

**3340000, Superpave Asphalt Pavement
Comments from Industry Review**

Mickey Cox
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Comment:

Concerning the frequency of Gmm on crushed RAP, I feel that 1 per 1000 tons on crushing RAP is to excessive. I usually crush around 15,000-20,000 tons each time and I will have 15-20 Gmm's and I think that is excessive. I would think that 1 per 2000 tons would be more than enough.

Response:

Agreed. Change made to test once per 5000 tons of incoming material.

Howard Moseley
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Comments:

334-1.1: Can we remove option #2? -

Response:

This has been discussed and will likely happen in the future if there is no use of the Option 2 provisions of the specification.

334-2.3.1: o I am a little concerned about removing the 50% RAP limit (all mixes) and the 30% RAP limit on traffic level D and E mixes. I think these restrictions have served us well.

Response:

It is unlikely excessive RAP percentages will occur. Volumetric properties will prevent this. The specification change may encourage Contractors to start fractionating their RAP, which is positive outcome. If problems are encountered by removing these restrictions, then they can be added back in the future.

o Since we are already increasing the amount of RAP in PG 76-22 mixes to 20%, do we need the exception allowing more RAP if no more than 20% by weight of the total binder comes from RAP? It might be good to remove this exception now since RAP piles can vary and the allowable percentage of RAP has increased. -

Response:

The intent of the specification change was simply to change the value from 15 to 20, while not changing the other requirement that you mentioned. For now the intent is to allow the % change to take effect and monitor the outcome.

334-2.3.3 “RAP Stockpile Approval: 1. Continuous stockpile: When RAP is obtained from one or multiple sources and is either processed, blended, or fractionated, and stockpiled in a continuous manner, assure an adequate number of test results are obtained for stockpile approval.” We need to assign a number. An adequate number to us may be different than an adequate number to a contractor. -

Response:

The number of tests is outlined below the paragraph that is cited.

334-5.1.9.5: Add “at a minimum” to the new paragraph. It should read like this: “When evaluating defective material by engineering analysis or delineation testing, at a minimum, evaluate all material located between passing Quality Control,... I have had Contractors argue that a QC air void of 2.34% indicates all of the material on the other side of this test result is good to go. -

Response:

Agreed. Change made.

Table 334-8: I am a little concerned about the other non-vertical vibratory modes. Do we really need to have this in the spec?

Response:

Information presented to the Bituminous Staff at the SMO appeared positive that non-vertical vibratory compaction can provide an alternative means for a Contractor to obtain acceptable density values without damaging sensitive structures. Note that these alternative compactors must still be approved by the Engineer prior to use.

Jennifer Williams
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Comment:

Section 334-5.1.7.2 Roadway - Change “Obtain five 6 inch roadway cores within 24 hours of placement” to “obtain three 6 inch roadway cores within 24 hours of placement, where it is impractical to cut five cores”. This follows the requirement in 334-5.1.4.3 for acceptance of the mix. Based on our field experience with obtaining IV cores, this proposed change is reasonable.

Response:

Agreed. Wording was modified to accommodate three cores where it is impractical to cut five cores.

Rich Hewitt
District 5 Bituminous Engineer:

Comments:

There is often some confusion with the word “terminated” in reference to Spec.334-5.1.2.2 of the “09” specs and the word terminated in the CPF sheet. Some people are confusing a LOT “terminated” after 20 days with the “Lot Terminated” button on the CPF sheet (form # 675-030-22A). I don’t think the intent of the Spec was to affect the CPF if a LOT ends due to time only. Therefore we propose Spec language only use the word “terminated” when referring to a LOT ending due to a QC failure (Specification 334-5.1.4.4). For other conditions, use the word “closed” (such as when a LOT reaches the 20 day time limit or the completion of a given mix type or mix design on a project).

Below is one substitution below in red text. However, there may be other locations in the Specs where the previously described proposal would necessitate the wording change.

334-5.1.2.2 Partial LOTs: A partial LOT is defined as a LOT size that is less than a full LOT. A partial LOT may occur due to the following: 1. The completion of a given mix type or mix design on a project. 2. LOTs will be terminated closed 20 calendar days after the start of the LOT. (Time periods other than 20 days may be used if agreed to by both the Engineer and the Contractor.) 3. A LOT is terminated per 334-5.1.4.4. All partial LOTs will be evaluated based on the number of tests available, and will not be redefined.

Response:

Agreed. Wording is modified, as appropriate, from “terminated” to “closed” throughout 334. Other specifications were checked but no other cases of “terminate” were encountered.

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Response:

This is a duplicate comment. See above.

Comments from internal teleconference on 7/17/09

Comment:

334-3.2.1.

1. Remove the comment inserted in the first sentence.

Response:

Agreed. Comment removed.

2. Should “may” be “must” or “shall” in the third paragraph proposed?

Response:

No, “may” is appropriate since this the use of warm mix asphalt will be the Contractor’s option.

3. Update URL to the specifications office website to ensure consistent implementation of specification and list. To be provided by the Specifications Office.

Response:

Received the URL from the Specifications Office and updated the specification.

Comment:

334-3.2.3.1, -3.2.3.2, - 3.2.3.4. Remove the comments in Word.

Response:

Agreed. Comments removed.

Comments from Meeting with Industry on 7/23/09

Comment:

334-2.3.3 (1) and (2). Revise the frequency of Gmm testing for incoming RAP material from once per 1000 tons to once per 5000 tons.

Response:

Agreed. Change made.

Comment:

334-2.3.3. Delete the proposed paragraph “Submit data for gradation, asphalt content,”

Response:

Agreed. Wording is unnecessary.

Comment:

334-2.3.3 and -2.3.4. Renumber these subarticles to -2.3.4 and -2.3.5.

Response:

Agreed. Subarticles are renumbered.

Comment:

334-3.3. Revise Table 334-4 to better define the new requirement for each component of the aggregate blend and handle the reference for FC-5 mixtures from Section 337.

Response:

Agreed. Wording for the proposed change was slightly modified to make it clearer. A note was added to clarify the reference from 337 regarding FC-5 mixtures.

Comment:

334-5.1.7.2. Change the first sentence to read, “Obtain five 6 inch diameter roadway cores, or three if five cannot be taken, within 24 hours of notification as directed ...”

Response:

Agreed. Wording was modified to allow the option of obtaining three cores if it is impractical to cut five cores.

Comment:

334-5.1.9.5. Clarify the last paragraph related to the “....even if this includes more than one subplot or multiple days of production.”

Response:

This wording was removed. The remaining wording “When evaluating defective material by engineering analysis or delineation testing, at a minimum, evaluate all material located between passing Quality Control, Process Control or Independent Verification test results” is adequate.