UNIVERSITY OF ARKANSAS
DIVISION OF AGRICULTURE
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When Repairing, Remodeling or Building Your Home

Structures built to meet or exceed current model building codes for high-wind criteria have a much better chance of surviving violent windstorms. The Standard Building Code, supported by the Southern Building Code Congress International, Inc., is one source for guidance on strengthening your home against high winds. Although no home can withstand a direct hit from a severe tornado, good construction will help your home survive if it's off to the side of the tornado's path.

When inspecting your home, pay particular attention to the windows, doors, roof, gables and connections (roof-to-wall, wall-to-foundation). Residences often are not built to withstand high winds, and weaknesses in the connections and structure make your home more vulnerable to significant damage.

If you're aware of the Southern Building Code standards and are handy with a hammer and saw, you can do much of the work yourself. However, home repair, remodeling or construction may require a building contractor, or possibly, a registered design professional, such as an architect or an engineer. Any repair or remodeling should be done only after determining where the electrical wiring is routed to avoid contact with electricity.

Windows – Impact-resistant window systems have a much better chance of surviving a major windstorm. After a storm, check that sashes are sturdy and will slide, repairing as necessary. Repair cracked putty and clean.

Entry Doors – Install doors with at least three hinges and a dead bolt security lock that has a bolt at least 1 inch long. Door frames must anchor securely to wall framing. Inspect hinges, latches and door perimeter fit to assure that the frame isn't twisted so that rain blowing against it doesn't leak into the house.

Patio Doors – Impact-resistant assemblies with laminated glass or plastic glazing are more resistant to tornadoes. Consider other sturdier types of doors, if that is an acceptable option.

Garage Doors – Install permanent wood or metal stiffeners. Garage doors are highly susceptible to wind damage, especially doors that are wider than 8 feet.

Roofs – Confirm that rafters and trusses are securely connected to the walls. Using a good light, check for ridge separation, loose knee braces or loose rafters or trusses where they are fastened to the wall. (See Connections below.) Replace damaged sheathing, flashing and shingles. Water leaks caused by loose nails or damaged flashing can be located using a garden hose. Replace or install a roof covering designed to resist high winds.

Gables – Brace the end wall of a gable according to current "high-wind" building code criteria.

Structure and Connections – If your house has more than one story, make certain the upper story wall frame is securely connected to the lower level framing. Do this inspection when remodeling or repairing damage. Inspect the interior of the house for structural damage. Remove broken plaster or sheetrock or split siding to inspect the structure. Make certain that walls are properly anchored to the foundation. Inspect the foundation where the wall joins it to assure they haven't separated (or pulled plate bolts loose). A registered engineer or architect can recommend proper repair that a qualified contractor can repair, retrofit or remedy.

Masonry, Chimneys and Gutters – Repair or caulk cracks and seams in masonry. Correct the pitch of gutters and straighten gutters and downspouts. Flush the gutters and wash the entire house exterior. Caulk and paint to protect the exterior finish and reduce hot and cold air leaks or loss from the heated or air conditioned space.

Use a ladder carefully for inspections and repair. Falls are one of the most common severe home hazards. Use a sturdy ladder that is tall enough and position it properly to inspect or work on your home.

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