

Laboratory Certification For

Shakib Dastaghir Construction & Design Company (S-CAD)-KBL

Lab ID: LCP-031

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Expiry date: Aug 14th, 2021

This letter confirms the completion of inspection and certification for the S-CAD Kabul Lab, which is located at House #8803, Street #3, Gulai Khwaja Boghra Road, District #15, Kabul, Afghanistan. This Laboratory should now be considered as **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 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. Eng. Ghulam Dastaghir 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 S-CAD 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 159 tests, as shown on attached sheets and summarized as:

Table 1: 48
Table 2: 25
Table 3: 44
Table 4: 35
Table 5: 7

Regards,



Ferdaws Mirza
ABA-Laboratory Certification Program Manager
(ABA-LCP)

S-CAD-KBL 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 D558	Standard Test Methods for Moisture-Density (Unit Weight) Relations of Soil-Cement Mixtures
4	ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12 400 ft-lbf/ft ³ (600 kN-m/m ³))
5	ASTM D854	Standard Test Methods for Specific Gravity of Soils Solids by Water Pycnometer
6	ASTM D1140	Standard Test Methods for Determining the Amount of Material Finer than 75- μ m (No. 200) Sieve in Soils by Washing
7	ASTM D1195	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
8	ASTM D1196	Standard Test Method for Nonrepetitive Static Plate Load Tests of Soils and Flexible Pavement Components, for Use in Evaluation and Design of Airport and Highway Pavements
9	ASTM D1452	Standard Practice for Soil Exploration and Sampling by Auger Borings
10	ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method
11	ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft ³ (2,700 kN-m/m ³))
12	ASTM D1586	Standard Test Method for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils
13	ASTM D1587	Standard Practice for Thin-Walled Tube Sampling of Fine-Grained Soils for Geotechnical Purposes
14	ASTM D1883	Standard Test Method for California Bearing Ratio (CBR) of Laboratory-Compacted Soils
15	ASTM D2113	Standard Practice for Rock Core Drilling and Sampling of Rock for Site Exploration
16	ASTM D2166	Standard Test Method for Unconfined Compressive Strength of Cohesive Soil
17	ASTM D2216	Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
18	ASTM D2435	Standard Test Methods for One-Dimensional Consolidation Properties of Soils Using Incremental Loading
19	ASTM D2487	Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
20	ASTM D2488	Standard Practice for Description and Identification of Soils (Visual Manual Procedures)

21	ASTM D2974	Standard Test Methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils
22	ASTM D3080	Standard Test Method for Direct Shear Test of Soils Under Consolidated Drained Conditions
23	ASTM D3282	Standard Practice for Classification of Soils and Soil-Aggregate Mixtures for High Construction Purposes
24	ASTM D3550	Standard Practice for Thick Wall, Ring-Lined, Split Barrel, Drive Sampling of Soils
25	ASTM D4220	Standard Practices for Preserving and Transporting Soil Samples
26	ASTM D4318	Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
27	ASTM D4546	Standard Test Methods for One-Dimensional Swell or Collapse of Soils
28	ASTM D4718	Standard Practice for Correction of Unit Weight and Water Content for Soils Containing Oversize Particles
29	ASTM D4829	Standard Test Method for Expansion Index of Soils
30	ASTM D4944	Standard Test Method for Field Determination of Water (Moisture) Content of Soil by the Calcium Carbide Gas Pressure Tester
31	ASTM D4959	Standard Test Method for Determination of Water Content of Soil By Direct Heating
32	ASTM D4972	Standard Test Method for pH of Soils
33	ASTM D5333	Standard Test Method for Measurement of Collapse Potential of Soils (Withdrawn 2012)
34	ASTM D6026	Standard Practice for Using Significant Digits in Geotechnical Data
35	ASTM D6032	Standard Test Method for Determining Rock Quality Designation (RQD) of Rock Core
36	ASTM D6151	Standard Practice for Using Hollow-Stem Augers for Geotechnical Exploration and Soil Sampling
37	ASTM D6528	Standard Test Method for Consolidated Undrained Direct Simple Shear Testing of Fine Grain Soils
38	ASTM D6913	Standard Test Methods for Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis
39	ASTM D6951	Standard Test Method for Use of the Dynamic Cone Penetrometer in Shallow Pavement Applications
40	ASTM D7380	Standard Test Method for Soil Compaction Determination at Shallow Depths Using 5-lb (2.3 kg) Dynamic Cone Penetrometer
41	ASTM G51	Standard Test Method for Measuring pH of Soil for Use in Corrosion Testing
42	ASTM G57	Standard Test Method for Field Measurement of Soil Resistivity Using the Wenner Four-Electrode Method
43	AASHTO T89	Standard Method of Test for Determining the Liquid Limit of Soils
44	AASHTO T90	Standard Method of Test for Determining the Plastic Limit and Plasticity Index of Soils

45	AASHTO T92	Standard Method of Test for Determining the Shrinkage Factors of Soils
46	AASHTO T224	Standard Method of Test for Correction for Coarse Particles in the Soil Compaction Test
47	CRD-C 654	Standard Test Method for Determining the California Bearing Ratio of Soils
48	CRD-C 655	Standard Test Method for Determining the Modulus of Soil Reaction



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 C40	Standard Test Method for Organic Impurities in Fine Aggregate for Concrete
3	ASTM C70	Standard Test Method for Surface Moisture in Fine Aggregate
4	ASTM C88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
5	ASTM C117	Standard Test Method for Materials Finer than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing
6	ASTM C127	Standard Test Method for Relative Density (Specific Gravity) and Absorption of Coarse Aggregate
7	ASTM C128	Standard Test Method for Relative Density (Specific Gravity) and Absorption of Fine Aggregate
8	ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
9	ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
10	ASTM C142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates
11	ASTM C535	Standard Test Method for Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
12	ASTM C566	Standard Test Method for Total Evaporable Moisture Content of Aggregate by Drying
13	ASTM C702	Standard Practice for Reducing Samples of Aggregate to Testing Size
14	ASTM C1252	Standard Test Method for Uncompacted Void Content of Fine Aggregate (as influenced by Particle Shape, Surface Texture, and Grading)
15	ASTM C1260	Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
16	ASTM C1567	Standard Test Method for Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Method)
17	ASTM D75	Standard Practice for Sampling Aggregates

No	Test Method	Test Procedure Title
18	ASTM D2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate
19	ASTM D4253	Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table
20	ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
21	ASTM D4944	Standard Test Method for Field Determination of Water (Moisture) Content of Soil by the Calcium Carbide Gas Pressure Tester
22	ASTM D5079	Standard Practice for Preserving and Transporting Rock Core Samples (Withdrawn 2017)
23	ASTM D5821	Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate
24	CRD-C 104	Method of Calculation of the Fineness Modulus of Aggregate
25	CRD-C 171	Standard Test Method for Determining Percentage of Crushed Particles in Aggregate

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

No	Test Method	Test Procedure Title
1	ASTM C20	Standard Test Methods for Apparent Porosity, Water Absorption, Apparent Specific Gravity, and Bulk Density of Burned Refractory Brick and Shapes by Boiling Water
2	ASTM C31	Standard Practice for Making and Curing Concrete Test Specimens in the Field
3	ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
4	ASTM C42	Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
5	ASTM C67	Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile
6	ASTM C78	Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)
7	ASTM C97	Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone
8	ASTM C109	Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens)
9	ASTM C116	Test Method for Compressive Strength of Concrete Using Portions of Beams Broken in Flexure (Withdrawn 1999)
10	ASTM C133	Standard Test Methods for Cold Crushing Strength and Modulus of Rupture of Refractories
11	ASTM C138	Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
12	ASTM C140	Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units

No	Test Method	Test Procedure Title
13	ASTM C143	Standard Test Method for Slump of Hydraulic-Cement Concrete
14	ASTM C151	Standard Test Method for Autoclave Expansion of Hydraulic Cement
15	ASTM C170	Standard Test Method for Compressive Strength of Dimension Stone
16	ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
17	ASTM C174	Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Cores
18	ASTM C187	Standard Test Method for Amount of Water Required for Normal Consistency of Hydraulic Cement Paste
19	ASTM C188	Standard Test Method for Density of Hydraulic Cement
20	ASTM C191	Standard Test Methods for Time of Setting of Hydraulic Cement by Vicat Needle
21	ASTM C192	Standard Practice for Making and Curing Concrete Test Specimens in the Laboratory
22	ASTM C204	Standard Test Methods for Fineness of Hydraulic Cement by Air-Permeability Apparatus
23	ASTM C231	Standard Test Methods for Air Content of Freshly Mixed Concrete by the Pressure Method
24	ASTM C232	Standard Test Method for Bleeding of Concrete
25	ASTM C293	Standard Test Method for Flexural Strength of Concrete (Using Simple Beam With Center-Point Loading)
26	ASTM C305	Standard Practice for Mechanical Mixing of Hydraulic Cement Pastes and Mortars of Plastic Consistency
27	ASTM C359	Standard Test Method for Early Stiffening of Hydraulic Cement (Mortar Method)
28	ASTM C451	Standard Test Method for Early Stiffening of Hydraulic Cement (Paste Method)
29	ASTM C469	Standard Test Method for Static Modulus of Elasticity and Poisson's Ratio of Concrete in Compression
30	ASTM C496	Standard Test Method for Splitting Tensile Strength of Cylindrical Concrete Specimens
31	ASTM C617	Standard Practice for Capping Cylindrical Concrete Specimens
32	ASTM C642	Standard Test Method for Density, Absorption, and Voids in Hardened Concrete
33	ASTM C780	Standard Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry
34	ASTM C805	Standard Test Method for Rebound Number of Hardened Concrete
35	ASTM C823	Standard Practice for Examination and Sampling of Hardened Concrete in Constructions
36	ASTM C1019	Standard Test Method for Sampling and Testing Grout for Masonry
37	ASTM C1064	Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete
38	ASTM C1074	Standard Practice for Estimating Concrete Strength by the Maturity Method
39	ASTM C1231	Standard Practice for Use of Unbonded Caps in Determination of Compressive Strength of Hardened Cylindrical Concrete Specimens

No	Test Method	Test Procedure Title
40	ASTM C1314	Standard Test Method for Compressive Strength of Masonry Prisms
41	ASTM C1437	Standard Test Method for Flow of Hydraulic Cement Mortar
42	ASTM C1552	Standard Practice for Capping Concrete Masonry Units, Related Units and Masonry Prisms for Compression Testing
43	ASTM C1768	Standard Practice for Accelerated Curing of Concrete Cylinders
44	ASTM C1860	Standard Test Methods for Measurement of Tensile Strength or Bond Strength of Portland Cement-Based Plaster by Direct Tension



Table 4. List of Certified Asphalt & Bituminous 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 Asphalt Binder (Pycnometer Method)
4	ASTM D88	Standard Test Method for Saybolt Viscosity
5	ASTM D92	Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester
6	ASTM D113	Standard Test Method for Ductility of Asphalt Materials
7	ASTM D140	Standard Practice for Sampling Asphalt Materials
8	ASTM D546	Standard Test Method for Sieve Analysis of Mineral Filler for Asphalt Paving Mixtures
9	ASTM D979	Standard Practice for Sampling Bituminous Paving Mixtures
10	ASTM D1074	Standard Test Method for Compressive Strength of Asphalt Mixtures
11	ASTM D1188	Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Coated Samples
12	ASTM D1559	Test Method for Resistance of Plastic Flow of Bituminous Mixtures Using Marshall Apparatus (Withdrawn 1998)
13	ASTM D1754	Standard Test Method for Effects of Heat and Air on Asphaltic Materials (Thin-Film Oven Test)
14	ASTM D2041	Standard Test Method for Theoretical Maximum Specific Gravity and Density of Asphalt Mixtures
15	ASTM D2042	Standard Test Method for Solubility of Asphalt Materials in Trichloroethylene
16	ASTM D2161	Standard Practice for Conversion of Kinematic Viscosity to Saybolt Universal Viscosity or to Saybolt Furol Viscosity
17	ASTM D2172	Standard Test Methods for Quantitative Extraction of Asphalt Binder from Asphalt Mixtures

No	Test Method	Test Procedure Title
18	ASTM D2489	Standard Test Method for Estimating Degree of Particle Coating of Asphalt Mixtures
19	ASTM D2726	Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Asphalt Mixtures
20	ASTM D3203	Standard Test Method for Percent Air Voids in Compacted Asphalt Mixtures
21	ASTM D3549	Standard Test Method for Thickness or Height of Compacted Asphalt Mixture Specimens
22	ASTM D3665	Standard Practice for Random Sampling of Construction Materials
23	ASTM D4867	Standard Test Method for Effect of Moisture on Asphalt Concrete Paving Mixtures
24	ASTM D5361	Standard Practice for Sampling Compacted Asphalt Mixtures for Laboratory Testing
25	ASTM D5444	Standard Test Method for Mechanical Size Analysis of Extracted Aggregate
26	ASTM D6926	Standard Practice for Preparation of Asphalt Mixture Specimens Using Marshall Apparatus
27	ASTM D6927	Standard Test Method for Marshall Stability and Flow of Asphalt Mixtures
28	ASTM E102	Standard Test Method for Saybolt Furol Viscosity of Bituminous Materials at High Temperatures
29	CRD-C 649	Standard Test Method for Unit Weight, Marshall Stability, and Flow of Bituminous Mixtures
30	CRD-C 650	Standard Method for Density and Percent Voids of Compacted Bituminous Paving Mixtures
31	CRD-C 652	Standard Test Method for Measurement of Reduction in Marshall Stability of Bituminous Mixtures Caused by Immersion in Water
32	AASHTO T79	Standard Method of Test for Flash Point with Tag Open-Cup Apparatus for Use with Material Having a Flash Point Less Than 93°C (200°F)
33	AASHTO T182	Standard Method of Test for Coating and Stripping of Bitumen-Aggregate Mixtures
34	AASHTO T230	Standard Method of Test for Determining Degree of Pavement Compaction of Bituminous Aggregate Mixtures
35	AASHTO T283	Standard Method of Test for Resistance of Compacted Hot Mix Asphalt (HMA) to Moisture-Induced Damage



Table 5. 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 Methods for Tension Testing of Metallic Materials
3	ASTM E290	Standard Test Methods for Bend Testing of Material for Ductility
4	ASTM A90	Standard Test Method for Weight [Mass] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings
5	ASTM E190	Standard Test Method for Guided Bend Test for Ductility of Welds
6	ASTM A1058	Standard Test Methods for Mechanical Testing of Steel Products—Metric
7	AASHTO T285	Standard Method of Test for Bend Test for Bars for Concrete Reinforcement

