

**KYTC Division of Construction and  
ACEC Bridges, Inspection & Design Sub-Committee  
Partnering Meeting**

**December 9, 2016, 1:00 PM – 3:00 PM**

**Minutes**

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

Mark Walls	KYTC Division of Construction (DOC)
Ryan Gossom	KYTC Division of Construction
Michael Baase	KYTC Division of Construction
Bill McKinney	KYTC Division of Structural Design (DOSD)
Joseph Van Zee	KYTC Division of Structural Design
Daryl Greer	KYTC Geotechnical Branch
Michael Carpenter	KYTC Geotechnical Branch
Bart Asher	KYTC Geotechnical Branch
Derek Barnes	Parsons
Wendy Harper	Parsons Brinckerhoff
Aaron Stover	Michael Baker
John Broadus	HDR
Steve Goodpaster	American Engineers
David Rust	Palmer Engineering

Discussion topics included:

- 1) Purpose** – This meeting was requested by the Sub-Committee to continue the dialog with the Division of Construction. The goal is to exchange feedback on bridge construction issues that could be addressed or avoided in future projects, resulting in more economical, easier to construct, and longer lasting bridges.
- 2) Division of Construction discussion topics**
  - a) First guardrail post on skewed box beam bridges** – DOC indicated that there have been conflicts between the first side mounted guardrail post and the abutment on highly skewed box beam bridges at the acute corners. DOC has requested that Designers check clearance of the first side mounted post to verify the as-assembled mounting will clear

the face of the abutment/wingwall and have room to slide the post over the bolts for installation. DOC also indicated that the first post off the bridge should be checked to confirm clearance with the abutment cap. This topic was further discussed in the DSOD update at the 6<sup>th</sup> Annual Bridge Seminar Day.

**b) Bridge Layout (Skew/Spans)** – DOC asked that Designers consider reducing skew where practical on bridges. DOC understands this may result in longer bridges but this may be offset by reduced construction costs. DOC also requested that Designers consider removing substructures/reducing the number of spans where practical, particularly where drainage may be improved. DOC provided a recent example of a 50' bridge with two piers.

**c) Through Barrier Drains** – Avoid use of through barrier drains where possible as there typically is a maintenance issue with the deck at the drain due to the consistent presence of moisture. DOSD indicated Designers may consider eliminating drains altogether for deck drainage areas less than 2,000 sf.

**d) Paint Applications** – The following was discussed:

- Specify application of primer only in the shop; additional coats are typically damaged in field even under the best conditions.
- Paint colors, particularly non-standard colors, should be coordinated with the DOC and District. Selection of very dark colors/light colors create construction and inspection issues. KYTC is considering development of a standard color palate.
- If painting weathering steel, consider painting the entire bridge as opposed to just exterior girders for aesthetics. Primarily consider un-painted weathering steel on jointless bridges in dry, low salt exposure applications.
- Paint/sealers on pier caps (below joints) and parapets are becoming more widely used; deck sealers as well. Contact DOSD regarding use of preventative maintenance measures as situations arise as this is cheaper if handled up front during design.

**e) Special Provision 69 Update** – DOC indicated that the special provision has been re-written. This topic was further discussed in the DOSD update at the 6th Annual Bridge Seminar Day.

**f) Geotechnical issues** – The following was discussed:

- Designers have been specifying deeper pile driving depths to accommodate lateral/uplift loads but the depths may not be achievable in the field. In these cases, the design should be an iterative process coordinated with KYTC Geotechnical Branch in which more piles and/or battered piles may be the solution in lieu of deeper driving depths.
- Designers should avoid tightly spaced piles (< 3D). There have been cases where even when piles are sequenced, soils have become too dense to drive pile.

- Designers should coordinate plan changes (changes to span lengths, etc.) that occur after preparation of the geotechnical report with KYTC Geotechnical Branch.

### 3) Follow-up from last meeting

- a) **As-Builts Special Note** – As-builts to be handled internally by KYTC.
- b) **Constructability Reviews** – Highway Design is performing constructability reviews. Brent Sweger may be copied on Stage I submittals and the review conducted then if staff is available.

### 4) New Topics

- a) **Specification Section 600 Update** - DOC indicated that this specification section has been re-written. This topic was further discussed in the DOC update at the 6th Annual Bridge Seminar Day.
- b) **Design Ownership of Value Engineered Projects** – There's a concern the VE consultant may miss a design constraint that led to the "as designed" solution on value engineered projects. One suggestion was to have the VE consultant take ownership of the entire plan set while another was to require approval of the change from the original designer. Changes to the specification are under consideration to address.
- c) **Erection of Steel Girders (Fit Conditions)** – The Cabinet indicated that although there is not a current policy specifying the fit condition for steel girders, the preferred and easiest condition for Contractors is for steel DL only. DOC is making updates to Specification Section 600 to require a pre-erection meeting to coordinate fit condition between applicable parties.
- d) **Prestressed Beam Fillet Detail** – The fillet detail utilizing a 3" projection to each side of the beam and 1" minimum embedment of the top flange is problematic with use of SIP forms. DOC indicated that fillets have been constructed "straight up" from the edge of the flange and DOSD concurred this would be an acceptable detail provided water intrusion to the stirrups is addressed by the design (i.e. embed top flange at overhang to block path if necessary).
- e) **Wingwalls (Stepped versus Tapered)** – DOC indicated there is no construction preference regarding use of stepped or tapered wingwalls in the field.

### 5) Future meetings – The next scheduled partnering meeting will be held in late Fall 2017.

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