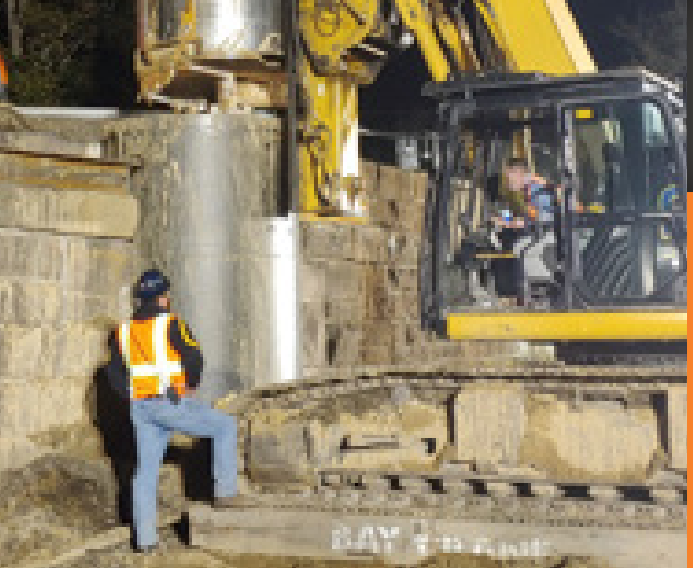

CASE STUDY 03012020

7-ft Diameter Drilled Shaft

PROJECT:	—
LOCATION:	Hamptons, NY
PRODUCTS USED:	**BIG-FOOT®** Polymer Slurry, **M-BOOSTER®** Dry pH Adjuster, **FORTIFY®** Slurry Loss Additive, **GEO-NET®** Slurry Loss Circulation Material, **GRID-LOCK®** Polymer Expanding Additive

CHALLENGE	65' below group surface, multiple layers of pea-sized to fist-sized gravel were unexpectedly encountered. The boreholes would collapse at these zones, making it impossible to advance to the total depth of 120' and 130', respectively.
SOLUTION	MATRIX studied the geology and decided on a three-step approach.

A recent project location on the eastern end of Long Island in the Hamptons, NY, presented significant challenges with the 7' diameter drilled shafts. MATRIX Construction Products was able to provide solutions to create a successful client experience.

SITE GEOLOGY:
The geology on this project consisted of sands, silts, and gravel seams (peas sized to 3" minus) containing brackish water.

CHALLENGE:
There were two locations of the drilled shafts that proved to be problematic. Approximately 65' below group surface, multiple layers of pea-sized to fist-sized gravel were encountered. The boreholes would collapse at these zones, making it impossible to advance to the total depth of 120' and 130', respectively. The larger formation solids encountered were not expected based on soil boring reports that were used to estimate the drilling project. To maintain borehole stability and control slurry loss, the drilling came to a standstill. With a multiple day shutdown, the project required a fast and cost-effective remedy to resolve the problem.

MATRIX was already the slurry supplier of choice for this project and the added challenges required specialized attention. Additional products were ordered by the customer. MATRIX was able to supply a rush delivery to the project and a representative was onsite to provide hands-on attention to the client. Our representative discussed the issues that had been occurring with the site personnel. Through discussion, they were able to pinpoint the exact issues to determine the cause and develop a solution to fix the problem. It was decided that the elevated levels of brackish saltwater were degrading the slurry viscosity in the hole and the larger formation solids that were encountered required added fluid loss control and borehole stabilization for these locations.

Batch mixing thru the MATRIX 3" Jet Mixer

MATRIX CONSTRUCTION PRODUCTS

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