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Arizona Governor's Award for Quality
1995 Pioneer Award Recipient

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June 15, 1998

Engineering Consultants Section

INFORMATION BULLETIN 98-15

TO: Consultants

FROM: Engineering Consultants Section

SUBJECT: Updated System For The Evaluation Of Testing Laboratories

`lease find enclosed a copy of the latest "System for the Evaluation of Testing Laboratories" for your use and ınformation. This revised document is also intended for inclusion into any future scopes of work that may require materials testing. If you should have any questions concerning this document, please contact either Randy Allenstein (602-255-8206) or Deidre Beekman (602-255-7188).

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ARIZONA DEPARTMENT OF TRANSPORTATION

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SYSTEM FOR THE EVALUATION OF TESTING LABORATORIES

April 8, 1998

SCOPE OF SYSTEM

The Arizona Department of Transportation (ADOT) System for the Evaluation of Testing Laboratories has been implemented to formally qualify materials testing laboratories to perform testing activities for ADOT. On all projects advertised/awarded by ADOT, the materials testing laboratory must satisfy the criteria as specified below and be approved by ADOT Materials Group prior to performing materials testing activities for the Department. For Certification Acceptance projects that are advertised/awarded by a local government agency, AASHTO accreditation in applicable test methods is sufficient. Those laboratories submitting asphaltic concrete mix designs must also meet the requirements of Materials Group Policy and Procedure Directive No. 96-6 and be approved by the Materials Group Bituminous Engineer. Eligible laboratories will be periodically evaluated to verify compliance with the system. The system is administered by the ADOT Materials Group Quality Assurance Section under authority delegated by the State Engineer. The procedure will apply to any laboratory performing testing activities for the Department, directly or as a subconsultant.

ADOT SYSTEM CRITERIA

The ADOT system acknowledges the mechanism for recognizing the competency of a testing laboratory to perform specific tests on construction materials established by the AASHTO Accreditation Program (AAP). AAP accreditation must be obtained for all AASHTO and ASTM test methods to be performed by the testing laboratory. For AASHTO/ASTM test methods, if the laboratory is AAP accredited for those tests <u>and</u> if the same AASHTO/ASTM test methods are successfully demonstrated to ADOT during inspection, then ADOT will approve those observed AASHTO/ASTM test methods. For Arizona test methods which are modifications of AASHTO/ASTM test methods, if the laboratory is AAP accredited for the AASHTO/ASTM test methods which are modified by Arizona test methods <u>and</u> if the Arizona test methods are successfully demonstrated to ADOT during inspection, then ADOT will approve those observed Arizona test methods. ADOT will also approve unique Arizona test methods successfully demonstrated to ADOT during inspection.

A copy of AAP accreditation certificates should be transmitted to the ADOT Materials Group Quality Assurance Engineer immediately upon receipt by the testing laboratory.

The following requirements are in addition to Section 2, AASHTO Accreditation Program Criteria, of the AASHTO Accreditation Program Procedures Manual:

2.1 Quality System Criteria is modified to add the following:

The laboratory shall have and maintain the current ADOT Materials Testing Manual. The manual shall be readily accessible to all laboratory personnel.

2.2 On-Site Inspection and Quality System Evaluation Criteria is modified to add the following:

For evaluation as an ADOT approved laboratory, the following permanently-based lab facilities will be subject to inspection by ADOT at regular time intervals:

1. Any AASHTO accredited independent lab operating within Arizona or within 50 miles of Arizona borders.

2. Any satellite*, of an out-of-state AASHTO accredited lab, that is operating within Arizona or within 50 miles of Arizona borders.

* "Satellite" laboratory facilities are permanently-based lab facilities working under the authority, and AASHTO accreditation of a main lab facility.

Any portable lab facility belonging to an ADOT approved lab will be subject to inspection by ADOT on a project-by-project basis.

ADOT inspection is required for any satellite or portable laboratory contracted to do verification (acceptance) testing on an ADOT project. For satellite or portable laboratories performing contractor quality control testing not used in the acceptance decision on an ADOT project, inspection by ADOT is at the discretion of the Resident Engineer. At least 10 days prior to any phase of construction requiring materials testing by the laboratory, the Resident Engineer shall notify the ADOT Materials Group Quality Assurance Engineer in writing to request inspection of a satellite or portable laboratory. Satellite or portable laboratories contracted to do materials testing on ADOT projects shall be set up and available for inspection by ADOT at least 5 days prior to any phase of construction requiring materials testing by the laboratory. The lab must be completely equipped for all phases of project-related testing.

The laboratory shall have written policy and procedures, as an addendum to their A.A.P. Quality Systems Manual, that are acceptable to the Department, to assure portable and satellite laboratory facilities performing testing activities on ADOT projects are capable of providing testing services

in compliance with applicable test methods. The policy and procedures should address inspection and calibration of testing equipment as well as a correlation testing program between the accredited laboratory and portable or satellite facilities.

The laboratory shall be open for inspection by Arizona Department of Transportation personnel at anytime. The laboratory shall demonstrate, during periodically scheduled on-site equipment and procedural inspections conducted by the ADOT Materials Group Quality Assurance Section, the capability to perform tests according to the current ADOT Materials Testing Manual for those testing services offered under the scope of this system. A written response to any deficiences noted during the inspections shall be submitted to the ADOT Materials Group Quality Assurance Engineer within 30 days of notification. Failure to respond to noted deficiencies within the 30 day limit will be grounds to negate ADOT approval.

Copies of AMRL and CCRL inspection reports and responses to any deficiencies shall be transmitted to the ADOT Materials Group Quality Assurance Engineer within 60 days of receipt of the inspection report.

2.3 Proficiency Sample Criteria is modified to add the following:

The laboratory shall participate in the ADOT proficiency sample program, performing at least those test methods for which ADOT approval has been granted. A written response to any deficiencies shall be submitted to the ADOT Materials Group Quality Assurance Engineer within 30 days of notification. Failure to test more than 2 consecutive proficiency samples that the lab is equipped to perform will be grounds to negate ADOT approval. Failure to respond to deficiencies within the 30 day limit will be grounds to negate ADOT approval.

Copies of AMRL and CCRL proficiency sample test result reports and responses to deficiencies shall be mailed to the ADOT Materials Group Quality Assurance Engineer within 60 days of receipt of the final report.

2.4 Personnel Qualification Criteria is modified to add the following:

An individual who is **responsible for supervising sampling and testing** shall meet the requirements given in Table 1 for the appropriate field in which sampling and testing is being performed.

An individual who **performs actual sampling and testing** shall meet the requirements given in Table 2 for the appropriate field in which sampling and testing is being performed.

TABLE 1
SUPERVISOR REQUIREMENTS

Soils and Aggregate	
Field	Laboratory
Arizona Technical Institute (ATI) "Field" certification required plus one of (a) through (g) below.	Arizona Technical Institute (ATI) "Soils/Aggregate" certification required plus one of (a) through (g) below.
Asphaltic Concrete	
Field	Laboratory
Arizona Technical Institute (ATI) "Field" certification required plus one of (a) through (g) below.	One of (a) through (g) below.
Concrete	
American Concrete Institute (ACI) "Concrete Field Testing Technician Grade I" certification plus one of (a) through (g) below.	

(a) Professional Engineer, registered in the State of Arizona, with one year of highway materials testing experience acceptable to the Department.

(b) Engineer-In-Training, certified by the State of Arizona, with two years of highway materials testing experience acceptable to the Department.

(c) Obtained a Bachelor of Science Degree in Civil Engineering, Civil Engineering Technology, Construction, or related field acceptable to the Department; and with three years of highway materials testing experience acceptable to the Department.

(d) Certified by the National Institute for Certification in Engineering Technologies (NICET) in the Construction Materials Testing field as an Engineering Technician (Level III) or higher in the appropriate subfield in which sampling and testing is being performed.

(e) Certified by NICET in the Transportation Engineering Technology field as an Engineering Technician (Level III) or higher in the Highway Materials subfield.

(f) Certified by NICET as an Engineering Technician, or higher, in Civil Engineering Technology with five years of highway materials testing experience acceptable to the Department.

(g) An individual with eight years of highway materials testing and construction experience acceptable to the Department.

TABLE 2 TECHNICIAN REQUIREMENTS	
Soils and Aggregate	
Field Arizona Technical Institute (ATI) "Field" certification.	Laboratory Arizona Technical Institute (ATI) "Soils/Aggregate" certification.
Asphaltic Concrete	
Field Arizona Technical Institute (ATI) "Field" certification.	Laboratory Certified by the National Institute for Certification in Engineering Technologies (NICET) in the Construction Materials Testing field as an Associate Engineering Technician (Level II) or higher in the Asphalt subfield.
Concrete	
American Concrete Institute (ACI) "Concrete Field Testing Technician Grade I" certification.	

2.5 Additional General Criteria is modified to add the following:

Copies of notification to AASHTO of changes in laboratory ownership, location, or managerial personnel shall be transmitted to the ADOT Materials Group Quality Assurance Engineer within 60 days of when the change occurs. ADOT should also be notified within 30 days of changes in supervisory and key technical personnel.

To be eligible to perform referee testing on ADOT projects as an independent testing laboratory, the laboratory must provide proof to the Department of their independent status by submitting a letter to the ADOT Materials Group Quality Assurance Engineer indicating all individuals and corporations which have ownership of the laboratory. In addition, the letter must indicate that each of the owners of the laboratory is devoid of any ownership in contracting firms or materials suppliers who perform work for the Department.

Douglas A. Forstie

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