

CHANCE[®]

HELICAL PULLDOWN[™] Micropiles Report

A CASE HISTORY

Project: Richmond, VA International Airport Improvements	Geotechnical Engineer: Schnabel & Associates	Structural Engineer: Dunlap and Spriggs	Contractor: Technical Foundations Richmond, VA 804-328-4500	Distributor: Walder Foundation Products Ashland, VA
--	--	--	---	---

Description:

Low headroom 7" mini-piles were specified to be installed to 35' to support new elevators and escalators foundations for the new second story addition. The proposed design working load was 20 tons.

Site access, noise and vibration was a concern as passengers were still using the airport. The 7" grouted minipile did not perform well when the ASTM D1143 Quick Load Test was applied.

Looking for alternate pile systems to support the load, the contractor called Walder Foundation Products inquiring about the use of helical piles for the application. Walder Foundation Products suggested the A. B. Chance HELICAL PULLDOWN[™] Micropile, a patented combination end-bearing/skin-friction pile. As the helical pile is installed, it pulls down a grout column around its central shaft.

42 such piles were installed in 3.5 days during regular business hours without any passenger inconvenience. Adding a 5" grout column increased the standard SS5 helical pile's ultimate mechanical limit of 25 tons by 13 tons in the project soil.

Product and Installation:

A.B. Chance Company HELICAL PULLDOWN[™] Micropile. An SS5 galvanized helical pile (lead section with 10" and 12" helical plates welded on a 1.5"-diameter shaft) with a 5"-diameter pulldown grout column. Each pile was installed to a 34' depth utilizing 3,000 ft-lb of installation torque.

Test Results:

ASTM D 1143 Quick Load Test to 38 tons, providing the safety factor required for the working load.



Advantages:

- No spoils generated or to be removed
- Hydraulic installation with no vibration or excessive noise
- Installed with electric equipment to reduce fumes
- Contractor/installer certified by Chance Company



A. B. CHANCE COMPANY,
HUBBELL POWER SYSTEMS
Certificate Number 001136
SIC Numbers 3499, 3429, 5063
Original Registration: July 1, 1992
Current Registration: Oct. 23, 2003



CHANCE[®]

210 N. Allen St.
Centralia, MO 65240
Phone: 573-682-8414
Fax: 573-682-8660

©2004 Hubbell / Chance
RGS/5M Printed in USA

This product was manufactured in a plant whose Quality Management System is certified/registered as being in conformity with ISO 9001:2000.

NOTE: Because Hubbell has a policy of continuous product improvement, we reserve the right to change design and specifications without notice.

Bulletin 01-0401