**GENERAL SUBJECT:** MATERIALS CERTIFICATION SCHOOLS PROGRAM

**NUMBER:** MD 410-17

**SPECIFIC SUBJECT:**
Revisions to the Materials Certification Schools policies as stated in Section 114

**DATE:** Sept. 18, 2017

**SUPERSEDES:** n/a

**APPROVED:**
Charles Babish, PE
State Materials Engineer

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**EFFECTIVE DATE**

- This memorandum is effective upon being published.

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**PURPOSE/NEED/SCOPE/REQUIREMENTS**

- This memorandum states revisions to the administrative policy requirements of the Materials Certification Schools program.

Changes are **Shaded**

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**PROCEDURES**

- Replace the current Section 114 of the Materials Division Manual of Instructions with the following:

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**SECTION 114 MATERIALS CERTIFICATION SCHOOLS PROGRAM**

The Materials Certification Schools (MCS) Program is offered by a partnership between the Virginia Department of Transportation (VDOT), the Virginia Education Center for Asphalt Technologies (VECAT), Germanna Community College (GCC) and the Community College Workforce Alliance (CCWA) for individuals who wish to receive training and certification in the areas of Concrete, Asphalt Concrete, Soils, Aggregate, Pavement Marking, Slurry Surfacing and Surface Treatment. The goal is to provide on-going training in materials technology for industry and VDOT employees for the purpose of providing a competent
workforce. These workers are involved in the production, utilization, acceptance, testing and inspection of materials used in the Commonwealth’s transportation infrastructure.

To attain this goal the Certification Programs objectives are:

- Provide technical training to VDOT and industry personnel.
- Enhance the teamwork and efficiency of VDOT, Industry, Municipalities, Testing/Inspection Agencies, and Consultants by training all individuals together.
- Support VDOT’s Construction and Maintenance Programs through provision of appropriate training. Support VDOT’s Quality Control and Quality Assurance Programs.

The roles and responsibilities of the program partners are as follows:

- VDOT is the certifying body and retains ownership of all certification examinations as well as the establishment of all certification requirements. The Department also reserves review authority over all materials and instructors used in the presentation of the training program.
- CCWA, GCC and VECAT will provide training locations and instructors for the instructor led training (ILT) as well as maintaining online training resources. They will also provide all training materials required as well as appropriate examination facilities.

Sec. 114.01 Specification Requirements

VDOT specifications require that the Contractor have present during the production, placement and testing of some materials a Certified Materials Technician. The following activities and the corresponding technicians summarize these specifications. Refer to the Virginia Department of Transportation Road and Bridge Specifications or the project contract documents for the actual specifications.

The production of Central Mix Aggregate requires the presence of a Certified Aggregate Plant Technician.

The Contractor shall have a Department-certified Asphalt Mix Design Technician for designing and adjusting mixes as necessary. The Asphalt Mix Design Technician or Asphalt Plant Level II Technician may perform testing of asphalt mixes.

The Contractor is responsible for having a Certified Concrete Plant Technician available during batching operations.

The Contractor shall have an Asphalt Field Level II Technician present during paving operations.

The placement of Slurry Surfacing requires the presence of a Certified Slurry Surfacing Technician.

The placement of Concrete requires the presence of a Certified Concrete Field Technician.

The placement of pavement markings requires the presence of a Certified Pavement Marking Technician.
The placement of Surface Treatment requires the presence of a Certified Surface Treatment Technician.

Sec. 114.02 Certification Application

All candidates for Certification in the VDOT Materials Certification Schools Program must read and sign an Application for Certification found in Appendix E.

Sec. 114.03 Certification Titles

<table>
<thead>
<tr>
<th>School</th>
<th>Certification Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt Field Level I</td>
<td>Asphalt Field Level I Technician</td>
</tr>
<tr>
<td>Asphalt Field Level II</td>
<td>Asphalt Field Level II Technician</td>
</tr>
<tr>
<td>Slurry Surfacing</td>
<td>Slurry Surfacing Technician</td>
</tr>
<tr>
<td>Surface Treatment</td>
<td>Surface Treatment Technician</td>
</tr>
<tr>
<td>Asphalt Plant Level I</td>
<td>Asphalt Plant Level I Technician</td>
</tr>
<tr>
<td>Asphalt Plant Level II</td>
<td>Asphalt Plant Level II Technician</td>
</tr>
<tr>
<td>Asphalt Plant Mix Design</td>
<td>Asphalt Mix Design Technician</td>
</tr>
<tr>
<td>Concrete Field</td>
<td>Concrete Field Technician</td>
</tr>
<tr>
<td>Concrete Plant</td>
<td>Concrete Plant Technician</td>
</tr>
<tr>
<td>Central Mix Aggregate Plant</td>
<td>Central Mix Aggregate Technician</td>
</tr>
<tr>
<td>Soils and Aggregate Field</td>
<td>Soils Compaction Technician</td>
</tr>
<tr>
<td>Pavement Marking</td>
<td>Pavement Marking Technician</td>
</tr>
</tbody>
</table>

Sec. 114.04 Steps Required for Certification

To obtain certification in a selected program the applicant must pass a certification examination and successfully complete any applicable proficiency examination (see following table Proficiency Examination Requirements).

The individual must successfully complete the proficiency examination in the same calendar year they pass the written examination. After successfully completing the written exam and the proficiency examination, a Certification will be awarded. The Certification is valid for five years. Expiration is five years from December 31st of the calendar year that the individual
attended class. Students may print their own certification record from VDOT University. The web address is: https://VirtualCampus.VDOT.Virginia.gov.

Individuals are allowed a maximum of two attempts per calendar year to pass any specific written certification examination or any required proficiency examination. Two failures of either the written or proficiency exam will require the individual to start the entire certification process again the following year.

The Certification belongs to the individual, not their employer. Upon change of employment or location, the Materials Certification Schools Staff should be notified to update the student’s record.
## Proficiency Examination Requirements

<table>
<thead>
<tr>
<th>Materials Certification Title</th>
<th>School</th>
<th>Proficiency Requirements</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt Field Level I Technician</td>
<td>Asphalt Field Level I</td>
<td>No proficiency examination required</td>
<td>No proficiency examination required</td>
</tr>
<tr>
<td>Asphalt Field Level II Technician</td>
<td>Asphalt Field Level II</td>
<td>No proficiency examination required</td>
<td>No proficiency examination required</td>
</tr>
<tr>
<td>Asphalt Plant Level I Technician</td>
<td>Asphalt Plant Level I</td>
<td>Road &amp; Bridge Specification 211.05, AASHTO R47</td>
<td>MCS Program Office</td>
</tr>
<tr>
<td>Asphalt Plant Level II Technician</td>
<td>Asphalt Plant Level II</td>
<td>AASHTO T30, AASHTO T166, AASHTO T209, AASHTO T269, AASHTO T312, VTM-102</td>
<td>MCS Program Office</td>
</tr>
<tr>
<td>Asphalt Plant Mix Design Technician</td>
<td>Asphalt Plant Mix Design</td>
<td>ASTM D4791, ASTM D5821, AASHTO T176, AASHTO T304, AASHTO T84, AASHTO T85, AASHTO T19, AASHTO T30, AASHTO T312, VTM-102, AASHTO T209, AASHTO T166, AASHTO T283</td>
<td>MCS Program Office</td>
</tr>
<tr>
<td>Central Mix Aggregate Technician</td>
<td>Central Mix Aggregate Plant</td>
<td>AASHTO T2, AASHTO T11, AASHTO T27, AASHTO T248, AASHTO T255, AASHTO T89, AASHTO T90</td>
<td>MCS Program Office</td>
</tr>
<tr>
<td>Concrete Field Technician</td>
<td>Concrete Field</td>
<td>ACI Concrete Field Level I (ASTM C172, ASTM C1064, ASTM C143, ASTM C31, ASTM C231, ASTM C173, ASTM C138)</td>
<td>Virginia Ready-Mix Concrete Association (VRMCA) (434) 977-3716</td>
</tr>
<tr>
<td>Concrete Plant Technician</td>
<td>Concrete Plant</td>
<td>Written proficiency examination required.</td>
<td>Part of written examination</td>
</tr>
<tr>
<td>Pavement Marking Technician</td>
<td>Pavement Marking</td>
<td>Written proficiency examination required.</td>
<td>Part of written examination</td>
</tr>
<tr>
<td>Slurry Surfacing Technician</td>
<td>Slurry Surfacing</td>
<td>No proficiency examination required</td>
<td>No proficiency examination required</td>
</tr>
<tr>
<td>Soils Compaction Technician</td>
<td>Soils and Aggregate Compaction</td>
<td>AASHTO T217, VTM-10, VTM-12, ASTM D4959</td>
<td>MCS Program Office</td>
</tr>
<tr>
<td>Surface Treatment Technician</td>
<td>Surface Treatment</td>
<td>No proficiency examination required</td>
<td>No proficiency examination required</td>
</tr>
</tbody>
</table>
**Sec. 114.05 Maintenance of Certifications**

Certification holders must complete all certification requirements every five years to maintain their certification.

**Sec. 114.06 Extensions**

Extension of certifications will be considered on a case by case basis and approved by the State Materials Engineer.

**Sec. 114.07 Suspension of Certification**

Certification is deemed to be a privilege that has been earned by an individual and may be suspended at any time if, in the opinion of the VDOT Technician Certification Review Board, an individual is thought to have knowingly committed acts that are detrimental to the integrity of the Certification Program or to the industry in general. All cases of potential certification suspension will be reviewed by the VDOT Technician Certification Review Board and they will recommend to the State Materials Engineer any action deemed appropriate. The State Materials Engineer will then make the final decision on what action will be taken, if any. The VDOT Technician Certification Review Board will be comprised of the following:

- The District Materials Engineer or designee (from District in which the incident occurs)
- The District Construction Engineer or designee (from District in which the incident occurs)
- The Materials Certification Schools Program Manager or designee

A suspension will be for a definitive amount of time as deemed appropriate based on the nature and severity of the infraction. Any individual who has their certification suspended will have to attend the appropriate Certification School and pass all required examinations to have their certification reinstated.

Acts that may result in suspension of certification include, but are not limited to the following:

- Falsification of field or quality control tests results and/or records
- Submitting false information that can be used for field or quality control test results
- Failure to perform specified duties
- Failure to follow appropriate testing or sampling procedures
- Display of any dishonest behavior during certification or re-certification

Any suspected inappropriate actions by an individual should be reported to the District Materials Engineer (DME) in the District in which the incident occurs. The DME has the authority to temporarily suspend an individual’s certification pending review by the VDOT Technician Certification Review Board. The DME will notify the Materials Certification Schools Program Manager, who will convene the VDOT Technician Certification Review Board. The Board will meet to review the incident as soon as practical. The individual will appear before the Board at that time.

Suspension of one Certification may be considered grounds for suspension of all Certifications held by the Technician. Further, any suspension of a Technician’s Certification in any other jurisdiction may result in the VDOT Technician Certification Review Board taking the same or
other action, against a Technician’s Certification in Virginia.

**Sec. 114.08 Program Instructors**

Instructors for the program are provided by CCWA and GCC and may come from VDOT or private industry. Although instruction must comply with VDOT procedures and specifications, we welcome and encourage the participation of industry in all parts of the program.

**Sec. 114.09 Program Evaluation**

Examinations

Certification examinations are all “open book”, proficiency examinations are “closed book.” A valid photo ID must be presented prior to taking any examination.

The examination results of each class are compiled and analyzed on an annual basis by VDOT. Frequently missed questions are evaluated and addressed by some combination of clarifying the question, highlighting the information in the manuals, asking the instructor to highlight the information or revising the question.

**Advisory Teams**

At the end of each season, the teaching teams meet with the Materials Certification School’s staff and representatives of the appropriate training provider to discuss and evaluate the past year’s schools. Included in this meeting are various subject matter experts, both VDOT and Industry. Student evaluations and test results are compiled prior to this time and are presented at the meeting. From this information and the advice of the instructors, action plans are formed to adjust the teaching, curriculum, manuals and tests to best meet the needs of the students and VDOT.

**Sec. 114.10 Study Guides**

Study guides are provided by the training provider and are reviewed and revised annually. Technical Working Groups representing VDOT, industry and the training provider meet at the end of each school season to ensure the study guides contain accurate and up to date information. Changes or corrections are incorporated into the study guides before the next school season. VDOT reserves the right to review all training materials including study guides, presentations and online training courses.

**Sec. 114.11 Scheduling**

Scheduling is done by the training providers. Classes are generally held between January and the middle of April.

**Sec. 114.12 Class Cancellations**

Every effort will be made to hold classes; however, weather conditions or low registrations may be justification for cancellation of a class. The training provider will make every attempt to contact the students in the event of a cancellation. If the community college where the training is being
held closes due to inclement weather, the class will be cancelled also. If this happens contact the training provider to make other arrangements.

Sec. 114.13 Fees and Refunds for Schools

Fees and refund policies are established by the training provider and are subject to change. The fee includes course attendance, manual and other materials, the examination and one retest. Separate fees may apply for proficiency examinations.

Sec. 114.15 Alternate Certifications

VDOT will recognize NICET Construction Materials Testing Level II Certification in Soils. Individuals possessing a current NICET Construction Materials Testing Level II Certification in Soils will not need to obtain a VDOT Soils and Aggregate Compaction Certification. Similarly, VDOT will recognize NICET Construction Materials Testing Level II Certification in Concrete. Individuals possessing a current NICET Construction Materials Testing Level II Certification in Concrete will not need to obtain a VDOT Concrete Field Certification. Individuals not possessing a current NICET certification described above, have the option of obtaining the prescribed NICET certification or the applicable VDOT certification.

NOTES

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REFERENCES

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COPY DISTRIBUTION:

Deputy Chief Engineer  VDOT Resident Engineers
Division Administrators  Federal Highway Administration
District Administrators  Virginia Ready Mix Association
District Location & Design Engineers  Precast Concrete Association of Virginia
District Construction Engineers  Virginia Transportation Construction Alliance
District Maintenance Engineers  Virginia Asphalt Association
District Bridge Engineers  American Concrete Paving Association Mid-Atlantic Chapter
District Traffic Engineers  Old Dominion Highway Contractors Association