

# Wisconsin Department of Transportation

**Date:** December 15, 2022

**Subject:** Agenda for Aggregate Subcommittee Meeting

**Location:** Galena Conference Room, Truax and Teams Meeting

**Time:** 8:00 AM to 10:00 AM

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## Attendees:

### WisDOT Members:

- Barry Paye – BTS Director
- Erik Lyngdal – BTS Chief Materials Engineer
- Tirupan Mandal – BTS Concrete Materials Lab Supervisor
- Adam Albers – BTS Materials Lab Coordinator
- Dan Reid – BTS Hydrogeologist
- Josh Seaman – BTS Aggregate Specialist
- Mark Kray – BTS Soils and Aggregate Specialist

### FHWA Members:

- James Pforr – FHWA Pavement & Materials/Asset Management Engineer

### Industry Members:

- Jack Peterson – Yahara Materials
- JR Ramthun – Michels Corporation
- Mark Sander – MTE Services, Inc
- Matt Grove – Wisconsin Transportation Builders Association
- Mike Kleist – James Peterson Sons, Inc
- Erin Longmire – Erin Longmire Consulting, LLC

## Agenda Items:

1. Welcome and introductions (**Mandal**)
  - Mark Kray is the new soils and agg specialist.
2. CMM, FDM, and Spec changes (**Mandal**)
  - QMP Base Changes
    - CMM 815.12.1 Use of Nuclear Density Gauges on Soils, Base Course
    - CMM 834.2.1 Verification Testing
    - FDM 19-21-5 5.2.1 QMP Base Aggregate Dense 1 1/4-Inch Compaction

- SS 730.3.1 General
  - SS 730.3.3 Department QV Testing
  - SS 730.3.4.1 Contractor QC Testing
  - Aggregate Source Approval
    - CMM 860.2 Aggregate Source Approval
3. Aggregate round robin (**Albers**)
- Presented the issue of batched samples being finer than expected.
  - Issues can be addressed by providing a complete/raw field sample that participating labs will dry and screen themselves.
  - More material will be provided as well.
4. Virgin aggregate on top of RAP (**Ramthun**)
- Presentation of nationwide specs with respect to RAP usage compared to WisDOT.
  - Industry supports the use of RAP as an economic savings to taxpayers. The spec regarding this topic changed in 2018.
    - In 2016 we had gradation requirements and an AC content test in the spec.
    - In practice, it was a visual inspection of 100% passing the ¾.
  - Consider/explore permeability issues with virgin on top of RAP.
    - How could we test the permeability?
  - Virgin agg over RAP produces an inverted pavement design.
  - Scarifying the RAP would allow for the virgin to interlock and allow seepage through the pavement structure.
    - We've seen virgin slipping on top of RAP.
    - Investigate construction practices for accomplishing this.
  - ACTION: Investigate performance of past projects that had virgin/RAP.
    - Look into performance of projects prior to 2018.
    - FWD data compared to expected moduli.
    - 2-3 pavement failures IS significant.
    - Past job – the HMA slid immediately after being placed. Rehab constructing on asphalt. NE region.

- Compare distress/IRI data from pavement surveying of virgin/RAP jobs to traditional base layers.
  - Tack the RAP to make sure it bonds to the virgin on top.
  - Blended material is more costly to produce than virgin agg.
  - Subcommittee members will share any known projects to investigate.
5. Base compaction job (**Lyngdal/Mandal**)
- Maximized number of HMA projects that we want the base compaction spec on. Next frontier is getting this on the right concrete jobs.
  - Pilot a concrete job to use the base compaction stsp:
    - A rural setting.
    - Need 6-8 inches of base. So that we're testing the density of the base and not the layer beneath it.
    - Get it in the PS&E for 2024 for pilots.
    - Could bring this to the concrete tech committee to see if they have any ideas.
6. Lucky strike extras
- WHRP Freeze-Thaw project
    - Will discuss data presented in last meeting.
  - ASR for source approval
    - Tied into FAA/BOA requirements for ASR. Post a list of sources with ASR in DOT resources.
    - ASR spec is pretty vague, and we should look into updating it. Ig/Met sources would be examined since they exclusively have ASR issues.
    - We can still use ASR susceptible aggs if we account for it in the concrete mix design.
7. Next meeting
- In-person/hybrid?
  - March 9<sup>th</sup> hybrid meeting.