

Bridge Technical Committee – **MINUTES** Wisconsin DOT, Industry, and Partners

Friday October 9th, 2015

9:30 AM– 12:00 Noon

SW District office (Dane – Columbia Rooms)

Presentation:

- **Concrete Internal Curing – Controlling Cracking in Bridge Decks**
Technical Presentation on Internal Curing – (Kevin McMullen & Tom Morris of Haydite Lightweight Aggregate).
Tom Morris provided an informative presentation on Internal Curing of concrete and bridge decks. Tom indicated there was a host of benefits to internal curing that include reduction in bridge deck cracking. This could reduce the need for lengthy wet cure. Some discussion on price note the \$10/CY (\$0.28/SF). There may be as many as 33 States that are looking at or using Internal Curing. Indiana DOT recently did 4 bridges (CY 2015?). We request more info from Tom on performance of the bridge decks that were constructed with Internal Curing. This may be an item of Research and/or Pilot for WisDOT.

Subcommittee Reports:

1. **Subcommittee Pile Under-Runs. (Jeff Horsfall, Matt Grove, & Joe Larson)** - Update on progress. ASP 6 went out in December 2015 with an updated version that is attached below. The department will monitor implementation of the revised spec.

550.5.2 Piling

Add the following as paragraph three effective with the December 2015 letting:

- (3) The department will not entertain a change order request for a differing site condition under 104.2.2.2 or for a quantity change under 104.2.2.4.3 for the Piling bid items. Instead the department will adjust pay under the Piling Quantity Variation administrative item if the total driven length of each size is less than 85 percent of, or more than 115 percent of the contract quantity as follows:

Percent of Contract Length Driven	Pay Adjustment
< 85	(85% contract length - driven length) x 20% unit price
> 115	(driven length - 115% contract length) x 5% unit price

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2. **Subcommittee to develop a ride quality specification for bridges – (Deb Bischoff & Jim Parry)** – Updates from 2015 Construction.
Jim provided an update. Completed specification for the Zoo Core 2 and also to be used on the IH-39 (Illinois – Dane Co.). This may also be considered for the 441 project.
 3. **Subcommittee on Structure Design & Construction – (Aaron Bonk)** – Discussion on this new subcommittee

Standing Topics:

1. Wis 441 – Aaron Bonk

2. **Zoo Interchange** (Laura Shadewald)
3. **IH-39 (Illinois – Dane County)** (Laura Shadewald & Jim Lucht)
4. **Verona Road (Madison)** (Laura Shadewald & Brandon Lamers) –
5. **EveryDay Counts – EDC-3 (Initiatives)** (Bill Oliva)
 - 2016 Dodge County GRS & Precast Box Girders Bridges – James Luebke.
These Dodge County Projects will be a February 9th, 2016 LET.
 - 2016 Iron County Precast Box Girders – Bill Oliva
 - Precast Piers – Combination of precast columns and cast in place caps
6. **Wisconsin Highway Research Program (WHRP) Bridge Items** – (Bill Oliva)
 - FY2016 Projects – We will be moving forward with the Damage and Repair of Prestress Girder research for FY17. Proposal will be selected in February 2016.

Previous Meeting Carryover Topics:

1. **Updates - Concrete Slope Paving Constructability and joint design and layout. (Kevin McMullen)** A few of the contractors would like to eliminate the details where the slope paving is done in layers and with keyway joints in favor of placing the entire slope and sawing or forming joints. And the joints are tied together with #4 tie bars.
 - Draft Details have been developed and are being circulated to bridge maintenance people for comment and will be shared in the near future with Kevin McMullen and others for comment. – (James Luebke)
2. **Certified Anchor Installer Obstacles. (Joe Larson/Bill Oliva)**
 - No updates from previous discussion. BOS would like to reach out to ACI for discussion on more practice certification process.
 - Dave Stanke indicated that there was no problem in getting certified for anchor installers.

New topics:

1. **Joint FHWA/ WisDOT Deck Construction Process Review - Purpose and Scope. (Joe Balice FHWA)**
Joe Balice gave an update on the joint process review for bridge deck construction. The team visited 16 projects that included HPC, Grade E overlay, and normal. This team also looked at other states. The goal was to help FHWA identify best practices. There will be a report of finding published in April 2016.
2. **Suggestions from contractors for widening slab structures - how to address full camber at exterior, no camber at interior where new meets existing. (Bill Dreher)** – It was suggested to send this item to Aaron Bonk and the BTC - Design Subcommittee
3. **Geotechnical Engineer Field Review - Geotech engineers are required, per a plan note, to be given 3 days notice prior to providing an on-site foundation material evaluation. (Dave Kiekbusch)** – Dave discussed this item and the plan note.
4. **Parapet on Retaining walls-** Recently we have been asked numerous times to wet cure parapet concrete that is on top of retaining walls. As you know, the spec allows the dissipating cure to be applied to these particular walls. Will the bureau be

changing this spec moving forward? Often times these style of walls are in locations that water is not readily available. If a new directive is brought forth from the bureau; additional cost will certainly apply to these walls. **(Joe Larson)** – Joe brought this item for discussion. The wet cure of parapet on walls where there is not easily available water is one of the concerns. Jim Parry, Mike Hall, Bill Dreher, and Bill Oliva have been crafting new spec language that may allow cure of parapets on all retaining walls with pigmented cure and seal except where it might be incompatible with a subsequent surface treatment. Draft Language will be brought to the next BTC for discussion.

5. **Deck removals on Prestressed Girders (Matt Grove).** There was discussion on this item. Aaron Bonk is leading a group that will be looking into this issue. This issue and group will also be tied into the upcoming WHRP research on damage and repair of PSG. More to come on this topic in the coming CY2016.
6. **Hammer type for Deck Prep Type II (Matt Grove).** Again this will be referred to Aaron Bonk's Sub-Group on Damage to PSG during deck removal.
7. **Question to Industry - How difficult is it to construct a break point in a deck cross-slope to change from 2% to 1.5% to accommodate current sidewalk requirements? (Dave Kiekbusch).** The 2% is an ADA Requirement. From the discussion, on a skew this is difficult. Matt Grove indicated to put the break in if it avoids rework. Dave Stanke said to make sure there is enough room to the second break.
8. **Unless specified on the plan, reinforcement may not be placed after the concrete has been poured (i.e. stab bars). The 2'-0" long #5 bars in fixed abutments and pier caps are the only ones that should be specified. (Dave Kiekbusch)** Dave (Stanke) indicated that the parapet bars are too tall on pedestrian bridges for the finishing machine to get over them. That is why the contractors are stabbing the bars. Dave Kiekbusch will look at shortening the bars.
9. **If a concrete diaphragm is poured prior to the deck pour, the detail calls for the construction joint to be 1'-2" below the top of the girder, which is done to reduce the possibility of pop-outs in the diaphragm just below the top flange. Please adhere to this dimension. (Dave Kiekbusch).**
10. **Guidance on Plastic Bar Chairs** – Updates (Matt Grove and Bill Dreher). – This appears to have been resolved.
11. **Installation of the bearing anchor bolts - (Krissy VanHout & Aaron Bonk)** – With the amount of steel in the pier caps it makes it quite challenging to install the anchor bolts around 18" deep. We have had Aaron Bonk involved and have come up with some ways to make it work. If we get 8" of depth then we are allowed to epoxy the anchor bolt in instead of grouting it in. Kevin and Aaron both agreed this is an industry issue. Kevin Weber has expressed concerns that when the steel is tied, many times the tails of the bars cause issues with where the horizontal bars can be placed. That's why bundling bars doesn't always work. I attached an email from Kevin with some pictures of what we are dealing with. Designers may not be considering constructability.

12. FAA Permits- These permits continue to be problematic. I have noticed that the designers are no longer stating on elevation that the crane is allowed to be at and not obtaining the initial permit. The designers need to obtain the permit as they have in the past. A best practice would be to take the roadway elevation and add 150' to that elevation. If the contractor elects to go above that elevation, they can modify it on their own. Time is of the essence with these permits, and on several occasions this year we had to delay the start of the project since the FAA review was not completed yet. **(Joe Larson) - Hold**

13. Specification Changes / Updates – Discussion (Mike Hall)

14. Polymer Overlays & Pavement Markings – Hold