NUCOR® SKYLINE

CASE STUDY

# Quonset Business Park Pier

Quonset, Rhode Island

## HISTORY

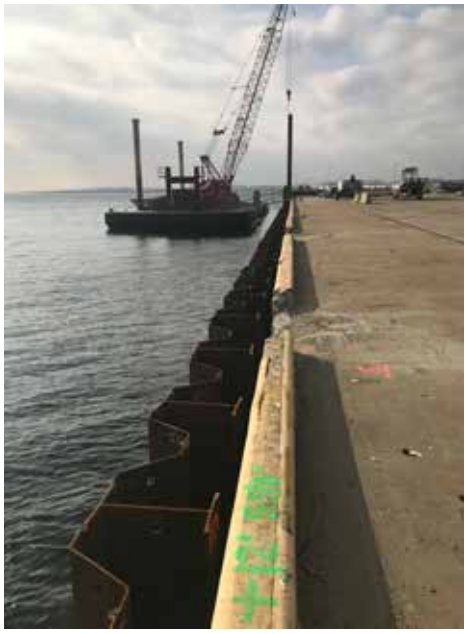
Quonset Point is a small peninsula that sits in the Narragansett Bay in Rhode Island. It is the home of the Port of Davisville, as well as the Quonset Business Park. The business park boasts more than 200 companies and nearly 12,000 workers and is a primary driver of economic development for the state. Located inside the park is the North Atlantic Distribution Inc. (NORAD), one of the largest automobile importers in North America.

## PROBLEM

In the past 20 years, NORAD has seen over 500% growth in its automobile imports. Continued growth in the automotive business, as well as strides in the growing wind energy industry, required more space at Pier 2 at the Port of Davisville. To accommodate larger ships, and allow the automobile carriers to dock directly in front of Pier 2, the front face of the pier had to be dredged. Before this could happen, the entire pier needed to be fortified with steel sheeting and tie backs.

## SOLUTION

The expansion of Pier 2 at the Port of Davisville will happen in two phases and the team at Quonset Development Corporation partnered with LM Heavy Civil Construction, GZA Engineering, and Nucor Skyline to design and install a bulkhead wall to create more waterfront space at the older, earth-filled wharf. The first phase was the construction of a new steel king pile wall to the north, south, and east faces of the pier. The wall consisted of HZ 880M A king piles and a pair of AZ 26-700 intermediary piles. ArcelorMittal is the only manufacturer of the HZ 880M king piles that are used in this rehabilitation project. The wall was then tied back to a line of W24x306 wide



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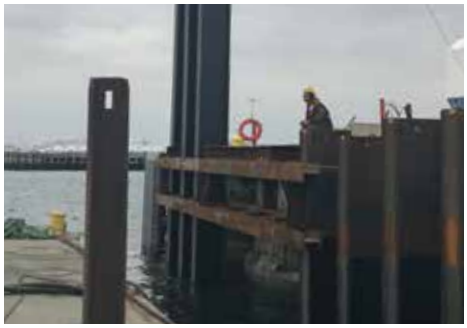

flange beams using 3” Grade 150 epoxy-coated threaded bars and double channel walers, all of which were produced by Nucor Skyline in the United States.

Once the king pile bulkhead wall is in place, the area can be dredged to accommodate larger ships. This will allow NORAD to expand their record breaking car import business, while also expanding the ability for the Port of Davisville to play a role in the ramp up of the wind industry. The equipment used for the off-shore wind industry is extremely heavy and requires a wharf that can bear the weight, while also allowing for heavy lift platforms, which makes the new rehabilitated Pier 2 the perfect choice.

The second phase of the construction at the Port of Davisville is the expansion of Pier 2 to create a third berth on the east side of the pier, which will begin bidding in the fall of this year. The additional space generated by this project, including the king pile wall fortification and dredging project gives the pier another 50 years of life.

## PROJECT PARTNERS

Owner
Quonset Development Corporation – Quonset, RI

General Contractor
GZA Engineering – Norwood, MA

## PRODUCT

Steel Wall System: HZ 880M A and AZ 26-700 (1,500 tons)

Steel Sheet Pile: NZ 26 (120 tons)

Wide Flange Beams: W24x306 (1,510 tons)

Geotechnical Products: 3” Epoxy-coated threaded bar, double channel walers (270 tons)

## PROJECT TIME FRAME

July 2018 through October 2019

**Skyline Steel, LLC**
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For technical questions and engineering support, please contact us via our technical hotline at: **1-866-875-9546** or email us at: **engineering@nucorskyline.com**.