

# Blue Heron Health & Rehab

## VIBRO STONE REPLACEMENT and COMPACTION GROUT PROJECT

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### Project

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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

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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

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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:** Institutional

**Solution:** Ground Improvement

**Services:** Vibro Stone Columns & Compaction Grout