2023 WAQTC QAC SUMMER MEETING MINUTES

DATE: JULY 17TH THROUGH 21ST

CHAIR: MISTY MINER, MDT

TIME: 1:00 TO 5:00 PM MON, 8:00 AM TO

COORDINATOR: DESNA BERGOLD, D B CONSULTING 5:00 PM TUES. THRU THUR., 8:00 AM

TO 12:00 NOON FRI MDT

LOCATION: DELTA HOTEL, HELENA, MT

ATTENDEES:

MISTY MINER, MDOT, CHAIR INVITED GUESTS:

GILBERT ARREDONDO, UDOT, VICE CHAIR OAK METCALFE, MDT AND EXECUTIVE

DAN GETTMAN, AKDOT & PF
CHRISTOPHER RUSSELL, CDOT
LORI COPELAND, ITD
BOARD MEMBER
ASHLEY HINTZ, MDT
DAVID CADEN, MDT

SHARON TAYLOR, NDDOT

ABSENT:

SEAN PARKER, ODOT,
MARK WILLOUGHBY, WSDOT
BRIAN IKEHARA, HDOT
NASSIM SABAHFAR, WFL

MEETING ITEMS:

REVIEWS OF AASHTO REVISIONS AND QAC PROPOSED REVISIONS FOR EACH PROCEDURE

- 1. MDT tour
- 2. Revisions to Embankment/Base and In-Place Density Training Materials
 - a. T 255/T 265, Moisture Content of Soil
 - i. No AASHTO revisions
 - ii. Optional steps on Performance Exam Check list Lori
 - iii. PP Slide 15 remove drying interval times, add a slide later with this information Misty (Winter)
 - iv. Terms 'interval' and 'increment' are only used in Table 3 Desna
 - v. PP revise with language from FOP Winter Meeting
 - vi. Table 3 inconsistent interval or increment for constant mass Desna
 - vii. Table 3 soils (minutes) 1 hour Desna
 - viii. More on the lid mass Misty
 - b. T 99/T 180, Moisture-Density Relations
 - i. No AASHTO revisions
 - ii. Moisture-density to match AASHTO (instead of moisture/density, etc.) Garth
 - c. R 75, Developing a Family of Curves
 - i. No AASHTO revisions
 - ii. PR one of the points needs to be moved Dan (Winter)
 - iii. Moisture-density to match AASHTO (instead of moisture/density, etc.) Garth
 - d. T 272, One-Point Method
 - i. No AASHTO revisions
 - ii. Moisture-density to match AASHTO (instead of moisture/density, etc.) Garth
 - e. T 85, G_{sb} (7/1)
 - i. AASHTO revisions
 - ii. Address aggregate that is not fully submerged Gilbert (Winter)

- iii. Significance change 'bituminous' to 'asphalt'
- f. T 310, In-place Density and Moisture Content of Soil-Aggregate
 - i. AASHTO revisions
 - ii. PP Slides 18 and 19 have repeat steps Winter Meeting
- g. T 355 In-place Density of Asphalt
 - i. AASHTO revisions
 - ii. PP Slide 18 should repeat FOP Step 5 Winter Meeting
- h. Exams
 - i. Moisture-density curve Mark
 - ii. New questions Winter Meeting
- 3. Revisions to Concrete Training Materials
 - a. TM 2, Sampling Concrete
 - i. AASHTO revisions to R 60
 - 1. New date
 - 2. Revised to harmonize with ASTM
 - 3. Added continuous mixer
 - ii. PR Steps 7 and 12 are the same Garth
 - b. T 309, Temperature
 - i. No AASHTO revisions
 - c. T 119, Slump
 - i. AASHTO revisions
 - 1. New date
 - 2. Revised to harmonize with ASTM
 - 3. Added in Section 5.1, 'The mold shall be free from dents, deformations, or adhered mortar.'
 - 4. Fixed Figure 1
 - 5. Added in Section 7.4, 'Rod the bottom layer throughout its depth.'
 - 6. Note 8 is now part of Section 7.11.3.
 - ii. FOP does not address moving the scoop around the perimeter, PR does Lori
 - iii. Step 9, 'Always keep an excess of concrete above the top of the mold.' Misty
 - d. T 121, Density
 - i. AASHTO revisions
 - 1. New date
 - 2. Revised to harmonize with ASTM
 - 3. Section 3.1.3 specific gravity of cementitious materials
 - 4. Section 4.6 mallet revision
 - 5. Section 7.3 added, 'and one stroke per 20 cm² [3 in.²] of surface for larger measures.'
 - 6. Section 7.4 Removed tapping the measure after vibrating
 - 7. Section 7.5 Defined drop height for SCC 125 mm (5 in.)
 - ii. Does not include the air content calculation Dan
 - iii. FOP strike-off and PR (Sstep 14) discrepancy Dan
 - iv. Move 'Procedure Selection' after 'Sampling' and rename to 'Consolidation Selection' Garth
 - v. Step 1 should be, 'determine mass of the "dry" empty measure' Misty
 - vi. PR appears to make optional steps mandatory Lori (Winter)
 - e. T 152. Air Content
 - i. AASHTO revisions
 - 1. New date

- 2. Remove 'rubber syringe' from 9.4.1
- 3. Added Note 12
- 4. Added precisions and bias for Type B Meter
- ii. Move 'Procedure Selection' after 'Sampling' and rename to 'Consolidation Selection' Garth
- iii. PP Slides 20 to 23 are missing Step 4 Winter Meeting
- iv. PP include all the steps for both layers and how many times the vibrator is inserted Winter Meeting
- f. R 100, Test Specimens
 - i. AASHTO revisions
 - 1. New date
 - 2. Retitle Section 8
 - ii. Reordering the FOP to better place the method of consolidation Misty
 - iii. Correct Step 6 Winter Meeting
- g. Exams
 - i. New questions Winter Meeting
 - ii. Ex 3 Q 3 and 22 Dan
 - iii. Q 30 Misty
 - iv. Specific apparatus questions Desna
- 4. Revisions to Aggregate Training Materials
 - a. R 90, Sampling Aggregate Products
 - i. No AASHTO revisions
 - b. R 76, Reduction (6/28)
 - i. AASHTO revisions
 - 1. New date
 - 2. Added sectoring and quartering template
 - c. T 255, Moisture Content of Aggregate
 - i. No AASHTO revisions
 - ii. Optional steps on Performance Exam Check list Lori
 - iii. Slide 15 remove drying interval times, add a slide later with this information Misty (Winter)
 - iv. More on the lid mass Misty
 - d. T 27/T 11, Sieve Analysis
 - i. AASHTO revisions
 - 1. New date
 - 2. T 27 Additional information in Overload Determination Annex
 - 3. T 11 Multiple sections
 - e. T 335, Fractured Particles
 - i. No AASHTO revisions
 - ii. Clearer definition of fracture criteria (also in Terminology) Sharon
 - f. T 176, Sand Equivalent
 - i. No AASHTO revisions
 - ii. PP Slides 33, 35, and 36 need to be renumbered Winter Meeting
 - g. Exams
 - i. New questions Winter Meeting
 - ii. Method C Q 9 & 10 English / metric sieve sizes reversed Mark
 - iii. Ex 1 Q 15 answers Q 10
 - iv. Ex 1 Q seems incomplete
 - v. Ex 1 Q 23 is the same as Ex 2 Q 24
 - vi. Ex 1 Q 18 s essentially the same question as Ex 3 Q 8
- 5. Revisions to Asphalt I and II Training Materials

- a. Background PP Slide 14 add scale criteria Dan
- b. R 97, Sampling Asphalt Mixtures
 - i. No AASHTO revisions
 - ii. Review Ouestions Lori
 - iii. Revisions Lori
 - iv. Apparatus should there be a separate shovel for windrow? Lori
 - v. Add sampling from a stockpile information to instructor's notes Winter Meeting
- c. R 47, Reducing Asphalt Mixtures (6/28)
 - i. AASHTO revisions
 - 1. New date
 - 2. Added sectoring
 - 3. Added quartering template
 - ii. Allow paper on surface for mixing Lori
- d. T 329, Moisture Content (6/29)
 - i. No AASHTO revisions
 - ii. Revisions to Significance Lori
 - iii. Step 4 and PR Step 3, to the nearest Lori
 - iv. Add M_i to example Lori
 - v. Add release media to example values Desna
 - vi. PR Step 6 add 'if JMF unknown' Dan
 - vii. Constant mass steps from T 255 Winter Meeting
- e. T 308, Asphalt Content
 - i. No AASHTO revisions
 - ii. Switching Steps 2 and 3 in Sample Prep Lori
 - iii. Add 'moisture free asphalt mixture' in calculations Lori
 - iv. Is Method B Step 17 necessary Lori
 - v. Add General section to include preheating the oven, remove from Procedures Winter Meeting
 - vi. Add constant mass formula in Method B Desna
 - vii. PR add step to spread material in the basket Dan
 - viii. Gilson furnace Dan
 - ix. PP Slide 46 ambiguous Dan
- f. $T 209, G_{mm} (7/6)$
 - i. AASHTO revisions
 - 1. New date
 - 2. Manometer pressure change
 - ii. Reverse order in Step 1 Lori
 - iii. Step 14a move second sentence to 13a Lori
 - iv. Annex Bowl Standardization and Check add second sentence from Step 14a Lori
 - v. Apparatus: combine two bullets on manometer Lori
 - vi. Uncoated Porous Aggregate, add 'specific gravity and in turn' Lori
 - vii. Annex A Flask Step 5 and Check Step 4 revise lid to 'cover or plate' Lori
 - viii. PR Bowl Step 14 add 'zero scale' and 'holder submerged Lori
 - ix. Add Bowl apparatus Kevin
- g. T 166, G_{mb}
 - i. No AASHTO revisions
 - ii. PR Step 2b add '5 seconds' Dan
 - iii. Note 2 appears mandatory Dan
- h. R 66, Sampling Asphalt Material
 - i. No AASHTO revisions
- i. T 30, Sieve Analysis

- i. No AASHTO revisions
- ii. Small sieve shaker from FOP is not on the PP (blurry) Dan
- iii. Procedure Step 13 should be two steps? Dan
- iv. Add 'in baskets' to definition of M_{f(T308)} in calcs Lori
- v. Review Question 1 add 'without overloading' Lori
- vi. PR Step 7, add 'reasonably' Lori
- i. T 312, Gyratory
 - i. No AASHTO revisions
 - ii. PR Step 6 'within compaction range' Lori
 - iii. PR add 'warmup gyratory' step Lori
 - iv. PR Step 2 remove 'rotating base surface and rollers' Lori
 - v. PR Step 5 add 'if needed' Lori
 - vi. PR Step 16 revise to 'Specimen height and number of gyrations recorded' Lori
 - vii. Revise illustration of device movement Winter Meeting
- k. TM 13. Volumetrics
 - i. No AASHTO R 35 revisions
 - ii. Add 'and endured several years of traffic' in Background Lori
 - iii. PR include checkboxes and P_s Kevin
- 1. Exams
 - i. New questions Winter Meeting
 - ii. Ex 1 Q 5 answers Q 2
 - iii. Ex 1 and 2 Q 24 apparatus question same question
 - iv. Ex 3 bituminous, T 312 average angle
- 6. Revision to Self-Consolidating Concrete Module Training Materials
 - a. Add Warning in PP for all methods Misty
 - b. T 347/T 351, Slump Flow and VSI
 - i. No AASHTO revisions
 - c. T 345, J-Ring
 - i. No AASHTO revisions
 - d. TM 18 Penetration
 - i. No ASTM C1712 revisions
 - e. TM 19, Column
 - i. No ASTM C1610 revisions
 - f. Exams
 - i. New questions Winter Meeting
- 7. Revisions to General Training Materials
 - a. Revisions to Course Objectives and Schedule Lori and Misty (Winter)(5/22)
- 8. Performance Exam Checklists with trial suspension
- 9. FOP Library
 - a. Performance Exam Checklists Winter Meeting
 - i. R 60 Misty (5/31)
 - ii. T 84 Lori
 - iii. T 89 Dan (5/31)
 - iv. T 90 Dan (5/31)
 - v. T 217 Sean (6/21)
 - vi. T 304 Kevin
 - vii. T 331 Kevin
 - viii. TM 14 Sean
 - ix. TM 15 Kevin
 - x. TM 16 Sean

- xi. TM 28 Kevin
- b. FOP for AASHTO T 89
 - i. Grooving tool pictures Winter Meeting
- 10. Third-Party Exam Delivery update

WAQTC ITEMS

a. Schedule for videos – Board

ORGANIZATION DOCUMENTS

- 11. Administration Manual and RPIH
 - a. Annex A impacts of course agenda and schedule revisions
 - b. Board approved radiation safety training statement and written exam revisions
 - c. Board did not approve trial suspension revision, returned to the QAC for further discussion.
 - d. Board asked QAC to revise interchangeable use of multiple terms, 'participant,' 'examinee,' and 'individual.'
- 12. Style Guide
- 13. Strategic Plan

OPERATIONS MANUAL

- 14. FOP Library Work Plan (5/19)
- 15. Training Materials Update Calendar (5/19)

ADDITIONAL ITEMS

- 16. YouTube Channel
- 17. Report from Executive Board meetings
 - a. Executive Board interview Video Schedule
 - b. Brainstorm program improvements
 - c. Executive Board Summer Meeting will be virtual.
- 18. 2024 Winter and Summer Meeting locations (5/17)
- 19. Other items

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Торіс	Discussion / Decision	ACTION REQUIRED BY:
	Misty Miner, MDT, and Qualification Advisory Committee (QAC) Chair welcomed the committee members to Helena. As the meeting was being held in Montana, Misty invited her Technician Training team to sit in.	
	Misty introduced:	
	Ashley Hintz, MDT, she has been with MDT working with David Cadena, MDT, and Misty for 2 years. Ashley manages the Independent Assurance program for technicians and the recently implemented comparison testing. Ashley has a background in chemistry.	
	David Cadena, MDT has been with MDT for 6 years and has been working with Misty for 2 years. David oversees equipment calibrations, Quality Management Systems (QMS), and AASHTO re:source and CCRL accreditations. Before working for MDT, David worked for Granite Construction.	
WELCOME	Misty stated that although David and Ashley have their specific areas of responsibility both are cross-trained and assist in the MDT and WAQTC technician training.	
WEDCOME	Misty requested that the committee members introduce themselves.	
	Misty said that she joined the QAC in 2009 and leads the MDT Quality Assurance Unit and the technician training.	
	Gilbert Arredondo, UDOT and QAC Vice Chair, has been with UDOT for 22 years, but has been working in construction materials testing since high school. Gilbert said that he has been with the QAC since 2013. He and 4 others run the UDOT TTQP.	
	Mark Willoughby, WSDOT, has been with WSDOT for 30 years and the QAC for 2 years. He ran the Regional Independent Assurance program for 20 years.	
	Dan Gettman, AKDOT, is AKDOT's WAQTC Coordinator and they have an agency Coordinator in each Region. Dan also coordinates the Qualified Products List.	
	Christopher Russell, CDOT, has been with the QAC for 9 years. He is CDOT's Geotechnical Engineer as an advisor to the CDOT Regions Engineers. Chris announced that this is his final meeting, he is leaving CDOT to pursue other opportunities.	

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Торіс	Discussion / Decision	ACTION REQUIRED BY:
	Lori Copeland, ITD, performs all technical training, not just ITD personnel. She has been with ITD for 29 years and the QAC since 2020. Lori helps manage the statewide WAQTC program. Sean Parker, ODOT, former QAC Chair, oversees ODOT's materials testing program, and works with the Asphalt Paving Association (APA). He has been on the QAC since 1999. Sean just received his 30-year pin but has yet to announce his retirement. Sharon Taylor, NDDOT, has been with NDDOT for 32 years. She has performed a lot of training and she also partners with the APA. NDDOT joined WAQTC in 2020 and Sharon joined the QAC at the same time. Misty took the opportunity to explain the Chair and Vice Chair succession plan as outlined in the <i>Operations Manual</i> . The Chair serves for 5 years, after 5 years the Vice Chair assumes the Chair and the QAC votes on a new Vice Chair.	
MDT Tour	Misty arranged a tour of the MDT Headquarters Materials Lab. Oak Metcalfe, MDT Materials Engineer and WAQTC Executive Board Member, conducted the tour of the facilities for the QAC members.	

REVIEW OF AASHTO REVISIONS AND QAC PROPOSED REVISIONS FOR EACH PROCEDURE

EMBANKMENT/BASE AND IN-PLACE DENSITY (EBTT/DTT)

	Field Operating Procedure (FOP) for AASHTO T 255, Total Evaporable Moisture Content of Aggregate by Drying and T 265 Laboratory Determination of Moisture Content of Soils
	Revisions proposed before the meeting:
T 255/T 265	Lori withdrew the item on optional steps on the Performance Exam Check list. She determined that an indication of N/A on steps that are optional is sufficient.
	Desna suggested using the term 'drying interval' for the periods of drying to reach constant mass after the initial drying.
	Misty proposed removing the drying intervals on PowerPoint Slide 15 as it can be confused with the initial drying time. She suggested that the table should be included with interval times after the initial drying cycle.

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Торіс	Discussion / Decision	ACTION REQUIRED BY:
	During the 2023 Winter Meeting, Desna was asked to revise the PowerPoint to match the language in the FOP.	
	Misty proposed that the FOP address the mass of the lid for the drying container. Currently, Step 1 includes the mass of the lid for microwave drying. Drying soils requires including the lid and its mass. Apparatus lists, 'Containers, clean, dry, and capable of being sealed,' and, 'Suitable drying containers,' Misty said that when she asked about the apparent redundancy, she was told that the first container was for the field sample and the second for drying. The committee agreed that the containers and lids need to be clarified.	
Г 255/Т 265	The first container that is capable of being sealed is the container mentioned in Sample Preparation for the representative sample obtained in the field. The drying container is for use during drying. The inclusion of the 'microwave safe container with ventilated lid' in apparatus and the current language in Step 1 further adds to the confusion.	
1 233/1 203	The committee determined that describing the drying containers in apparatus for both soils and aggregate would help as would indicating that the microwave safe container is for aggregate drying only. The use of the sealable container was also clarified in Sample Preparation.	
	The committee then drafted revisions to Step 1 to describe the containers and their use when determining and recording their mass before placing the sample in it.	
	Gilbert said that he has a picture of the Liquid Limit apparatus with the drying containers with lids. Misty isolated the drying containers (cans with lids) and suggested the student and PowerPoint could include it. Gilbert offered to stage a picture like the apparatus picture currently used but with drying containers. It was agreed that a new picture would be good.	
	The proposed revisions were approved by the committee.	
	There are no revisions to the AASHTO methods in 2023.	
	Proposed revisions to the training materials:	
	FOP:	
	- New date	

Separate drying containers for soils and aggregate

Apparatus

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Торіс	Discussion / Decision	ACTION REQUIRED BY:
	 Microwave safe container (for aggregate drying only) 	
	- Sample Preparation	
	 Revise instruction under Table 2, 'Immediately seal place or cover moisture content samples in a container capable of being sealed to prevent any change in moisture content or follow the steps in "Procedure." 	
	- Procedure	
T 255/T 265	 Step 1: revise separate container for soils and aggregate. 	
	 Use the term 'drying interval' for time of additional drying throughout. 	
	Performance Exam Checklist:	
	- None	
	PowerPoint:	
	- Slide 15: Remove drying interval	
	- Add another slide after initial drying to include the drying interval.	
	- Revisions to match FOP revisions	GILBERT
	Gilbert Arredondo will provide a new apparatus picture.	ARREDONDO
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	DESNA BERGOLD
	FOP for 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	
	Revisions proposed before the meeting:	
T 99/ T 180	Garth Newman, WSDOT, through Mark, suggested using 'moisture-density' (with the hyphen) to match AASHTO (instead of moisture/density, etc.).	
	This revision does not impact the FOP documents. Revisions were made in PowerPoint and written exams.	
	There are no revisions to the AASHTO methods in 2023.	

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Торіс	Discussion / Decision	ACTION REQUIRED BY:
	Proposed revisions to the training materials:	
	FOP:	
	- None	
T 99/ T 180	Performance Exam Checklist:	
	- 'Moisture-density' to match AASHTO (instead of moisture/density, etc.)	
	PowerPoint:	
	- None	DESNA
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	BERGOLD
	FOP for AASHTO R 75, Developing a Family of Curves	
	Revisions proposed before the meeting:	
	As in the FOP for AASHTO T 99/T 180, revise to 'moisture-density' to match AASHTO (instead of moisture/density, etc.).	
	This revision was approved as an editorial.	
	Revision discussion	
	Lori asked if, during the Performance Exam, a technician drafted the intermediate curves as a solid line instead of a dashed line should they fail. The technician pointed out that the figure in the AASHTO practice has a solid line. All agreed that this isn't a failure.	
R 75	Note 1 states, 'Intermediate template curves using slopes similar to those of the original moisture-density curves may be included when maximum density points are more than 2.0 lb/ft ³ apart. Template curves are indicated by a dashed line.'	
	Desna pointed out that three terms are now used for the curve under discussion. The committee agreed that the note should be revised to read just 'intermediate curves.'	
	The committee agreed that the AASHTO practice should also be addressed. This will be included on the 2024 Winter Meeting Agenda.	
	Sean said that as the portion of the curve that is over optimum is not required the PowerPoint should indicate its removal. He	

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Торіс	Discussion / Decision	ACTION REQUIRED BY:
	suggested that the PowerPoint slide show the graph with the curve over optimum and then without it. All agreed.	
	Sean then proposed corrections to the practice problem. Curve 3 needed 2 points corrected to match the answer key. These will be corrected.	
	There are no revisions to the AASHTO method in 2023.	
	Proposed revisions to the training materials:	
	FOP:	
	- Note 1: revised to just use the term 'intermediate curves.'	
R 75	Practice:	
	- New date	
	- Revise points for Curve 3	
	- 'Moisture-density' to match AASHTO	
	Performance Exam Checklist:	
	- None	
	PowerPoint:	
	- Include a transition with and without the portion of the curves over optimum moisture.	
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	DESNA BERGOLD
	Revisions to AASHTO R 75 will be included on the 2024 Winter Meeting Agenda.	
	FOP for AASHTO T 272, One-Point Method for Determining Maximum Dry Density and Optimum Moisture	
	Revisions proposed before the meeting:	
	As in the FOP for AASHTO T 99/T 180, revise to 'moisture-density' to match AASHTO (instead of moisture/density, etc.).	
T 272	This revision was approved as an editorial.	
1 4/4	There are no revisions to the AASHTO method in 2023.	
	Proposed revisions to the training materials:	
	FOP (editorial):	
	- 'Moisture-density' to match AASHTO	

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Торіс	Discussion / Decision	ACTION REQUIRED BY:

Торіс	Discussion / Decision	REQUIRED BY:
	Performance Exam Checklist:	
	- None	
T 272	PowerPoint:	
	- 'Moisture-density' to match AASHTO	DESNA
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	BERGOLD
	FOP for AASHTO T 85, Specific Gravity of Coarse Aggregate	
	Revisions proposed before the meeting:	
	During the 2023 Winter Meeting, the committee decided that the Training Materials should address aggregate that is not fully submerged during soaking in the PowerPoint Instructor's notes.	
	The committee agreed to add, 'Maintain at least 1 inch of water above the sample throughout the soaking period.' in the instructor's notes on Slide 14.	
	Desna pointed out that in Significance in the 'Student' form, 'bituminous mixes' is discussed, this should be revised to 'asphalt mixtures.'	
	Other revisions:	
T 85	The committee noticed that in Apparatus it lists 'large absorbent towel' and in Step 3 it states, 'large absorbent cloth.' The AASHTO method uses the term 'cloth.' 'Towel' will be changed to 'cloth' in Apparatus.	
	Sean suggested that calculating G_{sb} SSD while the sample is submerged could indicate if an error was made during the weight and mass determinations. The committee decided to add an instructor's note on Slide 17, 'Discuss calculating G_{sb} SSD at this time may indicate any error in weight and mass determinations.'	
	There are no revisions to the AASHTO method in 2023.	
	Proposed revisions to the training materials:	
	FOP (editorial):	
	- Apparatus: change 'towel' to 'cloth'	
	- Significance: change 'bituminous mixes' to 'asphalt mixtures' (Student)	

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Торіс	Discussion / Decision	ACTION REQUIRED BY:

		REQUIRED B1.
	Performance Exam Checklist:	
	- None	
	PowerPoint:	
T 85	- Instructor's note Slide 14: add, 'Maintain at least 1 inch of water above the sample throughout the soaking period.'	
	- Instructor's note on Slide 17: add, 'Discuss calculating G_{sb} SSD at this time may indicate any error in weight and mass determinations.'	DESNA
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	BERGOLD
	FOP for AASHTO T 310, In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)	
	Revision discussion:	
	PowerPoint Slides 18 and 19 have repeat numbering. Corrected step numbering starting on Slide 19. Sean suggested adding 'The drive pin can be used to mark the perimeter of the guide plate,' to the instructor's note.	
	There are no revisions to the AASHTO method in 2023.	
	Proposed revisions to the training materials:	
T 310	FOP:	
1 310	- None	
	Performance Exam Checklist:	
	- None	
	PowerPoint:	
	- Slide 19: correct step numbering starting on Slide 19	
	- Instructor's note Slide 19: add 'The drive pin can be used to mark the perimeter of the guide plate.'	
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	DESNA BERGOLD

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Торіс	Discussion / Decision	ACTION REQUIRED BY:
	FOP for T 355, In-place Density of Asphalt Mixtures by Nuclear Methods	
	Revisions proposed before the meeting:	
	Slide 18 needs to be revised to say, 'Rotate the gauge 90 degrees centered over the original footprint.' to match Step 5 in the procedure.	
	There are no revisions to the AASHTO method in 2023.	
	Proposed revisions to the training materials	
T 355	FOP:	
1 333	- None	
	Performance Exam Checklist:	
	- None	
	PowerPoint:	
	- Slide 18: revise to 'Rotate the gauge 90 degrees centered over the original footprint.'	
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	DESNA BERGOLD
	New Inputs / New Questions	
	Editorial revisions include 'moisture-density' to match AASHTO.	
	During the 2023 Winter Meeting it was decided that the inputs for calculations should be revised in all the exams. Desna volunteered to revise the inputs. The committee can review them during the Training Materials draft review. She said that she had created a spreadsheet that should make it easy. Each module's draft reviewer needs to verify the new inputs and answers.	
EXAMS	Revision to written exams include:	
	- New year	
	- New inputs for calculation questions	
	- 'Moisture-density' to match AASHTO	
	Committee members: refer to the exam errata for specific revisions.	
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	DESNA BERGOLD

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Торіс	Discussion / Decision	ACTION REQUIRED BY:
Concrete (C	CTT)	
	WAQTC TM 2, Sampling of Freshly Mixed Concrete	
	Revisions proposed before the meeting:	
	It was pointed out that Performance Exam Checklist Steps 7 and 12 serve the same purpose. It was decided that Step 12, which is worded better, will replace Step 7.	
	2023 AASHTO revisions to R 60:	
	New date	
	Revised to harmonize with ASTM	
	 Added sampling from a continuous mixer 	
	TM 2 is a WAQTC test method and does not need to be revised when a related AASHTO practice is revised. The committee decided not to add sampling from a continuous mixer to the FOP.	
	There is an FOP for AASHTO R 60 in the FOP Library and as the Champion, Misty will revise the FOP for the Library for approval during the 2024 Winter Meeting.	
TM 2	Lori asked why the oral Performance Exam Checklist is different from the physical Performance Exam Checklist. The committee reviewed the checklists and found that some of the differences are because the entire procedure can be represented in the oral Performance Exam Checklist. They also determined that the two Performance Exam Checklists could be more similar. Lori volunteered to compare all the oral Performance Exam Checklists with their counterparts and propose revisions before the 2024 Summer Meeting.	
	FOP:	
	- None	
	Performance Exam Checklist:	
	- Move Step 12 to Step 7 and remove original Step 7	
	PowerPoint:	
	- None	
	This revision will be included in the 2023 Training Materials	

pending Executive Board approval.

DESNA

BERGOLD

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Торіс	Discussion / Decision	ACTION REQUIRED BY:
	Lori Copeland will compare the oral Performance Exam Checklist to the physical Performance Exam Checklist and propose revisions next year.	LORI COPELAND
T 309	FOP for AASHTO T 309, Temperature of Freshly Mixed Hydraulic Cement Concrete	
	There are no revisions to the AASHTO methods in 2023. There are no revisions to the 2023 Training Materials.	
T 119	FOP for AASHTO T 119, Slump of Hydraulic Cement Concrete Revisions proposed before the meeting: Lori said that the FOP does not address moving the scoop around the perimeter, but the Performance Exam Checklist does. The committee agreed that it should be removed from the Performance Exam Checklist. Misty proposed revising Step 9 to say, 'Always keep an excess of concrete above the top of the mold.' 2023 AASHTO revisions: New date Revised to harmonize with ASTM Added in 5.1, 'The mold shall be free from dents, deformations, or adhered mortar.' Fixed Figure 1 Added in 7.4, 'Rod the bottom layer throughout its depth.' Note 8 is now part of Section 7.11.3.	
	Revisions were drafted before the meeting to match the AASHTO method.	
	All revisions were approved.	
	Proposed revisions to the training materials: FOP:	
	- New date	
	- New date - New AASHTO date	

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Торіс	Discussion / Decision	ACTION REQUIRED BY:
	- Apparatus Mold: The mold shall be free from dents, deformations, and adhered mortar.	
	- Procedure	
	Step 5: add 'Rod the bottom layer throughout its depth.'	
T 119	Step 9: revise to 'Keep an excess amount of concrete above the top of the mold at all times,' to 'Always keep an excess of concrete above the top of the mold.'	
	Note 1: Move first sentence 'If a decided falling away or shearing off of concrete from one side or portion of the mass occurs, disregard the test and perform a new test on another portion of the sample,' to Step 13d.	
	Performance Exam Checklist:	
	- Steps 3, 6 and 9: remove 'moving a scoop around the perimeter of the mold to evenly distribute the concrete as discharged.'	
	PowerPoint:	
	- Revisions to match the FOP	DESNA BERGOLD
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	BERGGES
	FOP for AASHTO T 121, Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete	
T 121	Revisions proposed before the meeting:	
	Dan pointed out that the FOP does not include the air content (gravimetric) calculation. The committee said that if air content were to be included perhaps it could be in an Appendix, a non-mandatory section. Dan said that he will talk to others at AKDOT and determine if they want to pursue this.	
	Dan said that Step 14 of the Performance Exam Checklist does not match the FOP. The FOP says that 'Final finishing may be accomplished with several strokes with the edge of the strike-off plate.' The 'may' makes this step non-mandatory. The AASHTO method states this step is mandatory. The committee decided to change the language in Step 5 to active voice.	

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Торіс	Discussion / Decision	ACTION REQUIRED BY
	Garth, through Mark, proposed moving 'Procedure Selection' to after the 'Sampling' section because that is when it is performed and renaming the section to 'Consolidation Selection.' The committee did not want to move the section. They felt that a technician should be able to anticipate the consolidation based on the placement and have the correct equipment available. The committee did approve the name change of the section.	
	Misty proposed Step1 be revised to 'determine mass of the "dry" empty measure.' The committee felt that this would only work for the first test of the day and after that a technician would have to take extraordinary steps to dry the measure. The AASHTO does not address determining the mass of the measure. It was decided that Steps 1 and 2 should be swapped so that the measure mass determination is after 'dampen the inside of the measure and empty excess water.'	
T 121	The committee agreed that determining the mass of the measure should be addressed in the AASHTO method and would like it include on the 2024 Winter Meeting agenda.	
	Other revisions	
	Both the rodding and the internal vibration sections have a lengthy step on the level of concrete in the measure before strike-off. This step was moved to the first step of the strike-off section.	
	2023 AASHTO revisions:	
	New date	
	 Revised to harmonize with ASTM 	
	• Section 3.1.3 specific gravity of cementitious materials	
	 Section 4.6 mallet revision 	
	• Section 7.3 – added, 'and one stroke per 20 cm ² [3 in. ²] of surface for larger measures.'	
	 Section 7.4 - Removed tapping the measure after vibrating this was not removed from T 152 	
	 Section 7.5 – Defined drop height for Self-Consolidating Concrete (SCC) 125 mm (5 in.) this was not added to T 152 	
	Many of the AASHTO revisions were drafted in the FOP but not	

all.

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Торіс	Discussion / Decision	ACTION REQUIRED BY:
	Section 7.3 revision was not drafted because the FOP does not address measures greater than ½ ft ³ . The committee agreed that this does not need to be included. The committee reviewed Table 1 and determined the final row addressing 1 ft ³ measures should be deleted.	
	Desna pointed out that the 2023 revision removed tapping the measure after vibration, but this section was not removed in AASTHO T 152. She also indicated that the addition of the drop height for SCC was not added to AASHTO T 152. The committee would like revisions to AASHTO T 152 to match the 2023 revisions to AASHTO T 121 included on the 2024 Winter Meeting Agenda.	
	Proposed revisions to the training materials:	
	FOP:	
	- New date	
	- New AASHTO date	
T. 101	- Apparatus Mallet: change '0.14 m ³ ' to '14 L' and 'of 0.028 m ³ (1 ft ³)' to 'larger than 14 L (0.5 ft ³)'	
T 121	- Table 1: remove the final row for 1 ft ³ measures.	
	- Change 'Procedure Selection' to 'Consolidation Selection'	
	- Procedure	
	 Rodding 	
	o Move Step 2 to Step 1 and Step 1 to Step 2	
	o Remove Step 12	
	Internal Vibration: remove Steps 8 and 9	
	 Self-Consolidating Concrete 	
	 Step 3: add 'Do not exceed 125 mm (5 in.) drop height' 	
	 Step 5: Revise the beginning of the sentence to read, 'Finish the surface' 	
	 Strike-off and Mass Determination: add step addressing excess or deficient concrete after consolidation. 	

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Торіс	Discussion / Decision	ACTION REQUIRED BY
	Performance Exam Checklist:	
	- New date	
	- Step 1: remove 'and volume' add 'dampened'	
T 121	- Step 2: remove 'dampened'	
1 121	PowerPoint:	
	- Revisions to match the FOP	
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	
	Revisions to address determining the mass of the measure in AASHTO T 121 and discrepancies between AASHTO T 121 and T 152 will be included on the 2024 Winter Meeting Agenda.	DESNA BERGOLD
	FOP for AASHTO T 152, Air Content of Freshly Mixed Concrete by the Pressure Method	
	Revisions proposed before the meeting:	
	As with T 121, Garth, through Mark, proposed moving 'Procedure Selection' to after the 'Sampling' section because that is when it is performed and renaming the section to 'Consolidation Selection.' The committee did not want to move the section. They felt that a technician should be able to anticipate the consolidation based on the placement and have the correct equipment available. The committee did approve the name change of the section.	
	During the 2023 Winter Meeting, it was noted that PowerPoint Slides 20 to 23 are missing steps. It was also decided that the PowerPoint should include all the steps for both layers and how many times the vibrator is inserted.	
T 152	These revisions were drafted and approved.	
	2023 AASHTO revisions:	
	New date	
	 Removed 'rubber syringe' from Section 9.4.1 	
	 Added Note 12: 'Gently squeezing water into the petcock using a bulb syringe or plastic wash bottle has been found to be satisfactory for adding water to the meter.' 	

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Торіс	Discussion / Decision	ACTION REQUIRED BY:

TOPIC	Discussion / Decision	REQUIRED BY:
T 152	Proposed revisions to the training materials: FOP: - New date - New AASHTO date - Apparatus Container for Water: remove parenthetical 'may also be a squeeze bottle' and add 'or plastic wash bottle' - Change 'Procedure Selection' to 'Consolidation Selection' - Procedure • Rodding – remove Step 12 • Strike-off and Air Content • Add step addressing excess or deficient concrete after consolidation. • Step 2: add that the plate is inclined when used for strike-off. Performance Exam Checklist: - New date - Step 11: revise to 'Concrete struck off level with top of the measure using the bar or inclined strike-off plate and rim cleaned off?' - Step 12: revise to 'Top flange of base-measure cleaned?' PowerPoint: - Revisions to match the FOP These revisions will be included in the 2023 Training Materials pending Executive Board approval. Revisions to address discrepancies between AASHTO T 121 and T 152 will be included on the 2024 Winter Meeting Agenda.	Desna Bergold
R 100	FOP for AASHTO R 100, Making and Curing Concrete Test Specimens in the Field Revisions proposed before the meeting: Misty proposed moving the 'Consolidation Selection' before the Procedure section. The committee reviewed this revision and determined that further reordering and title revisions were	

appropriate. Casting SCC cylinders was moved below rodding and internal vibration. During the 2023 Winter Meeting, the committee discussed revisions to Step 6 in the FOP. In the AASHTO practice, Section 9.2 states, 'In placing the final layer, add the amount of concrete that will fill the mold after consolidation.' The FOP allowed the addition of concrete if the mold is not completely full. Step 6 was revised to 'overfilling the mold on the final layer.' 2023 AASHTO revisions: • New date • Retitle Section 8: 'Fresh Concrete Tests' Proposed revisions to the training materials; FOP: • New AASHTO date • New AASHTO date • Moved 'Consolidation Selection' section from Procedure to its own section above Procedure. • Procedure Making Molding Specimens General • Section title change • Step 6: revise to 'Fill molds in the required number of layers, attempting to slightly overfilling the mold on the final layer. Add or remove concrete before completion of consolidation to avoid a deficiency or excess of concrete. • Making Casting Cylinders • Section title change • Move Self-Consolidating Concrete section under Internal Vibration section • Making Casting Flexural Beams	Page 23		
and internal vibration. During the 2023 Winter Meeting, the committee discussed revisions to Step 6 in the FOP. In the AASHTO practice, Section 9.2 states, 'In placing the final layer, add the amount of concrete that will fill the mold after consolidation.' The FOP allowed the addition of concrete if the mold is not completely full. Step 6 was revised to 'overfilling the mold on the final layer.' 2023 AASHTO revisions: New date Retitle Section 8: 'Fresh Concrete Tests' Proposed revisions to the training materials: FOP: New date New AASHTO date Moved 'Consolidation Selection' section from Procedure to its own section above Procedure. Procedure Making Molding Specimens General Section title change Step 6: revise to 'Fill molds in the required number of layers, attempting to slightly overfilling the mold on the final layer. Add or remove concrete before completion of consolidation to avoid a deficiency or excess of concrete.' Making Casting Cylinders Section title change Move Self-Consolidating Concrete section under Internal Vibration section	Торіс	Discussion / Decision	ACTION REQUIRED BY:
Internal Vibration section		appropriate. Casting SCC cylinders was moved below rodding and internal vibration. During the 2023 Winter Meeting, the committee discussed revisions to Step 6 in the FOP. In the AASHTO practice, Section 9.2 states, 'In placing the final layer, add the amount of concrete that will fill the mold after consolidation.' The FOP allowed the addition of concrete if the mold is not completely full. Step 6 was revised to 'overfilling the mold on the final layer.' 2023 AASHTO revisions: New date Retitle Section 8: 'Fresh Concrete Tests' Proposed revisions to the training materials: FOP: New date New AASHTO date Moved 'Consolidation Selection' section from Procedure to its own section above Procedure. Procedure Making Molding Specimens General Section title change Step 6: revise to 'Fill molds in the required number of layers, attempting to slightly overfilling the mold on the final layer. Add or remove concrete before completion of consolidation to avoid a deficiency or excess of concrete.' Making Casting Cylinders	
- Making Casting Flexural Beams		Internal Vibration section	
		- Making Casting Flexural Beams	
 Section title change 		 Section title change 	
Performance Exam Checklists:		Performance Exam Checklists:	

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Торіс	Discussion / Decision	ACTION REQUIRED BY:

	PowerPoint:	
	- Revisions to match the FOP	
R 100	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	DESNA BERGOLD
	New Inputs / New Questions	
	Misty proposed new questions, the committee decided to review them for discussion during the 2024 Winter Meeting.	
	Desna volunteered to revise the inputs for review during the Training Materials draft review.	
	Revision to written exams include:	
EXAMS	- New year	
	- New inputs for calculation questions	
	Committee members: refer to the exam errata for specific revisions.	
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	

AGGREGATE (AGTT)

R 90	FOP for AASHTO R 90, Sampling Aggregate Products There were no revisions proposed before the meeting. There are no revisions to the AASHTO method in 2023. There are no revisions to the 2023 Training Materials.
R 76	FOP for AASHTO R 76, Reducing Samples of Aggregate to Testing Size There were no revisions proposed before the meeting. 2023 AASHTO revisions: New date Add Sectoring Add Quartering template Revision discussion Desna drafted revisions to the Training Materials to match the revised AASHTO method. The committee reviewed the drafted

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ГОРІС	Discussion / Decision	ACTION REQUIRED BY:
	revisions and reworked the Method Selection section for clarity. Table 1 was revised to match the reworked Method Selection section.	
	Gilbert offered to provide pictures of sectoring of fine aggregate.	
	Proposed revisions to the training materials:	
	FOP:	
	- New date	
	- New AASHTO date	
	 New terminology section with definition of saturated surface-dry (SSD) 	
	- New Note 1 with approximation of SSD.	
	- Apparatus Method B – Quartering and Sectoring	
	 Add stick or pipe 	
	 Add quartering template 	
	- Method Selection	
R 76	 Paragraph describing elements of the method selection, materials and moisture content 	
	 Note 2: discussing drying material if desired 	
	 Bulleted section on use of each method and the material it can be used on 	
	 Table 1: revise to match bulleted selection method 	
	- Procedure	
	 Revise headings 	
	 Add Method B Sectoring 	
	Review Questions	
	- Add question on sectoring	
	Performance Exam Checklist:	
	- Add quartering template	
	- Add sectoring steps	
	- Add step, 'Increments combined to produce appropriate sample mass?'	

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Торіс	Discussion / Decision	ACTION REQUIRED BY:

Торіс	Discussion / Decision	REQUIRED BY:
	PowerPoint:	
R 76	- Revisions to match the FOP	DESNA
11,0	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	BERGOLD GILBERT
	Gilbert Arredondo will provide new Sectoring pictures.	ARREDONDO
	FOP for AASHTO T 255, Total Evaporable Moisture Content for Aggregates	
	Revisions proposed before the meeting:	
	Some of the same proposed revisions as those discussed for the FOP for AASHTO T 255/T 265.	
	Desna suggested using the term 'drying interval' for the periods of drying to reach constant mass after the initial drying.	
	Misty proposed removing the drying intervals on PowerPoint Slide 15 as it can be confused with the initial drying time. She suggested that the table can be included with interval times after the initial drying cycle.	
	During the 2023 Winter Meeting, Desna was asked to revise the PowerPoint to match the language in the FOP.	
	There are no revisions to the AASHTO method in 2023.	
T 255	FOP:	
1 233	- New date	
	- Sample Preparation	
	Revise instruction under Table 2, 'Immediately seal place or cover moisture content samples in a container capable of being sealed to prevent any change in moisture content or follow the steps in "Procedure."	
	- Procedure	
	 Use the term 'drying interval' for time of additional drying throughout. 	
	Performance Exam Checklist:	
	- Step 7: add 'temperature'	

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Торіс	Discussion / Decision	ACTION REQUIRED BY:
	PowerPoint:	

Торіс	Discussion / Decision	ACTION REQUIRED BY:
	PowerPoint:	
T 255	- Slide 15: remove drying interval	
1 233	- Add another slide after initial drying to include the drying interval.	DESNA
	- Revisions to match FOP revisions	BERGOLD
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	
	FOP for AASHTO T 27/T 11, Sieve Analysis of Fine and Coarse Aggregates and Materials Finer Than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing	
	No revisions were proposed before the meeting.	
	2023 AASHTO revisions:	
	New date (both)	
	T 27 – Add Section A1.3 (Overload Determination Annex)	
	• T 11	
	o Apparatus additions: Spoon or mixing utensil	
	o Additional wetting agents	
	o Add paragraph in Section 8.4: 'Do not overflow the No. 200 sieve, limit mechanical washing to 10 minutes, do not decant any water except over No. 200 sieve.'	
	 Add a section in 8.5 addressing mechanical washer 	
	Desna drafted revisions to match the AASHTO revisions.	
T 27/T 11	Desna pointed out that in AASHTO T 27, the minimum sample size for nominal No. 4 material and smaller is 300 g. The FOP minimum sample size for this material is 500 g. The committee decided to leave the larger sample size and recommended that committee members discuss it with their agency. If a member agency would like to see this revised, they should propose it in 2024.	

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Торіс	Discussion / Decision	ACTION REQUIRED BY:
	Additional revisions	
	The committee discussed the use of wetting agents and decided to revise Note 1 (Note 3 in Method C) to indicate that wetting agents are used 'when required by the agency.'	
	Proposed revisions to the training materials:	
	FOP:	
	- New date	
	- New AASHTO date	
	- Procedure Method A	
	Note 1: revise to 'When required by the agency, add a detergent, dispersing solution, or other wetting agent.'	
	Remove Note 2	
	Step 5: add 'limit agitation to 10 min.'	
	- Procedure Method B	
T 27/T 11	Note 1: revise to 'When required by the agency, add a detergent, dispersing solution, or other wetting agent.'	
	Remove Note 2	
	Step 5: add 'limit agitation to 10 min.'	
	- Procedure Method C	
	Note 3: revise to 'When required by the agency, add a detergent, dispersing solution, or other wetting agent.'	
	Remove Note 4	
	Step 13: add 'limit agitation to 10 min.	
	Performance Exam Checklist:	
	- None	
	PowerPoint:	
	- Revisions to match the FOP	
	- Instructor's note on Slide 9: Add 'The same mechanical sieve shaker may not be practical for all sizes of samples because the large sieving area needed for practical sieving of a large nominal size coarse aggregate very	

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Торіс	Discussion / Decision	ACTION REQUIRED BY
T 27/T 11	likely could result in loss of a portion of the sample if used for a smaller sample of coarse aggregate or fine aggregate.' These revisions will be included in the 2023 Training Materials pending Executive Board approval.	DESNA BERGOLD
	FOP for AASHTO T 335, Determining the Percentage of Fracture in Coarse Aggregate	
	Revisions proposed before the meeting:	
	Sharon suggested rewriting the definition for Fractured Criteria.	
	• Fractured criteria – Determined by the agency to define a fractured particle. (now)	
	Proposed options:	
	Fractured criteria – An agency-determined requirement for fractured particles	
	 Fractured criteria – The specified requirement for fractured particles determined by each agency. (e.g., 1 or 2 faces) 	
	The committee approved 'The specified requirement for fractured particles determined by each agency.'	
	Additional revisions	
T 335	Mark proposed moving Step 3, 'Sample dried and cooled, if necessary?' to Step 1 on the Performance Exam Checklist. This was approved.	
	There are no revisions to the AASHTO method in 2023.	
	Proposed revisions to the training materials:	
	FOP:	
	- New date	
	- Terminology: revise the definition of fractured criteria to read, 'The specified requirement for fractured particles determined by each agency.'	
	- Sampling and Sample Prep	
	 Step 3a: Revise to 'Dry and cool the sample, if necessary, to sufficiently obtain a clean separation of FA and CA material in the sieving operation.' 	

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Торіс	Discussion / Decision	ACTION REQUIRED BY:
	Step 4a: Revise to 'Dry and cool the sample, if necessary, to sufficiently obtain a clean separation of FA and CA material in the sieving operation.'	
T 335	Performance Exam Checklist:	
	- New date	
	- Step 3: move 'Sample dried and cooled?' to Step 1.	
	PowerPoint:	
	- Revisions to match the FOP	
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	DESNA BERGOLD
	FOP for AASHTO T 176, Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test	
	Revisions proposed before the meeting:	
	The steps in PowerPoint Slides 33, 35, and 36 should be renumbered.	
	Proposed revisions to the training materials:	
	FOP:	
T 176	- None	
	Performance Exam Checklist:	
	- None	
	PowerPoint:	
	- Renumber steps on Slides 33, 35, and 36	
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	DESNA BERGOLD
	New Inputs / New Questions	
	Revision to written exams include:	
	- New year	
Exams	- New inputs for calculation questions	
LAMIO	 Replaced one question per exam with a Sectoring question. 	
	Committee members: refer to the exam errata for specific revisions.	DESNA BERGOLD

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Торіс	Discussion / Decision	ACTION REQUIRED BY
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	
ASPHALT TES	ST METHODS (ASTT I AND II)	
	FOP for AASHTO R 97, Sampling Asphalt Mixtures Revisions proposed before the meeting. Lori proposed removing 'Plants with' from Question 2 second bullet of the Review Questions. It should read 'Attached sampling devices.'	
	Revisions Lori proposed for the FOP were:	
	Include 'Agency approved' before 'release agent' in Apparatus.'	
	Revise the second sentence of the second bullet under Procedure General to 'Cardboard boxes may be used if the sample has cooled' originally it said 'Do not put open graded mixture samples in boxes until they have cooled'	
	Revise both bullets under Roadway Before Compaction.	
	These revisions were approved.	
	Lori also asked if there should be a separate shovel listed in apparatus for sampling from a windrow. The committee decided that the listed shovel is correct.	
R 97	During the 2023 Winter Meeting, Lori said that many of her students are unclear when Asphalt Mixtures would be sampled from a stockpile. The committee decided to add, 'Recycled Asphalt Pavement (RAP) used in mix designing and 'Cold Mix' used in roadway patching may be sampled from a stockpile.' to the instructor's notes on Slide 35.	
	There are no revisions to the AASHTO method in 2023.	
	Proposed revisions to the training materials:	
	FOP:	
	- New Date	
	- Apparatus: revise to 'Agency approved release agent.'	
	 Procedure General: clarify use of cardboard boxes, revise to 'Cardboard boxes can used if the sample has cooled to 	

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Торіс	Discussion / Decision	ACTION REQUIRED BY
	the point that asphalt binder will not migrate from the aggregate.'	
	- Procedure Roadway Before Compaction: revise the first bullet to 'requiring' and the second bullet to 'Laying asphalt mixture on existing asphalt or laying a second lift of asphalt mixture allowing Method 2.'	
	- Safety second sentence: add 'breakdown' in front of 'roller'	
	Review Questions	
R 97	- Question 2 second bullet: remove 'Plants with.'	
	Performance Exam Checklist:	
	- None	
	PowerPoint:	
	- Revisions to match the FOP	
	- Add, 'Recycled Asphalt Pavement (RAP) used in mix designing and 'Cold Mix' used in roadway patching may be sampled from a stockpile.' to the instructor's notes on Slide 35.	DESNA BERGOLD
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	
	FOP for AASHTO R 47, Reducing Samples of Asphalt Mixtures to Testing Size	
	Revisions proposed before the meeting:	
	Lori requested allowing the use of paper on the hard surface for mixing. In Apparatus, sheeting is defined, and non-stick paper is one of the options.	
	2023 AASHTO revisions:	
R 47	New date	
	Changed apex to sectoring	
	Editorial revisions for clarity	
	Desna drafted the revisions to the FOP to match those in the AASHTO method. The committee reviewed and approved the revisions.	

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Торіс	Discussion / Decision	ACTION REQUIRED BY:
	Additional revisions	
	In reviewing the PowerPoint, the committee found that Slide 14 Step 1 should ready, 'not to exceed max mixing temperature.'	
	Gilbert offered to provide a picture of just the sectors that are combined to produce a sample.	
	Proposed revisions to the training materials:	
	FOP:	
	- New date	
	- New AASHTO date	
	- Apparatus: revise quartering template to match AASHTO	
	- Change section title 'Quartering' to 'Quartering and Sectoring'	
	- Change Apex Method to Sectoring	
	- Quartering and Sectoring Methods	
	Step 2: replace 'dump' with 'place'	
	 Step 6: change 'full quartering' to just 'quartering' and add 'sectoring' 	
	- Revise 'Apex' section to 'Sectoring' throughout	
R 47	- Add step in Sectoring, 'If necessary, repeat until the appropriate sample mass has been obtained.'	
	Review Questions	
	- New date	
	- Revise 'apex' to 'sectoring'	
	Performance Exam Checklist:	
	- New date	
	- Revise 'Apex' section to 'Sectoring' throughout	
	PowerPoint:	
	- Revisions to match the FOP	DESNA
	- Slide 14 Step 1 revise to 'not to exceed max mixing temperature.'	BERGOLD
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	GILBERT ARREDONDO

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Торіс	Discussion / Decision	ACTION REQUIRED BY
	Gilbert Arredondo will provide a picture with the sectors of material.	
	FOP for AASHTO T 329, Moisture Content of Asphalt Mixtures by Oven Method	
	Revisions proposed before the meeting:	
	Lori proposed revisions to Significance in the Student version, change 'rock' to 'aggregate' and 'mix' to 'asphalt mixture.'	
	During the 2023 Winter Meeting, the committee reviewed the FOP and drafted revisions to mimic those being proposed for the AASHTO method. The committee also agreed that the steps to determine constant mass are more concise in the FOP for AASHTO T 255.	
	Desna proposed including the mass of the release media to match the written exams. She also proposed removing 'sample' from 'sample container' and using the term 'sample and container' consistently throughout and including the initial mass of sample and container and the initial mass of the container in the example.	
Т 329	Lori and Dan proposed revisions to the Performance Exam Checklist. In Step 4, include 'the nearest' when determining the sample mass. Step 6 includes after JMF '(if known)' and the temperature range if the JMF is not known. Step 8 add 'dry' before mass.	
	These revisions were approved.	
	Additional revisions	
	While reviewing the drafted revisions, the committee decided to remove 'possibly dry' in all uses.	
	There are no revisions to the AASHTO method in 2023.	
	Proposed revisions to the training materials:	
	FOP:	
	- New date	
	- Significance: change 'rock' to 'aggregate' and 'mix' to 'asphalt mixture.' (Student)	
	- Apparatus: revise 'Sample container' to just 'Container.'	
	- Add steps to determine constant mass	

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Торіс	Discussion / Decision	ACTION REQUIRED BY:
	- Remove 'possibly dry'	
T 329	 Revise constant mass steps to mimic the FOP for AASHTO T 255 	
	Performance Exam Checklist (editorial):	
	- Step 4: add 'to the nearest'	
	- Step 6: add '(if unknown)' after JMF and add the temperature range if the JMF is unknown	
	PowerPoint:	
	- Revisions to match the FOP	
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	DESNA BERGOLD
T 308	FOP for AASHTO T 308, Determining the Asphalt Binder Content of Asphalt Mixtures by the Ignition Method	
	Revisions proposed before the meeting:	
	During the 2023 Winter Meeting, the committee decided to move Steps 1 in Methods A and B to a General section to reduce redundancy.	
	Desna proposed adding the constant mass formula and example in Method B.	
	Lori proposed switching Steps 2 and 3 in Sampling.	
	Dan asked that the Gilson furnace from the PowerPoint be included in the Student version.	
	Dan also requested that spreading the material in the basket assembly be included on the Performance Exam Checklist. Step 5 was revised to read, 'With pan below basket assembly, sample evenly distributed in basket assembly keeping material away from the edges?'	
	These revisions were approved.	
	Lori also suggested adding 'moisture free' to the mass of the sample in calculations. The committee decided this was not necessary.	
	Dan said that PowerPoint Slide 48 was ambiguous. Desna reviewed the slide and proposed revisions to the FOP and the PowerPoint slides.	

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Торіс	Discussion / Decision	ACTION REQUIRED BY
	In the Annex, Step 8 addresses what to do if the difference between the first two asphalt binder contents exceed 0.15 percent but it is quite confusing. Desna drafted Step 8 to read, 'Calculate the difference between asphalt binder contents of the two specimens.' Then Step 8a addresses if the two results do not exceed 0.15 percent and Step 8b addresses if the two results do exceed 0.15 percent. A new Step 9 addresses calculating the correction factor. She also drafted the revisions in the PowerPoint presentation. The committee reviewed the proposed revisions approved with some minor additions.	
	Additional revisions	
	In reviewing the drafted Method B calculation revision, the committee made additional revisions.	
	In Method B, a new Step 16 was added to further address achieving constant mass. Step 17 was also revised. The order of the formulas and example calculations was changed to be more consistent with other FOPs.	
	There are no revisions to the AASHTO method in 2023.	
T 308	Proposed revisions to the training materials:	
	FOP:	
	- Sampling: move Step 3 to Step 2	
	- Procedure: move Steps 1 in Methods A and B to a new General section.	
	- Method B	
	 Add Step 16 addressing constant mass determination 	
	 Step 17: revise for clarity 	
	- Method B Calculations	
	 Add formula and example for constant mass 	
	- Annex	
	 Step 8: revise to calculate the difference between the binder contents of the correction specimens include Steps 8a and 8b to address whether the difference exceeds 0.15 percent or not. 	
	New Step 9 to address calculating the correction factor.	

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Торіс	Discussion / Decision	ACTION REQUIRED BY
	Performance Exam Checklist:	
	- New date	
	- Step 5: revise to 'With pan below basket assembly, sample evenly distributed in basket assembly keeping material away from the edges?'	
T 308	PowerPoint:	
	- Revisions to match the FOP	
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	DESNA BERGOLD
	FOP for AASHTO T 209, Theoretical Maximum Specific Gravity (G_{mm}) and Density of Asphalt Mixtures	
	Revisions proposed before the meeting:	
	Lori suggested reversing the order of the two sentences in Procedure Step 1. The committee determined this isn't necessary.	
	Lori proposed moving the second sentence to 14a (The holder shall be immersed sufficiently to cover both it and the bowl.) to 13a to have it with taring the balance. The sentence was then revised to read, 'Immerse the suspension apparatus sufficiently to cover both it and the bowl.'	
	She also proposed this same move and revision in the Annex for bowl standardization and bowl check.	
	Lori pointed out that in Apparatus the 'vacuum measuring device' and the 'manometer or vacuum gauge' are the same. The 'manometer or vacuum gauge' should be removed.	
	Kevin Burns, WSDOT, through Mark, proposed including the suspension apparatus in apparatus. The suspension apparatus from the FOP for AASHTO T 166 was copied and Lori helped revise the description as ITD uses the bowl method.	
T 209	During the 2022 Training Materials update review, Lori noted some other minor revisions: adding 'specific gravity' in the 'Procedure – Mixtures Containing Uncoated Porous Aggregate' explanation and in the Annex revising 'lid' to 'cover' or 'plate.'	
	The proposed revision to the Performance Exam Checklist is to add steps in the 'bowl determination' to tare the balance and submerge the suspension apparatus. The committee also decided	

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Торіс	Discussion / Decision	ACTION REQUIRED BY
	to add the partial vacuum residual pressure since it was revised in the AASHTO.	
	These revisions were approved.	
	2023 AASHTO revisions:	
	- New date	
	- Changed manometer pressure to 4.0 \pm 0.6 kPa (30 \pm 5 mmHg)	
	Desna drafted revisions to match the AASHTO method revisions. These were approved.	
	Additional revision	
	The committee indicated that since there is only one Annex, Annex A should become Annex.	
	Proposed revisions to the training materials:	
	FOP:	
	- New date	
	- New AASHTO date	
	- Apparatus	
	 Vacuum measurement device: replace 'accurate to '0.1 kPA (1 mmHg)' to 'readable to at least 0.2 kPa (2 mmHg) 	
T 209	 Remove second listing of manometer 	
	Add 'Suspension apparatus: Suitable apparatus and holder to permit determining the mass of the sample while suspended below the balance. The wire suspending the holder shall be the smallest practical size to minimize any possible effects of a variable immersed length.'	
	 Procedure: – General Step 9 change '3.7 ±0.3 kPa (30 ±5 mm Hg)' to '4.0 ±0.6 kPa (30 ±5 mm Hg)' 	
	 Procedure – Bowl Step 3a move second sentence from Step 14a and rewrite to read, 'Immerse the suspension apparatus sufficiently to cover both it and the bowl.' 	
	- Procedure – Mixtures Containing Uncoated Porous Aggregate first paragraph change 'bituminous' to 'asphalt binder' and add 'G _{mm} and'	

Торіс	Discussion / Decision	ACTION REQUIRED BY:
	- Change title from 'Annex A' to 'Annex'	
	- Annex A	
	 Bowl – Standardization Step 2: add 'Immerse the suspension apparatus sufficiently to cover both it and the bowl.' 	
	 Check Step 2: add 'Immerse the suspension apparatus sufficiently to cover both it and the bowl.' 	
	 Pycnometer or Volumetric Flask – Standardization Step 5: change 'lid to 'plate or cover' 	
	 Pycnometer or Volumetric Flask – Check Step 5: change 'lid to 'plate or cover' 	
	Performance Exam Checklist:	
	- New date	
T 209	- Step 11: add 'of 4.0 ±0.6 kPa (30 ±5 mm Hg)'	
	- Step 15: add 15b 'Balance tared?'	
	- Step 15: add 15d 'Suspension apparatus submerged?'	
	PowerPoint:	_
	- Revisions to match the FOP	DESNA BERGOLD
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	220022
	FOP for AASHTO T 166, Bulk Specific Gravity (G _{mb}) of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens	
	Revisions proposed before the meeting:	
	Dan said that Note 2, 'Method B is not acceptable for use with specimens that have more than 6 percent air voids,' should be mandatory instead of a note. The committee agreed and decided to move the sentence to the beginning of Procedure Method B.	
T 166	Dan also suggested adding the time limit, 5 sec, for rapidly drying the specimen to Method A Step 5 and Method B Step 2b of the performance Exam Checklist. This was also approved.	
	There are no revisions to the AASHTO method in 2023.	

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Торіс	Discussion / Decision	ACTION REQUIRED BY
	Additional revisions	
	The committee decided to add 'completely submerged' in Procedure Method A Step 4.	
	Proposed revisions to the training materials:	
	FOP:	
	- New date	
	 Procedure Method A Step 4: add 'ensuring that the device is completely submerged and not touching the sides or the bottom of the water bath.' 	
	- Procedure Method B: move Note 2 to the beginning of the procedure and remove the note designation.	
TD 1.66	Performance Exam Checklist (editorial):	
T 166	- New date	
	- Method A Step 5: add '(within 5 sec.)'	
	- Method B Step 2b: add '(within 5 sec.)'	
	PowerPoint:	DESNA
	- Revisions to match the FOP	BERGOLD
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	
	FOP for AASHTO R 66, Sampling Asphalt Materials	
D 44	No revisions proposed were before the meeting.	
R 66	There are no revisions to the AASHTO practice in 2023.	
	There are no revisions to the 2023 Training Materials.	
	FOP for AASHTO T 30, Mechanical Analysis of Extracted Aggregate	
	Revisions proposed before the meeting:	
T 30	Dan suggested that the picture of the small sieve shaker from the FOP be moved into the PowerPoint. Desna tried to move it, but it was blurry in the PowerPoint. She also pointed out that the nest of sieves did not have a lid. All agreed that the nest of sieves needed a lid. Gilbert offered to get a better picture of the small shaker.	

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Торіс	Discussion / Decision	ACTION REQUIRED BY
	Dan proposed making Procedure Step 13 into 2 steps. Currently, Step 13 covers placing the sample on the top sieve and placing the nest of sieves in the shaker. All agreed.	
	Lori proposed clarifying that $M_{f(T308)}$ in the definitions in the mass verification formula to 'Mass of aggregate remaining in basket assembly after ignition from the FOP for AASHTO T 308.'	
	She also suggested adding 'without overloading' to Question 1 of the Review Questions and adding 'reasonably' to Step 7 of the Performance Exam Checklist.	
	There are no revisions to the AASHTO method in 2023.	
	Other revisions	
	Dan wanted to revisit the allowable variation when comparing the mass of the aggregate remaining in the basket assembly obtained in the FOP for AASHTO T 308 and the mass of the sample removed from the basket assembly and used for the FOP for AASHTO T 308. Currently, the FOP requires these masses to be within 0.10 percent. He said the AASHTO method uses 0.1 percent.	
T 30	Many members of the committee remember the lengthy discussions that led to the tighter restrictions but eventually agreed with Dan to match the AASHTO method in the FOP.	
	Proposed revisions to the training materials:	
	FOP:	
	- New date	
	- Mass Verification: revise the allowable variation from 0.10 percent to 0.1 percent.	
	- Make Procedure Step 13 two Steps	
	- Calculations: mass verification formula $M_{f(T308)}$ definition revise to 'Mass of aggregate remaining in basket assembly	
	Review Questions (editorial):	
	- Question 1: add 'without overloading.'	
	Performance Exam Checklist (editorial):	
	- New date	
	1	Ĭ.

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Торіс	Discussion / Decision	ACTION REQUIRED BY
	 Step 2: revise mass verification allowable variation Step 7: add 'reasonably clear' 	
	PowerPoint: - Revisions to match the FOP	DESNA
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	BERGOLD GILBERT
	Gilbert Arredondo will provide a picture of a small shaker.	ARREDONDO
	FOP for AASHTO T 312, Asphalt Mixture Specimens by Means of the Superpave Gyratory Compactor	
	Revisions proposed before the meeting:	
	During the 2023 Winter Meeting, Desna was asked to revise the illustration of the device movement to add the tolerance on the ram pressure and remove the 6-inch mold designation. The committee approved the revised illustration.	
	Lori had several revisions to propose to the Performance Exam Checklist.	
	Lori would like to include a new Step 1, 'Gyratory warmed up?' This is the first step in the FOP.	
	In the current Step 2, delete 'rotating base surface and rollers,' this is not in the FOP.	
	In the current Step 6, she recommended revising it to 'within the compaction temperature range.'	
	Finally in the current Step 16, she would like to rewrite it to read, 'Specimen height and number of gyrations recorded?'	
T 312	These revisions to the Performance Exam Checklist were approved.	
	Lori said that she felt the Performance Exam Checklist should be further revised and reordered. She volunteered to work on it and propose the revisions before the 2024 Summer Meeting.	
	There are no revisions to the AASHTO method in 2023.	
	Proposed revisions to the training materials:	
	FOP (editorial):	
	- Revised illustration of device movement (Student)	

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Торіс	Discussion / Decision	ACTION REQUIRED BY:
	Performance Exam Checklist:	
	- New date	
	- New Step 1: 'Gyratory warmed up?'	
	- Step 2: remove 'rotating base surface, and rollers.'	
	- Step 7: add 'within'	
	- Step 17: rewrite to 'Specimen height and number of gyrations recorded?'	
T 212	PowerPoint:	
T 312	- Revision to match the FOP	
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	DESNA BERGOLD
	Lori Copeland will revise and reorder the Performance Exam Checklist for the 2024 Summer Meeting.	LORI COPELAND
	WAQTC TM 13, Volumetric Properties of Asphalt Mixtures	
	Revisions proposed before the meeting:	
	Lori suggested adding 'and endured several years of traffic' in Background in the gyratory compaction explanation. She also wanted to add identifying the 'effective binder' in the fourth paragraph.	
	This was approved.	
	Desna had drafted including the percentage (%) in the formulas and calculations. It was determined that this wasn't necessary.	
TM 13	Kevin, through Mark, proposed including checkboxes indicating 'pass' or 'fail' on the Performance Exam, including the calculation for percent aggregate (P_s) , and moving the calculation for air voids (V_a) up on the list. The revisions to the Performance Exam were approved.	
	There are no revisions to AASHTO R 35 in 2023.	
	Proposed revisions to the training materials:	
	FOP (editorial):	
	- Background:	
	Revise the third paragraph to read, 'The sample is then compacted in a gyratory compactor to simulate the in-place asphalt mixture pavement after it has	

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Торіс	Discussion / Decision	ACTION REQUIRED BY:
	been placed, compacted, and endured several years of traffic.'	
	 Revise next paragraph to include 'effective binder.' 	
	Performance Exam:	
	- Add a P and an F on each calculation line to allow the examiner to mark pass or fail.	
TM 13	- Move $V_a (0.1\%)$ up to the top of the FIND and REPORT section	
	- Add P _s (0.01%)	
	PowerPoint:	
	- Revision to match the FOP	
	These revisions will be included in the 2023 Training Materials	
	pending Executive Board approval.	DESNA BERGOLD
	New Inputs / New Questions	
	Proposed revisions to the Written exams:	
	- New year	
	- New inputs for calculation questions	
EXAMS	- Revisions required to match revisions in the FOP.	
	Committee members: refer to the exam errata for specific revisions.	
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	Desna Bergold

SELF-CONSOLIDATING CONCRETE TESTING TECHNICIAN (SCCTT) MODULE

	FOP for AASHTO T 347, Slump Flow of Self-Consolidating Concrete (SCC) and AASHTO T 351, Visual Stability Index (VSI) of Self-Consolidating Concrete (SCC)	
	There are no revisions to the AASHTO methods in 2023.	
T 347 / T 351	<u>Discussion item</u>	
1 34// 1 331	Lori said that ITD will begin certifying technicians in SCC this year. Lori had an ACI certified technician proctor the exam for the first session.	

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Торіс	Discussion / Decision	ACTION REQUIRED BY:

	Lori agreed to provide some pictures from the certifications to enhance the training materials.	Lori
	There are no revisions to the 2023 Training Materials.	COPELAND
T 347 / T 351	Lori Copeland will provide pictures for the training materials.	
	FOP for AASHTO T 345, Passing Ability of Self-Consolidating Concrete by J-Ring	
T 345	There were no revisions to the Training Materials proposed before the meeting.	
	There are no revisions to the AASHTO method in 2023.	
	There are no revisions for this method to the 2022 training materials.	
	WAQTC TM 18, Penetration Test for Static Segregation Resistance of Self-Consolidating Concrete (SCC)	
TM 18	No revisions were proposed before the meeting.	
	There are no revisions to the ASTM C1720 in 2023.	
	There are no revisions to the 2023 Training Materials.	
	WAQTC TM 19, Static Segregation of Self-Consolidating Concrete (SCC) Using the Column Method	
TM 19	No revisions were proposed before the meeting.	
	There are no revisions to the ASTM C1610 in 2023.	
	There are no revisions to the 2023 Training Materials.	
	New Inputs / New Questions	
	Lori had some revisions for the written exam. The committee reviewed and approved.	
	Proposed revisions to the written exams:	
Examo	- New year	
EXAMS	- New inputs for calculation questions	
	Committee members: refer to the exam errata for specific revisions.	
	These revisions will be included in the 2023 Training Materials pending Executive Board approval.	DESNA BERGOLD

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Торіс	Discussion / Decision	ACTION REQUIRED BY:

GENERAL FILES

Course Objectives and Schedule	Course Objectives and Schedule	
	Misty and Lori drafted a new 'Course and Objectives' section for the AgTT module as an example. The drafted version is streamlined and intended to reflect the current practices.	
	The revision was sent for review. The committee approved it with no further revisions.	
	The approved 'Course and Objectives' section will be used as a model for revision of these sections in the remaining training modules.	Desna Bergold

TRAINING MATERIALS

	T	
	Misty suggested that the committee write exam questions for one module each year, rotating the modules each year.	
	She said that if everyone wrote one question per FOP, even though there may be some repetition, the exercise should provide 5 to 7 usable questions per FOP.	
Whiteen Evanc	The committee agreed that this would be a doable assignment and agreed to begin with Asphalt II.	
WRITTEN EXAMS	They also decided that if the questions were drafted by the 2024 Winter Meeting, then they can be reviewed and ready to incorporate into the 2024 written exams.	
	Desna agreed to start reminding the committee of the assignment in early October.	
	The QAC Members will write one exam question per FOP for Asphalt II due by the 2024 Winter Meeting.	DESNA BERGOLD
	The 2023 revision review assignments are:	
REVIEW ASSIGNMENTS	Embankment & Base and In-place Density: Lori Copeland and Dan Gettman	
	General: Gilbert Arredondo and Sharon Taylor	
	Concrete: Mark Willoughby and Misty Miner	
	Aggregate: Lori Copeland and Sharon Taylor	
	Asphalt: Dan Gettman, Gilbert Arredondo, and Mark Willoughby	

Торіс	Discussion / Decision	ACTION REQUIRED BY
	Administration Manual and RPIH: Sean Parker, Misty Miner, and Gilbert Arredondo	
	The committee members will review all the training materials: Student and Short FOPs, Review Questions, Performance Exams, Written Exams, and PowerPoint presentations for the module they are assigned.	
	Corrections will be sent to Desna.	
	Desna will send the draft revisions out by Sept. 6 th . Review deadline is Sept. 20 th .	Dravi
	Committee members will review the draft revisions of the modules assigned. Corrections will be sent to Desna.	DESNA BERGOLD

OP LIBRARY	<u>, </u>
	Performance Exam Checklists
	During the 2023 Winter Meeting, Kevin proposed that Performance Exam Checklists be developed for the FOPs in the FOP library. The following checklists were developed and sent to the committee.
	• FOP for AASHTO R 60
	• FOP for AASHTO R 79
	FOP for AASHTO T 84
PERFORMANCE	FOP for AASHTO T 89
	• FOP for AASHTO T 90
Exam Checklists	FOP for AASHTO T 217
CHECKLISTS	FOP for AASHTO TM 16
	The following were developed but were not sent to the committee as they are still pending the champion's approval.
	FOP for AASHTO T 304
	FOP for AASHTO T 331
	Sean said that he didn't think that a Performance Exam Checklist was appropriate for WAQTC TM 14, Asphalt Mixture Laboratory Prepared Test Specimen, there are just too many moving pieces. He said he would consider it and determine what the next step would be for the 2023 Winter Meeting.

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Торіс	Discussion / Decision	ACTION REQUIRED BY:

	Mark was uncertain if Performance Exam Checklists were necessary for WAQTC TM 15, Laboratory Maximum Dry Density of Granular Soil and Soil/Aggregate, and WAQTC TM 17, Determination of Theoretical Maximum Dry Density. He and Kevin will discuss it.	
	Due to time restraints the committee decided to revisit the Performance Exam Checklists during the 2024 Winter Meeting.	
	Performance Exam Checklists will be on the 2024 Winter Meeting agenda.	DESNA
	Desna will resend the drafted Performance Exam Checklists in October 2023, for review.	BERGOLD
	AASHTO R 60, Sampling of Fresh Concrete, Champion Misty Miner	
	2023 revisions to the AASHTO method include:	
D 60	New AASHTO date	
R 60	 Addition of 'Sampling from Continuous mixers' 	
	Other minor revisions	
	Misty Miner, FOP Champion, will revise the FOP for review and approval during the 2023 QAC Winter Meeting.	MISTY MINER
P 70	FOP for AASHTO R 79, Vacuum Drying Compacted Asphalt Specimens, Champion Misty Miner	
R 79	No AASHTO revisions in 2023.	
	No action required.	
Т 84	FOP for AASHTO T 84, Specific Gravity and Absorption of Fine Aggregate, Champion Lori Copeland	
1 04	No AASHTO revisions in 2023.	
	No action required.	
T 89	FOP for AASHTO T 89 Liquid Limit, Champion Dan Gettman	
	No AASHTO revisions in 2023.	
	No action required.	
T 90	FOP for AASHTO T 90, Plastic Limit and Plasticity Index, Champion Dan Gettman	

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Торіс	Discussion / Decision	ACTION REQUIRED BY
	No AASHTO revisions in 2023.	
	No action required.	
	FOP for AASHTO T 217, Speedy Moisture in Soils, Champion Sean Parker	
T 217	No AASHTO revisions in 2023.	
	No action required.	
	FOP for AASHTO T 304, Uncompacted Void Content of Fine Aggregate, Champion Mark Willoughby	
T 304	Kevin and Mark agreed that Mark is the new Champion.	
	No AASHTO revisions in 2023.	
	No further action required.	
	FOP for AASHTO T 331, G _{mb} Using Automatic Vacuum Sealing Method, Champion Mark Willoughby	
	2023 revisions to the AASHTO method include:	
	New AASHTO date	
T 331	 Revisions to plastic bag dimensions (Section 5.4) 	
	Performance exam drafted.	
	Kevin and Mark agreed that Mark is the new Champion for this FOP.	
	Mark Willoughby, FOP Champion, will revise the FOP for review and approval during the 2023 QAC Winter Meeting	MARK WILLOUGHBY
TM 14	WAQTC TM 14, Asphalt Mixture Laboratory Prepared Test Specimen, Champion Sean Parker	
	No action required.	
	WAQTC TM 15, Laboratory Maximum Dry Density of Granular Soil and Soil/Aggregate, Champion Mark Willoughby	
	Kevin and Mark agreed that Mark is the new Champion for this	

Mark sent Desna some revisions to this test method to be

Revisions to TM 15 will be on the 2024 Winter Meeting Agenda.

discussed during the 2023 Winter Meeting.

FOP.

TM 15

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Торіс	Discussion / Decision	ACTION REQUIRED BY:

TM 16	WAQTC TM 16, Flat and Elongated Particles in Coarse Aggregate, Champion Sean Parker No action required.	
TM 17	WAQTC TM 17, Determination of Theoretical Maximum Dry Density, Champion Mark Willoughby Discussion item Kevin and Mark agreed that Mark is the new Champion. No action required.	
THIRD-PARTY EXAM DELIVERY	All exams 'live' June 1 st . Desna explained that there had been some issues with the Asphalt exams, but they are now corrected. Mark said that he has heard that the testing facilities do not allow scratch paper. Desna said she will verify that they are supposed to. Desna told the committee that Kryterion has offered to hold monthly meetings to answer questions and to give guidance. The first one will be July 27 th at 9:30 MDT. Lori, Dan, and Mark asked to be invited. Gilbert said that both he and Scott Nussbaum, UDOT and Executive Board Treasurer, would like to be invited so they may stay current. Desna will forward the appointment. Kryterion monthly 'check-in meeting' will be held July 27 th at 9:30 MDT.	Desna Bergold

ORGANIZATION DOCUMENTS

WAQTC Administration Manual and Registration, Policies, and Information Handbook (RPIH)		
ANNEX A	Revisions for Course Objectives and Schedule The revised Training Materials Course and Objectives section will not impact Annex A. No action required.	

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Торіс	Discussion / Decision	ACTION REQUIRED BY:

TOPIC	Discussion / Decision	REQUIRED BY:
	Written exam, add no cellular device used during exam.	
	The committee proposed the following revisions to the Board.	
	Revisions to the Written Examination section:	
WRITTEN EXAM	The examination is closed book which requires that no technical materials, or notes, or cellular devices are allowed in the room to be accessed during the examination. Calculations may be required for some questions; therefore, a battery powered pocket calculator (non-cellular) may be brought to the examination. Calculators may not be shared. The individual must bring No. 2 pencils and erasers and clean scratch paper if desired.	
	The Board approved this proposal.	
	The Administration Manual and Registration, Policies, and Information Handbook is revised as approved and will be included in the 2023 Training Materials and Org. Documents.	
	Performance Exam Checklist Trial Suspension	
	The Board did not approve the proposal to allow a technician to suspend the exam and restart the same trial. They determined that as the performance exam is 'open book,' a 'trial suspension' is not necessary. The Board decided to return the proposal to the QAC for further discussion.	
	Lori said that ITD has been allowing the technician to suspend the performance exam trial and restart without counting it a failure but do not allow additional time for the trial.	
TRIAL SUSPENSION	Lori asked who else allows restarting a trial. Gilbert said that UDOT allows lesser 'mulligans.' Misty indicated that MDT didn't have an issue because most technicians don't catch themselves. Chris said that under certain situations CDOT would allow a restart. Dan said AKDOT would allow a restart if it were needed. Sean and Mark agree that ODOT and WSDOT would if the technicians caught themselves in an error.	
	It seems that this is a subjective situation. Lori indicated that she would like to remove the subjectivity and would support not allowing a 'trial suspension.'	

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Торіс	Discussion / Decision	ACTION REQUIRED BY:

	Everyone agreed that this practice can stop. Desna pointed out that the TTQP Examiners Orientation in the <i>Operations Manual</i> should be revised. The QAC agreed with the Executive Board and will no longer allow trial suspensions. Desna will remove this section of the TTQP Examiners Orientation for approval of the Board.	Desna Bergold
TERM USAGE IN THE	While reviewing the <i>Administration Manual</i> , the Board noticed that multiple terms are used interchangeably: 'participant,' 'examinee,' and 'individual.' The Board asked the QAC to select a term and revise the manuals appropriately.	
ADMINISTRATION MANUAL AND RPIH	The committee agreed on revising all the referenced usage to 'technician.'	
	Desna will revise the Administration Manual and Registration, Policies, and Information Handbook will be on the 2023 Executive Board Summer Meeting Agenda item.	Desna Bergold
	Lori asked that in Annex A, Test Methods for Asphalt II Qualification, where it indicates that there is performance exam for WAQTC TM 13, it be qualified with an asterisk and a footnote that states, 'Performance examination consists of performing appropriate calculations.'	
ANNEX A	She asked for a similar qualification for the FOP for AASHTO R 75, in the Test Methods for Embankment and Base Qualification and the combined Test Methods for Embankment and Base/In-place Density Qualification with the footnote reading, 'Performance exam consists of graphing a family of curves.'	
	The committee agreed.	
	Revisions to Appendix A of the Administration Manual and Registration, Policies, and Information Handbook will be on the 2023 Executive Board Summer Meeting Agenda item.	Desna Bergold

OPERATIONS MANUAL

address moving the work for the FOP Library to the annual Winter Meeting. These revisions were approved. DESNA BERGOLD	FOP LIBRARY WORK PLAN	,	Desna Bergold	
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Торіс	Discussion / Decision	ACTION REQUIRED BY:

	Proposed revisions to the FOP Library Workplan:	
	- Add, 'Revisions drafted for review and approval during the QAC Winter Meeting.'	
	These revisions will be included in the 2023 Operations Manual pending Executive Board approval.	
	Training Materials Update Calendar	
Training Materials Update	Desna drafted revisions to the Training Materials Update Calendars to address the work for the FOP. These revisions were approved.	
CALENDAR	Proposed revisions to the Training Materials Update Calendars:	
	- To include FOP Library Process	
	These revisions will be included in the 2023 Operations Manual pending Executive Board approval.	Desna Bergold

ADDITIONAL ITEMS

	YouTube Channel Aggregate Videos playlist Asphalt Videos playlist Concrete Videos playlist Embankment & Base and In-Place Density Videos playlist	
	CDOT's videos: https://www.codot.gov/programs/waqtc .	
	MDT full training videos at WAQTC Qualified Technician's Registry (mt.gov).	
YOUTUBE CHANNEL	Misty explained her vision. She would like to move toward video and audio training to replace extensive PowerPoint training.	
	Misty asked what the rest of the committee's vision is?	
	Lori said she likes the video snippets to be used in the classroom training.	
	Sean said that YouTube videos would need to be 'start to finish' of the FOP and follow the Performance Exam Checklist.	
	Misty agreed and asked if anyone wanted to create a video for a specific method to see what is entailed. The videos would	

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Торіс	Discussion / Decision	ACTION REQUIRED BY:
	not have to be a single take, if something is missing or needs to be cut it could be replaced with a slide and voiceover. Everyone could benefit and get inspiration from the different approaches.	
	Misty said that if anyone needed help with splicing video she would help.	
	Misty volunteered to do a video for the FOP for AASHTO T 30.	
	Lori volunteered for the FOP for AASHTO T 166.	
	Gilbert said that he would take the FOP for AASHTO T 209.	
	Mark said he will try the FOP for AASHTO T 329.	
	Dan agreed to take the FOP for AASHTO T 308.	
	Sean will do the FOP for AASHTO T 312.	
	Sharon will do the FOP for AASHTO T 255.	
	Sharon said she will send links to the committee members for some videos she has already created.	
	All agreed to get something put together by the 2024 Winter Meeting.	QAC
	QAC Members will create videos for the listed FOPs for review during the 2024 QAC Winter Meeting.	MEMBERS

REPORT FROM EXECUTIVE BOARD MEETING

	Brainstorm Program Improvements
	During the Executive Board Spring Meeting, the Board asked the QAC to brain-storm program improvements.
PROGRAM IMPROVEMENTS	Larry Ilg, ODOT and Executive Board Chair, suggested funding 'train the trainer' classes. Hosting classes for trainers or sending them to seminars to improve training methodology.
	Chris brought up CDOT's current move to making their training American with Disabilities Act (ADA) compliant, the committee discussed the possibility of making WAQTC Training Materials more compliant. Perhaps just start to review and modify the FOPs and PowerPoints.

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Торіс	Discussion / Decision	ACTION REQUIRED BY:
	Desna brought up facilitation training. WAQTC asked her to attend facilitation training when D B Consulting was selected for the original contract, and she found it very helpful.	
	Lori said that ITD has recently been offering 'Positive Culture Framework Training' and 'Group Facilitation Skills.' Lori provided links to this training.	
	The committee also noticed that AASHTO Technical Training Solutions (formerly TC ³) recently sent an email introducing an <u>Instructor Preparation course</u> .	
	Misty suggested obtaining software to assist in creating videos or a site where the committee could share materials and programs.	
	QAC ideas for program improvement:	
	- Addressing Training Materials ADA compliance	
	- Facilitation training	
	- Positive culture training	
	- Instructor preparation courses	
	- Video software/site for sharing materials and programs	
	The QAC's program improvement ideas will be presented to the Executive Board.	MISTY MINER
	Executive Board Summer Meeting	
BOARD SUMMER MEETING	The Executive Board Summer meeting will be held virtually July 28th, at 10:00 am MDT.	
	2024 QAC Winter and Summer Meeting Locations	
QAC MEETINGS	Desna was asked during the 2023 Winter Meeting to put together a list of locations and the cost based on Government Services Administration per diem. The committee discussed the options and decided to request approval from the Board for the following locations for each meeting.	
	2024 Winter Meeting to be held January 29 th through February 2 nd .	
	First choice: Honolulu HI	
	Second choice: Santa Fe NM	
	Third choice: Las Vegas NV	

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Торіс	Discussion / Decision	ACTION REQUIRED BY:	
	 2024 Summer Meeting to be held July 15th through the 19th. First choice: Minneapolis MN Second choice: Coeur d'Alene, ID Third choice: Anchorage, AK Misty Miner and Gilbert Arredondo will discuss the meetings' 	MISTY MINER GILBERT ARREDONDO	
OTHER ITEMS	locations with the Executive Board.	ARREDONDO	
ACCESSIBILITY ISSUES	Chris said that CDOT has been tackling accessibility issues for their training. It has been a difficult road and he wanted to alert the committee that it could become an issue with the WAQTC TTQP Training Materials. The committee decided to alert the Board to the possibility. TTQP Training Materials accessibility will be included on the	Desna	
	Executive Board Summer Meeting agenda.	BERGOLD	
PUBLICATION DATE	Gilbert said that UDOT begins using the revised Training Materials at the beginning of the following year, which means that they won't be using the 2023 Training Materials until the beginning of 2024. For this cycle, the Training Materials have a 'Pub. Date' in the footer of 'November 2023.' This has caused some confusion for the technicians. They frequently ask if they have the most current copy. Gilbert asked the committee to consider using January of the following year as the 'Publication Date.'		
	Most of the members have the same schedule as UDOT and approve the change. Misty says that they begin using the revised materials before the end of the year, but MDT wouldn't have a problem with changing the 'Publication Date.'		
	Sean said that he would like to check with the rest of the personnel in ODOT's training program. He said to discuss it with the Board, and he will have an answer by then.		
	TTQP Training Materials 'Publication Date' will be included on the Executive Board Summer Meeting agenda.	DESNA BERGOLD	