

# MECHANICSBURG ROAD BRIDGE OVER SUGAR CREEK SANGAMON COUNTY HIGHWAY DEPARTMENT



## CHALLENGE

*Flood events and age had taken its toll on this four-span highway bridge. The bridge was deemed structurally deficient and the approaches were prone to frequent flooding.*

Sangamon County needed an economical, cost-effective solution to a structurally and geometrically deficient bridge. Enhancements were also needed to improve the safety of this heavily-travelled, high accident location.

## SOLUTION

HLR designed 3,300 feet of relocated two-lane county highway and a four-span composite steel I-beam bridge over Sugar Creek located two miles east of Springfield, Illinois.

HLR served as the lead engineering firm, providing a Phase I Project Development Report, preliminary alternate traffic staging alignments, preliminary bridge design and hydraulic report, Water Resources Permit, Corps of Engineers permit, roadway and structure plans, traffic control plans, right of way documents, specifications, and estimates of cost and shop drawing review. To gain approval for the project, HLR coordinated with regulatory and permitting agencies including:

- Illinois Department of Transportation
- U.S. Army Corps of Engineers
- Illinois Department of Natural Resources
- Illinois Environmental Protection Agency

The second phase of the project included reconstruction of four miles of County Highway located adjacent to the east end of the project. HLR completed the contract plans, specifications and estimates for this section, which has not yet been built. This section is in a rural residential area of rolling terrain. The high traffic route combined with poor sight distance to numerous residential entrances made this a high accident section. The improvements consisted of substantial vertical grade improvements and guardrail additions.

## RESULTS

*Construction of the bridge and adjacent approaches was complete in 2002. The roadway remains to be reconstructed. Benefits include improved traffic flow as well as:*

- Reduced interruption due to flooding.
- Improved mobility for emergency vehicles
- Improved safety for the motoring public.



NEW MECHANICSBURG ROAD BRIDGE

## CONSTRUCTION BUDGET

\$3.6 Million – Bridge  
\$5.6 Million – Roadway