

Tampa Housing Authority

VIBRO STONE REPLACEMENT PROJECT

Project

The Renaissance at West River is a new, 6-story, approximately 209,000 sq. ft. mixed-use building in Tampa designed for the Tampa Housing Authority. The structure comprises the first-floor level of retail, leasing office & amenities. Floors 2-6 are comprised of residential apartments. The project also includes a stormwater drainage system and roadways. Subsurface conditions consisted of approx. 6-ft of sand over approx. 11-ft of sandy clays, with limestone encountered at an approx. depth of 17-ft. Ground Improvement utilizing Vibro-Replacement Stone Columns (VSC) were specified to support the building loads.

Challenge

The challenges encountered during VSC installation were minimal:

- Critical path construction schedule
- Limited access onto the site
- Limited movement around the site, due to multiple trades

Solution

Helicon 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 six days a week, in order to meet the client's critical path schedule. Efficient planning & coordination was key to overcoming the challenges & limitations.

(383) Vibro-Replacement Stone Columns (VSC) with a diameter of 24-in. were installed from site grade to depths ranging from 15-ft to 25-ft. Helicon collaborated with the Geotechnical Engineer of Record throughout the work and confirmed all recommended criteria were followed. The VSC work was successfully completed in just (10) days and finished on-time and within budget.



Owner: Tampa Housing Authority
Contractor: DPR Construction
Engineer: ECS Engineering
Market: Institutional
Solution: Ground Improvement
Service: Vibro Stone Columns