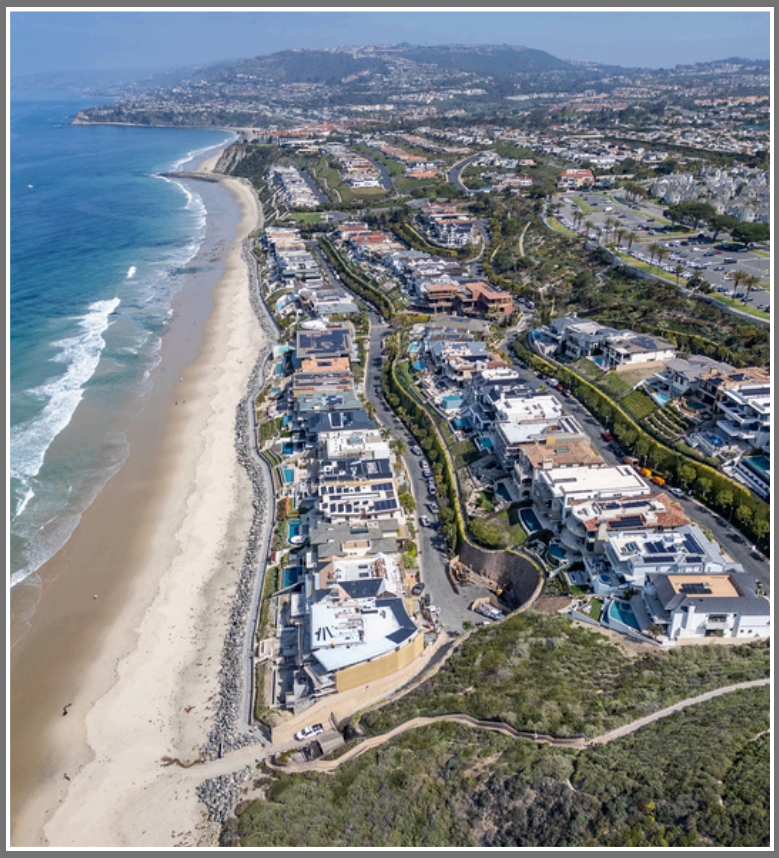
"Never Settle"
DALINGHAUS

Oceanfront Dream Homes Saved with Helical Tiebacks

ECP®

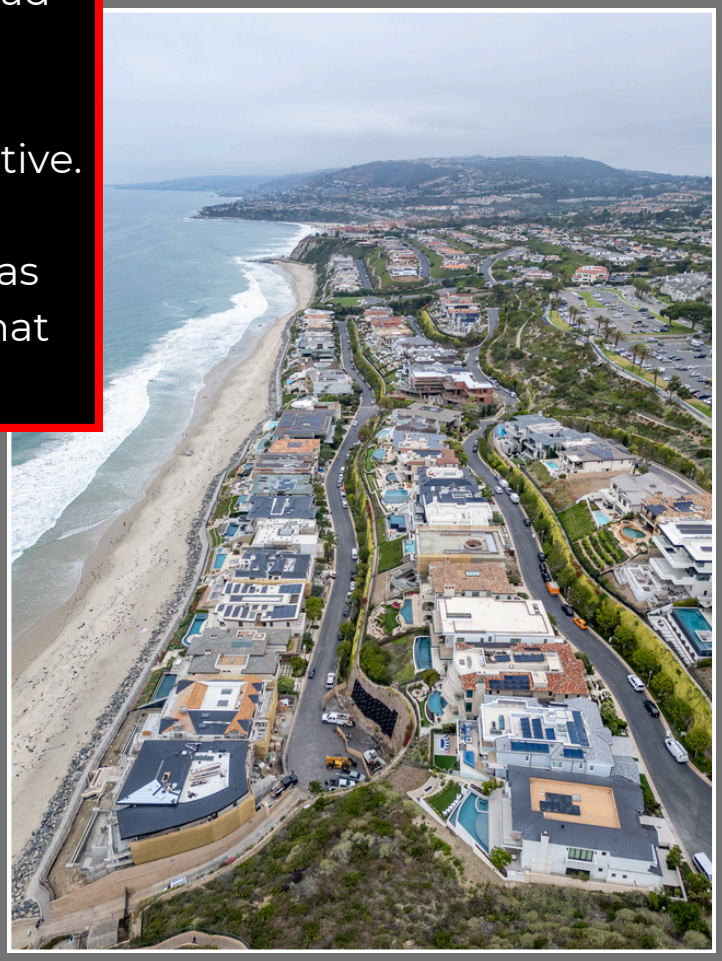
Dana Point, California
COMMERCIAL PROJECT OF THE YEAR FINALIST

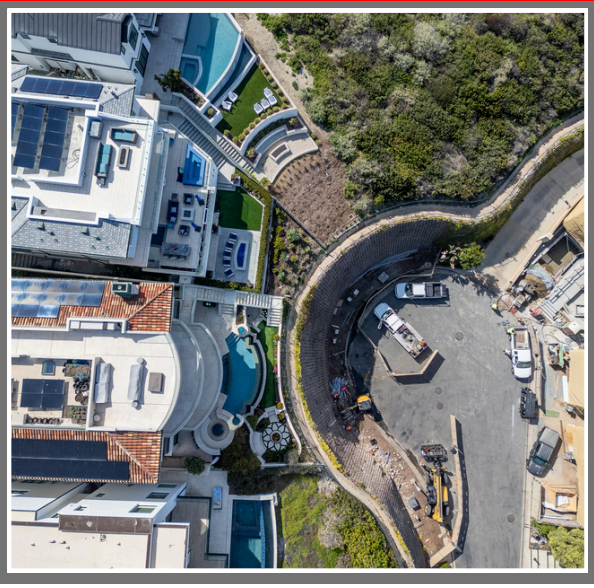
In a private beachfront community in Dana Point, California, Dalinghaus used 67 helical tiebacks to stabilize a massive retaining wall. The retaining wall supports over 100-million dollars worth of oceanside real estate, with another row of multi-million dollar homes directly beneath it. Needless to say, should this wall fail the destruction would be catastrophic.



The general contractor hired Dalinghaus Construction to perform the repairs of the retaining wall as a part of a larger renovation project for the community. Dalinghaus worked with Helfrich & Associates to design a repair plan that would stabilize the wall and ensure long term stability.

The wealthy, private, gated community had its own private security. That, along with other ongoing projects on adjacent properties made access to the site restrictive. The community is directly backed by the Pacific Ocean, so the Dalinghaus team was constantly dealing with the headaches that accompany the coastal commission.





The wall is over 40 feet tall, which required specialized equipment for testing, prep, installation, capping, waterproofing, rebar, shotcrete, and stamping. The specialized concrete stamps were custom ordered after engineering (and community) approval, which added to the projects lead time. They also performed tension testing on 4 of the helical locations to help the engineer determine the proper flight configuration, installation torque values, and installation depths.

The Dalinghaus team was involved in all aspects of the wall, including preparation, tieback installation, pile capping, waterproof membrane installation, rebar cages, shotcrete, and customized concrete stamping. The team utilized several different pieces of equipment to accomplish a clean installation. The installation took about 4 weeks, with piles going an average of 42 feet into the soil with some going as deep as 82'. Crews hit several layers of differing soil types and quite a few rocks, but ultimately the job was a resounding success.