PRESS RELEASE

September 13, 2022

**Mega fleet of Manitowoc crawler cranes creates a new chapter in the history of iconic Florida bridge**

* *A new, three-mile-long Howard Frankland Bridge is being constructed over Tampa Bay, alongside the famous-yet-flawed original span.*
* *Over 20 Manitowoc crawler cranes are currently being used to drive sheet and piles and build columns and set beams and decks. The cranes were adapted for use in the marine environment in partnership with the manufacturer and dealers Walter Payton Power Equipment and Ring Power Crane.*
* *The bridge’s design and construction are a joint venture between Archer Western Construction LLC, part of The Walsh Group, and Traylor Bros. Inc.*

The Howard Frankland Bridge has been an iconic Florida landmark for over half a century, carrying 132,000 vehicles along I-275 between Tampa and St. Petersburg daily. However, its infamous traffic jams have resulted in the bridge becoming a major chokepoint, and multiple expansions since its opening in 1960 have proven only partially successful in reducing congestion and traffic accidents.

Once again, the bridge is undergoing a major upgrade — and an army of Manitowoc cranes is almost exclusively providing the heavy-duty support necessary for the Florida Department of Transportation’s largest-ever plan to cater to future growth in the Tampa Bay area. The bridge’s design and construction are a 60:40 joint venture between Archer Western Construction LLC, part of [The Walsh Group](https://www.walshgroup.com/), and Traylor Bros. Inc.

Work began in November 2020 on the $865.3 million project to build a brand-new structure alongside the existing southbound bridge. At just under three miles long, the complex new, 168 ft-wide design will support more deck area than any other bridge in the state, which explains why 3,000 concrete and steel piles — a potential 43 miles worth of them — will be installed into the bay’s limestone bedrock. It also reveals why over 20 lattice-boom Manitowoc crawlers, including a 4100 ringer, are the workhorse fleet on the project, boasting the best load charts in their class and outstanding performance in bridge-building operations. Models include 14000, 999s, 2250s, 888, and MLC300s, with standard maximum capacities between 200 and 330 t.

**Trusted choice**

Planning for the crane-intensive project started 1,200 miles away at The Walsh Group’s Chicago headquarters.

“One of the unique challenges of this job is the sheer number of cranes needed. From a business stance, buying all new was not the right option, so we used a mixed strategy. With the volume of Manitowoc crawlers in our fleet, we refurbished many of our existing cranes and supplemented them with four new MLC300 models,” said Chris Stearns, senior manager at Walsh. “We also purchased used Manitowoc crawlers that were refurbished by the Walsh shops in Chicago and Texas and at Manitowoc dealer [Ring Power Crane](https://www.ringpowercrane.com/) in Florida.”

Ring Power Crane refurbished and repaired several 2250s, 888~~s~~, 14000s, and one MLC300, with all work completed in-house at their Riverview, Florida, location. This included an overhaul of the mechanical and hydraulic systems, tracks, and full repainting of each refurbished crane.

Walsh turned to Manitowoc dealer [Walter Payton Power Equipment](https://www.wppecrane.com/), based in Riverdale, Illinois, to help prepare an armada of ready-to-work cranes. In addition to providing parts for the refurb, WPPE offered guidance on crawler selection and configuration, barge loading processes, and special adaptions to fortify the units for marine applications.

The bridge’s construction is linear, starting at both ends concurrently and progressing to the center. This required tight coordination for equipment selection, said Pat Delis, Walsh’s account rep at WPPE.

“Part of the challenge with driving pile in Tampa Bay is that the geology of the rock changes rather rapidly across the entire bay, both in-depth and hardness. Once we’ve selected the correct model for the capacity and radius, each crane needed to be configured specific to its application,” Delis said. “Strong charts were a major concern since the center of gravity is always changing on the water, and Manitowoc crawlers have a reputation for their solid barge charts.”

As of May 2022, crews have sunk over 1,700 concrete piles, ranging anywhere from 77 ft – 121 ft in length due to the uneven floor of the basin. “Each concrete pile weighs about 1,000 lbs per foot, so if we're driving a 121-foot pile, you're looking for around 121,000 lbs to trek that pile from just one crane. So, this isn’t a job for just any crane,” said Greg Fullington, project executive with The Walsh Group.

In typical pile driving from barges, beams of this size require two crawlers to tip into position. Seeking a more productive method, Walter Payton collaborated with the [Manitowoc Lift Solutions](https://www.manitowoc.com/support/lift-solutions#:~:text=The%20Manitowoc%20Crane%20Lift%20Solutions%20Team%20is%20a,for%20their%20Manitowoc%20cranes%2C%20regardless%20of%20product%20line.) team to design special tilt block adaptors to deftly handle the piles.

“Now, you can place the pile with a single crane because you can hang two blocks from the same point,” said Dustin Soerens, product support specialist with Walter Payton. “The tilt block adaptor pins into the lower boom point and provides sheave-mounted transverse to the boom, allowing the piles to be tilted side-to-side without exceeding the allowable angles of the wire rope reeving.”

Another complexity of marine piledriving is the constant saltwater spray back from augering. The crawlers were fortified with a special marine-based zinc undercoating to resist corrosion over the five years the cranes will be on the water.

**Peak performance**

Uptime is non-negotiable for a project of this scale. Whether driving concrete or sheet piles, the contractor’s intensive regular inspection program, in conjunction with Manitowoc’s legendary high build quality, is ensuring all cranes continue to operate in peak condition.

“We’ve rarely experienced any unexpected downtime,” Stearns said. “With all those vibrations, we must pay close attention to the boom tips. We perform monthly inspections, which equates to servicing a crane each working day.”

Barge servicing is unconventional but efficient. Ranging from a minimum of 290 ft in the heavy-lift configuration on the 999 to 334.6 ft on the MLC300, each boom is too long to be laid tip-down while the crane is on its work platform. Instead, a second barge is positioned in front to accommodate the extended boom, while a maintenance barge moors alongside to begin servicing.

“In my opinion, Manitowoc cranes offer a good balance of performance capabilities, and technology without excess complexity,” said Greg Moore, senior equipment manager at The Walsh Group. “The operators like the cranes, they are intuitive to use, and our technicians find them easy to maintain.”

The project underlines the strength of the Manitowoc dealer network to give Walsh, and all customers, a consistently high level of service nationwide.

While Walter Payton provides technical and service support from Illinois, in Tampa, local Manitowoc dealer Ring Power Crane is lending daily boots-on-the-ground personnel.

“We’ve partnered with Walter Payton and Walsh for many years as jobs bring their cranes into our territory. Additionally, the support and flexibility we receive from the Manitowoc factory team in Wisconsin have been exceptional. Whenever we call, we reach a real person and get the issue resolved on the spot,” said David Courtney, vice president, product support and operations manager for Ring Power Crane.

**Working in harmony**

Many of the project’s challenges come from the natural world.

“The bay is an environmentally sensitive area, so we’ve hired dedicated personnel to look out for manatees and any other endangered species in the waters around the bridge. Manatees are attracted by the seagrasses, which we mark with buoys to ensure our barges don’t impact them, or that we don’t split down our equipment in those areas. Any time they come within proximity of our equipment, we’re required to shut down until they leave the area before we can work,” Fullington said.

For an added level of environmental protection, the crawlers use a special biodegradable-type hydraulic fluid that was formulated and approved by Manitowoc Lift Solutions to replace standard petroleum-based lubricants. “We pay a lot of attention to the hydraulic hoses during inspections and replace them scheduled, preventive fashion — the ultimate goal is to make sure no oil gets off the barge,” Moore said.

“Another way we are minimizing our effects on the bay is at the foundations of our piling operations,” Fullington added. “We're performing underwater acoustic studies with the help of a local university to measure the decibel level of our operation to ensure that we're below allowable thresholds.”

As one of the U.S.’s largest bridge builders, Archer Western’s expertise is key to keeping the project on pace for a 2025 completion. The new bridge will support eight lanes, comprising four general use and two express (tolled) southbound lanes, and two express northbound lanes, in addition to a 12ft-wide shared-use path for cyclists and pedestrians. With one section built with heavier loads in mind, the new bridge has also been designed to meet future demand for a light-rail transit system and accommodate self-driving cars.

Once the new bridge is fully opened, demolition of the original span will be the final chapter in its well-traveled story — one in which Manitowoc crawlers will likely play a central role, again.

To watch a video on this project, click [here](https://www.youtube.com/watch?v=jx_9bHX0sP8).

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ABOUT THE MANITOWOC COMPANY, INC.

The Manitowoc Company, Inc. was founded in 1902 and has over a 120-year tradition of providing high-quality, customer-focused products and support services to its markets. Manitowoc is one of the world's leading providers of engineered lifting solutions. Manitowoc, through its wholly-owned subsidiaries, designs, manufactures, markets, and supports comprehensive product lines of mobile hydraulic cranes, lattice-boom crawler cranes, boom trucks, and tower cranes, under the Aspen Equipment, Grove, Manitowoc, MGX Equipment Services, National Crane, Potain, and Shuttlelift brand names.

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