Mitigated Homes Remain Standing in New Orleans After Katrina

Full Mitigation Best Practice Story

Orleans Parish, Louisiana

New Orleans, LA – Torrance Green's construction company had nearly completed two homes in New Orleans when Hurricane Katrina struck in August 2005. The hurricane brought 100 mph winds and floodwaters up to 10 feet above grade, demolishing neighboring residences, but both of Green's structures survived the devastation thanks to his strict adherence to sound mitigation techniques.

The first structure is a two-family home built on chain wall footing, and elevated five feet above grade with reinforced concrete block columns. The frame is securely fastened to the foundation with anchor bolts, nuts, and washers. Understandably, the extensive and unprecedented flooding of the neighborhood did cause some damage to the home, such as shorted electrical components, saturated portions of drywall, and mold, but the siding, windows, and roof – all built to hurricane code – withstood Katrina. The windows are partially enclosed, the siding is nailed loosely with a quarter of an inch of give, and the roof is fitted to the frame with heavy-duty hurricane straps and connectors. Mr. Green personally ensures that his framers fill every nail hole on the prefabricated hurricane hardware he uses. The good condition of this house within a shattered neighborhood demonstrates that Mr. Green's construction techniques should be put to standard use in hurricane-prone areas.

The second house that was under construction when Katrina hit is a single-family, shotgun-style home (so named because of its long, narrow design). Like the first home, it is a lone survivor in a neighborhood that witnessed extensive destruction from high winds and flooding. The surrounding houses, built little above grade, sustained irreparable damage. In fact, most houses were blown off their lots. The house constructed by Mr. Green's company remains standing, however, because it was well-built with hurricane-resistant materials and elevated to the pre-Katrina Base Flood Elevation (BFE). Although the house was built to code, it was not completely protected from flooding because of the hurricane's unprecedented intensity. Still, the frame was elevated high enough that the water did not reach the newly installed air conditioning and heating ducts. The chain wall footing and concrete block pillars of the foundation, combined with the proper use of J-bolt anchors, saved the house from the fate suffered by its neighbors.

Mr. Green noted that both of his construction sites were protected with flood insurance, which has lessened the impact of the hurricane on his livelihood.

Following Katrina, Mr. Green also inspected a house he built the previous year in the Lower Ninth Ward, an area notorious for how hard it was hit by the storm. Upon arrival to Delery Street, he found the remnants of what used to be people's homes. The house that Green constructed stood alone among the wreckage. Except for some internal water damage, the house was almost unharmed. In fact, every roof shingle remained in place and even the turbine vent was still spinning.

Torrance Green knows how to build a house to withstand hurricane forces. He has been in the construction business in the New Orleans area for seven years, and has learned how to properly mitigate the natural hazards of the region. Hurricane-resistant construction materials and practices are no secret, Green insists, and in this part of the country they should be routinely utilized. Mitigation measures, along with flood insurance, are likely to help protect homes from flood loss and provide homeowners with peace of mind.

Activity/Project Location	
Geographical Area:	**Single County in a State**
FEMA Region:	**Region VI**
State:	**Louisiana**
County:	**Orleans Parish**

Key Activity/Project Information

Sector:	**Private**
Hazard Type:	**Flooding; Hurricane/Tropical Storm**
Activity/Project Type:	**Flood-proofing**
Activity/Project Start Date:	**08/2005**
Activity/Project End Date:	**Ongoing**
Funding Source:	**Homeowner**

Activity/Project Economic Analysis

Cost:	**Amount Not Available**

Activity/Project Disaster Information

Mitigation Resulted From Federal Disaster?	**Unknown**
Value Tested By Disaster?	**Yes**
Tested By Federal Disaster #:	**No Federal Disaster specified**
Year First Tested:	**2005**
Repetitive Loss Property?	**No**

Reference URLs

No URLs were submitted

Main Points

- Through strict adherance to hurricane construction codes and guidelines, the houses constructed (and those in cconstruction at the time of Hurricane Katrina) by Torrance Green's construction company were still standing after the storm.

Structure with Mold Damage.

This elevated home received flooding during Katrina.

Hurricane clips help keep a roof in place during high wind events.

This house was not properly anchored to its foundation.

This house in the Lower Ninth Ward stood alone in the wreckage following Hurricane Katrina.