

ENGINEERING DIRECTIVES AND STANDARDS

Volume	Chapter	Section	Directive Number	Effective Date
V	1	1	3	2/18/1987

SUBJECT: DOTD DISTRICT LABORATORY ACCREDITATION PROGRAM

- 1. PURPOSE:** The purpose of this directive is to establish regulations and procedures for the DOTD District Laboratory Accreditation Program. This program meets the Federal Highway Administration requirements listed in Title 23, Code of Federal Regulations; Part 637, Construction Inspection and Approval; Subpart B, Quality Assurance Procedures for Construction; Subsection 637.209(a)(4)(b) to qualify DOTD laboratories for acceptance testing. This program is patterned after AASHTO R 18, Establishing and Implementing a Quality System for Construction Materials Testing Laboratories. The program provides for the formal evaluation and recognition of the competency of each DOTD District Laboratory annually.
- 2. SCOPE:** The regulations of the Federal Highway Administration require that each state transportation agency have a central materials testing laboratory and that this central laboratory be accredited by AASHTO/AMRL. The regulations also require that any laboratory performing acceptance testing be qualified by the central materials testing lab. This directive officially establishes the laboratory accreditation program that has been in place for the DOTD District Laboratories since 1992 and assigns responsibility for program development.
- 3. POLICY:** The DOTD Materials Engineer Administrator will administer the District Laboratory Accreditation Program and will develop all program policies and procedures. The comprehensive program is patterned after the requirements of AASHTO R18. The program will include the DOTD Cooperative Testing Program, the DOTD Testing Equipment Management Program, and DOTD District Laboratory Inspection Program as listed below:
 - A. DOTD Cooperative Testing Program:** This proficiency sample program, administered by the Materials and Testing Section, is formally established to provide an ongoing intradepartmental evaluation of the quality and accuracy of material testing. This program involves all major DOTD testing facilities including the Materials and Testing Section, the Louisiana Transportation Research Center, and the nine DOTD District Laboratories.

This program consists of all laboratories performing tests on a number of homogeneous samples every six months. In April and October of each year, samples will be prepared, shipped to the Materials and Testing Section for distribution to the various laboratories and tested by specified methods. The results of the tests will be forwarded to the Materials Testing Section for statistical analysis. Any individual deficiencies discovered by the analysis will be reported to the participants. Each deficient laboratory must respond to the Materials Engineer Administrator with satisfactory evidence that all deficiencies were either corrected or action has been taken to correct deficiencies in the near future.
 - B. DOTD Testing Equipment Management Program:** This program, administered by the Materials and Testing Section, is formally established to monitor and control the accuracy, calibration and repair of testing equipment for DOTD. This program establishes guidelines for the identification, evaluation and implementation of current and future testing equipment needs, using a statewide inventory which includes the location, description, property control number, serial number, model number, manufacturer, date purchased, original cost, condition, date inspected or calibrated and remarks on testing equipment located in all district laboratories, field plant laboratories, and the Materials and Testing Section.

In order to continually update the testing equipment inventory, the Materials and Testing Section and each DOTD District Laboratory will communicate to update calibration and repair information. Each District Laboratory Engineer and each Materials and Testing Section Manager will make an annual review of all testing equipment to identify equipment needs, noting any deficiencies, downtime, or other problems involving testing equipment. Additionally, the Testing Equipment Unit of the Materials and Testing Section will perform an annual laboratory inspection and calibration of testing equipment noting any deficiencies including cleanliness and upkeep of equipment. A written list of deficiencies will be given to the district laboratory engineer and Materials Engineer Administrator.

Statewide equipment needs will be prioritized on a three-year priority list dividing equipment needs into new and replacement equipment. The priority list will be updated each year to ensure that all testing equipment is maintained at the level of accuracy and repeatability required by the specified test procedures. These equipment needs will be used in the agency budgeting process each year.

It will be the policy of the department that all testing equipment purchases will be under the auspices and budget of the Materials and Testing Section.

C. **DOTD District Laboratory Inspection Program:** This program, administered by the Materials and Testing Section, consists of an annual on-site inspection of each DOTD District Laboratory by a team from the AASHTO-accredited Materials and Testing Section. The annual inspections will include the following:

- (1) A review of the District Laboratory Quality Systems Manual which includes: organization and organizational policies such as sampling plans, 2059 reviews, subgrade soil surveys, truck, plant and roadway equipment certifications; staffing, including training records; equipment inventory, calibration/verification methods and records; preventive maintenance and repair records; sample processing; test data documentation, review and approval; and Independent Assurance program process and documentation.
- (2) Inspections of apparatus and procedures used in the testing of aggregates, Portland cement concrete, asphaltic concrete, asphalt, soils, and pavement against specified DOTD, AASHTO & ASTM Standard Test Methods.
- (3) Review of personnel the training program to ensure that all employees performing individual materials tests have met established, standardized qualifications.
- (4) Review of the District Independent Assurance Sampling and Testing Program.

The team will document any deficiencies discovered as part of the inspections program. At the completion of the inspection, the inspection team will hold a conference with the District Laboratory Engineer to summarize the findings and point out deficiencies requiring correction. The inspection team will then prepare a report for the Materials Engineer Administrator for distribution to the district laboratories. Each laboratory with identified deficiencies must provide the Materials Engineer Administrator with satisfactory evidence that all deficiencies noted were either corrected or that action has been taken to correct deficiencies in the near future.

Upon satisfactory compliance with all established criteria, accreditation certificates will be issued by the Materials Engineer Administrator and distributed to the appropriate DOTD District Laboratory.

4. **OTHER ISSUANCES AFFECTED:** All directives, memoranda or policies issued previously which are in conflict with this directive are hereby rescinded.
5. **EFFECTIVE DATE:** This directive will become effective upon receipt.

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DOTD CHIEF ENGINEER