

**Summary Minutes Of The
AASHTOWare Bridge Design-Rating (BrDR) Task Force Meeting
August 7, 2020
New Orleans, LA (Virtual)**

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

Date: Friday, August 7, 2020

Participants:

AASHTO	Judy Tarwater	AASHTO	Project Manager
SCOA	Tim Armbrecht	SCOA	SCOA Liaison
T&AA	Will Holmes	T&AA	T&AA Rep
BrDR Task Force	Todd Thompson	South Dakota DOT	Chair
	Mark Bucci	Louisiana DOTD	Bridge Rating (BrD)
	Michael Johnson	Idaho TD	Bridge Rating (BrR)
	Jeff Ruby	Kansas DOT	Bridge Design (BrD)
	Tom Saad	FHWA	FHWA Liaison
BrDR Contractor	Vinacs Vinayagamoorthy	California DOT	Bridge Rating (BrR)
	Herman Lee	ProMiles	BrDR Contractor
	Geoff Trees	ProMiles	BrDR Contractor
BrM Task Force	Tim Pilcher	ProMiles	BrDR Contractor
	Beckie Curtis	Michigan DOT	Bridge Management

Notes Taker: Judy Tarwater and Mike Johnson.

Agenda Item 0: Review Agenda/Assign Minutes

Recorder

Todd Thompson opened the meeting at 10:00am. The agenda was reviewed and no additional agenda items were added at this time.

Agenda Item 1: Prior Business

1a. Review June Meeting Minutes

Minutes from the June 25 – 26, 2020 Virtual Task Force Meeting (Whitefish, MT) were reviewed. The meeting minutes were approved as-is.

1b. Review Action Items

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

Agenda Item 2: User Group

2a. Summary Minutes from the June Task Force Meeting

The summary minutes for the June BrDR Task Force Virtual (Whitefish, MT) were provided. Judy Tarwater will post these on the SharePoint site for Task Force review and comment. Once in final form, the summary minutes will be forwarded to David Schroeder (RADBUG Secretary) for posting on the RADBUG website.

2b. 2020 RADBUG Survey Results / Follow-up

The Survey was open to the BrDR community July 1 – 17, 2020. 135 responses were received, 70 member state agencies (from 29 different member states), 9 local agencies, 0 U.S. agencies, and 56 consultants.

Six (6) responses from	New York
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Five (5) responses from	Massachusetts
Three (3) responses from	Arizona, Texas
Two (2) responses from	Alabama, Colorado, Connecticut, Illinois, Indiana, Kansas, Manitoba, Michigan, Mississippi, Montana, Nevada, New Jersey, Oklahoma, Rhode Island, South Dakota, Utah
One (1) response from	California, Florida, Idaho, Iowa, Louisiana, Minnesota, Nebraska, New Mexico, North Dakota, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, West Virginia, Wisconsin, Wyoming

Thirteen (13) BrDR Survey respondents indicated that they wished to be contacted by the Task Force.

2c. User Priorities / Strategic Directions

The Task Force discussed the need to develop a long term strategic plan to document planned enhancement strategies moving forward. The following items were discussed as an initial starting point.

- LRFR Rating Tool
- Corrugated Metal Deck Culverts
- Timber bridges including new AASHTO engine
- Steel Design
- PS-I girder Design
- Curve Steel Bridges with Hinges
- Curve MCB girders with hinges and integral with substructure
- Accommodating Multiple post tensioned duct MCB girder bridges

- Spliced PS girder bridges (staged construction with temp support)
- RC/PS/Steel Bent caps
- Validation Suite for Member Agencies
- Floor Beams (Steel and RC) with hinges
- Precast, reinforce concrete girders that are simple for Dead and Continuous for Live Load. [becoming more popular with ABC methodology]
- Comprehensive REPORT tool
- Removing ALL partial functionalities (or Missed Functions)

In addition to the enhancements, the Task Force discussed the importance of program improvements that will limit technical debt, how to release bug fixes, and progressing in the cloud.

In addition, the Task Force discussed promoting member agency funding support for specific enhancements with the Task Force possibly filling funding gaps to help move the enhancement forward sooner than later.

2d. Logistics – Posting RADBUD Webinar Videos and PowerPoint presentation (in pdf format)

Judy Tarwater walked through the RADBUD information posted on SharePoint.

- **PowerPoint presentations in pdf format** – to be posted on aashtowarebridge.org and aashtobr.org
- **RADBUD Webinar Videos** – The Training Session 1, Training Session 2, and Business Meeting videos will not be posted on the website/YouTube channel for public consumption.
- **Webinar Attendee Reports**

All of the RADBUD webinar videos are all posted on SharePoint for Task Force/ProMiles



consumption; However, only the following videos will be posted on the ProMiles YouTube channel (with a link from the aashtowarebridge.org website).

- Opening Session **webinar video**
- User Community Technical Presentations **webinar video**
- ProMiles Technical Presentations **webinar video**
- RADBUG Non-Member Discussion **webinar video**
- Introduction to AASHTOWare BrDR (amended) **standalone video**
- Training Session 1 (example A1) **standalone video**
- Training Session 2 (example A7) **standalone video**

The RADBUG PowerPoint Presentation pdfs will be forwarded to the RADBUG officers for posting on the aashtbr.org website.

2e. Other RADBUG Follow-up Actions?

The Task Force discussed the fact that the RADBUG sessions went very well in the virtual environment.

Agenda Item 3: Modernization

3a. Project Update and Schedule Review

ProMiles reported that we are still on schedule to release BrDR 7.0 in December.

A call will be set up with the Beta TAG in the next couple of weeks to keep things moving forward. The call will focus on ensuring the beta testers have what they need to facilitate their testing efforts. The biggest risk remains with the beta testing and problem resolution process.

3b. TAG Update

Mike Johnson suggested adding resources to mitigate potential issues relating to the testing effort.

3c. Beta Testing Update

7.0 Beta 6 testing:	6/2 – 7/17
Number of Beta testers:	38
Number of issues submitted:	24 issues
Number of checklists returned:	8
checklists from 5 testers	

3d. Supplemental Beta Testing

Supplemental Beta Testing

- Focus on the biggest concern that new or modified models produce incorrect results
- Scope is to manually enter agency's 6.8.4 bridges side by side into 7.0 windows, analyze and compare with 6.8.4 results
- Increase the breadth of similar Alpha testing with more variety of configurations
- Bridges will be collected from Beta testers and will be added to the regression testing database since results have been confirmed with 6.8.4

Agenda Item 4: Enhancements

4a. BrDR API Expiration Mechanism – AI 2020-BrDR-034

Promiles presented an estimate to move the license mechanism (formally referred to as the "license key" mechanism) from the User Interface into the BrDR API. This is needed to prevent use by consumers of the API after the license has expired.

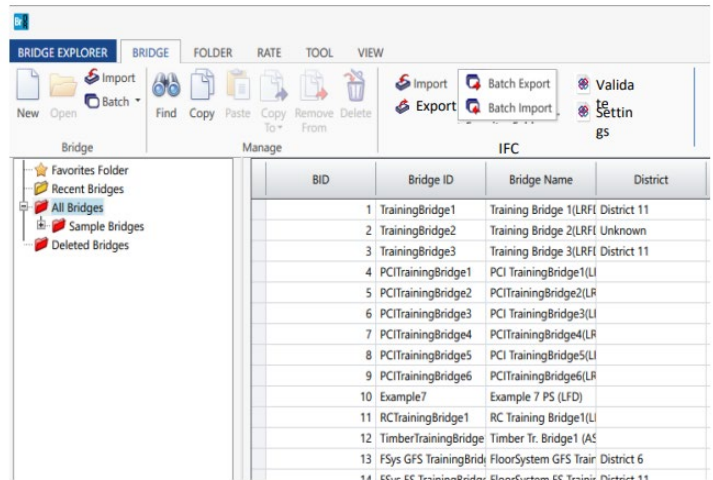
This enhancement will be included in the BrDR 7.1 work plan.



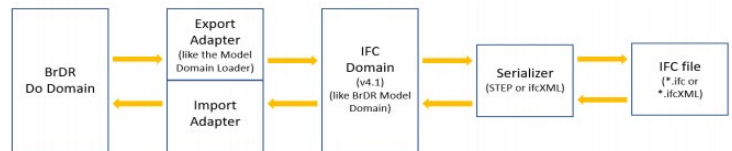
4b. IFC Converter Tool – AI 2020-BrDR-038

ProMiles presented an estimate to support the incorporation of the IFC Converter Tool into the BrDR API.

The IFC Converter Tool was developed based on the BrDR 6.8.2 database and supporting IFC 4.1. The converter tool can only be used for exporting BrDR bridge models to IFC format. This estimate is for IFC API implementation with import, export, and full BrDR user interface integration. The converter tool directly accesses the BrDR database tables to retrieve bridge data. This approach makes the converter tool hard to maintain when the BrDR database is updated. The converter tool should be incorporated into the BrDR API which allows better data compatibility and uniformity with the data structure of the IFC format. The BrDR API also protects the integrity of the bridge data in the database. This estimate includes populating the IFC 4.1 domain through the BrDR 7.0 API and fully integrating the converter tool into the BrDR 7.0 user interface.



BID	Bridge ID	Bridge Name	District
1	TrainingBridge1	Training Bridge 1(LRFI	District 11
2	TrainingBridge2	Training Bridge 2(LRFI	Unknown
3	TrainingBridge3	Training Bridge 3(LRFI	District 11
4	PCITrainingBridge1	PCI TrainingBridge1(LI	
5	PCITrainingBridge2	PCI TrainingBridge2(LR	
6	PCITrainingBridge3	PCI TrainingBridge3(LI	
7	PCITrainingBridge4	PCI TrainingBridge4(LR	
8	PCITrainingBridge5	PCI TrainingBridge5(LI	
9	PCITrainingBridge6	PCI TrainingBridge6(LR	
10	Example7	Example 7 PS (LFD)	
11	RCTrainingBridge1	RC Training Bridge1(LI	
12	TimberTrainingBridge	Timber Tr. Bridge1 (AS	
13	FSys GFS TrainingBrid	FloorSystem GFS Train	District 6
14	EC-EE TrainingBrid	ClassSystem EE Train	District 11



This enhancement will be included in the BrDR 7.1 work plan.

Agenda Item 5: Work Plans

5a. 7.1 Work Plan Discussion

The proposed 7.1 work plan has 2 releases. The 7.1 release will be targeted for June 2021 and a service pack for December 2021 release. The schedule of this work plan allows the implementation of PS Design Tool Phase 2 to start 2 months before the Steel Design Tool.

BrDR 7.1 – Target June 2021 release, includes the following enhancements and 7.0 bug fixes

- Task 4 - FP 38 Allow user to specify custom file paths for various output
- Task 5 - FP 36 BrM Web Service Integration
- Task 6 - FP 3 BRDRSUP-1619 Schedule based RC I beam with post tensioning
- Task 7 - FP 4 BRDRSUP-1620 Phi factor for moment MCB PT



- Task 8 - FP 5 BRDRSUP-1621 LLDF for one or two cell box girder bridges
- Task 9 - FP 6 BRDRSUP-1622 Limiting lever rule on single lane
- Task 10 - FP 7 BRDRSUP-1623 Limit applicability range values to lever rule
- Task 11 - FP 8 BRDRSUP-938 User-defined load distribution (DC2) to MCB webs
- Task 12 - FP 9 BRDRSUP-1624 Establish LLDF using full box case
- Task 13 - FP 10 BRDRSUP-936 Difference in skew between adjacent supports override
- Task 14 - FP 11 BRDRSUP-1627 Range of applicability for slabs
- Task 15 - FP 12 BRDRSUP-1628 Report writer for girder-floorbeam-stringer systems
- Task 37 - FP 35 BRDRSUP-553 3D analysis for superstructure with hinges
- Task 38 - FP 37 Load Rating Tool's Permit Analysis Settings
- Task 41 - Support Oracle Container database
- Task 46 - API License Mechanism

BrDR 7.1.1 – Target December 2021 release, includes the following enhancements and 7.0/7.1 bug fixes

- Task 1 - FP 1 Prestressed Concrete Design Tool Phase 2
- Task 2 - FP 2 Steel Design Tool
- Task 44 - IFC Implementation - BrDR API and UI Integration (Import and Export)

ProMiles presented the draft scope for the BrDR 7.1 work plan. The work plan has been revised from the previous version to include automated testing tasks.

Agenda Item 6: Review Action Item list from this meeting

Judy Tarwater read the action items recorded during the meeting.

Agenda Item 7: Task Force Executive Session (as needed)

Meeting was adjourned at 1:36pm.

