CHANCE™ UNDERPINNING ANCHORING REPORT

A CASE HISTORY

Chance Civil Construction Distributor:
DANBRO Distributors, Philadelphia, Pennsylvania

Project:
Kellogg
Residential Summer House
Bay Head, New Jersey

Structural Engineer:
W.J. Castle, P.E. & Associates, P.C.
(Member of THE CASTLE GROUP)

General Contractor:
Hydro-Marine Construction Co., Inc.
(Member of THE CASTLE GROUP)

Background Information:
Built around 1910, the Kellogg house was originally a "boat house." Modifications such as sealing of the boat slip and construction of a bulkhead were made over the years and the house was converted into a luxurious summer home.
The current owners decided to raise the house 6 to 8 feet and completely demolish and rebuild the first floor area, while preserving the second floor construction. The owners were unable to find a contractor to perform the required jacking procedure due to poor soil conditions and inability to build any temporary foundations. In September 2001, W.J. Castle, P.E. & Associates, P.C (CASTLE) was requested to perform an inspection and evaluation to determine if it could be raised without damaging the structure and second floor stone fireplace.

Job Description:
Based on the evaluation, CASTLE was requested to design a foundation system that would raise the house 6 to 8 feet.
CASTLE designed jacking frames utilizing Chance Helical Piers (SS5), which consisted of two sets of two rows of piers the length of the house. East set was installed near

the outside bearing wall with cross beams and lateral bracing. Helical piers also were installed around the fireplace for a total of some 72 piers installed. Small access holes (approx. 2 x 3 feet) were cut through the ground floor at pre-determined locations for the piers to be screwed into place to a uniform depth. The jacking frames extended only 2 to 3 feet above grade and were designed to become part of the final foundation system. Once in place, a steel cap beam was attached and jacks positioned. With the upper floors supported by this temporary system, the first floor walls were removed and a timber cribwall installed. All piling, steel beams, and bracing were installed and cut off as required by Hydro-Marine Construction Co., Inc. (HYDRO) a Chance certified installer.

CASTLE also designed a foundation system for other areas of the house including the overhangs, porches etc. at the owners' request. HYDRO personnel installed 106 additional

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A.B. Chance, a Division of Hubbell Power Systems Inc.
210 N. Allen St.
Centralia, MO 65240
Phone: 573-682-8414
Fax: 573-682-8660

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piers for these areas while the house was lifted onto the temporary foundation system.
The final step for this project was to reconstruct the first floor.

This entire project, from initial inspection to final construction was completed in six months, ending in May 2002. Total cost of this project was approximately $212,000.00.

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Before Rehabilitation

After Rehabilitation

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