MEMORANDUM

Texas Department of Transportation

TO: District Engineers **DATE:** July 27, 2006

FROM: William R. Cox, P.E.

SUBJECT: New Prestressed Concrete U-Beam Standard Drawings (English)

New prestressed concrete U-beam standard drawings with an issue date of July 2006 are posted on the TxDOT web site and are available for immediate use. The designs reflected by these standard drawings are based on HL93 live loading as required by the AASHTO *LRFD Bridge Design Specifications*.

Key features of these standard drawings include the following:

- **UBD,** Prestressed Concrete U-Beam Details – This standard drawing replaces standard drawing UBA. Skew angles up to 45-degrees are accommodated.
- **UBEB,** Elastomeric Bearing and Bearing Seat Details – This standard drawing replaces standard drawing UBB.
- **UBTS,** Thickened Slab End Details – This standard drawing provides details for transverse slab edges at expansion joint locations. When U-beams are supported with inverted-T bents, details provided assume expansion joint placement at each face of inverted-T stems.
- **UBMS,** Miscellaneous Slab Details – This standard drawing replaces the previous standard drawings UBMS and UBMST. Standard drawing UBMS provides details for lateral restraint of U-beam spans with inverted-T substructure only. If conventional substructure is used and lateral restraint of U-beam spans is necessary, project-specific lateral restraint details must be provided separately.
- **UBND,** Design Data – Project-specific beam design/fabrication information based on the AASHTO *LRFD Bridge Design Specifications* must be provided in the table on this standard drawing, which must be signed, sealed, and dated by a licensed Professional Engineer.
- **MEBR(U),** Minimum Erection and Bracing Requirements – This new standard drawing provides details for bracing U-beams during erection and slab placement.

Standard drawing UBNS is provided for the remaining projects designed for HS-20 live load in accordance with the AASHTO *Standard Specifications for Highway Bridges*.

Standard drawings PCP(U) and PMDF(U) are no longer available. Standard drawings PCP and PMDF are their replacements and should be used to complement U-beam bridge plans.

Standard drawings USMB and USMB-1 are no longer available and standard drawing BMCS should be used when clearance sign mounting details are needed.

These and other bridge standard drawings are available on the Bridge Standards web pages in MicroStation® "dgn" and Adobe® Acrobat® "pdf" formats. See http://www.dot.state.tx.us/business/standardplanfiles.htm .

If you have questions or comments concerning these standard drawings, please contact John M. Holt, P.E., at (512) 416-2212, or Jon T. Ries at (512) 416-2191.

Note: Original Signed By William R. Cox

cc: Federal Highway Administration
Bridge Design Consultants
Administration
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District Bridge Engineers
Bridge Division Employees