
11	ASTM C191	Standard Test Method for Time Setting of Hydraulic Cement by Vicat Needle

No	Test Method	Test Procedure Title
12	ASTM C192	Standard Practice for Making and Curing Test Specimens in Laboratory
13	ASTM C231	Standard Test Methods for Air Content of Freshly Mixed Concrete by the Pressure Method
14	ASTM C293	Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Center Point Load)
15	ASTM C451	Standard Test Method for Early Stiffening of Hydraulic Cement (Paste Method)
16	ASTM C617	Standard Practice for Capping Cylindrical Specimens
17	ASTM C805	Standard Test Method for Rebound Number of Hardened Concrete
18	ASTM C1019	Standard Test Method for Sampling and Testing Grout
19	ASTM C1064	Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete
20	ASTM C1437	Standard Test Method for Flow of Hydraulic Cement Mortar

Table 4. List of Asphalt Cement and Asphalt Concrete Tests

No	Test Method	Test Procedure Title
1	AASHTO T182	Standard Method of Test for Coating and Stripping of Bitumen Aggregate Mixtures
2	ASTM D5	Standard Test Method for Penetration of Bituminous Materials
3	ASTM D36	Standard Test Method for Softening Point of Bitumen (Ring-and Ball Apparatus)
4	ASTM D70	Standard Test Method for Density of Semi-Solid Bituminous Materials (Pycnometer Method)
5	ASTM D92	Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester
6	ASTM D140	Sampling Bituminous Materials
7	ASTM D546	Standard Test Method for Sieve Analysis of Mineral Filler for Bituminous 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 Method for Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
11	ASTM D2726	Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures
12	ASTM D3549	Standard Test Method for Thickness or Height of Compacted Bituminous Paving Mixture Specimens
13	ASTM D3665	Standard Practice for Random Sampling of Construction Materials
14	ASTM D113	Standard Test Method for Ductility of Bituminous Materials
15	ASTM D5361	Standard Practice for Sampling Compacted Bituminous Mixtures for Laboratory Testing
16	ASTM D5444	Standard Test Method for Mechanical Size Analysis of Extracted Aggregate
17	ASTM D6926	Standard Practice for Preparation of Bituminous Specimens Using Marshall Apparatus
18	ASTM D6927	Standard Test Method Marshall Stability and Flow of Bituminous Mixtures



Table 5. List of Bricks, Stone, & CMU's Tests

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

Table 6. List of Steel Tests

No	Test Method	Test Procedure Title
1	AASHTO T285	Standard Method of Test for Bend Test for Bars for Concrete Reinforcement
2	ASTM E8	Standard Test Methods for Tension Testing of Metallic Materials (Plate-Type Specimens)

