Holes should be drilled for lag bolts  $2\ 1/2$  inches from the outside edge of the plywood at each corner and at 12-inch intervals around the perimeter of the window.

Drill four holes in the center area of the plywood to relieve pressure built up between the window and the plywood during a hurricane. Mark each shutter so you will know where it is to be installed and store them and the bolts in an accessible place.

### ADDITIONAL PROTECTIONS

- Bring in all outside items, such as patio furniture and children's toys, that can become projectile objects in heavy winds.
- Keep trees and shrubbery trimmed. Make trees more resistant by removing diseased or damaged limbs.
- Clear loose and clogged rain gutters and downspouts. Hurricanes often bring long periods of rains. Clear drainage prevents misdirected flooding.
- Know whether your home is in a flood zone and if necessary follow flood preparedness procedures.
- Prepare an evacuation plan in case you and your family are asked to leave your home. Have a "grab and run" bag ready with important papers, such as your homeowners insurance policy and any required prescription drugs.
- Listen to the advice of local officials and leave if they tell you to do so. If you are not advised to leave ride out the storm in a safe room in your home away from windows.

### WHEN THE STORM IS OVER

- Use extreme caution when entering your home or business after the storm. Hurricane-driven flood waters may have damaged buildings where you least expect it. Carefully watch every step you take.
- Wear sturdy shoes. The most common injury after a disaster is cut feet.
- Use battery-powered lanterns or flashlights when examining buildings.
- Examine walls, floors, doors, staircases and windows to make sure that the building is not in danger of collapsing.
- Inspect foundation for cracks or other damage. Cracks to damaged foundations can render a building uninhabitable.
- Look for fire hazards. There may be broken or leaking gas lines, flooded electrical circuits or submerged furnaces or electrical appliances. Fire is the most frequent hazard following floods.
- Check for gas leaks. If you smell gas or hear a blowing or hissing noise quickly leave the building.
- Look for electrical system damage. If you see sparks or /frayed wires or smell burning insulation call an electrician.
- Pump out flooded basements gradually (about 1/3 of the water a day). If the water is pumped out completely in a short time pressure from the water outside could cause the basement walls to collapse.



# TOWN CF A5FG<: =9@8" BUILDING DEPARTMENT

# Hurricane Protection: Before and After



How to Protect Your Family and Your Home

## Prepare Your Home Before the Storm

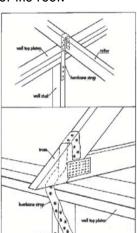
During a hurricane, homes may be damaged or destroyed by high winds and high waves. Debris can break windows and doors, allowing high winds inside the home. In extreme storms, such as a hurricane, the force of the wind alone can cause weak places in your home to fail.

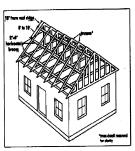
If you take action now—BEFORE a hurricane strikes— you can reinforce four areas of your home and increase the odds that your home will survive the storm.

### **AREAS TO STRENGTHEN:**

### THE ROOF

Installing additional truss bracing and gable end bracing to gabled roofs make the roof system stronger. A gable roof looks like an **A** on the ends with the outside wall going to the top of the roof. In Figure 2. Truss Bracing gabled roofs truss bracing usually consists of 2 x 4s that run the interior length of the roof.





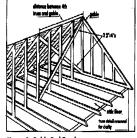


Figure 3. Gable End Bracing

Hurricane straps or clips can also help keep any type of roof attached to your walls. The straps, or clips, are made of aalvanized metal and are attached to the rafters and wall studs and the trusses and wall studs.

### **EXTERIOR DOORS & WINDOWS**

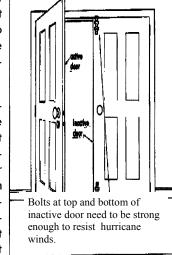
The exterior walls, doors and windows are the protective shell of your home. If that shell is broken, high winds can enter and put pressure on the roof and walls, causing damage. You can protect your home by strengthening the doors and windows. Insert wedges in all style doors and sliding patio doors. Doors that open inward will have to be wedged and bolted so that strong winds don't blow the doors open and expose the entire house to damaging winds. Placing a large piece of furniture next to the door will also help.

### **DOUBLE ENTRY DOORS**

Most double entry doors have an active and inactive or fixed door. Check to see how the fixed door is secured at the top and bottom.

The bolts or pins that secure most doors are not strong enough to withstand force winds of a hurricane.

Some door manufacturers provide reinforcing bolt kits made specifically for their doors. Check with your local building supply retailer to find out what type of bolt system will work Figure 5. Double Entry Doors for your door. The



door bolt materials should cost from \$10 to \$40, depending on the type and finish. Doors with windows will need additional protection from flying debris.

### **GARAGE DOORS**

Double-wide (2-car) garage doors pose a problem because they are so large they wobble as the high winds blow and can pull out of their tracks or collapse from wind pressure. If garage doors fail, high winds can enter your home through the garage and blow out doors, windows, walls and even the roof. Some garage doors can be strengthened with retrofit kits, which run between \$70 and \$1.50 a kit.

Many garage doors can be reinforced at their weakest points by installing horizontal bracing on each panel. You may also need heavier hinges and stronger center supports. Also, check the strength of your garage door track. If it is loose or can be twisted you will need a stronger track.

### **STORM SHUTTERS**

Installing storm shutters over all exposed windows and other glass surfaces is one of the easiest and most effective ways to protect your home. You should cover all windows, French doors, sliding glass doors and skylights. There are many types of manufactured storm shutters available.

It is important that you have your shutters ready now, and that you mark and store them so they can be easily installed during a hurricane watch.

Plywood shutters that you make yourself, if installed properly, can offer a high level of protection from flying debris during a hurricane.

Compliments of: Town of Marshfield

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