

Toolbox Talks

WARNING - ROOF COLLAPSE!



Municipally owned properties have the same risk of collapse from the weight of snow as all structures. At greatest risk are buildings with light weight roofs such as metal buildings, built-up roofs on bar joists and roofs that are flat or have minimal pitch. Sand and salt sheds are at high risk for collapse because they are usually light construction, metal sheathing on wood or metal frame, or an arched rib metal structure without internal supports. If they are not covered, the connectors are exposed to corrosion. The structure's integrity can be compromised from being struck by equipment or by uneven vertical loading from snow sliding off one side, but not the other.

Buildings can be protected by removing snow from them and perhaps even more important in the case of Quonset or dome constructed sand sheds from around them. When snow is allowed to accumulate against the sidewalls, it prevents snow from sliding from the roof, causing it to pile on the roof and creating forces that may exceed design limits.

Quonsets have the strength of the structure designed by engineers and based on local building codes. The design work includes factoring in snow loads, wind loads and other weather conditions. With that in mind, your building should have no issues handling typical snow loads. Unfortunately, things are not always "typical" and as a result, if you receive an unusually large snowfall, or allow snow to accumulate along the sides, then it is strongly recommended that you remove the snow.

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Ice is heavier than snow. Having a bit of light powder on your roof is unlikely to cause any issues. The problems from snow accumulation often only come from many feet of snow. Ice, however, is a different story. Ice is many times denser than snow and therefore much heavier. A couple inches of ice can be equivalent to many feet of snow so things can be deceiving. If you notice a concentration of ice on your Quonset it is a good idea to remove it before it becomes a problem.

How to remove the snow from Quonsets

Thankfully, removing snow from a Quonset building is typically easier than a traditional building. The steep sloped sides of the Quonset make the snow slide off on its own most times. Plowing along both sides of the building will give the snow a place to go and allow it to slide off completely.

Uneven loading can cause structural problems to your building if one side of the building faces the sun or get more wind, the snow can naturally unload on one side but not the other. To avoid uneven load stress, you should look for snow or ice buildup on one side but not the other. If you see this happening, you will have to manually remove the accumulation.

If you need to clear snow a simple tool like a roof rake will help.

Remember – Wood structures will usually show stress before they fail, unlike metal ones that usually will not! If you see movement or hear sounds, get out!!

