

MINUTES - BRIDGE TECHNICAL COMMITTEE MEETING

November 20th, 2013 Meeting

November 20, 2013 Agenda

Subcommittee Reports:

1. **Convening a subcommittee to develop a ride quality specification for bridges (Jim Parry)**
 - Jim Parry stated that there has been a large demand for training from his unit based on new 180 hires.
 - Frank Alfaro stated that PDS has been working with Collins Engineering to update training and it will be ready for implementation (WisDOT and consultants) in February 2014. Training course will be given in NE, SE, SW, and NW regions (not NC regions).
 - Jim Parry stated that training for the ride quality specification will hopefully be in place during 2014. Jim plans to build a template for use with this specification.
 - Jim also stated that he may be requesting input from industry to help in the development of this program. Bill Oliva mentioned that Jim should get in contact with Matt Grove in order to receive this input.
 - This topic will be addressed further in future meetings as progress is made.
2. **Bid Well Demonstration (Bill Oliva & Kevin McMullen)**
 - Bill Oliva mentioned that a demonstration from Bid Well will be coming in the future (March 2014). This was based on discussions had at the previous Bridge Tech Committee meeting. Bill will be soliciting questions from industry to pose to Bid Well in order to make the demonstration more beneficial for the group. Kevin McMullen will coordinate with the representative.

Standing Topics:

- a. **North South Update (Laura Shadewald)**
- b. **Hoan Bridge Update (Laura Shadewald)**
- c. **USH 41 Update (Laura Shadewald)**
- d. **Zoo Interchange (Laura Shadewald)**
- e. **IH-39 Illinois-Dane County (Laura Shadewald)**
- f. **Verona Road Madison (Laura Shadewald)**
- g. **Every Day Counts – EDC-2 Initiatives (Bill Oliva)**
 - BOS has developed standards for precast piers to be used on the IH-39 project.
 - BOS will be reviewing standards, specifications, and policies for other ABC structure types as well.
 - Want to get input from industry in order to provide assistance and insight into the development of ABC standards and policies.
- h. **Wisconsin Highway Research Program (WHRP) Bridge Items (Bill Oliva)**
 - Bill discussed the painting study that was recently completed and stated that a follow-up research project will be coming based on need. Updates to specifications and standards will follow recommendations from these reports.
 - Bill stated that 3 new projects will be starting in the near future:
 - Self-consolidating concrete in prestressed girders
 - Prestressed girder cracking phase II – end cracking in deeper girder sections
 - Research previous implementations of innovative bridge projects in Wisconsin (FRP, stainless steel reinforcement, unreinforced decks, precast elements, etc.)
 - Current and past projects can be viewed on the WHRP Web Site:
<http://wisdotresearch.wi.gov/whrp>
- i. **Leo Frigo Research**
 - Tom Braun asked whether the department will be researching the failure that occurred at the Leo Frigo bridge site. Bill Oliva stated that he agrees that research could be beneficial and the constraints of that research are currently being discussed. Matt Grove stated that at the next CE conference, the lunch speaker will likely be speaking on this topic.
 - Bob Arndorfer gave a brief update regarding the reasons for the failure. Anaerobic corrosion and aerobic corrosion. Buckled piling at the waterline elevation. Ongoing retrofits to 5 piers are being completed as of the date of the meeting. Bob stated that future investigations into the corrosion issue have not been determined as of yet.

Previous Meeting Carryover Topics:

1. Updates – Interior Adhesive Anchored Barriers (Aaron Bonk)

- Use of ACI/CRSI certification vs. pull testing and potential specification changes.
- Aaron Bonk discussed the updated policy direction for the contractors' installation of post—installed adhesive anchors. The intention is to allow contractors to choose between ACI/CRSI certification and non-destructive pull testing of the anchors.
- If ACI/CRSI certification is the direction that is chosen by the contractor, a supervising employee must physically supervise the installation of these anchors at the specific project site. This employee will likely need to sign off (through use of a form or other document) on the installation of all of the anchors for that specific job site.
- If the pull-testing method is chosen, a set number of anchors will need to be tested and will be called out in the standard specifications.
- Implementation of this new policy will be included in the 2015 standard specifications and will be implemented in the field in 2015.
- Darrin Stanke stated that pull-testing equipment is readily available and most contractors already have the equipment.
- Aaron Bonk stated that he will be working with Mike Hall to put together a draft version of the updates to the standard specs relaying this new requirement in the coming months. [\(Follow-Up\) A draft will be brought to the next Bridge Technical Committee meeting in March.](#)

New Meeting Topics:

1. 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.
- Request to remove keyed construction joints and use steel to tie together pours.
 - Sidewalk forms are readily available (they do not have beveled keyways typically).
 - [Kevin stated that he will submit some ideas to start the movement of this detail.](#)
 - [AMB to look into what other states are doing for pours of slope paving.](#)
- Request to change spec to change staged pours in lieu of one operation.
 - Leave it to the contractor to leave a means and methods for both the joints and the method of pouring.
 - Jim Parry stated that depending on the type of mix that is used, one pour may be difficult (or it may be OK).
 - [Look into spec section 604.3.4.3 for updates.](#)

2. Number of Painting Items on Projects (Matt Grove)

- The department seems to be increasing the number of bid items for the structure work. A recently let project had over 30 items of concrete painting items. There were two or three painting items for every structure. Why not have one or two items for all of the work and cover the painting breakdown in the structure quantity sheets? They use one temporary shoring item, concrete masonry bridge item, rebar item, etc. that covers all of the work for the entire project. Why not do the same with the concrete painting items?
- Tom Braun stated that there were painting items for every element of a structure plan set (bridges, walls, coping, railings, etc.). Tom stated that these items should be rolled up together.
- Mike Hall stated that for structures bid items, it is common to split out bid items per structure.

As a reference to this topic: Temporary Shoring

- Laura asked Tom to speak on the topic of temporary shoring (at the previous Bridge Tech Committee meeting, discussions pointing to separating quantities by structure was beneficial). Breaking these bid items down between cut walls and fill walls would be beneficial.
- Matt Grove stated that combining like items down into one bid item is OK. However, if they are different, the bid items should be split up from structure to structure or project to project.
- Pat Cashin asked how designer assumptions for temporary shoring are handled by the contractors. Tom Braun stated that they can look at the quantities during the bid process and will adjust their bids based on how they actually will build the walls.

3. Procurement of MSE Wall Panels

- Matt Grove brought up the topic of
- Jim Lucht stated that the burden is on the contractor to make sure that the MSE wall supplier has the inventory to supply their job.
- Tom Braun stated that for lets after May make it hard for supplies to be present. Tom stated that letting projects as early as possible is beneficial to the contractors and will keep projects on schedule.
- Darrin Stanke stated that the aesthetics associated with the precast panels are the hold-up on the precast panel production. The contractors are continually held up by aesthetics teams wanting new production samples. This has caused major construction delays throughout the state.
- [BOS will work to get the word out to Designers \(Spring Region Construction Conference and perhaps Bridge Manual\).](#)

4. Temporary Shoring Design

- Bob Arndorfer reiterated that fact that external stability design must be done by the contractors in addition to structural stability.

5. Specification Changes Discussion (Mike Hall)



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- Clarification of the 1 to 3 hour time lapse is needed in the Standard Specs. Mike stated that the intent is to allow this amount of time from the end of the first pour until the beginning of the second pour.
- Bob Arndorfer discussed the fact that the contractors were not being compensated correctly for pile preboring. Bob stated that the dimensions have been adjusted and a difference has been made between coring through rock vs. unconsolidated materials. Bob stated that the estimated quantities issue has been addressed through the PDS chiefs meetings (design and construction) and hopefully the quantities will be represented more accurately on future projects.
- Mike Hall is waiting for BOS review of the spec updates to ancillary structure foundations – does BOS want to have a time restriction or does BOS want a strength restriction? If BOS can justify the time restriction it will remain, but if a strength requirement is appropriate the specs will be updated. [BOS will be meeting prior to the March 2014 BTC Meeting to determine what updates would be appropriate.](#)
- Matt Grove asked that BOS look into the spec requirements for backfilling of incidental structures as well.
- Tom Braun asked if the 14 day wet cure could be waived for the sleeper slabs and also the abutment backwalls. Currently, the backwall needs to cure for 14 days prior to backfilling which holds up the schedules. Bill Oliva stated that this discussion has been had discussed at previous meetings and there is concern that backwalls are a primary feature. This item is currently under review. **(AMB to add a note to the structural approach slab standards that the footing does not need to be HPC – will remove the restriction for cure delays)**
- Chris Kirchner stated that he would like to get the prestressers to have a meeting with BOS to discuss a cross-section that is more efficient than what has previously been used (Token Creek bridge, etc.). Bill Oliva stated that BOS is very interested in learning lessons that came from these structures. Bill also stated that he will set up a meeting between the groups.

6. Composite Reinforcement (Kevin McMullen)

- Kevin stated that he has been meeting with a local designer of composites that has a desire to be used for bridge decks and railings. Bill Oliva stated that BOS is interested in this technology and will be looking into it as part of the WHRP study. Aaron Bonk stated that crash-testing would need to take place prior to any implementation. [This will be placed in the queue for consideration as research in WHRP.](#)

7. Bridge Approach Slabs (Kevin McMullen)

- Kevin stated that there is ongoing confusion regarding the implementation of the structural approach slab in conjunction with the roadway bid items.

- Aaron Bonk discussed the update of the FDM and the BOS Standard Details after the original implementation (this second update clarified the guidance for use of the approach slabs).
- Kevin also mentioned that there is an ongoing WHRP study targeting approach slab detailing. Aaron Bonk stated that it will be hard to delay the implementation of current detailing practices because the WHRP study will not be completed for a few years.

8. Kevin McMullen will be inviting a representative of the Bid-Well Paver manufacture to the March 2014 Bridge Technical Meeting.

- Please think about Questions that you would like to ask the representative to address at the presentation.