

**WSDOT/ACEC Structures Team
Minutes
ACEC/WSDOT Bridge and Structures Committee
10:00AM to 2:00PM
1/22/2016
COWI Seattle Office**

Attendance:

WSDOT	Jeri Bernstein, P.E., S.E.	Washington State Ferries (Co-Chair)	Yes
	Geoff Swett, P.E., S.E.	WSDOT - Bridge Design	Yes
	Mark Gaines, P.E.	WSDOT - HQ Bridge Construction	No
	Jed Bingle, P.E., S.E.	WSDOT - Bridge Design	Yes
	Glen Scroggins, P.E., S.E.	WSDOT - Bridge Preservation	No
ACEC	Jim Schettler, P.E., S.E.	Jacobs Engineering (Co-Chair)	No
	Bill Elkey, P.E., S.E.	Parsons	Yes
	Richard Patterson, P.E., S.E.	COWI Birdge	Yes
	Chester Werts, P.E., S.E.	HDR	Yes
	Paul Guenther, P.E., S.E.	COWI Marine	Yes
	Paul Brallier, P.E., S.E.	HNTB Corp.	Yes
	Matthew Lengyel, P.E., S.E.	FIGG Bridge Engineers	Yes

Meeting Began at approximately 10:05 AM

- **Approval of 11/20/2015 Meeting Minutes**
 - Review of minutes occurred without a quorum (5 consultants & 3 WSDOT) (later there were 6 consultants when Richard joined)
 - Minutes were approved by those present and Mark Gaines by proxy

- **Review of Team charter; Co-Chair and Team member succession**
 - Reviewed Paul Brallier as volunteer for consultant co-chair
 - Need more WSDOT members for the committee
 - Geoff confirmed that Bijan approved for 2 more from Bridge & Structures Office
 - Geoff to follow up with 2 interested potential members before next meeting by March 1st.
 - Glen will stay on despite low attendance
 - Geoff will eventually drop off after new WSDOT members have transitioned in
 - Revisions made to team charter
 - Co-chairs updated to Jeri Bernstein and Paul Brallier

- Language for “members present” added
- Charter revisions were approved by those present and Mark Gaines by Proxy
- Final approval of the charter will occur at the March 18, 2016 meeting. New WSDOT members will be approved.

➤ **Reflect on goals for this year**

- Provide Comment to the WSDOT Project Delivery Selection Method Guidance
 - Discussion: Jed pointed out that BDM Chapter 1 addresses roles for DBB
- Paul G. and Geoff commented on adding to BDM Chapter 1 as well
- Develop Guidelines for the Role of Design Engineers, Both Consultant /EOR and WSDOT/Owner under DB and GCCM contracts
 - Paul B. stated roles in DB are defined in RFP, but agreed that this should be addressed by group
 - Jeri commented we should look at past RFP’s for DB roles
- Providing engineering advice to local agencies
- Produce a Post EQ inspection manual for Local Agencies
- Review Specification revisions (added)

➤ **WSDOT/ACEC Structures Website**

- Inform Potential users of the site-Provide engineering design assistance to local agencies
- Confirm ACEC Structures Committee services were mentioned in Local Programs Newsletter
 - Geoff will follow up advertising w/WSDOT Local Programs LTAP newsletter
- APWA Newsletter any follow up to previous action items
 - Matt volunteered to write article for APWA newsletter
 - Matt discussed giving a presentation at APWA
 - Jeri said she would update the website

ACTION ITEMS

- **Geoff – Follow up advertising w/WSDOT Local Programs LTAP newsletter**
- **Matt – Write article for APWA newsletter**
- **Matt – Give a presentation at APWA**
- **Jeri – Update Website**

➤ **Review of Project Delivery Selection Guidance**

- Jeri walked through an overview of the 3 financial levels (2M, 10M, 25M), what is to be considered and who would have to be involved
- Jeri pointed out required training/knowledge
- Jeri pointed out advantage of in-house design and knowledge in going forward with project and construction
- Jeri asked how much design is required for DB? 30%?

- Paul B. explained how DB may not be advantageous to small design shops who may not have the opportunity to be involved
- Discussion of different alternatives around the table and past success and shortcomings.
- Geoff added that process results may not be followed and may be pre-decided
- Paul B. commented on the political influence and how this could change the decision
- Bill and Jeri discussed the pre-selection of teams and the follow up presentations
- Geoff commented on how certain constraints can support DB or GCCM as a better solution
- Matt suggested that past records on DB, GCCM, etc. would be helpful in gauging the future success of each
- Considerations include change orders, meeting budget, meeting schedule
- (Richard P. joined the group during this discussion)
- Richard suggested that WSDOT may want to follow a program for DB similar to the Navy program that is more streamlined. Includes all types of projects.
- Further discussion of various project experiences with DB and in some cases (SR-520 sound walls) owner may not get what it wanted if not well defined or if loopholes are inadvertently included.
- Risk is a consideration when determining the final PDM and which risk the owner really wants to own. Needs to be clearly defined and understood.
- DB may not be appropriate for the entire project, but may still be a better solution for a portion of the project.
- If the primary effort is retrofit (steel bridge example) then the RFP must be very prescriptive for awarding the job and completing the work and payment
- If the RFP is not prescriptive enough then the onus should be on the Contractor to determine what is required extra work
- Sometimes the Contractor on a GCCM is brought in too late; example of Sound Transit when the design was 90% complete
- If a retrofit project cannot be prescriptive enough, then GCCM may be the right choice
- Paul G. pointed out that some DB contractors do not identify the designer and will shop the design after award. This is not good for the designer or the owner.
- Matt pointed out that low bid on DB may not always be low bid in the end if the final cost escalates substantially with change of conditions, etc. Change of conditions are more prevalent with DB in his experience.
- Jeri added that there are less surprises in DBB because it is more thought through when it goes out to construction.
- Richard countered that WSDOT experience may be fewer change orders for DB than DBB, but Geoff was skeptical of this data.
- Geoff added that it may be dependent on how the project is administered.
- Richard said that he will follow up with Jeff Carpenter or Keith M. for data in WA.

ACTION ITEMS

- **Jeri – recommendations for comments on PDMSG**

- **Role of engineer Consultant/EOR and WSDOT/Owner in DB and GCCM contracts**
 - Submit as part of Project Delivery Method Selection Guidance

- **Post Earthquake Inspection of Bridges Manual for Local Agencies – Paul B**
 - Paul B. followed up on this item
 - Spoke with Tacoma and some other agencies
 - Following Nisqually, smaller jurisdictions did not have personnel
 - Already a good basic training video
 - Would like to take an existing reference and build on it, or just adopt it.
 - The goal is for WSDOT/ACEC Structures Team to present at the APWA Spring conference in 2017
 - Define what is safe/unsafe to determine if structures must be closed immediately
 - Jeri added that newer than 80's may not need to be closed
 - Discussed acquiring photographs from WSDOT or Caltrans
 - Jed tracked down shoring details for resource as well
 - Paul stated that we should NOT attempt to develop a tagging system
 - Discussion on MCEER document determined that it is good as reference without and condensing.
 - Paul reviewed the active database (WASAFE) of post-earthquake inspection volunteers that has been developed. He explained that even though this is set up for buildings, bridge engineers still understand structures and can be useful as well.

ACTION ITEMS

- **Paul B. – Put together an outline based on the earthquake response training video.**
- **Paul B. – PowerPoint presentation that identifies resources available (MCEER, Caltrans, etc.) and areas that be focused on following an event. Include the inspection kit in the presentation. (long term action item)**
- **Richard – Identify date for next western conference for APWA – April 4-7, 2017– DONE**
- **Geoff – Will follow up to see if there is a WSDOT post-earthquake checklist**
- **Jed – Will follow up with Eric Schultz on post-earthquake photographs**

- **Piling Standard Specifications Revisions – Geoff**
 - Geoff reviewed his task to update the Piling specification
 - Includes new structural steel piling and concrete filled steel tube piling designations. This will trickle down into other documents including the Standard Specifications.
 - Structural Steel Piles may be open-ended or close-ended or H-piles
 - CSFT's are composite structural piles and may be partially filled or completely filled and may be plain or reinforced
 - Paul G. suggested that H-pile should be more general to allow other rolled shapes
 - Richard suggested that “internally” could be deleted before “concrete”.

- Geoff initiated a discussion on length. WSDOT typically would specify tip elevation and load. Section on ordering pile may need to be rewritten.
 - Paul G. stated that risk associated with pile length should be on the owner.
 - Discussion on minimum pile thickness specified on plans versus what is required for driving the piles.
 - Geoff added that if capacity protection is part of the pile design, there may even be a maximum pile thickness.
 - Paul G. questioned whether the wording of “deforming or distorting” should be included if it is not quantifiable. All piles will have some level of deformation from pile driving.
 - Chester added that wording could be added after that would clarify that some deforming is acceptable as long as the structural capacity of the pile is still met and it meets the minimum thickness.
 - Geoff added that substantial deformation would have to occur, with buckling for example, before the capacity was compromised.
 - Geoff reviewed new verbiage from special provisions that has been adapted. Much of this was related to tolerances and welding details.
 - Geoff discussed UT testing of piles and what should be covered in the specifications versus the plans. Testing requirements in low stress zones may be lower or even excluded. Suggested example “all field butt splices shall be UT tested except as explicitly excluded in the plans in areas of low stress.”
 - Bill pointed out that this may start a dispute between the DB engineer and the owner’s engineer. Geoff stated that guidance can be included in the BDM.
 - Anything critical is now calling for AWS CWI inspection.
 - Paul B. asked about coatings on marine piles and Jeri clarified that they are now requiring coatings all the way down, to mitigate future cathodic protection measures.
- **Agenda items deferred to next meeting**
- Durability of Structures Discuss – Design Criteria Discussion
 - Post-Earthquake Inspection of Bridges Manual for Local Agencies
 - Review WSDOT EOP-Emergency Operations Plan
- **Next meeting will be March 18, 2016 at WSDOT Bridge and Structures Office**
- **Future Topics**
- Richard – Practical design and how it relates to economic analysis
 - Incorporate life cycle costs
 - Expansion joint design for longer life
 - Matt mentioned replaceable bladder on Murray Morgan
 - Jed stated that you don’t always want to replace bladders
 - Geoff stated that practical design approach isn’t always a benefit and sometimes just decreasing width of structure

- Paul B. gave example of WSDOT girder on practical design and some of the details involved and commented that most of the benefits of practical design are found in roadway revisions and reductions

➤ **Meeting Adjourned at approximately 2 PM**