



LEROY BURNELL/STAFF

The structurally fortress-like Amerisips home (left) on Sonny Boy Lane came away mostly unscathed from a Sept. 25 tornado that hit Johns Island.

## Builder's 'eco-shell' cited as saving home from Johns Island tornado

BY JIM PARKER  
*The Post and Courier*

**F**inding a sure-fire answer to a tornado's destructive path on Johns Island last month recalls the proverbial needle and haystack — or in this case, debris-strewn fields.

A few clues have emerged, though, less than two weeks after the storm.

Dozens of homes sustained damage, and Sonny Boy Lane was hit as hard as any single street. Blue tarps covered roofs on a number of the sprawling homes on large lots, and at least one house was mostly destroyed. At the same time, an Amerisips-built house, fit together with structural insulated panels “to withstand 200 mph winds,” absorbed minor damage to the siding, back stairs and a few broken windows, the company says. The house is next door to homes that suffered roof damage and across the street from the totaled brick house.

Amerisips, a Berkeley County-based builder specializing in energy-efficient, eco-friendly construction, credits its “eco-shell” design for protecting the three-tiered house. The company has highlighted the home’s ability to survive a natural



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The view from a second floor window of the Amerisips home shows insulation, wood planks and other debris covering yards and streets.



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disaster. Amerisips co-owner Steve Bostic went so far as to entitle a mini fact sheet with photos as "Amerisips in the Eye of the Storm."

Whatever happened precisely, Linda Geronilla stands behind the builder's handiwork. Her husband is a Charleston area physician, and she holds a doctorate in psychology — focused on assisting people with trauma.

"I am super impressed with Steve's construction," she says. "Compared to my neighbors, hearing their stories, I had very little damage."

According to Amerisips, about 80 homes were damaged in the Brownswood Road and Sonny Boy Lane areas of northern Johns Island. The tornado struck at 1 a.m. Sept. 25.

In the past 10 days or so, the company penned a "home design profile" of the Geronillas' house. They called the posh home "Amerisips most advanced EcoShell home to date."

Among the high-tech features, the company pointed out its SIPs — structural insulated panels. These extra-strong pieces of wood or magnesium oxide sandwich layers of insulation. They're manufactured to handle winds up to 200 mph. To put the speed into perspective, it's on par with race cars' fastest super-speedway laps.

"We started out designing buildings" with the metal SIPs before graduating to homes, Bostic says. Magnesium oxide wallboards provide construction strength as well as resistance from fire, moisture, mold and mildew. Amerisips markets its metal SIPs under the Insulsteel Building Enclosures label.

The tornado proved to be a fair test of the panels' actual strength, Bostic says, noting that it's hard to reproduce 175-200 mph winds in a lab.

Other perks of the eco-shell include:

- Solar photo voltaic system which will yield annual electric bills estimated at \$200 a year. Bostic says the system, which uses rooftop panels, was not damaged in the storm.
- Solar lithium ion batteries to provide power "off the grid" during emergencies.
- Solar thermal hot water heating.
- Hurricane impact glass windows that protect the home from severe water and airborne object damage.
- Two hour rated fire wall protection.
- EPA Indoor airPLUS air quality certification declaring the household to be super clean for breathing.
- U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) certification.
- U.S. Department of Energy "Zero Energy Home" certification, which shows that the house doesn't expend any more energy on heat, lights, air conditioning

and appliances than it generates from solar and thermal power.

"It literally is self-sustaining," Bostic says.

Amerisips counts PGT Industries as a key supplier. PGT builds custom aluminum, vinyl and impact resistant house windows, doors and porch enclosures.

Elsewhere, the home is designed with a rainwater collection cistern to reduce annual water consumption and sewer usage to minimum costs. The Unico brand clean air filtration system stays "extremely quiet," Bostic says.

By combining the energy-efficient ingredients into a single eco-shell, Amerisips has emerged as "the only certified builder in the area to meet the Zero Energy Home standards," Bostic says.

The eco-shell, he says, "should go into everyone's house." A protective, energy-efficient structure can be adapted for affordable housing, Bostic says, or for "big builders, who've got the land but are having trouble with the shell."

To learn more about the Sonny Boy Lane house and the builder's construction techniques, visit [www.Amerisips.com/storm](http://www.Amerisips.com/storm).

For more information and photos, visit [www.postandcourier.com/realestate](http://www.postandcourier.com/realestate).

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**The Amerisips house on Johns Island from the air stands out for its lack of damage compared with neighbors on Sonny Boy Lane.**



**Steve Bostic, managing partner of Amerisips, shows a state-of-the-art standby 50 amp solar power system utilizing lithium-ion batteries that operate "off the grid."**



**Work crews man bulldozers and backhoes to clear out fallen trees on Sonny Boy Lane on Johns Island, hit by a tornado two weeks ago.**