New Research Center Targets Natural Disaster Property Losses

by NAMIC

A new state-of-the-art applied research facility will use science and technology to expand capabilities to create more durable homes and businesses. The facility will be dedicated to reducing the human, financial, and societal costs of natural disasters and other threats to property from coast to coast.

The Institute for Business & Home Safety (IBHS), an insurance industry-supported nonprofit engineering and communications group, announced April 21 that it will construct the Insurance Center for Building Safety Research with funds from its insurer and reinsurer members.

The center will feature full-scale testing of buildings and construction components. A two-track research program will allow IBHS to address catastrophic issues, such as high winds, wind-driven water intrusion, earthquakes, and hail, as well as more isolated but expensive maintenance-related issues, such as plumbing system failure and interior fires. The findings will be used in aggressive consumer education and advocacy campaigns, in addition to supplying vital data to developing public policies in areas such as building codes and land use.

â€œUnfortunately, more people and property are in harmâ€™s way in this country than ever before,â€• said Julie Rochman, IBHS president and CEO. â€œMother Nature reminds us daily that we have to find ways to better protect the places where we live and work â€“ and we will have greatly increased capacity and capability to do that through the new insurance industry research center.â€•

She added that more durable construction is also environmentally friendly, and that even the â€œgreenestâ€• home could quickly become landfill if it is vulnerable to natural elements. â€œOur long-term goal is to help this country put a higher value on resilient, sustainable communities,â€• she said.

IBHS has been a leader in using building science to develop real-world approaches to reduce the risks posed by natural disasters and other perils. Events in recent years, including tornadoes, hurricanes, and wildfires, have given IBHS researchers opportunities for field work, during which they have learned much about how to better engineer structures against certain risks. But knowledge gaps that can be filled only with testing in controlled environments â€“ which the center will provide â€“ remain.

The centerâ€™s first priority will be to examine roofing performance issues. IBHS estimates that damage to the roofing system is present in as much as 95 percent of properties that suffer wind and water-related losses. The result is repair or replacement of millions of roofs every year.

â€œRoof failures and the damage done by water that can get in afterward can be a major headache and huge expense,â€• said Dr. Timothy Reinhold, IBHS vice president and director of engineering, who will lead the centerâ€™s research team. â€œBut with more realistic test methods and better knowledge about variables such as installation differences and how aging affects the performance of roof systems, we could save lots of money and aggravation.â€•

Reinhold noted that â€œproperty owners should quickly reap the benefits of this research, since roofs are the most frequently replaced component of buildings.â€• He added that existing research shows that each dollar spent on disaster mitigation saves society an average of four dollars.

The center will also enable IBHS staff to further leverage resources through ongoing partnerships with existing facilities and other researchers, according to Reinhold. Examples of this are already underway in the areas of earthquake, wildfire, and wind research. â€œIBHS is working with the University of Colorado and Pennsylvania State University on wildfire risk reduction research and risk modeling that is nearing completion,â€• he said. â€œAnd we are supporting earthquake research being done by the California Institute of Technology and University of California, Los Angeles.â€• He added that IBHS is also working with the University of Florida, Florida International University, and private laboratories on wind-driven water intrusion research.

Reinhold said the center â€œwill also foster a broader understanding of what can be accomplished with sustainable construction by providing training to builders, building officials, architects, engineers, insurance personnel, and others with a professional interest in the field.â€•

IBHS is currently evaluating several potential sites for the center. IBHS anticipates it will require about a 100-acre parcel. Selection criteria include a mild climate to allow for year-round research activities as well as access to significant amounts of electricity through a plant or substation. Construction is scheduled to begin

later this year.

Supporting IBHS member companies and insurance organizations currently include American Family Insurance, American Modern Insurance Group, Amica Mutual Insurance Company, Auto Club Insurance Association, Auto-Owners Insurance Group, Bankers Insurance Group, Benfield, COUNTRY Financial, Farm Bureau Mutual Insurance Company, Farmers Insurance Group, The Hartford Steam Boiler Inspection and Insurance Company, HomeWise Insurance Company, Liberty Mutual Insurance Company, MetLife Auto & Home, Munich Reinsurance America, National Association of Mutual Insurance Companies, Nationwide Insurance, OneBeacon Insurance Group, Property Casualty Insurers Association of America, RenaissanceRe Holdings, South Carolina Farm Bureau Mutual Insurance Company, State Farm Fire and Casualty Company, Swiss Re America, Travelers, and USAA.

â€œPowerful, destructive natural disasters do more than destroy property, they devastate lives,â€• said Rod Matthews, IBHS board chairman and vice president-underwriting at State Farm. â€œDisaster preparedness is a national challenge that calls for a concerted effort based on objective research and real-world solutions. This research center will help us find ways to not only build stronger, safer homes and businesses but also to save lives and prevent losses."

"Hurricanes, earthquakes, tornadoes, floods, and fires are inevitable, and it's our job to help people restore their lives to order after they happen," said Paul N. Hopkins, CEO of Farmers Group, Inc. "However, research by IBHS has shown that good building design can make a difference in the impact of these events. By creating this one-of-a-kind research facility, insurers are helping identify the best ways to reduce loss of life, injury, and disruption for our customers and communities in the future."

Source: IBHS

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