

Installer: Residential Foundation Solutions, LLC · Durham, NC · 888.309.9727



**SITUATION**

The home had a backyard pool that was beginning to slide away from the house and the double retaining wall surrounding the pool was cracked and bowing outward. During the evaluation, Ram Jack discovered that the home was constructed on subterranean rock formation. When the concrete pool was installed, it was backfilled with rock from previous demolitions. This creates voids underground making structures more susceptible to shifting and sinking.



**SOLUTION**

Originally, the plan was to stabilize the walls the traditional way by transferring tension loads from the existing retaining wall to a soil suitable for the load. But, due to the amount of stone and rubble behind the wall and the pool posing as a barrier, owner, Rick Sykes, opted to take the reverse approach, and designed a solution using a battered pile method -installing helicals in at approximately a 45-degree angle going away from the double retaining wall. He consulted with the structural engineer who agreed that the compression approach would in fact provide the necessary support to prevent additional failure.



**CONCLUSION**

The Ram Jack crew installed three helical piles to stabilize the footing settlement and eleven helical tiebacks to stabilize the bowing retaining walls. Customized plates were made and welding took place on site.