

# Division of Materials and Tests

## TDOT Certification: Hot Mix Asphalt Certification Program

### Course Title: Asphalt Concrete Mix Design Methods

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### Course Description

A Certified Asphalt Mix Designer should demonstrate proficiency in Hot Mix Asphalt Design and Submittal including an understanding of AASHTO/ASTM Test Methods and TDOT Specifications.

### Scope of Course

The course provides an overview of Hot Mix Asphalt, Design Submittal, volumetric calculations, and the following AASHTO and ASTM Test Methods:

- AASHTO T2 - Standard Practice for Sampling Aggregates
- AASHTO T 11- Materials Finer Than No. 200 Sieve in Mineral Aggregates by Washing
- AASHTO T 27- Sieve Analysis of Fine and Coarse Aggregates
- AASHTO T 84- Specific Gravity and Absorption of Fine Aggregate
- AASHTO T 85- Specific Gravity and Absorption of Coarse Aggregate
- AASHTO T 166- Bulk Specific Gravity of Compacted Bituminous Mixtures Using Saturated Surface-Dry Specimens
- AASHTO T 176- Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test
- AASHTO T 209- Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
- AASHTO T 245- Resistance to Plastic Flow of Bituminous Mixtures Using Marshall Apparatus
- AASHTO T 248- Reducing Samples of Aggregate to Testing Size
- AASHTO T 304- Uncompacted Void Content of Fine Aggregate
- AASHTO T 308- Determining the Asphalt Binder Content of Hot Mix Asphalt (HMA) by the Ignition Method
- AASHTO TP 4- Standard Method for Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by means of the Superpave Gyrotory Compactor
- ASTM D 4867- Standard Test Method for Effect of Moisture on Asphalt Concrete Paving Mixture
- ASTM D 4791- Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in coarse aggregate
- TDOT Test Method for Glassy Particles in Slag
- TDOT Test Method for Fractured Face Count for Marshall Mixes
- TDOT Test Method for Loss on Ignition for Surface Mixes
- TDOT Test Method for Ten Minute Boil Test for Anti-stripping Dosage Rate

## **Prerequisites**

- Completion of TDOT Asphalt Concrete Plant Technician Course and Math 3
- Supervisor's approval and written recommendation
- A general knowledge of asphalt mix design
- Familiarity with applicable TDOT Standard Specifications, Supplemental Specifications, and Special Provision

## **Certification Requirements**

TDOT will grant a 5 year certification only to those applicants who meet the following requirements:

- Attendance of the 5-day course in its entirety
- Successful completion of a 6 hour examination with a passing score of 70% or above. (The exam is OPEN BOOK and consists of true/false, multiple choice, and word problems.)
- Demonstration of his/her abilities to Regional Materials and Tests Personnel

## **Recertification Requirements**

- Must attend a ½ day seminar/workshop for updates of any changes to specifications and test methods since acquiring certification.
- Must re-demonstrate within one year of ½ day seminar/workshop to maintain certification.

## **Study Materials**

- [Hot Mix Asphalt Mix Design Certification Study Guide](#)

## **How to Register**

## **NOTICES:**

Cheating on any level of the exam **WILL NOT BE TOLERATED** and will result in immediate expulsion from the course and notification to superiors.

The use of cell phone calculators **WILL NOT** be permitted during exam.

A valid **PHOTO I.D. IS REQUIRED** upon check-in.