

AGC/WSDOT Structures Team October 17th, 2008 Meeting Minutes

Members

Attended	Member	Company	Phone	E-mail
	Ayers, Scott ¹	Graham Constr.	206-631-2358	scotta@grahamus.com
X	Barney, Millard	Conc. Tech.	253-383-3545	mbarney@concretetech.com
X	Beaver, Jesse	WSDOT-HQ	360-705-7825	beaverj@wsdot.wa.gov
X	Bernhard, Scott	Graham Constr.	509-534-1030	scottb@graham.ca
	Brecto, Barry	FHWA	360-753-9482	barrybrecto@fhwa.dot.gov
X	Casey, Daniel	KLM Constr.	253-297-2750	dcasey@klmci.com
X	Foster, Marco	WSDOT-NWR	360-757-5999	fosterm@wsdot.wa.gov
	Hegstrom, Ann	Kiewit Pacific	425-255-8333	ann.hegstrom@kiewit.com
X	Hilmes, Bob	WSDOT-ER	509-324-6232	hilmesb@wsdot.wa.gov
X	Ireland, Scotty	WSDOT-OR	253-305-6430	irelans@wsdot.wa.gov
X	Khaleghi, Bijan	WSDOT-HQ	360-705-7181	khalegb@wsdot.wa.gov
X	Madden, Tom	WSDOT-UCO	206-768-5861	maddent@wsdot.wa.gov
X	Olson, Ryan	Mowat Constr.	425-398-0205	ryan.olson@mowatco.com
	Parrish, Kevin	Hamilton Constr.	541-746-2426	kparrish@hamil.com
X	Pendras, Greg	Max J. Kuney	509-535-0651	gregp@maxkuney.com
X	Quigg, John	Quigg Bros.	360-533-1530	johnq@quiggbros.com
X	Schettler, Jim	Jacobs Civil	206-382-6322	jim.schettler@jacobs.com
X	Sheikhzadeh, M. ¹	WSDOT-HQ	360-705-7828	sheikhm@wsdot.wa.gov
X	Silverman, Mark	Atkinson Constr.	425-508-6616	mark.silverman@atkn.com
	Smith, Tobin	Max J. Kuney	509-535-0651	tobin@maxkuney.com
X	Swenson, Robb	General Constr.	360-394-1407	Robb.Swenson@kiewit.com
	Welch, Pete	Wilder Constr.	425-551-3100	pete.welch@gcinc.com

¹ Team co-chair

Guests

Attendee:	Company	Phone	E-mail
Aeschleman, Vance	Granite NW	425-508-6002	vance.aeschleman@gcinc.com
Ross, Don	Granite NW	425-551-3130	don.ross@gcinc.com

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

Topics – Shaft Slurry Disposal; Accelerated Bridge Construction Conference; Constructibility Review of East Camas Slough SR-14 Bridge; Deck Slab Overhang Removal; Alternative Rebar Configuration for Retaining Wall Traffic Barriers; Repair of Damage to Epoxy Coated Steel Reinforcing Bar; Sampling and Testing of Concrete; Sequencing of Plan Sheets; Abutment Design for Safety; Status of Alaskan Way Viaduct Replacement; WSDOT Bridge Construction Lessons Learned from the Field

The meeting started at 09:00.

1. New Member

Mohammad Sheikhezadeh announced that Greg Ritke, Tri-State Construction, Inc., had joined the team. Welcome, Greg!

Action Item: No further action.

2. Approval of September Meeting Minutes

Members approved the minutes.

Action Item: No further action.

3. Tension Controlled Bolts

Jesse Beaver indicated that WSDOT is still working to create the first draft revised specification to incorporate tension controlled bolts (TCB) as standard high strength bolted connection option.

Action Item: Jesse will continue work on the specification and provide the team with a draft when it is created.

4. Shaft Slurry Disposal

Mo provided an update on the current efforts to address environmental issues associated with disposal of shaft slurries. Discussion included the following:

- Effort is underway to describe 'uplands' for water slurry disposal.
- Soil filtration depth of min. 5' from the bottom of settling pond to the ground water table is required.
- Synthetic slurries will continue to be contained and disposed to sanitary sewer in accordance with the permit requirements.
- Consider different requirements for clay soils than for gravels with regard to infiltration and proximity to rivers, etc.
- This same policy will likely need to be extended to all concrete grinding, cure, or other similar work.
- There is a new commercial use of pH water as fertilizer.

Action Item: Mo will continue to update the team as contract specification language is developed.

5. Accelerated Bridge Construction (ABC) Conference

The WSDOT Bridge Design office held an accelerated bridge construction seminar Sep 30th, 2008. Contractors and consultants attended and in some cases participated in the

expert panel discussion. Several topics were presented from recent ABC practices by the Utah DOT. As a result of the conference, WSDOT has created a small in-house team to evaluate projects case-by-case for possible application of ABC practices.

Action Item: No further action.

6. AGC Lead Team News

Mo discussed the recent Lead Team meeting and relayed the following issues of interest:

SR-519 Design Build Contract

The initial upset price was less than the Engineer's estimate. AGC leaders were concerned about the appropriateness of this owner practice. WSDOT explained that the owner's expenses were included in the estimate

Annual Meeting

The annual meeting is January 9th. To meet WSDOT cost-cutting goals, the meeting will include reduced scope (fewer presentations and shortened total meeting time) and reduced participation by State staff.

Action Item: No further action.

7. Constructibility Review – East Camas Slough SR-14 Bridge

Mo provided the team a handout of as-built plans for the existing bridge along with photos of the original in-water pier construction. The existing bridge is 3 spans (100ft, 140ft, and 100ft) with spread footing on bedrock. Team feedback was requested on the feasibility of constructing in-water piers for a structure parallel to the existing bridge within the 2.5 months fish window.

Discussion included the following:

- There are currently no restrictions on night work or on noise in general.
- Trestle construction and removal is required within the fish window.
- Bedrock is at approximately 20ft to 30ft depth.
- Team members requested water depth specifically related to fish window.
- Members proposed shafts instead of spread footings.
- Suggestion to increase length of center span to move piers into shallower water areas and to get them out of the channel.
- Trestle is constructible but requires rigid frames due to shallow soil depth over bedrock.
- Willamette Tug & Barge Company did the footing excavation work for the existing bridge.
- Consider the Portadam portable cofferdam system (<http://www.portadam.com/>); ITD used this system recently on a Sand Point project. This system uses fabric membrane supported by a rigid frame to form a cofferdam in water depths up to 12 ft.

- Consider closing the adjacent bridge at night to allow construction access.
- Can oversize casing be used with shafts for access?

Action Item: No further action.

8. Deck Slab Overhang Removal

Mo provided a photo depicting a recently completed widening where the existing edge of deck and barrier were removed by concrete cruncher. The photo illustrates severely bent and fractured reinforcement. As contrast, Mo provided a photo from a recent widening where the edge of deck was removed by hand tool chipping. This photo showed plain and epoxy-coated reinforcement in excellent condition with no significant deformation. Mo explained that the existing reinforcement left after demolition for widenings forms a structural connection between the existing structure and the new widened portion and that WSDOT is concerned with the integrity of these bent transverse bars.

Discussion included the following:

- Chipping machine that work like miniature ho-rams are available; they provide good control of demolition and good protection of reinforcement. Robb Swenson had used similar equipment at the Hood Canal Bridge recently.
- A recent project that had 2 men hand chipping showed progression of approximately 1.5 ft per hour to chip a 6 inch to 7 inch deck.
- Contractors noted that bars are frequently bent upward to allow form placement even when they are not damaged during demolition; any related change in acceptable work methods should consider form placement and address the need for 2 bends of the existing reinforcement.
- Using a limiting weight of chipping hammer may unnecessarily limit robotic demolition methods.
- Consider a performance specification by identifying what WSDOT requires rather than acceptable means and methods.
- Hydro demolition could be used to cut concrete without damage to rebar if water issues can be addressed.
- Consider added traffic issues for extended demolition time.
- Allow test section as demonstration of alternative demolition methods.

Action Item: WSDOT will revise demolition specification and provide a draft to the team.

9. Alternative Rebar Configuration for Retaining Wall Traffic Barriers

Jim Schettler provided a handout of the current rebar configuration along with a proposed change to address forming issues. The current detail includes an angled rebar (Bar B1) that reinforces the base of the barrier. This bar projects though a construction joint at the top of the wall under the barrier to develop its tail downward into the wall. However, Jim indicated that development of this bar could occur fully within the barrier, eliminating this difficult bar placement with respect to formwork removal.

Action Item: Mo will pass this issue along to the Bridge Design group for further comment or revision and will respond to the team with resulting action.

10. Repair of Damage to Epoxy-Coated Steel Reinforcing Bar, Std Spec 6-02.3(24)H

WSDOT indicated intent to change the provision in this standard specification section that allows ¼-inch flaws in epoxy before any repair is required. WSDOT intends to require repair of all flaws that are visible to the naked eye to address corrosion.

Discussion included the following:

- How will these bars be inspected; will the underside of deck bottom bars be viewed in-place with a mirror?
- Can purple epoxy be used to help with this issue? It is from only 1 source but WSDOT may specify for saltwater marine environments.
- Snohomish County uses all galvanized rebar.
- Galvanized rebar do not have the pinhole corrosion issues.
- MME bars with 100 ksi yield strength have an AASHTO specification and are allowed in decks at 1:1 replacement.
- Virginia and Florida have banned epoxy coating due to humid conditions.

Action Item: WSDOT will revise this specification and provide it to the team for review.

11. Certification of Compliance for Prestressed Girders, Std Spec 6-02.3(25)J

Jesse Beaver provided a handout of a revision to the girder stamping process intended to prevent shipping delays. The existing system requires approval of the certificate of compliance, which is required to be completed prior to stamping girders approved for shipment, within 3 days of shipping to address final checks for camber, if stored more than 3 months, and horizontal alignment. However, in many cases, the girders are completed several months before shipping. The compromise is to allow girder stamping when girders are complete and to require documentation of final camber and alignment checks to be verified by onsite WSDOT fabrication inspectors.

Action Item: No further action.

12. Sampling and Testing of Concrete, Std Spec 6-02.3(5)G

Jesse provided a handout of a revision to the process for sampling and testing concrete. The change clarifies that WSDOT will conduct testing on concrete as accepted by the Contractor rather than as delivered from the plant. This process allows a concrete supplier to get their concrete within specification using onsite modifications that keep the concrete within mix design tolerances.

Action Item: No further action.

13. Sequencing of Plan Sheets

Mo relayed a recent request to reorganize bridge plan sheet sets to lump structure elements by pier rather than by element type. Discussion included the following:

- Members preferred the current organization with all shafts together, then all piers, etc.
- Members preferred keeping the construction sequencing at the beginning of the bridge plans, as is currently done.

Action Item: No further action.

14. Abutment Design for Safety

Mo indicated that WSDOT has a formal policy for bridge designs in urban areas that limit sloped embankments at abutments. This policy is intended to prevent construction of embankments that can be easily accessed by the public and that can therefore be unsafe. Bijan Khaleghi indicated that this is currently considered during the preliminary plans stage of bridge designs.

Action Item: No further action.

15. Status of Alaskan Way Viaduct Replacement

Tom Madden presented the current status of projects to replace the viaduct. The presentation included design visualizations of the alternatives for the contested center section.

Action Item: No further action.

16. Lessons Learned from the Field

Jesse gave a brief presentation on WSDOT's lessons learned and the latest project using precast crossbeams.

Action Item: No further action needed.

The meeting was adjourned at 12:00. The next meeting is scheduled for **14 Nov 08**.