

SUBCOMMITTEE ON MATERIALS (SOM)

2017 Annual Meeting – Phoenix, AZ

Wednesday, August 9, 2017

1:00 p.m. – 3:00 p.m. MST

TECHNICAL SECTION (TS) 2c

Asphalt-Aggregate Mixtures

TS 2c 2017 Annual Meeting Summary		
Meeting Date:	8/9/17	
Items approved by the TS for TS/Subcommittee/Concurrent Ballot		
Standard Designation	Summary of Proposed Changes	TS Only, Subcommittee Only or Concurrent? (TS / S / C)
R 79	WAQTC: Adopt proposed constant mass determination	C
TP 114	Ballot Allen's handwritten text minus the "100-mm (4-in.)" and change "sample" to "specimen" throughout that section.	C
T 195	Georgene Geary will address the comments received from the last ballot.	C
T 324	Address sinusoidal loading and other issues posed by Scott Andrus (UT)	TS
T 209	WAQTC ballot to set a firm temperature range instead of allowing temperature corrections. Other changes were also included.	TS
T 308	WAQTC: Change "HMA" to "asphalt mixtures" throughout.	C
T 355	Adopt changes on thin lift (option 3) from WAQTC (WA)	C
R XX-YY	PA will prepare and ballot a standard practice on proper set-up of an ignition oven.	TS
TP 82	This will be balloted for withdrawal.	C
New Task Forces Formed:		
Task Force Name	Summary of Task	Names of TF Members

17-01	Sampling asphalt mixtures	Scott Andrus (UT), Rick Bradbury (ME), Tim Ramirez (PA), Allen Myers (KY)
17-02	Evaluate the concerns regarding the "gas-free" water suggestion posed in the specific gravity definition by FHWA and then followed up by Alaska.	Brian Johnson (AASHTO), Matthew Corrigan (FHWA), Oak Metcalfe (MT), Bob Lauzon (CT)
Research Liaison:	Allen Myers	
Other Action Items:		
TF 2c-2010-01 will be sunset provided that TP 82 is successfully balloted for withdrawal.		

- I. **Call to Order and Opening Remarks** Allen Myers provided opening comments.
 - A. Provide brief summary of activities (*to ensure all attendees up to speed*)
 - B. Introduce new vice chair, Rick Bradbury (Maine)
 - C. Express gratitude to former vice chair, Matthew Corrigan (FHWA)

- II. **Roll Call** – Signify attendance on tablet computer We started using scanners this year to replace the tablet computers.

- III. **Approval of TS 2c Minutes from Mid-Year Web Meeting (January 26, 2017) – ATTACHMENT 1 (pp. 4-12)** Motion: MT Second: UT. Motion passed unanimously.

- IV. **Old Business**
 - A. Review of 2016 SOM Ballot 16-03 (Rolling Ballot 3, November 2016-January 2017)
 1. Item 25, AASHTO R 67 [*Sampling Asphalt Mixtures after Compaction (Obtaining Cores)*]
 - a. No changes proposed to practice at this time KS previously had a question about accelerated cooling of the pavement; we are not proposing any changes at this time.
 2. Item 26, AASHTO R 79 (*Vacuum Drying Compacted Asphalt Specimens*)
 - a. Practice revised according to ballot comments – ATTACHMENT 2 (pp. 13-15) AL previously commented that two drying cycles are needed to ensure that the specimen is completely dry. R 79 was revised to reflect that concern and received a negative vote from PA regarding the tolerance for comparing the two cycles. Tim Ramirez/PA indicated that the most recent revisions have addressed his concerns. Motion to forward to concurrent ballot: MN, second: MD. Motion passed unanimously. CONCURRENT BALLOT ITEM # 1
 3. Item 27, AASHTO T 275 [*Bulk Specific Gravity (G_{mb}) of Compacted Asphalt Mixtures Using Paraffin-Coated Specimens*]
 4. Item 28, AASHTO T 324 (*Hamburg Wheel-Track Testing of Compacted Asphalt Mixtures*) The negative vote from PA was considered persuasive, but the suggested editorial changes were made. Task Force 2c-2012-01 is revising the method in response to the negative vote.
 5. Item 29, AASHTO T 362 (*Quantitative Determination of the Percentage of Lime in Asphalt Mixtures*) Promoted to a full standard; editorial comments were incorporated as appropriate.
 6. Item 30, AASHTO TP 114 (*Determining the Interlayer Shear Strength of Asphalt Pavement Layers*)
 - a. Provisional test method revised according to ballot comments – ATTACHMENT 3 (p. 16) We received one question (Attachment 3) from PA regarding determination of the air void content of the top layer. Tim Ramirez/PA indicated that the suggested revision is an improvement. Tim suggested removing "...100-mm (4-in.)" from the proposed revised wording; also need to change "sample" to "specimen" in this section (editorial change).

Motion to advance to concurrent ballot: VA, second: MO. Motion passed unanimously.

CONCURRENT BALLOT ITEM # 2

7. Item 31, AASHTO TP 128 (*Evaluation of Oxidation Level of Asphalt Mixtures by a Portable Infrared Spectrometer*)
 8. Item 1, AASHTO M 156 (*Requirements for Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures*) **Items 8-11 are reconfirmations.**
 9. Item 2, AASHTO T 331 [*Bulk Specific Gravity (G_{mb}) and Density of Compacted Asphalt Mixtures Using Automatic Vacuum Sealing Method*]
 10. Item 3, AASHTO TP 82 [*Bulk Specific Gravity (G_{mb}) of Compacted Asphalt Mixtures Using Water Displacement Measured by Pressure Sensor*]
 11. Item 4, AASHTO TP 115 (*Determining the Quality of Tack Coat Adhesion to the Surface of an Asphalt Pavement in the Field or Laboratory*)
- B. 2017 TS 2c ballot
1. Ballot # 1 (May 2017) – **ATTACHMENTS 4 (pp. 17-19), 5 (pp. 20-24), AND 6 (pp. 25-33)**
 - a. Express gratitude to Georgene Geary (GGfGA Engineering)
 - b. Item 1, AASHTO T 195 (*Determining Degree of Particle Coating of Asphalt Mixtures*)
 - i. Ballot results – 27 affirmative/0 negative/7 not returned
 - ii. Comments from Arizona, Ohio, Pennsylvania, and Wisconsin
 - iii. Return comments to Georgene Geary for incorporation as appropriate **Motion to forward to concurrent ballot after Georgene Geary reviews and incorporates the comments: UT, second: PA. Motion passed unanimously. CONCURRENT BALLOT ITEM # 3**
 - c. Item 2, AASHTO T 168 (R XYZ) (*Sampling Asphalt Mixtures*)
 - i. Ballot results – 22 affirmative/5 negative/7 not returned
 - ii. Negative votes from Alaska, Idaho, Pennsylvania, Utah, and Wisconsin (**see Attachment 6**)
 - iii. Comments from Arkansas, Florida, Kansas, Maine, Maryland, Texas, and Washington
 - iv. Proposal from Western Alliance for Quality Transportation Construction (WAQTC) for AASHTO T 168 (R XYZ) – **ATTACHMENT 7 (pp. 34-38)**
 - v. Request Georgene Geary to coordinate with WAQTC to address negative votes and comments from TS ballot and possibly combine two versions of practice
 - vi. Another TS ballot in early 2018 **UT asked if a task force should be created to address these issues. Task Force 2c-2017-01 was created to include UT (Scott Andrus will serve as chair) along with ME, PA, and KY. The TS 2c chair finds the negatives persuasive and will send the negatives to the new task force for consideration.**
- C. Task Force Reports
1. Task Force 2c-2008-02
 - a. Rich Barezinsky, Chair (Kansas), Matthew Corrigan (FHWA), Oak Metcalfe (Montana), and Tim Ramirez (Pennsylvania)
 - b. Provide recommendations for amplitude and frequency for mechanical agitation devices in AASHTO T 209 [*Theoretical Maximum Specific Gravity (G_{mm}) and Density of Hot Mix Asphalt (HMA)*]
 - i. NCHRP 20-07 research submittal, *Develop criteria that establish the amount of energy required to maintain fully-animated particles of loose asphalt within the test procedure AASHTO T 209*, selected for funding in September 2015 (NCHRP 20-07, Task 391)
 - c. Task force awaiting results of research project for incorporation into AASHTO T 209 as appropriate
 - d. Estimated completion date of late 2017 **We will hopefully have changes to propose for T 209 at this time next year.**
 2. Task Force 2c-2010-01
 - a. Matthew Corrigan, Chair (FHWA) and Jim Bibler (Gilson Company)
 - b. Incorporate comments from 2009 SOM ballot into AASHTO TP 82 [*Bulk Specific Gravity (G_{mb}) of Compacted Asphalt Mixtures Using Water Displacement Measured by Pressure Sensor*]
 - c. Consider subsequent comments and questions regarding TP 82
 - d. Any additional members or activity? **Matt Corrigan gave an update – additional members haven't been identified that have the equipment or are interested in helping to develop this**

test method further. We should consider retiring this task force. Based on the lack of activity and interest, the TS 2c chair will retire this group.

3. Task Force 2c-2012-01
 - a. Scott Andrus, Chair (Utah), Bill Schiebel (Colorado), Matthew Corrigan (FHWA), Oak Metcalfe (Montana), Tim Ramirez (Pennsylvania), Darren Hazlett (Texas), and Joe DeVol (Washington)
 - b. Implement findings from NCHRP 20-07, Task 361, study into AASHTO T 324 (*Hamburg Wheel-Track Testing of Compacted Asphalt Mixtures*)
 - c. Generally maintain AASHTO T 324 to reflect latest features and ideas
 - d. Update from Scott Andrus (Utah) – **ATTACHMENTS 8 (pp. 39-41) AND 9 (pp. 42-54)** Scott Andrus indicated that there was a negative vote from PA regarding the width of the wheel. The proposed editorial changes were incorporated. Scott also reviewed changes in Figure 1 (cylindrical specimen mounting system) and the measuring system. These changes were major issues. Letters were sent to Hamburg manufacturers, five of whom responded to the proposed revisions. Scott recommended incorporating the changes into a technical section ballot. Oak Metcalfe/MT provided additional commentary. This is a sizeable task force. We will await the task force's recommendations for the technical section ballot.
4. Task Force 2c-2015-01
 - a. Garth Newman, Chair (Idaho), Mike San Angelo (Alaska), Matthew Corrigan (FHWA), Rick Bradbury (Maine), James Williams (Mississippi), Oak Metcalfe (Montana), Tim Ramirez (Pennsylvania), and Kurt Williams (Washington)
 - b. Address negative votes and incorporate comments as appropriate from 2014 SOM ballot into AASHTO T 209 [*Theoretical Maximum Specific Gravity (G_{mm}) and Density of Hot Mix Asphalt (HMA)*]
 - c. Suggestions from Richard Giessel (Alaska)
 - i. Clarify application of vacuum in method summary
 - ii. Improve figure depicting arrangement of testing apparatus
 - iii. Modify and add notes concerning removal of water vapor
 - d. Update on progress? The revisions to T 209 were significant, and several negative votes were received. Garth Newman gave an update – many of the revisions involved reorganizing the standard. Garth proposed that the revised version of T 209 be presented again on a technical section ballot. He recommends reading the final version first rather than just considering the red-lined version.
- D. Standards Pending Revision
 1. All AASHTO standards related to measuring or calculating specific gravity
 - a. Issue resulting from FHWA negative vote on AASHTO T 166 [*Bulk Specific Gravity (G_{mb}) of Compacted Asphalt Mixtures Using Saturated Surface-Dry Specimens*] as presented on 2015 SOM ballot
 - b. Add "gas-free distilled water" to Apparatus section
 - c. Concern about availability of distilled water in remote laboratories
 - d. Richard Giessel (Alaska) provided guidance for using non-distilled water and correction factors
 - e. Discussion at 2016 TS 2c meeting did not produce consensus
 - f. Awaiting recommendations from WAQTC for future technical section ballot
 - g. Update on progress? A revised version of T 166 was mistakenly published in 2016, and that error was corrected in 2017. Garth Newman stated that "gas-free" water is not included in T 209 and should be removed from T 166. Matt Corrigan/FHWA said the basis for the negative vote was not the gas-free distilled water requirement but rather the definition of bulk specific gravity. The TS 2c chair thinks this issue is a good candidate for a task force and sought volunteers [WAQTC representative, Matt Corrigan/FHWA, Brian Johnson/AASHTO re:source (Brian will Chair), Oak Metcalfe/MT, and Bob Lauzon/CT].
- E. Previous Correspondence
 1. Tennessee-suggested practice for preparing pavement cores for asphalt binder content or gradation testing
 - a. Include in AASHTO R 67 [*Sampling Asphalt Mixtures after Compaction (Obtaining Cores)*]?
 - b. Tennessee distributed survey in August 2016 to query SOM for existing practices

- c. Update on progress? Brian Egan/TN only sent the survey responses to the TS 2c chair rather than the entire group. Allen Myers will send the responses to entire group when he returns home. Brian indicated that three out of 31 states had a written state practice, and he gave a brief summary of the survey responses. No formal task force was created at this point. Brian will identify the three states that have written practices.
2. Inquiry from Brian Johnson from AASHTO re:source regarding AASHTO T 209 [*Theoretical Maximum Specific Gravity (G_{mm}) and Density of Hot Mix Asphalt (HMA)*]
 - a. Precision estimates in T 209 do not specify nominal-maximum aggregate size
 - b. Precision estimates in T 209 are probably not accurate for 37.5-mm nominal-maximum mixtures
 - c. Should T 209 identify nominal-maximum aggregate sizes to which precision estimates apply?
 - d. Should TS 2c attempt to define precision estimates for 37.5-mm nominal-maximum mixtures in T 209? The precision and bias statement indicates how the estimates were determined. No further action is necessary.

V. New Business

- A. Research Proposals (20-7 RPS and full NCHRP RPS) No research proposals were received this year. One NCHRP 20-7 project is ongoing (T 209).
- B. AASHTO Re:source/CCRL - Observations from Assessments?
 1. Correspondence from AASHTO re:source about unique apparatus presented for AASHTO T 209 [*Theoretical Maximum Specific Gravity (G_{mm}) and Density of Hot Mix Asphalt (HMA)*] – ATTACHMENT 10 (pp. 55-57) Brian Johnson/AASHTO re:source indicated that this apparatus (mechanical washing device) is not precluded by the current standard, but it is concerning to some state agencies. The ATG asked that we bring this issue to the technical section. For now, we have to accept this device. AASHTO T 209 should be modified if there is concern about this equipment (e.g., degree of agitation, changing the specific gravity of material, stripping and degradation of sample, etc.). Curt Turgeon/MN stated that documentation is needed indicating that coated materials are damaged by this apparatus. Such documentation is not available at this time. John Malusky/AASHTO re:source suggested changing the requirement from “agitation” to “vibration.” Randy West/NCAT indicated that this agitation device may actually be better than the typical vibration devices that most laboratories are using for T 209. The laboratory in question received acceptable ratings on the AASHTO re:source proficiency samples using this device. TS 2c will table this topic for now – if it becomes a larger issue, we will try to address it. The existing Task Force 2c-2008-02 could define the agitation/vibration requirements, and AASHTO re:source can keep a tally of the number of these devices in use (right now, it’s an isolated case).
- C. NCHRP Issues
 1. Update from Amir Hanna (NCHRP) Amir Hanna gave an update.
- D. Correspondence, calls, meetings
 1. WAQTC suggestion to change “hot mix asphalt (HMA)” to “asphalt mixture” in AASHTO T 308 [*Determining the Asphalt Binder Content of Hot Mix Asphalt (HMA) by the Ignition Method*]
 - a. Revisions will be performed editorially The AASHTO publications staff prefers that title changes be balloted. TS 2c proposes a concurrent ballot. Motion to change the title and references from “hot mix asphalt” to “asphalt mixture”: CO, second: MD. Motion passes unanimously. CONCURRENT BALLOT ITEM # 4
 2. WAQTC-proposed revisions to AASHTO T 355 [*In-Place Density of Asphalt Mixtures by Nuclear Methods*] – ATTACHMENT 11 (pp. 58-70)
 - a. Allow thin-layer gauge as alternate
 - b. Add third alternate method to place gauge parallel to direction of travel and perform 4-minute reading in back-scatter mode Kevin Burns/WA spoke on this topic. WA allows a third method of density determination. ME also has a thin layer method. This change would be beneficial and reflect current practices in other states. Motion to forward to concurrent ballot: MD, second: WA. Motion passes unanimously. CONCURRENT BALLOT ITEM # 5
- E. Presentation by Industry/Academia None.
- F. Proposed New Standards Tim Ramirez/PA spoke about the activities of the NCHRP 09-56 panel considering the proper installation and maintenance of ignition furnaces. These changes, as provided

in NCHRP Report 847, will be considered on a future technical section ballot. These revisions will be proposed as a separate standard from AASHTO T 308.

- G. Proposed New Task Forces Two new task forces were created as previously discussed (sampling asphalt mixtures and measuring/calculating specific gravity). TS 5c created a task force to update AASHTO R 42. Three East Coast states volunteered to assist, but states west of the Mississippi are also asked to participate. KS and TX will help with this effort.
- H. Standards Requiring Reconfirmation or Extension
 1. AASHTO R 47-14 [*Reducing Samples of Hot Mix Asphalt (HMA) to Testing Size*]
 2. AASHTO T 164-14 [*Quantitative Extraction of Asphalt Binder from Hot Mix Asphalt (HMA)*]
 3. AASHTO T 269-14 [*Percent Air Voids in Compacted Dense and Open Asphalt Mixtures*]
 4. AASHTO T 287-14 [*Asphalt Binder Content of Asphalt Mixtures by the Nuclear Method*]
 5. AASHTO T 305-14 [*Determination of Draindown Characteristics in Uncompacted Asphalt Mixtures*]
 6. AASHTO TP 82-10 (2017) [*Bulk Specific Gravity (G_{mb}) of Compacted Asphalt Mixtures Using Water Displacement Measured by Pressure Sensor*]
 - a. Provisional test method must be promoted to full standard or discontinued
 - b. Future of AASHTO TP 82? This provisional test method is in its eighth year and must be promoted or discontinued. No states indicated that they were using this device. Motion to discontinue TP 82 on concurrent ballot: ME, second: CT. Motion passes unanimously.
CONCURRENT BALLOT ITEM # 6
- I. SOM Ballot Items (including any ASTM changes/equivalencies)

VI. Open Discussion

- 1) NCHRP Research Results Digest 369 concerns agitation devices for testing maximum specific gravity. This report indicates that Rice agitators provide statistically similar results to other devices.
- 2) Asphalt Analyzer – ASTM is planning to add a standard for this device. This machine will not be included in AASHTO standards at present.
- 3) NAPA has initiated efforts to reinvigorate the “asphalt road map.” Inform NAPA of any interest for research needs statements.
- 4) The scope of NTPEP may be expanded to include warm-mix additives in the future.

VII. Adjourn The TS 2c meeting adjourned at 2:58 p.m.