

MEMORANDUM

June 13, 2017

TO: ACEC-INDOT Bridge Inspection Committee Members

FROM: Jonathan Olson, BF&S

RE: ACEC-INDOT Bridge Inspection Committee Meeting Minutes
(Meeting held May 12, 2017)

The following were in attendance:

Merril Dougherty, INDOT	A.J. Wortkoetter, INDOT
Bill Dittrich, INDOT	Jeremy Hunter, INDOT
Scott Minnich, United Consulting	Rob Coop, USI Consultants
John Lukac, BLN	Bobby Chandler, Clark Dietz
Jonathan Olson, BF&S	Sean Hankins, INDOT

Item #1 - Training Update

NHI Courses:

- o 130055 2 Week Bridge Inspection class - INDOT will host again in 2017.
- o 130053 3 Day Refresher Course - INDOT will host again in 2017.
- o 130078 3.5 Day Fracture Critical Class - INDOT will host again in 2017.
- o 135047 1 Day Scour at Highway Bridges - INDOT looking at possibly hosting in 2017.
- o NHI has a NEW one week bridge inspection class for PE's instead of the 2 week course.
- o NHI Online has a free 1 hour hydraulics course.

S-BRITE Certification Inspecting Steel Bridges for Fatigue - A class is scheduled for May 23-24th, 2017. INDOT is looking at possibly replacing the 3.5 day NHI fracture critical course with the S-Brite Course.

Item #2 - Load Rating/Posting Policy

Sean Hankins is currently working on Load Rating Policy with Jeremy.

LPAs are confused about how to proceed with the recent load posting policy design memo. H20 Inventory rating is no longer required to post loads. The previous posting policy based on H20 Inventory ratings was very conservative. By not using inventory ratings for posting, INDOT is trying to get in line with the Manual for Bridge Evaluation (MBE) as well as adjacent states. While it is required to follow the new posting criteria, bridge owners may post for a more conservative (lower) tonnage at their discretion. In addition, a load rating engineer can always use engineering judgement to make ratings lower than what calculations say.

We will not be rating for the HS-25 Truck because it exceeds legal loads. Also, we will not be rating for the HL-93 Truck because it is purely used for design purposes and not for posting.

The Bridge Inspection Manual currently states how and when to post a bridge. However, this chapter is currently under review by INDOT. To help clarify, INDOT provided the following posting guidelines:

If ANY legal or routinely permitted load rates below 1.0, then you must post for the lowest calculated tonnage of ALL legal and routinely permitted loads.

Example:

HS20 (GVW = 36T), if RF = 0.9, then tonnage = 32T

AASHTO Type 3 (GVW = 25T), if RF = 1.0, then tonnage = 25T

Even though the AASHTO Type 3 rates OK, it still has a lower tonnage than the HS20 that rates low, and the bridge should be posted based on the 25T.

In addition, the MBE should be used to establish safe posting levels; MBE 6A.8.3 for LRFR, and MBE 6B.7.3 for LFR. Note that "Legal" terminology used in LRFR is comparable to "Operating" in LFR.

The state is currently rating all bridges using LRFR, rather than LFR. Rating with LRFR is more up-to-date with ongoing research and improvements in the industry. However, sometimes LRFR has some issues, such as giving higher capacities with concrete. There are no mandates yet on which code to use for load ratings, however LRFR is generally recommended.

How do we handle all the vehicles we need to rate for vs. the few fields that are in BIAS? The BRADIN Load Rating Database will be used for this. It is a new software that is first being used on the state system and will be rolled out to the locals later. Load rating information will be entered into the BRADIN database software - and will be read only in BIAS. Users performing load ratings will have to request access to the software. Inputting data into BRADIN software will be part of the standard load rating process. Currently, only rating factors and tonnage will be input into the software, but additional information such as location and limit state could be added in the future. An example of the BRADIN input is attached.

Emergency vehicles will soon be added to the list of vehicles that bridges are required to be rated for. One of the emergency vehicles has a 62 kip tandem axle. Using these new vehicles will allow collaboration with emergency personnel on safe routes to take.

Rating for the superload permit vehicles in the BIM and having that information filled out helps speed up permits in the future because the load rating engineer can look to see if the permit vehicles are similar and may not need to run new calculations. Impact is included on the values reported for permit vehicles.

INDOT has yet to determine how a load rating engineer will input ratings into BRADIN for all legal loads when engineering judgement is used instead of calculations. They are willing to accept advice on how to handle.

The new/updated load rating chapter in the Bridge Inspection Manual should hopefully come out in the second half of this year.

Email Jeremy Hunter or Sean Hankins if you are having problems/issues with BrR software. Currently there are a few known problems with timber bridges. There is also a problem with the distribution factors for precast concrete channel beams. The reason that INDOT has mandated the use of BrR software is because it can easily rate all legal loads, which are required by State and Federal law. Spreadsheets can be more difficult to rate for all vehicles, and are difficult when legal loads change.

Item #3 - Early NTP for LPA Updated Load Ratings

This policy is currently under review by INDOT. The Federal Deadline for having all load ratings in BrR is November 2019. Counties with earlier compliance

months/years get longer timeframe to complete all their load ratings. Some counties only have a few months to complete all new load ratings in BrR.

Since the end date is fixed, is there a way for consultants to start earlier on the load ratings? New contracts have a start date, and INDOT cannot release NTP before that date.

If currently under contract and the dates for the load ratings are for phase 2, why can't NTP for load ratings be issued earlier? INDOT says it is fiscally constrained and won't release money early for a later phase.

It was suggested that INDOT could move up the load rating dates, or possibly do different contracts for just the load ratings, so they wouldn't be tied to the same timeline as the inspections.

INDOT is looking into the option of giving the consultants the entire two year phase to complete the load ratings or giving them until the compliance date of November 2019.

Item #4 - New contracts reduce due date by 30 days for phase II

Why are the due dates for phase II inspections 30 days less than for phase I? While the total man-hours are less for phase II, the work takes approximately the same amount of time start to finish as for phase I. Andrew Wortkoetter will look into this with Kathy-Eaton McKalip.

Item #5 - Contract and Fee Justification Approval Requirements

Is there documentation available on what is needed for contracts and fee justifications, so it will be easier to get them approved? Justification is needed for everything, especially for equipment.

Federal funds cannot be used for inspecting pedestrian structures unless there is an MOA. If there is an MOA, federal funds can be used to inspect a pedestrian structures at 48 month frequency.

Per diems can only be used in conjunction with an overnight stay. Partial per diem is not allowed.

The new boilerplate contract states that 1 draft report and 2 final reports are all that LPA can be reimbursed for.

Sub-consultant acknowledgement forms should be between the sub and the prime consultant at the top of the forms.

New contracts should be started 1 year in advance to ensure getting a NTP before start of inspections.

Item #6 - Channel Survey Frequency

Can we change the basic channel survey to 48 months, rather than 72 months so it is easier to keep track of? The basic channel survey should be done once per contract cycle.

Item #7 -Extended Frequency Review by FHWA

FHWA would like an in-depth inspection before placing a bridge on an extended inspection cycle. INDOT doesn't think this will be necessary, due to filtering out high risk bridges.

One of the criteria for extended frequency is for a clear roadway width of 30 feet. This will be an issue on the LPA system, where the majority of bridges have clear roadway widths of between 24 and 28 feet. INDOT will consider if this criteria is necessary, or if it can be changed for low volume roads.

Item #8 - BIAS Issues

People are having issues with the county summary reports currently showing incorrect data in the front tables. Submit any issues to Mona at inbridgeshelp@indot.IN.gov

Item #9 - Railroad Flatcars with Composite Decks

Currently all railroad flatcars are considered fracture critical, including those with non-composite and composite concrete decks. INDOT is looking into the possibility of using Dr. Connors research to prove that railroad flatcars with composite concrete decks are redundant. This change will require approval from FHWA. Even if this is passed, non-composite concrete decks will still be considered fracture critical.

Item #10 - Bat and Swallow Data Collection

An email went out on training that all inspectors should have received. Inspectors should be entering data into the MAD tab in BIAS. It would be helpful if a link or additional information on training was made available so new inspectors could be trained.

Item #11 - Other Topics

Scott Minnich will be taking over Adam Post's position on this committee on behalf of United Consulting. Adam Post will now be working for INDOT.

Mona Davis is now the permanent BIAS Administrator.

Andrew Wortkoetter has been reviewing all information in BIAS during RFP stage. There have been errors with closed structures showing up at 12 month frequency; these should be 24 months. Also, special detail inspections are preferred at 48 months, rather than 60 months, so inspections can take place once per contract cycle.

A minimum of 3 months is needed to get a supplemental approved. Work cannot start until NTP is issued. Counties should be giving consultants adequate notice of upcoming initial inspections so there is time for a supplemental. If work begins before a NTP is issued then a county may not get reimbursed for the work completed.

Consultant invoices need to state what bridges were completed. Also, sub-consultant invoices are currently not required to be submitted with invoices, but it is highly recommended by INDOT to do so.

Counties should consider automatic direct deposits for paying invoices. This gives them proof of payment quicker, which allows them to get quicker reimbursement.

Inspectors stated that they like inspecting in the winter, but some counties have moved out of winter months. INDOT stated that only a few counties have changed inspections out of winter months. If a county wants to change back to a winter cycle, they would have to move up (or short cycle), which would be extra money from LPA.

Item #12 - Next Meeting Date

The next committee meeting will be held on Friday, August 11, 2017 at 9:00am in INDOT N642 conference room.