

***ASPHALT CONCRETE  
TASK FORCE  
APRIL 1ST, 2026  
MEETING MINUTES***



# GREENBOOK COMMITTEE

## NEW MATERIALS AND METHODS SUBCOMMITTEE - SURFACE ASPHALT CONCRETE TASK FORCE – Minutes

\*\*\*\* April 1, 2026, 1:00 P.M. \*\*\*\*

Online ONLY:

Microsoft Teams [Join the meeting now](#)

Meeting ID: 236 315 114 242 8

Passcode: Sw6NQ7oM

- I. Call to Order
- II. Introduction
- III. Greenbook Committee Updates
  - a. Main Committee
    - i. 2026 Supplement
      1. *Published and distributed via email. Expect website availability shortly.*
    - ii. APWA SoCal Greenbook Seminar
      1. *Online Workshop*
      2. *April 27-30*
      3. [LINK](#)
    - iii. CONTINUAL – Review ASTM references:
      1. *All groups are requested to examine the list of ASTM referenced test methods, prioritize, and make appropriate updates.*
  - b. Editorial Standards Subcommittee
    - i. 2027 Standard Spec Book Revisions
      1. *All proposed changes for 2027 Standard Spec book due in editorial by June.*
      2. *All revisions need to be ready for publishing by September*
  - c. Surface Subcommittee
    1. *Need changes ASAP to meet June editorial deadline for the 2027 Standard*
- IV. Current Business
  - a. Change Requests:
    - i. 316SM: Fiber Reinforcement
      1. Sponsor: City of San Diego
      2. Discuss: Production Data Reporting
        - a. There was an in-depth discussion about the flexibility of data logging systems for aramid fiber feed systems. This was prompted by feedback from producers and plant manufacturers. Concerns were raised about the specification's requirement that data must come directly from the aramid fiber feed

system, as some plants integrate fiber metering into the main plant computer. The group agreed to revise the language to allow data from any reliable, metered source, not just the fiber feed system, as long as it accurately reflects the fiber addition rate. They also discussed the practicality and limitations of using solvent extraction as a forensic or backup method for verifying fiber content, agreeing that while it is useful as a failsafe, it is not practical for routine quality assurance due to the test result turnaround time, hazardous nature of the solvents, and test reproducibility concerns.

- ii. RAP in ARHM
  - 1. Sponsor: TBD
  - 2. Discuss Draft Specification Language
- iii. Review of ASTM references
  - 1. Examine the list, prioritize, and make appropriate updates
    - a. Not discussed
- iv. Gyratory Compactor Implementation
  - 1. Sponsor: Orange County
  - 2. Project Shadow Testing
    - a. *The plan is to collect field data during the construction season by having producers compact field samples of Asphalt Concrete B & C2 and Type III C2 mixes using the gyratory compactor with 50 gyrations. Participants would report air voids, bulk and maximum specific gravities, and, optionally, Hamburg wheel track test results. The group debated whether to use plant-produced or lab-mixed material, ultimately favoring plant-produced samples for practicality and relevance. They also discussed aligning bulk specific gravity testing with Caltrans by using T 166 instead of T 275, citing safety and consistency. The goal of the pilot is to compare air voids from gyratory compacted specimens with Hveem compacted specimens. The group hopes to see the results for the comparison specimens to lie within a range of 1–2%. The reported data will be useful in the development of specification revisions.*

V. New Business

- a. JMF “life” extension
  - i. *There was a robust discussion about the challenges of renewing mix designs every two years, especially for producers supplying multiple agencies with similar mixes. Participants suggested alternatives such as allowing a point check or stability test to extend the approval period, similar to Caltrans’ renewal process.*

*The group recognized confusion among agencies regarding the distinction between mix design and job mix formula expiration and discussed the need for clearer language or possible standardization. The discussion concluded with a plan to further explore options for mix design renewal and clarification in future meetings. This should include a two year “expiration”, mix design renewal “point check”, and a process to manage the JMF usage when the mix design “expires in the middle of a project.*

- VI. Completed Changes Submitted to Committee
  - a. Following changes are under review and vote by Surface Subcommittee.
    - i. 347 SM: Crushed Rock Quality Revisions – REFERRED
    - ii. 327 SM: WMA – SUBMITTED
    - iii. 350 SM: ARHM Editorial Revisions – SUBMITTED
  
- VII. Bin List
  - a. Non-Nuclear Density gauges
  - b. Add requirements for audit RAP content for produced HMA
    - i. Sponsor: TBD
    - ii. Draft Revisions
  - c. Fiber usage in preservation treatments
  - d. Balanced Mix Design
  
- VIII. Next Meeting – May 6, 1:00 p.m. Online ONLY
  
- IX. Action Items
  - a. *BMilar - Send the APWA SoCal Greenbook seminar link and the meeting agenda to all participants*
  - b. *BMilar - Revise the aramid fiber metering and data-logging specification text to allow a generic data logging system (not limited to the fiber feed system) and incorporate suggested wording changes (including using AFMAC where appropriate), and prepare the updated document for surface subcommittee review*
  - c. *BMilar - Add the “class” terminology (replace “type” with “class”) and adjust related spec language where Greenbook refers to AC classes*
  - d. *BMilar - Finalize the gyratory compactor pilot/shadow testing document (clean up formatting and details), then send it to the group for quick review and distribute instructions to agencies, contractors and producers requesting voluntary participation*
  - e. *BMilar - Specify in the gyratory pilot instructions that bulk specific gravity testing will follow T166 (align pilot with Caltrans direction to use T166)*

Attendees:

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Brandon Milar	CalAPA
Pascal Mascarenhas	CRM
James, Elaine	City of San Diego
Jeff Luzar	PRS
Gary Porritt	PRS
Cameron Richardson	CalCIMA
James Emerson	
John Warrick	Labelle Marvin
Nolan Lohman	Ingevity
Araceli Contreras	County of San Diego
Michael Ramos	Sully-Miller
Jorge Campos	Sustainable Emulsions
Brandon Moreno	Granite Construction
Garo Avoyan	County of Los Angeles
Lisa Nordine	DeSilva Gates
Patrick Carrigan	City of Los Angeles
Theo Demangos	Granite Construction
Roger Smith	Consultant
Chris Lucero	Vulcan Materials
Al Ochoa	Kleinfelder
Todd Vargason	Ergon
Tim Denlay	Knife River Construction
Roger Schlierkamp	GMU

Consensus Revisions to the proposed AFMAC Specification:

203-XX.7.1 AFMAC Metering Systems

Incorporation of Aramid Fiber product shall conform to ASTM 8395 and manufacturer recommendations. The aramid fiber additive shall be measured by a meter certified in accordance with 4-7. The metering system shall be capable of varying the rate of delivery of aramid fiber additive proportionately with the rate of delivery of aggregate and RAP while the plant is in full operation.

The ~~aramid fiber feed system~~ plant shall have a system to ~~shall~~ capture and report feeding logs during production on AFMAC. The data log report shall include but is not limited to, the following:

- a) Production Date
- b) Aramid Additive product information
- c) Mix Type
- d) Reporting interval
- e) Aramid additive content

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- f) Aramid Fiber Dosage Rate
- g) Aramid Fiber Additive Dosage Rate
- h) Plant Production Rate

Upon request, the ~~aramid fiber feed system~~ data log report shall be made available to the Engineer.

## Current JMF Specification Language:

### 203-6.3 Job Mix Formula (JMF) and Mix Designs.

**203-6.3.1 General.** The Contractor shall submit in accordance with 3-8.4 a JMF that summarizes each asphalt concrete mix design for each class and grade of asphalt concrete required to construct the Work. Supporting information for the warm mix asphalt (WMA) technology and/or recycling agent, if included in a mixture, shall also be submitted.

The JMF shall identify the source and the individual grading of each material used to produce the mix design (including the percentage and individual gradation of any manufactured or natural sands), the combined gradation, the optimum binder content (OBC), void content, reclaimed asphalt pavement (RAP) percentage, RAP gradation, RAP binder content, stability value, plant identification, mix number, WMA technology, and the source and performance grade of the paving asphalt. Upon request, the mix design test data represented by the JMF shall be immediately made available to the Engineer.

For asphalt concrete with 20 to 25 percent reclaimed asphalt, the grade of the virgin binder must be the specified grade of asphalt binder for the asphalt concrete with the upper and lower temperature classification reduced by 6 degrees C.

When greater than 25 percent RAP is to be included in a mixture, a mix design shall be submitted. The submittal shall include supporting information showing the viscosity of the individual binders (both the virgin paving asphalt grade and that of the binder recovered from the RAP); and the amount of recycling agent, if any, and the blended final viscosity in accordance with AASHTO M323.

For all mixtures, the asphalt binder content shall be defined as the total bituminous material present in the mix consisting of the blend of virgin paving asphalt, residual paving asphalt from RAP, and recycling agent.

~~When a mix design is more than 30 Days old, the JMF must indicate that the combined gradation is  $\pm 3$  percent from the referenced mix design based on a 30-Day moving average or a minimum of the 10 most current results. If the combined aggregate gradation is not within  $\pm 3$  percentage points of the gradation shown on the referenced mix design on any sieve, if the source of any aggregate is changed, or the performance grade of paving asphalt is changed, or the mix design is over 2 years old, a new mix design shall be prepared and a new JMF shall be submitted to the Engineer for approval.~~

Keep 2-year-old "expiration":  
Mix design renewal process: "point check"  
Manage expiration in middle of project

Write up problem statement for a change.