SEVIER RIVER BRIDGE, AXTELL UTAH
Utah DOT Opt for Prefabricated Steel for Bridge Replacement

The Sevier River Bridge, located approximately 2.5 miles east of Axtell is a critical thoroughfare for the numerous farmers and ranchers who live in central Utah. It is also structurally and functionally deficient with a sufficiency rating of an abysmal 16.8 per a 2002 inspection by the Utah Department of Transportation. The aging bridge could no longer handle significant loads and, if allowed to deteriorate further, would cause significant travel disruption to nearby communities.

As part of its 2009 Statewide Transportation Improvement Program, the Utah Department of Transportation scheduled the replacement of the Sevier River Bridge — though the Utah DOT planned to do it with a slightly different twist.

Well known for its use of accelerated bridge construction techniques and prefabricated bridge components to speed the construction and repair of the state’s aging bridge infrastructure, the Utah DOT opted to replace the Sevier River Bridge with prefabricated steel bridge components.

Tom Christensen, P.E., project engineer with Jones & DeMille Engineering, says, “We specified prefabricated steel on this project for several reasons. One reason was that steel beams are typically shallower than prefabricated, pre-stressed concrete systems, which allowed us to keep a low bridge profile height. The second factor was cost. The prefabricated steel beams were less expensive than comparable prefabricated concrete systems.”
Completed in March 2010, the new Sevier Bridge, located approximately 10 feet north of the existing bridge location, is 75 ft long x 28 ft wide steel beam bridge with a concrete deck that sits on piles and caissons. The short span steel bridge was fabricated by Wheeler Bridge, an executive member of the Short Span Steel Bridge Alliance.

The new bridge was designed with 4 longitudinal weathering steel beams. The beams were prefabricated and shipped in pairs. Bolted diaphragms connected the beam pairs after they were set. The concrete deck was cast-in-place and a crash-tested, prefabricated steel railing finished the bridge.

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For more information about prefabricated steel bridges, contact Dan Snyder, manager of business development, Steel Market Development Institute, (202) 452-7100, or email sssba@steel.org.

About the Short Span Steel Bridge Alliance
The Short Span Steel Bridge Alliance (SSSBA) is the industry resource for information related to short span steel bridges in North America. SSSBA’s objective is to provide essential information to bridge owners and designers on the unique benefits, innovative designs, cost competitiveness, and performance related to using steel in short span installations up to 140 feet in length. Alliance members include bridge and culvert industry leaders, including manufacturers, fabricators and representatives of related associations and government organizations. To learn more visit www.shortspansteelbridges.org or email sssba@steel.org.

About The Steel Market Development Institute (SMDI)
SMDI is a business unit of the American Iron and Steel Institute (AISI), advances the use of steel through market-driven strategies that promote cost-effective solutions in the marketplace. The SMDI focuses on the automotive, construction and container markets, value-added long products, steel recycling, and on new-growth opportunities in non-traditional steel markets. SMDI’s Construction Market Council is comprised of nine member companies, including integrated and electric furnace steelmakers: AK Steel Corporation, ArcelorMittal Dofasco, ArcelorMittal USA, Nucor Corporation, Severstal North America Inc., SSAB Americas, Steelscape, Inc., United States Steel Corporation, and USS-POSCO Industries. For more information, visit www.steel.org.