

# NDDOT Technical Certification Program (TCP)

## Certification Summary

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Certifications are available for aggregate testing, asphalt mix testing, soils field testing and concrete field testing.

QC/QA asphalt paving projects require Asphalt Inspection and Asphalt Mix Controller certification in addition to aggregate testing and asphalt mix testing certification.

Certifications are valid for five year. Registration is through the NDDOT TCP website.

### QC/QA CERTIFICATION - ASPHALT

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#### ASPHALT PAVEMENT INSPECTOR (API)

Requires successful completion of the Asphalt Pavement Inspection class. (Required for QC/QA Asphalt Paving)

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#### ASPHALT MIX CONTROLLER (AMC)

Requires successful completion of three classes: Asphalt Pavement Inspection, Aggregate and Asphalt Mix Testing and Asphalt Mix Controller. (Required for QC/QA Asphalt Paving)

*\*Please note that if your goal is for certification as Aggregate Tester, Asphalt Mix Tester and Asphalt Mix Controller you will need to attend an Aggregate Testing and Asphalt Mix Testing class (es) and complete a performance exam.*

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#### ASPHALT MIX TESTER (AMT)

Requires successful completion of Aggregate Testing and Asphalt Mix Testing classes, plus a performance exam of each test or procedure. Certification in Aggregate Field Lab or Aggregate Designer is required. This certification is required for an individual responsible for working in a construction field lab on a QC/QA asphalt paving project.

ND T 166 - Bulk Specific Gravity of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens, Method A

ND T 209 -Theoretical Maximum Specific Gravity and Density of Hot Mix Asphalt

ND T 312 - Preparing and Determining Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyrotory Compactor

NDDOT 5 - Sampling and Splitting Field Verification Hot Mix Asphalt (HMA) Samples

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## Certification Summary

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### QC/QA CERTIFICATION - AGGREGATE

Aggregate Tester certification requires successful completion of an Aggregate Testing class and performance exam of each test or procedure. There are four choices for aggregate tester certification. Aggregate Field Lab or Aggregate Designer is required for individuals that works in QC/QA asphalt field lab. Aggregate Designer certification is required for testing or creating asphalt mix designs. Aggregate Field/Gradation and Aggregate Sampler certifications are also offered.

Aggregate testers may work on asphalt paving project or any project that requires aggregate testing.

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### AGGREGATE SAMPLING TECHNICIAN

Requires attending any one of the aggregate testing, or Asphalt Pavement Inspection, classes offered and reviewing the test procedures and associated instructional videos, and completing an exam.

ND T 2 - Sampling of Aggregates

ND T 248 - Reducing Samples of Aggregate to Testing Size

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### AGGREGATE FIELD/GRADATIONS

ND T 2 - Sampling of Aggregates

ND T 11 - Materials Finer Than No. 200 Sieve in Mineral Aggregate by Washing

ND T 27 - Sieve Analysis of Fine and Coarse Aggregate

ND T 248 - Reducing Samples of Aggregate to Testing Size

ND T 255 - Total Evaporable Moisture Content of Aggregate

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### AGGREGATE FIELD LAB (QC/QA FIELD LAB AGGREGATE TESTER)

ND T 2 - Sampling of Aggregates

ND T 11 - Materials Finer Than No. 200 Sieve in Mineral Aggregate by Washing

ND T 27 - Sieve Analysis of Fine and Coarse Aggregate

ND T 248 - Reducing Samples of Aggregate to Testing Size

ND T 255 - Total Evaporable Moisture Content of Aggregate

ND T 113 - Lightweight Pieces in Aggregate

ND T 176 - Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test

ND T 304 - Uncompacted Void Content of Fine Aggregate

ND D 4791 - Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate

NDDOT 4 - Percentage of Fractured Particles in Coarse Aggregate

# NDDOT Technical Certification Program (TCP) Certification Summary

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## AGGREGATE (MIX) DESIGNER (QC/QA ASPHALT MIX DESIGN TESTER OR DESIGNER)

- ND T 2 - Sampling of Aggregates
- ND T 11 - Materials Finer Than No. 200 Sieve in Mineral Aggregate by Washing
- ND T 27 - Sieve Analysis of Fine and Coarse Aggregate
- ND T 248 - Reducing Samples of Aggregate to Testing Size
- ND T 255 - Total Evaporable Moisture Content of Aggregate
- ND T 113 - Lightweight Pieces in Aggregate
- ND T 176 - Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test
- ND T 304 - Uncompacted Void Content of Fine Aggregate
- ND D 4791 - Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
- NDDOT 4 - Percentage of Fractured Particles in Coarse Aggregate
- ND T 84 - Specific Gravity and Absorption of Fine Aggregate
- ND T 85 - Specific Gravity and Absorption of Coarse Aggregate

## AGGREGATE AND ASPHALT PERFORMANCE EXAMS

A performance exam is required for certification as a tester.

A [Performance Exam request form](#) must be filled out and signed by an individual that holds current certification for the tests requested. Once that form is received an exam may be scheduled.

Performance exams are scheduled online through the [TCP Web Page](#) registration link.

## CONCRETE

### CONCRETE FIELD TESTER

American Concrete Institute Field Testing Technician – Grade 1 is equivalent to Concrete Field Tester certification. When the class schedule is determined it will be available on the ND Ready Mix web site: <http://www.ndconcrete.com/>

Individuals completing ACI Concrete Field Testing Technician must provide proof of current ACI certification if they wish to have that information displayed in their NDDOT TCP online record.

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## Certification Summary

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### SOIL

#### SOILS FIELD TESTER

Requires successful completion of the Soils testing class which includes a performance exam of each procedure.

ND T 99 & 180 - Moisture-Density Relations of Soils

ND T 191 - Density In-Place by the Sand Cone Method

ND T 217 - Determination of Moisture in Soil by Means of Calcium Carbide Gas Pressure Moisture Tester (Speedy)

ND T 265 - Laboratory Determination of Moisture Content of Soils

ND D 2167 - Density of Soil in Place by the Rubber-Balloon Method

ND D 4643 - Microwave Method of Drying Soils

### CERTIFICATION RENEWAL

#### CLASSROOM

Certification renewal is required every five years. Depending on the certification the class may be one-half or one-day in length.

#### PERFORMANCE EXAM

Tester certification also requires that a performance exam be completed every five years. Exams must be scheduled in addition to the classroom renewal class.

### TEMPORARY (1-YEAR) CERTIFICATION

Many of the individual test methods and tests are available as a one-year certification. This level of certification is intended for new or temporary employees. It is not a substitution for the 5-year certification required to run a QC/QA field lab on an asphalt paving project.

The tests and procedures are available in the Field Sampling and Testing Manual.

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## RESOURCE MATERIALS

Material tests and procedures are available in the Field Sampling and Testing Manual.

The manual is available from the NDDOT web site or at this link:

<http://www.dot.nd.gov/divisions/materials/testingmanual.htm>

Prior year Class Manuals in PDF are available from the TCP web page [or at this link](#):

## CONTACT

[dotmaterials@nd.gov](mailto:dotmaterials@nd.gov)

701-328-6937

NDDOT TCP Web Link

<http://www.dot.nd.gov/divisions/materials/techniciancertification.htm>