

**Summary Minutes Of The
AASHTOWare Bridge Design-Rating (BrDR) Task Force Meeting
June 12 - 13, 2019
Traverse City, MI**

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

Date: Wednesday, June 12, 2019

Participants:

AASHTO	Judy Tarwater	AASHTO	Project Manager
SCOA	Tim Armbrecht	SCOA	SCOA Liaison
T&AA	Will Holmes	T&AA	T&AA Liaison
BrDR Task Force	Todd Thompson	South Dakota DOT	Chair
	Mark Bucci	Louisiana DOTD	Bridge Rating (BrD)
	Joshua Dietsche	Wisconsin DOT	Bridge Rating (BrR)
	Michael Johnson	Idaho TD	Bridge Rating (BrR)
	Dean Teal	Kansas DOT	Bridge Design (BrD)
	Tom Saad	FHWA	FHWA Liaison
	Vinacs Vinayagamoorthy	California DOT	Bridge Rating (BrR)
BrDR Contractor	Herman Lee	Michael Baker, International	BrDR Contractor
	Geoff Trees	Michael Baker, International	BrDR Contractor
Guests	George Huang	California DOT	RADBUG President

Notes Taker: Judy Tarwater and Mark Bucci

Agenda Item 0: Review Agenda/Assign Minutes

Recorder

Todd Thompson opened the meeting at 10:10am. The agenda was reviewed and three additional topics were added:

Agenda Item 7e: Database Changes for T-18 Ballot Items

Agenda Item 17b: BrDR features bullet points to assist users in RFP preparation

Agenda Item 17c: T-18 / T-19 presentations at COBS

The Task Force scheduled a conference call for 10:00am EDT on Thursday, June 13 with a third party developer to discuss the implementation of their culvert engine.

Agenda Item 1: Prior Business

1a. Review April Meeting Minutes

Minutes from the April 2 - 3, 2019 Task Force Meeting in Alexandria, VA were reviewed and approved as-is.

The Task Force discussed member liaison assignments and made the decision to add the following liaison responsibilities:

Mike Johnson – Beta Testing TAG

Mark Bucci – Design TAG

Vinacs Vinayagamoorthy - Reports TAG

1b. Review Action Items

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



Agenda Item 2: Financial Overview and Work Plan Summary

2a. Update of the FY2019 MSE Work Plan

Baker provided an update on the FY2019 MSE work plan as of 04/30/19. 2b. Update on 7.0 Project Work Plan (June 2019)

Baker provided an update on the Modernization Project work plan as of 04/30/19. To recap:

- Phase 1 – modernized engine
- Phase 2 – modernized engine with modernized user interface (UI)
- Phase 3 – modernized engine, UI, and enhancements

2c. Update on 7.1 Project Work Plan (June 2020)

The 7.1 Project Work Plan was discussed.

Agenda Item 3: Update on BrDR Licenses (FY2019)

3a. Product Report

Judy Tarwater presented a product license summary report developed from the Excel output from AASHTOWare Manager. The report included licenses ordered as of 05/28/19.

Item	FY17	FY18	FY19	Sponsoring Agency
Bridge Design - 120-Day Evaluation License	12	5	2	
Bridge Design Developer License	2	2	1	
Bridge Design Educational License	7	11	12	
Bridge Design Single Workstation Option	4	3	4	
Bridge Design Special Consultant Option	34	39	31	
Bridge Design Unlimited Option (Members)	15	16	16	
Bridge Design Unlimited Option (Non-Members)	N/A	N/A	0	
Bridge Design/Rating Service Units	94	94	38	

Item	FY17	FY18	FY19	Sponsoring Agency
Bridge Rating - 120-Day Evaluation License	23	16	6	
Bridge Rating Agency Sponsored Consultant Licenses	3	3	4	ILDOT, MIDOT, OHDOT, VADOT
Bridge Rating Developer License	5	6	7	
Bridge Rating Educational License	7	11	13	
Bridge Rating Single Workstation Option	25	59	26	
Bridge Rating Special Consultant Option	348	438	358	
Bridge Rating Unlimited Option (Members)	39	41	35	
Bridge Rating Unlimited Option (Non-Members)	N/A	N/A	12	
Sponsored Consultant Licenses (Bridge Rating) - No Fee	59	139	119	ILDOT
Sponsored Consultant Licenses (Bridge Rating) - No Fee	87	107	94	MIDOT
Sponsored Consultant Licenses (Bridge Rating) - No Fee			99	OHDOT
Sponsored Consultant Licenses (Bridge Rating) - No Fee	85	84	78	VADOT
PGSuper Professional		2	3	KDOT, MassDOT, ORDOT
BridgeLink Professional		1	2	ITD, MSDOT

3b. Service Unit Report

Baker presented the service unit summary report. 38 new service units have been purchased in FY2019.

3c. Evaluation Software

The current summary of BrDR software evaluations was reviewed.



Agenda Item 4: Support and Maintenance Report

4a. Incident and Report Summary

Baker presented the Defect History Report through release 6.8.3. Fifteen (15) new defects have been added since the Task Force meeting in April 2019. The total number of defects reported were 2574. Currently, 2359 defects have been resolved; 94 defects are not reproducible; 5 defects need more information; and 116 defects are unresolved (two of which are critical issues, a decrease of two since the April Task Force meeting).

4b. Progress on Bug Resolution

Baker reviewed Maintenance Progress reports for the 6.8.4 release as of 06/03/19. Out of 202 total reported incidences, 158 have been resolved and 44 are assigned for resolution. All 44 currently unresolved incidences are expected to be resolved before the production version of the software is delivered.

Baker reviewed Maintenance Progress reports for the 7.1 release as of 06/03/19. Out of 106 total reported incidences, 34 have been resolved and 72 are assigned for resolution.

4c. Enhancement List Update

Baker presented an update on the Enhancement List.

Six (6) additional enhancements have been added to the TAG Enhancement List since the last Task Force meeting.

Useability	BRDR-2149	Displaying Advanced Rating Results Summary Report
Useability	BRDR-2154	Truss Analysis modules should not be separate
Output	BRDR-2155	Expansion of Tabular Results
Useability	BRDR-2156	BW-MT-CN-02 Split Modulus of Rupture between Std/LRFD like Elasticity

Useability	BRDR-2159	Add ability to batch process Analysis Engine change for Corrugated Metal and Timber Decks
Library	BRDR-2161	M270 Grade 70W minimum tensile strength in library

4d. Maintenance Issues

Baker provided an overview of BRDRSUP-1361 - BrR not producing Service I Rating Factors (Reported by CTDOT / Related Version 6.8.1). BrR is not computing and reporting rating factors for the Service I rating level for mild or prestressed reinforcement of prestressed girders. The program is calculating a capacity to demand ratio in the spec check. BRDUSUP-1361 included two examples: 1) Simple Span Prestressed Concrete: I-Girder Bridge Evaluation of an Interior Girder (LRFR only), and 2) Reinforced Concrete T-Beam Bridge: Evaluation of an Interior Beam. The second example is correct; however, the first example is incorrect. It should be noted that rating factors are addressed in the same manner in later versions of BrDR.

Agenda Item 5: Options for Clean-up and Ongoing Maintenance of the BrDR

Enhancement List

Following considerable discussion, the Task Force made the decision to recommend to the User Group that the current BrDR enhancement list be sunset, excluding the enhancements for which cost estimates have been developed. The current enhancement list will be archived and users will be directed to re-submit enhancement recommendations for consideration.

Going forward, the Task Force will implement a system for ensuring the enhancement list doesn't grow to an un-manageable list going forward. User feedback will be solicited to seek suggestions on how to best manage the enhancement list going forward. The Task Force



discussed setting a threshold duration for items to remain on list. The Task Force also discussed adding an input field to rank importance.

The recommendation will be communicated during Todd Thompson's RADBUG presentation.

Agenda Item 6: Enhancements

6a. Enhance Fatigue Life Evaluations

Baker identified some of the comments made by the Caltrans TAG as "enhancements". The Caltrans TAG did not participate in the discussion the last time the Fatigue Life Estimation issue was discussed; however, the Caltrans TAG noted that three of the four fatigue life estimations listed in the MBE were not incorporated when this feature was added to the software. Some of the issues were missed during the review and development process when this was incorporated.

Fatigue Load Factor changes which were introduced in the 2017 and 2018 T-18 ballot items will be incorporated into the software via ongoing spec updates. Baker presented the estimate for the enhancement for Fatigue Life Evaluations to allow the user to select any or all of the fatigue life evaluations in the MBE.

Agenda Item 7: Modernization

7a. Project Update

Beta 3 testing was conducted last week. The patch for this release will be provided to the beta TAG on Monday, June 17. The patch can be installed on top of the current installation. Substructures, library explorer and data input/export have not yet been completed. Baker advised that they are confident that the modernized release will be completed and available for delivery by the end of August. Previously the Task Force discussed releasing 6.8.4 prior to the release of 7.0 to allow users to

have an opportunity to provide feedback to Baker. However, the Task Force made the decision to hold off on the early release of 6.8.4 until additional information is available on the 7.0 delivery schedule.

It should be noted that only 6.8.4 can be used to compare the results produced by the Legacy engine and the Modernized engine to ensure the accuracy of the modernized engine, since only the 6.8.4 version has the Modernized engine and Legacy engine. Any fixes made to the 6.8.4 modernized engine will be incorporated into the 7.0 version.

7b. 2019 Q2 Status Report

The 2019 Q2 Modernization Project status reporting ends July 31, 2019; therefore, Baker will develop the draft BrDR Modernization Project 2019 Q2 Status Report and forward to Judy Tarwater and Todd Thompson by the end of June.

7c. TAG Update

Dean Teal reported that five (5) BrDR Testing TAG members – Dean Teal (KSDOT), Jeff Ruby (KSDOT), Ruben Boehler (ILDOT), Matt Luger (NDDOT), and Don Tempinson (MIDOT) - conducted the second round of 6.8.4 / 7.0 Beta Testing June 4 – 6, 2019 in Pittsburgh.

Dean also reported that a new load rater from Rhode Island has volunteered to be added to the Testing TAG.

The Task Force made the decision to schedule an additional Testing TAG meeting in South Lake Tahoe, CA following the RADBUG meeting (August 1 – 2, 2019). Dean Teal will reach out to the TAG members to check their willingness and ability to participate. If testing TAG members are able to commit, Dean will work with Judy



Tarwater to get the testing meeting logistics set up with the hotel.

7d. 6.8.4 and 7.0 Beta Testing

- i.) Hosted environment – User Interests
Dean Teal provided feedback from the BrDR Testing TAG members.

- ii.) Hosted environment – Level of effort
The level of effort was provided for 4 Virtual Machine options

7e. Database Changes for the T-18 Ballot Items

The EV and Culvert ballot items are not expected to be approved by COBS. The Task Force decided to wait to make decisions on which database changes should be incorporated into BrDR based on the outcome of ballot item voting at COBS.

Agenda Item 8: AASHTOWare BrDR and Eriksson Culvert – Conference Call

The Task Force held a conference call with a third party developer interested in incorporating their culvert engine into BrDR.

Agenda Item 9: Miscellaneous Topics

9a. 7.0 License Management Monthly Fee

Example

Baker presented information on their research and recommended a solution for license activation and management going forward (beginning with version 7.0). The key end user BrDR licensing strategy complaint from consultant licensees is that BrDR cannot be used in a virtual environment. The cloud-controlled network floating environment would alleviate their need for a virtual environment. In addition, in the cloud-controlled network floating environment, license keys will no longer have to be de-activated on one workstation to move the license key to another workstation.

The Task Force supports moving forward with the cloud-controlled network floating licensing strategy for BrDR and directed Baker to implement the licensing strategy in BrDR 7.0.

9b. Using AD Groups for Account Setup/Control

The Task Force was recently contacted by the Colorado DOT to request information on the Task Force's strategy to move forward with the ability to use Active Directory Groups for account setup/control to support the implementation and use of BrDR. The Task Force is interested in moving forward with a BrDR Active Directory initiative. These activities will be tracked under existing Action Item 2019-BrDR-001, Baker to provide an estimate by the July 2019 RADBUG meeting to incorporate a password scheme into BrDR to support Active Directory Domain Management Services for the windows domain network.

9c. TPF-5(372) Software Advisory Group Activities

Baker provided an overview of the 04/23/19 BIM for Bridges and Structures - Software Advisory Group Meeting

- IFC 4.2 Status
 - The IFC 4.2 candidate versions are on technical.buildingsmart.org/standards/ifc/ifc-schema-specifications/
 - IFC 4.1 is an official standard which has alignment, change logs, etc.
 - IFC 4.2: it has inputs from the US, Germany, and China; it contains deep foundations, facilities, etc. for bridges.
 - IFC 4.2 will be released by the end of 2019.
- Goals and timelines
 - Develop the US Model View Definitions (MVD) based on IFC 4.2



- 20 states + FHWA will join the pilot projects to test it
- Software vendors implement the MVD in year 3 (2021) and the software got certified in year 5 (2023).
- The pooled fund study uses the software first strategy: software implement the candidate version of IFC and HDR can start beta testing earlier.
- Software vendor participation
 - Implementation expectation:
 - Timeline: from year 1 (2019) to year 3 (2021)
 - Scope: design → fabrication
 - Bridge types will be defined by HDR.
 - **Actionable items: Define gaps of implementing IFC**
 - **Roadblocks: something the software can NOT do**
 - **Obstacles: something the software can do but need help.**
 - **Better identify those before the COBS meeting (at the end of June). There will be a software vendor workshop in the meeting.**
 - Tech support for implementing IFC/MVD: HDR project team, AEC3, and buildingSMART (bSi) ISG/MSG teams.
 - Open Design Alliance has IFC SDK.
 - HDR will define the work scope: what kind of bridges need to be supported.
 - HDR encourages software vendors to be a member of the buildingSMART so they can have a representative in the buildingSMART ISG/MSG team.
 - Process: Design → Fabrication. Two tiers
 - Design data to fabricator (shop drawing)
 - Design data to CNC machine directly
 - Timeline: see graphic
 - COBS meeting: June 24-27, 2019 in Montgomery, Alabama. Software vendor workshop
 - Future meeting:
 - For year 1, quarterly meetings
 - For year 2 to 5: meet more frequently
 - Use the Microsoft Team



Agenda Item 10: Third-Party Issues

10a. Long-term Strategy

In terms of a long-term strategy for BrDR collaboration with third party developers, discussions have been largely tabled over the past few years due to ongoing modernization activities. As we are nearing the first release of the modernized product, the Task Force agrees that we should have a more substantial discussion on how to proceed going forward.

A Third Party Developer session (Getting Started with the Modernized System) will be held on Tuesday afternoon during the RADBUG meeting. The Task Force discussed the fact that it appears that many of the BrDR third party developers are working on export facilities to export data from BrDR; however, many third party developers do not seem to have a desire to allow the exchange of data from their systems to BrDR.

Will Holmes suggested that we consider adding a clause to the developer license agreement to ensure they are bound to support two way data exchange with their software. The Task Force recognizes that for certain applications, such as permit routing applications, one way data transfer is acceptable; however, for structure design and rating applications, two way data exchange capabilities is the preferred solution.

Agenda Item 11: User Group

11a. Summary Minutes from the April Meeting

The summary minutes for the April BrDR Task Force meeting in Alexandria, VA 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 (Secretary RADBUD) for posting on the RADBUD website.

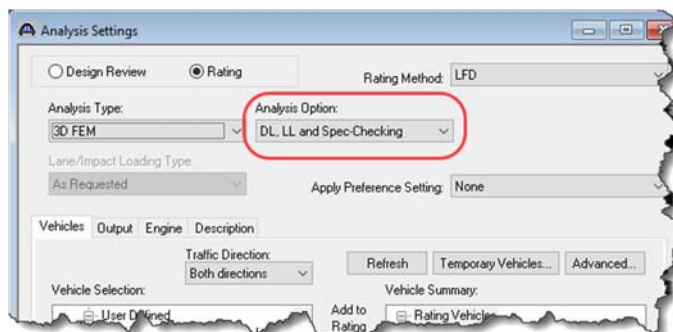
11b. 2018 RADBUD Meeting Follow-up Actions – for presentation at the 2019 RADBUD

Baker provided the Task Force with proposed responses to the consultant community’s questions raised during the 2018 RADBUD meeting. The Task Force made the decision to convey the 2018 questions and answers to the RADBUD attendees during the Consultant session at the 2019 RADBUD.

- **Possibility to move the expiration notice to first popup prior to expiration (maybe once at start of June)** Done. License expiration notice moved to start of June.
- **Email to consultants with unlimited licenses to describe in detail how that’s supposed to work**
We will need to first find out what needs to be described in detail and decide on how to best address them (AASHTOWare Catalog, AASHTOWare Store, Support website, Software installer/release documentation, Help/FAQ, Email).

- **3D analysis of curved girders: disappointed in how software doesn’t clean up temp files (filled out 1TB drive with temp files running multiple files) %TEMP%**

The files stored in the Temp folder are 3D analysis results for reusing by the 3D FEM Analysis Option feature. An enhancement for allowing user to specify custom file paths for Analysis cachefiles, Report XSL files and Bridge backup files has been added to the BrDR 7.1 work plan.



- **Integral pickups: not on current list of enhancements (most states don’t care)**
Not certain what this is referring to. If this is an enhancement request, the user should consult with the agency and the agency can submit an enhancement request in JIRA.
- **When is substructure going to be finished?**
Vinacs confirmed that the question is for the BrR software. We are aware that Louisiana and Georgia would like to have the capability for rating substructures. The Task Force will need to prioritize this together with other enhancements to provide the most benefit for the agencies with the available resources.
- **Culverts: fillets on exterior wall corners not interior. Only one size of fillet, when multiple can occur. H dimension in bent bar from center of bar to center of bar instead of exterior/exterior. Bars in fillets not able to be input. Soils below floor not strong**

enough, floor extended beyond box to get soil pressure within allowables.

The user should consult with the agency and the agency can submit an enhancement request in JIRA.

- **TRB version of CANDE, why can't we work with TRB to get it as an option to use CANDE as an engine.**

The Task Force has discussed the needs to expand to other culvert types and enhance the existing analysis capabilities. All options, including incorporating the CANDE software, are on the table for evaluations.

- **Tutorials have gotten more complex and pictures are not being included. Need more photos to break that hard barrier of communication. Simplifies it. Can even just use a real plan sheet, no need to recreate an image.**

Caltrans made available of 17 as-built plans and the corresponding BrDR models. They are now available in the Tutorials section of the BrDR Technical Support website

<https://aashto.mbakercorp.com/Pages/Trainimg.aspx>. Note that the as-built plans and BrDR models are provided as examples and are not intended to replace other agency policies and practices nor to replace engineering judgement.

- **Is Service I going to be added as a rating calculation? Concrete Structures need Service I factors for Permit/Legal. MBE stops short, shows a Capacity and a Demand. LRFR. ConnDOT has brought this up.**

This is BRDRSUP-1361 (BrR not producing Service I Rating Factors). It is marked as a maintenance request to be reviewed by the Task Force/TAG.

- **Kicker girders / doglegs: Allow definition of line girder and tie that to a point load on the main structure.**

This is BRDRSUP-612 (Dog-legged framing plan). It is marked as an enhancement request.

- **Allow adjustment of Member Description text window size**

This has been discussed by the TAG. We would need a generic solution for adding notes to different components in the model. For example, adding notes for member loads calculation.

- **Ability to select multiple locations to add vehicles when selecting which vehicles in the rating window**



The user should consult with the agency and the agency can submit an enhancement request in JIRA.

- **CGS for prestressing at ends (can we get an option to input at CL)**

The user should consult with the agency and the agency can submit an enhancement request in JIRA.

11c. 2019 RADBUD Meeting Agenda

George Huang presented the draft 2019 RADBUD Meeting agenda. The Task Force agreed that the regression testing tool should be included in one of the training sessions.

The Task Force discussed notifying the end user designees (voting members) prior to the RADBUD meeting that the existing BrDR enhancement list will be sunset and archived. The Task Force also discussed providing the end user designees with the list of enhancements included in the 7.0 and 7.1 work plans as well as anticipated future software directions (starter enhancement list for post 7.1). A brainstorming session will be held

during the RADBUG meeting. End user designees should be prepared to vote on enhancements.

11d. 2019 Survey

Josh Dietsche presented the draft survey to the Task Force for their review and comment. Josh suggested and the Task Force agreed to distribute the survey to all BrDR users.

Josh scaled back the draft 2019 survey from previous years' surveys in an effort to secure a higher response rate. The Survey has been developed to support separate organization types with questions which focus on high level responses to questions on product experience, user support, and development process (i.e. how well does the products meet the users' needs). Based on the users' organization and their role within their organization, the number of survey questions varies from 9 to 15. All survey tracks are expected to take only four (4) minutes to complete. SurveyMonkey estimates the survey completion rate to be 53%.

NUMBER OF QUESTIONS	Member Agency	Local / US Agency	Consultant
Bridge Design Engineer	15	14	12
Bridge Rating Engineer	15	14	12
Bridge Design Management	10	9	9
Bridge Rating Management	10	9	9

The Task Force discussed the draft survey and suggested minor revisions, to include an additional question to ask how long the respondent has been using the software.

11e. RADBUG SWAG Suggestions

The Task Force briefly discussed possible SWAG options for the 2019 RADBUG meeting. The group decided on 26oz vacuum bottles with the Br logo.

Agenda Item 12: Work Plans

12a. Planning Estimates

Dean Teal will update the BrDR Planning Estimate spreadsheet prior to the RADBUG meeting. Mark Bucci agreed to take over the administration of the BrDR Planning Estimate spreadsheet following Dean Teal's departure from the Task Force in June 2020. Dean Teal will provide instruction to Mark prior to his departure from the Task Force.

12b. Future Work Plans

No discussion.

Agenda Item 13: FHWA Update

Tom Saad provided the following FHWA update. Nicole Nason was sworn in as FHWA Administrator on May 2nd. Nason has served as an Assistant Secretary for Administration at the State Department and previously served as Administrator for the National Highway and Traffic Safety Administration (NHTSA) and as an Assistant Secretary at the Department of Transportation. She also worked at Customs and Border Protection and for several congressional committees.

FHWA recently published a manual to aid in the implementation of refined analysis in the design and analysis of bridges. Publication FHWA-HIF-18-046, *Manual for Refined Analysis in Bridge Design and Evaluation*, is available at <https://www.fhwa.dot.gov/bridge/pubs/hif18046.pdf>. The manual provides technical guidance on using refined methods of analysis for design and evaluation of highway bridges, to supplement the provisions and commentary of the AASHTO specifications. The application of refined methods is needed when a bridge design falls outside of the limits for the approximate methods in the AASHTO specifications or when refined methods can provide a more rigorous



treatment to appropriately account for unique details and/or behaviors. Refined methods can also be used to achieve more accurate load rating. To generate confidence, this manual includes seven case study analysis examples and provides results that can be used by software providers and engineers to verify their modeling techniques.

FHWA report FHWA-HIF-18-061, *Concrete Bridge Shear Load Rating Synthesis Report*, is intended to provide guidance for the bridge community to address challenges that are commonly faced when rating concrete bridge components for shear. The report can be downloaded at <https://www.fhwa.dot.gov/bridge/loadrating/pubs/hif18061.pdf>. The objective of the study was to determine why shear ratings are often low when little visual distress is observable, and to make suggestions for the best approaches for analyzing concrete shear behavior to develop confidence in shear load rating results. The report provides recommendations for improved implementation to increase the accuracy in establishing concrete element shear capacity. The second phase of this work will be underway very soon, to draft ballot items for consideration by AASHTO Committee on Bridges and Structures Technical Committees to offer additional specifications to better ascertain the shear capacity of concrete bridge components. This phase of work will also develop load rating examples that will address detailed application of the appropriate methods for shear capacity determination.

The FHWA Office of Bridges and Structures is developing guidelines and load rating examples for tunnel components to support the need for State Highway Agency's to load rate tunnels in accordance with the National Tunnel Inspection Specifications. FHWA will soon host a webinar to

provide training, demonstrate the requirements for tunnel load rating and to discuss the contents of the guide.

A study on the impacts of truck platooning was recently initiated by FHWA to determine if the effects of truck platoons will necessitate the need for additional guidance for bridge load rating engineers. There is concern that trucks operating in platoons may be able to operate with minimal headway distances, necessitating a need for additional guidance in the MBE for assessing bridges in corridors where platoons will operate. The results of this study will be available in early 2020. If you have questions about the study, please contact Dr. Lubin Gao at lubin.gao@dot.gov.

FHWA is currently updating the National Highway Institute Course No. 130092, Load and Resistance Factor Rating of Highway Bridges to bring the course up-to-date with MBE revisions that have been adopted in recent years. You may register for open seats for courses that have been scheduled at <https://www.nhi.fhwa.dot.gov/course-search?tab=0&key=130092&res=1>. Additionally, you can find excellent Reference Manuals that were developed to coincide with many of the FHWA National Highway Institute Course curriculum that is developed for bridge design and analysis engineers at <https://www.fhwa.dot.gov/bridge>.

Planning is underway for FHWA to host the Southwest States Load Rating Program Peer Exchange in the summer of 2019. This will be the sixth regional peer exchange in as many years and will allow load rating specialists from the States of Alaska, Arizona, California, Hawaii, New Mexico, Nevada, Oklahoma, Oregon and Texas to



discuss challenges and share best practices in bridge load rating, posting and permitting.

FHWA will host the 27th webinar in the series of Bridge Load Rating Webinars on FHWA's new *Manual for Refined Analysis in Bridge Design and Evaluation* on June 18th. The webinars in this series, which provide a good source of information on best practices in bridge load analysis, posting and permitting, are recorded and available for viewing at <https://www.fhwa.dot.gov/bridge/loadrating/>.

Agenda Item 14: FY2019 Quality Assurance Review for Bridge Design-Rating

Judy Tarwater presented the results of the 2018 BrDR QA Review held November 7, 2018 at the Michael Baker International offices in Moon Township, PA.

Agenda Item 15: Five Year Projection for BrDR

The five year projection was presented to the Task Force during executive session.

Agenda Item 16: Licensing Issues

16a. Third Party Add-ons

Baker advised that they have been approached by a state to perform development work to incorporate a state specific specification into BrDR.

16b. Design Tools

The Task Force discussed the idea of establishing a different licensing scheme in the future, for the use of the Prestressed and Steel Design tools.

Agenda Item 17: Marketing Activities

17a. COBS

Judy Tarwater to man the AASHTOWare bridge table at the COBS meeting in Montgomery, AL. Todd Thompson and Eric Christie to present BrDR

presentations during the T-18 and T-19 technical committee meetings. The 2019 Bridge Products Newsletter will be placed at the state engineers' tables for their consumption during the closed session on Wednesday morning.

17b. BrDR Features Bullet Points to Assist Users in RFP Preparation

The Task Force discussed ideas to assist users in their review/evaluation of the BrDR feature set, particularly in the area of extracting application information for the development of Requests For Proposals.

During the January and April Task Force meetings, the Task Force discussed potential opportunities to provide users with a better user experience.

- Creating a 1-page "Getting Started" document; a concise document to make a user's initial foray into the product less intimidating.
- Build in more customer support hours into the base fee of the product (similar to what AASHTOWare pavement does?)
- Implement a larger initial fee for the project, with the understanding that there will be more support provided to new users
- Create a series of YouTube videos (or some other format easily accessible via a search engine)
- Users are typically directed to the Baker website. However, in the absence of specific direction to visit the Baker website, a majority of the users are unaware of the training information available on the site. How can we ensure users are aware of these great training tools? Can we ask the marketing group for assistance in this area?
- Caltrans has "Introduction to Virtis" and "RC Box example" PowerPoint training slide decks that are used within Caltrans for new users.



These training materials are geared towards going through each step until the process is complete. New users are expected to follow each step in the PowerPoint presentations, yielding the same load rating results. RC Box example is based on a real bridge. Caltrans is also considering the addition of voice prompts to future versions of these presentation. Would training materials similar to the Caltrans PowerPoint slide decks (along with as-built plans and voice prompts) be appropriate to develop and make available to the wider user base?

- The Method of Solutions are included in the BrDR Help directory. The information provided within the BrDR help facility frequently answers many questions posed by BrDR users. Are BrDR users made aware of the location and content of this help facility?
- The current setup has support information available through the Help menu. Support information is included in the software download email. Is there a better way to ensure the users are aware of the Help facility?
- Should the AASHTOWare website be enhanced to link directly to the design examples on the Baker website (or host them directly on the AASHTOWare website)?

17c. T-18 / T-19 Presentations at COBS

Agenda Item 18: Review Action Item list from this meeting

Mark Bucci read the action items recorded during the meeting.

Agenda Item 19: Task Force Executive Session (as needed)

Meeting was adjourned at 4:30pm.

