

## **SUBCOMMITTEE ON MATERIALS (SOM)**

**2016 Annual Meeting – Greenville, South Carolina**

**Wednesday, August 3, 2016**

**1:00 pm – 3:00 pm EDT**

**TECHNICAL SECTION (TS) 2c**

**Asphalt-Aggregate Mixtures**

- I. Call to Order and Opening Remarks**
- II. Roll Call**
  - A. Signify attendance on tablet computer
- III. Approval of TS 2c Minutes from Mid-Year Web Meeting (February 11, 2016) – ATTACHMENT 1**
- IV. Old Business**
  - A. 2015 SOM ballot items (SOM Ballot 15-04, Rolling Ballot 3, November 2015-January 2016)
    1. Item 50, AASHTO PP 75 (*Vacuum Drying Compacted Asphalt Specimens*)
      - a. Practice promoted to full standard (now AASHTO R 79)
      - b. Practice revised according to ballot comments – **ATTACHMENT 2**
    2. Item 51, AASHTO R 67 [*Sampling Asphalt Mixtures after Compaction (Obtaining Cores)*]
      - a. Practice revised according to ballot comments – **ATTACHMENT 3**
    3. Item 52, AASHTO T 166 [*Bulk Specific Gravity ( $G_{mb}$ ) of Compacted Hot Mix Asphalt (HMA) Using Saturated Surface-Dry Specimens*]
    4. Item 53, AASHTO T 308 [*Determining the Asphalt Binder Content of Hot Mix Asphalt (HMA) by the Ignition Method*]
    5. Item 54, AASHTO T 324 [*Hamburg Wheel-Track Testing of Compacted Hot Mix Asphalt (HMA)*]
    6. Item 55, AASHTO T 355 [*In-Place Density of Asphalt Mixtures by Nuclear Methods*]
    7. Item 56, AASHTO TP 72 [*Quantitative Determination of the Percentage of Lime in Hot Mix Asphalt (HMA)*]
      - a. Method revised according to ballot comments
    8. Item 57, AASHTO TP 114 [*Determining the Interlayer Shear Strength (ISS) of Asphalt Pavement Layers*]
      - a. Method revised according to ballot comments – **ATTACHMENT 4**
    9. Item 58, AASHTO TP 115 [*Determining the Quality of Tack Coat Adhesion to the Surface of an Asphalt Pavement in the Field or Laboratory*]
    10. Item 59, AASHTO T 37 [*Sieve Analysis of Mineral Filler for Hot Mix Asphalt (HMA)*]
    11. Item 60, AASHTO T 110 [*Moisture or Volatile Distillates in Hot Mix Asphalt (HMA)*]
      - a. Method needs review to compare with latest version of ASTM D979
    12. Item 61, AASHTO T 168 [*Sampling Bituminous Paving Mixtures*]
      - a. Method needs revision to “practice”
    13. Item 62, AASHTO T 343 [*Density of In-Place Hot Mix Asphalt (HMA) Pavement by Electronic Surface Contact Devices*]
    14. Item 63, AASHTO TP 72 [*Quantitative Determination of the Percentage of Lime in Hot Mix Asphalt (HMA)*]
      - a. Method promoted to full standard as AASHTO T 362

15. Item 64, AASHTO TP 82 [*Bulk Specific Gravity ( $G_{mb}$ ) of Compacted Bituminous Mixtures Using Water Displacement Measured by Pressure Sensor*]
  - a. Ballot comments referred to Task Force 2c-2010-01
- B. 2016 TS 2c ballots
  1. Ballot # 1 (January – February 2016)
    - a. Item 1, AASHTO TP XYZ (*Evaluation of Oxidation Level of Asphalt Mixtures by a Portable Infrared Spectrometer: A Field Quality Control Procedure*)
      - i. Two negative votes (Arizona and Maine) considered persuasive
      - ii. Method revised according to ballot comments
  2. Ballot # 2 (May – June 2016)
    - a. Item 1, AASHTO TP XYZ (*Evaluation of Oxidation Level of Asphalt Mixtures by a Portable Infrared Spectrometer*) – **ATTACHMENTS 5 and 5a**
      - i. Ballot results – 27 affirmative/2 negative/6 not returned
      - ii. Negative votes from Mississippi and New Hampshire
      - iii. Comments from Arizona, Kansas, Maryland, Missouri, Oklahoma, Ontario, Pennsylvania, Tennessee, Virginia, Washington, and Delmar Salomon (Pavement Preservation Systems)
      - iv. Update from Delmar Salomon (Pavement Preservation Systems)
- C. Task Force Reports
  1. Task Force 2c-2008-02
    - a. Rick Kreider, 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)*]
    - c. 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)
    - d. Task force awaiting results of research project for incorporation into AASHTO T 209 as appropriate
  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 Bituminous Mixtures Using Water Displacement Measured by Pressure Sensor*]. Provide more details on water displacement measurement equipment.
    - c. Any additional members or activity?
  3. Task Force 2c-2012-01
    - a. Scott Andrus, Chair (Utah), Bill Schiebel (Colorado), Matthew Corrigan (FHWA), Oak Metcalfe (Montana), Tim Ramirez (Pennsylvania), and Darren Hazlett (Texas)
    - b. Implement findings from NCHRP 20-07, Task 361, study into AASHTO T 324 [*Hamburg Wheel-Track Testing of Compacted Hot Mix Asphalt (HMA)*]
    - c. Generally maintain AASHTO T 324 to reflect latest features and ideas
    - d. Update from Scott Andrus (Utah)
  4. Task Force 2c-2015-01
    - a. Garth Newman, Chair (Idaho), Mike San Angelo (Alaska), Matthew Corrigan (FHWA), Rick Kreider (Kansas), Rick Bradbury (Maine), James Williams (Mississippi), Oak Metcalfe (Montana), Cole Mullis (Oregon), Tim Ramirez (Pennsylvania), and Kurt Williams (Washington)
    - b. Address negative votes and incorporate comments from 2014 SOM ballot into AASHTO T 209 [*Theoretical Maximum Specific Gravity ( $G_{mm}$ ) and Density of Hot Mix Asphalt (HMA)*]
    - c. Update from Garth Newman (Idaho)
- D. Standards Pending Revision
  1. AASHTO T 195 (*Determining Degree of Particle Coating of Asphalt Mixtures*)
    - a. Issues discovered by Oregon during 2015 reconfirmation ballot
    - b. TS 2c Chair will inquire with AASHTO regarding available resources to assist with improvements to T 195.

2. AASHTO T 269 (*Percent Air Voids in Compacted Dense and Open Asphalt Mixtures*)
  - a. Asphalt Institute-suggested changes to air voids nomenclature
  - b. Change from  $V_a$  to  $P_a$  will be performed editorially
- 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. Query SOM for existing practices
  2. Montana suggestion to reference AASHTO PP 75 (now R 79) (*Vacuum Drying Compacted Asphalt Specimens*) rather than ASTM D7227 (*Standard Practice for Rapid Drying of Compacted Asphalt Specimens Using Vacuum Drying Apparatus*) in AASHTO T 166 [*Bulk Specific Gravity ( $G_{mb}$ ) of Compacted Hot Mix Asphalt (HMA) Using Saturated Surface-Dry Specimens*]
    - a. ASTM D7227 was developed with specific manufacturer in mind, while AASHTO PP 75 (R 79) is more general?
    - b. Change in reference to be performed editorially if no significant differences are identified
    - c. Update from Oak Metcalfe (Montana)
    - d. Also reference AASHTO PP 75 (R 79) rather than ASTM D7227 in AASHTO T 331 [*Bulk Specific Gravity ( $G_{mb}$ ) and Density of Compacted Hot Mix Asphalt (HMA) Using Automatic Vacuum Sealing Method*]?
  3. 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 Hot Mix Asphalt (HMA) 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) will propose guidance for using non-distilled water and correction factors – **ATTACHMENT 6**
    - e. Matthew Corrigan (FHWA) and Brian Johnson (AMRL) will research this issue and provide recommendations.

## V. New Business

- A. Research Proposals
  1. 20-7 RPS
  2. Full NCHRP RPS
- B. AMRL/CCRL - Observations from Assessments?
- C. NCHRP Issues
  1. Update from Amir Hanna (NCHRP)
- D. Correspondence, calls, meetings
  1. Question from Thomas Zehr, Illinois DOT, about AASHTO T 324 [*Hamburg Wheel-Track Testing of Compacted Hot Mix Asphalt (HMA)*] – **ATTACHMENT 7**
    - a. “6 in.” versus “5.91 in.” diameter specimens
    - b. Issue referred to Task Force 2c-2012-01
  2. Question from Ali Regimand, InstroTek, about AASHTO T 275 [*Bulk Specific Gravity ( $G_{mb}$ ) of Compacted Hot Mix Asphalt (HMA) Using Paraffin-Coated Specimens*] – **ATTACHMENT 8**
    - a. Allow vacuum-drying of specimens as option to oven-drying
    - b. Consistent with other test methods for  $G_{mb}$  determination, AASHTO T 166 [*Bulk Specific Gravity ( $G_{mb}$ ) of Compacted Hot Mix Asphalt (HMA) Using Saturated Surface-Dry Specimens*] and AASHTO T 331 [*Bulk Specific Gravity ( $G_{mb}$ ) and Density of Compacted Hot Mix Asphalt (HMA) Using Automatic Vacuum Sealing Method*]
  3. Suggestions from Richard Giessel, Alaska DOT, for AASHTO T 209 [*Theoretical Maximum Specific Gravity ( $G_{mm}$ ) and Density of Hot Mix Asphalt (HMA)*] – **ATTACHMENT 9**
    - a. Clarify application of vacuum in method summary
    - b. Improve figure depicting arrangement of testing apparatus
    - c. Modify and add notes concerning removal of water vapor
  4. Suggestions from Richard Giessel, Alaska DOT, for AASHTO T 275 [*Bulk Specific Gravity ( $G_{mb}$ ) of Compacted Hot Mix Asphalt (HMA) Using Paraffin-Coated Specimens*] – **ATTACHMENT 10**

- a. Clarify “dipping” versus “surface coating” of specimens with paraffin
- b. Provide instructions for determining specific gravity of materials that float in water
- 5. Question from Maria Knake, AMRL, about AASHTO T 324 [*Hamburg Wheel-Track Testing of Compacted Hot Mix Asphalt (HMA)*] – **ATTACHMENT 11**
  - a. Path of loaded wheel is not centered over specimen in Hamburg Wheel-Track device
  - b. Issue referred to Task Force 2c-2012-01
- E. Presentation by Industry/Academia
- F. Proposed New Standards
- G. Proposed New Task Forces
- H. Standards Requiring Reconfirmation or Extension
  - 1. AASHTO M 156-13 (*Requirements for Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures*)
  - 2. AASHTO T 331-13 [*Bulk Specific Gravity ( $G_{mb}$ ) and Density of Compacted Hot Mix Asphalt (HMA) Using Automatic Vacuum Sealing Method*]
  - 3. AASHTO TP 82-10 [*Bulk Specific Gravity ( $G_{mb}$ ) of Compacted Bituminous Mixtures Using Water Displacement Measured by Pressure Sensor*] is due for one-year extension by SOM
  - 4. AASHTO TP 114-16 [*Determining the Interlayer Shear Strength (ISS) of Asphalt Pavement Layers*] is due for two-year extension by TS 2c (voice vote)
  - 5. AASHTO TP 115-16 (*Determining the Quality of Tack Coat Adhesion to the Surface of an Asphalt Pavement in the Field or Laboratory*) is due for two-year extension by TS 2c (voice vote)
- I. SOM Ballot Items (including any ASTM changes/equivalencies)

**VI. Open Discussion**

**VII. Adjourn**