

# CASESTUDY

FEB 2023

8 HELICAL PILES & 8 TIEBACKS  
STABILIZE FAILED RETAINING  
WALL IN STORM EMERGENCY



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# HELICAL PILES & TIEBACKS SAVE BACKYARD RETAINING WALL IN EMERGENCY STORM REPAIRS

## PROJECT BACKGROUND

After recently remodeling their entire backyard and installing a pool a Seal Beach, CA homeowner began noticing signs that their retaining wall was beginning to lean and crack in the midst of one of Southern California's few and far between winter storms. In a matter of days they began noticing several inches of vertical as well as horizontal movement in both the wall as well as the new concrete and pavers in the backyard.

## PROJECT DESIGN PHASE

After performing his initial evaluation our Inspection Specialist, Tom, found that a broken sprinkler line had allowed potentially thousands of gallons of water to oversaturate the soils behind the retaining wall and building up enormous amounts of hydrostatic pressure. This was compounded by several inches of rain in a multi-day winter storm. The city declared the project an emergency repair and expedited a permit that would allow our team to begin repairing the wall immediately. Tom worked with Helfrich & Associates to design a repair plan consisting of 8 helical piles as well as 8 tiebacks to stabilize the wall from any future movement.

## DALINGHAUS SOLUTION

The helical piles would be used to address settling while the tiebacks would be used to address the lateral movement. Our crew began by installing the tiebacks in order to provide the wall with a bit of support before exposing and undermining the footing in order to install the helical piles. They found competent soils at a depth of about 35' with their tiebacks and a depth of about 25' for the vertical piles. Due to accessibility limitations the crew dug and installed the helicals all with handheld equipment.

## INSTALLATION OVERVIEW

TOTAL HELICALS

**16**

HELICAL PRODUCT

**TAF-288  
TAF-150**

PRODUCT MANUFACTURER

**EARTH CONTACT PRODUCTS  
(ECP)**



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