

Members: Larry Ilg (QIC), Gary Thompson, Bruce Patterson, Dick Dominick, Chris Hardwick, Not present Mike Crennen (QIC),

The members met for the first time after the QIC Rodeo where all the task groups learned the background and goals of the QIC. The issues discussed are outlined below.

1) Result Based Aggregate Production to Allow Mix Adjustments

The group discussed the danger of aggregate production which result in a limited ability to adjust a HMA mix volumetrics during the development of a mix design or once a design is produced.

- a. Establish a range for volumetric adjustments. – The group discussed the need to establish ranges in gradations to ensure adjustments can be made. Will the requirement of the 3% difference on the #8 sieve be enough? What other methods could be used to improve or support current specs.
- b. Aggregate gravity management – All in the group recognized the affect of aggregate gravities on the volumetric of a HMA and felt a system to manage aggregate gravities may be advantageous.

2) Bailey Gradation Method

The Bailey Gradation Method (BGM) is a blending method that tries to build a strong aggregate structure while still providing volume for asphalt. This results in a mix that should be able to resist rutting and have good durability at the same time. Gary mentioned that AASHTO added some “primary control sieves” into the current Superpave method which may be related to the Bailey method.

- a. Segregation – Will the use of the BGM reduce or increase the risk of designing a segregation prone mix
- b. Impact on crushing – What impact will BGM have on current crushing operations, will it affect commercial differently than mobile
- c. Mix design – What impact will the BGM have on current mix design practices. What additional training will need to occur and at what levels
Bruce and Dick have volunteered to look at developing some gradations with the Bailey Method for a project they are currently working on to see how the volumetrics react. A formal research project will be RFP shortly by ODOT Research in January.

3) Mix Design Feedback

Once a CMDT has completed a mix design, the last information the CMDT receives is approval of the mix design. If adjustments are made to the mix design under production the CMDT often is not notified of the changes.

- a. Design vs Production – Review current communications methods on changes to mix designs and who are the responsible parties
- b. Changes sent to CMDT – Develop method of communication that include the CMDT.

4) **Mix Design Guidelines**

Review mix design guidelines to see if better information or practices are available

- a. RAP – Best practices of placing RAP in design, then incorporate into guidelines
- b. Temp-Vis – Review research to see if any new developments have been made for establishing mixing and compacting temperatures.
- c. Model dust and return – Are designers considering the dust management systems at plants or do we need to provide additional guidelines.
- d. Absorption Management – How can designers and/or plants manage absorption better

5) **Performance Test**

What are the current plans of ODOT for a performance test?

- a. APA
- b. Hveem
- c. Secondary compaction
- d. Simple Performance Test

Bruce will compile data on APA and Hveem Stability results and present to group.

6) **Review Criteria**

- a. Review the 745 standard spec and document the background and reasoning behind criteria used in specifications
- b. Air void change through structure – Document background on reasoning of changing air voids through pavement structure and methods used to adjust mix design.**

Based upon discussion within the QIC Committee, this will likely be a task we will want to dedicate some time to.

- c. Best practices and new technology to consider
- d. Single compactive effort for the State.**

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7) **Next Meeting**

- a. January 14, 2005 Location: ???

Issue/Problem	Time Frame and Priority	Tasks needed to understand/solve (Champion)	Implementation (change process/spec)	Deliverable (revised spec/training/other)
Result Based Aggregate Production to Allow Mix Adjustments	❶	Aggregate gravity management Establish range for volumetric adjustments (Gary Thompson)	Change process – may be done though spec	Revise training
Bailey Gradation Method	❸	Segregation Impact on crushing Mix design (rut resistant with adequate volume for asphalt) (Gary Thompson)	Change spec and design process	Revise spec and training
Mix Design Feedback	❷	Designs vs Production Changes sent to CMDT (Larry Ilg)	Change in Process	Training and Form?
Mix Design Guidelines	❻	RAP Temp – Visc Model dust and return Absorption management	Change in training materials	Revise training
Performance Test	❹	APA Hveem SPT Secondary compaction	Change in specifications and testing	
Review Mix Design Criteria	❺	Document background <i>Air void change through structure</i> Best practice and technology	Change in specifications and test procedures	Document explaining mix design criteria and test methods. Training materials.
Single Compactive Effort		Investigate feasibility of having only one compactive effort for all designs (100 gyrations)	Changes in spec.	
Look at long life pavements and their mix designs		Investigate if there is a common link		

