Henry Road Bridge Case Study

Steel Bridge Essentials Summer 2021 Webinar Series
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Henry Road Bridge, Mercer County, PA

Fabricator: Valmont/Con-Struct
Contractor: Jett Excavating
Deck Precaster: Faddis Concrete Products

Existing Structure
- 55 yr old, 42 ft Span Beam Bridge
- Deterioration and Deficient
- Closed to Traffic for 2 yrs

Replacement Structure Requirements
- Use Existing Abutments (Limited Capacity)
- 60° Skew on Abutments
- Superstructure Only Replacement
- Design-Build thru PennDOT
- County Funds (Local Funding)
Press-Brake Tub Girder

Bids Range $327,750 to $730,870

Concrete:
1 – Box Culvert
   Highest Bid
1 – 4 P/C Spread Box Beams
   Mid-Range Bid

Steel:
2 – 7 Steel Beams
   Mid-Range Bids
2 – Press-Brake Tub Girder
   Lowest Two Bids
   Within $ 2,985 of each other
Press-Brake Tub Girder

Con-Struct / Valmont
Winning Bid $ 327,750

Press-Brake Tub Girder
4 PBTG Units
8 Precast Concrete Deck Panels
CIP Curbs w/ Railings
Epoxy Overlay
Press-Brake Tub Girder

Fabrication
Press-Brake Tub Girder

Finishing Fabrication – Two Methods

Pre-Decked - Composite
- PBTGs Pre-Decked
- Closure Pours
- CIP Curbs

Field Assembly - Composite
- PBTGs no Deck
- Precast Deck Panels
- Grouted Shear Pockets
- Closure Pours
- CIP Curbs
Press-Brake Tub Girder

Henry Road Bridge, Mercer County, PA
Field Assembly - Composite
PBTGs no Deck
Press-Break Tub Girder
Henry Road Bridge, Mercer County, PA
Field Assembly - Composite Precast Deck Panels
Press-Brake Tub Girder

Henry Road Bridge, Mercer County, PA
Field Assembly - Composite
Grouted Shear Pockets
Press-Brake Tub Girder

Henry Road Bridge, Mercer County, PA
Field Assembly - Composite
Cast-in-Place Curbs & Closure Pours
Press-Brake Tub Girder

Henry Road Bridge, Mercer County, PA
Field Assembly - Composite
Completed Bridge

Economical
Ease of Erection
Sustainable