

In Tallahassee Redesign, Steel Makes The Grade

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By Deb Wood

Concrete or steel? Steel won one round in the case of a bridge in Lee County, Fla., thanks in part to the quixotic nature of materials prices but mostly to a value engineering exercise that drew specifically on steel's attributes.

Lee County expects to save at least \$1.85 million on the \$37-million construction of the Estero Parkway Flyover, based on a redesign by Finley Engineering Group, Tallahassee. The two-year job began this month. "If someone can save us a couple bucks, we don't care whether the bridge is concrete or steel," says Donald DeBerry, county public works operations manager.

The 561-ft-long x 116-ft-wide flyover extends Estero Parkway over Interstate 75. It was originally designed in concrete by PBS&J, Tampa. But in this case, "the cast-in-place, post-tensioned box girder was a very expensive alternative and did not fit well with the site requirements or the owner's requirements," says Craig Finley, president of Finley Engineering.

Finley presented his plan to Zep Construction, Fort Myers, Fla., which won the contract in August. "At the time of the post-tension design, steel prices were pretty high, but since then, prices went down," says Jovan Zepcevski, Zep president. "After I found the prices of steel were better [than] concrete, we started the process to save some money."

DeBerry says materials costs did change, but the savings also are connected with how efficient a contractor is with specific methods. He notes that he is now opening bids for a project where the contractor wants to switch from steel to concrete to save money.

If the redesign saves more than the \$1.85 million Zep guaranteed the county, Zep and the owner will split the surplus equally. Zep must complete the job in the two-year time frame.

Robert Clark, president of steel fabricator Tampa Steel, Tampa, notes that the redesign calls for heavier webs that reduced the need for stiffeners and cross braces. The four steel girders allow for shallower grades, so Zep will use fewer mechanically stabilized earth walls. Because the steel weighs less, the foundation will be lighter and require 40 prestressed concrete pilings rather than 75.

The original plans also called for extensive shoring. With poor soil conditions, Zep would have needed to drive timber piles or pour a concrete mat. That would have hindered equipment moving for a \$430-million widening of I-75 beneath, says Zepcevski. Now, there will be just two shoring towers to avoid.



Steel girder design will lighten loads and costs on a new flyover, while clearing space below for Interstate work.