



New Orleans Cold Storage Warehouse

UNITED STATES



Owner
New Orleans Cold Storage

Engineer
Menard USA

General contractor
Tippman Larson Group

Dates of work
2021/05 2021/07

Main figures

Controlled Modulus Columns
2,150 EA.



Description

A \$42 million expansion was proposed for the Jourdan Road cold storage warehouse at the Port of New Orleans (Port NOLA). The State of Louisiana would provide \$10 million in outlay funds, while Port NOLA is providing \$2 million. Located along the inner Harbor Navigation Canal, the development plans are for the complex to grow from 160,000 sq. ft to 304,000 sq. ft. When complete, the facility will add more than 100 new permanent jobs in the region.

Due to the compressible and loose nature of the soils at the site, Menard USA was contracted to provide ground improvement for the warehouse expansion – the selected technique was Controlled Modulus Column (CMC)® rigid inclusions.

Ground conditions

The site consisted of dense sand to depths of up to 12 ft and soft to silty clays to depths of 12 ft to 70 ft.

Solution

Driven piles were considered for ground improvement. However, it was determined that CMCs would be more effective in supporting the warehouse's footings due to the high bearing capacity. CMCs were also more cost-effective than driven piles. Menard installed 2,510 CMCs to a maximum depth of 75 ft. Menard designed a layout of CMCs at each footing to support column loads that ranged from 140 to 160 kips. The design provided for 1 in of post-construction settlement, meeting the performance criteria of the building.

Menard faced everything from flooding (due to a tropical storm) to a closed main entrance (forcing it to use an alternative entry) to a poorly maintained working platform to working adjacent to the existing warehouse. Despite these challenges, Menard met the owner's requirements for quality, safety and schedule.

For a major expansion to a cold storage warehouse at the Port of NOLA, Menard successfully provided ground improvement by installing CMCs.

