# State Discussion Topics – 2004

**State: Idaho**

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1. Have you adopted the Superpave aggregate consensus properties? Were any of these specifications more restrictive than your previous specifications? If you did not adopt the Superpave aggregate standards have you made any significant changes to your aggregate specifications in the last 10 years.

Ans: Yes. Idaho has adopted the Superpave consensus properties for aggregates to be used with Hveem mix designs. We have not fully implemented the Superpave mix design yet but are planning to have couple of projects next year. Currently Sand Equivalent minimum is 35. It will be made more restrictive when we start using Superpave. The other properties are as recommended except for Flat and Elongated, which is 15% minimum currently.

2. Have aggregate producers had to modify practices and equipment to meet the new specifications? As an example: have you seen changes in crushing equipment, equipment to remove fine dust, and the number of stockpiles and cold feed bins used?

Ans: Little or no modification was necessary. Idaho has required multiple stockpiles for many years so we do not anticipate future problems. Dust removal might be the biggest problem the contractor will face.

3. Do you have aggregate sources that were being used before the changes that no longer meet your specifications? Are aggregates or filler having to be hauled to some locations, in order to meet Superpave requirements, where local sources were being used before Superpave?

Ans: Because we specify most of the Superpave consensus properties currently, we do not anticipate any sources that currently meet our specification to be rejected with full implementation of Superpave.

4. Do you require QC or QA testing of aggregates during aggregate production or only during the mixing process? Do you require the contractor to perform QC testing at required frequencies? Which properties must be checked?

Ans: We require QC and acceptance testing by the contractor during mixing and mix placement process. QC testing is required at every 1500 Ton for Gradation, Sand Equivalent and Fracture count from the cold feed. Acceptance testing is required at every 750 Tons for gradation and Fracture count from the roadway.

5. For aggregate properties, excluding gradation, do you test or require testing at a specified frequency during production or do you only verify aggregate properties at the time of the mix design? For which properties and at what frequencies are the tests performed?

Ans: During mix production Fracture count (excluding gradation) is tested every 1500 Ton for QC and every 750 Ton for acceptance by the contractor. Sand Equivalent is tested every 1500 Ton for QC. The State tests Gradation, SE, Fracture, Flat and Elongated particles, Fine Aggregate Angularity during acceptance test strip. Three tests per test strip.

6. Please list the test specified and the limits for each of the properties shown below for an aggregate you would use for surface course on a high volume rural interstate.
   A. Soundness –
   B. Durability -
   C. Course Aggregate Fracture -
   D. Fine Aggregate Fracture -
   E. Cleanliness (sand equivalent, PI, or other)
   F. Flat and Elongated
   G. Polish Resistance

Ans: A. Sodium Sulfate soundness test: 12% max loss at 5 cycles (this is not a big problem for our aggregates)
Following limits are for 3.0 to <30 million ESALS (Obtained from the Superpave specification that is under review)
   B. L.A. Wear: 30% max loss
   C. Coarse agg. Fracture :
      One fractured face: 95% min
      Two fractured face: 90% min
   D. Fine aggregate angularity: 45 min
   E. Sand equivalent: 45 min
   F. Flat and elongated: 10% max
   G. No test is specified.

7. Has your state done any research with Micro Deval? Is Micro Deval testing performed on the coarse aggregate, fine aggregate, or a combined sample? Do you have any plans to replace your present specifications for aggregate soundness or durability with Micro Deval?

Ans: My state hasn't done any research with Micro Deval and currently there isn't any plan to incorporate Micro Deval. Although a research project has been proposed for one of the State Universities in Idaho to compare the Idaho Degradation test with Micro Deval, but this research is currently unfunded.

8. Is your state using any wheel tracking devices (Hamburg, APA, or Other) to test HMA? Do you use the devices to evaluate rutting, moisture damage, or fatigue? What are your testing parameters (number of cycles, temperature, rut depth, and such)? Do you have specification for HMA and if so please list? Does the state perform the testing or is the contractor required to perform the testing?

Ans: We have APA and planning to use the device for Superpave projects. Testing parameters and HMA specification are under review. At present only the State owns the device, therefore, the State will perform all the testing.