

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
MATERIALS CONTROL, SOILS AND TESTING DIVISION

GENERAL INFORMATION GUIDE
FOR QUALITY ASSURANCE TESTING

1.0 PURPOSE

- 1.1 The purpose of the West Virginia Division of Highways (WVDOH) Technician and Inspector Certification Program is to improve the quality assurance of embankments, subgrades, base course, asphalt and Portland cement concrete by the certification of industry and Division of Highways personnel. This procedure is to establish guidelines for this purpose.

2.0 GENERAL

- 2.1 It is the Division's intent to conduct a cooperative program of training, study, and examination so that personnel of the producer, contractor, and the Division of Highways will be able to better assure, by their increased technical knowledge, the level of quality required by the governing specifications.

3.0 SCOPE

- 3.1 This procedure is applicable to all requirements, guidelines, and other support documents of the Division of Highways that reference conditions, methods, and levels of qualification specific to the Division of Highways training and certification program.

4.0 POLICIES AND ADMINISTRATION

- 4.1 Board of Certification - The Certification Program will be carried out in accordance with general policy guidelines established or approved by the State Highway Engineer. He will be advised by a Board composed of the following members:

1. Director Contract Administration Division
2. Director Human Resources Division
3. Director Highway Operations
5. Representatives of the Contractors Association of West Virginia
6. Representatives of the West Virginia Cement Concrete Materials Producers
7. Representatives of West Virginia Asphalt Concrete Materials Producers

- 4.1.1 The Certification Board will meet upon call of the State Highway Engineer.
- 4.2 Administration - The program will be directed by the Director, Contract Administration Division (hereafter referred to as "Director"). He will have the assistance of an Implementation Committee appointed by the State Highway Engineer as follows:
1. One senior representative of the Contract Administration Division
 2. One senior representative of the Highway Operations Division
 3. A representative of the Human Resources Division of the Division of Highways
- 4.2.1 In addition to the above, the non-Division of Highways members (Section 4.1) of the Certification Board may jointly select representatives of producers and contractors to work with the Implementation Committee at such times and on such matters as the Director and the representatives mutually agree. These representatives shall not be candidates for certification.
- 4.2.2 The Implementation Committee will meet upon call of the Director, or person authorized by him.
- 4.2.3 A Program Coordinator is to be recommended by the Implementation Committee and selected by the State Highway Engineer and will be assigned to assist the Director in administering the program and to handle planning, administration, and coordinating functions as may be delegated to him within the scope of appropriate Division of Highways directives.
- 4.2.4 The Human Resources Division of the Division of Highways shall provide such planning, administration, coordinating, and clerical functions for the program as may be requested by the Director and/or Program Coordinator.
- 5.0 REQUIREMENTS
- 5.1 Where applicable, quality control representatives of a contractor or producer will be certified in one (or more) of the certifications listed in Section 6.0 depending upon the individual's duties or responsibilities. Responsibilities and qualification requirements are listed in appropriate support documents such as Materials Procedures, etc.
- 5.2 For purposes of the Division's Quality Assurance program, a non-Highways Division certified technician/inspector represents the company of which he is a full-

time employee on the project, owner, or partner (as defined by the Federal Wage and Hour Legislation). If said company has subsidiary or affiliated organizations, each organization will be required to have its own certified technicians/inspectors where applicable unless the State Highway Engineer makes an exception. Exceptions will be granted only when it can be proven that the certified technician/inspector actually performs the duties of the technician/inspector for all of the subsidiary or affiliated organizations.

5.3 Designated Highways Division personnel will be certified where applicable in one (or more) of the certifications listed in Section 6.0 depending upon the individual's duties or responsibilities.

6.0 EXAMINATIONS

6.1 All certifications listed in Section below require written examinations. Some of the listed certifications require a practical examination after successful completion of the written examination. All written examinations will be of the 'open-book' type. Practical examinations require performance of the tests required by the specifications for the material type involved. It is the responsibility of the applicant to determine which certification is applicable to his/her assignment. Following is a description of the certifications listing relevant information about each:

6.1.1 Aggregate Inspector - The written examination for Aggregate Inspector consists of the following parts:

- 1) Aggregate Specifications and Procedures
- 2) Aggregate Fundamentals
- 3) Sampling, Control, and Inspection of Aggregates
- 4) Aggregate Testing

After successful completion of the written examination the applicant will be required to pass a practical examination consisting of his/her demonstration of testing common to normal aggregate quality requirements. Certification as an Aggregate Inspector qualifies the employee, either contractor or Division, to perform sampling and/or testing of aggregates relevant to the quality control program or acceptance program respectively.

6.1.2 Aggregate Sampling Inspector - The written examination for Aggregate Sampling Inspector consists of the following parts:

- 1) Sampling Fundamentals
- 2) Sampling Methods and Equipment

The Aggregate Sampling Inspector requires only the successful completion of the written examination; no practical examination is required. Certification as an Aggregate Sampling Inspector qualifies the employee, either contractor or Division, to perform sampling of aggregates relevant to the quality control program or acceptance program respectively.

6.1.3 Compaction Inspector - The written examination for Compaction Inspector consists of the following parts:

- 1) Specifications
- 2) Compaction Test Procedures
- 3) Radiation Safety and Nuclear Gauge
- 4) Test Procedure Problems

After successful completion of the written examination the applicant will be required to pass a practical examination demonstrating his/her proficiency in using the testing equipment. Certification of the Compaction Inspector qualifies the employee, either contractor or Division, to conduct tests on all construction materials that require compaction testing.

6.1.4 Concrete Technician - The written examination for Concrete Technician consists of the following parts:

- 1) Fundamentals
- 2) Sampling and Testing
- 3) Control and Inspection
- 4) Mix Proportioning and Adjustment

The Concrete Technician requires only the successful completion of the written examination; no practical is required. Certification of the Concrete Technician qualifies the employee to make plant and mix adjustments, proportioning, etc.

6.1.5 Concrete Inspector - The written examination for Concrete Inspector will cover the same subject matter as the first three parts of the Concrete Technician examination but will be grouped into only one (1) part:

- 1) Fundamentals, Sampling and Testing, Control and Inspection

6.1.6 After successful completion of the written examination the applicant will be required to pass a practical examination demonstrating his/her proficiency in conducting tests common to concrete quality control. Certification as a Concrete Inspector qualifies the employee, either contractor or Division, to perform

sampling and/or testing of concrete relevant to the quality control program or acceptance program respectively.

Asphalt Technician - The written examination for Asphalt Technician consists of the following parts:

- 1) Fundamentals
- 2) Sampling and Testing
- 3) Control and Inspection
- 4) Mix Proportioning and Adjustment

After successful completion of the written examination the applicant will be required to pass a practical examination demonstrating his/her proficiency in conducting tests common to asphalt concrete quality control. Certification of the Asphalt Technician qualifies the employee to sample and test asphalt, make plant and mix adjustments, proportioning, etc.

6.1.7 Asphalt Inspector - The written examination for Asphalt Inspector will cover the same subject matter as the first three parts of the Asphalt Technician examination but will be grouped into only one part::

- 1) Fundamentals, Sampling and Testing, Control and Inspection

After successful completion of the written examination the applicant will be required to pass a practical examination demonstrating his/her proficiency in conducting those tests common to asphalt quality control. Certification as an Asphalt Inspector qualifies the employee, either contractor or Division, to perform sampling and/or testing of asphalt concrete relevant to the quality control program or acceptance program respectively.

7.0 TRAINING

7.1 Training - The Division of Highways, contractors, and producers will sponsor courses of instruction consisting of schools and seminars to help prepare personnel for certification under one or more of these certification programs. To the extent possible, these courses of instruction will be joint efforts of the industry and WVDOH. Nothing in this document shall be interpreted to prohibit any party from conducting courses of instruction for their personnel to assist in preparation for these exams.

7.2 The purpose of the joint schools for technicians/inspectors will be to provide helpful information and instruction for persons preparing to take the technician examinations. These courses will be in the nature of "review" or "refresher"

courses and will not be designed to provide complete instruction for persons without basic foundation in the subject matter.

7.3 When these schools are held, admission requirements to technician's refresher schools shall be determined by the sponsoring group.

8.0 DATE AND LOCATION OF EXAMINATION

8.1 Examinations, both written and practical, will be coordinated by the Human Resources Division of the Division of Highways. The locations and dates of the examinations will be announced at least two weeks prior to being given. The examination will be held on a regional basis when feasible.

8.2 The following is a list of the approximate times given to complete all parts of each written certification examination:

- 1) Aggregate Inspector _____ 6.25 hours
- 2) Aggregate Sampling Inspector _____ 3.00 hours
- 3) Compaction Inspector _____ 6.00 hours
- 4) Concrete Technician _____ 6.25 hours
- 5) Concrete Inspector _____ 3.00 hours
- 6) Asphalt Technician _____ 6.25 hours
- 7) Asphalt Inspector _____ 3.00 hours

8.3 To pass any of the written examinations, the applicant must obtain a score of at least 70 percent on each 'part' of the examination. For those inspector examinations made up of only one part, the applicant must obtain at least 70 percent overall. Each applicant will have the opportunity to retake those parts of the examination failed. Normally, there will be two examinations per certification topic each year. Additional examinations will be given as the demand may require and as directed by the State Highway Engineer.

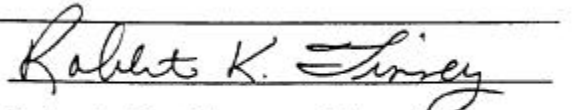
8.3.1 If, over a period of two calendar years, an applicant fails to successfully complete all portions of the written and/or practical parts of the examination, then in order to obtain certification he must retake and successfully pass all portions of the examination, including those he had successfully completed during the prior two year period.

8.4 Certificate Non-Transferable - The status of the certification for a technician or an inspector is not transferable and is valid only for the quality control procedures designated by the bearer's certificate.

- 8.5 Revocation of Certificate - If at any time a Division of Highways, contractor's, producer's, or supplier's technician or inspector is found to have altered or falsified test reports or is found to have improperly performed tests or reported their results, the individual's certification may be rendered invalid by the State Highway Engineer upon recommendation of the Implementation Committee and/or the Board.
- 8.6 Renewal and Certification - Certification will be renewed every three (3) years. General guidance and information for renewal will be recommended by the Board as required by the State Highway Engineer.
- 8.6.1 All renewals of certification shall be at least for a three-year period, and shall terminate on December 31 of the third calendar year after renewal has been made.
- 8.6.2 The responsibility for applying for re-certification shall lie with the certified individual. The Division of Highways will attempt to contact a person by mail at their last known address. Such contact will be made within sufficient time to notify a person that their certification is about to expire. It is, however, the responsibility of the individual to inform the Division of Highways Human Resources Division of his/her current address.
- 8.6.3 Applications for re-certification shall be on a standard form prepared by the Division of Highways and should include a chronological history of the candidates work within the area in which certification has been made. Such history will include only those assignments pertinent to this field during the three-year period for which the person was certified. The purpose of including this work history within this field is to permit the Implementation Committee or other party so designated by the State Highway Engineer to determine if the applicant for renewal had sufficient contact within the area in order to obtain renewal without having to retake the examination.
- 8.6.4 The above application will be notarized (Section 8.6.3).
- 8.6.5 The Implementation Committee or other designated party shall establish internal criteria for renewal and shall recommend to the State Highway Engineer disposition of each applicant. The State Highway Engineer may request the Board to review applications as required.
- 8.6.6 Upon obtaining renewal of certification, a renewal card shall be issued.
- 8.7 Application for Certification - Applications for certification will be directed to the Human Resources Division of the Division of Highways.

9.0 FUNCTIONS AND RESPONSIBILITIES

- 9.1 Contractor or Producer - The producer and contractor will be responsible for product control of all materials during the handling, blending, and mixing operations. The contractor and producer also will be responsible for the formulation of a design mix that will be submitted to the Division of Highways for approval.
- 9.1.1 Technician/Inspector - A Quality Control representative of a contractor or producer should be a certified technician/inspector as outlined in Section 5.0 and whose responsibilities may include such duties as proportioning and adjusting the mix, sampling and testing the product, and preparing control charts.
- 9.2 The Division of Highways - The Division of Highways is responsible for all acceptance decisions.
- 9.2.1 District Materials Supervisor - District Materials activities are the responsibility of the District Materials Supervisor.
- 9.2.2 Division Technicians and Inspectors - Division of Highways technicians and inspectors will be assigned as necessary to carry out the required acceptance decision activities. These employees will not issue instructions to the contractor or producer regarding process control activities. However, the Division of Highways representatives has the responsibility to question, and where necessary to reject, any operation or sequence of operations, which are not performed in accordance with the contract documents.


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