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Indiana Completes Highway Years Early, Millions Ahead

By Kevin Wilcox



The Indiana Department of Transportation opened 67 new miles of I-69 between Evansville and Crane earlier this month, several years ahead of schedule and \$80 million under budget. Courtesy of Cher Elliott of INDOT

The Indiana Department of Transportation capitalized on an innovative funding source to complete a portion of the long-awaited Interstate 69 far ahead of schedule and under budget.

November 27, 2012—The Indiana Department of Transportation (INDOT) opened 67 new mi of Interstate 69 between Evansville and Crane earlier this month, several years ahead of schedule and \$80 million under budget. This represents the first three segments of a six-section highway project that will eventually link Evansville, Bloomington, and Indianapolis, where it will connect via I-465 with an existing portion of I-69 completed in 1971.

"I-69 between Evansville and Indianapolis really got under way in earnest in the late 1990s with the initial Tier 1 Environmental Study," says Will Wingfield, the director of media relations for INDOT. "Before funding was identified, we were at one point estimating that construction of this section wouldn't even begin until 2017."

The project is funded via the Major Moves initiative put forward by Governor Mitch Daniels in 2006. By leasing the Indiana Toll Road—a vital route linking the Chicago Skyway to the Ohio Turnpike—the state raised \$3.8 billion to fund a host of highway projects, including I-69. The route will provide important connections in southern Indiana.

"While a large part of the state benefits from improved access to jobs, education, and healthcare as a result of the national highway system, southwest Indiana was largely left behind—and that can be reflected in population growth, job growth," Wingfield says. "What it means ... is uplifting southwest Indiana, but also making the state as a whole a stronger place to live and work and do business."

The new highway segment crosses the Patoka River National Wildlife Refuge, home to otters, beavers, migratory birds, rare fish, and the occasional eagle. This area provided some of the biggest engineering challenges of the project. To protect the river and marshland, INDOT built twin bridges, approximately 4,400 ft long, to span the entire Patoka floodplain in the remote area. The only access to the site was via a narrow, gravel road.

The piers are founded on drilled shafts ranging from 60 to 102 ft deep, extending through silt soils and at least 15 ft into bedrock, says Brian Malone, P.E., the I-69 project manager for INDOT.

"They wanted to minimize the number of piers in the bottom, so we ended up going in with span lengths anywhere from 130 feet to 150 feet long," Malone says. The massive concrete T-bulb girders are 7 ft, 6 in. tall and weigh as much as 90 tons.

"That's 244 beams that had to come in down a narrow gravel road that might have been about 18 feet wide," Malone remembers. "Steerable trailers were used to get them in. It was quite a challenge just to get the beams there." Once the beams were in, workers had to place them from equipment restricted to a small causeway in the middle of the highway footprint to protect the river.

The river didn't cooperate during the process, as construction was halted from November 2011 to February 2012 because of flooding. An unusually dry summer allowed the construction team to make up the lost time.



Section 4 of the highway is already under construction, slated to be complete by the end of 2014. That section presents a different engineering challenge. Engineers and contractors will contend with karst, an eroding limestone condition that creates sinkholes and underground rivers and lakes, some of which become homes to rare bats and fish. Karst is also prone to contamination via runoff from construction projects.

"We have to really control our water runoff—during construction, especially—to keep silt and sediment from getting down into these sink holes," Malone says. "We have to protect those all we can. We've got measures in place that if we find one that is not known, the contractor is to contact the INDOT people on the job and then we contact all of the agencies and we develop a plan to handle it while the contractor avoids the area."

The project is running 25 percent under budget at this point, attributable in part to INDOT allowing contractors to compete in the bidding process with their choice of concrete or asphalt for sections of the highway in which geotechnical conditions allowed. The resulting highway has 50.2 miles of concrete and the balance paved in in asphalt.

Massive concrete T-bulb girders, some as long as 150 ft and weighing 90 tons, were brought in to parts of the project via narrow gravel roads. Courtesy of Cher Elliott of INDOT

The project in Indiana is a link in an eventual national I-69 that will extend through seven states, from the Mexican border in Texas to the Canadian border in Michigan.

"Many people said this interstate expansion wouldn't happen in their lifetime, but it's now poised to open and the result will be greater economic opportunity, faster and safer travel, improved connectivity, easier access for leisure travel and more," said Daniels in a press release announcing the opening of the first sections.

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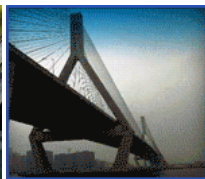


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