

JC-32 Gilbert Road Bridge Superstructure Replacement Over Clear Run

Client: Jefferson County (PA) Commissioners

Completed: 2011 Cost: \$600,000



The JC-32 Bridge, known locally as the Gilbert Road Bridge, was built in 1920. The bridge consisted of substandard steel girders with concrete encased floor beams. Severe deterioration of the steel superstructure required replacement. Using the existing stone masonry abutments, Gwin, Dobson & Foreman designed a replacement superstructure that complied with all state and local requirements as follows:



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- 41'-6" single span, one-lane, steel I beam superstructure with a composite, reinforced concrete deck. The existing wingwalls were extended using the stone masonry removed from the abutments. A cast-in-place concrete curtain wall was constructed around the existing abutments and wingwalls as a countermeasure to protect from scour and undermining. All existing stone masonry was cleaned and the mortar joints were repointed.
- The bridge cross-section was widened to comply with PennDOT's one-lane bridge criteria. The vertical alignment was increased to allow the increased superstructure depth. Since the width of the hydraulic opening was inadequate for the design flood, the far approach was depressed to create an overflow channel to decrease backwater elevations.
- To increase driver safety, pull-off areas were constructed at each approach.

GD&F did all preliminary engineering and final design work including Line and Grade report; Hydrologic/Hydraulics report; Categorical Exclusion report; Type, Size and Location report; General Permit application; Right-of-Way Plans; Plans; Specifications and Cost Estimate; construction administration; and construction inspection. All design and construction work was done under the direction of PennDOT District 10-0, Indiana, PA.