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## Roof Covering, Sheathing, & Replacement

**Roof Covering:** Your roof covering is a critical part of your house's first line of defense against keeping hurricane winds and wind driven rain out of your home. It has historically been one of the weakest elements in that line of defense. In Hurricane Andrew, a study by the National Association of Home Builders Research Center showed that widespread damage to roofs seriously affected 77 percent of the homes surveyed. This damage of the roof covering led to severe water damage both during and after Hurricane Andrew. Damage surveys conducted following the hurricanes of 2004 and 2005 have also highlighted the frequency of roof cover damage. Of the homes that had enough damage to file an insurance claim, 95 percent had some level of roof covering damage. Studies have also highlighted the fact that damage to the roof covering during a hurricane can lead to substantial water damage in subsequent rainstorms. Both the initial water intrusion and the later leakage can lead to significant mold problems. The links below are intended to help you evaluate the condition of your roof cover and to provide you with suggestions for ways to maximize the resistance of your roof cover until you are ready to re-roof and then to provide guidance on key factors for maximizing the resistance of your new roof once you do re-roof. As you read through the information on roofs, some of the terms used may not be familiar to you. You can click on [Roofing Concepts and Terms](#) to access a list of definitions that may be helpful.



**Extensive loss of roof cover and underlayment usually results in extensive water intrusion and internal damage including collapsing ceilings**

(click image for larger version)

**How can I evaluate my roof cover?**

[Shingle Roof](#)

[Tile Roof](#)

[Metal Roof](#)

[Membrane or Built-up Roof](#)

**What can I do about my roof cover?**

[Shingle Roof](#)

[Tile Roof](#)

[Metal Roof](#)

[Membrane or Built-up Roof](#)

**Roof Sheathing:** Your roof sheathing, or roof deck, serves a number of critical functions. It is the base upon which the roof covering is applied, it provides the structural barrier between the interior of your house and the fury of the storm and it helps transfer wind forces to wall elements that direct these forces down to your foundation. Loss of even one piece of roof sheathing will produce a gaping hole where wind can enter and water can pour into your attic. Studies have shown that loss of roof sheathing typically increases the amount of interior damage by a factor of 9. Most of the loss of roof sheathing that has been observed in past hurricanes has been attributed to installation and design shortcomings. Most of these shortcomings can be overcome by improving the anchorage of your sheathing to the rafters and trusses that hold it in place.



**Roof sheathing loss at gable end. This is a common failure point.**

(click image for larger version)

**How can I determine how my roof sheathing is attached?** **What can I do about my roof sheathing connection?**

[Determining the sheathing attachment](#)

[I will be re-roofing soon](#)

[It will be years before I re-roof](#)

**Re-Roofing:** When you re-roof, you have a unique opportunity to make substantial improvements to the hurricane resistance and resilience of your home. In hurricane prone regions, you should always remove the old roof cover down to the roof deck, check and improve its attachment if necessary and build up a hurricane resistant roof covering. In most cases, these extra measures result in relatively modest increases in the overall costs of the re-roofing project. The lowest cost options include re-nailing the roof



**Installing secondary water protection over seams between roof sheathing**

(click image for larger version)

deck to the structure below and adding some form of secondary water protection over the joints between the roof sheathing. Note that the Florida Existing Building Code (FEBC) requires proper fastening of the roof sheathing, "the integrity of the main wind force resisting system is required." If you have "Law and Ordinance" insurance coverage and are re-roofing after storm damage, the costs of adding fasteners to bring the roof sheathing attachment up to code requirements should be a covered expense in Florida where the FEBC has been adopted. Moderately expensive options include selecting a roof cover with a higher wind rating than the minimum required by code and picking a roof covering with a longer expected lifespan. Click on [Re-Roofing](#) to get more detailed information.

**After a Storm:** It has become clear in recent years that the widespread damage to roofs that usually accompanies the landfall of a hurricane places tremendous pressures on the roofing industry. Shortages of qualified labor and of wind resistant products frequently lead to significant delays in repairs. With this in mind, click on [After A Storm](#) to see what you can do to minimize additional damage of your home and belongings. You can also look at the end of each section on "What can I do about my (shingle, tile, metal, membrane) roof?" to see what you might want to buy before a storm to help you patch your roof if it gets damaged.

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Division of Emergency Management  
**Bureau of Recovery and Mitigation**  
*2555 Shumard Oak Boulevard*  
*Tallahassee, Florida 32399-2100*  
*Voice: (850) 413-9816*

[Questions](#)