Coastal Fortified Homes™

Why?

Because this is no longer an acceptable risk...

"Hurricane Sandy damage in Holgate"
Mystic Islands, Ortley Beach, N.J. | By : Governor's Office/Tim Larsen | Saturday, Nov. 10, 2012.

The clear & growing ***Need***

Population

*In **2010**, 123.3 million people, or **39%** of the nation's population lived in counties directly on the shoreline.... This number is projected to **increase** by an additional 10 million people or **8%** by the year **2020**... The population density of coastal shoreline counties is over 6 times greater than the corresponding inland counties .... 50% of the nation's population live within 50 miles of the coast. Source: NOAA. gov. World wide, **more than a billion people live** in low-lying coastal regions.* Source: Worldoceanreview.com.

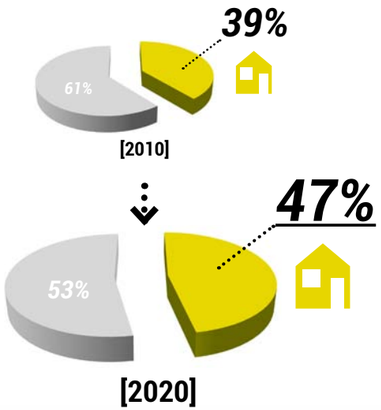
Storm Frequency

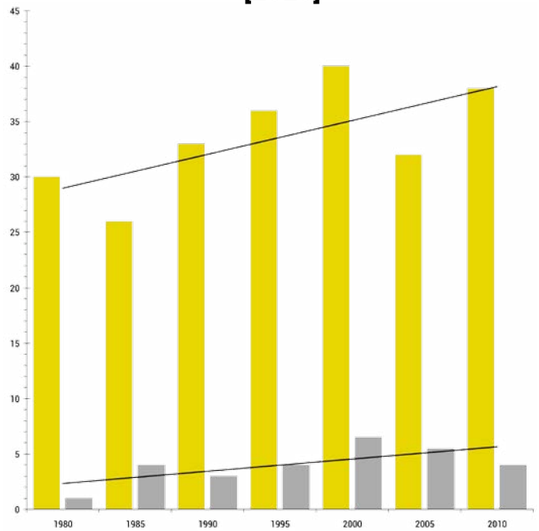
10 of the top 15 most active hurricane seasons and the most named storms, from 1851 to the present, have occurred since the year 2000. Source: Weatherunderground.Com.

Storm Costs

On average, every $1 spent to make infrastructure more resilient against pounding storms saves $4 in costs later on. Source: LifeScience

Population Density of Coastal Shoreline





Increasing Hurricane Frequency and Costs

Legend

- Percentage of Category 4 and 5 Events
- Number of Events Exceeding $1-Billion in Damage

*"It only takes one hurricane or tropical storm making landfall to have disastrous impacts on our communities".*Source: Joe Nimmich, FEMA associate administrator for Response and Recovery

Insurability and Premiums

Flood Insurance - In response to the "Biggert-Waters Flood Insurance reform Act of 2012 (The Biggert-Waters Flood Insurance Reform Act of 2012 was designed to allow premiums to rise to reflect the true risk of living in high-flood areas. The bill was supposed to deal with the "insolvency" of the National Flood Insurance Program by requiring the premiums to reflect real flood risks. The result was a 10 fold increase in premiums. At present, $527 billion worth of property is in the coastal floodplain. The federal government heavily underwrites the flood insurance rates for theses areas.) Congress passed The Homeowners Flood Insurance Affordability Act of 2014. The Homeowner Flood Insurance Affordability Act of 2014 is a bill that delays the increase in flood insurance premiums for 4 years ..... allowing time for further study.

Windstorm Insurance - In areas with a high hurricane risk, such as the Gulf Coast of Florida and Texas, insurers may refuse to write policies that include windstorm coverage or any homeowners' policies at all. A number of coastal states have created government-backed insurance pools to write policies for coastal homeowners. These state insurance pools are underfunded and are being evaluated.

Homeowners' Insurance - Many private insurance companies no longer provide policies for low-lying coastal communities.

Other - Does storm surge count as wind damage or flood damage? ... In 2009, Texas passed a law requiring homeowners buying windstorm coverage from the state pool to buy federal flood insurance first, to eliminate future disputes. There continues to be unresolved insurance claims from Hurricane Katrina, and the more recent Hurricane Sandy.

Coastal Fortified Home **Solution**

Engineering

A ***category V*** hurricane is rated at ***155 + mph*** wind. Coastal Fortified Homes are engineered to withstand wind loads in excess of ***200 mph***. The ability to withstand anticipated storm surge is also factored into the design specifications.

Although specific building codes vary by location, traditional homes in low-lying coastal regions are typically built to withstand Category 3 hurricanes.

Since the late 1800's, the coastal community of Galveston, TX has averaged a direct hurricane hit once every 8.3 years. Building codes in Galveston require the capability to withstand a 3-second gust at a wind-speed of 130 mph.

Hurricane Allen (1980) on the Atlantic Coast has the sustainable highest wind speed hit on record of 190 mph.

Coastal Fortified Homes *are engineered to* ***withstand windspeeds of 200 mph.***

Architectural Design

Our homes are robust and resilient without compromising on pride of ownership. Designed by internationally prominent architects to provide regional and neighborhood compatibility, a Resilient Home Design Collection will soon be available for preview.

Construction-ability | Practicability | Sensibility

Pre-Cast Insulated Concrete Components are manufactured in a facility and erected in the field. This smart building system approach assures:

- ***HIGH QUALITY*** controlled environment with 3rd-party inspections
- ***COST EFFECTIVE CONSTRUCTION***, within 10% of traditional constructional costs
- ***ABBREVIATED BUILD-OUT SCHEDULES*** twice as fast as traditional construction
- ***DURABILITY*** which translates into extended life-cycle
- ***INSURABILITY*** at significantly lower premiums
- ***MOLD/MILDEW RESISTANT***
- ***TERMITE/ INSECT ERMITE / INSERCT RESISTANT***
- ***ROBUST AND RESILIENT***
- ***ENERGY EFFICIENCY*** 50% more efficient than traditional construction
- ***SUSTAINABLE*** and ***LOWER COST*** of operations
- ***VERSATILE*** our homes are able to be raised on concrete pilings to accommodate ***FEMA***'s increased base flood elevations

Able to incorporate:

- ***ALTERNATIVE ENERGY*** systems, such as solar.
- ***EMERGENCY PREPAREDNESS*** systems, such as back-up generator.
- ***EXPANDABILITY*** by adding more panels, creating more rooms for the multi-generational household and non-load bearing interior walls, allowing changes to room configuration, use, and optimal air circulation.
- ***FLEXIBILITY*** systems, which can be easily accessed for future technology upgrades.

Pilot Project

Currently under **construction** in **Port Aransas, Texas**

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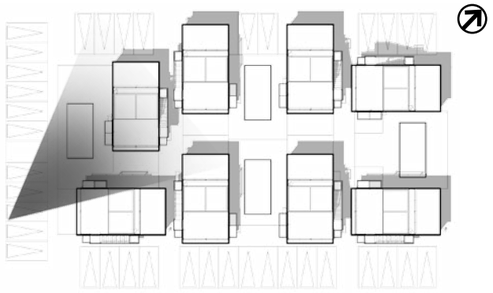
We are currently building an eight home "pilot" enclave in collaboration with Lorette Custom Homes, a Homebuilder based in Port Aransas, Texas. With project completion scheduled for March of 2015, these resilient homes will demonstrate a well designed and low maintenance environment appropriate for low lying coastal zones surrounding the country.

Designed for a vacation rental profile, the two-story homes of approximately 1600 square feet, will feature 4 bedrooms and 3 full bathrooms. A covered roof terrace expands the social living area of each home and provides sunset views over the surrounding neighborhood.

Site amenities include 4 swimming pool courtyards, drought tolerant landscape and a unique 5 parking spaces per home.

The Coastal Fortified Homes ™ building system will receive the highest ratings and certifications given by USGBC (United States Green Building Council) and IBHS (Institute of Business and Home Safety). With a commitment to quality, Key alliances formed between leading manufacturers and experts in the housing industry will insure continued innovation and relevance of our system.



Station Street

*The **Coastal Fortified Home Building System***

Ancient Roman builders incorporated precast concrete methods for constructing aqueducts, culverts, and tunnels.

Precast concrete is a method of pouring concrete into a mold in a controlled environment, and then transporting it to the construction site, and setting it into place. By producing precast concrete in a controlled environment, the product is closely monitored for quality control and allowed to properly cure.

A **sandwich panel** is created by adding rigid insulation between 2 pre-cast concrete wythes (sides), creating a highly energy-efficient thermal envelope. A foil face on the insulation, against a very dense formula of concrete, contributes significantly to the panel's ability to resist moisture-migration. The individual precast components are assembled through specially-engineered connections, and each wall is reinforced with steel.

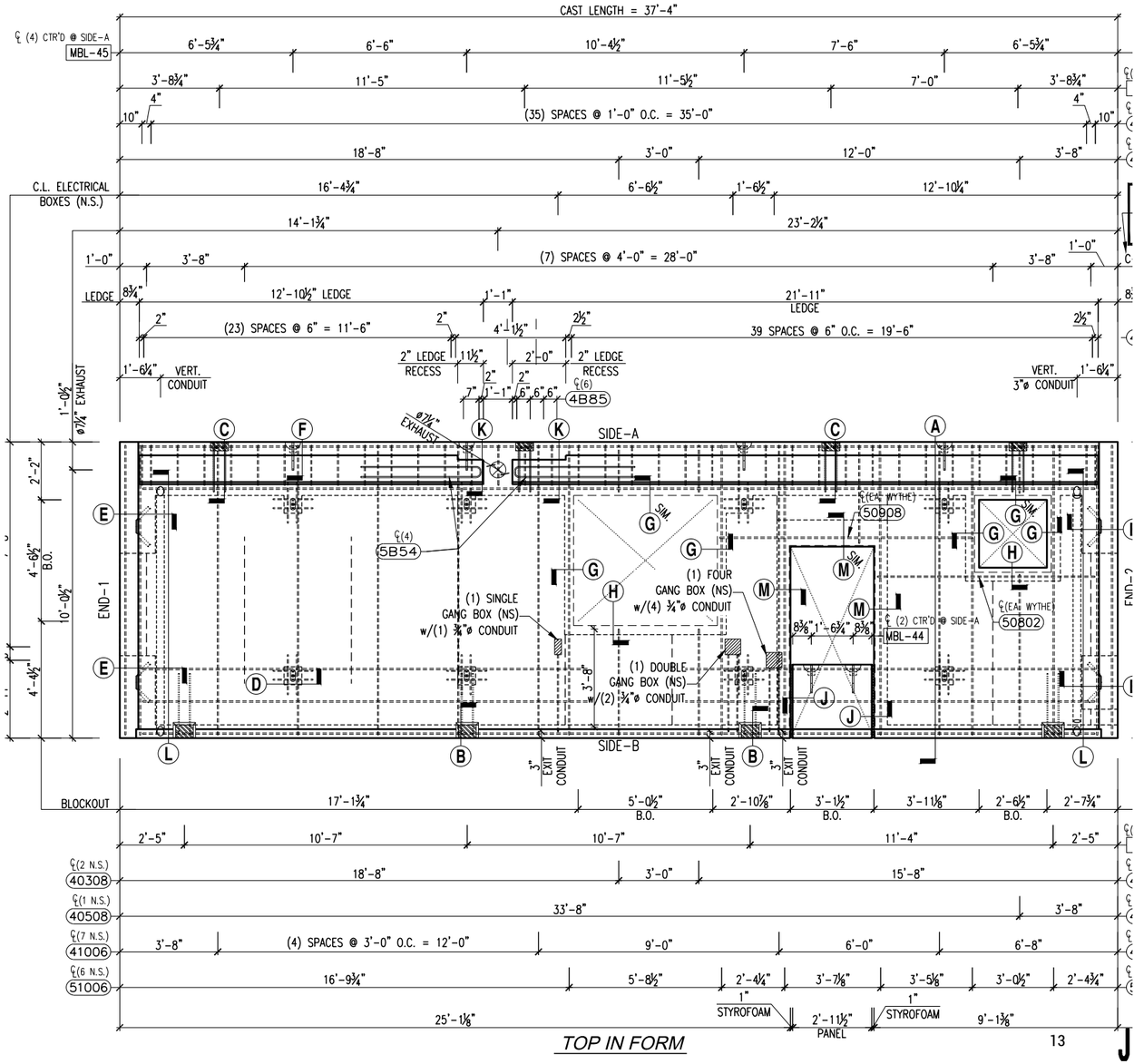
Specialized **impact-resistant windows** and doors are "blocked out" during the wall casting process, in order to be installed after the homes are erected. This method assures proper installation by trained professionals, as well as ease of transportation of the panels.

A **waterproofing membrane** is applied on the third floor terrace to assure a watertight envelope. All electrical runs and mechanical routing are considered in the design and planning and implemented during the casting process.

It takes a complete system to be resilient. A Coastal Fortified Home is a complete system.

Steel Reinforcement in the Wall

Insulation in Sandwich Wall



Continuing the Berkus Legacy in the Innovation of Housing

For 50 years the Berkus family has been focused on introducing innovative designs and developing new technologies for the housing industry.

1960's / 1970's

• **Operation Breakthrough:** Nationwide
- Barry Berkus worked with the US Government on a DHUD demonstration program to provide a new system of housing production, financing, marketing, management and land use.
• **Christian Western Structures:** Nationwide
- Innovated panelized building concepts.
• **Laguna Beach Apartments:** Laguna Beach, California
- Innovated panelized/lift up tower modules with floor/roof panels for hillside developments.
• **Levitt Mobile Modular Systems:** Nationwide
- Innovated mobile modular housing units.
• **Alcoa Aluminum Products:** Nationwide
- Innovated panelized housing systems.

1980's

• **HMX-1 Modular Demonstration Home:** Houston, Texas
National Association of Home Builders (NAHB) Convention show home
- Showcased new building technologies.
• **Asphalt Industry Demonstration Home:** Midwest
- Showcased new living patterns and uses for asphaltic products.
• **Copper Industry Demonstration Home:** East Coast
- Showcased new living patterns and uses for copper products and assemblies.
•**New Expanding Shelter Technology (NEST) program:** Nationwide NAHB Convention show homes.
- Showcased innovative design in modular construction.
•**Rokko Demonstration Home:** Japan
- Showcased innovative American design and construction techniques.
•**The New American Home 1987:** Dallas, Texas
NAHB / Hanley Wood - National Demonstration Home
- Introduced new technologies and home design concepts to the marketplace.

1990's

•**Mod Pod:** Nationwide
- Rapidly deployable, disaster relief "temporary housing".
•**The Home of the Future:** Fort Worth, Texas
Hanley Wood / Centex Homes - National Demonstration Home
- Introduced new technologies and home design concepts to the marketplace.
•**The Millennium House:** Nationwide
- Introduced a new concept in home design and construction techniques inspired by the organic growth patterns and forms found in nature.
•**Concrete Demonstration Home:** Houston, Texas
NAHB Convention show home
- Showcased innovative Insulated Concrete Form (ICF) construction.

2000's

•**Four Demonstration Homes:** Austin, Texas
-Introduced new living patterns and site-specific design solutions to the marketplace.
•**Silverleaf Casitas:** Scottsdale, Arizona
Gold Nugget Awards – Project of the Year
•**Yanonali Court:** Santa Barbara, California.
Gold Nugget Awards – Project of the Year
- LEED Platinum Rated enclave of homes.

2010's

•**RESTART©:** Nationwide
- Innovation in neighborhood design and building technologies.
•**Agri-homes**: Nationwide
- Introducing new living patterns in agrarian settings.
•**The New American Home 2014:** Las Vegas, Nevada.
NAHB / Hanley Wood - LEED Platinum - National Demonstration Home.
• **Coastal Fortified Homes:** Port Aransas, Texas.
- Introducing new concepts in fortified concrete construction techniques to the marketplace.

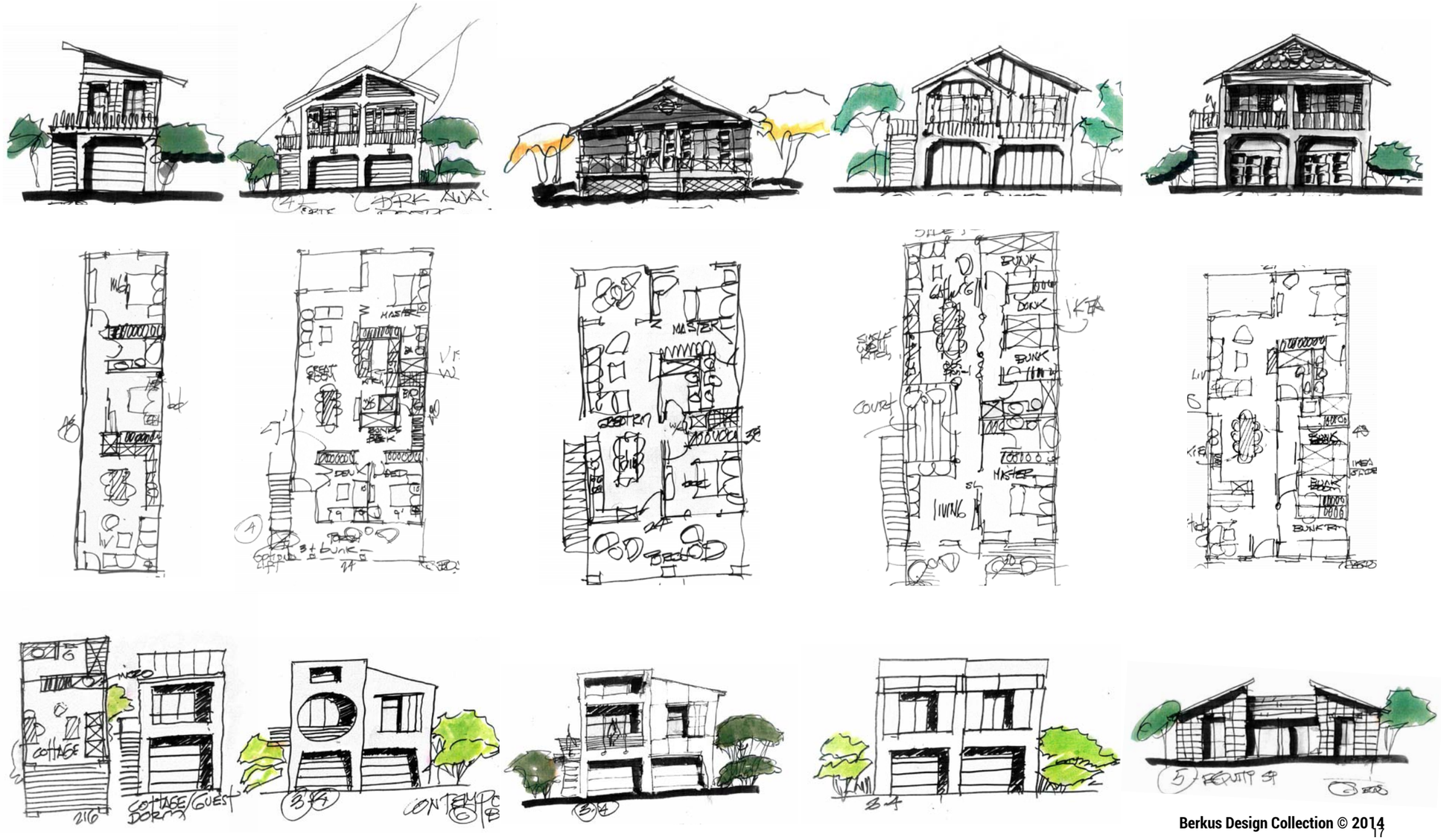
Resilient Home Design Collection *| Balancing Form and Function*

General - Whether for the Baby Boomer, Generation X-er, or the Millennial, the benefits of resilient construction, modern technology, lower maintenance, higher energy efficiency, and the ability to adapt for special conditions are central to the vision of Coastal Fortified Homes.

The Form - Respecting regional style and culture without compromising on the pride and integrity of home ownership is our core objective. Founded initially on the Berkus Resilient Home Design Collection, prominent architects throughout the nation will collaborate on all aspects of Form, from outreach and expansion to implementation.

The Function – Our system incorporates integrated design, environmental sensitivity, and flexible living configurations. Through continued performance testing and measuring, awareness, education, and outreach, Coastal Fortified Homes will continually remain proactive and relevant.

Simply put, we as a team of licensed architects, engineers, builders and housing industry experts, are passionate about creating an intelligent and lasting solution to the challenges of safe living in low-lying coastal communities.



Coastal Fortified Homes™

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Resilient Home Building Systems is the parent company to Coastal Fortified Homes, Resilient Home Design Collection and the nonprofit arm Resilient Homes Worldwide.