

State Discussion Topics – 2003

Alaska DOT Response

1. What is the status of Superpave implementation for both binder and mixtures? **Superpave mix designs are being used on highways having high traffic in two of the three regions of the State. The resulting mix has been well accepted by agency and industry. The PG binder specifications have been adopted statewide.**
2. What are the primary PG binder grades being used? **PG52-22, PG 58-28+, PG 64-28+** Does your state use any SHRP plus tests and the reason for their use? **Yes, North Slope Alaskan crude is the most economical source and elastomeric polymer loading is desired for resistance to thermal cracking, studded tire wear resistance, and resistance to plastic deformation.** Do you have any plans to implement AASHTO MP1a? **No.**
3. There has been much recent discussion on the affects of acid modification of binders. Is your state concerned with the issue of chemical modification? **Yes since liquid antistrip is used and because it has other detrimental effects.** Does your state have any specifications to address chemical modification of PG binders? **Not at this time, but are considering doing this.**
4. There has been a concern that Superpave mixtures may be over compacted, resulting in low binder contents and reduced durability and fatigue life. Is your state doing any testing, other than gyratory compaction, do determine if the mixture has adequate binder? **No, other than comparison with the historical Marshall mix results.** Has your state taken any action or modified the Superpave procedures to insure adequate binder in the mixture? **Not at this time, but are evaluating the work that Colorado has done.**
5. What procedures does your state use to specify aggregate durability for HMA (sodium sulfate, magnesium sulfate, freeze thaw, or other)? **sodium sulfate, LA, Degradation, Nordic Abrasion.** Have you done any research with Micro Deval and do you have any plans to replace your present specifications with Micro Deval? **No, monitoring the work of others and looking to compare this with the Nordic Abrasion test or a modified form of this test.**
6. Does your state routinely specify Stone Mastic Asphalt (SMA) mixtures? **Yes in Anchorage.** Approximately how many tons of SMA is placed each year? **150,000 tons.** Do you use AASHTO MP2 and PP41 for specifications and design or what significant modification to these have you made? **Yes, no significant modifications are used.** Do you have any construction quality issues and how are SMA mixture performing? **SMA and other mixes only last 6-8 years in Anchorage due to studded tire abrasion (rutting, the width between ruts match the a compact car).**
7. Has the performance of longitudinal joints been as issue? **Yes.** What type of joint is required or generally constructed by contractors? **Contractor's choice.** Do you require

any QC or QA procedures such as density or permeability at the joint? Cores centered over the joint are taken, if the density is less than 91% MSG then joint sealing is required at the Contractor's expense and a penalty is assessed of \$1.00/lf per percent less than 91% based on a average of the project average density. If density is > 91% then a bonus is offered of \$0.25/lf per percent above 91% MSG.

8. Do you regularly see paver related segregation (linear streaks either at or just below the mat surface) Not regularly, but they do occur and do you have a specification to address it? Not at this time, but plan to institute a specification. Do feel temperature segregation is a problem and do you have a specification to address it? Yes, plan to work with Contractor's using a thermal camera before instituting a specification.
9. Are there any recent or pending rule changes by your state EPA that may impact specifications or changes to products? No Has there been any recent legislation that will impact the refining or HMA paving industries? No
10. What is the single most concerning issue with the quality of HMA in your state? The single issue would be adequate funding for pavement preservation, but joint density, smoothness, conformance to mix designs issues, resistance to studded tire wear are the technical issued being dealt with.