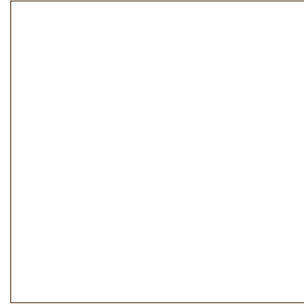
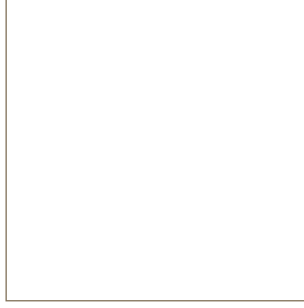


# The FM Global Research Campus





Engineers at the Natural Hazards Laboratory perform a wind uplift test on a roof membrane to determine if it meets rigorous property loss prevention standards. Such testing helps FM Global clients determine which products will best prevent or minimize property losses due to windstorms.



## Natural Hazards Laboratory



**W**indstorms, floods and earthquakes pose major threats to property, but the loss potential of these natural hazards can be greatly reduced. FM Global research following Hurricane Andrew in 1992 led to recommendations that lowered our clients' overall losses by an estimated US\$250 million six years later when Hurricane Georges struck. Today, the new Natural Hazards Laboratory helps researchers further understand what causes building materials to fail and the best ways to design buildings to resist the effects of Mother Nature.

Researchers can now replicate even the toughest weather phenomena, and recreate hurricane-force winds of 160-mph (258 km/h). Winds this strong truly test the strength of glass and the endurance of building materials, particularly roof systems.

Inside the laboratory, a hail gun launches ice balls of varying sizes, to simulate moderate and severe hail storms, and a debris cannon shoots simulated wind-blown wood projectiles at speeds matching those of a real hurricane to determine impact resistance of doors, windows and siding. The laboratory also is equipped with a powerful xenon arc ultraviolet (UV) accelerated weatherometer to measure the effects of the sun's UV radiation on building materials that have been exposed for long periods. And, testing includes accelerating the weathering of all types of building materials to determine more precisely how to design and install them for long-term performance.



1. A slope-burn test in the materials laboratory replicates the impact of wind-blown fire on a sloped roof.
2. The wind machine at the Natural Hazards Laboratory churns up hurricane-force winds to test the durability and strength of building materials.
3. A piece of lumber easily impales a .5-in. (13-mm) sheet of plywood when shot from a debris cannon.



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