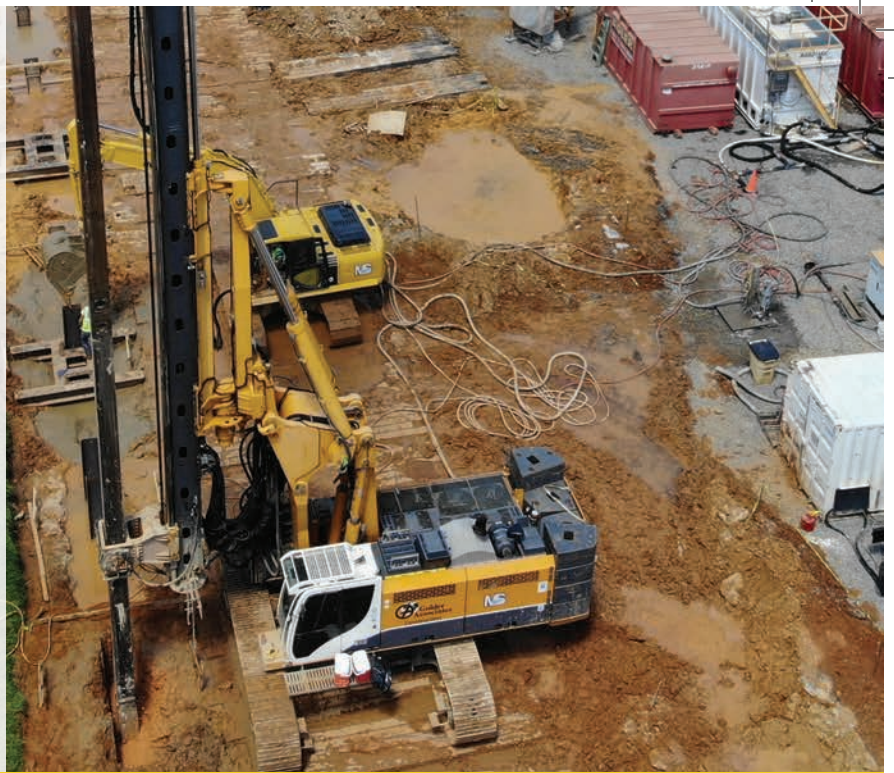


PROJECT DESCRIPTION

THE WALK STUDENT HOUSING
WITH UNDERGROUND PARKING
TUSCALOOSA, AL

MORRIS-SHEA PROJECT COMPONENTS
CUTTER SOIL MIX RETAINING WALL - 90 PANELS
CFA FOUNDATION PILE - 48 PILES



MORRIS-SHEA

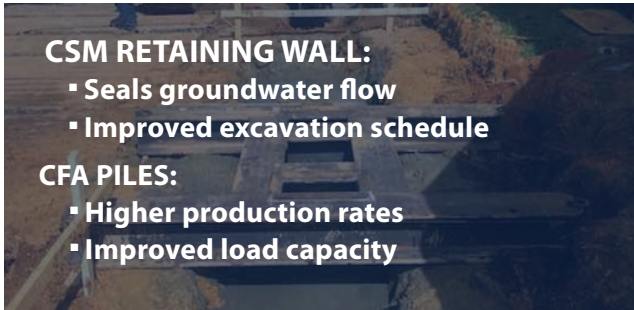
Student Housing Project

CSM RETAINING WALL:

- Seals groundwater flow
- Improved excavation schedule

CFA PILES:

- Higher production rates
- Improved load capacity



PROJECT OVERVIEW

Morris-Shea utilized a Cutter Soil Mixing (CSM) method to install a contiguous retention wall at depths up to 60 feet for a 3-story underground parking garage at The Walk, a student housing project in Tuscaloosa, Alabama. The CSM structure was then excavated to produce 40 feet high interior walls that retain soil and minimize ground water penetration. The geotechnical contractor also drilled 48 Continuous Flight Auger (CFA) piles and plunge columns that form the high capacity deep foundation for the multi-story structure. These piles were drilled to bedrock from within a 20 FT excavation of the perimeter CSM wall.

WALL AND FOUNDATION INSTALLATION

Cutter Soil Mixing (CSM) panels were formed by drilling overlapping primary and secondary panels to depths up to 60 feet below grade to serve as a soil retaining and water cutoff wall. Two soldier beams were precisely placed in each panel with survey control and templates to maintain proper placement and verticality. Bentonite slurry was injected through the CSM when mixing to the bottom of each panel. Cement slurry was used during extraction of the CSM to provide a structurally sound, low permeability wall with a minimum compressive stress of 350 psi. Initial excavation was performed upon completion of the CSM wall followed by installation of CFA piles and plunge columns to support interior columns and walls of the structure.



GROUNDWATER CONTROL

The CSM wall was installed to a depth up to 60 feet and excavated to a maximum of 40 feet below surface. The wall minimized the need for temporary and permanent dewatering. Risks associated with dewatering underneath adjacent structures and roads that could cause settlements outside of project boundaries were eliminated.



CUTTER SOIL MIXING

CSM is an advanced geotechnical soil mixing technique utilizing two rotating cutter heads to form a homogenous soil mix retaining wall that can also serve as the final structural perimeter wall and a water cutoff structure. This can result in cost and schedule savings during excavation, dewatering, and perimeter wall construction.

MORRIS-SHEA

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