

Elevating a Slab-On-Grade Home

Baldwin County, AL – The Scarcliff family enjoyed living on the river. What they disliked was the fact that each time Fish River overtopped its banks, floodwaters would show its presence in their home.

Floodwaters made repeat visits to their slab-on-grade home until the Scarcliffs sought mitigation measures to hold it at bay.

“Our home has flooded five times. We’re only 300 feet away from the river” said Glenn Scarcliff, retired salesman. “In 1997, during Hurricane Danny, we got seven feet of water. Recovery costs were estimated at \$168,000. We had three incidents where floodwaters got up to six to eight inches in our home. Then in 2005, we got five feet of water.”

To add to the family’s woes was the fact that Mr. Scarcliff bought the house in 1976 and had maintained flood insurance as long as the home was mortgaged. He paid the mortgage off in 11 years and canceled the policy shortly afterward.

“I thought I was wasting money,” said Scarcliff.

The Scarcliffs nearly exhausted their life savings to defray the cost of repairs following the 1997 flood event.

“I quickly went back to the insurance company, upon completion of repairs, to ask if I could be re-instated,” he said. “I was told I could.”

The Alabama Emergency Management Agency (AEMA) along with the Federal Emergency Management Agency (FEMA) offered a solution to the Scarcliffs’ flood issue – elevating their flood-prone home.

The elevation project was funded by FEMA’s Hazard Mitigation Grant Program (HMGP).

HMGP provides grants to states and local governments to implement long-term hazard mitigation measures after a major disaster declaration. The purpose of the HMGP is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster. The state administers the grant. The project was approved March 2, 2006 and was completed December 6, 2006.

The total cost of the project was \$90,492. The Federal share was 75 percent. Local share provided by the Scarcliffs was 25 percent. As policy holders in the National Flood Insurance Program, Increase Cost of Compliance (ICC) funds covered the Scarcliffs’ share.

If you have NFIP insurance, and your home has been declared substantially damaged, ICC coverage is provided to cover up to \$30,000 of the cost to elevate, flood proof, demolish, or relocate your home. ICC coverage is in addition to the coverage you receive to repair flood damages.

The scope of work involved the use of hydraulic jacks and a network of I-beams to lift the slab-on-grade, wood-frame house. The contractor separated the house from the slab, lifted the house and left the slab on the ground. Because the slab was not lifted, the I-beams were inserted through openings

cut into the walls of the house above the slab rather than below it. To enable the beams to lift the house, the contractor attached horizontal wood bracing to the interior and exterior walls at the tops of the openings.

The advantage to lifting the house without the slab is the fact that it's lighter and therefore easier to lift. This applies mainly to wood frame and brick veneer homes. It is important to note, it is possible to lift the house with the slab attached if desired. Masonry homes are more difficult to lift because of their construction, design and weight; however, lifting these homes is also possible.

"The old slab was demolished and hauled away, and a new slab was poured," said Scarcliff. "The pilings are actually 24 feet long and had to be special ordered. They had to be special ordered and cost about \$200 each"

"We got to watch the entire elevation process," said Scarcliff's wife, Gabrielle. "It was so exciting to watch those jacks actually lift the house."

"The engineer did the plans for the elevation project," said Scarcliff. "According to the elevation certificate, we needed to elevate seven feet. We decided to go up 10 feet."

On April 30, 2014, rushing floodwaters wreaked havoc in some of the homes in the town of Summerdale. The Scarcliffs' 2,500 square-foot home stood high above the flood. Floodwaters rose up 4 feet on the subfloor.

"I am pleased with the project. Since the recent flood, I have spoken to two other homeowners regarding elevations. They plan to use ICC funds to raise their homes," said Scarcliff.

For additional information, visit: <http://www.fema.gov/media-library/assets/documents/480> (see Chapter 5 of FEMA P-312: "Homeowner's Guide to Retrofitting") and <http://www.fema.gov/national-flood-insurance-program-2/increased-cost-compliance-coverage>