

# 2022 WAQTC QAC COMMITTEE WINTER MEETING MINUTES

**CHAIR:** SEAN PARKER, ODOT  
**COORDINATOR:** DESNA BERGOLD, D B CONSULTING

**DATE:** JAN 31<sup>ST</sup> THROUGH THE FEB 4<sup>TH</sup>, 2022  
**TIME:** 1:00 TO 5:00 PM, MON.; 8:00 AM TO 5:00 PM,  
 TUES. THRU THUR.; 8:00 AM TO 12:00 NOON  
 FRI.

**LOCATION:** PANORAMIC BOARDROOM,  
 ELDERADO, RENO, NV

**ATTENDEES:**  
 SEAN PARKER, ODOT, CHAIR  
 MISTY MINER, MDOT, VICE CHAIR  
 JEANNETTE DIRKS, AKDOT & PF  
 CHRISTOPHER RUSSELL, CDOT  
 LORI COPELAND, ITD  
 SHARON TAYLOR, NDDOT

GILBERT ARREDONDO, UDOT  
 KEVIN BURNS, WSDOT  
 NASSIM SABAHFAR, FHWA

**ABSENT:**  
 BRIAN IKEHARA, HDOT

**MEETING ITEMS:**

1. Welcome
- AASHTO Standards
2. Embankment/Base and In-Place Density
  - a. T 265, Moisture Content of Soil
  - b. T 99, Moisture/Density Relations of Soils
    - i. 2019 proposal – published
  - c. T 180, Moisture/Density Relations
    - i. 2019 proposal – published
  - d. R 75, Developing a Family of Curves
  - e. T 272, One-Point Method
    - i. 2020 proposal – published 2021
  - f. T 85,  $G_{sb}$ 
    - i. 2020 proposal – published 2021
  - g. T 310, In-place Density and Moisture Content of Soil-Aggregate
    - i. 2021 proposal – will be concurrent ballot
    - ii. 2019 proposal – published
    - iii. Section 9 and 9.5 distance from vertical projection – Sean
  - h. T 355, In-place Density of Asphalt
3. Concrete
  - a. R 60, Sampling Concrete
  - b. T 309, Temperature
  - c. T 119, Slump
  - d. T 121, Density
    - i. 2020 proposal – published 2021
  - e. T 152, Air Content
    - i. Picture labeling ‘main air valve,’ ‘bleeder valve,’ and ‘petcocks,’ – Lori
    - ii. 2020 proposal – published 2021
  - f. R 100, Test Specimens
    - i. 2020 proposal – published 2021
  - g. R 39, Making and Curing Concrete Test Specimens in the Lab
4. Aggregate
  - a. R 90, Sampling Aggregate Products
  - b. R 76, Reduction
    - i. Comments from TS Ballot

- c. T 255, Moisture Content of Aggregate
  - d. T 11, Washing
  - e. T 27, Sieve Analysis
  - f. T 335, Fractured Particles
  - g. T 176, Sand Equivalent
    - i. 20196 and 2021 proposals – balloted no negatives
5. Asphalt
- a. R 97, Sampling Asphalt Mixtures
  - b. R 47, Reducing Asphalt Mixtures
  - c. T 329, Moisture Content
    - i. 2020 proposal – published 2021
  - d. T 308, Asphalt Content
    - i. 2020 proposal – published 2021
  - e. T 209,  $G_{mm}$ 
    - i. 2020 proposal will be balloted in 2021
  - f. T 166,  $G_{mb}$ 
    - i. 2020 proposal – published 2021
  - g. R 66, Sampling Asphalt Material
  - h. T 30, Sieve Analysis
    - i. A2.2 – correction – Desna
    - ii. 2020 proposal – published 2021
  - i. T 312, Gyrotory
    - i. 2020 proposal – published 2021
  - j. R 35, Superpave Volumetric Design
    - i. 2020 proposal – revised SP 2 to MS 2 but left title as ‘Superpave Mix Design’
6. Other AASHTO:
- a. T 283, Resistance of Compacted Asphalt Mixtures to Moisture-Induced Damage
    - i. 2020 proposal – published 2021
  - b. T 315, Determining the Rheological Properties of Asphalt Binder Using a Dynamic Shear Rheometer (DSR)
    - i. Revision discussion from 2020 Winter meeting
  - c. T 88, Particle Size Analysis of Coarse Aggregate
    - i. Status of 2019 proposed revision – balloted in 2021 no negatives
  - d. R 25, Technician Training and Qualification Programs
    - i. Status of 2020 proposed revision – passed, published in 2022
  - e. T 331, Bulk Specific Gravity ( $G_{mb}$ ) and Density of Compacted Asphalt Mixtures Using Automatic Vacuum Sealing Method
    - i. 2020 proposal – published 2021
    - ii. Plastic bag verification – 2021 Summer meeting
7. WAQTC FOPs
- a. TM 15 – held until Summer Meeting
    - i. Steps 7 and 8 add sample reference – Kevin
    - ii. Mold dimensions and ‘follower’ – Kevin
    - iii. Adding manual rammer in apparatus – Kevin
  - b. Practical Exams – Misty
8. Administration Manual /RPIH Revisions
- a. Certified Technician Registry Note
9. Strategic Plan Action Items
- a. Status of online written exam delivery
10. Other

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TOPIC	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
WELCOME	<p>Misty Miner, MDT and WAQTC Vice Chair, welcomed everyone to the meeting. Misty explained that Sean Parker, ODOT and QAC Chair, would be a bit late. She asked that everyone introduce themselves and share updates on their agency's programs and the ongoing impact of COVID-19.</p> <p>Misty said that MDT is conducting virtual training and testing. She feels that this has increased the success rate. Montana assesses a fee for the course and exams and the virtual environment includes automatic tracking, all of which keeps technicians engaged.</p> <p>Jeanne Dirks, AKDOT, introduced herself, this is the first meeting that Jeanne has attended. She said that Alaska has been conducting training and testing in person in large facilities to maximize distancing.</p> <p>Sharon Taylor, NDDOT, said that as North Dakota, having recently joined WAQTC, they have been using their own program. She said that they have been conducting some training virtually and some in person. She advocates hybrid training for the long term.</p> <p>Gilbert Arredondo, UDOT, said that Utah has evolved their program. Some portion of training is virtual, with testing in person. They train and certify January through November. They try to be somewhat flexible to accommodate the technician's schedule.</p> <p>Randy Mawdsley, WSDOT, who is retiring soon, and Kevin Burns, WSDOT, said that Washington State contracts with Northwest Council of Engineering Labs (NWCEL) to conduct their training. They hope WAQTC will soon contract with Kryterion to deliver electronic written exams.</p> <p>Upon his arrival, Sean Parker, ODOT and WAQTC Chair, said that Oregon is still training full force with some accommodations and distancing. Many ODOT employees are working remotely, and he expects that they will continue to do so.</p> <p>Desna Bergold, D B Consulting and WAQTC Coordinator, said hello and indicated that as she been working remotely for much of the last 12 years as WAQTC's consultant, she has had to make few adjustments due to the pandemic.</p> <p><i>Discussion only, no action required.</i></p>	
AASHTO REVISIONS PROCESS	<p>As the QAC Winter Meeting's priority is discussion and review of proposed revisions to AASHTO Standards, this meeting began with a review of the <a href="#"><i>Process for Revision Proposals to the AASHTO Standards</i></a>, which is included in the Operations Manual. There were suggestions for improving and updating the document: change Technical Section to Technical Subcommittee (TS), include templates of the proposal letter sent to the TS Chair and the PowerPoint the</p>	

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	<p>Champion can present during AASHTO Committee on Materials and Pavement (COMP) meetings.</p> <p>There was also a discussion on the AASHTO Balloting process and how proposals are tracked after the Executive Board approves and submits them to the (TS) Chair.</p> <p><a href="#">2021 - 2022 AASHTO Publications Schedule</a></p> <p><i>Desna Bergold will update the Process for Revisions Proposals to the AASHTO Standards and include it on the Executive Board Spring Meeting Agenda.</i></p>	DESNA BERGOLD
OPERATIONS MANUAL ADMIN/RPIH	<p>The committee also briefly reviewed the rest of the documents in the Operations Manual and the Organizational Documents.</p> <p>There was further discussion on the <i>Technician Training and Qualification Program (TTQP)</i> <a href="#">Administration Manual</a> and the <i>TTQP Rights, Policy, and Information Handbook (RPIH)</i>.</p> <p>Desna pointed out that the <i>Administration Manual</i> and <i>RPIH</i> are nearly identical documents. Everything contained in the standard <i>RPIH</i> is in the <i>Administration Manual</i>, but the <i>Administration Manual</i> contains some additional instructions for member agencies on administering the program. The <i>RPIH</i> is intended to be revised by member agencies to include agency specific information.</p> <p>Desna also briefly showed the <a href="#">2021 Strategic Plan</a> and explained that the Appendixes of the plan include the previous four years Completed Items list. Revisions to the AASHTO Standards are listed as a Completed Item upon publication in the AASHTO Standards.</p> <p><i>Discussion only, no action required.</i></p>	
PROPOSED REVISION TO AASHTO STANDARDS		
EMBANKMENT/BASE AND IN-PLACE DENSITY		
T 265	<p><i>T 265, Laboratory Determination of Moisture Content of Soils</i></p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	
T 99/ T 180	<p><i>T 99, Moisture-Density Relations of Soils Using a 2.5-kg (5.5-lb) Rammer and a 305-mm (12-in.) Drop and</i> <i>T 180, Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop</i></p> <p><u>Status of previous proposals</u></p> <p>In 2019, WAQTC proposed revisions to T 99 and T 180 to replace the variables for density, <i>W</i> and <i>D</i>, with <math>\rho</math>, in calculations. These revisions were published in the <i>2021 AASHTO Standards</i>.</p>	

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	<p><u>FOP revisions discussion</u></p> <p>In the formulas in the FOP, <math>P_f</math>, representing the percent fine particles in a sample, and <math>\rho_f</math>, representing the density of the fine particles, looks the same. This has created a problem for the technicians. The committee reviewed some options and decided when the term P is used it will not be italicized, even in equations, and that when <math>\rho</math> is used it will be italicized.</p> <p><i>Desna will include revisions to the FOP for AASHTO T 99/T 180 on the Summer Meeting Agenda.</i></p> <p><i>Desna will list the published revision as a Completed Item on the 2022 Strategic Plan.</i></p> <p><i>No new proposed revisions to the AASHTO methods.</i></p>	DESNA BERGOLD
R 75	<p><i>R 75, Developing a Family of Curves</i></p> <p><i>No new proposed revisions to the AASHTO practice.</i></p>	
T 272	<p><i>T 272, One-Point Method for Determining Maximum Dry Density and Optimum Moisture</i></p> <p><u>Status of previous proposal</u></p> <p>In 2020, WAQTC proposed removing ‘or’ in 6.1.1. This revision was published in the <i>2021 AASHTO Standards</i>.</p> <p><u>FOP revisions discussion</u></p> <p>In the FOP, the term <math>\rho</math> will be italicized in all instances, see T 99/T 180. ‘Wet density’ in calculation needs to be revised to <math>\rho_w</math>.</p> <p><i>Desna will include revisions to the FOP for AASHTO T 272 on the Summer Meeting Agenda.</i></p> <p><i>Desna will list the published revision as a Completed Item on the 2022 Strategic Plan.</i></p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	DESNA BERGOLD
T 85	<p><i>T 85, Specific Gravity of Coarse Aggregate</i></p> <p><u>Status of previous proposal</u></p> <p>In 2020, WAQTC proposed adding ‘according to T 255’ in Sections 8.1 and 8.5 and 122°F after 50°C in Sections 8.1 and 8.5. These revisions were published in the <i>2021 AASTHO Standards</i>.</p> <p><i>Desna will list the published revision as a Completed Item on the 2022 Strategic Plan.</i></p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	DESNA BERGOLD

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T 310	<p><i>T 310, In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)</i></p> <p><u>Status of previous proposals</u></p> <p>In 2019, WAQTC proposed revisions to T 310. Replacing the variables <math>W</math> and <math>D</math> with <math>\rho</math> to represent density in calculations. This was approved as an editorial. These revisions were published in the 2021 AASHTO Standards.</p> <p>In 2021, WAQTC proposed revisions to T 310 to change the term ‘probe’ to ‘source rod’ in Sections 9.5.2, 9.5.6, 9.5.8, and Note 5. This was approved on concurrent ballot and should be published in the 2022 Standards</p> <p><u>FOP revision discussion:</u></p> <p>Sean brought up a discrepancy among the Field Operating Procedure (FOP), AASHTO T 310, and <i>ASTM D6938, In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)</i>.</p> <p>The FOP for AASHTO T 310 states in the Procedure section that the test site should be at least 150 mm (6 in.) away from a vertical projection unless the gauge is corrected for trench wall effect.</p> <p>T 310 Section 9.1 states, ‘Select a test location where the gauge will be at least 150 mm (6 in.) away from any vertical mass. If closer than 600 mm (24 in.) to a vertical mass, such as in a trench, follow the gauge manufacturer’s correction procedures.’</p> <p>Section 9.5 T 310 states, ‘Select a test location where the gauge in test position will be at least 150 mm (6 in.) away from any vertical projection,’ but doesn’t include the reference to the trench correction.</p> <p>ASTM D6938 Sections 10.1 and 10.4.1 agree with AASHTO T 310.</p> <p>The committee determined that the FOP should address trench wall effect within 600 mm (24 in.) of the gauge and tentatively proposed adding the following:</p> <p><b>Procedure</b></p> <ul style="list-style-type: none"> <li>– Step 1.d, ‘Correct for trench wall effect according to manufacturer’s correction procedures if the test site is closer than 600 mm (24 in.) to vertical projection. See Note 2.’</li> <li>– <b>Note 2:</b> To perform moisture and density tests in a trench or against a large solid object, it is necessary to perform a trench moisture correction. Moisture present in the trench walls may be read by the moisture detector in the gauge.</li> </ul>	

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	<p>The committee members will discuss this revision with the technicians in the field in the Spring. Desna sent the draft FOP to the QAC members and will remind them to solicit input from the technicians.</p> <p>The committee also drafted revisions to the PowerPoint with further instructor's notes on Slide 15.</p> <p><i>Desna will list the published revision as a Completed Item on the 2022 Strategic Plan.</i></p> <p><i>Desna will verify the revisions proposed in 2021 are published.</i></p> <p><i>The QAC members will discuss the proposed revision to the FOP with their technicians.</i></p> <p><i>Desna will include revisions to the FOP for AASHTO T 310 on the Summer Meeting Agenda.</i></p>	<p>QAC MEMBERS</p> <p>DESNA BERGOLD</p>
T 355	<p><i>T 355, In-place Density of Asphalt Mixtures by Nuclear Methods</i></p> <p><u>Status of previous proposal</u></p> <p>In 2021, WAQTC proposed revisions to T 335 to change the term 'probe' to 'source rod' in 9.3.1.1 and 9.3.2.1. This was approved on concurrent ballot and should be published in the 2022 AASHTO Standards.</p> <p><i>Desna will verify the revisions proposed in 2021 are published.</i></p> <p><i>Discussion only, no action required.</i></p>	<p>DESNA BERGOLD</p>
TRAINING MATERIALS BASICS	<p><u>FOP revision discussion:</u></p> <p>There is currently nothing in the <i>Basics of Compaction and Density Control</i> discussing backfill. The Basics section focusses compaction control in a roadway section.</p> <p>The committee decided to discuss it during the Summer Meeting. Desna offered to research and possibly draft revisions.</p> <p><i>Desna will include revisions to the Basics of Compaction and Density Control on the Summer Meeting Agenda.</i></p>	<p>DESNA BERGOLD</p>
AASHTO CONCRETE TEST METHODS		
R 60	<p><i>R 60, Sampling Freshly Mixed Concrete</i></p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	
T 309	<p><i>T 309, Temperature of Freshly Mixed Hydraulic Cement Concrete</i></p> <p>The committee discussed the upcoming Standard Specification AASHTO M 339, <i>Thermometers Used in the Testing of Construction</i></p>	

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	<p><i>Materials.</i> All of the Standards that use a thermometer will reference this specification and include standard specific language.</p> <p><u>FOP revision discussion:</u></p> <p>Lori said that one of ITD’s technicians had a problem with AASHTO T 309 Section 6.1. 15°C is not equivalent to 27°F.</p> <p style="padding-left: 40px;">‘6.1 – Perform standardization by comparing readings on the thermometer with another calibrated thermometer at two temperatures at least 15°C (27°F) apart.’</p> <p>The committee reviewed the section and found that even though it appears to be presented as an equivalency, it is referring to standardizing the thermometer at two disparate temperatures. 15°C is equivalent to 60°F and 30°C is equivalent to 87°F. The FOP for AASHTO T 309 states, ‘at two temperatures at least 15°C or 27°F apart,’ and therefore avoids this confusion. The committee agreed that further clarification could be added to the training materials and will be discussed it during the Summer Meeting.</p> <p><i>Desna will include clarification of the temperature range on the Summer Meeting Agenda.</i></p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	DESNA BERGOLD
T 119	<p><i>T 119, Slump of Hydraulic Cement Concrete</i></p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	
T 121	<p><i>T 121, Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete</i></p> <p><u>Status of previous proposal</u></p> <p>In 2020, WAQTC proposed revisions to change ‘tap the sides’ to ‘tap around the perimeter’ in Section 7.4 Vibration and revise ‘sides’ to ‘side’ in Section 7.5. These revisions were considered editorial and were published in the 2021 AASHTO Standards.</p> <p><i>Desna will list the published revision as a Completed Item on the 2022 Strategic Plan.</i></p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	DESNA BERGOLD
T 152	<p><i>T 152, Air Content of Freshly Mixed Concrete by the Pressure Method</i></p> <p><u>Status of previous proposal</u></p> <p>In 2020, WAQTC proposed to change ‘tap the sides’ to ‘tap around the perimeter’ in Section 9.1.3 and revise ‘sides’ to ‘side’ in Sections 9.1.4, 9.3.1, 9.3.3, 9.4.2, A1.7.2, and A1.7.3. These revisions were</p>	

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	<p>considered editorial and were published in the <i>2021 AASHTO Standards</i>.</p> <p><u>FOP revision discussion:</u></p> <p>Lori recommended that the FOP include a picture labeling the ‘main air valve,’ ‘bleeder valve,’ and ‘petcocks.’ The committee reviewed the pictures currently in the FOP and agreed. They also saw that not all of the pictures in the Student FOP are in the PowerPoint. Desna was instructed to include them.</p> <p>They also reviewed AASHTO T 309 and saw that it included a great diagram of the Type B Meter. The committee agreed that if AASHTO would give WAQTC permission to use it, it would be better than trying to recreate it. Sean will discuss asking AASHTO for permission during the Executive Board Spring Meeting</p> <p>The committee thought that pictures of the petcock both open and closed would be good to include. Gilbert offered to provide them.</p> <p>Lori also said that the Manufacturer’s Operating instructions state not to tilt the meter while filling with water through the petcocks. The FOP states, ‘Incline slightly and gently rock the air meter.’ This will need to be discussed during the Summer Meeting.</p> <p><i>Gilbert Arredondo will provide pictures of the petcock.</i></p> <p><i>Desna will list the published revision as a Completed Item on the 2022 Strategic Plan.</i></p> <p><i>Desna will include revisions to the PowerPoint and FOP on the Summer Meeting Agenda.</i></p> <p><i>Desna will include asking the Executive Board for permission to request the use of AASHTO’s Type B meter diagram on the Spring Meeting agenda.</i></p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	<p>GILBERT ARREDONDO</p> <p>DESNA BERGOLD</p>
R 100	<p><i>R 100, Making and Curing Concrete Test Specimens in the Field</i></p> <p><u>Status of previous proposal</u></p> <p>In 2018 and 2020, WAQTC proposed revisions to correct the tamping rod length in Table 1 and revise the Test Method (T) to a Practice (R). These revisions were published in the <i>2021 AASHTO Standards</i>.</p> <p><i>Desna will list the published revision as a Completed Item on the 2022 Strategic Plan.</i></p> <p><i>No new proposed revisions to the AASHTO practice.</i></p>	<p>DESNA BERGOLD</p>

TOPIC	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
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AASHTO AGGREGATE TEST METHODS		
R 90	<p><i>R 90, Sampling Aggregate Products</i></p> <p><i>No new proposed revisions to the AASHTO practice.</i></p>	
R 76	<p><i>R 76, Reducing Samples of Aggregate to Testing Size</i></p> <p><u>Status of previous proposal</u></p> <p>In 2021, WAQTC proposed extensive revisions to R 76 to include ‘Reduction by Apex,’ and further revisions for clarity. The proposal was balloted in the Technical Subcommittee and received three negatives.</p> <p>Sean recommended that the committee work through the negatives. The committee reviewed and addressed all the comments from the TS Ballot.</p> <p>See the attachment to these minutes for specific negatives and comments with QAC recommended actions.</p> <p>The proposed corrections will be presented to the Board. Sean suggested that if the Board approves the revisions, the Board Champion should discuss the revisions with the TS Members who voted negative. Sean will offer to assist the Champion. If those who voted negative agree that their comments have been appropriately resolved, the Champion will be advised to ask Matt Beason, TS 1c Chair, to ballot the new proposal in the Technical Subcommittee before the next scheduled COMP ballot.</p> <p><i>Revisions to the 2021 proposed revision to R 76 will be presented to the Executive Board for approval and submittal to AASHTO.</i></p> <p><i>Sean Parker will assist the Champion to resolve negative comments.</i></p>	SEAN PARKER
T 255	<p><i>T 255, Total Evaporable Moisture Content for Aggregates</i></p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	
T 11	<p><i>T 11, Materials Finer Than 75-<math>\mu</math>m (No. 200) Sieve in Mineral Aggregates by Washing</i></p> <p><u>Discussion item</u> - See discussion in T 27.</p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	
T 27	<p><i>T 27, Sieve Analysis of Fine and Coarse Aggregates</i></p> <p><u>Discussion item</u></p> <p>Sean discussed the ongoing T 11/T 27 and T 30 harmonization Task Force of which he is a member. Last fall the revisions to T 30 were balloted in TS 2c. Based on the comments and negative votes, Maria</p>	

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	<p>Knake, AASHTO re:source, revised the proposed changes to T 27 and T 30. The Task Force decided to table proposed revisions to ‘Sieving Efficiency and Time Evaluation’ so that the other harmonization revisions can move forward. The Task Force will continue to meet and discuss these and other topics.</p> <p><i>Discussion only, no action required.</i></p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	
T 335	<p><i>T 335, Determining the Percentage of Fracture in Coarse Aggregate</i></p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	
T 176	<p><i>T 176, Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test</i></p> <p><u>Status of previous proposal</u></p> <p>In 2019, WAQTC informed the TS 1a Chair that there were discrepancies in the description and figures of the apparatus.</p> <p>In 2021, WAQTC proposed removing the second sentence in 6.2 and revising the sample size in Section 6.4 to 1000 to 1500 g (2.2 to 3.3 lb.). These revisions were approved on COMP Ballot and should be published in the <i>2022 AASHTO Standards</i>.</p> <p>Sean said that this was a good example of WAQTC working with the Standard’s Steward, Edward Inman, New Jersey, and the TS 1a Chair, Andy Babish.</p> <p><i>Desna will verify the revisions proposed in 2021 are published.</i></p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	
AASHTO ASPHALT TEST METHODS		
R 97	<p><i>R 97, Sampling Asphalt Mixtures</i></p> <p><i>No new proposed revisions to the AASHTO practice.</i></p>	
R 47	<p><i>R 47, Reducing Samples of Asphalt Mixtures to Testing Size</i></p> <p><u>Status of previous proposal</u></p> <p>In 2021, WAQTC proposed revisions updating the figures and formatting, and use of ‘active voice.’ The revisions were submitted before the Mid-year webinar and will be discussed at the COMP Annual Meeting.</p> <p>Based on the comments from the TS 1c ballot of R 76, the committee reviewed the proposed revisions to R 47. They determined that the term ‘approximately’ should be added before ‘equal’ in Section 10.5.2.4.</p>	

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	<p>They also decided that a new Section 10.5.2.5 should be added, ‘If necessary, repeat Sections 10.5.2.1 through 10.5.2.4 until the required sample size is obtained.’ This is a repeat of Section 10.5.1.3 with appropriate cross referencing.</p> <p>The committee also updated the letter that the proposal Champion sends to the TS Chair.</p> <p><i>Revisions to R 47 will be presented to the Executive Board for approval and submittal to AASHTO.</i></p>	SEAN PARKER
T 329	<p><i>T 329, Moisture Content of Asphalt Mixtures by Oven Method</i></p> <p><u>Status of previous proposals</u></p> <p>In 2020, WAQTC proposed replacing T 168 with R 97 in 2.1 and 5.1. These revisions were published in the <i>2021 AASHTO Standards</i>.</p> <p><i>Desna will list the published revision as a Completed Item on the 2022 Strategic Plan.</i></p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	DESNA BERGOLD
T 308	<p><i>T 308, Determining the Asphalt Binder Content of Asphalt Mixtures by the Ignition Method</i></p> <p><u>Status of previous proposals</u></p> <p>In 2020, WAQTC proposed adding a new Section 7.8, ‘Reset the internal balance to zero,’ revising ‘flat pan’ to ‘container’ in Section 9.1. Revising Sections 7.2 and 8.2 to say, ‘Use T 329 to oven dry the asphalt mixture specimen to a constant mass or determine the moisture content of a companion specimen.’ These revisions were published in the <i>2021 AASHTO Standards</i>.</p> <p><u>FOP revision discussion:</u></p> <p>It was pointed out in the meeting that the AASHTO revision, to replace ‘flat pan’ with ‘container,’ was not reflected in the training materials. This revision will be addressed during the Summer Meeting.</p> <p><i>Desna will list the published revision as a Completed Item on the 2022 Strategic Plan.</i></p> <p><i>Desna will include revisions to the FOP for AASHTO T 308 on the Summer Meeting Agenda.</i></p>	DESNA BERGOLD

TOPIC	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
T 209	<p><i>T 209, Theoretical Maximum Specific Gravity (<math>G_{mm}</math>) and Density of Asphalt Mixtures</i></p> <p><u>Status of previous proposals</u></p> <p>In 2020, WAQTC proposed many revisions to address plant-produced samples, remove the requirement to dry the sample, address apparatus, and the appendix. These revisions were approved on concurrent ballot and should be published in the <i>2022 AASHTO Standards</i>.</p> <p>The committee reviewed the <a href="#">TS 2c 2021 COMP Annual Meeting Minutes</a> and the discussion on the revisions that were made before the last proposals were balloted concurrently.</p> <p><i>Desna will verify the revisions proposed in 2021 are published.</i></p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	
T 166	<p><i>T 166, Bulk Specific Gravity (<math>G_{mb}</math>) of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens</i></p> <p><u>Status of previous proposals</u></p> <p>In 2020, WAQTC proposed changing the term ‘samples’ to ‘specimens’ where appropriate and changing the temperature in the water bath from <math>25 \pm 1^\circ\text{C}</math> (<math>77 \pm 1.8^\circ\text{F}</math>) to <math>25 \pm 1^\circ\text{C}</math> (<math>77 \pm 2^\circ\text{F}</math>) in Sections 6.2, 9.2, 9.3, and 10.1. These revisions were published in the <i>2021 AASHTO Standards</i>.</p> <p>The committee reviewed the <a href="#">TS 2c 2021 COMP Annual Meeting Minutes</a>.</p> <p><i>Desna will list the published revision as a Completed Item on the 2022 Strategic Plan.</i></p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	
T 30	<p><i>T 30, Mechanical Analysis of Extracted Aggregate</i></p> <p><u>Status of previous proposals</u></p> <p>In 2020, WAQTC proposed revisions to Table A1. These revisions were published in the <i>2021 AASHTO Standards</i>.</p> <p><u>Discussion item</u> - See Task Force discussion in T 27.</p> <p><u>Proposed revision</u></p> <p>Desna noticed that in Section A2.2 it states, ‘This mass is shown in Table A2.1 for <b>five</b> sieve-frame dimensions in common use.’ Table A2.1 was revised in 2021 and has only three sieve-frame dimensions. This revision is most likely editorial.</p> <p><i>Desna will list the published revision as a Completed Item on the 2022 Strategic Plan.</i></p>	SEAN PARKER

TOPIC	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
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	<i>Revisions to T 30 will be presented to the Executive Board for approval and submittal to AASHTO.</i>	
T 312	<p><i>T 312, Asphalt Mixture Specimens by Means of the Superpave Gyrotory Compactor</i></p> <p><u>Status of previous proposals</u></p> <p>In 2020, WAQTC proposed changing T 168 references to R 97 and ‘binder’ and ‘HMA’ to ‘asphalt binder’ and ‘asphalt mixtures.’ These revisions were published in the <i>2021 AASHTO Standards</i>.</p> <p><i>Desna will list the published revision as a Completed Item on the 2022 Strategic Plan.</i></p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	DESNA BERGOLD
R 35	<p><i>R 35, Superpave Volumetric Design for Asphalt Mixtures</i></p> <p><u>Status of previous proposals</u></p> <p>In 2020, WAQTC proposed revising SP 2 to MS 2, this was published in the <i>2021 AASHTO Standards</i> but the title is incorrect, ‘Superpave Mix Design.’</p> <p>The committee reviewed the Standard in the AASHTO Library, and it appears that this reference will be removed in the next publication.</p> <p><i>Discussion only, no action required.</i></p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	
<b>OTHER AASHTO TEST METHODS</b>		
T 283	<p><i>T 283, Resistance of Compacted Asphalt Mixtures to Moisture</i></p> <p><u>Status of previous proposal</u></p> <p>In 2020, WAQTC proposed extensive revisions to this method. These revisions were published in the <i>2021 AASHTO Standards</i>.</p> <p><i>Desna will list the published revision as a Completed Item on the 2022 Strategic Plan.</i></p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	DESNA BERGOLD
T 315	<p><i>T 315, Determining the Rheological Properties of Asphalt Binder Using the Dynamic Shear Rheometer (DSR)</i></p> <p>During the 2020 Winter Meeting, Davis Mariman, FHWA, proposed revisions to the Verification and Calibration section in 9.1. It currently states that there are four items that require verification, lists them, and then states that the DSR temperature transducer must be verified first. The DSR temperature transducer is not included in the list, but the portable thermometer is. He felt that the DSR temperature transducer</p>	

TOPIC	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
	<p>should replace the portable thermometer since it is actually a part of the machine. Sonya Puterbaugh, AASHTO re:source, pointed out that the portable thermometer also needs to be verified and is outlined in 9.3. Upon further review of the method, it was determined that the equipment references are inconsistent and confusing.</p> <p>At that time David, Sonya Puterbaugh, AASHTO re:source, and Kevin were going try to work through the issues and present revisions at a future date. David left his position shortly thereafter. Nassim decided that she would try draft revisions to address this issue. Kevin agreed to forward the revisions to WSDOT subject matter experts. As Sonya agreed to help before, she will be asked to help again.</p> <p><i>Nassim Sabahfar will draft revisions and Kevin Burns will review them.</i></p>	<p>NASSIM SABAHFAR</p> <p>KEVIN BURNS</p>
T 88	<p><i>T 88, Particle Size Analysis of Soils</i></p> <p><u>Status of previous proposal</u></p> <p>In 2020, WAQTC proposed moving Note 7 into 12.2, adding dispelling foam with 3 drops of isopropyl alcohol, and deleting Figure 5. These revisions were approved on COMP Ballot and should be published in the <i>2022 AASHTO Standards</i>.</p> <p><i>Desna will verify the revisions proposed in 2021 are published.</i></p> <p><i>Desna will list the published revision as a Completed Item on the 2022 Strategic Plan.</i></p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	<p>DESNA BERGOLD</p>
R 25	<p><i>R 25, Technician Training and Qualification Programs</i></p> <p><u>Status of previous proposal</u></p> <p>In 2015, WAQTC proposed revisions to R 25. The revisions included adding references to the Appendixes and corresponding references in the reference section, removing ‘flexible’ from Section 3.1, and adding ‘subordinates’ to the Section 7.2, <i>Examination, Controls, and Integrity</i>. The 2015 proposed revisions were lost and were re-proposed in 2019. Some of these revisions were published as editorial, the addition of ‘subordinates’ to the Section 7.2 should be published in <i>2022 AASHTO Standards</i>.</p> <p><i>Desna will verify the remaining revisions proposed in 2021 are published.</i></p> <p><i>Desna will list the published revision as a Completed Item on the 2022 Strategic Plan.</i></p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	<p>DESNA BERGOLD</p>

TOPIC	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
T 331	<p><i>T 331, Bulk Specific Gravity (<math>G_{mb}</math>) and Density of Compacted Asphalt Mixtures Using Automatic Vacuum Sealing Method</i></p> <p><u>Status of previous proposals</u></p> <p>In 2020, WAQTC proposed removing redundant information and revising Formula 1. These revisions were published in the <i>2021 AASHTO Standards</i>.</p> <p><i>Desna will list the published revision as a Completed Item on the 2022 Strategic Plan.</i></p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	DESNA BERGOLD
T 84	<p><i>T 84, Specific Gravity and Absorption of Fine Aggregate</i></p> <p><u>Revision discussion</u></p> <p>Sharon said that NDDOT would like to propose adding a T 255 reference for drying the specimen.</p> <p>As the committee reviewed the method other revisions were discussed. Currently Section 7, Preparation of Test Specimen, does not address separating the sample over the No. 4 sieve. It does state, ‘Obtain approximately 1 kg of the fine aggregate from the sample,’ without defining fine aggregate.</p> <p>It also states that the sample can be brought to saturated condition by adding 6 percent moisture but does not say to cover it.</p> <p>The committee also wanted to include the definition of SSD from the training materials.</p> <p>Sharon also said there was a problem with the instruction to heap ‘additional material above the top of the mold by holding it with cupped fingers of the hand hold the mold,’ in Section 7.2.1. This can vary significantly by the size of the technician’s hands and can contribute to variability in the SSD determination.</p> <p>The drafted revisions are:</p> <ul style="list-style-type: none"> <li>– Include T 27 in Section 2, Referenced Documents</li> <li>– Section 3.1.1 add ‘<b>oven</b> dry mass’ in the definition of absorption and remove the last sentence</li> <li>– Add Section 3.1.2: ‘<i>saturated surface dry (SSD)</i> – the condition of an aggregate particle when the permeable voids are filled with water, but no water is present on exposed surfaces.’</li> <li>– Add Section 7.1: ‘Separate the sample over the 4.75 mm (No. 4) sieve if necessary.’</li> </ul>	

TOPIC	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
	<ul style="list-style-type: none"> <li>– Revise the new Section 7.2 to obtain the specimen from ‘material passing the 4.75 mm (No. 4).</li> <li>– Revise the new Section 7.3: ‘Dry <del>it</del> <b>the specimen</b> in a suitable pan or vessel to constant mass <b>according to T 255</b> at a temperature of <math>110 \pm 5^{\circ}\text{C}</math> (<math>230 \pm 9^{\circ}\text{F}</math>). <del>Allow it to</del> Cool to <del>comfortable handling</del> <b>room</b> temperature.</li> <li>– Add Section 7.4: ‘Bring the sample to saturated condition:</li> <li>– Section 7.4.1: ‘Cover with water, or;’</li> <li>– Section 7...2: ‘Add at least 6 percent moisture to the sample, cover with an air-tight lid.’</li> <li>– Section 7.5: ‘Allow the sample to stand for 15 to 19 h.</li> <li>– New Section 7.7.1: Remove instruction to heap the material above the mold and change ‘sand’ to ‘fine aggregate.’</li> </ul> <p>The committee decided that these revisions should not be proposed to the Executive Board at this time. They would like to get feedback from their subject matter experts and revisit the draft revisions to the standard during the Summer Meeting.</p> <p><u>FOP proposed revisions</u></p> <p>Lori pointed out that Note 1 in the FOP from the FOP library should be a step rather than be a note as it instructs the technician on the steps to take if the fine aggregate slumps on the first trial. As Lori is the Champion of this FOP, she said that she will draft revisions for consideration during the Summer Meeting.</p> <p><i>QAC Members will consult subject matter experts on the drafted revisions.</i></p> <p><i>Desna will include discussion of revisions to AASHTO T 84 and the FOP for AASHTO T 84 on the Summer Meeting Agenda.</i></p> <p><i>No new proposed revisions to the AASHTO method at this time.</i></p>	<p>QAC MEMBERS</p> <p>DESNA BERGOLD</p>
T 112	<p><i>T 112, Clay Lumps and Friable Particles</i></p> <p>Nassim brought forward a couple of editorial revisions in Tables 1, 2, and 3 from her counterpart.</p> <ul style="list-style-type: none"> <li>– Table 1 second row, 3.75 mm should be 37.5 mm</li> <li>– Table 2, second and third rows 25 mm should be 37.5 mm</li> <li>– Table 3 third row, 3.75 mm should be 37.5 mm, fourth row 1½ in. should be ½ in., fifth row insert mm after 4.75, sixth row 841 µm should be 850 µm.</li> <li>– All tables: extra spaces should be removed.</li> </ul>	

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TOPIC	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
	<p><u>Discussion item</u></p> <p>She also pointed out questions about Section 6.2, which states that each separate portion may be reduced, independently of other portions, to a narrow mass band in Table 2. Why reduce a portion to this min/max band? The final test results are for all of the portions combined not separate portions. Altering the gradation this way would seem to alter the results. As Western Federal Lands (WFL) uses the results of this test for acceptance of chip seal, potentially skewing the results is concerning. Sean recommended that Nassim and WFL work with the Standard's Steward Richard Barezinsky, KDOT, to determine if the Standard should be revised.</p> <p><i>Editorial revisions to T 112 will be presented to the Executive Board for approval and submittal to AASHTO.</i></p>	
WAQTC FOPs		
	<p>Sean suggested that the FOPs in the FOP library be listed as items on all Winter Meeting agendas instead of discussing them during the Summer Meeting. The Summer Meeting is often busier due to updating all the training materials. Desna agreed and said that she would send reminders to the FOP Champions before the meeting and verify if there were any revisions to the related AASHTO Standards.</p> <p><i>List the FOP Library documents as agenda items for the upcoming Winter Meetings with Champion's name.</i></p>	DESNA BERGOLD
TM 15	<p><i>WAQTC TM 15 Laboratory Theoretical Maximum Dry Density of Granular Soil and Soil/Aggregate</i></p> <p>Kevin withdrew this agenda item for this meeting and would like it to discuss it during the Summer Meeting.</p> <p><i>Desna will include revisions to WAQTC TM 15 on the Summer Meeting Agenda.</i></p>	DESNA BERGOLD
PRACTICAL EXAM DISCUSSION	<p>Misty proposed creating combination practical exam checklists for the procedures that have multiple steps in common, such as T 121 and T 152. MDT asks the technician to perform the FOP for AASHTO T 121 up to determining the mass of concrete in the measure then allows them to continue with the FOP for AASHTO T 152 and determine the air content on the concrete. This is how these tests are performed in conjunction in the field.</p> <p>Similarly, the FOPs for AASHTO T 99/T 180 and T 272 have compacting a specimen in a mold in common.</p> <p>She asked if anyone felt there would be a reciprocity issue. Gilbert said that UDOT performs practical exams the same way and using a combined checklist would not affect reciprocity. Sharon agreed and</p>	

TOPIC	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
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	<p>said that NDDOT would adopt a combined checklist if it were made available.</p> <p>Chris and Kevin agree that their agencies combine practical exams too.</p> <p>Sean says that ODOT requires the technician to perform full proctor for the FOP for AASHTO T 99/T 180 and a one-point for the FOP for AASHTO T 272.</p> <p>Lori said ITD has the technician perform a one-point determination and then asks them to describe the conditions that would require performing a full proctor. Then the technician performs a full five-point proctor from prepared material but is not required to dry the moisture specimens. The wet and dry masses are then provided to the technician to complete the calculations and plot the curve. Jeanne says AKDOT's process is similar to ITD's.</p> <p>Lori said that ITD is concerned that the technician will not be able to take the steps necessary to perform a full five-point proctor.</p> <p>Desna indicated that later this year she will be distributing the Reciprocity Questionnaire that is required by TTQP Operational Agreement. The questionnaire asks the agencies if there are 'shortened' steps and how they are shortened. These different approaches to the practical examination will be documented on the questionnaire report. The questionnaire will be discussed by the Board during the Spring Meeting.</p> <p>Misty said that she will create combination checklists for discussion and possible approval during the Summer Meeting.</p> <p><i>Misty Miner will create Performance Exam Checklists which combine the steps of appropriate test methods and present them during the Summer Meeting.</i></p>	<p>MISTY MINER</p>
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*TTQP ADMINISTRATION MANUAL AND REGISTRATION, POLICIES, AND INFORMATION HANDBOOK (RPIH)*

	<p>It was brought to Desna's attention that in the <i>Administration Manual</i> and <i>RPIH</i> under 'Certified Technician Registry' there is a note which appears mandatory. In AASHTO Standards and WAQTC FOPs, notes are considered non-mandatory.</p> <p><b>Note:</b> The number assigned with the first Certification will remain with that employee no matter if additional Certifications may be attained through other WAQTC Agencies. Should a technician obtain a Certification in a state other than the one designated by the assigned Certification number, the Agency issuing the additional Certification will notify the Agency where the Certification number originated so that the Certification may be properly registered.</p> <p>The committee agreed that the term 'Note' should be removed.</p>	
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TOPIC	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
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	<i>Revisions to the Administration Manual and RPIH will be drafted and presented to the Executive Board for approval.</i>	DESNA BERGOLD
STRATEGIC PLAN	<p><i>Investigate virtual written examinations</i></p> <p>Randy reported on the status of electronic written exam delivery. Randy, Desna, and Scott Nussbaum, UDOT and WAQTC Treasurer, have been working with Kryterion. Kryterion has provided an initial contract and there were many questions that Kryterion is answering. Progress is looking good.</p> <p><i>Discussion only, no action required.</i></p>	
OTHER		
	<p>MDT has been conducting virtual written exams for a while through their Learning Management System (LMS), Moodle. Misty told the committee how MDT has it set up. Misty released an exam for Desna to screen share with the committee.</p> <p><i>Discussion only, no action required.</i></p>	
	<p>Misty also said that she has been conducting virtual training. To support the virtual training, she has created video content for the PowerPoint presentations. Misty presented an Aggregate PowerPoint using the talk to text feature that is available with recent editions of PowerPoint and supported by her learning platform.</p> <p>Chris previously discussed the videos developed by CDOT that they have posted to YouTube on a CDOT Employee channel.</p> <p>The committee searched the term ‘WAQTC’ on YouTube and found some unauthorized videos.</p> <p>The committee discussed the possibility of a WAQTC YouTube channel with the video content already developed. The WAQTC website PowerPoint Presentations could include links to the YouTube videos. Many members are already considering creating more videos for their own training which could also be included.</p> <p>The committee will ask the Board for permission to create a WAQTC YouTube channel during the Spring meeting. If approved, it could be added to the Strategic Plan with a one-year production schedule.</p> <p>MDT’s videos can be embedded in the PowerPoint presentations for the FOPs now. Misty asked the committee members to review the video content that she distributed during this meeting for the Summer Meeting to determine if there are any missing elements.</p> <p>The committee agreed. The committee members want to review all the content but volunteered to focus on a single module first. Jeanne volunteered for Aggregate; Sharon will take Asphalt; Gil will take</p>	

TOPIC	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
	<p>Concrete; Lori and Sean will split Embankment/Base and In-place Density. Lori and Sean will also review CDOT's related videos on the 'CDOT Employee Channel.' Kevin agreed to assist Lori and Sean.</p> <p>It was recommended that once the videos are in place, a video review should become part of the annual training materials update review assignment.</p> <p><i>A WAQTC YouTube channel will be included on the Executive Board Spring Meeting agenda.</i></p> <p><i>QAC Members will review MDT's and CDOT's video content for inclusion in the training materials and possible YouTube channel.</i></p>	<p>SEAN PARKER</p> <p>QAC MEMBERS</p>
	<p>Sean reminded everyone to start collecting corrections/revisions to the training materials from their trainers and forward to Desna who will track and possibly draft revisions for the Summer Meeting.</p> <p><i>QAC Members will collect training materials revisions and corrections and forward to Desna.</i></p>	<p>QAC MEMBERS</p>

## R 76 negative votes from ballot:

### General correction:

To address comments on the use of the new 10.1.3, Apex Method, the QAC recommends revisions to Section 5, Selection of Method.

- 5.2. *Coarse Aggregates*—Reduce the sample using a mechanical splitter in accordance with Method A (preferred method) or by quartering in accordance with Method B Sections 10.1.1 or 10.1.2. Method B Section 10.1.3 and the miniature stockpile Method C are not permitted for coarse aggregates. ~~or mixtures of coarse and fine aggregates.~~
- 5.3. *Combined Coarse and Fine Aggregate*—Samples that are in a dry condition may be reduced in size by either Method A or Method B Sections 10.1.1 or 10.1.2. Samples having free moisture on the particle surfaces may be reduced in size by quartering according to Method B Sections 10.1.1 or 10.1.2. When Method A is desired and the sample is damp or shows free water, dry the sample until it appears dry or until clumps can be easily broken by hand (Note 2). Dry the entire sample to this condition, using temperatures that do not exceed those specified for any of the tests contemplated, and then reduce the sample. Method B Section 10.1.3 and the miniature stockpile Method C are not permitted for combined aggregates.
- 5.1 *Fine Aggregates* – Already states, ‘Samples having free moisture on the particle surfaces may be reduced in size by quartering according to Method...’

### Kansas

Comments from ballot	QAC response
6.1. Since we are going to active tense, change "When additional tests are to be conducted" to "When conducting additional tests" Also, keep the "for" in the last sentence.	Revised
10.1. Remove "either" and the first "or"	Revised
10.1.1.2. Keep it at three times, it's adequate. The minimum of four times is only for rolling the aggregate on a tarp	The QAC is willing to remove this recommendation.
10.1.1.3. Keep "so that each quarter sector of the resulting pile will contain the material originally in it."	The QAC will leave this statement in the WAQTC proposal.  Revised, ‘Carefully flatten the conical pile to a uniform thickness with a diameter

	approximately four to eight times the thickness...’
10.1.2.1. change to read "place the field sample on a tarp and mix with ..."	Revised
10.1.2.3. applies only to the rolling method in 10.1.2.2. and thus, should be numbered as 10.1.2.2.1.	Revised
Renumber the rest of the section accordingly.	Revised
The "Remove and set aside" paragraph should have its own paragraph number.	Section 10.1.2.6 now says, ‘Remove two diagonally opposite quarters...’ Section 10.1.2.7 says, ‘if necessary, repeat...’
The new verbiage now requires the "back-half" to be set aside where it was optional before.	Took out ‘and set aside’ added back, ‘The unused quarters may be set aside for later use and testing.’
10.1.3. You are eyeballing the amount of material being removed from the quarter section. You say to remove an equal portion, but that will never be equal. You have biased the sample. Do not recommend adding this procedure to R 76.	Add ‘approximately’ in Sections 10.1.3.7, 10.1.2.5, 10.1.2.5.2, and 10.1.3.4.
12.1. Keep it at three times as this is adequate.	Leave at three.

## Mississippi

Comments from ballot	QAC
Why is a distinction being made between 9.1 and 9.2, being redundant with trowels in 9.1 and 9.2 and straightedges in 9.2?	Removed trowel from Section 9.1. Section 9.2, ‘Metal straightedges:’ as a descriptor.

<p>Are we comfortable with scoops, trowels, and drywall taping knives made of plastic? If not, perhaps 9.1 should say something like: "Metal straightedge: scoop, shovel, trowel, spatula, drywall taping knife, or other appropriately similar hand tool."</p>	<p>Put metal as a descriptor for straightedges.</p>
<p>In 9.4, currently the tarp is implied to be rectangular. Now any shape tarp is allowable. Is a change in tarp shape acceptable? If the tarp is not implied as being required to be rectangular, now it is allowed to be circular, and has no corners to pull in 10.1.2.2 and 10.1.2.3.</p>	<p>Added rectangular.</p>
<p>Just changing one method so that it is like another method doesn't seem sufficient reason for making the change from "at least 3" to "at least 4" in 10.1.1.3. Why is making one method like another method sufficient for making the change? Since the tarp was implied to be rectangular, this made the "at least 4" roll requirement sensible, one roll for each corner per 10.1.2.2. Adding a sample flipping to mimic the tarp seems ungrounded.</p>	<p>Three reinstated</p>
<p>Perhaps 10.1.1.6 should say, "Repeat Sections 10.1.1.2 through 10.1.1.5 as often as necessary to obtain the required test sample size." or "If necessary to obtain the required test sample size, repeat Sections 10.1.1.2 through 10.1.1.5 as often as required."</p>	<p>Proposing:  ‘10.1.1.6. If necessary, repeat Sections 10.1.1.2 through 10.1.1.5 until the required sample size is obtained (see Figure 4).’</p>
<p>Perhaps 10.1.2.3 should say "...rolled at least four times and until it is thoroughly mixed..."</p>	<p>Added, ‘Roll the material at least four times until it is thoroughly mixed.’ in Section 10.1.2.2  ‘Pull each corner of the tarp...’ is now Section 10.1.2.3</p>
<p>Also, the previous figure showed the corners being simultaneously pulled up, towards the center of the tarp, and towards each corner's diagonally opposite corner. The proposed figure shows two corners being pulled up and towards their two other adjacent corners. This will not form the required cone.</p>	<p>The QAC recommends that the figure be revised.</p>
<p>10.1.2.8 - change "required sample size" to "required test sample size"</p>	<p>Revised here and in Section 10.1.1.6</p>

<p>If 10.1.3 is going to be added, why not also allow a template which divides the sample in quarters and eighths?</p>	<p>Added template to Section 10.1.1.3</p> <p>Need more information to fully address this.</p>
<p>12.1 - if all the paragraphs in 10 are broken out into individual Sections, why was this not?</p>	<p>Recommended breaking the paragraph into steps.</p>
<p>Ditto on adding an additional pile flipping from 3 to 4 being ungrounded</p>	<p>Leave at 3.</p>

**Florida**

<p>Two apparent problems in steps 5, 6, and 7 of 10.1.3</p> <ol style="list-style-type: none"> <li>1. Difficulty in getting a clean separation</li> <li>2. Difficulty in duplicating the cut proportion in the opposite quarter</li> </ol>	<p>Section 10.1.3 is intended for Fine aggregate which can only be quartered at SSD or wetter. See ‘<b>General Correction.</b>’</p> <p>All 'equals' are approximate.</p>
<p>In 10.1.1.2, no data have been provided to justify the change from mixing the sample three times to four times. Until a proven need is provided, it is also an added burden to the health and safety of the technicians</p>	<p>Leave at 3.</p>
<p>The perceived purpose of the Reduction by Apex method in 10.1.3 is to create a short-cut to attain the final, smaller portion of sample for a test. If the technician followed the procedure and performed a subsequent split of two opposing corners with the quartering device, then this could be done in a reasonably equivalent amount of time. The rationale for introducing this new method is that asphalt technicians do this. However, asphalt and granular non-cohesive aggregate do not behave the same.</p>	<p>The intent is to be able to obtain a representative specific sample size, such as required in T 84, which has a tolerance for sample size, with minimum manipulation. See ‘<b>General Correction.</b>’</p>
<p>10.1.1.3 Correct to "Carefully flatten the conical pile to a uniform thickness and diameter of approximately four to eight times the thickness."</p>	<p>Revised, ‘Carefully flatten the conical pile to a uniform thickness <b>with a</b></p>

	diameter approximately four to eight times the thickness...'
The new figures are great but the angle of repose of the conical stockpiles is misleadingly steep and should be reduced to represent a true sample.	The QAC feels that as a representation of a cone the Figures are adequate.

Other comments with Affirmative votes:

<p><b>Arizona:</b></p> <p>Revisions look good. As long as the references to the figures are accurate.</p> <p>Section 10.1.3.8 Continue using the apex method with the unused portion of the material until samples have been obtained for all required tests (see Figure 6).</p> <p>Comments: The figure below section 10.1.3.8 is accurate and shows the apex method. However, if you go to Figure 6 -Reduction by Apex Method, it shows something different, then the Apex Method. The reference to "Figure 6" needs to be accurate. There are conflicting images.</p>	The conflicting images are redlined struck-out images.
<p><b>Georgia:</b></p> <p>Straightedges: metal spatulas, trowels, metal straightedges, or drywall taping knives. "Metal straightedges" should be removed/deleted from Section 9.2, since metal straightedge is a tool used for drawing straight lines, or checking their straightness, NOT a flatten spatulas or towel.</p>	Addressed with Mississippi's comments.
<p><b>South Carolina:</b></p> <p>4.2, In the last sentence, it looks like the word "sample" should be added at the end of the sentence.</p> <p>6.1: I think the last sentence should read "Use similar procedures for aggregate produced in the laboratory."</p>	Revised  Revised
<p><b>Tennessee:</b></p> <p>Vote affirmative, as a suggestion, in section 10.1.2.3 maybe add language that states, "as close to a conical pile as possible."</p>	QAC did not recommend any action on this.