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# 2015

## CASE STUDY

Type: Residential | Issue: SC201507

### Near-Complete Recovery Achieved on Home with Severe Foundation Damage

15 Multi-Helix Piles Stabilized Structure

RAM JACK LOCATION:

## Ram Jack South Carolina

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Ridgeway, SC



## SEVERE FOUNDATION SETTLEMENT

### RAM JACK SOUTH CAROLINA

RIDGEWAY, SC  
866-735-3085  
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This beautiful Georgetown, South Carolina home boasts timeless brick construction; it also boasted years of foundation settlement.

### Situation

The residence had all of the traditional markers of a failing foundation. Various windows and doors throughout the home were difficult to open and close or wouldn't do so at all. Large cracks were forming in the mortar, causing the bricks to separate from one another as much as 2 in. The brick walls were separating from numerous window and door frames. All in all, three out of the four corners of the home needed foundation repair.

### Proposed Solution

Jim Green, P.E. of Ram Jack South Carolina came up with a design plan to install 15 multi-helix piles, strategically placing them in the ground beneath three sinking corners of the home to lift and stabilize the structure. While the level of settlement of the home was so severe that it was unknown how much Ram Jack would be able to lift the structure, the helical piles would, at a minimum, stabilize the

structure in place. Stiff knees would also be used to push the brick back together throughout the process to close the large cracks in the brick.

### Outcome

Over the course of two days, 15 helical piles were installed according to the engineer's design, torqued to an average depth of 16 ft. The structure was lifted as much as 4 in. Four stiff knees were used to effectively move the brick back together. When the job was finished, the home was stabilized, most of the walls had been lifted back to achieve complete recovery, and the walls that weren't full recovered only deviated a minor 0.1 in. When finished, the homeowners were ecstatic, saying, "The work was excellent - absolutely beautiful work. The crew was very informative and nobody could have ever convinced me that the bricks would have such great recovery; you can hardly tell there were existing cracks."

BEFORE: Severe foundation settlement caused 2-inch cracks in the brick



AFTER: Recovery of foundation and closure of bricks

