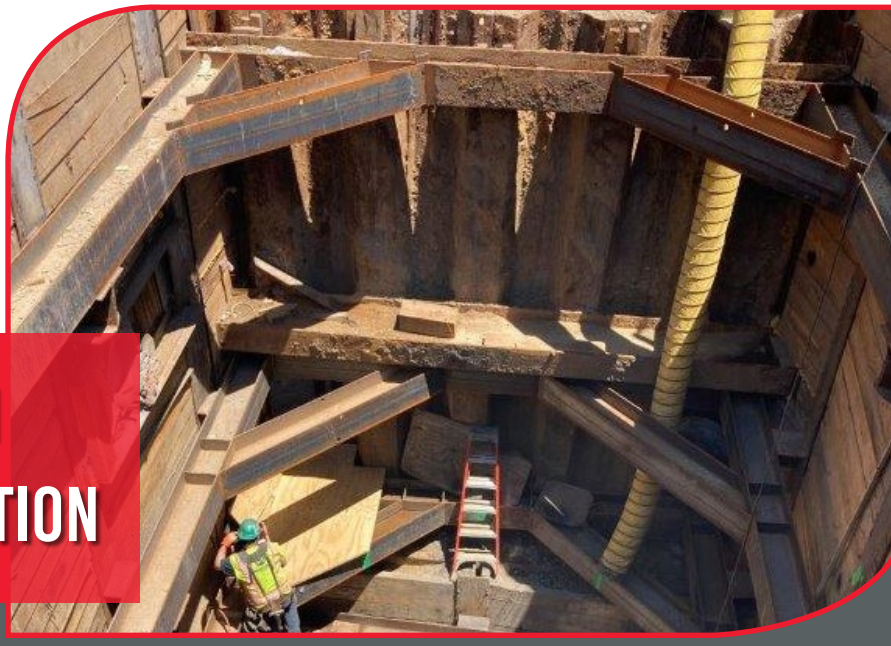
DEEP FOUNDATIONS INSTITUTE

SUBSURFACE CHARACTERIZATION COMMITTEE PRESENTS



SHEET PILE INVESTIGATION FOR THE SOUTH PUMP STATION

New York City Department of Environmental Protection (DEP)
Flushing, New York

SCOPE OF FOUNDATION WORK

Technology used, reason for the reuse:

The Rikers Island South Pumping Station required demolition and replacement with a new pump station of similar dimensions. To demolish the existing pump station and construct a new one, an excavation support system was required. It was understood that an existing sheet pile system was already in place but the length of the sheets and the thickness of the sheets was unknown. Reusing the sheeting would save costs, but the length and condition of the sheets required investigation.

Methodology to determine existing capacity:

The length of the sheet piles was determined using an inductive field method. Four grouted boreholes were installed within 18 inches of the existing wall. The test results indicated that the sheet piles were between 25- and 28.5-feet long with tip elevations of -7 to -10.5 feet.

Retrofit construction activities conducted:

The sheet piles were reused in the earth support system design. The sheets were determined to be in adequate condition and of adequate length. Portions of the earth support system required supplemental soldier piles.

Conclusions on other side...

CONCLUSIONS

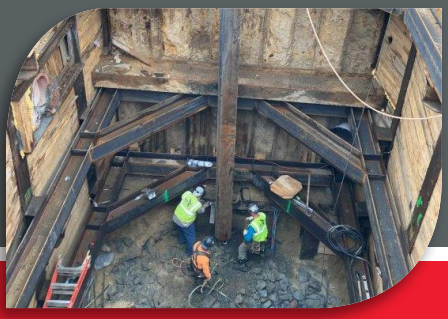
SHEET PILE INVESTIGATION FOR THE SOUTH PUMP STATION

Cost Savings:

If the sheet piles could not be reused the sheet piles would have required removal and additional materials and labor would have been required to complete the excavation support system. An estimated $500,000 was saved and the testing program cost approximately $25,000.

Cost Saving Statistics:

1. $500,000 in cost savings
2. 2 months of sheet pile extraction and reinstallation time
3. The testing program and analysis cost approximately $25,000



FOR MORE INFORMATION

William Oder
Geosciences Testing and Research, Inc.

Phone: +1 (978) 301-3242

Email: bill@gtrinc.net
Website: www.gtrinc.net