July 15, 2021
Meeting Minutes – Concrete Pavement Technical Committee

Location: Zoom Meeting

Date: July 15, 2021

Time: 9:00 am to 12:00 pm

Attendance

Committee Members:

WisDOT Members –

Bureau of Technical Services (BTS):

- ★ Scott Lawry – BTS Director
- ⊘ Barry Paye – Chief Materials Engineer
- ★ Jim Parry – Quality Assurance Supervisor
- ⊘ Leslie Ashauer – Concrete Quality Assurance Engineer
- ⊘ Debra Bischoff – QMP Engineer
- ★ Peter Kemp – Pavement Unit Supervisor
- ★ Myungook Kang – Pavement Policy and Research Engineer
- ★ Adam Johnson – Independent Assurance Program Coordinator
- ★ Mark Finnell – Concrete Engineer Consultant (Behnke Materials)
- ⊘ Signe Reichelt – Test Procedure Manual Consultant (Behnke Materials)

Bureau of Project Development (BPD):

- ★ Michael Hall – Construction Standards Engineer
- ⊘ Craig Pringle – Construction Oversight Engineer
- ★ Chad Hayes – Construction Oversight Engineer

Regional Representatives:

- ★ Alan Rommel – NE Region TSS Chief – Management Liaison
- ⊘ Vacant – TSS Supervisor – TSS Liaison
- ★ Travis Mikshowsky – SW Region Soils & Materials Engineer
- ★ Matt Smith – SW Region Independent Assurance
- ★ Kurt Flierl – SE Region Construction Project Manager (joined at 10:30 am)
- ★ April Rieger – SE Freeways Design/Construction Interface Engineer
- ★ Brent Ferguson – NC Region Independent Assurance
- ★ Devin Harings – NW Region Pavement Engineer
- ★ Matt Bertucci – NE Region Materials Engineer

Bureau of Aeronautics (BOA):

- ⊘ Tom Dewinter – Airport Construction Standards Chief

Bureau of Structures (BOS):

- ⊘ Josh Dietsche – Director (BOS)

FHWA Members –

- James Pforr – Pavement & Materials/Asset Management Engineer

Industry Members –

- Vacant – American Council of Engineering Companies Liaison
- Ed Anastas – A.W. Oakes
- Barry Bohman – Chippewa Concrete Services
- David Meyer - Continental Cement Company
- Brian Borowski – Lafarge/Holcim
- Mark LaLonde – LaLonde Contractors
- John McConahy – Mapei
- Scott Grams – Michels Paving
- Tom Ptaschinski – Ptaschinski Construction Company
- David McKewin – Sommers Construction Company
- James Palmer – St. Mary's Cement Company
- Mark Pichler – Stark Paving
- Mike Hammitt – Trierweiler Construction Company
- Heath Schopf – Vinton Construction Company
- Jackie Spoor – Wisconsin Concrete Pavement Association
- Kevin McMullen – Wisconsin Concrete Pavement Association
- Matt Grove – Wisconsin Transportation Builders Association
- Tony Zignego – Zignego Company

Resource Members (as needed)–

- Erik Lyngdal – BTS Concrete Lab Supervisor - Aggregate Tech Committee Chair
- Vacant – Concrete Materials Lab Coordinator
- Ryan Ramthun – Michels Paving
- Andrea Breen – Zignego Ready Mix
- Melissa Markquart – Soils & Materials Engineer, WisDOT

Agenda Items

1. Welcome and Introductions – M. Finnell (~5 min)
    a. Matt Bertucci – New NE Region Materials Engineer (replaced Leslie A.)
    b. Review etiquette during virtual meting
    c. Recording of Meeting
2. Review & Approval of March 2, 2021 Minutes – M. Finnell (~10 min)

    Mark Finnell gave an overview of minutes from previous meeting

    - F&T Testing presentation by James P., not available to be shared.
3. 2022 Specification Update Review – M. Finnell / K. McMullen (~10 min)

    Mark Finnell giving update

    415.3.7 – Joint layout has been added as incidental to the layout, will take over with the new specification rollout.

    501 received a major overhaul. Reorganized to where it all made sense. Cement first, then SCMs, the Admixtures, then Aggregates, gradations, etc.

Small language clean ups in 501 as well.

Big things that we added: Inclusion of Optimized Aggregate Gradations. No longer an SPV

- Projects over 50,000 SY will require OAG and must include flexural strength.
- All aggregate gradation is based on combined aggregate gradations, no more individual gradations will be used.

Part 7 updates to concrete aggregate testing (QC & QV). Some QV items will be updated with ASP6s.

With all the changes, we need to update everyone with the noted changes above. Most likely there will be a presentation put together to share with everyone.

WCPA workshop will have all these updates with a presentation put together for our members.

We will do a membership download with all the changes prior to the November letting. Likely this should occur in the September/October timeframe.

Jim Parry noted we also include this in the inspection training in the spring.

Mike Hall – working on getting guidance this into the CMM in the October timeframe (before the letting).

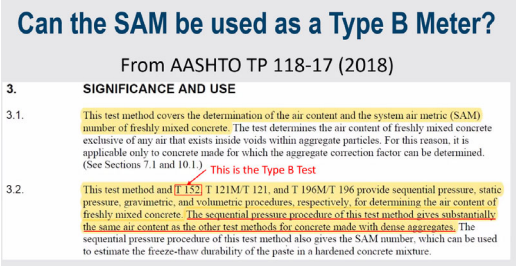
Mark Finnell noted that he and Leslie A. are currently working on the guidance and have communicated with FHWA on the importance of getting the guidance out soon.

Surface Resistivity added to standard specification (added additional 3 cylinders), CMM guidance coming soon. CST updates on HTCP format coming soon as well. PCCTEC-II will learn about surface resistivity on how it would affect your mix design, permeabilities, etc.

4. SAM Update – M. Finnell (~20 min)
    a. SAM & Type B Comparison Data

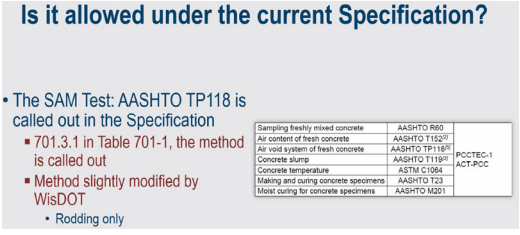
Can the SAM be used as a Type B Meter?

Yes



Is it allowed under the current Specifications?

Yes



Does the SAM measure air content higher than a Type B?

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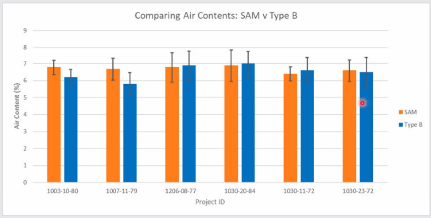
- In simple terms: the SAM does **NOT** measure higher air contents
- Pulled data from 2019 Construction Season
  - Chose 6 pavement projects from several regions
  - They contain as many as 5 data points up to 16 data points
  - Each data point comes from the same sublot

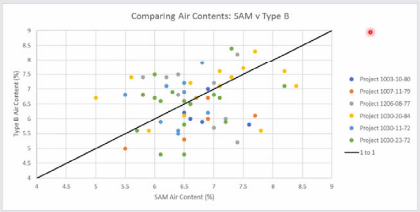
Does the SAM measure air content higher than a Type B?

Project ID	n	SAM AC Avg.	SAM AC Std. Dev.	Type B AC Avg.	Type B AC Std. Dev.
1003-10-80	6	6.8	0.45	6.2	0.45
1007-11-79	5	6.7	0.68	5.8	0.68
1206-08-77	11	6.8	0.90	6.9	0.90
1030-20-84	15	6.9	0.95	7	0.77
1030-11-72	9	6.4	0.41	6.6	0.81
1030-23-72	16	6.6	0.66	6.5	0.92

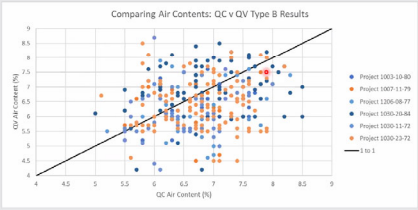
Does the SAM measure air content higher than a Type B?



Does the SAM measure air content higher than a Type B?



Does the SAM measure air content higher than a Type B?



What is the Source of Air Content Variability?

- Consolidation method
- Equipment not calibrated
- Operator error
- Faulty equipment
- Errors in batching
- Potential admixture incompatibility

Conclusion

- The SAM can be used to supplement the Type B Air Meter
  - Allowed under AASHTO TP118
  - Allowed under current specifications
- SAM air content measurements are comparable to Type B measurements
  - Variability can stem from multiple sources

James Pforr – Asked if anyone is using the MinT for consolidation this year?

Mark Finnell – The shaft is too small for the vibration unit, and the manufacturer is working on fixing the issue.

MK – Phase 2 of the PEM study is working on using the MinT for the study and for future projects.

b. Future of SAM Testing

Past and Current SAM Testing

- Last year was the first year QV ran SAM
- Still in shadow spec phase
- This year testing is continuing as normal
  - 1 QC SAM Test per lot
  - 1 QV SAM Test per 5 QC SAM Tests
- Still in data collection phase

Where WisDOT is At

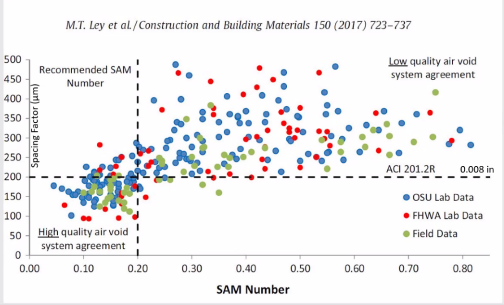
- Language still needs to be drafted
  - Specification
  - Dispute Resolution
- Frequency of testing
- Determination of SAM Number limits

Proposed SAM Number Limits

- SAM # ≤ **0.30** – Accept
- **0.30**< SAM # ≤ **0.35** – Corrective Action
- **0.35**< SAM # ≤ **0.40** – Remain in Place and Price Reduction
- **>0.40** Remove and Replace

Where do these Limits Come From?

Data based on 303 Laboratory and Field Mixtures. Gathered by two different research groups.



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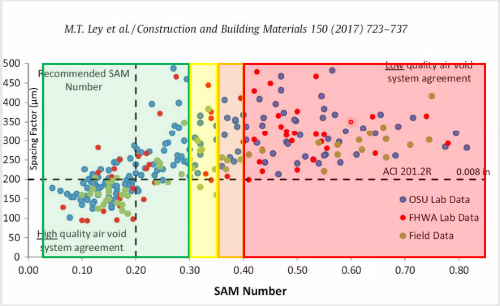
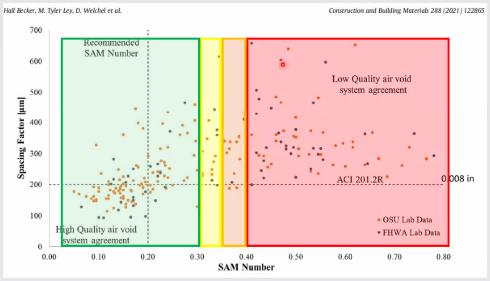


Where do these Limits Come From?

New data based on 227 laboratory mixtures. Gathered by two different research groups.



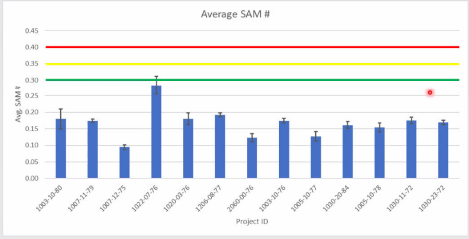
How Do these Limits Affect WisDOT Projects?

- Looked at QC data for 2019 Projects
  - Could not get QC and QV 2020 data in time for today's meeting
- Ran simple statistics
- Looked at the individual QC SAM results
  - % above each of these limits

How Do these Limits Affect WisDOT Projects?

Project ID	n	SAM # Avg.	SAM # Std. Dev.
1003-10-80	25	0.18	0.149
1007-11-79	56	0.17	0.042
1007-12-75	14	0.09	0.026
1022-07-76	8	0.28	0.079
1020-03-76	9	0.18	0.053
1206-08-77	16	0.19	0.024
2060-00-76	10	0.12	0.038
1003-10-76	45	0.17	0.048
1005-10-77	21	0.13	0.065
1030-20-84	81	0.16	0.093
1005-10-78	52	0.15	0.096
1030-11-72	46	0.18	0.068
1030-23-72	77	0.17	0.061

How Do these Limits Affect WisDOT Projects?



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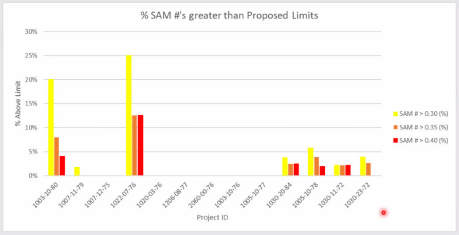


The Future of the SAM

- More data collection is required
  - Analyze QC and QV Data from 2020
  - Gather and analyze QC and QV data from 2021
- Draft Spec and CMM Language
  - Dispute resolution is key

When to expect to see SAM full implementation? Original date was 2023, but 2024 is looking like a more realistic date. WisDOT still needs to develop language for dispute resolution & CMM guidance.

SAM task force will be formed to develop the missing parts. Volunteer's Welcome.
Kevin McMullen urging members to look at their SAM numbers now and advance their mixtures to develop a mix design that works well.

Scott Grams Chat Question: We have a large amount of concern over side-by-side testing. We see very little continuity between operations even out of the same wheelbarrow.
Jim Parry – Noting that variability research of the SAM came down to the consolidation method. The MinT is believed to alleviate this challenge.
Scott Grams noted he agrees with Jim Parry and would prefer to switch all mixtures to 1" nominal aggregates.
Kevin McMullen – if this is an issue, we should push to get the MinT out in the field now.
Jim Parry – would like to synthesize things to get less variability in the future with cylinders, smaller beams, etc.

5. Fast Track Concrete – M. Finnell (~15 min)

Task force assembled to get this completed. Several parties will be involved to get this developed.

August will be the timeframe we are looking to meet up and discuss.

Kevin: This topic will encompass gaps, repairs, materials, etc. Goal is to change the way project development looks at the project. This will be a large lift with the design/traffic crew, based on timing but it needs to be discussed.

Mark noting this will take time to fully accomplish (1-2 years).

Jim Parry – the main thing the department will be putting in the contract is closure windows (close-open). Within that timeframe, the Contractor gets to choose what mixture is used to fulfill the time requirement. Time focused vs mixture focused.

Kevin: We have a couple contractor volunteers and will be bringing in admixture folks, rapid set repair folks and any other expertise needed to get the conversations going.

Pete Kemp – Jim had mentioned it would be spec centered around opening/closing. Remember our

counties around us that might not have the expertise to pick their mixtures.

Jim Parry – education will be one of the biggest lifts throughout this process, and it will take a lot of effort.

Kevin – our counties will be ordering Redi-mix so we will need to work with our partners to educate them and all be on the same page.

6. 4 x 4 Concrete Beams – M. Finnell (~15 min)

6x6x12 flexural beams are large and heavy. WisDOT looking into reducing and allowing smaller beam sizes to be used on our projects.

Benefits: lighter, smaller, can cure more at a time. Andrea Breen noted in chat: Storage tank space is also a valid consideration for large jobs with the smaller 4x4 beams.

Drawbacks: Ultimate strength can be higher (Variability?)

AASHTO notes if you used 1 ¼ inch or less can use 4x4

- Both QC and QV will need to use the same size beams. Arguments on what can be used for acceptance
- Correction factor can be determined
- If using 4x4, must break all 3 beams
    - Variation between beams will be compensated and brought back to a more equivalent value to the cylinders
    - Kevin McMullen noted in the chat: AET National study showed variability was a bit higher.
- Everyone must fabricate beams with the same consolidation method.

Scott Grams asking via chat: Is the Standard Deviation lower on 4x4 beams?

Kevin McMullen noted a text received: Why just 4x4 beams and not 4x8 cylinders?

- Jim Parry – 1.5” nominal aggregate size is currently required, so our ability to use mixtures with smaller nominal aggregate size hinges on the study going on. It’s not a ergonomics issue like the large beams, so we are not discussing that yet.

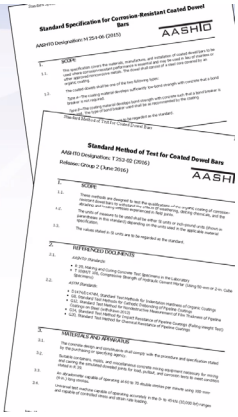
MK Kang – Noting that it can be added to research in the future. Mark Finnell noted research was done comparing smaller vs larger beam sizes. The large stone was the factor that would not allow smaller flexural beams. Jim Parry noting the older mixtures we have had in WI utilized the larger stone, but things are changing with the optimization of our mixtures, which is why we are looking into this now.

7. Dowel Bar Standards – K. McMullen (~30 min)

We are looking at the overall dowel system: shipping, installing, size, etc.

Current AASHTO Dowel Specs (origin: 1970s)

- M 254 – Standard Specification for Corrosion-Resistant Coated Dowel Bars (last revised 2006, reapproved 2019)
  - Spec covers the materials, manufacture and installation of "organically coated" steel dowel bars.
  - Developed around *1.25-in diameter*, 20-30 mils coating (Type A, low bond strength) or 5-9 mils (Type B, bond breaker required).
  - *Dowels qualified as individual products*, not as part of a system.
- T 253 – Standard Method of Test for Coated Dowel Bars (last revised 2002, reapproved 2020)
  - Spec covers all test methods cited in M254


Standard Specification for Corrosion-Resistant Coated Dowel Bars
AASHTO
Standard Method of Test for Coated Dowel Bars
AASHTO

Limitations of Current AASHTO Dowel Specs

- Not directly applicable to many dowel products being used and developed today
  - Can't evaluate different dowel materials
    - Different tests needed for different materials, different coatings
  - Can't evaluate behavior of groups of dowels
  - No ability to evaluate potential structural performance potential (differential deflection) of nonstandard dowel spacing

Difficult for manufacturers to innovate.
Difficult for agencies to adopt new products.

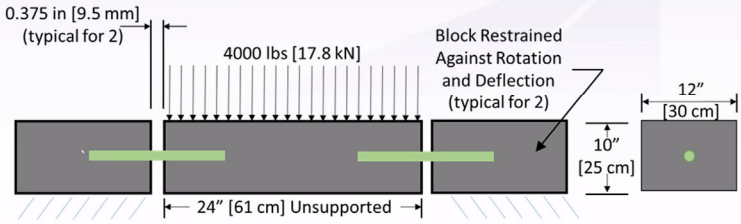
Brief History

- Efforts to develop a more universal or generic dowel spec were begun by NCC around 2014.
- In Mid-2016, ACPA's Jointing Task Force resolved to pick up where NCC left off.

ACPA Specification Development

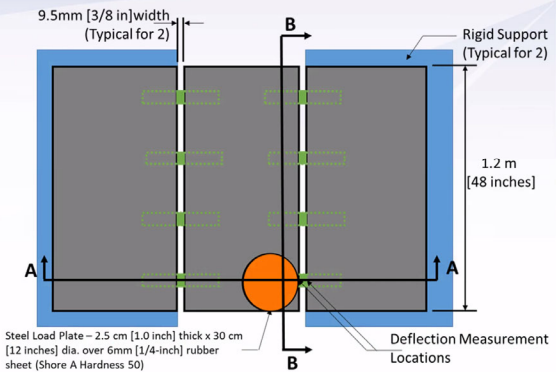
- AASHTO T253 and M254 used as basis for development
  - Primary goal: Incorporate new load-deflection test
  - Development approach: Keep general AASHTO spec format and content to extent possible
- Specification Development Committee
  - Agency Staff
    - MnDOT - Maria Masten, Rob Golish
    - PennDOT - Neal Fannin
    - MoDOT - Brett Trautman
  - ACPA
    - National - Jerry Voigt, Eric Ferrebee
    - WCPA – Kevin McMullen
  - Dowel Manufacturers/Distributors
    - AHT/Simplex – Glenn Eder, Mark Kaler
    - Artazn - Mike Mather
    - CMC – Bassam "Ben" Sadawi
    - CRT – Jim Olson
    - MasterDowel – Brad Zaun
    - PNA – Feng Mu
    - O-Dowel - Chris Schenk
    - Owens Corning – Doug Gremel, Bryan Barragan

Current AASHTO T253 Load-Deflection Test Schematic



Performance criterion: Limit relative deflection across joints to 10 mils (0.01 inches).

ACPA T253 Load-Deflection Test Schematic



Validation of New Structural Test Protocol

Goal:

- Validate multi-dowel structural model behavior (load-deflection) and determine acceptance threshold

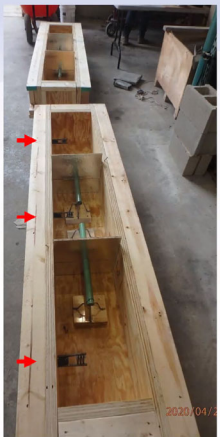
Testing:

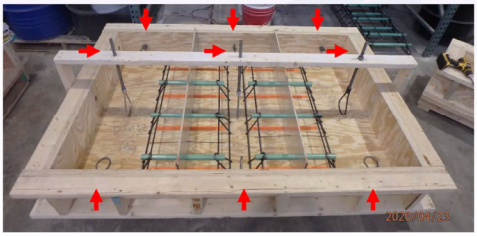
- 4 replicates AASHTO T253 load-deflection testing
  - 1.25-inch diameter epoxy-coated steel dowels
  - Yields 8 measurements of relative deflection
- 2 replicates of the proposed modified version of this test
  - Four 1.25-inch diameter epoxy-coated steel dowels per joint
  - *Four test locations per specimen* (one in each of the four corners of the unsupported slab)
  - Yields 8 measurements of relative deflection
- Test protocol modification:
  - Hold load for 10 mins at specified peak (4000 lbs or 9000 lbs), measure RD at start and end of hold
  - Increase load to 150% of specified peak
  - Hold load for 10 mins at new peak (6000 lbs or 13,500 lbs), measure RD at start and end of hold
  - Release load; measure RD at release and 1 minute after release.
- Companion compressive strength/elastic modulus test cylinders

Funding and Execution of Validation Testing

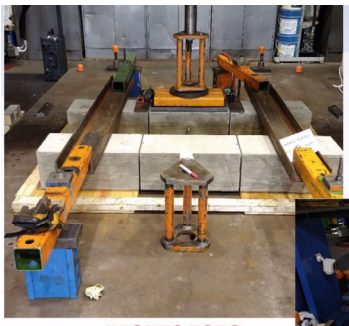
- Request for Testing Proposals solicited by ACPA from 3 labs.
  - Construction Technology Laboratories (Skokie, IL) selected
- Testing funded by National Concrete Consortium through ACPA
- Some staff time donated by ACPA
- Standard epoxy-coated dowels donated by TyE Bar, LLC
- Testing performed May 20-21, 2020

CTL Specimen Moulds with Dowels and Lift Anchors



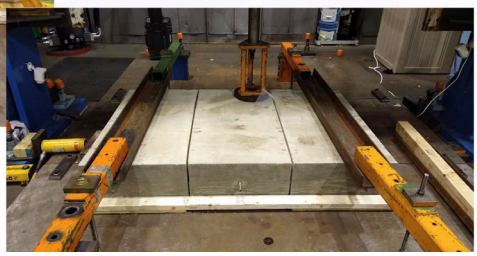


Test Stand Setup



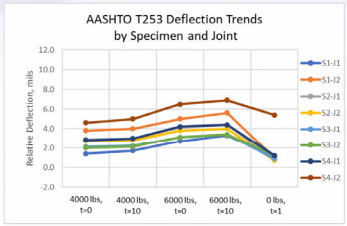
AASHTO T253

ACPA T253

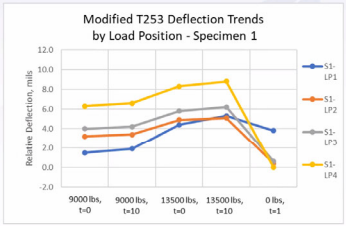


Comparing Test Results – AASHTO T253 vs ACPA T253 Load-Deflection

AASHTO T253



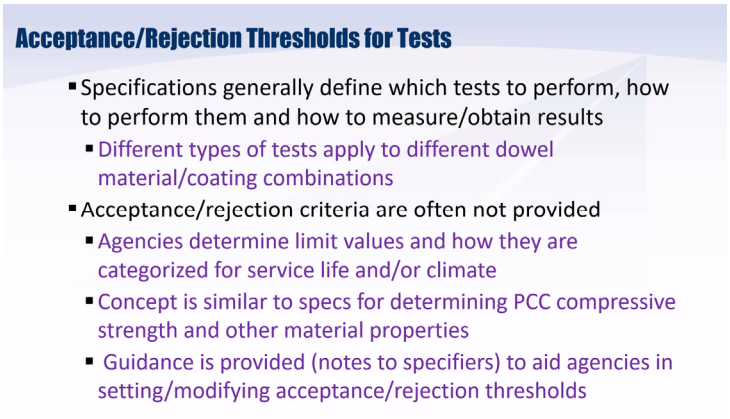
ACPA T253 Specimen 1 (Specimen 2 is similar)

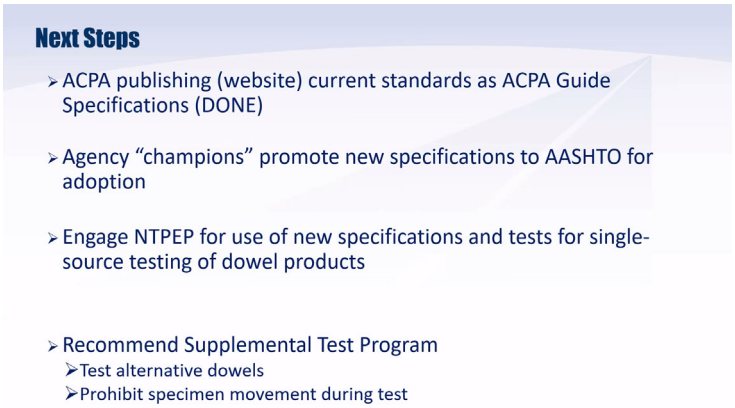


- Unexpected load sequence bias observed in new test procedure
  - Caused by specimen handling? Caused by "fatigue"?
  - Use only first load position for analysis.
- Load-deflection data indicate similar behavior for both tests – recommend similar limit criterion.
- Very little load-hold drift observed at standard load; slight drift at increased load

Dowel Types (determines applicable test suite)

- ***Type A*** **- Single metallic material**
  - ***AASHTO M255 or M334, ASTM A276, A312, A955 or A1035 (CS, CM and CL)***
  - *Grade as specified by purchaser.*
- ***Type B*** **- Single nonmetallic material**
  - ***ASTM D7957***** or as specified by the purchasing agency.
- ***Type C*** **– Metallic core with metallic corrosion protection**
  - Steel core : ***AASHTO M 255 or M334, ASTM A513 or A615***
  - *Metallic* corrosion protection: ***ASTM A249, A276 or A312 for stainless steel coatings, ASTM A513, ASTM A1035 (CS, CM and CL) for low-carbon chromium coatings, ASTM B69 for rolled zinc coating, or ASTM A1094 for hot-dip galvanizing.***
- ***Type D*** **– Metallic core with nonmetallic corrosion protection**
  - Core material: ***AASHTO M255 or M334, ASTM A276, A312, A513, A615, or A1035 (CS, CM and CL)***; grade specified by the purchasing agency.
  - Type D1: mechanically bonded nonmetallic cladding material (ASTM D7957* or as specified by purchaser), e.g., GFRP
  - Type D2: meet requirements of ASTM A1078 one or more thin layers of epoxy, plastic or similar materials of primarily organic composition … epoxy coating systems to meet material requirements of ASTM A775, A934 and/or CSA-Z245.20.





Jim: would like to commend the folks that worked with ACPA to get this pushed through and standardized.

8. AASHTO T253 / M254

9. MIT T2/T3 Scan – M. Finnell / J. Spoor / K. McMullen (~15 min)
    a. Comparison/Referee Plate

Proposing using a referee plate that is on site. Both machines (Department/Contractor) use that initial plate as a referee should the machines not correlate later in the project.

Goal would be to use a plate in the field to check each machine and have the option to use said referee plate throughout the project. This would only be a verification check, not calibration.

Provides a good check of our equipment as we move forward.

April Rieger chat question: Would industry want to be paid for installing and maintaining the ref plate?

Jim Parry – the plate would be one of the initial plates placed in the project, so it would not be in addition to what they already are required to install.

Adam Johnson asked if it would be a daily check like HMA uses on site?

Jim Parry – yes, it would be a daily check. Also noting that these devices are remarkably accurate.

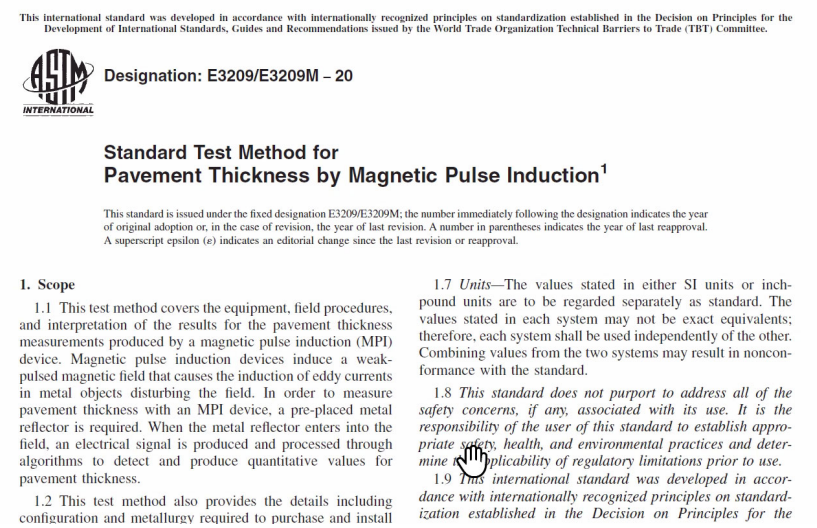
Mark Finnell noted that metallic devices seriously alter the results. Any foreign material or electrical will seriously alter the reading (electrical (over or underground), steel toe boots, coins, etc.). We will have some troubleshooting guidance in the CMM.

Kevin and Adam both indicating that a low charge could result in an inaccurate reading.

Kevin noting cold weather could be a challenge as well.

Adam Johnson asking about creating a reference sheet to note as the go.

b. Adoption of ASTM Standard



This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

Designation: E3209/E3209M – 20

Standard Test Method for Pavement Thickness by Magnetic Pulse Induction[1]

This standard is issued under the fixed designation E3209/E3209M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This test method covers the equipment, field procedures, and interpretation of the results for the pavement thickness measurements produced by a magnetic pulse induction (MPI) device. Magnetic pulse induction devices induce a weak-pulsed magnetic field that causes the induction of eddy currents in metal objects disturbing the field. In order to measure pavement thickness with an MPI device, a pre-placed metal reflector is required. When the metal reflector enters into the field, an electrical signal is produced and processed through algorithms to detect and produce quantitative values for pavement thickness.

1.2 This test method also provides the details including configuration and metallurgy required to purchase and install

1.7 *Units*—The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in nonconformance with the standard.

1.8 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.9 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the*

870.4.7.2 is where we currently have our language. But we can take it out and use the ASTM standard. Should we consider adoption of ASTM E3209/E3209M procedure?

Jim Parry – we would have to read it in detail and bring it to the table.

Mark Finnell noting, we can look at it and modify it if we want to for Wisconsin.

10. Sidewalk Staking – K. McMullen (~10 min)

Kevin noting this came up in 3 out of the 5-region meeting we had. Highway 11 Durant Street in Racine was a prime example. Scenario you would not expect. Sidewalks were the first things built on the project. It is generally assumed that sidewalks are built last, but it is not the case anymore.

We are asking for sidewalk taking item to supply the contractor adequate reference to build it properly. In many cases the sidewalks are needed to be built first to maintain access to residents and businesses, etc.

Why here? This group took care of curb ramp challenges, so we thought it be best to be placed in front of this group.

Mark – warrants discussion. If we are all in agreeance it can likely get into 2023 specification as a reasonable goal.

Peter Kemp noting it would be very difficult. Now BPD and planners will now need all the grades, etc.

required for their planning, etc. It is a little more difficult than just saying we will pay for another item.

Mike Hall – the curb ramp spec notes that it would be a burden for designers to get all the elevations in.

Mark Finnell noting it is a worthy lift to do.

Jim Parry – would not necessarily pertain to all projects, but some urban projects constructed with sidewalk first in nontraditional construction modes.

Kurt Flurl noting in the chat that they are already using a SPV item on projects currently.

James Pforr noting that items that are incidental and potentially moving to not incidental will need to be looked at closely.

Mark Finnell noting to put this as an action item and will have more lifting with sidewalk staking and get more parties involved.

Mike Hall – question for Kurt. Does Department provide grades, or does the contractor need to interoperate? If Department puts in the grades, then we have the item. Kurt noted that the grades were on there, but not noting specifically as grades can/do change.

Kevin McMullen requested copies of the SPVs Kurt noted. It is statewide concern as it was brought up in 3 out of the 5 region meetings. Jim Parry agreed.

11. QC Plan Project Specific Info – K. McMullen (~10 min)

    a. Slip Form Paving required when 300 LF or longer

Looking at getting QC plans more detailed.

Kevin McMullen discussing staging concrete pours and potential bump-outs and ability to move a slipform concrete paver may need to be modified. Goal would be to put this into the QC plan to get approved ahead of time.

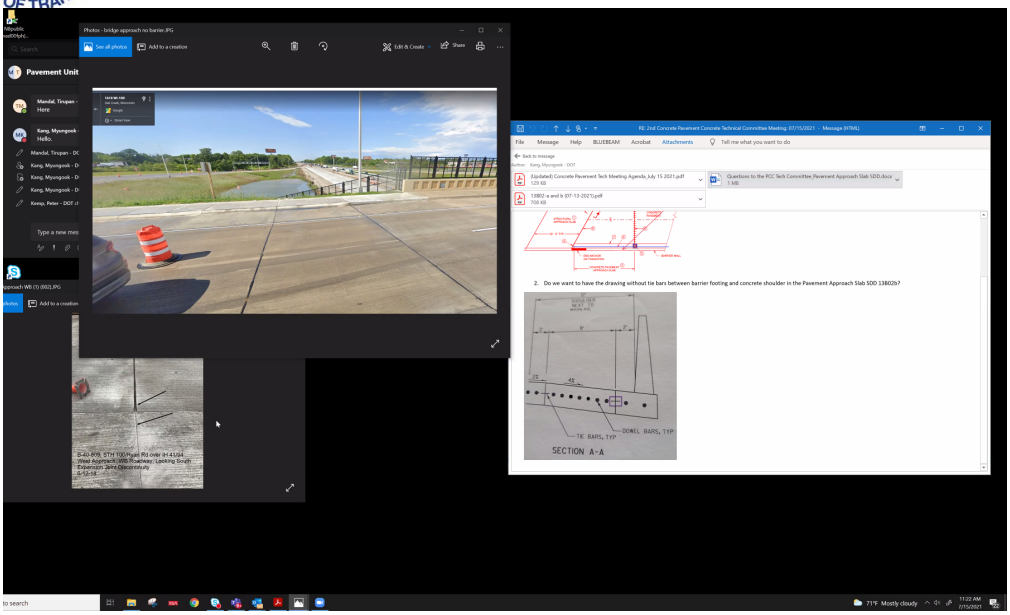
Jim Parry asking if we could pour the bump outs after the slipform paver goes through the project. Is our priority to get the slipform paver in there, or the bump outs? If the requirement is to place the bump outs, then there is an obstruction that does not allow you to pave the continuous 300 LF.

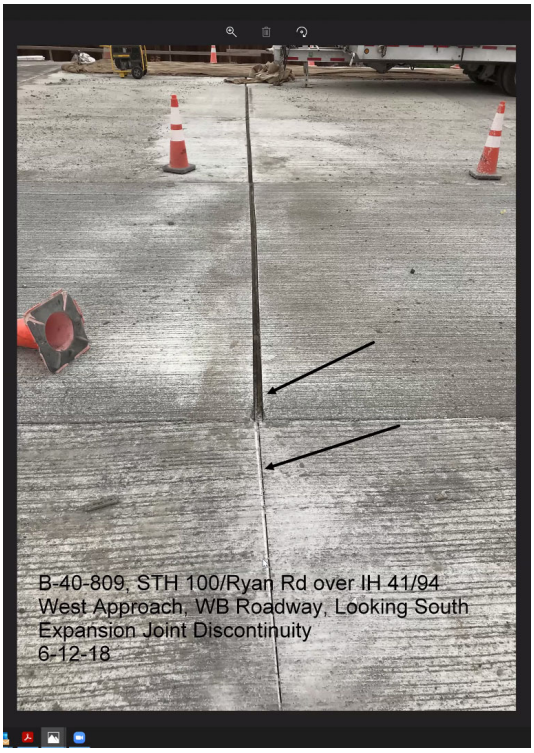
Heath noting the details are likely going to be in the pre-pour meeting and weekly meetings. The project is evolving as they go and changing. Communication throughout the project is vital.

Mark noting key issues that could have been caught can be brought up and thought out beforehand.

12. Updates to SDD 13B02: Concrete Pavement Approach Slab – P. Kemp / M. Kang (~10 min)

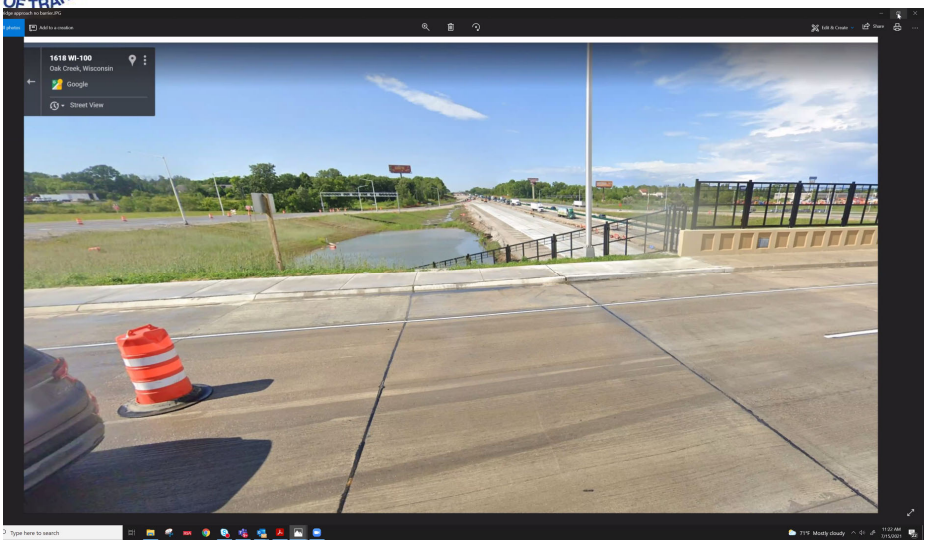
Item 6 – expand joint through concrete



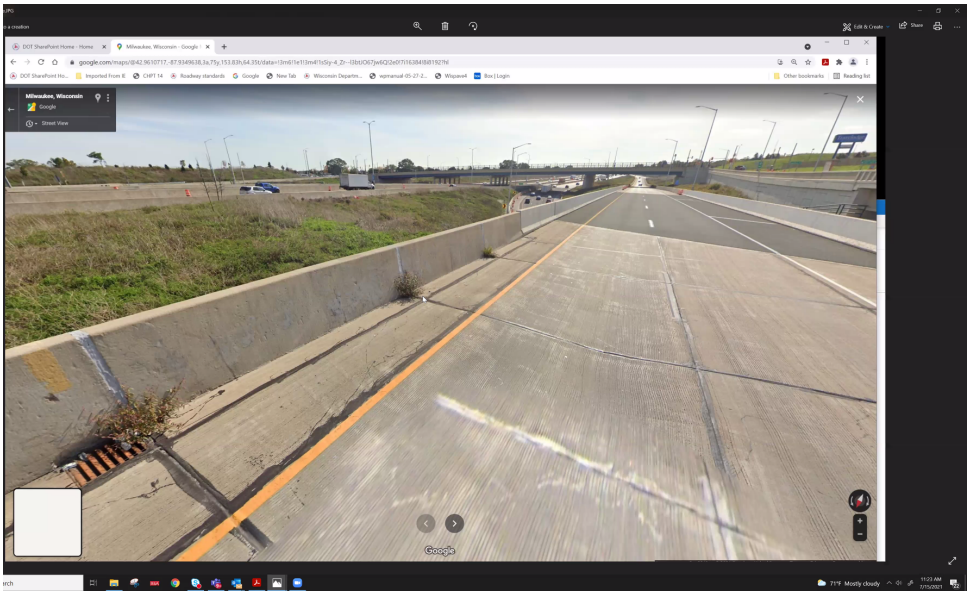


This led to some not tying joint, so they did not have to expand the joint.

We want the joint through any tied concrete.



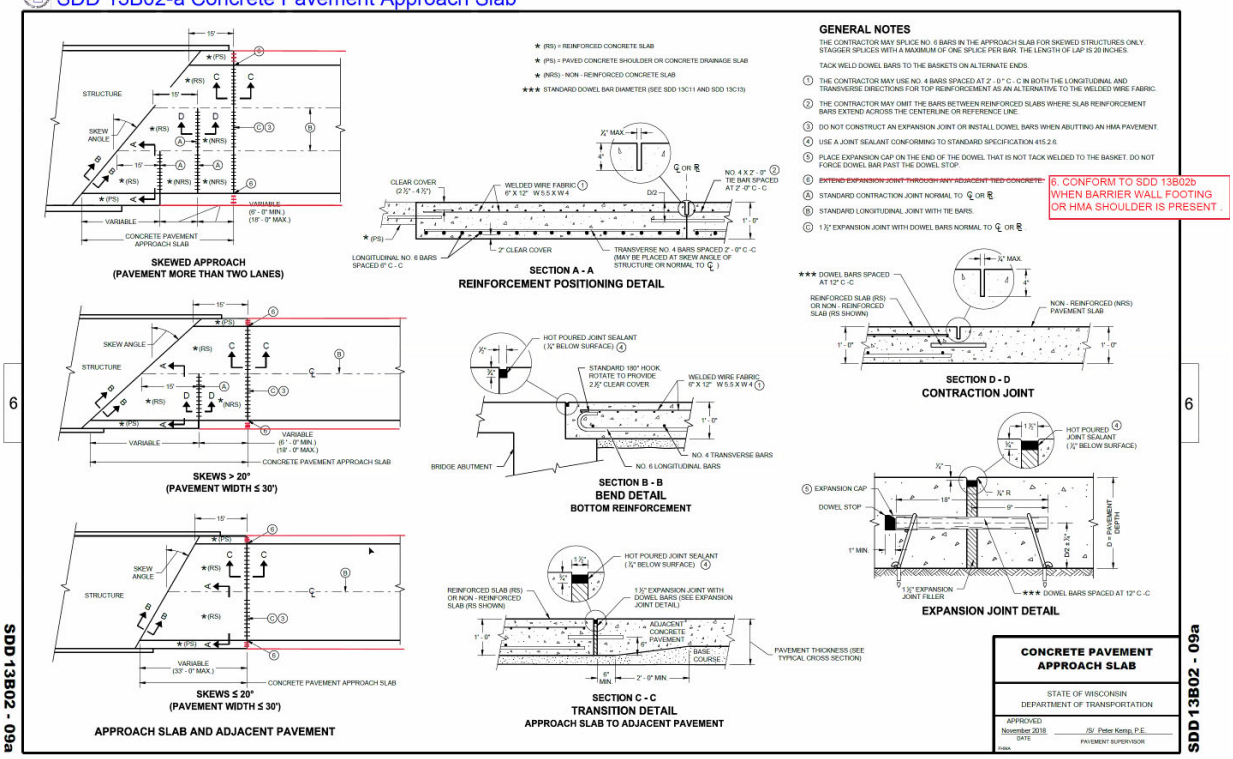
Barrier wall is also a concern.



Jim Parry – where is the expansion for the barrier wall element?

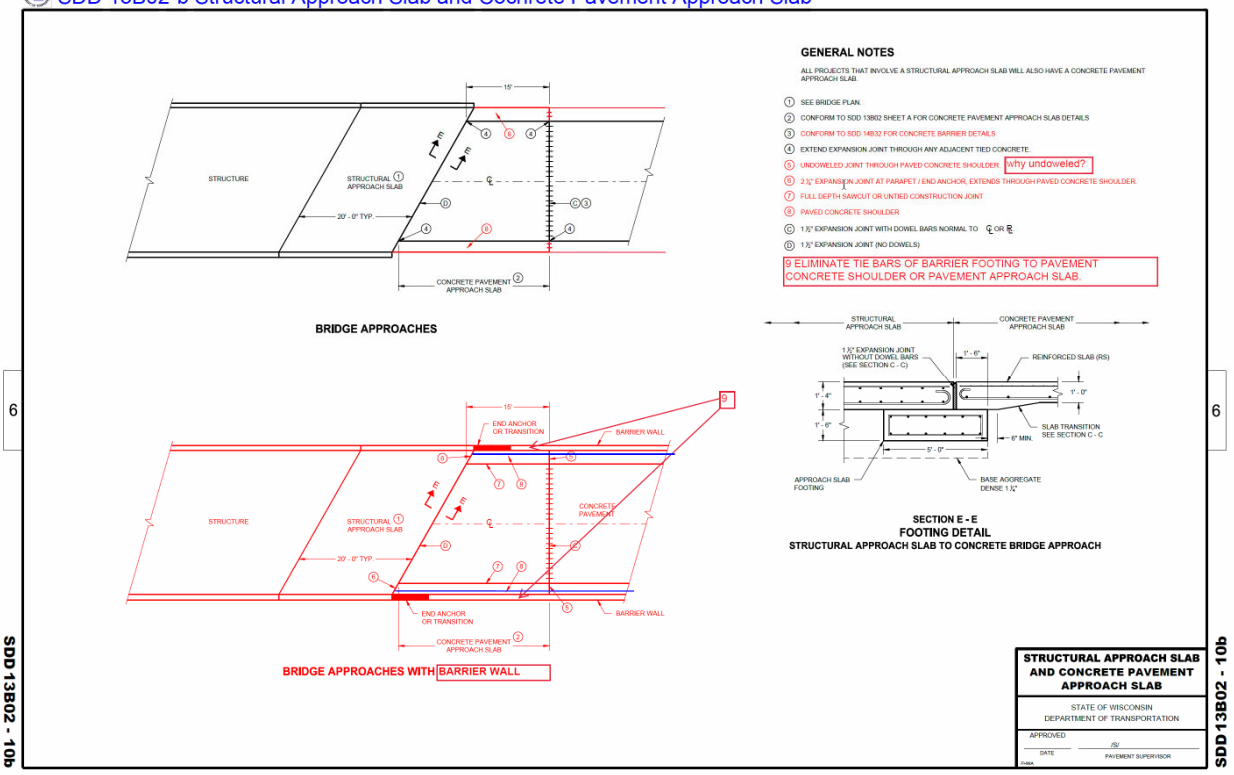
Peter Kemp – Noting it would be at bridge parapet, where it meets up with the barrier wall. April – we do not show any other in the barrier wall. Would be using the standard 300 feet.

SDD 13B02-a Concrete Pavement Approach Slab



(6) If you have a barrier wall confirm to the following detail SDD 13B02-10b

SDD 13B02-b Structural Approach Slab and ~~Concrete~~ Pavement Approach Slab

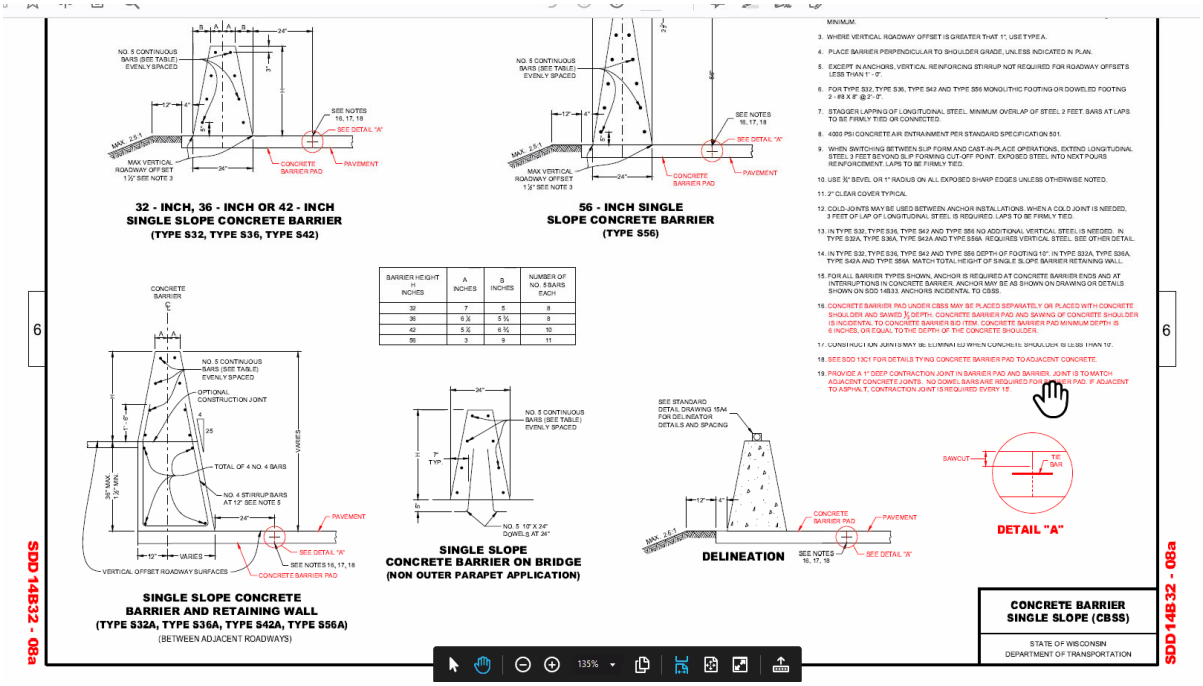


Heath asking how far back does it go?

This detail is a full depth sawcut, untied?

The intent is to meet the expansion joint.

Kevin sharing new barrier single slope detail – detail A shows tie bar.



Pete Kemp agrees the new detail is conflicting with

Eliminating the expansion in footer and wall from constructability is much easier. However, slab is going to expand at a joint in pavement, but you are telling the wall to slide at the area and Heath believe we will have blowups.

Kevin agrees with Heath and fears it will create a problem.

James Pforr agrees with Heath and Kevin and looks like it will lock up and blow up.

Kevin has concerns.

April noting the are using this on the 90 corridor and have had no issues. This was modified in the SE Region in 2020.

Kurt F. noting they put an isolation joint in 2014? On Ryan Road?

April to get information to us on performance of modification prior to adoption. Let us put on table for the next concrete pavement tech team.

Peter Kemp to update the shoulder detail and delete note (6).

Kevin agrees with this approach. Seems logical.

Peter noted they did talk with BTS on this and the felt that the noted expansion would protect their assets.

Peter Kemp to keep note (6) in due to unique situations but update the shoulder.

13. WHRP Studies – M. Finnell / K. McMullen (~15 min)
    a. PEM Part 2: OAG Influences
        i. 2022 Test Projects

Behnke Materials will be reaching out to projects to get testing done yet this 2021 season.

Dowel Bar project field work 2022

Timing and quality of application of curing compound – will looking for 2022 project to do field testing. Variety of different ways and require some significant coordination. Installing some equipment into pavement to access cure. GPR testing to access quality of cure, and potentially asking contractor to adjust rate of cure on some segments (speed/amount of material going through the machine).

MK Noted in the Chat: I just wanted to say the curing material study is to find the method to find out the optimal timing and coverage of curing material in the field.

Action Items

1. SAM Task Force / M. Finnell / August 2021
2. Fast Track Concrete Task Force / L. Ashauer / August 2021
3. Curb Head Details / P. Kemp / September 2021
4. MIT T2/T3 Comparison CMM Guidance / L. Ashauer / October 2021
5. 4 x 4 Concrete Beam Task Force / M. Finnell / August 2021
6. Sidewalk Staking Development / L. Ashauer & M. Finnell / 2022
7. Follow up on SDD 13B02 / A. Rieger & P. Kemp / Sept 2021

Other Notes

Other important details discussed during the meeting can be entered here.
L. Ashauer is the new chair of Concrete Pavement Technical Committee, and all communication can be sent her way.
Future meeting will continue to be virtual – Next meeting, September 16th, 2021.