CASE STUDY Sandy Springs, GA

CANTSINK™
SUPPORTING INNOVATION



Foundation Footings For Front/Rear Home Additions

Unsuitable Soil Calls For Deep Foundations

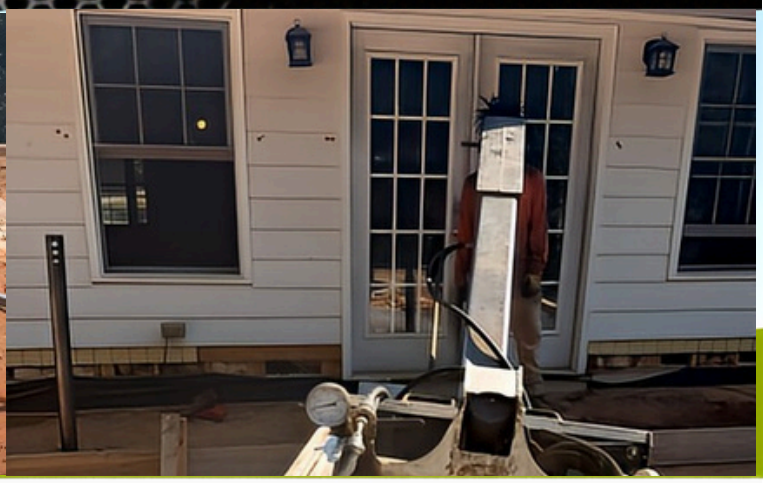
SITUATION

A homeowner in Sandy Springs, GA planned to expand their single-story home with new additions on both the front and rear of the house. As the project moved into foundation design, poor soil conditions were discovered at the building site — soils that wouldn't reliably support conventional shallow footings for the new construction. Based on those conditions, the engineer of record specified a deep foundation system to carry the additions' loads down past the weak soils to competent bearing. With the existing home occupied and the new footings tying in directly alongside it, the solution also had to be installed with minimal disturbance to the original structure. Builder Waters Woodworks turned to Cantsink for a helical pile solution.

CASE STUDY

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SCOPE OF WORK

WATERS WOODWORKS HIRED CANTSINK TO INSTALL HELICAL PILES SUPPORTING BOTH THE FRONT AND REAR ADDITIONS, WITH THE ENGINEER SPECIFYING A DESIGN CAPACITY OF 25 KIPS PER PILE. TO MEET THAT REQUIREMENT, CANTSINK INSTALLED 2.5" HELICAL PILES FITTED WITH A 12" HELIX, A CONFIGURATION WELL SUITED TO DEVELOPING CAPACITY IN THE SITE'S SOILS.

ANCHOR SYSTEM

IN ALL, 12 HELICAL PILES WERE INSTALLED ACROSS THE FRONT AND REAR ADDITIONS. PILES WERE INSTALLED TO REFUSAL AT THE MARKED LOCATIONS, WITH EVERY PILE INSTALLED TO THE ENGINEER'S SPECIFIED 25 KIPS. BECAUSE SOIL CONDITIONS VARIED ACROSS THE SITE, ACTUAL INSTALLED DEPTHS RANGED FROM 14 FEET TO 28 FEET - A RANGE THAT HIGHLIGHTS THE ADVANTAGE OF HELICAL PILES, WHICH ARE EXTENDED UNTIL THEY REACH COMPETENT BEARING RATHER THAN STOPPING AT A FIXED, ASSUMED DEPTH. PILE LOCATIONS AT THE FRONT OF THE HOME WERE PROBED IN ADVANCE TO IDENTIFY FILL PLACED AROUND AN EXISTING SEWER LINE. THE PROJECT ALSO PRESENTED A LOW-OVERHEAD CHALLENGE. SEVERAL PILES HAD TO BE INSTALLED DIRECTLY BESIDE THE EXISTING HOME, BENEATH THE ROOFLINE AND EAVES, IN NARROW FOOTING TRENCHES THAT LEFT IMITED CLEARANCE FOR INSTALLATION EQUIPMENT. CANTSINK CREWS USED COMPACT EQUIPMENT AND CAREFULLY CONTROLLED INSTALLATION TO SET EACH PILE ACCURATELY IN THESE CONFINED LOCATIONS WITHOUT DAMAGE TO THE EXISTING STRUCTURE.

RESULT

THE HELICAL PILE SYSTEM GAVE THE MONTEVALLO HOME ADDITIONS A RELIABLE, VERIFIABLE FOUNDATION DESPITE THE POOR SOILS DISCOVERED ON SITE. BY EXTENDING EACH PILE TO COMPETENT BEARING — FROM 14 FEET TO 28 FEET AS CONDITIONS REQUIRED — AND CONFIRMING CAPACITY AGAINST THE ENGINEER'S 25-KIP SPECIFICATION, CANTSINK DELIVERED THE LONG-TERM STABILITY THE HOMEOWNERS AND ENGINEER OF RECORD REQUIRED, WHILE WORKING AROUND LOW-OVERHEAD CONDITIONS AND AN OCCUPIED HOME WITH MINIMAL DISRUPTION.