Engineering Tomorrow's Infrastructure

U.S. Highway 160 Arkansas River Bridge

Sumner County, Kansas

Principal-In-Charge:
Hagos Andebrhan, PE

Project Manager:
Burrel Boley, PE

Construction Cost:
$1.6 Million

Delivery Date:
1985

The U.S. Highway 160/Arkansas River Bridge illustrates the savings possible when sound engineering and problem-solving strategies connect. Originally, this project scope involved total replacement for this Kansas Department of Transportation (KDOT) bridge project. In reviewing the existing bridge for demolition, Taliaferro & Browne determined that the existing substructure appeared to be in good condition and reusable, if new pier caps could be devised to support a new superstructure. This change in course resulted in construction being successfully completed on time and at a savings of more than $300,000 over a complete replacement.

Taliaferro & Browne's engineering services included developing methods for demolishing the existing concrete arches (in stages to maintain traffic) and for constructing new pier caps on the existing piers. The seven concrete arch spans, each approximately 80 feet in length, were replaced with rolled steel beams made continuous over the piers and composite with the concrete deck. The new superstructure provided for a concrete deck with two, 12-foot lanes and two, 10-foot safety shoulders. KDOT corral rails were provided on the deck to promote safety and drainage. Deck joints were provided only at the abutments to reduce maintenance costs.

Client:
Kansas Department of Transportation

Taliaferro & Browne, Inc.
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