

AASHTOWare Bridge Design-Rating (BrDR) Task Force Summary Meeting Minutes

January 26 – 28, 2016

New Orleans, LA

Table of Contents

General Information – Meeting of the Bridge Design & Rating Task Force	3
Agenda Item 0: Review Agenda/Assign Minutes Recorder	3
Agenda Item 1: Prior Business	3
1a. Review January Meeting Minutes	3
1b. Review Action Items	3
Agenda Item 2: Financial Overview and Work Plan Summary.....	3
2a. Update on Phase 20 (FY2016).....	3
2b. Update on 6.8 Release Work Plan	3
2c. Update on P/S Design Tool Work Plan	3
2d. Update on FE Engine Modernization Work Plan.....	4
Agenda Item 3: Update on BrD/BrR Licensees (FY 2016).....	4
3a. Product Report	4
3b. Service Unit Report	4
3c. Evaluation Software Report.....	4
Agenda Item 4: Support and Maintenance Report	4
4a. Incident and Support Summary	4
4b. Progress on Bug Resolution.....	4
4c. Enhancement List Update	4
4d. Maintenance Issues	4
4e. Issues Policy.....	4
Agenda Item 5: Update on 6.7.1 and 6.8	5
5a. Progress and Schedule Review	5
5b. TAG Update.....	5
Agenda Item 6: Update on P/S Design Tool and FE Engine Modernization	5
6a. Finite Element Engine Conversion Status.....	5
6b. Finite Element Engine Performance.....	5
6c. P/S Design Tool Update and Demo	5
Agenda Item 7: Modernization.....	5
7a. Update	5
7b. Solicitation Strategy.....	6
Agenda Item 8: Enhancements.....	6
8a. Steel Design Tool Update – TAG Rnd 2 Comments – 2015-BrDR-093.....	6
8b. Steel Design Tool Estimate Update – 2015-BrDR-095.....	6
8c. FP8 – Curved Girder Part 3 – Move Connectors up under bridge	6
8d. Rating Tool – Estimate to add GFS LFR-only	6
8e. Caltrans JIRA BRDRSUP-822 – MCB Integral Substructure.....	6
Agenda Item 9: Miscellaneous Topics	6



Agenda Item 10: Third Party Issues.....	6
10a. Long-term Strategy.....	6
Agenda Item 11: User Group.....	6
11a. Summary Minutes from November Meeting.....	6
11b. Non-Voting Users' Discussion Minutes Responses.....	7
Agenda Item 12: Work Plans.....	7
12a. 6.8 Project Work Plan Amendment 3.....	7
12b. FY2017 MSE Work Plan Amendment 1 Draft.....	7
12c. Planning Estimates.....	7
12d. Future Work Plans.....	7
Agenda Item 13: FHWA Update.....	7
Agenda Item 14: Five Year Projection for BrDR.....	8
Agenda Item 15: Licensing Issues.....	8
15a. University Licenses.....	8
15b. International Licenses.....	8
15c. Special Consultant Option Licensees.....	8
15d. Third-Party Add-Ons.....	8
15e. Future of Bundling Modules (Post-Modernization).....	8
15f. End User Communique on Licensing Fees.....	8
Agenda Item 16: SCOJD Submission.....	9
16a. Review and Approve FY2017 Catalog Language.....	9
Agenda Item 17: 2016 BrDR Quality Assurance Report.....	9
Agenda Item 18: T&AA Update.....	9
Agenda Item 19: Marketing Activities.....	9
19a. Marketing General.....	9
Agenda Item 20: Review Action Item list from this meeting.....	9
Agenda Item 21: Task Force Executive Session (as needed).....	9



General Information – Meeting of the Bridge Design & Rating Task Force

Date: Tuesday, January 26, 2016 – Thursday, January 28, 2016

Participants:

AASHTO	Judy Skeen Bruce Johnson Wally Ballou	AASHTO Oregon DOT Kansas DOT	Project Manager SCOJD Liaison T&AA Liaison
BrDR Task Force	Todd Thompson Joshua Dietsche Jeff Olsen Dean Teal Amjad Waheed Tom Saad	South Dakota, DOT Wisconsin DOT Montana DOT Kansas DOT Ohio DOT FHWA	Chair Bridge Rating (BrR) Bridge Design (BrD) Bridge Design (BrD) Bridge Rating (BrR) FHWA Liaison
BrDR Contractor	Jim Duray Herman Lee	Baker Baker	BrDR Contractor BrDR Contractor

Notes Taker: Tom Saad / Judy Skeen

Agenda Item 0: Review Agenda/Assign Minutes

Recorder

Todd Thompson opened the meeting at 11:00 AM. Tom Saad was assigned as the meeting minute's recorder. The agenda was reviewed. No additional agenda items were added.

Agenda Item 1: Prior Business

1a. Review January Meeting Minutes

Minutes from the November 3 – 4, 2015 Task Force Meeting in St. Petersburg, FL were reviewed and approved with one minor change on page 11 – under item 7c, 'back billing' should be 'back filling'.

1b. Review Action Items

Jeff Olsen reviewed the Action Items and updates were provided to the Task Force.

Agenda Item 2: Financial Overview and Work

Plan Summary

2a. Update on Phase 20 (FY2016)

Baker will develop a contract modification to cover the additional costs due to extensive specification updates.

2b. Update on 6.8 Release Work Plan

Baker advised that FP4, Maintenance Items, is 60% complete and FP5 LFD DF 1994 Guide Spec is 60% complete through the end of December. Four tasks are to be implemented for CalTrans which will be included in the 6.8 release. Baker indicated these items should not impact the delivery schedule.

2c. Update on P/S Design Tool Work Plan

Baker will provide a demonstration of the PS Concrete Design Tool in agenda item 6. Beta testing can begin the first week of March.



2d. Update on FE Engine Modernization Work Plan

Baker advised that FP1, FE Engine Conversion task, is 70% complete. Baker is finding significant speed enhancements with smaller models on the order of five times previous runs and two times improvement on large models. This project is expected to be completed by the end of March.

Agenda Item 3: Update on BrD/BrR Licensees (FY 2016)

3a. Product Report

Judy Skeen presented a product license summary report developed from the Excel output from AASHTOWare Manager. The report included licenses ordered as of 01/19/16.

Item	FY2014	FY2015	FY2016
Bridge Design - 120-Day Evaluation License	13	2	5
Bridge Design Developer License	0	1	1
Bridge Design Educational License	7	9	13
Bridge Design Single Workstation Option	3	2	1
Bridge Design Special Consultant Option	35	35	34
Bridge Design Unlimited Option	18	17	16
Bridge Design/Rating Service Units	30	31	48
Bridge Rating - 120-Day Evaluation License	13	3	11
Bridge Rating Agency Sponsored Consultant Licenses	2	2	2
Bridge Rating Developer License	4	3	4
Bridge Rating Educational License	7	11	15
Bridge Rating Single Workstation Option	24	20	17
Bridge Rating Special Consultant Option	261	339	328
Bridge Rating Unlimited Option	31	33	33
Sponsored Consultant Licenses (Bridge Rating) - No Fee	125	128	87

Sponsored Consultant Licenses (Bridge Rating) - No Fee	124	110	90
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3b. Service Unit Report

Baker presented the service unit summary report. A total of 41.8 service units were recently donated to support the enhancements included in the 6.8 Project Contract mod #2.

3c. Evaluation Software Report

The current summary of BrDR software evaluations was reviewed. The most recent version of this report is posted on SharePoint. Oregon's evaluation license will be extended to the end of the fiscal year and signs are positive (based on feedback from Bruce Johnson) that Oregon will license the product.

Agenda Item 4: Support and Maintenance Report

4a. Incident and Support Summary

Baker presented the Defect History Report. 1,934 bugs have been reported. Currently there are 21 total unresolved BrDR bugs.

4b. Progress on Bug Resolution

Baker reviewed Maintenance Progress reports for the 6.8 release as of 01/13/16. For the 6.8 Release, out of 167 total reported incidences, 21 remain and are to be assigned for resolution. None of the 21 remaining bugs will impact the 6.8 release.

4c. Enhancement List Update

Baker advised that there were only three items added to the TAG enhancement bucket in October.

4d. Maintenance Issues

No additional discussion.

4e. Issues Policy

The IssueNet software is no longer available; however, old issues stored in VI can still be viewed. The Task Force made the decision that



the issues stored in IssueNet should be preserved and therefore directed the contractor to ensure the data is backed up and preserved outside of IssueNet.

Agenda Item 5: Update on 6.7.1 and 6.8

5a. Progress and Schedule Review

6.7.1 Beta was sent out on 01/25/16. Baker requested beta tester feedback by 02/01/16.

The development of 6.8 is proceeding well with the beta version scheduled for release in mid-April. The development of the majority of the Caltrans tasks is complete. Baker alpha testing will begin within a few weeks. Robert Fulton may be hired as a Baker contractor to assist Baker in their alpha testing tasks.

5b. TAG Update

6.8 beta testing will be scheduled for the last week of April or the first week of May at Michael Baker offices in Pittsburgh, PA. Dean Teal will coordinate the scheduling and logistics of the beta testing effort with Baker and the members of the BrDR Beta TAG. April 30 is a good timeframe for the TAG to meet.

Agenda Item 6: Update on P/S Design Tool and FE Engine Modernization

6a. Finite Element Engine Conversion Status

No additional discussion. This topic was discussed under Agenda Item 2d.

6b. Finite Element Engine Performance

No additional discussion. This topic was discussed under Agenda Item 2d.

6c. P/S Design Tool Update and Demo

Baker presented a demonstration of the User Interface for the Prestressed Design Tool. The demonstration began with the P/S Design Tool installation process (the standard installation installs the software under the AASHTOWare folder.) brdx is registered as the P/S Design Tool.

Baker also provided an overview of the software functionality. The P/S Design Tool will be ready for beta testing in March. Jeff Olsen has assembled a group of potential testers.

The Task Force discussed licensing and software distribution options, i.e. delivery as a separate module with a separate licensing key, delivery as both a 32-bit and 64-bit version, delivery with the core BrD product. The Task Force decided to release the P/S Design tool in 32-bit in the initial release. When complete, the software will be distributed to all member agencies who currently license BrD (both Unlimited and Workstation licensees). Options to allow consultants to license the P/S Design Tool could be considered following the release of phase 2 (full cross-section vs. single girder design).

Agenda Item 7: Modernization

7a. Update

To date, 8 states have officially committed to support the BrDR Modernization project. 10 states have advised that they will not participate in the modernization project.

The Task Force discussed several approaches to moving the project forward including the following.

- Re-scope the project to update the architecture to increase performance but maintain the current user interface.
- Evaluating options to maintain the complete modernization scope using licensing revenue throughout the project to fund the modernization project shortfall and delaying product enhancements scheduled for year three to years four and/or five. (Essentially funding the project with modernization commitments and licensing fees.)



7b. Solicitation Strategy

The Task Force discussed the BrDR Modernization Project, state BrDR licensees, and state commitment status and made the decision to again follow-up with those states who have not yet responded. Task Force members, liaisons and the AASHTO project manager were assigned specific states to contact individually. In the meantime, the contractor will be tasked with developing the three year modernization work plan to Task Force review and comment.

Agenda Item 8: Enhancements

8a. Steel Design Tool Update – TAG Rnd 2 Comments – 2015-BrDR-093

Baker presented a summary of the round two comments received on the Steel Design Tool mockups. Comments were received from

- Brenda Crudele – New York State DOT
- Beckie Curtis – Michigan DOT

Both comments related to adding the ability to specify their own distribution factors to allow the software to support single lane distribution factor for the permit vehicle. This vehicle always controls the design for a simple span steel bridge. The ability to specify a single distribution factor and run their permit truck, will allow the design tool to generate the needed girder sizes.

8b. Steel Design Tool Estimate Update – 2015-BrDR-095

Baker presented an overview and estimate for a one phase approach to developing the steel design tool. The estimate supports plate girders. Rolled beams are not included. Funding for this enhancement is not likely to be available in the foreseeable future. The enhancement will be put on hold for now and will be revisited as a high priority enhancement in the future.

8c. FP8 – Curved Girder Part 3 – Move Connectors up under bridge

Baker has completed work on this enhancement; however, funding for this enhancement was not

included in the 6.8 contract mod #2 which was recently submitted and approved by SCOJD.

8d. Rating Tool – Estimate to add GFS LFR-only

Baker presented the estimate to support this enhancement. This enhancement was requested by the Illinois DOT who is interested in funding this enhancement via service units. The Task Force approved supporting this development work if Illinois is able to secure funding to move it forward.

8e. Caltrans JIRA BRDRSUP-822 – MCB Integral Substructure

The Task Force discussed Vinac's request to use the "transformed" moment of inertia of bent/pier instead of the "non-transformed" moment of inertia to support the calculation of rating factors that are more consistent with the rating factors being calculated by Caltrans' in-house software.

Agenda Item 9: Miscellaneous Topics

No discussion.

Agenda Item 10: Third Party Issues

10a. Long-term Strategy

Midas software requested an audience with the BrDR Task Force. The representatives provided an overview of their thoughts followed by a Task Force discussion.

Agenda Item 11: User Group

11a. Summary Minutes from November Meeting

The summary minutes for the November BrDR Task Force meeting in St. Petersburg, FL were provided but have not been reviewed by the Task Force. Judy Skeen posted the summary minutes on the SharePoint discussion area for Task Force review and comment by 02/05/16.



11b. Non-Voting Users' Discussion Minutes Responses

During the 2015 RADBUG, the consultants met separately and developed a document summarizing their discussions. The document includes both comments and questions/concerns for Task Force review and feedback.

At the Task Force's direction, Baker developed responses to the questions posed for Task Force review and comment. Judy Skeen posted the questions and proposed responses on the SharePoint discussion area for Task Force review and comment by 02/04/16.

Agenda Item 12: Work Plans

12a. 6.8 Project Work Plan Amendment 3

This topic was discussed under Agenda Items 8c and 8e.

12b. FY2017 MSE Work Plan Amendment 1 Draft

The Task Force reviewed and commented on the draft FY2017 MSE Work Plan.

12c. Planning Estimates

Dean indicated the planning estimates have been posted to the Sharepoint site and the document is self-explanatory.

12d. Future Work Plans

No additional discussion.

Agenda Item 13: FHWA Update

Tom Saad provided the FHWA updates to the Task Force.

Preliminary Inventory Data Submittal for the National Tunnel Inventory (NTI):

The initial effort to establish the NTI resulted in 473 highway tunnels being reported by 37 State DOTs, DC, Puerto Rico and 4 Federal agencies. CA and the National Park Service currently share the title of having the most tunnels; 64 each. Thirteen States

reported no highway tunnels. FHWA has begun to develop a NHI course that will provide instruction for load rating tunnel components as required by the NTIS.

FAST Act:

On December 3, 2015, both the House of Representatives and the Senate passed the Fixing America's Surface Transportation (FAST) Act, which reauthorizes Federal surface transportation programs for five fiscal years (FY 2016-2021). The President signed the FAST Act into law the following day. Consequently, FHWA and its programs will continue normal operations without interruption. In the coming days and weeks FHWA will begin implementation of the newly-enacted law. The FHWA is studying all facets of the law to develop an approach for implementing it; it will take several months to establish guidance and policy on the specific provisions in the law.

FHWA Load Rating Webinars:

On February 24th, FHWA will host the 18th webinar in a series to advance best practices and procedures in bridge load rating. The subject for this webinar is 'Load Rating and Posting for State Specific Legal Loads'. Representatives from the Iowa and Florida DOTs will provide lessons learned on managing increases in legal and permit loads in the load rating process. All of the previous webinars have been recorded and are available for you to view at the following website:

<http://www.fhwa.dot.gov/bridge/loadrating/>

Load Rating Training:

A number of State DOTs are hosting the National Highway Institute course 130092, *Load and Resistance Factor Rating of Highway Bridges*, this winter. The Texas DOT hosted the training in January, and there may be an opportunity to sign-up for seats in sessions to be delivered in Florida, Kentucky and Virginia. Please reference the NHI website for training availability.



Agenda Item 14: Five Year Projection for BrDR

Judy Skeen handed out and discussed the simplified BrDR Five Year Projection spreadsheet, focusing on BrDR Modernization Project commitments to date and alternate financing options to fully fund the project.

Agenda Item 15: Licensing Issues

15a. University Licenses

Judy Skeen discussed with Angel Williams, AASHTOWare Business Manager, at length the Task Force's desire to allow universities to obtain the BrDR software free of charge for the purpose of research when doing research for a member agency that licenses the Unlimited license of the requested product. Angel has discussed this request (i.e. to allow universities working for member agencies who license the AASHTOWare products to secure access to our proprietary systems at no cost) with our attorney as this has been and continues to be a hot subject in the areas of Pavement (with the Pavement ME software product) and Safety Analyst. Our attorney can support reduced license fees (as we implemented in the FY16 catalog, to allow universities to license the software for DOT research at the special consultant option reduced rate); however, he is adamantly opposed to giving our software away to the academic community given they are not AASHTO members and they have not contributed any funding at all to the development, maintenance and support of the products.

The biggest concern is allowing the intellectual property out into the university environment completely free of charge. With both Pavement ME and Safety Analyst universities must purchase the workstation versions of these products for the purposes of conducting research; UNLESS, the research-sponsoring DOT allows the university to use their unlimited software license on the DOT server(s). This is however, not an option for the BrDR product

given the fact that the software is not server-based.

15b. International Licenses

No discussion. This agenda item will be removed from future meeting agendas.

15c. Special Consultant Option Licensees

The Task Force discussed the issue with consultants using the Special Consultant Option license for bridges outside of the state that approved them for the Special Consultant Option license under their Unlimited BrDR license. The Task Force asked Baker to investigate options to 'mark' the Special Consultant Option software to designate the sponsoring state.

15d. Third-Party Add-Ons

Various topics regarding improving the process for third-party developers were discussed.

15e. Future of Bundling Modules (Post-Modernization)

Todd Thompson presented his analysis of potential modular licensing options for breaking up BrDR licenses by structure type / functionality. The licensing structure presented was based on the annual estimated cost of maintaining specific structure types and the associated number of licensees needed to support the annual costs. Not knowing how many states would be interested in licensing by structure type complicates the analysis of determining an appropriate fee structure.

The Prestressed Design Tool could be licensed separately but will also be included as a component of member agency BrD licenses. However, the first release will also be included in BrR.

15f. End User Communique on Licensing Fees

No change in license fees at this time.



Agenda Item 16: SCOJD Submission

16a. Review and Approve FY2017 Catalog Language

The Task Force reviewed and made minor changes to the proposed BrDR language for the FY2017 AASHTOWare Catalog.

16b. SCOJD Submission

Product Strategic Directions

Suggestions for improving the AASHTOWare Program

The Task Force was asked to contribute ideas on suggestions to improve the AASHTOWare program.

Agenda Item 17: 2016 BrDR Quality Assurance Report

The Task Force reviewed the QA report.

Agenda Item 18: T&AA Update

The Task Force discussed the draft 2015 BrDR Quality Assurance Report. The contractor was directed to respond to the findings, to include providing additional information on the existence and location of documentation that was not located, as applicable.

Agenda Item 19: Marketing Activities

19a. Marketing General

The Task Force discussed recent and upcoming marketing presentations during the joint meeting. The Task Force is interested in pursuing marketing opportunities with the AASHTOWare marketing expert.

- Look for opportunities to tie education-related outreach to marketing efforts – webinars, YouTube videos? Consider developing concise videos demonstrating use of BrR with MBE load rating examples for use by FHWA in NHI load rating course.
- Look for opportunities to market to the front office managers showing them how we can make their design/rating process

better, fast, more efficient – in other words, how we can save them time and resources along with making them more efficient.

- TXDOT recently hosted NHI training and it may be an opportunity to market BrR and BrD as they may be reassessing load rating program needs.

Agenda Item 20: Review Action Item list from this meeting

Judy Skeen read the action items recorded during the meeting for the information of attendees.

Agenda Item 21: Task Force Executive Session (as needed)

Task Force held a closed door Executive Session to review financial report.

The meeting adjourned Thursday, January 28 at 2:30pm.

