

CASE STUDY BROUGHT TO YOU BY:



Project: Residential Helical Pier & Tie-Back

Project Location: Fullerton, CA

Project Background Information:

A Fullerton, CA homeowner reached out to Dalinghaus Construction, INC after they believed a portion of their home, located near a slope, began showing signs of foundation problems. There were cracks appearing all over the walls and ceiling in that area of the home and they even had one of the walls settle so much in the middle that a gap was created in the drywall which would allow someone to see through to the room on the other side. They had attempted to patch and repair the cracks, but they continued to reappear! After explaining their home's situation, the homeowner scheduled a free foundation inspection to allow for measurements of the home's slab foundation. Phil Laney performed the initial inspection and measured a variety of elevation changes with up to 2.3 inches of settlement in the corner of the slab closest to the slope.

Project Design Phase:

The initial design concept for the project consisted of helical piers and helical anchors to both stabilize and attempt to lift the beautiful hillside home that had settled 2.3 inches. The homeowner had received bids for mudjacking and concrete piers, which neither provided a long-term solution for the foundation's issues.

ECP's model 150 Round Corner Square Body Helical Anchors could be used to address the lateral movement the home was experiencing due to the proximity to the hillside with their 7,000 ft lbs of torque and 70,000 lbs ultimate capacity.

ECP's model 288 Round Helical Pier could be used to stabilize the home's foundation away from the incompetent soils supporting it with their 9,500 ft lbs of torque and 100,000 lbs ultimate capacity.

Dalinghaus Solution:

After completing the inspection, Phil designed a repair plan consisting of 10 helical piers and 2 helical anchors to not only stabilize the home and prevent any future settlement issues, but to also attempt to lift the home to maximum practical recovery. The homeowner's primary concern was preventing future damage, but our team's plan was to attempt to recover some of the settlement before locking the helical brackets and foundation in place.

The helical piers were to be spaced every 5' around the perimeter and 2' from corners of the affected room. There was also a fireplace that needed two of it's own helical piers. The helical anchors were installed evenly on the wall that was parallel with the slope. Jesse and his crew installed all of the helical piers and anchors without the use of heavy machinery due to the small confines presented around the home. Each helical pier was hydraulically driven to predetermined torque and pressure values in order to ensure the home's weight would be transferred to competent, load-bearing strata.

Project Team

General Contractor: Dalinghaus Construction, Inc

ECP Helical Anchor Installer: Dalinghaus Construction, Inc

Products Installed

- ECP's 150 RCSB 1 1/2" Helical Anchor
- ECP's 288 Helical Pier 2 7/8" Round Helical Pier

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