



Arkansans Get Ideas on Combating High Winds

Full Mitigation Best Practice Story

Independence County, Arkansas

Independence County, AR – Only six months into the year 2008, the State of Arkansas has had three disaster declarations warranting Federal assistance. In response to the severe storms, tornadoes, and flooding disasters experienced by the State of Arkansas (DR-1744-AR, DR-1751-AR and DR-1758-AR), FEMA Region VI took along an exhibit during its Hardware Tours to demonstrate an aspect of construction critical to the safety and welfare of citizens: using connectors.



In regions of the country prone to high wind events, building codes such as the International Residential Code (IRC) require structures to be capable of transferring the wind's forces through the framework of the building to the foundation. Locally, FEMA Region VI's Hazard Mitigation Community Education and Outreach (CEO) group provided critical information on safe building practices, including demonstrations on building safer structures using connectors. Connectors are steel components designed to connect and strengthen joints within the frame of a home. They are engineered to secure the frame of the house and increase its ability to resist seismic, wind, and other forces. Joints supported with connectors are much stronger than joints secured solely with nails.

"A local company had previously donated some of their connectors to us," said Taran Wilson, Region VI CEO Group Supervisor. "In the wake of the tornado disaster, DR-1744-AR, I contacted the company to secure samples of connectors for our Hazard Mitigation Advisors to display during the Hardware Tours. The company decided to create three models, utilizing various types of connectors, for us to display."

Wilson continued, "The [FEMA] Hazard Mitigation staff, watched and listened attentively, as the company's representative demonstrated the function of each connector. I tried to use advisors who had a construction or engineering background to explain the exhibit during our tours."

The exhibit showed connectors such as hurricane ties, double stud plates, strong-tie nails, floor span connectors, stud plate ties, girder tie-downs, coiled straps, roof truss clips, joist hangers, stud shoes, wall bracing anchor bolts and strap-tie hold downs. These connectors were especially placed in local hardware stores within Arkansas counties affected by recent storms.

Connectors are reportedly user friendly and inexpensive for new construction. They are also recommended for use on existing construction; however, that job is more challenging.

"Whether old or new construction, the use of connectors is advantageous" said Wilson. "The level of difficulty in placing connectors on existing structures depends largely on what you are strapping down. For example, roof to wall connectivity is much easier to accomplish than wall to floor."

Safe building practices can minimize the financial woes caused by disasters. For new construction, citizens and builders are urged to follow guidelines set forth in the International Residential Code (IRC). For areas that experience higher wind speeds (up to 150 mph), the IRC refers builders to the American Forest and Paper Association (AF&PA) Wood Frame Construction Manual (WFCM) for regulatory design guidelines.

Activity/Project Location

Geographical Area: **Single County in a State**

FEMA Region: **Region VI**

State: **Arkansas**

County: **Independence County**

Activity/Project Location

City/Community: **Batesville**

Key Activity/Project Information

Sector: **Public**

Hazard Type: **Severe Storm; Tornado; Hurricane/Tropical Storm**

Activity/Project Type: **Education/Outreach/Public Awareness**

Activity/Project Start Date: **02/2008**

Activity/Project End Date: **Ongoing**

Funding Source: **Other FEMA funds/ US Department of Homeland Security**

Activity/Project Economic Analysis

Cost: **Amount Not Available**

Non FEMA Cost: **0**

Activity/Project Disaster Information

Mitigation Resulted From Federal
Disaster? **Unknown**

Value Tested By Disaster? **Unknown**

Repetitive Loss Property? **No**

Reference URLs

Reference URL 1: **<http://www.b4ubuild.com>**

Reference URL 2: **<http://www.awc.org/standards/wfcm.html>**

Main Points

No Main Points were entered.



FEMA Hazard Mitigation Advisors explain exhibit to local citizen during one of the department's hardware tours



Picture shows damage sustained as a result of March 2004 flood event