

# ROSE & THORN HOME INSPECTION

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Hurricane Impact resistant windows and doors.

Hurricane shutters.

How can they help your home?

What can each withstand?

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## Hurricane Impact Resistant Windows.

There are 2 main types of impact windows, depending on the degree of impact resistance.

One type of impact windows is designed for small missile (projectile) impacts. These windows consist of multiple layers of polyvinyl butyral (PVB) sandwiched between 2 sheets of glass. The glass is then placed in an autoclave at least 600 degrees Celsius under high pressure — to temper the glass in order to increase its strength.

The other type of impact windows is designed for larger missile impacts. These windows are referred to as PET laminated glass and glass-clad polycarbonate. In most cases, the windows are attached to the frame with structural silicone sealant.

Not every window on the market can claim to be impact resistant. There are testing standards set forth by the American Society for Testing & Materials (ASTM) that must be met before the window is certified as being impact-resistant. One of the most stringent of the requirements comes from the South Florida Building Code, which has been concerned over the increase in the number and force of hurricanes in recent years. Beginning in July 2001, the South Florida Building Code required that every exterior opening in a house be protected against flying debris either by shutters or impact resistant windows.

Also, according to the code, the windows must meet requirements for large and small missiles. It specifies that for large missiles, the window has been tested with an impact from a six-foot-long 2x4 weighing nine pounds, traveling at 50 feet per second. The test is done in a laboratory setting with the lumber fired from a cannon into the window. The window glazing must remain intact after the impact.



The small missile test exposes the window to a variety of impacts with 30 pieces of roof gravel traveling at approximately 80 feet per second or 50 miles per hour in order to meet the certification requirements. Current tests actually use steel ball bearings for uniformity in test conditions.

The windows are marked and graded according to the South Florida Building Code to ensure that you are getting exactly what you're paying for. You can rest assured when buying impact-resistant windows that the product will perform as advertised when installed according to manufacturer's specifications.



# Hurricane Shutters.

Hurricane shutters come in many options.

Roll down

Accordion

Aluminum Panel

Polycarbonate Panel

Wooden colonial style

Bahama shutters

Each have their own limits and protection. Be sure to investigate carefully to cover your protection requirements.



Roll down can be manual or powered. Be sure to have the manual key should the power fail.

In terms of design, all rolling shutters are available in a wide range of colors and sizes. They're made from some of the strongest and most durable materials and are built to last.

They don't have to be removed after the season, adds security to your home.

Can be used in hard to reach area's

When rolled up, they are stored permanently affixed above the window/ door.

Can easily be operated by and made storm ready.

Roll down shutters are not cheap; however, they can add value to your home.

May require a battery back up system so the shutters can be operated during power outages.



Accordion shutters are metallic shutters which are neatly folded into pleats and opened when needed. They are fixed to one side of the door or window and works on tracks which help it slide forward or back. They resemble the pleated part of an accordion, hence their name.

Accordion shutters are the easiest ones to operate, (other than the remote operated roller shutters, of course).

They don't have to be removed after the season, adds security to your home.

They are folded neatly to one side and are compact.

You can paint them to match your interior and exterior decor.

They take hardly any time to close up a normal window and you can secure your home within minutes.

They can be used to secure windows and doors – any space, just name it!

Accordion shutters, although are compact, it does take up a few centimeters of your side space in your window view, depending on the length of the shutter.

The tracks of the accordion need to be frequently checked and kept clean. If a bead or anything is stuck in the track, then it is difficult or impossible to move the shutter across unless the obstruction is removed.

Accordion shutters can be installed to cover any length, but height could be a problem.

Accordion shutters are not convenient for hard to reach areas.



## Aluminum Panel and Polycarbonate Panel Hurricane Shutters.



### Metal hurricane shutters

Practice installing all of your hurricane shutters, and time how long it takes to get them out of storage and hang them up so you have a realistic idea of the lead time you need if a major storm approaches.

Be sure your hurricane shutters are easily accessible and be prepared to act quickly. When a storm is approaching, install the shutters as soon as possible. Hurricane shutters will provide very little protection if they're buried deep inside your storage area.



Clear hurricane shutters are available in standard industry widths and are designed to work with the same standard industry tracks and hardware that aluminum or steel panels are installed on.

Not all panels are created equally. Be sure to investigate the impact resistance of these. Look for: Miami Dade County high velocity missile proof approved on the paperwork



The use of a drill with a nut driver will help install your shutters, have spare wing nuts and bolts on hand. Stainless steel of course!

## Wooden colonial style



Permanently-mounted Colonial hurricane shutters add a distinct aesthetic design to the exterior of a home while also providing homeowners with storm protection and privacy. Colonial-style hurricane shutters mount to either side of a window in a single, bi-fold, or tri-fold design. Available in a variety of materials such as aluminum, polycarbonate, and traditional wood, they add color, texture, and aesthetic details to the exterior of a home.

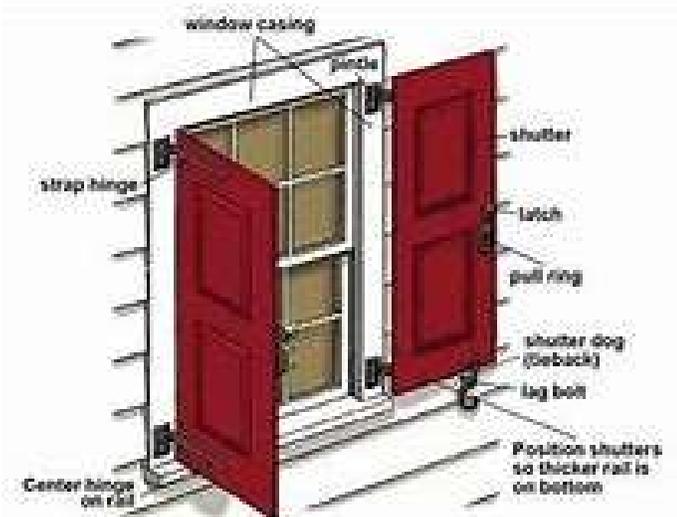
These shutters close up tight to the window or door they are installed on.

They take only minutes to close and secure.



Be sure to regularly inspect the shutter mounting hardware, as sand and salt can rust the hinges. You don't want to find out they won't close as a storm is approaching.

As most of these shutters are constructed of wood, be sure to maintain them to keep wood rot and wood destroying insects at bay.



Will this type of shutter fit your windows or doors!

The hinge must be able to close the shutter flat against the window or door.

The attachment to the window frame is paramount to the resistance of the shutters.

## Bahama shutters

Bahama shutters are a type of window shutter that is mounted on the exterior of the home or commercial property. These shutters are hinged at the top, making them easy to pull over windows when a storm approaches. They are a one-piece shutter that is mounted above a window. They can remain propped open at all times, left partially closed or completely closed for privacy. As they are secured to the wall itself, they will remain sturdy during strong winds.



When a storm is approaching, a homeowner simply pulls on the bottom of the shutter to bring it down to seal the window, protecting the glass from any wind damage.

Many homeowners also use these shutters to keep the sun out, when windows are facing the sunlight.

A Bahama Shutter also provides privacy for homeowners, even with the shade in the open position.

Bahama Shutters are usually made of sturdy aluminum but can also be created out of wood. Wood has a natural beauty, or aluminum because of its long-lasting properties. They are often sold in either panel or louver styles for added variety. The shutters can be tailor made to fit almost any window size and shape from bay windows to attic windows. They are available in a wide variety of colors and are finished with a powder coating process.

With any storm window and door protection, do your homework and be sure of the parameters and limitations of the product you are interested in.

Talk to your installer, have they installed your type of hurricane protection before? References?

The strength and protection of the shutters will be limited by the quality of the installation.

Thank you to Lana Hommick-Lee for her suggestion for this newsletter.

**Rose & Thorn Home Inspection is available to serve your clients inspection needs.**

**Please contact me at 708-278-8592.**