

# Gallia County's Design Build Method

2016 CEAO BRIDGE CONFERENCE

AUGUST 17, 2016



# Design Build Experience

- ▶ 6 Design Build Bridges
  - ▶ 2 Trusses
  - ▶ 2 Box Beam Bridges
  - ▶ 2 Steel Beam Bridges
- ▶ Circumstances
  - ▶ 2 bridge collapsed
  - ▶ 4 scheduled bridge replacements



# Bid Package – Scope of Work

- ▶ Span & width (f to f)
- ▶ Existing piers incorporate or aesthetics
- ▶ No concrete parapet, weathering steel, timber decks.
- ▶ Required Load Rating
- ▶ DBE Goal
- ▶ Pre-bid meeting
- ▶ Utility Relocation DBT
- ▶ Included QA/QC testing in DBT
- ▶ Local Let
  - ▶ Project Administration
  - ▶ Project Inspection
  - ▶ Monitored QA/QC Testing and performed separate our own testing.

# Preliminary Engineering

## Tasks

- ▶ Acquired Funding
- ▶ Scoping Meeting
- ▶ Project Development
- ▶ Soil Borings
- ▶ Site Plan
- ▶ Geotechnical Eng.
- ▶ Environmental
- ▶ Right of Way Appraisal
- ▶ Right of Way Acquisition



**Total Preliminary Engineering Cost = \$69,848**

(GCE time for coordination/contracts not included.)

(ROW ~ \$35,000 Federal Funds)

(ROW on state exchange \$1,500)

# Innovative Contracting

- ▶ **Total Bridge Closure**
  - ▶ Incentive/De-incentive
  - ▶ Public Notification (Robo call, commissioner/ township/farm bureau meetings, press releases, emergency services.)
  - ▶ Damages beyond project completion dates.



# New Bridge

- ▶ **Warren Camelback Through Truss**

DB Cost = \$1,449,827.50

Construction Eng. = \$22,605.51

- ▶ **Closed July 8<sup>th</sup> opened to traffic November 15<sup>th</sup>, 2013 for **131** day closure.**

Total Construction Cost = \$1,472,433.01

Total Preliminary Engineering and Construction Costs = \$1,561,541.01

- ▶ **\$0 in change orders on the construction of the bridge.**



# Design Build vs. Traditional

Design Build Construction  
Cost=\$1,449,827.50

## Design and Construction

LBR = 80% = \$1,159,862

Credit= 15% = \$ 217,474

Local= 5% = \$ **72,491**

Traditional Construction Only =  
\$1,350,000

## Design

Local = 100% Design = **\$100,000**

## Construction

LBR = 80% = \$1,080,000

Credit 15% = \$ 202,500

Local = 5% = \$ **67,500**

Since LBR funds are not permitted for design on traditional projects, but are on design build projects, Gallia County will continue design build in the future on all bridge projects utilizing federal funds.

# Design Build Best Practices/What we learned

- ▶ Know what you want or don't want in your bid document.
- ▶ Review plans from DBT closely before approving.
- ▶ Need a good contractor – Constant Communication.
- ▶ A good bond between contractor and consultant.
- ▶ Design Build is faster way of building bridges.
- ▶ Design Build is a cheaper way of building bridges.
- ▶ Contractor has all liability – No Change Orders