



IBA Consultants

New York City On Borrowed Time Against Hurricane Related Damage. IBA Consultants Urges Building Owners To Prepare Now.

NOAA, NY City Council and Others Agree That No Area Is Safe From Hurricanes.

05.28.2009 – For most people living along the northeastern seaboard, the hurricane season comes and goes without much concern. After all, in the New York area, it's been nearly 71 years since a Category 3 hurricane devastated a then sparsely populated Long Island.

Impact-resistant building expert Mark Baker, president of IBA Consultants, cautions building owners and facilities managers against complacency.

“Buildings within the City are on borrowed time against damage because it's not if a major hurricane will come, but when. The absence of one in seven decades statistically makes it more likely, not less likely that one will strike NYC in the near future. The time to evaluate and prepare a building for this eventuality is right now.”

Baker is not alone in his message:

Effective July 2008, the New York City Council passed a new building code that recognizes the City is within a “Hurricane Prone Region.” As such, the new code mandates that new buildings be designed and constructed to withstand the force of a hurricane, which is similar to Florida's building code.

A 1990 study by the U.S. Army Corp of Engineers states that New York City is the third most vulnerable major city to a hurricane, behind only New Orleans and Miami.

According to Scott Mandia, Professor of Physical Sciences at SUNY Suffolk, “...the next time a storm like the Long Island Express roars through, it might be the greatest disaster in U.S. history.”

Finally, the National Oceanic and Atmospheric Administration (NOAA) agrees that no area along the eastern seaboard, including New York City, is safe from major hurricanes and the damage that they produce



“There are millions of people currently living along the coastline who have never experienced a hurricane, let alone a major hurricane”, said Dennis Feltgen, Public Affairs Officer for NOAA’s National Hurricane Center in Miami. “It could be this season when many of these residents will learn firsthand about these storms, and it is vital to be prepared.”

Despite a consensus from several authorities that a major Category 3 hurricane could impact NYC, few building owners and facilities managers have taken notice in a significant way.

According to Baker, this complacency poses problems that can be avoided.

“Before a hurricane’s path points toward NYC, building owners need to take the steps necessary to strengthen their building, protect the people inside it and increase the value of their property,” states Baker. “Preparation starts with evaluating the exterior to find the small problems that turn into large ones during a major storm.”

And Baker speaks from experience. His firm, IBA, was an early adopter of the Miami-Dade Building Code in the wake of Hurricane Andrew (Category 5) in 1992. Later, their participation in reviewing, testing and modifying a proposed state code assisted Florida lawmakers in writing one of the most respected building codes in the country. Today, Baker sits on the ASTM committee for impact resistant glazing.

“It’s great that New York City passed building codes similar to Miami-Dade,” states Baker. “However, currently 100 percent of the City’s buildings contain window systems that will fail during a major storm because they simply weren’t designed to withstand the force.”

“Prior to the new code, the exterior windows and cladding for most buildings in NYC were designed to meet a 30 PSF (pounds per square foot) design pressure. However, for a hurricane, this is far too low. When the wind load of a storm exceeds window capacity of a window not designed to handle it, failures and damages occur.

“With the new building code in place, new construction must meet the requirements of the ASCE-7 standard often resulting in design loads two times as high.”

According to the American Architectural Manufacturers Association, the primary consideration of the rating is structural integrity of the window or door, to keep it intact and prevent the pressure of high-velocity wind from entering the building and causing catastrophic structural damage.

As Baker notes, New York City’s building owners – and general population – will benefit from what Miami tested and implemented nearly two decades ago.

“For years in Miami-Dade County, new construction and renovation projects had to comply with hurricane resistance code requirements, which mandated increased design protocols for both product and building to withstand impact from wind, rain and flying debris caused

by hurricanes. Thanks to this code, South Florida became much more resistant to damage since the window capacities were greater than wind loads.”

While the new code takes effect in New York City, owners and facility managers of older buildings should not wait to begin to change their mindset to harden their building against the next hurricane. Baker offers the following recommendations:

Tighten Up Your Building: Ensure that seals are tight around windows and add approved sealants as necessary. Check every window and exterior door to against cracks and breaks. Check the roof’s seam integrity, flashings and penetrations and metal/stone copings for adhesion, cracks and leaks. Without an inspection and maintenance program, air leakage from small cracks can contribute to internal pressurization of a building, which is the major cause of structural failure during a hurricane.

Limit Potential Projectiles: Clear debris from outside the building and from the roof. Debris in a storm can turn into projectiles that can penetrate windows and doors no matter how tall the building is. In fact, since wind speeds increase at higher elevations, hurricane strength winds can pick up debris from a small building and turn it into a projectile as it strikes (and damages) a taller building.

Harden & Retrofit Older Buildings: Any older building’s exterior can provide better protection for the people and assets inside it through newer waterproofing and impact resistant designs and products. In doing so, notes Baker, the owner may qualify for insurance premium discounts as well as increase value of their investment.

“Through the combination of regular maintenance before a storm and the right products to add protection, an owner will increase the chance of their building escaping a major storm with little damage,” concludes Baker. “The key is being prepared and realizing that all coastal areas along the Eastern seaboard are prone to major hurricanes.”

With eight offices located throughout the United States, IBA Consultants (www.ibaconsultants.com) is the country’s foremost building envelope consulting firm, specializing in the identification and elimination of potential and existing wall cladding, glazing, glass, roofing, and waterproofing system failures. Founded in 1996, with more than 4,000 successful projects to its credit, IBA has earned a reputation for excellence throughout the world through a highly trained staff with world-class qualifications.

Twitter Pitch

NY City is on borrowed time against hurricane damage. Expert: It's not if, but when. Now is time to prepare bldgs.

News Facts

- A category 3 hurricane has not hit NYC in 71 years.
- NY City Council recognized the City is in a Hurricane Prone Region.
- NOAA states: “It could be this season when many of these residents will learn firsthand about these storms, and it is vital to be prepared.”

- IBA Consultants is one of the country's leading hurricane code, design and construction experts.
- 100 percent of the City's buildings contain window systems that will fail during a major storm because they simply weren't designed to withstand the force.

Resource Links

None

Tags

[NYC hurricane](#), [New York City](#), [IBA Consultants](#), [NOAA](#), [National Hurricane Center](#)

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