

HELICAL FOUNDATION SOLUTIONS

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

CERTIFIED INSTALLER

MASON GRADY FOUNDATIONS -
Cairo, GA

GENERAL CONTRACTOR

BBG - DESIGN BUILD -
Shalimar, FL

STRUCTURAL ENGINEER

BARKLEY CONSULTING ENGINEERS
- Tallahassee, FL

GEOTECHNICAL ENGINEER

LARRY M JACOBS & ASSOCIATES -
Pensacola, FL

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.



PROJECT

A two story wood framed addition was to be constructed on the West end of an existing town-home located along the shoreline of Boggy Bayou in Valparaiso, FL. Larry M Jacobs & Associates of Pensacola, FL was contracted to determine the subsurface conditions at the work area and to aid Barkley Consulting Engineers of Tallahassee, FL in the design of the structure's foundation. Two (2) standard penetration test borings were performed to depths of approximately 30-35 feet. These borings found loose sand layers which extended from grade to a depth of approximately 13 feet. Due to these loose layers it was determined that the addition would need to be supported on a deep foundation that would transfer the load of the structure through these loose soils into a deeper more competent load bearing soil layer.

SOLUTION

Helical Piles were chosen as the deep foundation option for this project for a number of reasons. Foremost was to protect the existing structure. Helical piles can be screwed into the soil using small construction equipment, with little disturbance to the soil or surroundings, and do not require hammering as other deep foundation options do. Therefore, they could be installed adjacent to the existing foundation without risk of foundation settlement. Helical Piles were also chosen to prevent the need for mobilization of large construction equipment to the site, and to prevent settlement of the addition's foundation in the event of storm scour, as the South end of the addition is located approximately 20 feet from the shoreline of Boggy Bayou.

continued

CASE HISTORY

THE WORK

The deep foundation system consisted of 14 CHANCE 2-7/8" Round Shaft Pipe Piles. Lead sections consisted of a 10", 12", 14" helix configuration, installed to depths ranging from 26 feet to 28 feet.

The piles were installed with an Eskridge Drive Head mounted to a John Deere 35G Mini-Excavator. Piles were equipped with a bolted 7"x7"x0.5" steel new construction pile cap to allow for connection to the new foundation. Working loads per pile were 15 kips in compression and 8 kips in tension with a factor of safety of two (2). A CHANCE Digital Torque Indicator was used to monitor the installation torque for each pile during installation.



Helical Pile advanced adjacent to existing foundation.



Helical lead section being advanced. Digital Torque Indicator mounted directly above the drive tool.



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Mason Grady Foundations specializes in CHANCE Helical Pile Systems primarily for foundations and retaining walls. The company is a certified CHANCE installer, we are family owned and operated, and we are a member of the CHANCE Alliance Network.