

**Laboratory Certification For
Systematic Standard Construction Laboratory (SSCL)**

Lab ID: LCP-007

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Expiry date: April 5, 2017

This letter confirms the completion of inspection and certification for the SSCL, which is located at Pul-e- Charkhi Kabul Jalalabad Road near Pul-e-Charkhi Check Post, Kabul, Afghanistan. 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 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 following individuals while without their oversight, the laboratory will require recertification:
 1. Mohammad Asif the laboratory manager;
 2. Other Senior Technicians who were inspected and certified during the inspection, a list of certified technicians can be provided upon request;
- B. If the calibration certificates of equipments expire or become invalid as per the relevant ASTM or AASHTO 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.html>. The inspection and certification process for the SSCL 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.

Regards,

Naeem Yassin

President of Afghanistan Builders Association
(ABA)



SCCL Certified Laboratory Tests

Table 1. List of Certified Soil Tests for SSCL

No	Test Method	Test Procedure Title
1	ASTM D 421	Standard Practice for Dry Preparation for Particle Size Distribution & Soil Constants
2	ASTM D 422	Standard Test Method for Particle Size Analysis of Soils
3	ASTM D 653	Terminology Relating to Soil, Rock, and Contained Fluids
4	ASTM D 698	Standard Test Method for Compaction Characteristics by Standard Effort
5	ASTM D 854	Standard Test Method for Specific Gravity of Soils by Water Pycnometer
6	ASTM D 1140	Standard Test Method for Amount of Material in Soils Finer than 75 mm (No. 200) Sieve
7	ASTM D 1556	Standard Test Method for Density & Unit Weight of Soils in Place by Sand-Cone Method
8	ASTM D 1557	Standard Test Method for Laboratory Compaction Characteristics by Modified Effort
9	ASTM D 1883	Standard Test Method for California Bearing Ratio (CBR) of Laboratory Compacted Soil
10	ASTM D 2166	Standard Test Method for Unconfined Compressive Strength of Cohesive Soil
11	ASTM D 2216	Standard Test Method for Laboratory Determination of Water(moisture) Content of Soil and Rock By Mas
12	ASTM D 2487	Standard Practice for Classification of Soils for Engineering Purpose (Unified Soil Classification System)
13	ASTM D 2488	Standard Practice for Description & Identification of Soils (Visual-Manual Procedure)
14	ASTM D 3282	Standard Practice for Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purpose
15	ASTM D 3740	Standard Practice for Minimum Requirements for Agencies Engaged in Testing and/ or Inspection of Soil and Rock as used in Engineering Design and Construction
16	ASTM D 4220	Standard Practice for Preserving & Transporting Samples
17	ASTM D 4318	Standard Test Methods Liquid & Plastic Limits & Plasticity Index
18	ASTM D 4643	Standard Test Method for Determination of Water Content of Soil by Microwave Oven Heating
19	ASTM D 4718	Standard Practice for Correction of Unit Weight and Water Content for Soils Containing Oversize Particles
20	ASTM D 4959	Standard Test Method for Determination of Water (Moisture) content of Soil by Direct Heating
21	ASTM 6913	Test Methods for Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis
22	ASTM D 6951	Standard Test Method for Use of the Dynamic Cone Penetrometer in Shallow Pavement Applications

No	Test Method	Test Procedure Title
23	AASHTO T 089	Standard Method of Test for Determining the Liquid Limits of Soils
24	AASHTO T 090	Standard Method of Test for Determining the Plastic Limit and Plasticity Index of Soils
25	AASHTO T 092	Standard Method of Test for Determining the Shrinkage Factors of Soil
26	AASHTO T 093	Standard Specification for Determining the Field Moisture Equivalent Soils
27	AASHTO T 224	Standard Method for Test for Correction for Coarse Particles in the Soil Compaction Test

Table 2. List of Certified Advanced Soil Tests

No	Test Method	Test Procedure Title
1	ASTM D 1195	Standard Test Method for Repetitive Static Plate Load Tests of Soils and Flexible Pavement Components, for Use in Evaluation and Design of Airport and Highway Pavements
2	ASTM D 1196	Standard Test Method for Non-repetitive Static Plate Load Tests of Soils and Flexible Pavement Components, for Use in Evaluation and Design of Airport and Highway Pavements
3	ASTM D 1452	Practice for Soil Exploration and Sampling By Auger Borings
4	ASTM D 1586	Practice for Penetration Test and Split-Barrel Sampling of Soils
5	ASTM D 1587	Standard Practice for Thin-Walled Tube Sampling of Soils for Geotechnical Purposes
6	ASTM D 2435	Standard Test Method for One-Dimensional Consolidation Properties of Soils Using Incremental Loading
7	ASTM D 3080	Standard Test Method for Direct Shear Test of Soils Under Consolidated Drained Conditions
8	ASTM D 6151	Standard Practice for Using Hollow-Stem Augers for Geotechnical Exploration and Soil Sampling
9	ASTM D 6528	Standard Test Method for Consolidated Undrained Direct Simple Shear Testing of Cohesive Soils

Table 3. List of Certified Aggregate (Fine and Course) Tests for SSCL

No	Test Method	Test Procedure Title
1	ASTM C 29	Standard Test Method for Unit Weight and Voids in Aggregate
2	ASTM C 70	Standard Test Method for Surface Moisture in Fine Aggregate
3	ASTM C 117	Standard Test Method for Material Finer than 75 μm (No. 200) Sieve
4	ASTM C 125	Standard Terminology Relating to Concrete and Concrete Aggregate
5	ASTM C 127	Standard Test Method for Specific Gravity & Absorption in Coarse Aggregate
6	ASTM C 128	Standard Test Method for Specific Gravity & Absorption in Fine Aggregate

No	Test Method	Test Procedure Title
7	ASTM C 131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
8	ASTM C 136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
9	ASTM C 142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates
10	ASTM C 144	Standard Specification for Aggregate for Masonry Mortar
11	ASTM C 404	Standard Specification for Aggregate for Masonry Grout
12	ASTM C 535	Standard Test Method for Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
13	ASTM C 566	Standard Test Method for Total Evaporation Moisture Content of Aggregate by Drying
14	ASTM C 702	Standard Practice for Reducing Samples to Testing Size
15	ASTM C 897	Standard Specification for Aggregate for Job-Mixed Portland Cement-Based Plasters
16	ASTM C 1252	Standard Test Method for Uncompacted Void Content of Fine Aggregate
17	ASTM D 75	Standard Practice for Sampling Aggregate
18	ASTM D 1241	Standard Specification for Materials for Soil-Aggregate Subbase, Base, and Surface Courses
19	ASTM D 2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate
20	ASTM D 4791	Standard Test Method for Flat Particles, Elongated Particles, Flat and Elongated Particles in Coarse Aggregate
21	ASTM D 4944	Standard Test Method for Field Determination of Water (Moisture) Content of Soil by The Calcium Carbide Gas Pressure Tester
22	ASTM D 5079	Standard Practice for Preserving and Transporting Rock Core Samples
23	ASTM D 5821	Percentage of Fractured Particles in Coarse Aggregate
24	CRD-C 171	Percentage of Crushed Particles in Aggregate
25	BS 812 Section 105.1	Testing Aggregates. Methods for Determination of Particle Shape Flakiness Index

Table 4. List of Certified Cement, Grout, Mortar, & Concrete Tests for SSCL (Start checking)

No	Test Method	Test Procedure Title
1	ASTM C 31	Standard Practice for Making and Curing Test Specimens in the Field
2	ASTM C 39	Standard Test Method for Compressive Strength of Cylindrical Specimens
3	ASTM C 42	Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
4	ASTM C 94	Standard Specification for Ready-Mixed Concrete (Required for Batch Plants)
5	ASTM C 109	Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in or [50-mm] Cube Specimens)
6	ASTM C 143	Standard Test Method for Slump of Hydraulic- Cement Concrete
7	ASTM C 150	Specification for Portland Cement

No	Test Method	Test Procedure Title
8	ASTM C 172	Standard Practice for Sampling Freshly Mixed Concrete
9	ASCTM C 185	Standard Test Method for Air Content of Hydraulic Cement Mortar
10	ASCTM C 187	Standard Test Method for Amount of Water Required for Normal Consistency of Hydraulic Cement Paste
11	ASCTM C 188	Standard Test Method for Density of Hydraulic Cement
12	ASCTM C 191	Standard Test Method for Time Setting of Hydraulic Cement by Vicat Needle
13	ASTM C 192	Standard Practice for Making and Curing Test Specimens in Laboratory
14	ASTM C 204	Standard Test Methods for Fineness of Hydraulic Cement by Air- Permeability Apparatus
15	ASTM C 231	Standard Test Methods for Air Content of Freshly Mixed Concrete by the Pressure Method
16	ASTM C 270	Standard Specification for Mortar for Unit Masonry
17	ASTM C 359	Standard Test Method for Early Stiffening of Hydraulic Cement (Mortar Method)
18	ASTM C 451	Standard Test Method for Early Stiffening of Hydraulic Cement(Paste Method)
19	ASTM C 470	Standard Specification for Molds for Forming Concrete Test Cylinders Vertically
20	ASTM C 476	Standard Specification for Grout of Masonry
21	ASTM C 511	Standard Specification for Moist Cabinets, Moist Rooms, Water Storage Tanks
22	ASTM C 617	Standard Practice for Capping Cylindrical Specimens
23	ASTM C 778	Standard Specification for Standard Sand
24	ASTM C 805	Standard Test Method for Rebound Number of Hardened Concrete
25	ASTM C 823	Standard Practice for Examination and Sampling Hardened Concrete in Construction
26	ASTM C 926	Standard Specification for Application of Portland Cement-Based Plaster
27	ASTM C 1019	Standard Test Method for Sampling and Testing Grout
28	ASTM C 1064	Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete
29	ASTM C 1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregate for Use In Construction and Criteria for Testing Agency Evaluation
30	ASTM C 1231	Standard Practice for Use of Unbonded Caps in Determination of Compressive Strength of Hardened Concrete Cylinders
31	ASTM C 1437	Standard Test Method for Flow of Hydraulic Cement Mortar
32	ASTM C 1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete

Table 5. List of Certified Asphalt Cement and Asphalt Concrete Tests for SSCL

No	Test Method	Test Procedure Title
1	ASTM D 5	Standard Test Method for Penetration of Bituminous Materials
2	ASTM D 36	Standard Test Method for Softening Point
3	ASTM D 70	Standard Test Method for Density of Semi-Solid of Bituminous Materials
4	ASTM D 92	Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester
5	ASTM D 113	Standard Test Method for Ductility of bituminous Materials
6	ASTM D 140	Standard Practice for Sampling Bituminous Materials
7	ASTM D 242	Standard Specification for Mineral Filler for Bituminous Paving Mixtures
8	ASTM D 546	Standard Test Method for Sieve Analysis of Mineral Filler for Bituminous Paving Mixtures
9	ASTM D 979	Standard Practice for Sampling Bituminous Paving Mixtures
10	ASTM D 1754	Standard Test Method for Effect of Heat & Air by Thin Film Oven
11	ASTM D 2041	Standard Test Method for Theoretical Maximum Specific Gravity & Density (Rice)
12	ASTM D 2042	Standard Test Method for Solubility by Trichloroethylene
13	ASTM D 2172	Standard Test Methods for Quantitative Extraction
14	ASTM D 2726	Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures
15	ASTM D 3665	Random Sampling of Construction Material
16	ASTM D 3666	Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials
17	ASTM D 5361	Standard Practice for Sampling Compacted Bituminous Mixtures for Laboratory Testing
18	ASTM D 5444	Standard Test Method for Mechanical Size Analysis of Extracted Aggregate
19	ASTM D 6926	Standard Practice for Preparation of Bituminous Specimens Using Marshall Apparatus
20	ASTM D 6927	Standard Test Method for Marshall Stability and Flow of Bituminous Mixtures
21	CRD-C 649	Standard Test Method for Unit Weight, Marshall Stability, and flow of Bituminous Mixtures
22	AASHTO T 79	Flash Point with Tag Open-Cup Apparatus for Use with Material Having a Flash Less Than 93.3°C (200°F)
23	AASHTO T 182	Coating and Stripping of Bitumen-Aggregate Mixtures

Table 6. List of Certified Bricks, Stone, & CMU's Tests for SSCL

No	Test Method	Test Procedure Title
1	ASTM C 90	Standard Specification for loadbearing Concrete Masonry Unit
2	ASTM C 97	Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone
3	ASTM C 140	Standard Test Methods for Sampling and Testing Concrete Masonry and Related Units
4	ASTM C 170	Standard Test Method for Compressive Strength of Dimension Stone
5	ASTM C 1093	Standard Practice for Accreditation of Testing Agencies for Masonry
6	ASTM C 1232	Terminology of Masonry
7	ASTM C 1532	Practice for Selection, Removal, and Shipment of Manufactured Masonry Units and Masonry Specimens from Existing Construction
8	ASTM C 1552	Standard Practice for Capping CMU/Related Units/Masonry Prisms for Compression Testing
9	ASTM C 1587	Practice for Preparation of Field Removed Manufactured Masonry Units and Masonry Specimens for Testing