

Hamdan Medical Project

CHEMICAL GROUT PROJECT

Project

The project is a single-story, metal frame, office building with stucco cover, interior steel pipe column supports, and post tension cable reinforced slab. The building has undergone significant subsidence due to organic soil layers. The Geotechnical Engineer of Record recommended a ground improvement solution of two-part structural polyurethane foam injections (chemical grout) throughout the structure to improve the load bearing capacity of the existing soils at the site.

Challenge

- Subsoil conditions varied from dense to very loose.
- All grout injection points were located inside the structure.

Solution



Helicon worked alongside the geotechnical design team to develop a chemical grout design submittal. The chemical grout program was designed to meet the building code load criteria. Chemical grout utilized in this project has a compressive strength of approximately 11,000 psf as an unconfined foam. Efficient planning & coordination was key to overcoming the challenges & limitations. 31,565.5 +/- pounds of polyurethane material were injected into a total of 635 chemical grout points throughout the interior of the structure. Helicon collaborated with the Geotechnical Engineer of Record throughout the work and confirmed all recommended criteria were followed. The chemical grout work was successfully completed on time and within budget.

Owner: Hamdan Medical
Engineer: Award Engineering
Market: Commercial
Solution: Ground Improvement
Services: Chemical Grout

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