

Florida Contractor with Family Ties

Leware Construction Company has more than 50 years of bridge-building experience across Florida

by Monica Schultes



Leware is installing more than 30,700 ft of Florida I-beams weighing up to 92 tons each and 36,900 ft of 24-in. prestressed concrete piling to construct two Interstate 75 ramps, each 3400 ft in length, in Manatee County, Fla. The \$144 million project is a joint venture with Ajax Paving Industries. All Photos: Leware Construction Company.

Like many firms in the construction industry, Leware Construction Company bears the name of its founder, Jim Leware Sr., who started building concrete bridges in 1970. Family-owned and operated, Leware is based in Leesburg, Fla., and has focused on concrete bridges in Florida for more than 50 years. Leware's vice president, Keith Waugh, who has been around since the company's early days, says that the family business is still as steady as ever.

Much of the work that keeps Leware's crews busy is obtained through the competitive-bid process. Leware has established a solid reputation, and the Florida Department of Transportation (FDOT) respects the decades of experience that the company brings to the table.

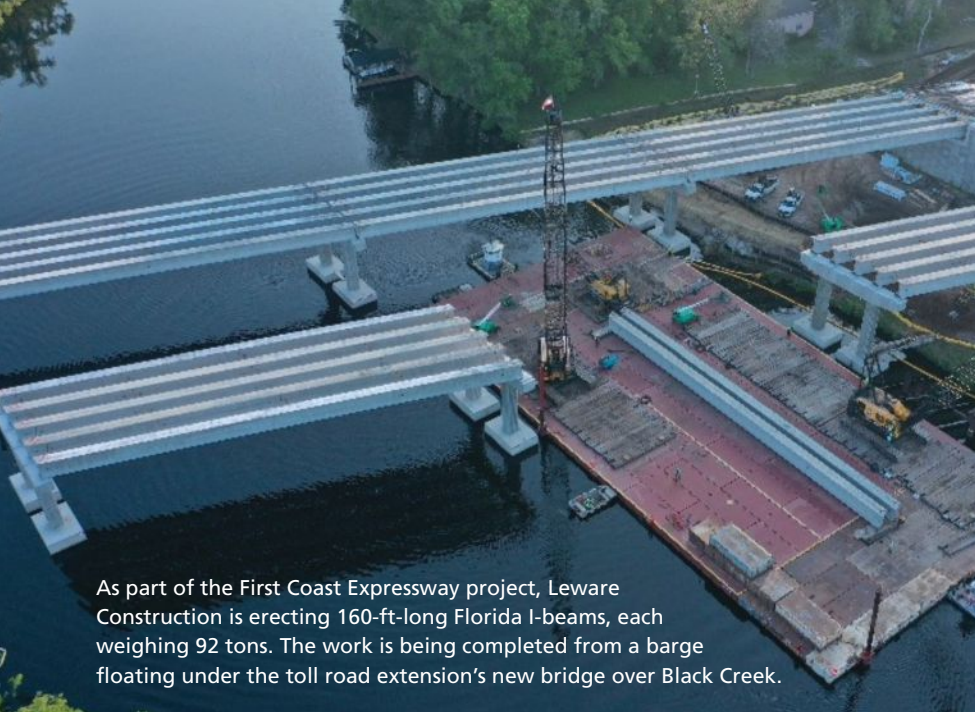
"We focus on what we know," says Waugh. Familiarity with FDOT requirements and preferences allows Leware to take advantage of midsize and midrange bridge projects in the company's sweet spot. "For larger projects, we joint venture with partners, or we perform subcontract work," Waugh notes.

For example, Leware entered into a joint venture with Ajax Paving Industries for the Interstate 75 (I-75) and U.S. Route 301 interchange reconstruction project in Manatee County, Fla., with Leware serving as the bridge contractor and Ajax as the road and paving contractor. For this FDOT project, new 3400-ft-long bridges are being constructed for a northbound exit ramp and a southbound entrance ramp over the

Manatee River. The project scope also includes the widening of two bridges over Salt Marsh that have a combined length of 2700 ft. In July 2022, Leware began installing 36,900 ft of 24-in. prestressed concrete piling for the I-75 ramps.

Solidifying the relationships that the company has in the construction industry is an important part of Leware's success. Top executives play an active role in trade associations, and they are also involved in managing projects. Their formula includes careful control of expenses, the right amount and type of technology, and managing risk.

At Leware construction sites, crane operators set the pace and orchestrate the activity. Familiarity with the



As part of the First Coast Expressway project, Leware Construction is erecting 160-ft-long Florida I-beams, each weighing 92 tons. The work is being completed from a barge floating under the toll road extension's new bridge over Black Creek.

equipment improves the flow and handling of materials, while optimizing crane use improves productivity and schedules.

Focus on Florida

The early development of tourism in Florida was driven by the state's infrastructure, and Central Florida cities along the Interstate 4 (I-4) corridor from Tampa Bay to Orlando continue to grow at an accelerated rate, with Orlando being one of the fastest-growing metropolitan areas. Whereas Florida was once famous for attracting snowbirds and retirees, people from all walks of life now move there. As the state has prospered with the influx of population over the years, so has Leware Construction.

Waugh explains that Leware stays focused on Florida because "we know the people, specs, weather, and geology, and work very closely with FDOT. We are deeply involved with industry groups like the Florida Transportation Builders Association (FTBA), and we know policies and procedures and are comfortable here."

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To illustrate the company's commitment to the state's industry and communities, Jim Leware Jr. served as the chair of FTBA in 1996; the company's executive

vice president, Andy Clark, served in the same role in 2001; and Keith Waugh was installed as chair in 2022. No other company has had three executives hold the position of FTBA chair.

Florida I-Beam

FDOT emphasizes consistent design and good value in the construction of its highways and bridges. Like other state transportation agencies, FDOT has collaborated with industry partners to develop more efficient bridge beams. The Florida I-beam (FIB), first produced in 2009, has a wider bottom flange and lower center of gravity than an AASHTO-type beam. As a result, FIBs can accommodate more prestressing strands and are more stable in shipping, handling, and placement.

Waugh believes that the introduction of the FIB proved to be a huge leap forward. "That was a major innovation at the time, which has streamlined and economized hundreds of bridges since then," he recalls.

Leware is in the process of setting 160-ft-long, 78-inch-deep, 92-ton FIBs as part of the First Coast Expressway project near Jacksonville, Fla. FDOT has already completed several phases of the 46-mile toll road, with two more segments currently under construction.

In Lake County, Fla., Leware replaced the Little Lake Harris Bridge along State Road 19 using FIBs and precast concrete substructure elements that were founded on 24-in.-square prestressed concrete piles with lengths up to 140 ft.

Leware Construction Company

Family-owned and operated Leware Construction Company was founded in 1970 by Jim Leware Sr., a graduate of Georgia Tech who had managed the bridge division of a major contractor in the 1960s. When Jim Sr. passed away in 1986, his elder sons, Jim Jr. and Scott, were thrust into managing the business. They continue to do so today, along with third-generation family members.

In the half century since Jim Leware Sr. bought his first crane, Florida has gone through significant changes, including an increase in population across the state and many major road and bridge projects. Leware constructed numerous bridges for the original Interstate 10 in north Florida and Interstate 75 through southwest Florida. As the state boomed, many new bridges were built for the Crosstown Expressway in Tampa, the East-West Expressway (State Route 408) in Orlando, and other major limited-access facilities throughout central and northeast Florida.

"We saw a lot of success throughout our early years along with the population boom in Florida," recalls Keith Waugh, the company's vice president. With the ever-increasing popularity of Orlando tourist attractions, there was high demand for more infrastructure in the region, and that, combined with Leware Construction's specialized knowledge of concrete bridges, sustained company growth.

Since its early days with just a few crawler cranes, Leware has grown to have a large fleet of cranes and equipment. Comfortable with maintaining the company's current size and workload, Leware focuses on preserving relationships with government officials, other contractors and subcontractors, and local communities.

"In a family business, we know how important it is that people look out for one another," says Waugh. "We all do that while protecting the sense of family that started it all. I believe Jim Sr. would be pleased that we have continued to build on the foundation he provided us."



A self-propelled modular transporter (SPMT) was used to move an eight-girder span unit with a concrete deck and railings into position at Graves Road over Interstate 4. Use of the SPMT reduced the road closure from several weeks to two nights.

The \$22 million contract called for the 3250-ft-long bridge—which is often referred to as the Howey Bridge—to open in early 2020. In fact, the construction team completed the work ahead of schedule and under budget.

Success in projects such as these often depends on advance organization of the day's work to minimize crane idle time. Leware professionals have extensive technical knowledge, which they use to optimize day-to-day execution on the jobsite and reduce safety risks. Decades of successful projects showcase the Leware team's on-site efficiencies.

Innovative Methods

In Florida, certain construction activities—including removing existing beams, installing new beams, and placing new bridge decks—are not permitted over active traffic. To fulfill this requirement, Leware employs

innovative methods to complete work while minimizing lane closures.

According to the Federal Highway Administration,¹ the first use of self-propelled modular transporters (SPMTs) over a U.S. Interstate highway occurred in Florida. The 2006 FDOT project used the relatively new method to accommodate the widening—from four to six lanes—of I-4 at Graves Avenue in Volusia County.

As a subcontractor to Ranger Construction Industries, Leware's team used the new method to transport a unit of eight 78-in.-deep Florida bulb-tee beams for each of the two spans. Weighing 1300 tons, each span unit of the new bridge included an 8-in.-thick concrete deck and traffic railings. After fabrication, the spans were then transported and erected using SPMTs. A cast-in-place reinforced concrete

substructure was founded on driven prestressed concrete piles.

The SPMT system, which is more commonly used today, meant that I-4 was closed for just two nights, rather than the numerous weeks of nightly lane closures that would have been required without SPMT technology (for more details on the Graves Avenue Bridge project and concrete bridge innovations in Florida, see the State article in the Fall 2007 issue of *ASPIRE*®).

In a joint venture with the deMoya Group, Leware Construction was involved in a design-build project to widen Interstate 75 near Fort Myers, Fla. This project included six low-level bridges and twin 3850-ft-long high-level bridges over the Caloosahatchee River. That river is home to Florida's second-largest population of manatees, and FDOT's plans required extensive

On the design-build project for widening Interstate 75 across the Caloosahatchee River, two custom-built rubber-tired straddle carriers spanned 84 ft across the median gap between the east and west twin bridges to deliver materials.



coordination with numerous agencies to protect these vulnerable mammals and their habitat. All of the bridges on this project were constructed using top-down construction methods to minimize impacts to wetlands. Material deliveries for the Caloosahatchee River Bridge were handled with two custom-built rubber-tired straddle carriers with 84-ft clear spans to accelerate construction and reduce traffic interference. (For details on this project, see the Concrete Bridge Technology article in the Spring 2022 issue of *ASPIRE*.)

Sustaining Success

Concrete construction is hard, hands-on work. Building forms, tying reinforcing steel cages, and placing concrete are extremely labor-intensive activities, and maintaining an adequate workforce is challenging. However, according to Waugh, "Now is the time to consider a career in bridge construction. The vocation offers opportunities to both begin and advance in an industry that builds the basis for how we live, work, and play."

Leware Construction offers competitive wages and benefits and continues to promote the construction industry as an industry where employees can make a good living through hard work.

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Leware is very much a family-oriented firm, where many of the employees are in it for the long haul. The staff wear many hats. They may be in the field one day and meeting with owners and agencies the next. According to Waugh, "The thing that sets us apart

is that we are extremely mobile and flexible. We own all of our equipment and generally don't need to rent anything." Family members are actively involved in projects. "We stick to what we know, and that minimizes our risk in what is already a risky business," Waugh says.

Conclusion

Concrete—including cast-in-place, precast, and segmental concrete construction—is king in Florida. Leware has built hundreds of bridges in the past half century. The company's sense of family has pervaded their work and is reflected in their accomplishments across the region.

Reference

1. Federal Highway Administration (FHWA). 2007. *Manual on Use of Self-Propelled Modular Transporters to Move and Replace Bridges*. FHWA-HIF-07-022. Washington, DC: FHWA. <https://www.fhwa.dot.gov/bridge/pubs/07022/hif07022.pdf>. 

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