

USACE-Certified Laboratory

STRATA Engineering Services

Lab ID: LCP-013

Issue date: Oct 15th, 2020

Expiry date: Oct 14th, 2021

This letter confirms the completion of inspection and certification for the STRATA Lab, which is located at House # 5, Khushal Khan Mina, Opposite to Cello, District 5, 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 U.S. Army Corps of Engineers Transatlantic Afghanistan District (USACE TAA) 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 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. Eid Mohammad the laboratory manager;
- B. If the calibration certificates of equipment 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 STRATA 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 61 tests, as shown on attached sheets and summarized as:

Table 1: 11
Table 2: 16
Table 3: 14
Table 4: 16
Table 5: 2
Table 6: 2

Regards,



Ferdaws Mirza

ABA Laboratory Certification Program Manager
(ABA-LCP)

STRATA Certified Laboratory Tests

Table 1. List of Certified Soil Tests

No	Test Method	Test Procedure Title
1	ASTM D698	Standard Test Method for Compaction Characteristics by Standard Effort
2	ASTM D854	Standard Test Method for Specific Gravity of Soils by Water Pycnometer
3	ASTM D1140	Standard Test Method for Amount of Material in Soils Finer than 75 mm (No. 200) Sieve
4	ASTM D1556	Standard Test Method for Density & Unit Weight of Soils in Place by Sand- Cone Method
5	ASTM D1557	Standard Test Method for Laboratory Compaction Characteristics by Modified Effort
6	ASTM D1883	Standard Test Method for California Bearing Ratio (CBR) of Laboratory- Compacted Soils
7	ASTM D2216	Standard Test Method for Laboratory Determination of Water Content of Soil and Rock By Mass
8	ASTM D2487	Standard Practice for Classification of Soils for Engineering Purpose (Unified Soil Classification System)
9	ASTM D4318	Standard Test Method for Liquid, Plastic Limits & Plasticity Index of Soils
10	ASTM D6026	Practice for Using Significant Digits in Geotechnical Data
11	ASTM D6913	Test Methods for Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis



Table 2. List of Certified 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	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 Material Finer than 75 μ m (No. 200) Sieve
5	ASTM C127	Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption in Coarse Aggregate
6	ASTM C128	Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption in 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 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

No	Test Method	Test Procedure Title
12	ASTM C702	Standard Practice for Reducing Samples of Aggregate to Testing Size
13	ASTM D75	Standard Practice for Sampling Aggregate
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 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 Test Specimens in the Field
2	ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Specimens
3	ASTM C42	Standard Test Method for Obtaining and Testing Drilled Cores and Sewed 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 C185	Standard Test Method for Air Content of Hydraulic Cement Mortar
8	ASTM C187	Standard Test Method for Amount of Water Required for Normal Consistency of Hydraulic Cement paste
9	ASTM C231	Standard Test Method for Air Content of Freshly Mixed Concrete by Pressure Method
10	ASTM C617	Standard Practice for Capping Cylindrical Concrete Specimens
11	ASTM C642	Standard Test Method for Density, Absorption, and Voids in Hardened Concrete
12	ASTM C805	Standard Test Method for Rebound Number of Hardened Concrete
13	ASTM C1019	Standard Test Method for Sampling and Testing Grout
14	ASTM C1064	Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete

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 of Bitumen (Ring-and-Ball Apparatus)
3	ASTM D70	Standard Test Method for Density of Semi-Solid 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 Bituminous Materials

No	Test Method	Test Procedure Title
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 & Density of Asphalt Mix
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 Paving Mixtures
12	ASTM D3203	Standard Test Method for Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures
13	ASTM D3665	Standard Practice for Random Sampling of Construction Materials
14	ASTM D5361	Standard Practice for Sampling Compacted Bituminous Mixtures for Laboratory Testing
15	ASTM D6926	Standard Practice for Preparation of Bituminous Specimens Using Marshall Apparatus
16	ASTM D6927	Standard Test Method for Marshall Stability and Flow of Bituminous Mixtures

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

No	Test Method	Test Procedure Title
1	ASTM C140	Sampling and Testing Concrete Masonry and Related Units
2	ASTM C1552	Standard Practice for Capping Concrete Masonry Units, Related Units and Masonry Prisms for Compression Testing

Table 6. List of Certified Steel Tests

No	Test Method	Test Procedure Title
1	ASTM A370	Standard Test Methods and Definitions for Mechanical Testing of Steel Products
2	ASTM E8	Standard Test Method for Tension Testing of Metallic Materials