

# Moorings Condominium Project

COMPACTION GROUT, INJECTION PINS, CHEMICAL GROUT PROJECT

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## Project

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The project is a 12 building condominium complex located on the waterfront in Tarpon Springs, FL. All 12 buildings were in need of foundation repair and ground improvement due to voids occurring underneath the buildings.

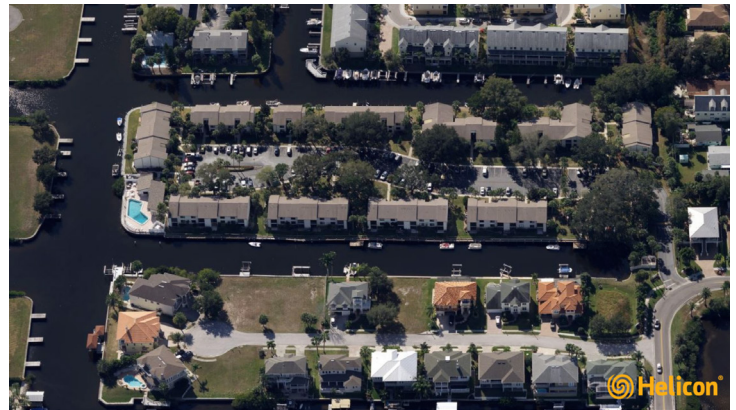
## Challenge

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- Weak soils throughout the 12 building condominium complex.

## Solution

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Fill the voids, cracks, fractures, and cavities while stabilizing the granular material and improving the physical properties of the soil.

The engineer of record recommended a ground improvement plan that consisted of approximately 1,400 cubic yards of compaction grout injected at varying depths of up to 100 ft. per injection point. A mixture of cement, fly ash, sand, water, and other admixtures were injected into the loose soils and voids in the limestone and overlying sand strata. Pumping continued until a grout pressure of 200 to 400 psi was achieved or lifting of the structure was observed.

The grout casing was then extracted upward four to five feet and pumping resumed. Injection pins were installed around the property per site plan specifications. Each pin pile was hydraulically driven into the soil until enough pressure was reached for refusal. Chemical grout was injected through 364 points for a total of over 18,000 lbs of chemical grout.

All operations were performed under the observation of the engineer of record. Post grouting borings were performed to evaluate the effectiveness of the compaction grouting program. Efficient planning & coordination was key to overcoming the challenges & limitations.

**Client:** Moorings Condominium HOA

**Engineer:** Basic Engineering

**Market:** Commercial

**Solution:** Ground Improvement

**Services:** Compaction Grout, Injection Pins,  
Chemical Grout