

# WAQTC QAC COMMITTEE MEETING MINUTES

**CHAIR:** GARTH NEWMAN, ITD  
**RECORDER:** DESNA BERGOLD, D B CONSULTING

**DATE:** JAN. 30<sup>TH</sup> THROUGH FEB. 3<sup>RD</sup>  
**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:** ELDORADO, RENO, NV

**ATTENDEES:**  
GARTH NEWMAN, ITD                      SEAN PARKER, ODOT  
DAN GETTMAN, AKDOT &                GILBERT ARREDONDO,  
PF    UDOT  
CHRISTOPHER P. RUSSELL,            **GUEST:**  
CDOT                                        SONYA PUTERBAUGH,  
MISTY MINER, MDOT                    AASHTO RESOURCE  
RANDY MAWDSLEY,  
WSDOT

**ABSENT:**  
KEVIN BURNS, WSDOT  
MEGAN CHATFIELD, WFL-FHWA  
BRIAN IKEHARA, HDOT

## MEETING ITEMS:

REVIEWS OF AASHTO REVISIONS AND QAC PROPOSED REVISIONS FOR EACH PROCEDURE

1. Revisions to Embankment/Base and In-Place Density Test Methods
  - a. T 255, Moisture Content of Aggregate
  - b. T 265, Moisture Content of Soil
  - c. T 99, Moisture/Density Relations
  - d. T 180, Moisture/Density Relations
  - e. R 75, Developing a Family of Curves
  - f. T 272, One-Point Method
  - g. T 85,  $G_{sb}$
  - h. T 310, In-place Density and Moisture Content of Soil-Aggregate
  - i. T 355 In-place Density of Asphalt
2. Revisions to Concrete Test Methods
  - a. Vibrator vpm consistent in all test methods – 2017 Summer Meeting
  - b. R 60, Sampling Concrete
  - c. T 309, Temperature
  - d. T 119, Slump
  - e. T 121, Density
    - i. Does not require striking the sides of the mold when vibrating – Misty
    - ii. Vibrator requirements 117 Hz [7000 vibrations per min] or greater
  - f. T 152, Air Content
    - i. Does not require striking the sides of the mold when vibrating – Misty
    - ii. Vibrator requirements - As described in R 39
  - g. T 23, Test Specimens
    - i. Does require striking the sides of the mold when vibrating – Misty
    - ii. Vibrator requirements - 9000 vibrations per minute (150 Hz)
  - h. T 39, Making and Curing Concrete Test Specimens in the Lab – 2017 Summer meeting
    - i. Add Super Air Meter – Dan
    - ii. Modify 6.2.2.2 to allow fine material to be at 6% moisture

- i. T 22, Compressive Strength of Cylindrical Concrete – tolerance for test age – 2017 Summer meeting
- 3. Revisions to Aggregate Test Methods
  - a. T 2, Sampling Aggregate
  - b. R 76, Reduction
  - c. T 255, Moisture Content of Aggregate
  - d. T 11, Washing
    - i. Outstanding from 2015 – Garth was on Task Force
  - e. T 27, Sieve Analysis
    - i. Move adequacy of sieving and overloading to Annex
  - f. T 335, Fractured Particles
  - g. T 176, Sand Equivalent
- 4. Revisions to Asphalt AASHTO Test Methods
  - a. T 168, Sampling HMA
  - b. R 47, Reducing Asphalt Mixtures
    - i. Max temperature to heat equipment – 2017 Summer meeting
  - c. T 329, Moisture Content
  - d. T 308, Asphalt Content
  - e. T 209,  $G_{mm}$
  - f. T 166,  $G_{mb}$
  - g. R 66, Sampling Asphalt Material
  - h. T 30, Sieve Analysis
    - i. Sieving efficiency and overloading as annex – 2018 Summer meeting
  - i. T 312, Gyrotory
  - j. R 35, Superpave Volumetric Design
- 5. Other AASHTO:  
WAQTC ISSUES
- 6. Copy Right on PowerPoints – Garth
- 7. Process for seeking WAQTC support in AASHTO revisions – Board fall teleconference
- 8. Members interested in revising T 344 – Garth
- 9. Members interested in revising T 167 and T 283 – Garth
- 10. Revisions to Admin manual
  - a. LMS revisions
  - b. Performance exam revisions
- 11. Admin Manual notification time frame conflict – Garth
- 12. Operations Manual
  - a. Reciprocity Questionnaire
- 13. Archiving historical documents – Garth to send hard copies to Brad Neitzke and disks to Desna Bergold
- 14. Report from Executive Board meetings – Garth Newman
  - a. Definition of ‘performance samples’ for Admin Manual
  - b. Revisions to bylaws
- 15. Self-consolidating Concrete (SCC) module workplan – Executive Board
- 16. CCRL Aggregate requirement – Dan Gettman
- 17. Asphalt Mixture mixing SOP
- 18. Review of AASHTO methods to present to the Board
- 19. Revise common Asphalt I & II documents to have both in the header – Garth
- 20. Remove fineness modulus from the FOP for T 27/T 11 – 2017 Summer meeting
- 21. FOP for T 27/T 11 – reformatting gradation example tables – 2017 Summer meeting
- 22. Performance exam checklists, highlighted short forms – 2017 Summer meeting

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
WELCOME	<p>Garth Newman, ITD and Qualification Advisory Committee (QAC) Chair, welcomed the committee members to Reno. Garth introduced the guest from AASHTO Resource, Sonya Puterbaugh, then asked everyone to introduce themselves.</p> <p>Desna Bergold, D B Consulting, verified that all attendees had received and downloaded the most recent agenda and working documents.</p>	
EMBANKMENT/BASE AND IN-PLACE DENSITY RELATED TEST METHODS		
T 265	<p><i>AASHTO T 265; Laboratory Determination of Moisture Content of Soils</i></p> <p><i>No proposed revisions to the AASHTO method.</i></p>	
T 99 AND T 180	<p><i>AASHTO T 99, Moisture-Density Relations of Soils Using a 2.5-kg (5.5-lb) Rammer and a 305-mm (12-in.) Drop and 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>Revisions to these methods are being balloted on AASHTO Committee on Materials and Pavement (COMP) Ballot 3 to remove the 2-inch sieve equipment.</p> <p><u>Status of previous proposals</u></p> <p>WAQTC proposed revisions to this method in 2016. The revisions proposed were deemed editorial at the 2016 AASHTO SOM (now COMP) Annual Meeting but have not been included in any updates.</p> <p>Garth has spoken to Lyndie Blackburn, Technical Section (TS) 1b Chair. Lyndie committed to follow up on these revisions.</p> <p><u>Discussion item</u></p> <p>Sonya asked how WAQTC addressed an issue that AASHTO Resource and their inspectors have noticed. In both T 99 and T 180, the apparatus section lists an extruder, but they do not discuss its use in the body. The committee reviewed the methods and determined that an extruder is not always required, at times material is easily removed from the mold. The committee also indicated that often the material is not cohesive enough to create ‘cut faces,’ the method should address obtaining a sample under</p>	

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	<p>these circumstances. Language was devised to address these scenarios for the methods.</p> <p>Sonya found out that Brian Johnson, AASHTO Resource, was also working on this issue. Garth suggested that revised language be given to Sonya to discuss with the rest of Resource.</p> <p>Sonya will let the committee know if Resource will propose the language developed in this meeting.</p> <p><i>Sonya Puterbaugh will discuss revisions with Resource and inform the committee of the outcome.</i></p>	SONYA PUTERBAUGH
R 75	<p><i>AASHTO R 75; Developing a Family of Curves</i></p> <p><i>No proposed revisions to the AASHTO method.</i></p>	
T 272	<p><i>AASHTO T 272; One-Point Method for Determining Maximum Dry Density and Optimum Moisture</i></p> <p><u>Status of previous proposals</u></p> <p>WAQTC proposed revisions to this method in 2017. These revisions are being concurrently balloted (both COMP and TS) on Ballot Number 3. These revisions add a new section to instruct the user how to handle oversized particle corrections.</p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	
T 85	<p><i>T 85, Specific Gravity of Coarse Aggregate</i></p> <p><i>No proposed revisions to the AASHTO method.</i></p>	
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><i>No proposed revisions to the AASHTO method.</i></p>	
T 355	<p><i>T 355; In-place Density of Asphalt Mixtures by Nuclear Methods</i></p> <p><u>Status of previous proposals</u></p> <p>WAQTC proposed revisions to this method in 2017. These revisions are being concurrently balloted on Ballot Number 3. These revisions allow a thin-lift gauge as an alternate device and adds a third method to place the gauge parallel to the direction of</p>	

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	<p>traffic and perform a four-minute reading in the back-scatter mode.</p> <p><i>No new proposed revisions to the AASHTO method.</i></p>	
CONCRETE TEST METHODS		
R 60	<p><i>R 60; Sampling Freshly Mixed Concrete</i></p> <p><i>No proposed revisions to the AASHTO method.</i></p>	
T 309	<p><i>T 309; Temperature of Freshly Mixed Hydraulic Cement Concrete</i></p> <p><i>No proposed revisions to the AASHTO method.</i></p>	
T 119	<p><i>T 119, Slump of Hydraulic Cement Concrete</i></p> <p><u>Status of previous proposals</u></p> <p>WAQTC proposed revisions to this method in 2017. These revisions were concurrently balloted on Ballot Number 1.</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>Revision discussion</u></p> <p>The 2017 revisions to <i>T 23; Making and Curing Concrete Test Specimens in the Field</i>, changed the vibrator requirements from at least 117 Hz [7000 vibrations per min] to 9000 vibrations per minute (150 Hz). This requirement was not consistent throughout the related methods. WAQTC will propose revising the vibrator requirements in T 121 to match T 23.</p> <p><u>Revision proposal</u></p> <ul style="list-style-type: none"> <li>• Revise vibrator requirements in apparatus to match T 23.</li> </ul> <p><i>Revisions to T 121 will be presented to the Executive Board for approval and submittal to AASHTO.</i></p>	GARTH NEWMAN

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
T 152	<p><i>T 152; Air Content of Freshly Mixed Concrete by the Pressure Method</i></p> <p><u>Revision discussion</u></p> <p>The vibrator requirements in this method reference <i>R 39, Making and Curing Concrete Test Specimens in the Laboratory</i>. The committee decided that the actual requirements should be in the method. As the requirements are the same in T 23 as in R 39, WAQTC will propose revising the vibrator requirements in T 152 to match T 23.</p> <p><u>Revision proposal</u></p> <ul style="list-style-type: none"> <li>• Revise vibrator requirements in apparatus to match T 23.</li> </ul> <p><i>Revisions to T 152 will be presented to the Executive Board for approval and submittal to AASHTO.</i></p>	GARTH NEWMAN
T 23	<p><i>T 23; Making and Curing Concrete Test Specimens in the Field</i></p> <p><u>Discussion item:</u></p> <p>Dan Gettman, AKDOT &amp; PF, said that believes that to fill the mold with Self-Consolidating Concrete (SCC) it should be filled in a single pour from a container. Misty Miner, MDT, and Chris Russell, CDOT, emailed Eric Prieve, CDOT, ACI rep. Eric responded that <i>ASTM C1758, Fabricating Test Specimens with Self-Consolidating Concrete</i> indicates that the ‘pouring vessel’ can be refilled multiple times.</p> <p>Garth spoke to Ben Graybeal, AASHTO Infrastructure Research and Development, who said that he has never had this come up.</p> <p><u>Revision discussion</u></p> <p>Sonya pointed out that in apparatus, 5.4 Tamping Rods, the maximum length for the tamping rod is 24 in., in Table 1 the largest rod goes to 26 in. The Table should be changed to match. The committee agreed.</p> <p>The committee also indicated that this method is actually a practice and should be revised to an R standard.</p>	

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
	<p><u>Revision proposal</u></p> <ul style="list-style-type: none"> <li>• Correct tamping rod length in Table 1</li> <li>• Revise to an ‘R’ practice</li> </ul> <p><i>Revisions to T 23 will be presented to the Executive Board for approval and submittal to AASHTO.</i></p>	GARTH NEWMAN
R 39	<p><i>R 39, Making and Curing Concrete Test Specimens in the Laboratory</i></p> <p><u>Revision discussion</u></p> <p>In reviewing T 23, the committee also reviewed R 39. Misty, Dan, and Gilbert Arredondo, UDOT, volunteered to have their agency’s experts review it and send the comments to Desna to draft revisions.</p> <p>MDT requested that provisions be added to use this practice on SCC including the additional tests that are performed on SCC: T 347, T 345, and T 351.</p> <p>AKDOT wants to add determining air content using the Super Air Meter and the correlating method, TP 118.</p> <p>There are other revisions proposed to comply with AASHTO Style Manual and T 23.</p> <p><u>Revision proposal</u></p> <ul style="list-style-type: none"> <li>• Add SCC steps and test method apparatus and references.</li> <li>• Add Super Air Meter apparatus and test method reference.</li> <li>• Revisions in apparatus to match T 23.</li> <li>• Reference in preparation of materials, 6.3 Aggregates to T 27 when discussing separating in to individual size fractions.</li> <li>• Move ‘buttering’ mixer from Note 14 to a step.</li> <li>• Revise Note 13 and add to Step 7.1.2.2.</li> <li>• Remove ‘Placing’ section to ‘Casting Specimens’ section revised from T 23.</li> <li>• Add Table for ‘Method of Consolidation Requirements.’</li> <li>• Add section for specimen ‘Identification’ from T 23.</li> </ul>	

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
	<ul style="list-style-type: none"> <li>Remove reference to cardboard molds, they are not allowed in M 205.</li> <li>Remove “Precision and Bias” statement, this is a practice, the precision and bias statement is repeated from the test methods it references.</li> <li>Reverse US Customary units and SI units to meet AASHTO Style Manual.</li> </ul> <p><i>Revisions to R 39 will be presented to the Executive Board for approval and submittal to AASHTO.</i></p>	GARTH NEWMAN
T 22	<p><i>AASHTO T 22; Compressive Strength of Cylindrical Concrete Specimens</i></p> <p><u>Discussion Item</u></p> <p>The 2017 revisions to this test method included a plus and minus on all the test ages, before this revision the plus and minus was only on the 12 and 24-hour test ages the rest were silent. Some agencies interpreted this to mean the tolerance was only a plus. Garth originally thought that this would pose a problem for ITD, but they are working through the issue.</p> <p>Sonya was asked how Resource interpreted the table. She contacted Casey Soneira, AASHTO Resource, who indicated they have always interpreted the table as plus and minus throughout. ASTM is currently plus or minus.</p> <p><i>Discussion item, no action necessary.</i></p> <p><i>No proposed revisions to the AASHTO method.</i></p>	
AGGREGATE TEST METHODS		
T 2	<p><i>AASHTO T 2; Sampling of Aggregates</i></p> <p><u>Status of previous proposals</u></p> <p>WAQTC proposed a new ‘A’ practice, wholly owned by AASHTO, to replace the ‘C’ method owned by ASTM, in 2016. The proposal was balloted in the TS and there were many comments. WAQTC reworked the new practice and resubmitted.</p>	

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
	<p>The revised new practice is a COMP ballot item on Ballot No. 3.</p> <p><i>Discussion item, no action necessary.</i></p>	
R 76	<p><i>R 76; Reducing Samples of Aggregate to Testing Size</i></p> <p><i>No proposed revisions to the AASHTO practice.</i></p>	
T 255	<p><i>T 255, Total Evaporable Moisture Content for Aggregates</i></p> <p><i>No 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>Status of previous proposals</u></p> <p>WAQTC proposed revisions to this method in 2015 addressing the automatic washer. A Task Force was formed to consider the issue in depth. Garth is a member of the Task Force.</p> <p>Garth submitted the Task Force's proposal to Scott Seiter, TS 1c Chair in July. Garth indicated this was discussed during the 2017 Annual Meeting and is on the mid-year meeting as an upcoming TS ballot.</p> <p><i>Discussion item, no action necessary.</i></p> <p><i>No 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>Revision discussion</u></p> <p>During the 2017 Summer meeting, the committee decided that discussions of overloading sieves, shaker time, and sieving efficiency would be better addressed in Annexes. Desna was asked to draft these revisions for review at this meeting.</p> <p><u>Revision proposal</u></p> <ul style="list-style-type: none"> <li>• Moving evaluation of shaker time and sieving efficiency from Section 8.4 to Annex A1.</li> <li>• Moving sieve overloading restrictions from Section 8.3, Note 5, and Table 1 to Annex A2.</li> </ul>	

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
	<ul style="list-style-type: none"> <li>• Add references to applicable Annexes.</li> <li>• Correct verbiage in Section 8.5.</li> <li>• Matched language from T 30 where appropriate.</li> </ul> <p><i>Revisions to T 27 will be presented to the Executive Board for approval and submittal to AASHTO.</i></p>	GARTH NEWMAN
T 335	<p><i>T 335; Determining the Percentage of Fracture in Coarse Aggregate</i></p> <p><i>No 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><i>No proposed revisions to the AASHTO method.</i></p>	
T 113	<p><i>T 113; Lightweight Pieces in Aggregate</i></p> <p><u>Status of previous proposals</u></p> <p>WAQTC proposed revisions to this method in 2015. The revisions were balloted and there were some comments that needed to be addressed. Sean Parker, ODOT and QAC Vice Chair, is reworking the proposal.</p> <p>The revised new practice is a COMP ballot item on Ballot No. 3.</p> <p><i>Discussion item, no action necessary.</i></p> <p><i>No proposed revisions to the AASHTO method.</i></p>	
ASPHALT TEST METHODS		
T 168	<p><i>T 168; Sampling Bituminous Paving Mixtures</i></p> <p><u>Discussion item:</u></p> <p>Randy Mawdsley, WSDOT, presented a link to a video sent by Kevin Burns, WSDOT, of a sampling device used to obtain asphalt mixture samples from the back of a haul truck.</p> <p>The committee reviewed the video and found videos of other similar equipment.</p>	

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
	<p><u>Status of previous proposals</u></p> <p>WAQTC proposed a new ‘A’ practice, wholly owned by AASHTO, to replace the ‘C’ method owned by ASTM, in 2017. At the same time another practice was proposed with significant differences. A Task Force was created to resolve the differences and join the proposals. Scott Andrus, UDOT and WAQTC Board Treasurer, was the head of the Task Force. Scott sent the proposal to Allen Myers, TS 2c Chair, in October 2017.</p> <p><i>Discussion item, no action necessary.</i></p>	
R 47	<p><i>R 47; Hot Mix Asphalt (HMA) to Testing Size</i></p> <p><u>Revision discussion</u></p> <p>Section 8.1 allows the mechanical splitter and accessory equipment to be heated to 230 degrees F. Heating of other equipment and apparatus in other methods is not addressed. The committee feels that 230 degrees F is a low temperature when dealing with asphalt mixtures and recommends that it should read, ‘not to exceed the maximum mixing temperature.’ This should also be stated for the equipment in the other methods.</p> <p>As the WAQTC is proposing revisions to this method the committee agreed that revising HMA to asphalt mixtures should also be addressed.</p> <p><u>Revision proposal</u></p> <ul style="list-style-type: none"> <li>• Change maximum temperature for heating equipment in Section 8.1 to maximum mixing temperature.</li> <li>• Add heating of equipment to Sections 10.1 and 12.1.</li> <li>• Change HMA to asphalt mixtures throughout.</li> </ul> <p><i>Revisions to R 47 will be presented to the Executive Board for approval and submittal to AASHTO.</i></p>	GARTH NEWMAN
T 329	<p><i>T 329; Moisture Content of Hot Mix Asphalt (HMA) by Oven Method</i></p> <p><i>No proposed revisions to the AASHTO method.</i></p>	

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
T 308	<p><i>T 308; Determining the Asphalt Binder Content of Hot Mix Asphalt (HMA) by the Ignition Method</i></p> <p><u>Status of previous proposals</u></p> <p>WAQTC asked the TS to editorially change “hot mix asphalt” and “HMA” to “asphalt mixture” throughout the method in 2017. At the 2017 Annual Meeting, Allen Myers, TS 2c Chair, determined that as this would change the title of the method the revision requires balloting. The proposed revisions are on concurrent Ballot No. 3.</p> <p><i>Discussion item, no action necessary.</i></p> <p><i>No proposed revisions to the AASHTO method.</i></p>	
T 209	<p><i>T 209; Theoretical Maximum Specific Gravity (<math>G_{mm}</math>) and Density of Hot Mix Asphalt (HMA)</i></p> <p><u>Status of previous proposals</u></p> <p>WAQTC proposed extensive revisions to this method in 2014. There were quite a few comments from TS 2c members, so the Chair created a Task Force to review the proposal and address the comments. Garth is a member of the Task Force and reported on their progress to the committee.</p> <p>Garth said the task force delivered the final proposed revisions to Allen Myers, TS 2c Chair. Garth will call him and determine when it will be balloted and to whom.</p> <p><i>Garth will report on the status of this revision.</i></p> <p><i>No proposed revisions to the AASHTO method.</i></p>	GARTH NEWMAN
T 166	<p><i>T 166; Bulk Specific Gravity (<math>G_{mb}</math>) of Compacted Hot Mix Asphalt (HMA) Using Saturated Surface-Dry Specimens</i></p> <p><i>No proposed revisions to the AASHTO method.</i></p>	
R 66	<p><i>R 66; Sampling Bituminous Materials</i></p> <p><i>No proposed revisions to the AASHTO method.</i></p>	

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
T 30	<p><i>T 30; Mechanical Analysis of Extracted Aggregate</i></p> <p><u>Revision discussion</u></p> <p>During the 2017 Summer meeting the committee decided that discussions of overloading sieves, shaker time, and sieving efficiency would be better addressed in Annexes. Desna was asked to draft these revisions for review at this meeting.</p> <p>Garth pointed out that when a revision to the automatic washer is addressed in T 11, T 30 should be revised to match.</p> <p><u>Revision proposal</u></p> <ul style="list-style-type: none"> <li>• Moving evaluation of shaker time and sieving efficiency from Section 8.4 to Annex A1.</li> <li>• Moving sieve overloading restrictions from Section 8.3, Note 5, and Table 1 to Annex A2.</li> <li>• Add references to applicable Annexes.</li> <li>• Correct verbiage in Section 8.5.</li> <li>• Match language in T 27 where appropriate.</li> </ul> <p><i>Revisions to T 30 will be presented to the Executive Board for approval and submittal to AASHTO.</i></p>	GARTH NEWMAN
T 312	<p><i>T 312; Preparing and Determining the Density of Asphalt Mixture Specimens by Means of the Superpave Gyrotory Compactor</i></p> <p><i>No proposed revisions to the AASHTO method.</i></p>	
R 35	<p><i>R 35; Superpave Volumetric Design for Asphalt Mixtures</i></p> <p><i>No proposed revisions to the AASHTO method.</i></p>	
OTHER AASHTO		
R 18	<p><i>R 18, Establishing and Implementing a Quality Management System for Construction Materials Testing Laboratories</i></p> <p><u>Status of previous proposals</u></p> <p>WAQTC proposed revisions to this method in 2017. The proposed revisions were on concurrent Ballot No. 1.</p>	

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
	<i>Discussion item, no action necessary.</i>	
R 25	<p><i>R 25, Technician Training and Qualification Programs</i></p> <p><u>Information item</u></p> <p>Revisions to this practice were on COMP Ballot 1.</p> <p><i>Discussion item, no action necessary.</i></p>	
R 89	<p><i>R 89, Accreditation Bodies Operating in the Fields of Construction Materials Testing and Inspection</i></p> <p><u>Information item</u></p> <p>This practice has recently been accepted and will fall under TS 5c, Quality Assurance and Environmental. Sonya provided a 'Review Only' copy for meeting attendees.</p> <p><i>Discussion item, no action necessary.</i></p>	
WAQTC ISSUES		
COPY RIGHT ON POWERPOINTS	<p>The WAQTC PowerPoint Presentations do not have a copyright statement on them. Garth suggested that even though the presentations are only for member agency use, it may be a good idea to include a statement. The committee agreed and determined that the first slide of the Quality Assurance presentation (the first presentation in all modules) should have the statement.</p> <p><i>Desna will include this slide in all modules in the 2018 Training Materials update.</i></p>	DESNA BERGOLD
REVISIONS TO ADMIN MANUAL	<p>During the Executive Board Fall Teleconference, the Board approved revisions to the <i>WAQTC TTQP Administration Manual</i>.</p> <p>The first revision is to provide language that allows UDOT to administer the written exams online through their LMS.</p> <p>The other revision is to allow a combination of performance samples and direct oversight for performance exams. This revision was approved with a follow up to be developed to address a definition of "performance sample" and interpretation of test results.</p>	SEAN PARKER

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
	<p>Sean Parker, ODOT and QAC Vice Chair, Mike San Angelo, AKDOT &amp; PF, and Garth are developing this additional criterion.</p> <p><i>Sean Parker, Garth Newman, and Mike San Angelo will continue to work on this.</i></p>	<p>GARTH NEWMAN</p> <p>MIKE SAN ANGELO</p>
OPERATIONS MANUAL	<p>During the Executive Board Fall Teleconference, the Board approved three new pieces of the <i>Operations Manual</i>:</p> <ul style="list-style-type: none"> <li>• Examiner Orientation</li> <li>• Process for Revision Proposals to AASHTO</li> <li>• Reciprocity Questionnaire.</li> </ul> <p>The Examiner Orientation was developed by the QAC and approval had been pending a revision to the <i>Administration Manual</i>.</p> <p>The Process for Revision Proposal that Desna developed was approved for inclusion in the Operations Manual. Mike San Angelo will put together a process flowchart that will also be included.</p> <p>The Reciprocity Questionnaire that the member agencies completed in 2016 is included and will be distributed every three years to comply with the <i>TTQP Operational Agreement</i>.</p> <p><i>Discussion item, no further action required.</i></p>	
T 344	<p><i>T 344, Evaluation of Superpave Gyratory Compactor (SGC) Internal Angle of Gyration Using Simulated Loading</i></p> <p>Garth is seeking assistance in revising this method in accordance with the new Process for Revision Proposals to AASHTO.</p> <p>He has noticed issues with how the method is written. The method includes instruction for both the SAV and RAM units but is difficult to decipher. For example, the term Static Angle Gauge, Section 7.1.4, is not consistently used throughout so the reader is forced to infer later discussions on its use.</p> <p>Section 9, <i>Calibration and Standardization</i>, discusses verification and calibration, or both, each of these terms have</p>	<p>GARTH NEWMAN</p> <p>KEVIN BURNS</p>

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
	<p>specific meaning in R 18 and their usage here does not appear to agree with those definitions.</p> <p>Garth has already done some research on this method and would like to know if any other member agency would like to assist in developing a revisions proposal as this method affects all member agency's that use Superpave.</p> <p>Randy called Kevin to see if he is interested. Kevin would like to participate in any revision effort.</p> <p>Garth said that Clint Van Winkle at Troxler volunteered to help,</p> <p>Garth and Kevin will get a draft revision done and bring it back.</p> <p><i>Garth Newman and Kevin Burns will draft revisions to T 344 to present to the QAC.</i></p>	
T 167 AND T 283	<p><i>T 167, Compressive Strength of Hot-Mix Asphalt</i></p> <p><i>T 283, Resistance of Compacted Asphalt Mixtures to Moisture</i></p> <p>Garth asked if any member agencies would be interested in efforts to revise these test methods.</p> <p>No other agency uses T 167, Garth will work on this for ITD.</p> <p>T 283 is referenced in <i>M 323, Superpave Volumetric Mix Design</i>. Garth pointed out that T 283 is not in step format. The paragraph formatting is difficult to follow and in places has information later in the method that is required earlier in the method.</p> <p>Gilbert Arredondo, UDOT, said that their Superpave training materials once had a Field Operating Procedure (FOP) based on the AASHTO method. He volunteered to send this to Garth as a starting point for the step revisions. Sean volunteered to help review revisions.</p> <p><i>Garth Newman will draft revisions to T 283 with Gilbert Arredondo and Sean Parker's assistance.</i></p>	<p>GARTH NEWMAN</p> <p>GILBERT ARREDONDO</p> <p>SEAN PARKER</p>

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
TRAINING MATERIALS UPDATE PROCESS	<p>There were some issues with the most recent training materials update process. Concern about being unable to make late revisions that were not discussed during the Summer meeting. The process and dates for revisions has not been formally documented but Garth has been following the same process since the committee has grown beyond just he and Sean.</p> <p>Garth documented the process he has been following and presented it to the committee for discussion. He emphasized that the committee should determine if the process should be revised to meet current needs.</p> <p>The committee discussed the ramifications of trying to address content revisions after the July meeting. The committee decided that the July meeting should be the final date for content revisions and further defined that the draft review is strictly for identifying errors and omissions of the approved revisions in the draft materials.</p> <p>Randy suggested that as the process has overlapping dates, a graph similar to a baseline schedule would be useful.</p> <p>The committee identified a conflict in the Organizational documents. The <i>Operational Agreement</i> states that the final training materials are incorporate into the TTQP by October 15<sup>th</sup>. The <i>Administration Manual</i> says the training materials are to be incorporated into the Agency's materials by Oct. 1. The committee determined that they will propose a revision to the <i>Operational Agreement</i> to match the <i>Administration Manual</i> and current practice.</p> <p><i>Desna will develop a baseline schedule type graph from the Training Materials Update Process.</i></p> <p><i>Request the Board review the Training Materials Update Process and subsequent graph for inclusion in the Operations Guide.</i></p> <p><i>Request the Board revise the training material update deadline in the Operational Agreement to match in the Administration Manual.</i></p>	<p>DESNA BERGOLD  GARTH NEWMAN</p>

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
WAQTC CALENDAR OF EVENTS	<p>Desna showed the committee a WAQTC calendar of events that she developed from the WAQTC Organizational documents and current practice. She incorporated the Executive Board, TTQP QAC, and Working Committee schedules.</p> <p>The committee felt that the calendar is helpful and would like greater distribution. They also recommended developing a baseline schedule type graph.</p> <p><i>Present the WAQTC calendar of events to the Board for posting on the website.</i></p>	GARTH NEWMAN
REVISIONS TO THE WAQTC BYLAWS	<p>The committee reviewed the revisions to the Bylaws that the Board approved during the Fall Teleconference.</p> <p><i>Discussion item, no further action required.</i></p>	
ADMIN. MANUAL NOTIFICATION TIME FRAME CONFLICT	<p>The Administration Manual appears to have conflicting dates for notifying an exam participant of their results. Under ‘Participant Notification,’ it states that the Agency will notify the participant within 10 working days. Under ‘Certified Technician Registry’ the successful exam results should be logged on the registry within 5 days.</p> <p>The committee determined that these time frames should agree and would like time allowed to log successful results into the registry be 10 days.</p> <p>While reviewing the manual, the committee noticed that it said ‘a letter, or other method selected by the Agency, may serve as Certification verification . . .’ The committee will be recommending this be changed to ‘Presence on the Agency’s <b>Certified Technician Registry</b> may serve as Certification verification . . .’</p> <p>The committee also decided to remove the statement ‘Exams will be either Metric or English depending on agency standards’ from Annex A. Metric exams are no longer supported. This revision is considered editorial.</p> <p><i>These proposed revisions to the Administration Manual will be presented to the Board.</i></p>	GARTH NEWMAN

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
ARCHIVING HISTORICAL DOCUMENTS	<p>Garth will eventually send the materials needing to be scanned for the archive to Brad Nietzke, WFL, and send the old training CDs to Desna for upload.</p> <p><i>Garth will work with Brad and Desna on the hard copies and disks. The QAC will review and make recommendations.</i></p>	GARTH NEWMAN
ASPHALT I & II HEADER	<p>Currently all the FOP files that are common to Asphalt I and Asphalt II have 'Asphalt' in the header. The files that are unique to the manuals of each are designated with the I or II as appropriate. This has caused some confusion. The short forms of each module have different chapter numbers even though the content of many of the files are the same, the files themselves are different. Garth indicated that this has caused some confusion. He asked that all the common content have 'Asphalt' in the header. The committee agreed.</p> <p><i>Desna will change the headers of all the common FOP short forms to read 'Asphalt.'</i></p>	DESNA BERGOLD
REMOVE FINENESS MODULUS FROM THE FOP FOR T 27/T 11	<p>During the Summer meeting, the FOP for AASHTO T 27/T 11 was revised. There was some discussion about removing the section on Fineness Modulus. Sean, who was not in attendance, asked that it remain in the FOP, via email. The committee felt that this should be discussed again in person.</p> <p>Both Dan and Sean indicated that their agencies used Fineness Modulus as an acceptance criterion. The committee decided to leave the section in the FOP.</p> <p><i>No action required.</i></p>	
FOP FOR T 27/T 11 – REFORMATTING GRADATION EXAMPLE TABLES	<p>During the summer meeting, Gilbert recommended a revision to the example gradation tables to include the calculation performed. The committee determined that this would be a major change and wanted to review a mock up.</p> <p>Desna was asked to draft all the tables with the calculation and distribute the example for comment. The committee approved the draft tables for inclusion in the FOP for 2018.</p> <p><i>Desna will include the revised example tables in the Draft training materials for final approval at the 2018 Summer meeting.</i></p>	DESNA BERGOLD

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
PERFORMANCE EXAM CHECKLISTS, HIGHLIGHTED SHORT FORMS	<p>During the summer meeting, the members were asked to highlight the important points of each FOP and review the Performance Exam Checklists. The objective is to identify the subject of new written exam questions and ensure the Performance Exam Checklists are complete.</p> <p>Due to some confusion and deadline conflicts, this assignment was only partially completed.</p> <p>The committee discussed the intent of the activity and determined that they would complete the comparison of important points in the FOP and the Performance Exam Checklists. Highlighting the FOP is not necessary.</p> <p>The revision review assignments are as follows:</p> <p style="padding-left: 40px;">EB/DTT: Chris Russell and Dan Gettman</p> <p style="padding-left: 40px;">Concrete/General: Garth Newman and Megan Chatfield</p> <p style="padding-left: 40px;">Aggregate: Kevin Burns and Misty Miner</p> <p style="padding-left: 40px;">Asphalt: Gilbert Arredondo and Sean Parker</p> <p>Those that have not completed their assignment agree to have it complete by April 30<sup>th</sup>.</p> <p><i>Committee members will complete the review of the Performance Exam Checklists by April 30<sup>th</sup>.</i></p>	QAC MEMBERS
EXAM DISCUSSION	<p>Sonya asked if WAQTC considers the minimum requirements for exams outlined in <i>ASTM D3740, Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction; D3666, Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials; and E329, Agencies Engaged in Construction Inspection, Testing, or Special Inspection.</i></p> <p>The committee expressed interest in these requirements and may consider adopting some of them to maintain the exam quality.</p> <p>Desna was asked to develop a list of the requirements in these specifications for the committee's consideration. Sonya offered</p>	



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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
SCC MODULE WORKPLAN	<p>Would the SCC module be a stand-alone qualification or part of the existing Concrete Testing Technician (CTT) module?</p> <p>Garth said that SCC should be a stand-alone module. Misty indicated that MDT would probably do CTT and SCC together anyway. The committee determined that if SCC is its own qualification then a CTT qualification needs to be a prerequisite. They also agreed that a synopsis of how SCC is handled in the CTT methods should be included in the SCC module.</p> <p>There was some concern about how a CTT prerequisite would affect American Concrete Institute Concrete Field Technician Grade I (ACI-CFT) reciprocity. A review of the ASTM methods in ACI-CFT showed that <i>C231, Air Content of Freshly Mixed Concrete by the Pressure Method</i> does not include use with SCC. Eric Prieve, CDOT ACI Rep., was emailed and he indicated that this method would soon address SCC.</p> <p>The committee also discussed whether WAQTC member agencies would be able to accept ACI's SCC qualification. Garth pointed out that the ASTMs that ACI uses for certification are not equivalent to the AASHTO methods WAQTC member agencies are using.</p> <p>The committee determined to make the following recommendations to the Board:</p> <ul style="list-style-type: none"> <li>• SCC should be a stand-alone qualification</li> <li>• CTT or ACI-CFT should be a prerequisite</li> <li>• Discuss SCC in CTT (ACI-CFT) methods in SCC training</li> </ul> <p>Garth suggested that any more effort on the SCC module work plan would need to wait until the Board had a chance to address the copyright problems.</p> <p><i>Garth Newman will discuss the AASHTO copyright issues for the SCC module with the Executive Board before and during the Spring Meeting.</i></p> <p><i>Garth Newman will present the committee's recommendations to the Executive Board.</i></p>	GARTH NEWMAN

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
AASHTO COPYRIGHT	<p>The concerns with AASHTO’s copyright prompted further discussion. The committee would also like the Board to address how the methods that WAQTC developed and AASHTO adopted are considered. WAQTC still has training materials for many of them. WAQTC has not obtained express permission to use these AASHTO methods because the methods are WAQTC’s intellectual property.</p> <p>The methods WAQTC developed for AASHTO are:</p> <ul style="list-style-type: none"> <li>• R 64, Sampling and Fabrication of 50-mm (2-in.) Cube Specimens Using Grout (Non-Shrink) or Mortar</li> <li>• R 67, Sampling Asphalt Mixtures after Compaction (Obtaining Cores)</li> <li>• R 75, Developing a Family of Curves</li> <li>• T 308, Determining the Asphalt Binder Content of Hot Mix Asphalt (HMA) by the Ignition Method</li> <li>• T 309, Temperature of Freshly Mixed Portland Cement Concrete</li> <li>• T 310, In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)</li> <li>• T 329, Moisture Content of Asphalt Mixtures by Oven Method</li> <li>• T 335, Determining the Percentage of Fracture in Coarse Aggregate</li> <li>• T 355, Test for In-Place Density of Asphalt Mixtures by Nuclear Methods</li> </ul> <p>There may soon be three more:</p> <ul style="list-style-type: none"> <li>• R XX, Sampling of Aggregate Products</li> <li>• R XX, Sampling of Asphalt Mixtures</li> <li>• R XX, Determining Constant Mass</li> </ul> <p>There also many methods WAQTC revised for AASHTO.</p> <p><i>Garth Newman will present the QAC’s concerns to the Executive Board.</i></p>	GARTH NEWMAN
	<p>Mike San Angelo asked the QAC to discuss whether the WAQTC should develop training materials and certify on the methods in ASTM C1077. One of his concerns seemed to be that accreditation in C 1077 was required for concrete mix designing. The committee could not find anywhere this was</p>	

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
CCRL AGGREGATE REQUIREMENT	<p>required. AASHTO R 39 had a reference to C1077 in a note as an example. The soon to be proposed revisions to R 39 will ask for that to be removed because it causes confusion.</p> <p>Dan said that AKDOT &amp; PF is getting pressure from the ACI Representative in his state to adopt ACI because of the C1077 requirement. As the committee couldn't find this requirement as it pertains to member agencies, Dan thought that is may be something related to the public facilities, including airports, that the agency oversees.</p> <p><i>Dan Gettman will follow up with Mike San Angelo and research AKDOT &amp; PF's requirements.</i></p>	DAN GETTMAN
ASPHALT MIXTURE MIXING SOP	<p>The Executive Board asked the QAC to develop a standard practice for Mixing of Asphalt Mixture Specimens in the Laboratory. Desna solicited the member agencies to provide any state-owned methods. She compared those that she received and presented the findings to the committee.</p> <p>There was discussion of how much to encompass in the practice. It was determined that although this practice could be used in conjunction with other mix designing techniques, the practice will assume the targets (job-mix formula, gradation, and asphalt binder content) are already established.</p> <p>The primary purpose of this practice will be for agencies' use during mix design verification.</p> <p>The committee began to discuss the details of the process and developed an outline (attached).</p> <p>The committee asked Desna to begin the first draft of the practice based on the methods from the member agencies she has received and distribute for comment.</p> <p><i>Desna Bergold will rough draft a standard practice for Mixing of Asphalt Mixture Specimens in the Laboratory.</i></p>	DESNA BERGOLD
	<p>During the Summer meeting, the QAC decided to begin standardizing the Humphres method. AKDOT, ITD, WSDOT, and WFL all use a variation of this method to determine in-place density of granular materials. Randy and Megan Chatfield, WFL-FHWA agreed to work on it. Randy reported on their progress.</p>	

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Topic	Discussion / <i>Decision</i>	ACTION REQUIRED BY:
REPORT ON HUMPHRES METHOD	<p>Randy met with Megan and their agencies' subject matter experts and worked through the differences among the methods.</p> <p><i>Randy Mawdsley and Megan Chatfield will continue to work on a standardized Humphres method.</i></p>	<p>RANDY MAWDSLEY</p> <p>MEGAN CHATFIELD</p>
REVIEW OF AASHTO METHODS TO PRESENT TO THE BOARD	<p>Revisions to the following methods will be presented to the Executive Board during the 2018 Spring Meeting:</p> <p><i>T 27; Sieve Analysis of Fine and Coarse Aggregates</i></p> <p><i>T 121; Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete</i></p> <p><i>T 152; Air Content of Freshly Mixed Concrete by the Pressure Method</i></p> <p><i>T 23; Making and Curing Concrete Test Specimens in the Field</i></p> <p><i>R 39, Making and Curing Concrete Test Specimens in the Laboratory</i></p> <p><i>R 47; Hot Mix Asphalt (HMA) to Testing Size</i></p> <p><i>T 30; Mechanical Analysis of Extracted Aggregate</i></p>	

## Attachment A

### Asphalt Mixtures Laboratory Prepared Test Specimens

Format – old TM or short form? Training materials? FOP library? Eventual proposal to AASHTO?

#### Aggregate preparation

- Fractionate
  - Blend the material according to stockpile percentage then fractionate
  - Fractionate the stockpile material then combine according to the percent retained and stockpile percentages
- Addressing adhering minus No. 200
  - Wash each fraction – WSDOT
  - Wash combined sample to later adjust for adhering fines – MDT
    - Batch a sample, wash to determine amount of minus #200 in final batch quantities
- Screen or sample tolerance
  - Perhaps a note
  - Check M2
- Gradation tolerance – UDOT (960), CDOT
  - Batch a gradation size sample and verify batch proportions
- Calculation and example
- Admixtures – lime – UDOT
- ~~Theoretical rejection of baghouse fines (CDOT)~~

#### Asphalt binder and aggregate mixing

- Heat aggregate and asphalt binder
- Butter batch
- Bowl and whip tolerance after butter – UDOT, CDOT (original weight)
- Asphalt binder tolerance
- RAP
- Record actual masses of aggregate and asphalt binder – UDOT
- Calculation and example – WSDOT
- Mixture conditioning – UDOT, MDT