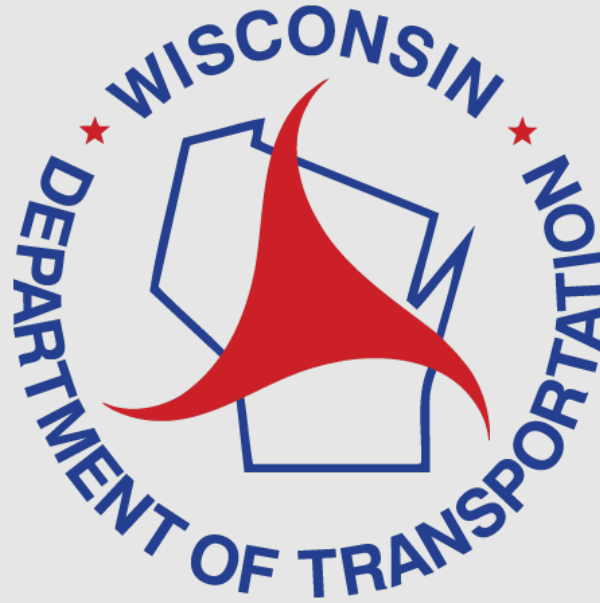




Wisconsin DOT Materials

Erik Lyngdal

WCPA Conference – February 9-10

Chief Materials and Pavements Engineer

Staffing Updates – Concrete Materials Lab

- Tirupan Mandal – Concrete Materials Lab Supervisor
- Tom Sweeney – Cement Lab
- Josh Seaman – Aggregates Lab
- Mark Kray – Soils Lab



Staffing Updates – Quality Assurance Unit

- Vacant – Concrete Engineer
- Christine Krall – New Products Engineer
- Michael Morrison – IS Automation
- Brian Jandrin – Nuclear Density



Staffing Updates – Pavement Unit

- Sinan Coban – Pavement Engineer
- Ali Morovatdar – Pavement Engineer
- Accepted Offer – Pavement Engineer



IA Program Update



2022 Results

- Did not meet 90% milestone called out prior to start of season.
- However...still successful year.
 - Was able to increase rates across the board.
 - Impressive considering program increase in every area.



2022 Results – Not Final

	2022	2021	2022 vs 2021
Active Testers	1858	1575	283
No. Evaluated	1404	1121	283
No. at 90%	1672	1418	254
Percentage (Avg)	76%	71%	

***Aggregate and PCC Testing have greatest room for improvement
14 total IAs



IA Program Continuous Improvement

- New IA activities forthcoming (beams & proctor).
- Communication, ongoing issue.
 - Include stressing the importance of IAP.
- **Suggestion** – project level rodeo! Get all certified personnel IA'd at one time.



Laboratory Qualification Update

- What if I do not have a lab, but complete field testing. Do I need to participate in lab qualification program? Yes! Why?
 - All who complete testing need to be held to same standard. Those with labs are being evaluated for field tests.
 - Lab qualification includes Quality Management System – training, calibrations, reporting... All important pieces of QA.
 - Technician empowerment.
 - Not being enforced for 2023.
 - Don't need a physical lab.





WisDOT Manual of Test Procedures

Effective Date 01/01/2024 (TBD)

Table of Contents:

ALL MATERIALS			
<i>WisDOT Test Modified (WTM)</i>	<i>Referenced Procedure</i>	<i>Description</i>	<i>Page</i>
WTM D3665 (Effective Date 01/01/24)	ASTM D3665-12	Random Numbers	1

AGGREGATES			
<i>WisDOT Test Modified (WTM)</i>	<i>Referenced Procedure</i>	<i>Description</i>	<i>Page</i>
WTM R76 (Effective Date 01/01/24)	AASHTO T 76-16	Reducing Samples of Aggregate	2
WTM R90	AASHTO R 90-18	Sampling of Aggregate	3



WTM R76

Effective Date: 01/01/24

Revised Date:

Follow AASHTO R76 *Standard Practice for Reducing Samples of Aggregate to Testing Size* with the following modifications:

AASHTO R76-16 (2020) Section	WisDOT Modification:	
2.1	<i>Replace the AASHTO R90 and T84 references with the following WisDOT Modified versions:</i> WTM R90 – Sampling of Aggregate WTM T84 – Fine Aggregate Specific Gravity	
Section 5.1	<i>Replace Section 5.1 with the following:</i> The sample should be reduced to the size needed for a specific test by using either a riffle splitter (Method A), quartering method (Method B) or miniature stockpile method (Method C) for damp fine aggregate only. The riffle splitter should not be used for fine aggregates that are wetter than saturated surface dry (SSD). Fine aggregates that are in a free moisture condition (damp) should be split using the quartering method or miniature stockpile method.	
Section 7.1	<i>Add the following table to Section 7.1: Splitter Chute Opening Requirements</i>	
	Type of Aggregate	Chute Width
		Approximately 50% larger than the

MOTP Timeline – 2024 Construction Season

2023 -published on DOT website



Cement NTPEP Program

- WisDOT will be using NTPEP for the Cement Approved Products beginning with the **November 2023 letting**.
- Letters being sent to current Cement Suppliers on APL.
- New requirements will be included in **Spring CMM update**.
- Suppliers to submit application to WisDOT by **03/15**. Posted on **03/31**.
- Cement suppliers should apply through NTPEP by **April** and submit samples.



Theme: Long term Foundational Improvements



FHWA – Quality Assurance Concrete Review

Part 637 Construction Inspection and Approval

To prescribe policies, procedures and guidelines to assure the quality of materials and construction in all Federal-aid highway projects on the National Highway System



Major QA Review Findings

1. Need to ensure all QV testing is accounted for
2. Define a clear dispute resolution process when QV fails
3. Mathematically compare QC with QV for acceptance

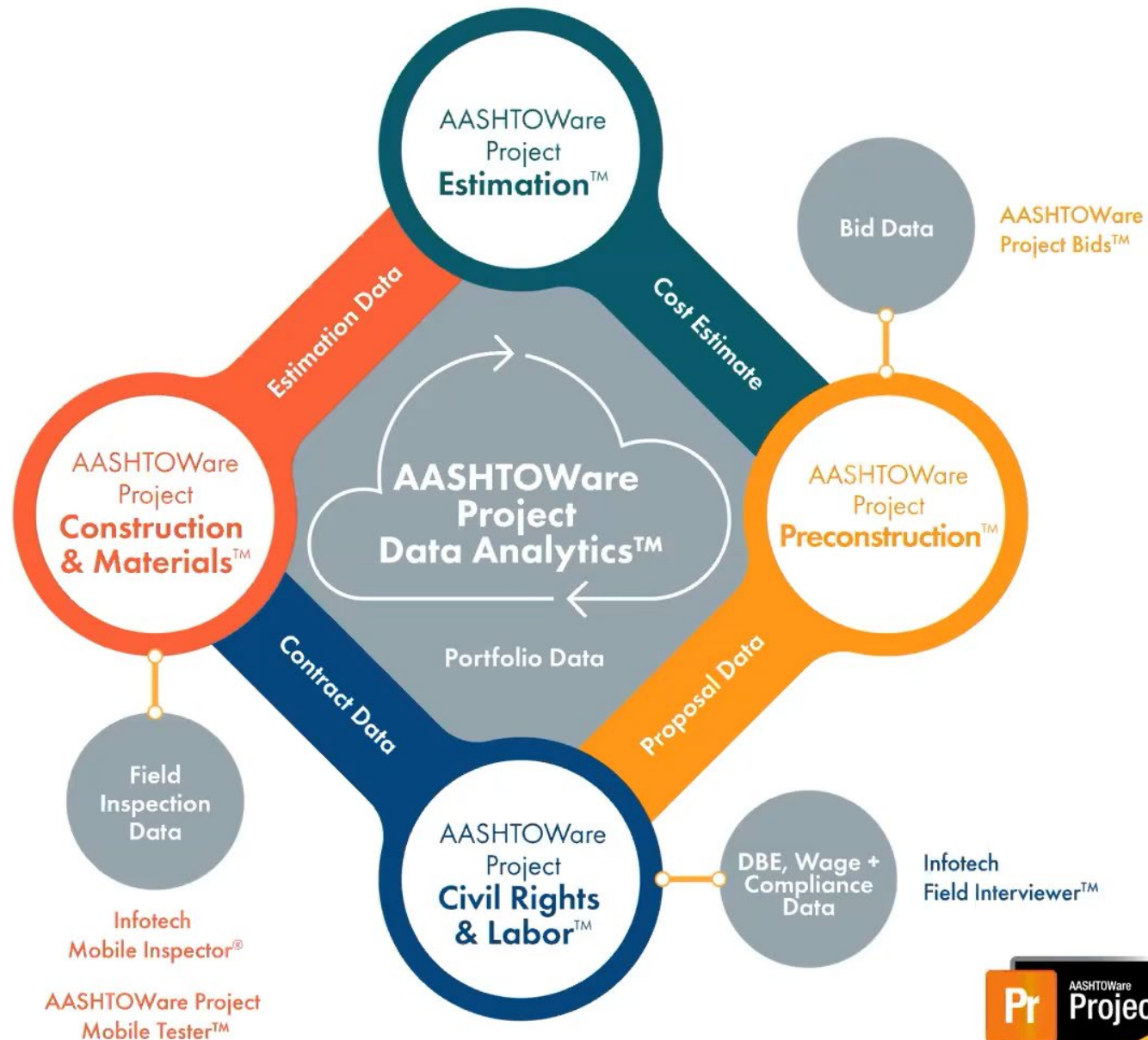
Moving forward...

Over the next several years QA unit will be implementing major revisions to concrete QA program. Particularly with respect to use of Department testing for acceptance.

How does industry stay involved? Concrete Technical Committee and materials training.



AASHTOWare Project™



415.X000 Concrete Pavement

→ 501.xxx Cement

→ 106.xxx Aggregate Source

→ 710.XXX and 715.xxx Mixture Design

→ 501.XXX Concrete Aggregate Testing



Contractor Perspective – User Interface

Agency views (AV) replace MRS

How can we get QC into AV?

ONE SYSTEM and Web Based!!!!





In progress

2024-2025

???

**Reference
Data**

**User
Interface**

**Pilots/
Training**

Program



Specification Re-Organization

Where do materials specifications belong???



Objective - Part 7 Materials

- **7XX.1 Material Type – Material**
- **7XX.1.1 Pre-Project Requirements**
 - **7XX.1.1.1 Material Property Requirements**
 - **7XX.1.1.2 Contractor Testing**
 - **7XX.1.1.2.1 Contractor Testing – Documentation**
 - **7XX.1.1.3 Department Testing**
- **7XX.1.2 Project Requirements**
 - **7XX.1.2.1 Conformance**
 - **7XX.1.2.2 Contractor Testing**
 - **7XX.1.2.3 Department Testing**
 - **7XX.1.2.4 Dispute Resolution**



Implementation timeline – Lineup with AASHTOWare

- Development (in-progress)
- Department and Industry Buy-in (in-progress)
- Pilot (Target 2024-2025)
- Full Implementation



Thank you!

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