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How TMEiC and Global created a new standard in port safety and productivity

The ambitious Global Terminal Expansion Project (Global) in Jersey City, New Jersey went live on April 16, 2014.

The facility now offers faster transaction and processing times, increased safety, and improved reliability for containers moving between New York/New Jersey and the rest of the world.

The project was borne out of a unique opportunity. Global is the only terminal in the New York harbor that is not restricted by the air draft of the Bayonne Bridge, a 100-year-old structure that blocks the Elizabeth River, and prevents large ships from reaching parts of the harbor.



The Global Terminal Expansion Project went live on April 16th 2014. Image: GCT

Capitalising on this opportunity, the expansion doubles the size and capacity of the terminal and has a capacity of 1.1 million lifts a year.

Powered by dedicated ship-to-shore cranes, manned Rubber Tired Gantry (RTG) cranes, and 20 Rail Mounted Gantry (RMG) cranes with TMEiC Automation, the terminal offers a semi-automated solution that gets containers on the road, or back to sea—quickly and safely.

Richard Ceci, Vice President of Information Technology, and project lead, for Global Container Terminals USA, says he chose TMEiC based on the company's proven track record and superior quality.

"We had experience with the crane supplier and TMEiC; as our team came from building a similar terminal in Virginia," Ceci said. "When the time came for Global to go out to bid, we conducted a fair assessment, and TMEiC won based on the quality and price of the control systems offered."

From the Sea

Unrestricted by air and water draft, Global is the only terminal in the New York/New Jersey harbour currently able to service the largest vessels transiting the Suez and Panama canals. This is made possible by the terminal's expanded 2,700' (823 meter) berth, 50' (15.2 meter) draft, and automated stacking yard featuring 20 RMGs.

Each RMG is eighty feet (24.4 meters) high, has a lifting capacity of forty tons, and can stack containers five high. These RMGs use TMEiC's proprietary TMdrive-10e2 variable frequency drives as part of the MaxSpeed[®] advanced crane control system platform.

The cranes also feature TMEiC's advanced MaxView[®] laser-based automation systems, designed to remove the possibility of human error, reduce risk, and increase efficiency. These state-of-the-art systems allow the RMGs to operate in totally automatic mode for most of the work they accomplish. Manual control from a remote location on site is used when interfacing with an over-the-road truck or for exceptional situations.

The RMGs also employ TMEiC's CraneDirector[™]. This system coordinates the interface with NAVIS, Global's Terminal Operating System (TOS). Now standard in all of TMEiC's automated terminal projects, this interface between cranes and TOS allows for efficient start up and operations going forward.

To the Land

Designed in a way to maximise speed and efficiency, trucks will no longer need to drive throughout the terminal. Instead, they will make a short drive to the stacks where containers are picked up or delivered into an automated stacking environment.

More important than speed, Global's 10 new TMEiC RMG stacks have been positioned at an angle to make approaching and departing the area safer and easier for drivers, as well as workers operating within the terminal. This is a first in container yard design globally.

"TMEiC's automated systems are designed by professionals who are very solid," Ceci said. "Whenever automation and people are brought together, it's important to engineer systems that can account for people possibly making mistakes. TMEiC understands that and the need for the system to be failsafe."

Ceci explains how TMEiC's people are like an extension their own project team.

"TMEiC is very knowledgeable about the systems Global is implementing, and they are professionals that understand the need for flexibility in scheduling as well as functionality. TMEiC has delivered based on the right thing to do for every situation, within budget, and on time. Our engineers are highly demanding and because TMEiC understands our business so well, there have been no change orders, and it's all gone exactly to plan. When you're making the final strides toward finishing a project, this is an indication that people are working very well together."

To the Customers

Global's expansion now makes it possible to save time for many more customers, as the closest, most efficient, terminal to the New York/New Jersey harbour entrance.

Its prime location, combined with TMEiC's world-class technology, has made Global Terminal a gateway of choice, and a leading example for the rest of the world to follow.

Visit www.tmeic.com (<http://www.tmeic.com>) to learn more about the variety of products and solutions they offer.