From Left to Right:
(1) Andrew Graettinger, Associate Prof., Dept. of Civil Eng., Univ. of Alabama, Tuscaloosa, AL
(2) Tom Skaggs, APA – The Engineered Wood Association, Tacoma, WA
(3) Rakesh Gupta, Associate Prof., Dept. of Wood Sci. and Eng., Oregon State Univ., Corvallis, OR
(4) John van de Lindt, Associate Prof., Dept. of Civil Eng., Colorado State Univ., Fort Collins, CO
(5) Steve Pryor, Simpson Strong-Tie Company, Inc., Dublin, CA
Review finds damage factors

Construction quality affected storm damage

By JAY REEVES
Associated Press writer

GULFPORT, Miss. — A few more nails and extra bolts could have made a big difference for some homes that were destroyed by Hurricane Katrina.

An initial engineering review found that most of the wood-frame houses that survived the storm's 130 mph gusts held up because of little things: plenty of nails, metal straps attaching rafters to frames and bolts anchoring frames and porches to concrete.

The review was completed by a five-person team organized by the University of Alabama. University researchers, building code specialists, engineers and wood industry experts spent three days inspecting 30 locations in southern Mississippi and eastern Louisiana. The goal was to explain why some homes survived, and others were uninhabitable.

"The lesson to be learned is attention to detail," said John van de Lindt, a Colorado State University professor who was part of the team. "If the (building) code was followed, things seemed to do really well."

The group didn't spend much time looking at the rubble of homes nearest the coast, where structures were washed away by a storm surge topping 35 feet. Instead, it focused on homes just a little inland.

"Designing against surge can be done, but it would be so expensive that no one could afford it," said Andrew Graettinger, an associate professor of civil and environmental engineering at Alabama.

The research group determined that new homes fared better than older ones, but porches were a problem area.

"The columns supporting them were just resting on the concrete, and the wind would just pick it up," van de Lindt said. "That led to roof failures on both homes and light industrial buildings."

The group also found evidence of spotty quality between builders. But rather than purposely skirting building codes, builders apparently didn't understand all the requirements of constructing hurricane-proof homes, the team believes.

Dave Johnson, a building inspector in Harrison County, said most of the area's coastal towns operate under a building code that requires that structures withstand winds up to 130 mph. Farther inland, buildings are rated to weather 100 mph winds, he said.