

Seabrook Island Residence

Seabrook Island, South Carolina, USA



South Carolina homeowner creates hurricane-resistant home with Advantage ICF System®

Architect Bruce Eason of New South Design specializes in classic, old world, custom home design. Many of his designs are also sold as house plans through his company New South Classics. Eason was contacted by a homeowner interested in constructing his popular Seabrook home plan on the southeast coast of Seabrook Island, outside of Charleston, South Carolina.

"We took our Seabrook design, with traditional stick framing, and modified it to withstand the forces of nature as this house was to be built right on the water," said Eason. "The owner wanted to be sure that they had enough structure to handle the wind and water loads that typical hurricanes with wind and tidal surges could produce, and meet applicable building codes."

Working with a structural engineer, Eason specified the Advantage ICF System® for the above grade walls. The Advantage ICF System delivers two continuous layers of expanded polystyrene insulation for exceptional energy efficiency, along with the strength and durability of reinforced concrete. Light gauge steel framing was used for the roof and interior walls.



"The Charleston summers are hot and humid," said Eason. "ICF construction added greatly to the thermal protection for increased efficiency and comfort. The strength of the ICFs combined with the all steel framing is very important in hurricane prone areas. In this area you've got wind, water, heat and humidity—ICFs help mitigate all of that."

Despite the home's robust structure that is designed to withstand 140 mph winds, it retains the character of an authentic turn-of-the-century Charleston-style home.

"You can use a new technology like ICFs and finish with a home that looks appropriate in the Charleston Lowcountry," said Eason. "What's behind the walls is very different than what you expect. It is very high-tech, energy-efficient, and it enhances the safety and durability of the house."

"The home provides us with a great example of disaster-resistant and energy-efficient construction using the Advantage ICF System," said Advantage ICF System Product Manager Greg Doren.



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