

Inspection Checklists for Equipment and Building Features

Inspecting your Porch Roof Connection:

The connections between the roof structure and the top of the columns and between the bottoms of the columns and the floor and/or foundation are the areas where you need to focus your attention. To keep the porch roof from being lifted off, the forces trying to lift the roof off have to be resisted by the weight of the roof and forces developed in the columns that pull down on the roof. The weight of the roof is usually 10 pounds per square foot or less while the uplift forces may be 32 to 59 pounds per square foot. Toenails through the roof structure into the tops of the columns won't come close to providing enough restraint. A pin or small bracket designed to keep the bottom of the column from being knocked loose will not do much to hold down the bottom of the column either. In some cases, you may find a hurricane clip connecting the roof structure to the top of the column and another small strap at the bottom. In a few cases you may find a heavier metal strap or even a threaded rod that runs through the middle of the column. These heavier anchors are closer to being what you really need to hold down the porch roof in a strong wind.

- [] There is no visible connection or only nails attaching the roof structure to the columns.
- [] There is no visible connection or only nails attaching the columns to the floor system or foundation.
- [] Thin metal straps with 4 to 5 nails on each side are used to connect the roof structure to the column.
- [] Thin metal straps with 4 to 5 nails on each side are used to connect the column to the floor system or foundation.
- [] There is a heavy metal strap at least 1" wide and 1/8" thick connecting the roof structure to the column with at least 4 nails or screws.
- [] There is a heavy metal strap at least 1" wide and 1/8" thick connecting the column to the floor system or foundation. The strap is either embedded in the foundation or floor slab or connects to a wood floor system with at least 4 nails or screws.
- [] There is a threaded rod going up through the column with a steel plate and large nut that is holding down the roof structure and the rod is anchored into the foundation or floor slab.

Inspecting your shed: Is it strong enough?

The answer to the question is your shed strong enough is easy, because most likely the answer is a resounding `No!'. It would be an exception if it were strong enough.

- [] Can you push on any corner of the shed and make it wiggle? Try all four corners pushing in both directions.
- [] Can you lift a corner of the building up off the ground, even a little bit? Answer this question assuming the building has no contents to weight it down.
- [] Is the shed rated, designed and properly anchored for the wind zone where it is located?

Inspecting your metal chimney: Is it strong enough?

- [] By pushing on the chimney can you cause it to wiggle? This is somewhat subjective, but if you can cause it to wiggle (not simply just budge), then hurricane winds will beat on the chimney and loosen it. Push or pull from all four sides.
- [] Are screws that hold sections of pipe missing or severely rusted?
- [] If the chimney has guy wires or struts to help support it, are they in good condition? Are they rusted?

Inspecting your wood framed chimney: Is it strong enough?

- [] By pushing on the chimney can you cause it to wiggle? This is somewhat subjective, but if you can cause it to wiggle (not just budge), then hurricane winds will beat on the chimney and loosen it. Push or pull from all four sides.
- [] Does there appear to be water damage to wood to such an extent that nails cannot do their job to hold the structure and siding together?
- [] Has the plywood siding delaminated to such an extent that its ability to provide rigidity is compromised?
- [] Have decorative boards deteriorated because of exposure to rain and sunlight to the point where they are not effective at holding the wood underneath them together?
- [] Does the shroud have secure nails at least every 12" to hold it to the framing? By secure we mean; are the nails snug and not apt to fall out?
- [] Are the nails that hold the shroud at least 2½" long?
- [] Are nails driven into good solid (undeteriorated) wood? If nails have pulled out replacing them with long screws of slightly larger diameter should solve that problem forever.
- [] Is the wood that the shroud is nailed to well secured to the rest of chimney structure?
- [] Is the shroud rusted to the point that its structural integrity should be questioned?
- [] Can you tell what the chimney uses for sheathing? Is it plywood, OSB, or Thermoply type sheathing as a structural member?

Inspecting your masonry chimney: Is it strong enough?

- [] Are there cracks between concrete block that are wide enough to cause concern that settling has taken place to such an extent that the mortar between blocks are so weakened that a strong vibrating wind might cause the chimney to come apart? Bear in mind the forces that are applied, 700 pounds to just a 4' by 4' section in a 150 mph wind. A masonry fireplace may have much more surface area exposed to wind depending on the design.
- [] Does the shroud have secure screws at least every 12" to hold it to the block or concrete? By secure we mean screws that are snug and not apt to fall out. Screws installed in concrete blocks can easily work their way loose.
- [] Is the shroud rusted to the point that its structural integrity should be questioned?