



Currents

HOUSES THAT WORK

The Building Science Consortium — in collaboration with top home builders operating under the umbrella of the U.S. Department of Energy's Building America program — have developed complete energy and moisture management details for homes in every climate zone.

Offering detailed plans and drawings of homes suited to each zone, the project includes best practice building methods for meeting the extreme energy and moisture demands of homes in hot, humid climates along the southern coastlines and throughout Florida. Where humidity levels reach more than 70% throughout the year, improperly detailed homes provide ideal conditions for mold, mildew, and rot. Problems are compounded by intense solar radiation that imposes enormous thermal loads on the house, which not only increases cooling costs but keeps indoor surfaces cool for longer periods of time, thereby increasing condensation levels that also encourage moisture failures.

In-depth, practical solutions to these widespread coastal problems can be found online at www.buildingscience.com/houses-thatwork or at www.eere.energy.gov/buildings/building_america/pdfs/34585.pdf.

First Responder

Building expert joins post-storm search-and-rescue effort

Two hours after Hurricane Ivan made landfall, a Coast Guard HH-60 Jayhawk helicopter lifted off to do the first airborne reconnaissance of the Florida Panhandle coast. Among those on board: Forensics engineer Bill Bracken.

Bracken is Florida's lead Federal Emergency Management Agency-qualified structures specialist. His primary job: Size up damaged or destroyed structures and

"Our role is to do a very rapid assessment, because in our absence these firemen are going to rush in there," he explained.

The engineers are also expected to put their expertise to use in the air. Jostled by 60-knot crosswinds from Ivan's feeder bands, Bracken flew from near Pensacola, Fla., to Mobile, Ala., on September 16, 2004. Among the first to spot the collapsed oceanfront condos that are among



FEMA PHOTO/JOCELYN AUGUSTINO

Engineers joined first responders in the search for missing persons in homes destroyed by Hurricane Ivan near Pensacola, Fla.

advise firefighters and rescue workers before they attempt entry. Hired by the state during major emergencies, Bracken and four colleagues joined rescue swimmers, firefighters, and other first responders immediately after hurricanes Charley, Frances, Ivan, and Jeanne.

Forensic engineering typically values careful consideration over quick judgment calls. But Bracken, president of Tampa-based Bracken Engineering, said he's trained to give immediate advice after examining cracking or listing buildings — making the call on whether the building "is in a state of equilibrium or of imminent collapse."

Ivan's most enduring images, he helped direct ground-based rescue teams past obstacles such as downed bridges to where they were needed most.

Last year's four hurricanes are thought to have left at least 100 Floridians dead. Bracken may well have helped keep that number from rising any higher. In February, the Florida Fire Chiefs' Association awarded him Search and Rescue Responder of the Year — making him the first forensic engineer to receive the award. — A.H.