



## Avoiding Wind Damage: A Checklist for Homeowners

FEDERAL EMERGENCY MANAGEMENT AGENCY

Once a hurricane or major storm hits, it's too late to protect your home and property. But there are things you can do now to limit future wind damage. Some are fairly simple and inexpensive; others will require a contractor. You'll need to consider the characteristics of your home, your financial resources and the building codes in your community.

This homeowner's checklist will help you learn what you can do. For more information about the costs and benefits of each approach, talk to a professional builder, architect or contractor. You should also ask your building department about building permit requirements.

### ◆ Do you know your risk?

Ask your emergency management office or American Red Cross chapter for information about the hazards in your community.

### ◆ Do you have enough insurance?

Even if you have taken steps to protect your home from flooding, you still need flood insurance if you live in a floodplain.

Homeowners' policies do not cover flood damage, so you will probably need to purchase a separate policy under the National Flood Insurance Program (NFIP).

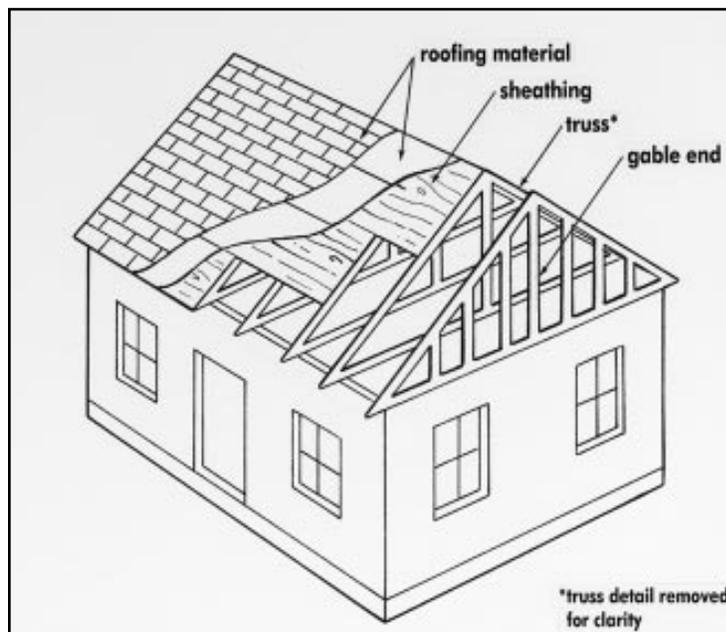
It takes 30 days for a flood policy to take effect. This is why you need to purchase flood insurance before flooding occurs.

If your insurance agent is unable to write a flood policy, call 1-800-638-6620 for information.

### ◆ Is the roof sheathing properly installed?

During a windstorm, wind forces are carried from the roof down to the exterior walls, down to the foundation. Homes can be damaged when wind forces are not properly transferred to the ground.

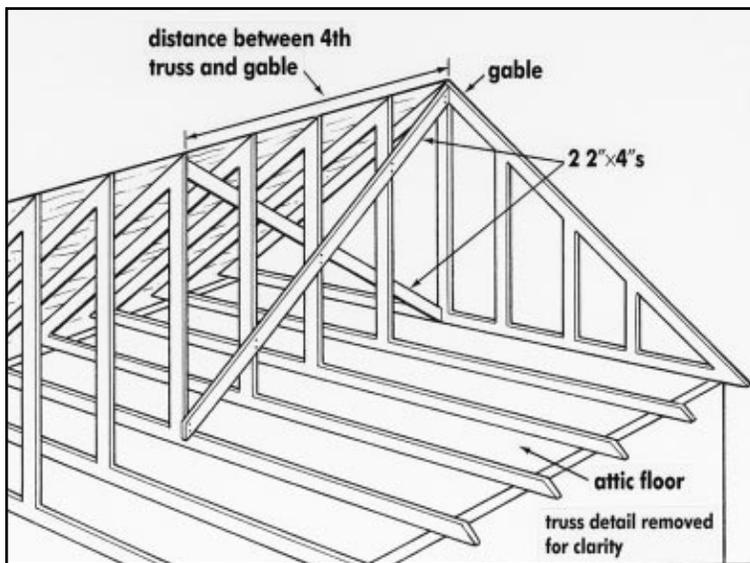
Roof sheathing (the boards or plywood nailed to the roof rafters or trusses) can fail during a hurricane if not properly installed. Examine the sheathing from the attic. If many of the nails have missed the rafters, you may need to re-nail the sheathing. If you're putting on a new roof, make sure the sheathing complies with current recommended practices.



Make sure roof sheathing is properly installed.

▶ **Are end gables securely fastened to the rest of the roof?**

In a hurricane or other wind storm, the side walls of the roof (end gables) take a real beating and can collapse. Gable bracing often consists of 2"x4"s placed in an "X" pattern at both ends of the attic: from the top center of the end gable to the bottom of the brace of the fourth truss, and from the bottom center of the end gable to the peak of the roof.



Example of gable bracing

▶ **Are double entry doors secured at the top and bottom?**

The exterior walls, doors and windows are the protective shell of your home. If the shell is broken during a storm, high winds can enter the home and put pressure on the roof and walls, causing serious damage.

For each double door, at least one of the doors should be

▶ **Has the garage door been properly secured?**

If the garage door fails, winds can enter your home and blow out doors, windows, walls and the roof. Ask your building department for guidance on what to do.

▶ **Are windows protected by storm shutters?**

Installing storm shutters is one of the most effective ways to protect your home. Purchase or make shutters for all exposed windows, glass surfaces, French doors, sliding glass doors and skylights. There are many types of manufactured storm shutters available made out of wood, aluminum or steel. You can also make storm shutters with 5/8-inch thick exterior-grade plywood.

*If you're building or remodeling a home, there are many other ways to protect your property that are not addressed in this checklist. To learn more, talk to a professional home builder, architect, contractor or building supply retailer.*

▶ **Is the roof fastened to the walls with hurricane straps?**

Hurricane straps (made out of galvanized metal) help keep the roof fastened to the walls in high winds. They can be difficult to install, so you may need a contractor for this project. Ask your building department whether hurricane straps are required or advisable in your area.

secured at both the top of the door frame and the floor with sturdy sliding bolts. Most bolts that come with double doors, however, are not strong enough to withstand high winds. Your local hardware can help you select the proper bolts. Some door manufacturers provide reinforcing bolt kits made specifically for their doors.