

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

Bay Line Train Engine Shelter



PROJECT:

Construction of a new train engine shelter in Panama City, FL.

BACKGROUND:

Bay Line Railroad in Panama City, FL contracted Anderson Construction Company of Ft. Gaines to construct a new train engine shelter. The steel framed shelter spanned two sets of railway tracks and was open on both ends, allowing train engines to enter and exit.

PROBLEM:

The shelter measured approximately 64 ft. by 94 ft. and was supported by eight column footings, four on each side of the tracks. Due to the shelter's close proximity to the Gulf of Mexico, a deep foundation was needed to resist uplift from high winds.

SOLUTION:

Southern Earth Sciences in Panama City, FL performed a geotechnical investigation to aid the structural engineer with design of the shelter's foundation. Four cone penetrometer soundings were performed by Southern Earth to evaluate the soil's bearing capacity to depths ranging from 20-30 ft. below the existing ground surface. The shelter needed to resist uplift in the event of high winds, so they chose CHANCE® Helical Anchors for the deep foundation solution. Two anchors were installed in each footing to carry a working load of 17 kips per anchor.

The deep foundation system consisted of 16 CHANCE 1-1/2" square shaft anchors. Lead sections consisted of a 10"/12"/14" helix configuration, installed to depths ranging from 25-32 ft. The piles were installed with an Eskridge Drive Head, mounted to a John Deere® 35G Mini-Excavator.

continued

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 Panama City, FL

GENERAL CONTRACTOR
ANDERSON CONSTRUCTION CO. OF FT. GAINES
 Fort Gaines, 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.

CASE HISTORY

A 7"x 7"x 0.5" new construction cap was used to connect the pile to the new column footings. Each cap was embedded into the footing a minimum of six inches. Working loads per anchor, as mentioned previously, were 17 kips with a factor safety of two. A CHANCE digital torque indicator with wireless display was used to continuously monitor the torque applied to each anchor throughout the installation process. The equipment operator and the assistant could both monitor and record torque simultaneously.

KEY BENEFITS:

- Limited access
- Standard equipment for installation
- No soils to remove
- Immediate proof testing and loading
- Reach competent soil below active zone
- Low to no vibration/noise



Anchor cap set seven (7) inches from bottom of footing (L). Extension bolted to lead section (R). Lead sections with 10",12",14" helices (Background). All CHANCE material is hot dipped galvanized for corrosion protection.



CHANCE Digital Torque Indicator mounted between the drive head and anchor tool (L). Wireless display mounted on the installation equipment to allow the operator to continually monitor torque (R).



7" x 7" x 0.5" new construction pile caps to allow for connection to the new poured concrete footings.



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