



Hazard Mitigation Saves Historic Galveston Home

Full Mitigation Best Practice Story

Galveston County, Texas

Galveston Island, TX When Hurricane Ike slammed ashore on Galveston Island in September 2008, the storm's 100-mph winds and 11-foot storm surge took aim at one of the most important historic buildings in Texas – Moody Mansion.



The mansion suffered some rainwater intrusion and flooding from Hurricane Ike's surge, but damage was minimal, thanks to hazard mitigation measures that dramatically reduced disaster losses, said Betty Massey, executive director of the Mary Moody Northern Endowment, which owns and operates the mansion. The measures are all part of the endowment's phased, systematic, strategic approach to protecting historic resources through disaster planning, preparation, and hazard mitigation.

The mansion is, by any standard, a priceless treasure. Construction spanned 3 years, from 1892 to 1895. The building is crafted of red brick generously iced with limestone, sporting bold arches, towers, dormers, and a pyramidal red-tile roof. It contains 31 rooms on three floors atop a raised basement. Perhaps the most stunning feature is a 12-foot-tall leaded, stained-glass window overlooking the landing of the finely crafted staircase in the oak-paneled central hall.

During Hurricane Ike, winds hurled debris broadside into the stained-glass window, but the window had been covered with safety glass to protect it in a storm. Mary Hoehne, Moody Mansion facility manager, said, "The covering did its job. There's no question that without the safety glass we would have lost that window."

Broken windows would also have allowed substantial water intrusion and damage throughout the home. That's why most of the other 50-plus windows are covered with clear storm coverings of polycarbonate, a kind of plastic shield that is nearly as clear as glass.

The best of the polycarbonate glazing products are touted for their high-impact strength, flame resistance, insulation, and clarity. This type of shield is often used in bus stop shelters, sky lights, and similar projects that demand both transparency and extreme strength. Placing the polycarbonate on the windows protects the mansion's openings without detracting from the historic building's façade. The window protection system has been a major investment that the mansion is continuing in installments as funds are available.

According to Ms. Massey, Moody Mansion stewards believe their responsibility to safeguard the property requires hazard mitigation measures. Some people think historic properties cannot be protected from hazards because those protective measures could detract from the historic buildings. To the contrary, she feels hazard mitigation is imperative for historic buildings because these structures represent priceless resources that cannot be lost.

The challenge is to find creative ways to mitigate risks without sully the historic character of the buildings. "For example, we needed to prevent water from building up and damaging the porches, but we didn't want to detract from the beautiful archways," Ms. Massey said. To solve the problem and still preserve the mansion's status on the National Register of Historic Places, the mansion's stewards funded an engineered system of drains and removable fabric shields that hang from permanent fasteners. "We put on the shields before a storm," said Ms. Hoehne. "When we take them down, no one would even know the system is there."

Hurricane mitigation work also includes weather stripping, wooden shutters on windows without clear storm shields, and protective film applied to the inside of the windows. When one window broke, the film kept it from shattering, which in turn prevented further damage. A humidity-control system prevents mold, a scourge of flooded homes, and also helps keep water from wicking up the masonry walls and causing long-term damage.

Perhaps most importantly, a hazard mitigation plan addresses preparedness, business continuity, and hazard mitigation.

Ms. Massey said, "The idea is to think things through ahead of time and have a plan, even if you can't do it all at once. One year, we add half the protective plastic and repair the old shutters on the other windows, and next year add another quarter and so on. We keep a standing item in every year's budget for hurricane mitigation."

Activity/Project Location

Geographical Area: **Single County in a State**

FEMA Region: **Region VI**

State: **Texas**

County: **Galveston County**

City/Community: **Galveston**

Key Activity/Project Information

Sector: **Private**

Hazard Type: **Hurricane/Tropical Storm**

Activity/Project Type: **Retrofitting, Structural**

Activity/Project Start Date: **01/2000**

Activity/Project End Date: **Ongoing**

Funding Source: **Non-profit organization (NPO)**

Activity/Project Economic Analysis

Cost: **Amount Not Available**

Activity/Project Disaster Information

Mitigation Resulted From Federal
Disaster? **No**

Value Tested By Disaster? **Yes**

Tested By Federal Disaster #: **1791 , 09/13/2008**

Repetitive Loss Property? **No**

Reference URLs

No URLs were submitted

Main Points

No Main Points were entered.



A 12-foot-tall stained glass window welcomes visitors to the Moody Mansion.