NEW NICE MIDDLETON BRIDGE

Construction Sequence 4:

Foundations and Piers

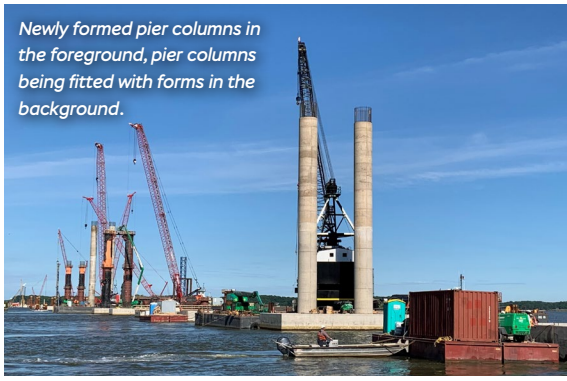
The substructure of the new Nice/Middleton Bridge is comprised of concrete foundations constructed on top of piles driven into the river bottom. Other elements include concrete pier columns and caps that will be built onto the foundation to support the girders and bridge deck. Work on foundations and piers began in late 2020 and is scheduled to be completed in late 2021.

The foundations start with concrete forms (nicknamed "bathtubs") that unify groups of piles. Once set, steel rebar cages are installed and additional concrete is placed within the bathtubs, providing a robust base upon which the pier columns are built. The project's 33 individual "bathtubs" are lifted into place by high-capacity floating cranes. Weighing as much as 195 tons (the weight of 135 average-weight cars), the bathtubs are about the size of a small house (as large as 30 feet wide by as long as 52 feet). This innovative forming method reduces both construction time and environmental impact as compared with traditional cofferdam construction that has been used to build bridges for centuries.

The pier columns, which vary in height up to 117 feet, are built by mounting vertical cylinder-shaped forms onto the foundations and fitting rebar cages within the cylinders. The cylinders are then closed and concrete is poured inside to create the columns. The 58 sets of columns are topped with rectangular pier caps that tie the columns together and support the bridge's girders.

To receive public and mariner alerts, please use this link: **nicemiddletonbridge.com**.

The MDTA thanks the public for their patience as the new bridge is built.



Newly formed pier columns in the foreground, pier columns being fitted with forms in the background.

A "bathtub" foundation form is lowered onto a set of piles.

The Maryland Transportation Authority (MDTA) is replacing the existing Nice/Middleton Bridge with a new bridge that will:

- Increase the vehicle capacity with four 12-foot-wide lanes, replacing the old bridge's two 11-foot-wide lanes
- Improve safety by installing a barrier separated median between eastbound and westbound lanes, adding two-foot shoulders and other improvements that meet current safety standards
- Eliminate safety issues at toll booths by replacing them with highway speed toll lanes
- Enable tall ships to pass beneath its 135-foot clearance

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Maryland Transportation Authority