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Blue Heron Health & Rehab

VIBRO STONE REPLACEMENT and COMPACTION GROUT PROJECT

Project

The project is a new Health & Rehabilitation facility in the Seven Oaks Community, located in Wesley Chapel, Pasco County. The structure is approximately 57,600 square-foot building with associated roadway, pavement & parking areas. Due to the presence of loose to medium-dense fine sands to slightly clayey fine sands in the upper 25 feet, the Geotechnical Engineer of Record recommended a ground improvement program for Vibro-Replacement Stone Columns (VSC). In addition, because of the presence of overburden soil erosion/raveling evidence related to possible "sinkhole conditions", the Geotechnical EOR recommended a Compaction Grouting (CG) program to mitigate the concerns.

Challenge

The challenges encountered during VSC installation were minimal:

- Limited movement around the site, due to ongoing site conditions
- Weather conditions were unfavorable and slowed production

Solution

Helicon followed the Compaction Grout (CG) parameters, provided by the Geotechnical Engineer of Record, during the installation. Our crew installed (21) grout injection points to approximately 30-50 feet. Helicon also worked alongside the general contractor & the geotechnical/structural design teams, to develop a cost-conscious Vibro-Replacement design submittal. The VSC Program was designed to meet the design load criteria of 6,000 psf allowable. Helicon's VSC crew worked approx. 10-hour shifts for up to six days a week, in order to meet the client's critical path schedule. Efficient planning & coordination was key to overcoming the challenges & limitations. (394) Vibro-Replacement Stone Columns (VSC) were installed from site grade to depths ranging from 10-ft to 25-ft. Helicon collaborated with the Geotechnical Engineer of Record throughout the work and confirmed all recommended criteria were followed. The CG & VSC work was successfully completed in just (12) days and finished on-time and within budget.

Owner: Blue Heron Health & Rehab
Contractor: The Douglas Company
Engineer: Mortensen Engineering
Market: Insitutional
Solution: Ground Improvement
Services: Vibro Stone Columns & Compaction Grout