



December 16, 2025

Meeting – HMA Spec Subcommittee

Location: Teams Meeting / In-Person (Galena Room @ Truax Madison)

Date: 12-16-2025

Time: 10:00AM – 12:00PM

Attendance

Attendance may be inaccurate due to late recording start.

Albert Kilger

Dan Kopacz

Casey Wierzchowski

Deb Schberman

Zach Lemke

Cayley Young

Travis Kurey

Scott Syron

Jake Amundson

Neal Atanasoff

Jeremy Barron

Brian Jandrin

Michelle Gehrke

Bryce Cibulka

Jeff Anderson

Craig Konkel

David Hose

Devin Harings

Derek Frederixon

Agenda Items

1. PWL for SMA
 - i. Splitting larger sample sizes.
 - Albert K.: This topic shouldn't be new since we are doing split samples instead of independent samples during SMA test strips.
 - Dan K.: If we move to PWL for SMA, we will use that procedure for the whole job instead of just the test strip.
 - Albert K.: We had received some questions regarding remixing the splits to homogenize the samples, due to requiring 2 samples from the truck box due to the larger sample sizes. Do we need to add additional language to the MOTP on how to handle this? Or do we want to leave this up to the sampler's discretion at the time of sampling?
 - Deb S.: If we know that it is being done different

ways, then that tells us we should probably add language to the MOTP, so everyone is doing it the same way. Then the conversation can be had about which procedure is optimal.

- Dan K.: As long as the material is from the same truck, it seems like we don't need to recombine it. We've proved this to ourselves from the Round Robin. Another point is that if we try to recombine the material, then that provides more opportunities for fines to stick to the splitter, especially if it's not heated.
- Scott S.: We were the region that was recombining. If the new method with not recombining works, then I am fine with using that method.
- Derek F.: We don't feel strongly one way or the other if it works.
- Dan K.: If there ever is a question on it, we always can run a gradation on those samples. If both parties do this, it is a good way to make sure the samples aren't segregated.
- David H.: If your quartermaster is level, then things work out well, but if it's not, then you can have some differences where recombining can help.
- **Action Item:** WisDOT will clarify in the 2027 MOTP update that the SMA splits should not be recombined due to the larger sample sizes (essentially 2 samples from the truck box).

ii. Testing both samples for the Test Strip.

- Dan K.: What's been happening on the test strips in the past, when the one sample was collected and failed, there was always the question about the acceptability of the other sample. The contractor would say it's passing and want to proceed into production. In these cases, BTS would recommend that the region test the other sample, and if they matched the contractor's sample, we would allow them to proceed into production. Also mix corrections may have been made by the second sample to address the concerns. So, some regions are testing both samples right away while they are hot and others are still just testing the one sample.
- Albert K.: Industry's perspective is to be consistent across the state. We have been sensitive to the testing resources/staffing of the

regions, so we haven't standardized testing both samples yet.

- Deb S.: When are we targeting to implement this.
 - Dan K.: We would target 2026 via a no cost change order with an updated STSP, if industry and the department agree. It's too late to put it in the specs though for 2026 otherwise.
- Jake A.: If SMA is going to PWL, won't the test strip require 3 tests to do F&t?
 - Dan K.: We have discussed this, and do not plan to move the SMA test strip to 3 samples due to the workload. The test strips would stay the same as they are now.
 - Albert K. The changes to which samples are tested/reported would apply to both QMP and Pilot PWL SMA projects.
- Neal A.: If the department tests both samples for the test strip approval criteria, what happens if one sample passes and the other fails?
 - Dan K.: If one fails, the material will still have to go to Jeff. Whether or not we move into production will depend on the situation. If the first mix passes and the second fails and we don't know why, then maybe we wouldn't move into production. If the first fails and the second passes, then we would lean towards allowing production to begin. However, pay would still be determined by the dispute resolution testing, like it is now. Some people feel as though we should do another test strip, and that the contractor is given a free pass to move into production when the test strip fails. However, this is not the case. The acceptance limits still apply when we move into production. The test strip is just an indication to see if the mix is acceptable and that the contractors have their process figured out to move forward.
- Deb S.: We have had discussions about the core lok and bag sizes for testing SMA. These details will be important for moving into PWL. We've had issues with different bag qualities, big bags and small bags, as well as double bagging the samples. Additionally, there have been differences between samples bagged in new/different core loks, side-by-side.
 - Dan K.: We have had concerns in the past with bags breaking and some people were double bagging, and I think that is where we ran into problems. I think we agreed at the time not to double bag, and to just use the correct bag sizes.

If the bags were breaking, we would step in and look at the situation on a case-by-case basis.

- Jeff A.: At the time, the issue we were having was a contractor was using a "sleeve" instead of double bagging. Double bagging is allowed by the AASHTO standard for situations where the bags puncture because of the samples. If you validate the bags as you are required to in section 8 with every net set of bags you purchase and make sure they are within the tolerance, there shouldn't be issues with double bagging. The standard says you cut the second bag back several inches then slide the two bags together, weight them up, then put your sample into both bags and vacuum seal them. You are just sealing the outside bag and the inside bag help reduce the potential for puncture. If you can't meet the tolerances with bag verification, then you should not be using the bags.
- Dan K.: **Action Item:** We may come up with an IA checklist, if it doesn't already exist, to verify these verifications are being done before putting the bags into service and/or double bagging, etc.
- Deb S.: If we cut and core the pavement and test the cores using small bags because we cut 4-inch cores, are we making sure when the department verifies those results that they are also using small bags when testing the cores?
- Dan K. The correct bag size should be part of the procedure and we would follow that. Additionally, these details should be discussed as part of the pre-pave meeting.
 - Deb S.: There is ambiguity in the standard that implies the tester can decide which bag will work best for them based on some generalities. We believe there will be differences in test results if the department ends up testing with different bag sizes than the contractor. Industry would like the testing to be

- uniform.
- Jeff A [Posted in chat from AASHTO standard]:
 - Plastic bags – The two most commonly used sizes of bags are designated as small and large size bags. The small bags shall have a minimum opening of 235 mm (9.25 in.) and a maximum opening of 267 mm (10.50 in.) with a mass of less than 35 g. The large bags shall have a minimum opening of 368 mm (14.50 in.) and a maximum opening of 394 mm (15.5 in.) with a mass of 35 g or more.
 - Sealing the Specimen—Select an appropriately sized bag for the specimen. Specimens of 100 mm (4 in.) and 150 mm (6 in.) in diameter and up to 75 mm (3 in.) in thickness are usually tested with a small bag. Specimens of 150 mm (6 in.) in diameter by 75 mm (3 in.) or greater in thickness will usually be tested with a large bag.
- **Industry Action Item:** If industry would like to remove the ambiguity with bag sizes during testing from the standard, industry will provide the department with the desired bag sizes for the various geometries for a 2027 MOTP update.
- Albert K.: Do the regions have all the bag sizes they need.
 - Scott S.: We do not. We were cutting large bags down to about 30g for 4-in. cores.
- Dan K. & Jeff A.: Everyone should also be checking their vacuum pressures using an

absolute vacuum gauge.

- Deb S. Worksheets may also need to be updated to show all the information.
 - Dan K.: AASHTOWare should have places to enter all of this information.
 - Scott S.: It will be in AASHTOWare.
- **Action Item:** The department will update the 2027 MOTP regarding bag sizes with consideration to any industry feedback provided.
- **Action Item:** The department will update the AWP spec and STSP for SMA test strips to have the department test both volumetric samples. Revisions will be shared with and reviewed by the committee prior to publication.

2. Small Quantity / Low-Risk Density Testing

- i. Uncorrelated Nuclear Gauges
 - Albert K.: Based on previous discussions, the department agrees that there are situations where it may make sense to still use uncorrelated nuclear gauges, whether it be due to risk, quantity, or other project constraints. We had previously asked for some recommendations but have not yet received any. From internal discussions, there aren't many scenarios where we would do this such as small, non-contiguous areas, or areas where it doesn't make sense to use the coring rig. There would likely be less situations than compared to the existing QMP program.
 - Dan K.: There are too many situations to have an exhaustive list. We will provide guidance to the regions, but we may just give the regions the latitude to decide for themselves based on our guidance.
 - Casey W.: This all would be listed in the mixture use table ahead of time and not decided after the fact. These areas will likely be small areas on parts of larger projects that are lower risk and where we don't have to go through the extra effort of correlated gauges or cores.
 - Dan K.: If a gauge is going to be used or not on a project needs to be decided ahead of time so the project will have the proper staff and gauges available.
 - Deb S.: Industry's opinion is to not change from the current practice of uncorrelated nuclear gauges. There is so much

effort that goes into the gauges every year. Maybe there can be a threshold if you're at a certain level. If the quality appears marginal on the nuclear gauge, then we could core it to find out for sure.

- Dan K.: This is a reasonable approach to core marginal areas. However, we still have scenarios where gauge offsets from some correlations are high. We don't want to use uncorrelated gauges in high-risk areas and may take cores instead.
- Deb S.: We also have concerns about coring in live intersections, etc.
 - Casey W.: This is also considered as part of the risk from the department. If it's difficult to get in there to do the work to begin with, let's try to make sure we have the results we need so we don't have to go back and fix it later.
 - Dan K.: We will provide guidance to the regions on these situations as well, like the conversations about having traffic on milled surfaces and other project decisions. Other considerations are whether the project is a reconstruct vs. a mill and fill with a shorter lifespan.
- Jake A.: We would like BTS involved in the making of the Mixture Use Tables for these new programs since there was some issues when they were first rolled out and with all the new changes, we could see some issues arise again.
 - Albert K.: We have prepared updated FDM guidance for designers for making these selections with the new programs.
 - Dan K.: Each region is different, but in general we get those questions and work them out with the PWL reps. Some challenges are new staff that need to learn. Industry can also reach out if things don't look right.

3. DT2490 Form (Previously 249-Report/Form)

- Albert K.: The updated form is pretty much done. We are waiting on final feedback and coordinating with Atwoods/MRS.
 - Presented the new form as well as some of the features and explained the new Resultant Mixture PG and Binder Designation fields in comparison to the Virgin Binder PG and Virgin Binder

Designation.

- A notification will be sent once the new form is available.

4. Core Testing

i. Testing the same cores twice (initial test + region verification).

- Jeremy B.: We have data to show that we will share. The issues begin to show up when it goes to the region verification testing.
 - **Industry Action Item:** Jeremy B. will provide data showing differences between initial core tests and region verification testing.
- Jeremy B.: What is the point of the region verification step if the project staff witnesses the initial testing and signs off on it?
 - Dan K.: One of the issues we've had is the core dry not working properly. We aren't having the staff go out there with the absolute vacuum gauge, but maybe this is something we should require to verify the core dry is working correctly. We've also seen situations where the core dry isn't allowed to cool down between specimens which can cause damage.
 - Albert K.: Since the cores are technically QV cores, we are supposed to test them according to FHWA, but since we have gotten approval to do witnessed testing because of department equipment limitations, a concession we made is that we would verify a percentage of the cores in our labs.
- Scott S.: How many core are run again because they didn't meet constant mass? I always match the contractor unless the cores weren't run correctly. I think part of the problem with doing the constant mass procedure may be the initial pressure drawdown for those first two cycles may be causing the damage we are seeing in some cases.
 - Dan K.: We've had some, and we've had some projects where the cores have been suspect. Some areas have issues and others don't. We should be careful blaming the constant mass scenario. We haven't seen any data yet about the number of cycles being run in each region.
- Derek F.: One issue we had this year with core-only projects was that the spec doesn't offer any guidance on comparison between the contractor and department for production cores. So we had cores we tested that went to the department, were tested there, and they selected an arbitrary number of cores they claimed didn't compare and then used their numbers instead of the contractors numbers in the spreadsheet. There is nothing in the spec that lays out a

comparison process for selecting whose data to use.

- Dan K.: The reason we have a tolerance for the test strip is because we have 10 cores that are averaged, and the average difference needs to be more than 0.5%. During production, we would need an individual tolerance. So that's why we've said we're doing the verification testing since we have that right, and if it doesn't match up, we use the department results. If the language needs to be strengthened, we can do that.
 - Derek F.: If the department results rule, I think there needs to be a dispute resolution process beyond that.
 - **Future Topic:** Individual density tolerances on cores between labs / potential dispute resolution process.
- ii. Drying the cores twice for constant mass.
 - Dan K.: Some people feel that running the cores twice to achieve constant mass according to the AASHTO, that that is causing differences in the results. There is data shows if done correctly, the core dry should not be affecting the results.
- iii. Review of Standard Operating Procedure.
 - Dan K.: There are things we have to do with the core dry equipment to make sure they are calibrated correctly and that they are pulling the right amount of vacuum. Also, the core dry needs to be cooled down between samples. There have also been indications that we have been testing frozen cores (kept on ice too long)— which won't work. Ultimately, there are many little confounding factors that should be looked at first, and if we are still having issues, then maybe we will review the procedures again.
 - Jeff A. [Posted in chat]: In asphalt paving and testing, the process of running R79 and T166 involves specific procedures to assess the density and moisture content of asphalt specimens. When a cored specimen exhibits distress after repeated use to dry back to run T166, several factors might be contributing to this issue:
 1. **Repeated Handling and Testing:** The repeated process of drying the specimen can cause physical wear and tear. The specimen is subjected to handling, heating, and cooling cycles, which can lead to micro-cracking or other forms of distress over time.
 2. **Moisture Sensitivity:** Asphalt specimens can be sensitive to moisture changes. If the specimen absorbs moisture during testing or storage, repeated drying cycles can exacerbate distress by expanding and contracting within the material structure.
 3. **Temperature Fluctuations:** When drying the specimen, the

temperature fluctuations can cause thermal stress. If the heating is not uniform or controlled, it can result in uneven expansion and contraction, leading to cracking or other forms of distress.

4. Aging of the Asphalt Binder: Over time, repeated exposure to heat and air can cause the asphalt binder to age and become more brittle. This can make the specimen more susceptible to distress during handling and testing.
5. Initial Condition of Specimen: If the initial condition of the cored specimen is compromised, such as having existing micro-cracks or being improperly compacted, it may be more prone to distress during subsequent testing cycles.
6. Quality of Core Extraction: The way the specimen is cored and prepared can affect its durability. Poor coring techniques can introduce micro-cracks or other defects that become apparent after repeated testing.
 - o To address these issues, consider the following steps:
 - Ensure that the drying and testing procedures are carefully controlled and consistent.
 - Minimize the number of drying cycles if possible and evaluate the necessity of repeated testing.
 - Monitor the condition of specimens closely and document any signs of distress or degradation.
 - Use proper handling techniques to minimize physical damage during transportation and testing.
 - Review the initial preparation and condition of the core specimens to ensure they meet the required standards.

Previous Action Items

1. WTM R47 Section 8.2.3 – Splitting Samples for HMA vs. SMA
 - i. **Industry Action Item:** David H. will report back what temperatures we are seeing [for heated splitters].
 - ii. **Action Item:** The department will investigate further if checking the temperature of the splitter is important to keep or not.
 - Dan K.: We are not going to be checking the splitter temperatures and saying you can't go above a certain temperature. Based on our discussions they probably are getting hotter than the requirement in the MOTP. The thought is that since the time the material is in contact with the splitter is so short that the excessive heat shouldn't cause any issues with the mix.

2. WTP H-001

- i. **Action Item:** Department will work to get 249 report made into a DT form to be published online with the rest of the forms.
 - **BTS UPDATE:** Form (DT2490) is complete and will be available on WisDOT Forms soon (<https://wisconsindot.gov/Pages/global-footer/formdocs/default.aspx>).
 - Albert K.: Currently the form is out for review to primary mix designers. Feedback for the form is due today [12/16/25]. We will look to get the form published online after the New Year. This is the form that will be used for Mix Design submittals going forward.
 - Albert K.: One feedback received was for a Lastrada export function. If this is desirable, email me with the details of what you need.

3. AASHTO M339 (Thermometer requirements)

- i. **Action Item:** Discuss thermometer requirements (M339) at Tech Team.
 - Albert K.: This is a requirement of the new MOTP/AASHTO standards. Double check your thermometers meet this requirement. You may have already updated thermometers for other standards as part of lab qualification programs or other accreditations.
 - Deb S.: Is this something that is required for taking pavement mat temperatures or inspection as well?
 - Albert K.: No, these requirements only apply to AASHTO/ASTM test methods that require the use of a thermometer.

4. WTM T209

- i. **Action Item:** Department will notify HTCP and Tech Team of the change to the vacuum pressures for the procedure.
 - Dan K.: There is a potential for people to operate at different ends of the pressure window in order to try to match whoever they are trying to match (WisDOT/BTS/etc.). Just be aware these things are checked during IAs. We don't want it to seem like the pressures don't matter because we are all targeting the middle of the range anyways.