



Final Report TPF-5(349) Western Alliance for Quality Transportation Construction

Background

The Western Alliance for Quality Transportation Construction (WAQTC) is a partnership of western state and federal highway agencies. This voluntary organization was established in 1998 to assure qualified personnel for the transportation construction workforce as well as act as a unified body to meet today's challenge of improving the transportation products and services that we provide to the public.

In the mid 1990's several northwestern state and federal highway agencies recognized the need for qualified materials test technicians and laboratories conducting acceptance testing on materials incorporated into transportation facilities. These highway agencies formed the Northwest Alliance for Quality Transportation Construction (NAQTC), which produced five technician-training and qualification modules. Since materials testing procedures vary little from state to state, the NAQTC determined that all highway agencies in the western United States would benefit from a united effort. The NAQTC invited all WASHTO states to join. Eventually 7 additional states' highway agencies joined to form the Western Alliance for Quality Transportation Construction (WAQTC).

The WAQTC is dedicated to improving the quality of transportation products and services through an AASHTO R 25 compliant, comprehensive Technician Training and Qualification Program (TTQP). The TTQP program provides a cost-effective means to meet the requirements of 23 CFR 637.209 b which requires 'all sampling and testing data . . . be executed by qualified sampling and testing personnel.'

The WAQTC is also an effective voice at the AASHTO Subcommittee on Materials, improving existing testing standards and introducing new ones.



Objectives

WAQTC is focused in three main areas: Standardizing test methods (WAQTC, AASHTO, and ASTM), accreditation of the Transportation Technician Qualification Program (TTQP), and working together on national programs of significance including research, training, and technology deployment.

The primary goals of the WAQTC organization are to:

- promote an atmosphere of trust, cooperation, and communication between government agencies and the private sector;
- respond in a unified and consistent manner to identify quality improvement needs and new technologies that impact the products that we provide;
- provide a forum to promote uniform test standards;
- provide highly skilled, knowledgeable materials sampling and testing technicians; and
- provide reciprocity for Qualified testing technicians among Accredited Contributing Members.

Participants

The Utah Department of Transportation is the lead agency for the pooled fund. Michael Voth has served as the FHWA Technical Liaison and a member of the Executive Board. The WAQTC Executive Board is composed of member agency representatives, including state materials engineers. The WAQTC Qualification Advisory Committee is composed of materials qualification leaders in the member agencies.

Pooled fund contributors are the member agencies within WAQTC. They include:

- Alaska DOT&PF
- Central Federal Lands Highway Division
- Colorado DOT
- Hawaii DOT
- Idaho Transportation Department
- Montana DOT
- North Dakota DOT
- Oregon DOT
- Utah DOT
- Washington DOT
- Western Federal Lands Highway Division



Accomplishments

2017 to 2021

The WAQTC has continued to update and maintain a Transportation Technician Qualification Program for Materials Training and Certification in the following qualification areas:

- Aggregate
- Asphalt I
- Asphalt II
- Concrete
- Embankment & Base
- In-Place Density
- Embankment & Base / In-Place Density

A new module has been added to available qualifications:

- Self-Consolidating Concrete

WAQTC has represented member agencies in critical committee assignments, especially in each meeting of the AASHTO Committee on Materials and Pavements.

- 12 AASHTO Standards published in 2019 were developed by WAQTC before being adopted by AASHTO.
- 60 Revisions to AASHTO Standards in the past 8 years were proposed by WAQTC. Most notably were significant or complete revisions to national standards for T 209, Maximum Theoretical Laboratory Density of Asphalt Mixtures and Annexes to T 99 and T 180, Moisture-Density Relations of Soils that replace T 225, Correction for Coarse Particles.

Future Direction

The Western Alliance for Quality Transportation Construction continues through a new pooled fund, TPF-5(476). Member agencies continue to extend reciprocity to fellow members through a uniform but flexible certification program. Significant efforts are under way to meet the present challenges to quality today, building upon the WAQTC foundation and goals. Those efforts include reviewing and updating test methods and procedures, training a new generation of materials testing technicians, and moving written examinations and training resources into online formats and utilizing third-party testing centers.

Together we will continue to meet today's challenge of improving the transportation products and services that we provide to the public.