



FIU

**Extreme Events
Institute**

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International Hurricane Research Center

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FIU

**Extreme Events
Institute**

Extreme Events Institute (EEI)

International Hurricane Research Center

Disaster Resilience in the Americas Program



Hurricanes
Floods
Earthquakes
Tsunamis
Volcanoes

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Research Areas

Florida Public Hurricane Loss Model
Storm Surge Model: CEST



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NOAA National Hurricane Center – National Weather Service



Risk Equation

$$E_{mR} / DR / CatR = H + E_x \times V$$

An Institute programmatically built around an equation.
Flood, Pakistan 2014. Photo by IFRC

"We're in a slow motion train wreck."

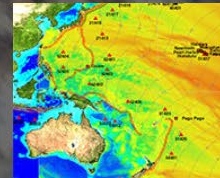
EEI In The News



**Building Hurricane-
Proof Roofs, 12/13/17**

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Visualizations



**Visualizations of
Hazards**

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World Premiere Showing of Documentary:

BUILT TO LAST?

SAVING OUR HOMES IN THE AGE OF DISASTERS

Wall of Wind

Official NSF Research Testing Facility

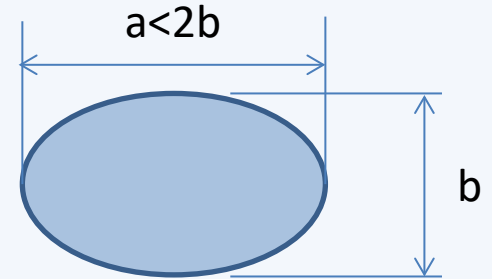
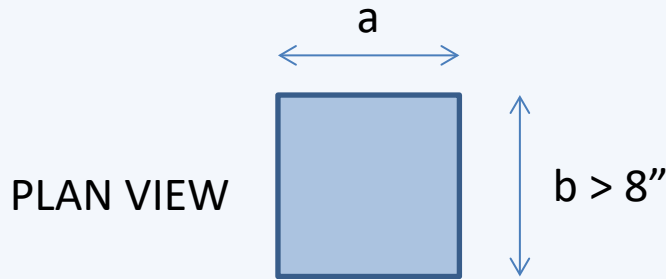


Wall of Wind Mitigation Challenge

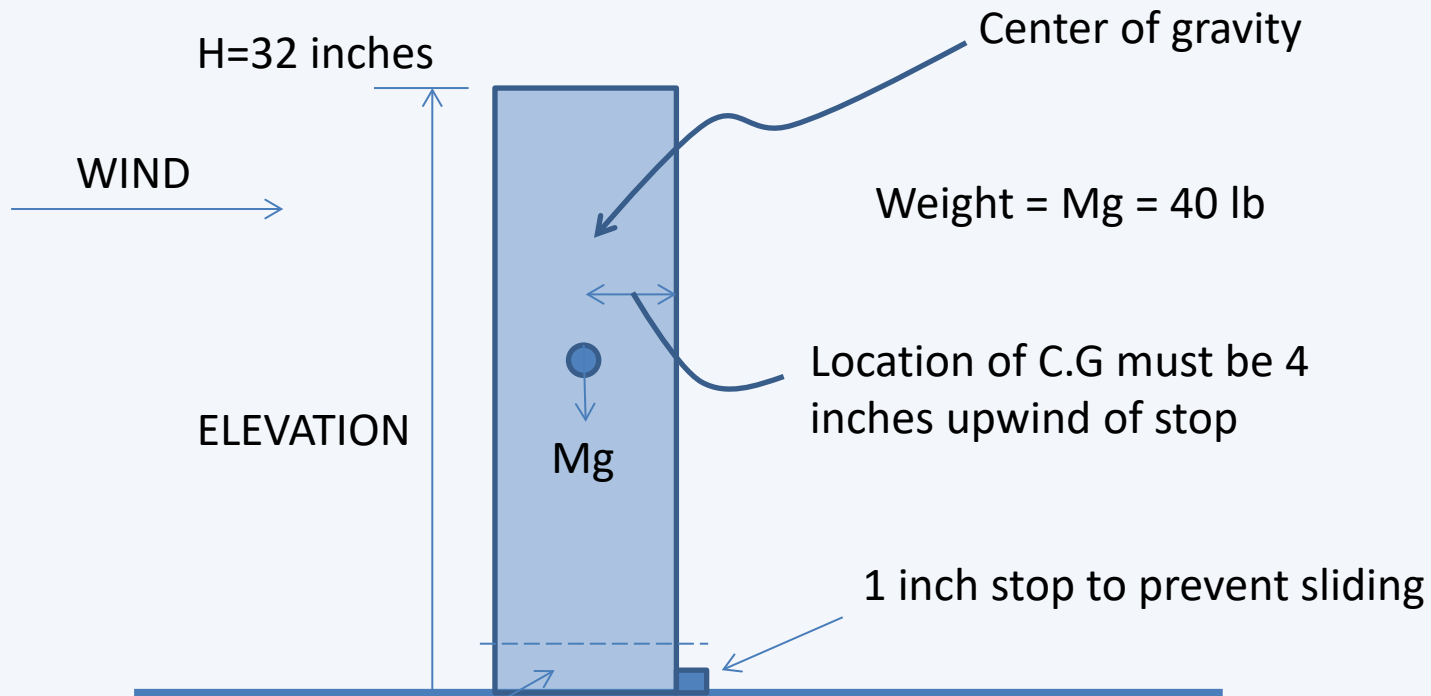
- FIU Wall of Wind Team determines the mitigation challenge.
- High school teams compete by solving the challenge.
- 3 components; technical paper, oral presentation and physical test.
- VIP Judges for the day of competition.

2018 Wall of Wind Challenge

- The objective was for students to improve a building's aerodynamic performance.
- Each team's task was to develop a mitigation solution that would improve aerodynamic performance through shape optimization by minimizing aerodynamic drag.
- The goal is for a building model to remain upright to as high a wind speed as possible.



Example of alternative shape



Lowest 2 inches must be square