

L.R. Kimball applies its design-build expertise to create bridge access to Pennsylvania airport, earns national honors

THE SITUATION

Motorists traveling to the Dubois/Jefferson County Airport in Pennsylvania always have confronted a frustrating navigational issue: they could take the easterly exit from I-80 onto State Route 830 or choose the exit 19 miles to the west. Either way, drivers would be compelled to wander along SR 830, a two-lane road, for more than 10 miles before reaching the airport. The driving distance could be cut by 60 percent, however, with the construction of a new interchange where the interstate passed over Township Road T-544, also known as Sensor Road. The Pennsylvania Department of Transportation (PennDOT), District 10-0, issued a contract for the design/build construction of the bridge over I-80 and the interchange. The team of L.R. Kimball and Glenn O. Hawbaker, Inc. were the successful bidders for the project.

THE SOLUTION

L.R. Kimball examined the efficiencies that PennDOT was seeking and recommended a more effective way to target those results through expertly managed processes. L.R. Kimball designed a two-span, continuous pre-stressed concrete bridge more than 305 feet long overall, with a reinforced concrete hammerhead pier and with mechanically stabilized earth (MSE) abutments and wings. Working with its construction partner, Glenn O. Hawbaker, Inc., L.R. Kimball completed the bridge on time and within the allotted budget.

The structure became the first modified turnkey/design-build project in PennDOT District 10-0, with PennDOT establishing preliminary engineering information and the design-build team completing design and construction. L.R. Kimball's project management expertise significantly contributed to the project's success.

THE CHALLENGES

A preliminary bridge design had been prepared by others for the I-80/Sensor Road intersection, but the design/build team modified the design significantly to minimize cost and contract duration. The initial drawings had specified concrete stub abutments—short abutments built atop an embankment and pilings—and a four-span bridge.



A CDI Company



Project Overview

CLIENT
Glenn O. Hawbaker, Inc.

GOAL
Design of a new highway overpass bridge for the new Dubois / Jefferson County Airport Interchange

L.R. KIMBALL SERVICES

- Bridge design
- Structure design
- Geotechnical engineering
- Drilling services

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AVIATION | CIVIL | CONSTRUCTION SERVICES | DATA SYSTEMS | ENVIRONMENTAL
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THE RESULTS

By eliminating two spans in its bridge design, L.R. Kimball significantly reduced the construction cost of the project and kept it on schedule. Now drivers can exit I-80 directly onto Sensor Road for a much faster, relatively straight trip of just four miles to the airport.

The Dubois area expects increased commerce at the airport because of this easier, more efficient access. PennDOT agrees; it described the Route 830 Airport Access Project as an economic lifeline. After winning first place for “On Budget” in the Northeastern Association of State Transportation Officials (NASTO) region, the project ultimately was named one of just 10 finalists for the national “America’s Transportation Award.” The award, which recognizes excellence in projects of state departments of transportation, is sponsored by AAA, the U.S. Chamber of Commerce and the American Association of State Highway and Transportation Officials.

The wide-ranging design-build experience of L.R. Kimball has helped transportation departments, municipalities, schools and utilities build new facilities and capabilities expeditiously, helping communities and commerce grow.



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