

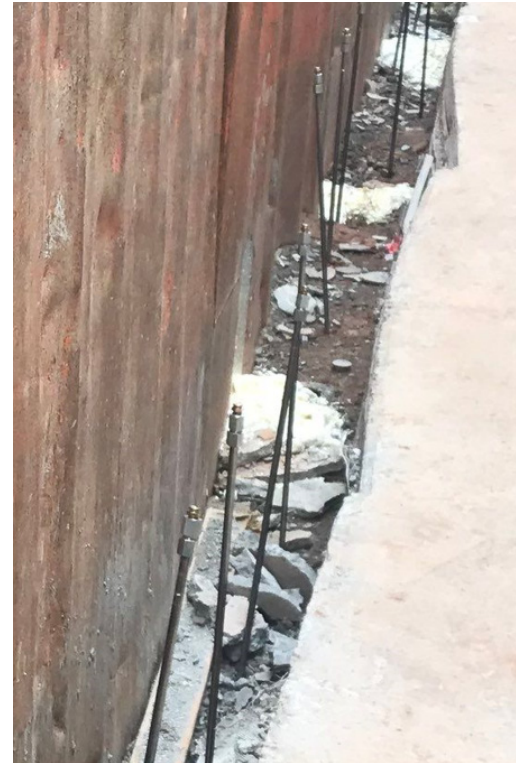


## Deep Lock® Soil Stabilization for New Construction

A general contractor on a new commercial construction job reached out to Atlanta-based geotech specialist about the foundation phase of a project they were working on. Sheet pile panels were used for erosion control while they poured the foundation walls. After the foundation concrete was cured, there was still a layer of gravel and soil being held in place by the sheet pile panels, located between the panels and the foundation. If the contractor were to pull up the sheet piles without stabilizing that gravel and soil first, it could become unstable, leaving the foundation without a surrounding layer of supporting soil. The soil and gravel would need to be locked in place first before the sheet pile panels were removed. Soil stabilization specialists SiteMix Pressure Grouting LLC were the perfect subcontractors for this job.

### Powerful Polymers

The technicians selected Alchemy-Spetec's AP Fill 720 structural polymer for the job due to its ability to permeate the soil and encapsulate the gravel into one solid mass.



AP FILL 720 Cured		
Tensile Strength	(ASTM D-1623)	43psi (2965 mb)
Tensile Elongation	(ASTM D-1623)	3.8%
Shrinkage	(ASTM D-1042/D-756)	Negligible
Compressive Strength (with Fine Sand)	(ASTM C-39)	1803 psi (124313 mb)

## Painless Procedure

The crew inserted injection rods to a depth of about 12 feet deep at a spacing ratio of 3 feet apart along the entire length of the foundation wall. Next, they injected the structural polymer until it was seen bubbling up through the surface of the ground (a.k.a. *grouted to refusal*).

## Rapid Result

The entire layer of surrounding supportive soil and gravel was locked into place. When the sheet piles were pulled, only a thin gap from the sheet pile panels remained. The contractor then filled that gap with cement, leaving a solid supportive wall of soil/gravel/grout to support the foundation.

## About Alchatek

Alchatek is an international leader in the manufacture and supply of chemical grouts and construction products for Geotechnical, Leak Seal, and Seawall Repair applications. Providing solutions from its headquarters in Tucker, Georgia and its manufacturing facility in Reno, Nevada, Alchatek specializes in advanced construction technologies for sealing leaks, stabilizing soils, lifting concrete, and protecting infrastructure and seawall structures. To best serve its customers, Alchatek is organized onto three divisions:

**The Leak Seal Division** combines a full system offering of polymer chemical grouts and equipment with perhaps the most experienced technical team in the industry. It specializes in preventing water ingress through concrete infrastructure including parking garages, culverts, basements and foundations, and sewer manholes.

**The Geotechnical Division** offers a complete line of single component products for soil stabilization as well as two component polyurethane foams for concrete lifting, void filling, and stabilization of infrastructure. This includes lifting sunken structures such as warehouse floors, back into place.

**Seawall Repair Network®** is the only national network of certified contractors in the repair, preservation, and protection of Seawalls waterfront barriers. Its proprietary methods and materials are environmentally friendly and safe for use in all marine environments and provide a non-destructive solution for seawall repair at 80% less than the cost of replacement.

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