Press Brake Formed Tub Girder Bridges

Frequently Asked Questions:

- **Weight** is about 150 lbs/ LF for the tub girder only
    - About 850 lbs/LF for the tub girder and deck
    - The relatively light weight is an advantage in allowing the use of smaller equipment to set the girders. In a situation with overhead wires or reaching across a wide span, using smaller equipment can be a big advantage over traditional designs
- **Cost** is about 2.75/lb for the tub girder only, about $292 to $432 per LF
- **Leadtime** is about 10-12 weeks after shop drawing approval for the tub girders, additional time is required for precasting the decks if precast decks are specified
- **What type of steel are the tub girders made from?** 3/8" thick AASHTO M270 GR50 is standard, other options and weathering steel are available
- **Where are the tub girders manufactured?** Either at a dedicated facility in Tennessee or Valmont's main plant in Nebraska depending on current shop capacity
- **Who does the galvanizing?** Tubs are galvanized to ASTM A123/AASHTO M111 by Valmont
- **If the decks are not cast in place, who does the precast decks? One of several Precasters in central or northern Illinois – typically ICCI/Illini Concrete in Tremont (Peoria area)**
- **Galvanized Stay in Place forms** are used over the tops of the tub girders only; removable forms are used on the rest of the deck
- **There are (2) 12" Inspection Ports** with removable/swivel-type covers at either end of the tub girder to facilitate internal inspection
- **There are (2) 2" ventilation holes** covered with stainless hardware cloth to prevent entry of birds and vermin
- **The tub girders can be designed for inundation, seismic rating** and can handle light rail traffic
- **Crown and camber** can be accommodated, but the tub girders can only be produced in straight sections – not horizontal curves. Cambering is for dead load deflection and vertical roadway profile per AWS D1.5 2020 Section 5.5.3 tolerances
- **Precast decks can be sealed with Pavix** or any other concrete sealant by the Precaster and can be left as is or coated with any typical overlay material
- **The same grout product that is used to fill the keyway** is used to fill the holes that were left in the deck for the lifting slings to pass through; typically Transpo T17 Polymer Concrete or Ductal LaFarge UHPC
- **The end walls** on precast units can be precast or cast in place
- **Any type of expansion joint** can be accommodated at the designer's discretion
- **Scuppers and drains** can be accommodated

FAQ's continued . . .

- **Parapets and curbs** can be accommodated; these get complicated with the precast method and may be most economically accomplished with a cast in place deck
- **Any type of Bearing Pads,** Roller Bearings or Integral Abutments can be accommodated: IDOT “Pads, Bearing, Elastomeric Type I”
- **Bearings** can be fixed or expansion
- **Multiple Span pier cap width:** minimum 24” total
- **Valmont will do as much or as little of the design as desired**
- **IL SE stamp** can be provided