CASE HISTORY

- SITE PREPARATION
- NEW CONSTRUCTION
- REMEDIAL REPAIR
- HELICAL PULLDOWN® MICROPILE
- ATLAS RESISTANCE® PIERS
- HELICAL UNDERPINNING
- EARTH RETENTION
- RETAINING WALLS
- HELICAL TIEBACK
- SOIL SCREW®
- PIPELINE STABILIZATION
- TELECOM/SUBSTATION
- UTILITY/SOLAR

CHANCE® DISTRIBUTOR
FOUNDATION TECHNOLOGIES, INC.
Lawrenceville, GA

CHANCE® CERTIFIED INSTALLER
CAROLINA FOUNDATION SOLUTIONS, LLC
Burlington, NC

PROFESSIONAL ENGINEER
ROYAL ENGINEERING, INC.
Greenville, SC

GENERAL CONTRACTOR
EST GENERAL CONTRACTORS, INC.
Dunn, NC

Hubbell Power Systems, Inc. is the world's leading helical pile/anchor manufacturer. The CHANCE® brand offers a technically advanced, cost effective solution for the Civil Construction and Electric Utility and Telecommunications markets.

Four Story Hotel Foundation

> "While the contractor could dig down about two feet, no spoils could be generated, which is why the design called for helical piles."
>
> -CHET MILLER, PRESIDENT, CAROLINA FOUNDATION SOLUTIONS, LLC

PROJECT:
Construction of a Hampton Inn in downtown Hartsville, SC on a Brown-Field site without generating any spoils.

PROBLEM:
A large brown-field site stood three blocks from the center of Hartsville, SC. Previously a railroad yard, the soil was contaminated with creosote and coal dust covered with 2.5 feet of clean fill. Hartville wanted to build something there to increase economic development in that area. The question was how?

THE SOLUTION:
Royal Engineering, Inc. had an idea to build a hotel on the site without creating any spoils. The building, a four story Hampton Inn, could be supported by piles with a minimum of excavation. EST General Contractors, Dunn, NC got the job and contacted Carolina Foundation Solutions, LLC out of Charlotte, NC to install the piles.

continued

HELICAL FOUNDATION SOLUTIONS

> “Noise was a consideration. This site was in the downtown section of a city with business and a college nearby. Helical Piles can be installed quietly, compared to other approaches. They can also be installed quickly, which is beneficial on any job.”

Chet Miller, President of Carolina Foundation Solution explains, “This was the new construction of a four-story hotel, which covers two city blocks in downtown Hartsville. While the contractor could dig down about two feet, no spoils could be generated, which is why the design called for helical piles.”

The only other option considered was pouring a massive concrete slab over the site and building on top of that. The idea was rejected for two reasons. The first was cost. Secondly, that approach would have raised the building, changing the elevation with respect to the road frontage.

Helical Piles offered other advantages, as Miller points out. “Noise was a consideration. This site was in the downtown section of a city with business and a college nearby. Helical Piles can be installed quietly, compared to other approaches. They can also be installed quickly, which is beneficial on any job. Also, we did not need to bring in big equipment. EST General Contractors dug numerous shallow trenches for footings around the site, but we were able to use a Bobcat Mini-Excavator and easily maneuvered around them.”

Carolina Foundations installed the required 404 Helical Piles in 22 days. The Helical Piles were provided by Foundation Technologies Inc, an authorized CHANCE distributor, who delivered the piles to the worksite, allowing work to proceed quickly.

Each pile was an SS5 with a 10 inch and 12 inch helix. On average, the piles were installed to a depth of 14 to 17 feet to reach the required torque of 3,500 foot-pounds. “We use an electronic digital drive-head. So, we were able to monitor torque. Royal Engineering also checked,” explains Miller.

Of the 404 piles, approximately 50, scattered throughout the structure, were installed with a slight batter to better support the internal walls. Carolina Foundations welded a 7 x 7” plates to the top of each shaft and then the contractor poured a grade beam to support the hotel.

KEY BENEFITS:

Occasionally, a job might call for minimal spoils, but on this project NO spoils could be generated. Helical Piles were the perfect solution. With the number of Brown-Field sites across the US and around the world, similar projects may become a common occurrence. Also, the ease and speed of installation is always beneficial.

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