



HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS

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Winter Storm Update Information:

Snow Load and Structural Stability

With the large amount of snowfall over the last weekend, and with the possibility of an additional 10” – 20” on the way, there will be a significant amount of additional weight or “live load” on our roofs. Our building codes anticipate this type of loading and require that it be incorporated into the structural design of the building.

Although the absolute amount of snowfall we have received and anticipate has not exceeded expected design loads, there are several factors that could cause a roof to be at or exceed its maximum design load. Blowing and drifting snow, freeze/thaw cycles, rainfall or water on top of snow, and blocked roof drains can cause concentrated loading. Flat roofs, especially those with long-span, open floor areas are at greatest risk.

At this point the best strategy is to monitor the situation, stay alert, be aware, and know the warning signs:

1. Excessive sagging of roof/ceiling (either interior or exterior)
2. New cracks or separation of building joints
3. Doors and/or windows that become out of square and rub or stick when attempting to open
4. **ANY** moaning, creaking or cracking sounds from the floors, walls, or especially the roof/ceiling

If you experience any of the warning signs, leave the building and have the situation evaluated by a qualified licensed contractor or professional engineer. If it can be done safely, excessive snow should be removed from the roof. If you are not qualified and properly equipped, do not attempt to climb on any roof.

If your roof or any part of your structure is at risk of a pending collapse, call 911.

Some Additional General Points:

- **During A Storm**
 1. Monitor the weather and condition of the roof.
 2. Inspect roofs for leaks or structural deficiencies that may develop during the storm.
 3. Clear leaves, snow, ice, silt, or other debris from gutters, drains, downspouts, and scuppers.
- **After A Storm**

1. Have a professional licensed contractor remove excessive snow immediately from every roof surface, including roof overhangs and covered porches.
2. Remove snow from side walls to prevent high snow mounds from pushing them in.
3. Temporarily shore up and brace dipping or sagging roofs or walls.
4. Verify that drains are clear of ice and snow to allow melting and runoff. If the roof is pitched and without drains, open paths to the eaves to ensure drainage and prevent ponding.
5. Avoid ice dams by keeping the attic well ventilated so snow doesn't melt and refreeze at the roof's edge. Also make certain the attic floor is well insulated to minimize the amount of heat rising from the house into the attic.

Here are several other points to consider:

- Improper operation of doors or windows, deflection of ceiling finishes or exposed beams, roof leaks or sprinkler heads moved for their normal positions could all be signs of roof failure.
- Barns and other agricultural out buildings could present a safety hazard. Be especially careful when entering those buildings and make prudent decisions about housing animals in those structures.
- Contact a structural engineer, licensed contractor or other qualified individual if you are concerned about the structural integrity of a building. Consider evacuating or moving out of the building if appropriate.
- Because of the anticipated cold temperatures, this threat will remain in place for a considerable time after the snow fall ends.