



Seltice-Warner Bridge Case Study

Short Span Steel Bridge Alliance

W. Mark Storey, PE
Whitman County Engineer

www.shortspansteelbridges.org



Pre-Fabricated Modular Beam

Seltice-Warner Bridge, White Road, Whitman County, WA

Fabricator: BigR/Contech Engineered Solutions
Contractor: Whitman County Crew
Design Engineer: Mark Storey, County Engineer

Existing Structure – 30 ft Span, 20 ft Wide

Built/Rebuilt 1952/1986

Wood with Wood Piles & Wood Backwalls

Wood Deterioration & Susceptibility to Scour

Replacement Structure Requirements

Increase Hydraulic opening – 30 ft Channel

Raise Clearance for 100 yr Flood

Gravel Roadway

Piles with Alluvium Soils / Scouring

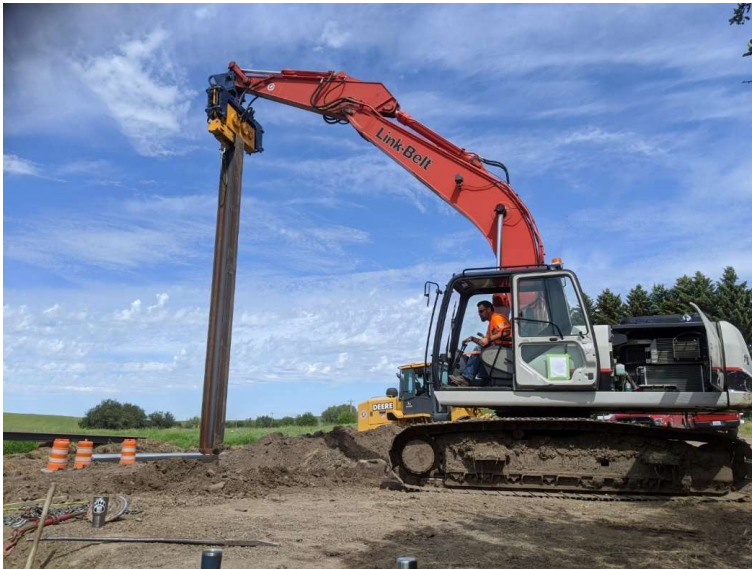


Pre-Fabricated Modular Beam

Foundation and Abutment

County Owned Pile Driver (44 ton/pile)

H12x53 Pile Cap



Pre-Fabricated Modular Beam

Bridge Structure

35 ft Span x 28 ft Wide

2-Girder Modules / 3 Modules

Shipped on One Truck

Fully-Assembled

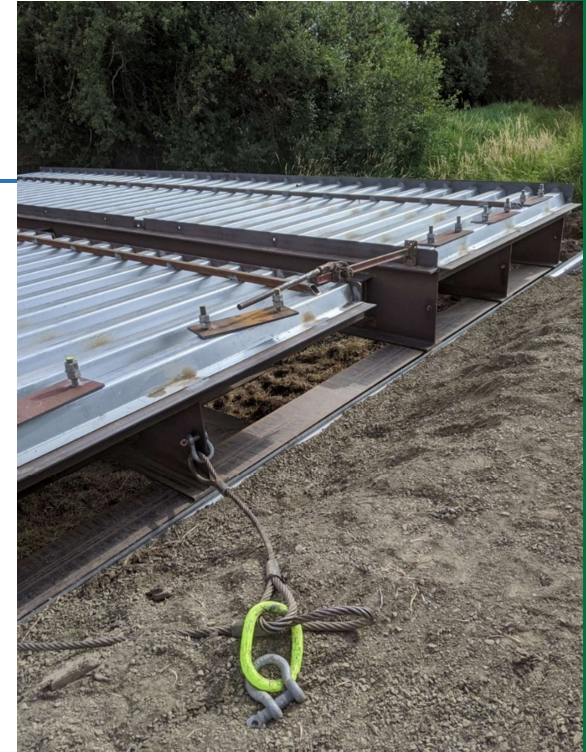
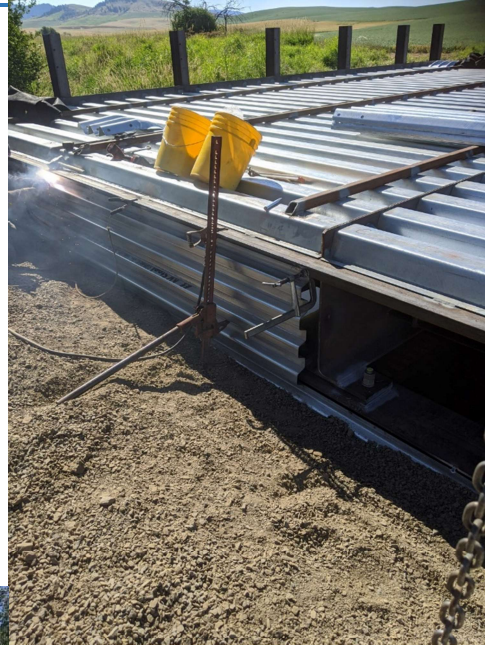
CSD and Dams

Simple Connections



Pre-Fabricated Modular Beam

SuperStructure Erection



Pre-Fabricated Modular Beam

Timing

Excavation, Stream Restoration &
Bridge Installation ~ 4 Weeks

Costs

Steel Superstructure	\$ 59,000
Labor & Equipment	\$ 70,000
Pile Foundations	\$ 20,000
Permitting	\$ 10,000
Total	\$159,000

\$ 162.25 / ft²

Concrete Superstructure Alternative \$ 82,000



Pre-Fabricated Modular Beam

Take-Aways – Steel Bridges

Economical

- Lighter Superstructure

- Lighter Equipment

- Lighter Abutments

Ease of Erection

- Modular

- Accelerated Bridge Construction

- Match-Fit Fabrication

Sustainability


- Recyclable

- Reusable / Movable




5 Ways to Keep Learning About Steel Bridges


1. Subscribe to the Weekly Newsletter



7-Part Bridge Series Available On-Demand
The free video series presented by industry experts on steel bridge-related topics is now available on-demand.
[Watch Videos](#)

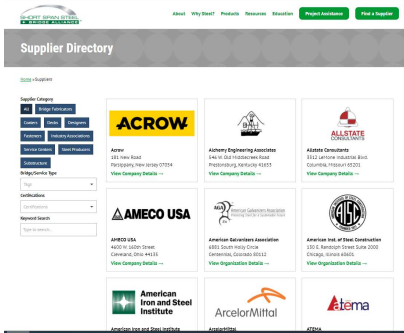


Buried Steel Bridge Wins ASCE Award
A "signature" buried steel bridge located in California wins the local ASCE Parks & Rec Project of the Year.
[Read More](#)



Steel Plate Girder Bridge Built Using eSPAN140
The free online tool saved time by providing preliminary plans for a bridge constructed in Boone County, Missouri.
[Read More](#)

2. Find a Supplier



Supplier Directory

ACROW Acrow 180 West Road Parsippany, New Jersey 07054 View Company Details	Alabama Engineering Associates 140 West Hillside Ave. East Prichard, Alabama 36873 View Company Details	ALLSTATE CONTRACTORS Allstate Contractors 700 Lakeside Village Blvd. Columbia, Missouri 65202 View Company Details
AMECO USA AMECO USA 4800 N. 102nd Street Omaha, Nebraska 68132 View Company Details	American Steel Institute American Steel Institute 4800 North 102nd Street Omaha, Nebraska 68132 View Company Details	ARCelorMittal ArcelorMittal 100 S. Franklin Street Suite 2000 Chicago, Illinois 60606 View Company Details
American Iron and Steel Institute American Iron and Steel Institute	Atena Atena	

3. Design a Bridge in 5-Minutes



4. Receive Free Project Assistance



5. Schedule a Workshop/Webinar



www.ShortSpanSteelBridges.org

Questions? Dan Snyder, Director, SSSBA, dsnyder@steel.org, (301) 367-6179