

AGC/WSDOT Structures Team January 30th, 2009 Meeting Minutes

Members

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1 Team co-chair

Guest

Attendee:	Company	Phone	E-mail
Ecklund, Jack	Quigg Bros.	360-533-1530	johnq@quiggbros.com

Meeting minutes were prepared by Jesse Beaver, WSDOT Assistant Bridge Construction Engineer, BeaverJ@wsdot.wa.gov.

Topics – AGC Annual Meeting, Stimulus Package, Shaft Slurry Disposal, Preservation of Rebar During Deck Overhang Removal, Concrete Barrier Detail Revision, Epoxy Coated Rebar Repair, Electronic Bidding, Certification Requirement for Mechanical Couplers, Placing Concrete in Foundation Seals, Accelerated Bridge Construction (ABC), Use of Self Consolidating Concrete (SCC)

The meeting started at 09:00.

1. New Member

Mohammad Sheikhezadeh informed the team that Bill Binnig was joining in place of Ann Hegstrom. Welcome Bill!

Action Item: No further action.

2. AGC Annual Meeting

Mohammad Sheikhezadeh requested team feedback on the presentation topics and reduced duration of the annual meeting held January 7th, 2009 at the Fircrest Golf Club. Team member comments included the following:

- Members preferred the full-day scheme; the revised format still required a full day attendance, but provided reduced scope of project presentations.
- Invitation to most contractors was not extended.
- The information was generally good, but speakers did not coordinate and consequently discussed similar topics.

Action Item: No further action.

3. Stimulus Package Update

Barry Brecto discussed the latest publicly available information on the economic stimulus package with regards to infrastructure development. Highlights include the following:

- Half of the funds would have to be at work within 120 days and half within 1 year of stimulus package approval by congress.
- WSDOT stimulus is projected to be used for pavers, 2 bridge painters, and at least 1 bridge.
- Local agencies have a greater portion of their stimulus directed at structures work.
- Local agencies are projected to get approximately half of the Federal stimulus allotted to Washington State.

Action Item: Barry will continue to inform the team as updates become available.

4. Approval of October Meeting Minutes

The minutes were approved for publication with no comments from the team.

Action Item: WSDOT will publish the meeting minutes at the WSDOT website.

5. Shaft Slurry Disposal

Mo provided a handout with proposed new language for the shaft special provision. The new language allow infiltration of shaft water slurry into the ground when groundwater table depth is more than 5 ft below the groundline. The new specification also allows

synthetic and mineral slurries to be disposed into sanitary sewer in accordance with permits.

Team discussion included the following:

- WSDOT environmental staff are onboard since the volume of pH contaminated water is very small relative to the total volume of water removed during concreting work for shafts.
- Team members requested that WSDOT HQ ensure that this policy is well explained to region environmental staff. WSDOT indicated that that Scott Carey and Christina Martinez from HQ Environmental were delivering the message.
- Team members requested that this language be included in the environmental permit.
- Members indicated that establishing reliable groundwater depths for the 5 ft requirement had been difficult in the past and encouraged WSDOT to review required site evaluation during the PS&E process.
- Members asked if this infiltration approach could be used for other pH water such as concrete cure water. WSDOT responded that it could not at this time.
- Members questioned whether synthetic slurry could be infiltrated if it is filtered after use of flocculants. WSDOT responded that it could not due to environmental concerns with the slurries. Currently only 1 slurry complies with NSF 60 Standards for potable water, but other suppliers are pursuing that certification.

Members also recommended the following immediate changes to the proposed new language:

- Change Note 2 to permit infiltration also by permit which may be other than sanitary sewer.
- Change line 36 from “project” to “plans and specifications”.

Action Item: WSDOT will incorporate requested changes and review other comments. The revised language will be incorporated for future contracts.

6. Preservation of Reinforcement Bars During Deck Slab Overhang Removal

Mo showed the team photos of typical to aggressive demolition by munchers that resulted significant non-uniform bending of the deck transverse reinforcement as well as photos from a contract where deck demolition by hammer or small automated hoe-ram that left the bars completely undamaged. Mo informed the team that WSDOT was considering changes to the demolition specification that would require all reinforcement bars that required re-use, such as for widenings, to be undamaged by demolition efforts.

Team discussion included the following:

- Members recommended WSDOT review production rate decreases that would result from this change. The effect could significantly increase closure times beyond 1-2 days full closure frequently required by current methods.

- Members noted that the photos that showed no damage to the rebars only for epoxy-coated bars which are known to debond from concrete better than black bars.
- Members noted that even if methods kept the transverse bars virtually undamaged, many of them would require bending upward for placement of girders and deck soffit forms.
- Some members suggested consideration of full removal and replacement with dowels where continuous transverse bars are required.
- Members argued strongly against restriction on all bending during demolition.
- Team members discussed the difficulty of evaluating the condition of bent rebar and relayed a recent project where the final bars were tested for post-bending condition and found to be structurally acceptable.
- Members questioned if the demolition practices to date have been found defective in practice or only in theory.
- Define a level of acceptable damage in plans or specs.
- Account for certain level of damage and augment rebars by drilling into the existing deck or coupling with the stubbed out existing rebars.
- Allow alternative in plans if no damage can be tolerated
- Some members remembered a study from approx 15 years ago on condition of reinforcement bars after excessive field bending with yield strength still intact.
- Members recommended avoiding a blanket policy in favor of case-by-case evaluation of acceptable practice by bringing these jobs to the team for recommendation early in the PS&E process.

Action Item: WSDOT will re-evaluate proposed changes and will ensure the team is consulted for constructability recommendations for future contracts.

7. Concrete Barrier Detail Revision

Bijan Khaleghi provided a handout of a revised reinforcement detail intended to address concerns from team members expressed at a previous meeting. The revision allow placement of formwork without requirement for rebar (angled bar B1) projecting through the side of the forms. Members agreed that the detail was improved, but that it could be further modified to allow extension of the forms upward above the top of the exterior face of the wall placement to accommodate varying wall heights without requirement to cut forms for each height. Bijan agreed that the rebar could be modified but noted that the further revision would not be incorporated into the standard plans for several months.

Action Item: Jim Schettler agreed to sketch his proposal for additional revision and provide to Bijan for consideration. No further action.

8. Epoxy-coated Rebar Repair

Mo discussed WSDOT view that the current specification allows unacceptable levels of damage to epoxy coating before repair is required. Consequently, WSDOT has created and Mo provided a draft handout of the new specification.

Discussion included the following:

- The new specification language will still not ensure 100% epoxy coverage at all locations and is vague about the method of assessing which areas show damage.
- Based on the care to protect the bars and the level of inspection and repair work to get uniform epoxy coverage, members recommended that WSDOT consider alternate reinforcement bar materials such as stainless steel, galvanized bars, and MMFX.
- Members discussed issues with galvanized rebar including bowing of the bars by as much as 1ft in 60ft.
- Last year WSDOT found stainless steel reinforcement for four times the price of black bars.
- Use of stainless steel requires electrical isolation from other reinforcement bars to prevent exacerbation of the corrosion process.

Action Item: WSDOT will review the proposed revised language for standard epoxy-coated rebar repair and will also continue to investigate alternate materials. No further action by the team.

9. Electronic Bidding

Ken Walker provided handout on Bid Express and discussed the current status of electronic bidding for WSDOT construction contracts.

Ken's description of the status included the following:

- WSDOT has entered into agreement to post and receive bids in AASHTO Bid Express.
- WSDOT will upload the bid items for Contractor download and use. Contractors can use their own estimating software to complete their bid, then upload back to Bid Express before the cutoff time. Access these tabs at BidEx.com.
- 30 states are using Bid Express, including ODOT which has been using it since Jul 07.
- The process includes a fee for Contractor use of \$100 registration plus \$25/month for each state.
- Registration also gives access to expedite bidding software as option.
- Completed bid tabs are available electronically for an additional fee, but these will also continue to be provided in text format for free from the WSDOT Contract Ad & Award website.
- WSDOT is evaluating whether to move advertised contract plans from Builder's Exchange to Bid Express.
- The website interface for Bid Express will be available 23 Feb 09.
- WSDOT wants 20 Contractors to test the Bid Express bidding process on 4 upcoming contracts between April to June; this will include free temporary access to the software; email Ken Walker (walkeken@wsdot.wa.gov) if interested and WSDOT will publish the invite to this trial.

- The target to go live with the process, provided the trial is successful, is July 2009, but this may slip a bit.
- WSDOT is also allowing use of electronic bid bonding through 2 companies with fee.

Team discussion included the following:

- Contractors already using this process in other states found download of bid tabs to Heavy Construction to be a significant time saving process.
- This process will still require prequalification to bid as GC by WSDOT; this process will continue to be done by phone with Ken's office.
- The security measures will include public (WSDOT) – private (GC) digital keys to each bid to protect their access by anyone including Bid Express employees.
- The system doesn't check if stated DBE is actually classified as DBE by OEO.
- This process will not be used initially for region Ad & Award.
- The team thanked Ken and his team for this step forward and for their reliable and timely posting of bids.

Action Item: Team members should contact Ken if they are interested in testing the Bid Express software within the next few months.

10. Certification Requirement for Mechanical Couplers

Mo provided a handout with draft revised specification change to require certification of installer training to address quality of mechanical coupler installations.

Discussion included the following:

- The current system doesn't adequately evaluate the actual production installer; based on the requirement to have samples approved prior to installation of production couplers (time between sample testing and production), the Contractor may have one of their staff make the samples while the project rebar laborers install the production couplers.
- Consider WSDOT certification of the installer on each job where they will be used.
- Members questioned whether it was prudent to continue testing all couplers if different installers make the samples and the production connections and the couplers are already listed on the qualified products list based on evaluation of coupler capacity.
- What training is available from suppliers?
- Members recommend additional language in the WSDOT Construction Manual to have a pre-activity meeting for this work that includes training on mechanical coupler installation and inspection.

Action Item: Mo will submit a proposal at the next meeting for revised mechanical coupler process.

11. Placing Concrete in Foundation Seals, Standard Specification 6-02.3(6)B

Mo provided the team a revised specification for placing concrete in foundation seals that removed the minimum tremie diameter and the minimum number of tremies per size of foundation.

Discussion included the following:

- Add language in the Construction Manual to have pre-activity meeting and train inspectors on seal installation.
- Continue to keep adequacy of the seal as Contractor responsibility.
- One member indicated that the minimum tremie diameter in the existing specification was a good practice and recommended keeping that requirement. However, most members agreed that means and methods should be deleted.

Action Item: Mo will revise the specification and bring back to the team for review.

12. WSDOT Accelerated Bridge Construction (ABC) Committee

Bijan informed the team that he had created a committee to assist WSDOT with prudent implementation of ABC practices for WSDOT bridges and other structures.

Bijan's description of the committee included the following:

- The committee includes two members from AGC (Scott Bernhard and Dave Banke), one professor from UW, one precast industry representative, one FHWA representative, and several WSDOT members representing design and construction.
- The second meeting is Feb 3, 2009.
- The committee is looking at precast column-crossbeam bents for the new SR-520 floating bridge.
- This work is similar to efforts underway by Caltrans.

Action Item: No further action.

13. Use of Self Consolidating Concrete (SCC)

Bijan informed the team of current efforts to use SCC on WSDOT contracts, as follows.

- WSDOT is contracting to have all WF74G girders on one span of the two span Tieton Bridge fabricated using 5,000psi SCC.
- Concrete Technology Corp is casting panels of SCC and is concerned about creep and shrinkage in girders.

Action Item: No further action.

The meeting was adjourned at 12:00. The next meetings are scheduled for **6 Mar 09**, **3 Apr 09**, and **1 May 09**.