



2013

CASE STUDY

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Ram Jack Stabilizes Unsupported Foundation Caused by Severe Flooding

RAM JACK LOCATION:

Ram Jack Utah

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New Harmony, UT



UNSUPPORTED FOUNDATION

RAM JACK UTAH

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No matter what you do to take care of and protect yourself, there's nothing you can do to prevent a natural disaster. And in the case of a natural disaster, there is often little you can do to prevent damage to your home.

Situation

In Littlefield, Arizona, when a river overflowed its banks and flooded the area, it eroded away soil beneath the residence. The flood waters washed away so much soil the front corner of the home was hanging in the air with no structural support beneath it. The owner of the home acquired a large beam to temporarily add support to the structure, but he needed a permanent solution. The owner called Ram Jack Utah to take care of the problem.

Proposed Solution

Initially, the engineering firm's plans included helical piles to support the structure, the creation of a form around the perimeter of the eroded area, and filling the interior with a sand slurry through holes to be drilled in the slab of the structure.

Outcome

The experts at Ram Jack Utah proposed an alternate solution that would both fill the empty space perfectly while providing the structural support the front corner of the home needed. Ram Jack proposed using structural polyurethane foam rather than slurry to fill the void beneath the home's foundation. This provided numerous advantages, including being lighter in weight, requiring less time to install, costing less, and not requiring removal of the floor covers for installation. Ram Jack Utah also proposed using strategically placed steel helical piles in order to lift the structure to an even level.

The helical piles were installed using a rotary torque driver and a mini excavator. After the first corner pile was placed, the temporary wood support beam was removed, and the rest of the piles were installed. Foam was installed throughout the process and allowed to cure as needed. When finished, the foam extended to the perimeter of the structure, occupying over 200 ft.³ Seven (7) 2 7/8 in. helical piles with guide sleeves and low profile brackets were installed to an average depth of 25 ft., lifting the structure 1.5 in. for complete recovery.



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