CASE STUDY

I-69 OVER TRIBUTARY TO INDIAN CREEK, STRUCTURE 9

INSTALLATION DATE—OCTOBER, 2013

PROJECT TEAM MEMBERS:

Owner: Indiana Department of Transportation
Engineer: URS
Contractor: Milestone
Precast Producer: Independent Concrete Pipe Company

TECHNICAL DETAILS:

Span: 30’-0”
Rise: 11’-0”
Length: 500’-0”
Cover: 76’-0”
Live Load: HL-93
Skew: none
Type: Versa™ Series
Multiple-Radius

When designing the new I-69 extension through Southern Indiana, URS needed a solution to carry the highway over a wide valley and a relatively small stream. With over 1,500’ from top of bank to top of bank and 90’ from stream bed to top of road elevation, a significant bridge would have been required to span the valley.

Instead, URS found that a 30’ span x 11’ rise buried arch would meet all hydraulic requirements. PreTek Group proposed a precast concrete solution to carry the stream under 76’ of earth embankment. This solution offered significant savings over the conventional bridge alternative.

In addition to the initial cost savings, the buried bridge provides other benefits. Up to 120,000 sf of future bridge deck maintenance is eliminated. Safety and ride quality are improved with elimination of the elevated deck and approach slabs. In addition, the embankment protects the stream from salt and de-icing chemicals applied to the road surface.

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