

KYTC Division of Maintenance/ACEC-KY Bridge Subcommittee Partnering Meeting

March 3, 2015, 10:00 AM – 12:00 PM
Room 311

Minutes

These minutes provide an outline of discussions at the Division of Maintenance and ACEC Bridge Sub-Committee partnering meeting held at the Transportation Cabinet Office Building. Those in attendance were:

David Steele	Division of Maintenance (DOM)
Joshua Rogers	Division of Maintenance
Evan Dick	Division of Maintenance
Tom Matthews	Division of Maintenance
Mark Swieterman	Division of Maintenance
Rick Rogers	Division of Maintenance
Dora Alexander	Division of Maintenance
Anne Irish	Division of Maintenance
Jon Wilcoxson	Division of Maintenance
Doug Burton	Lochner
Derek Barnes	Parsons
John Broadus	HDR
David Depp	Johnson, Depp & Quisenberry
Scott Ribble	Burgess & Niple

Discussion topics included:

- 1. Purpose** – This meeting was requested by the Sub-Committee in order to exchange feedback on maintenance issues that could be addressed/avoided in future projects, resulting in easier to maintain and longer lasting bridges.
- 2. Coatings (Follow-up from last meeting)** – Masonry coating study – KTC is wrapping up a coating study that is investigating substitutes for masonry coating. Other coatings – DOM is testing water based bridge coatings/paints.

- 3. Load Ratings** – LARS is used by KYTC. DOM wants initial load ratings for all bridges, especially complex bridges (curved, truss, etc.). Adding the load rating to the design scope for new bridges was discussed and DOM strongly supported the idea but added that Professional Services would need to approve. DOM is hiring 2 new people for load rating to help meet federal deadline. Approximately 100 complex bridges and a yet unknown amount of non-complex bridges will be contracted out late summer/early fall.
- 4. As-builts** – Currently KYTC Division of Construction is responsible for as-builts but a central storage location is not used. DOM suggested storing in the Division of Structural Design's database where original design plans are stored. The use of pay item/special note was discussed, in order to put the as-built responsibility on the contractor. DOM had no objection but noted that having a central depository is the key issue, regardless of who's responsible. DOM noted that many inspectors are new and need training on important items to look for and note in as-builts.
- 5. Failure of doweled connection for end bent/app slab** – ACEC inquired as the reason for the failure (discussed at the recent 2015 ACEC Bridge Seminar). DOM stated that the dowel connection for a long bridge (400'-600') continuous with integral end bents failed due to movement at the end bents. It is understood that the dowel bars broke out of either the corbel or the approach slab.
- 6. Deck drains** – ACEC inquired as to the performance and preferred type of deck drains. None of the currently used types (thru barrier, steel tube, steel drains) have any significant issues. Previous issues with the steel tube type have been remedied by increasing the size of the opening. Clogging issues with scupper boxes on older bridges have been rehabbed with large PVC pipes.
- 7. KYTC Standard Trucks (Legal Loads)** – DOM provided the legal loads to be published with these meeting minutes.
- 8. Maximum bridge length for IEBs** – ACEC inquired if there's a maximum bridge length for utilizing integral end bents. DOM cited an 800' continuous bridge in Clinton County but also noted the dowel failure (for a shorter length) previously discussed. The Clinton County bridge is fairly new so long term data is not yet available.
- 9. Future Advertisements** – New NBIS and fracture critical inspections are expected in the next year. The number of firms (currently 3) for the NBIS inspections may be increased.
- 10. Bridge Joints** – The group discussed the performance of several bridge joint types. DOM has had success with the 4" strip seal and the V-seal (on narrow joints). Asphalt plugs have worked but only on low ADT applications. Link slabs have performed well and continue to be used to eliminate expansion joints during rehab/paint projects; however, impacts to bearings and changes in loads to substructures need to be investigated on rehab projects.
- 11. Continuing Education** – ACEC inquired about the possibility of hosting the NHI Bridge Inspection course. DOM only have 4-5 people who need the training and will be sent out of state for training. They would be open to hosting but 18-20 people are needed to host. Consultants (both in-state and out) could likely fill seats not used by DOM. A 3-day

refresher course is coming up but may only be in-house. ACEC firms will be solicited for interest in sending staff to a two-week course if one were to be held in Kentucky.

12. Recurring problem – ACEC inquired as to whether there are maintenance issues that could be handled during design. The following issues/suggestions were provided:

- Make sure LRFR load ratings are greater than 1.0.
- Design bridges to be more inspection friendly with more vertical clearance below the beams at the end bents and hanging points for trusses.
- Seal beam ends at joints (or embed in concrete).
- Better detail bridges on longitudinal grades to prevent elastomeric bearing pads from walking.
- To the extent practicable, consider and accommodate future jacking of the superstructure for the replacement of bearings.
- Due to issues with scour at culverts and bridges, evaluate riprap to assure it is large enough for design floods. Also socket footings lower due to issues with scourable rock.
- For maintenance painting notes, contact DOM before letting to assure latest notes/info are used. Use Spec 614 once it is updated.

13. Future Meetings – The group will continue the yearly meeting in Spring 2016.