



MEMORANDUM

TO: District Engineers

DATE: August 31, 2004

FROM: Mary Lou Ralls, P.E.

SUBJECT: New Steel Beam Standard Drawings (English)

New steel beam standard drawings with an issue date of August 2004 are posted on the TxDOT web site and are available for immediate use. The designs reflected by these drawings are based on HL93 live loading as required by the AASHTO *LRFD Bridge Design Specifications*.

These standard drawings are good for bridges requiring shallow superstructure depth, bridges that may require future widening, and bridges where crane location or reach is an issue. Construction costs of standard steel beam bridges and prestressed concrete box beam bridges are comparable based on current statewide average low bid unit prices. Because these standard steel beam bridges are new and steel costs are currently unstable, specific cost comparisons to other bridge types are unreliable.

Key features of these standard drawings include the following:

- Superstructure and substructure details are provided for roadway widths of 24, 28, and 30 feet. These details accommodate 0-, 15-, and 30-degree skew angles.
- Span lengths range from 30 feet to 120 feet, in 5-ft. increments.
- Multi-span units are accommodated, with the slab continuous over interior bents.
- Steel can be painted or weathering.
- Drawings accommodate use of the 2004 *Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges*.

The *Guide to Bridge Standard Drawings*, also available on the TxDOT web site, has been updated to include a section on steel beam standard drawings. This section provides guidance on plan preparation for use with these standard drawings.

Steel beam and other standard drawings are available from the Bridge Standards (English) web pages in MicroStation® "dgn" and Adobe® Acrobat® PDF formats. Please distribute this information to the appropriate district staff and area offices as well as consulting engineers working on TxDOT projects.

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 Mary Lou Ralls

cc: Federal Highway Administration
Bridge Design Consultants
Administration
Division and Office Directors
Directors of Transportation Planning and Development
District Bridge Engineers
Bridge Division Employees