

# SNOW LOAD HAZARDS

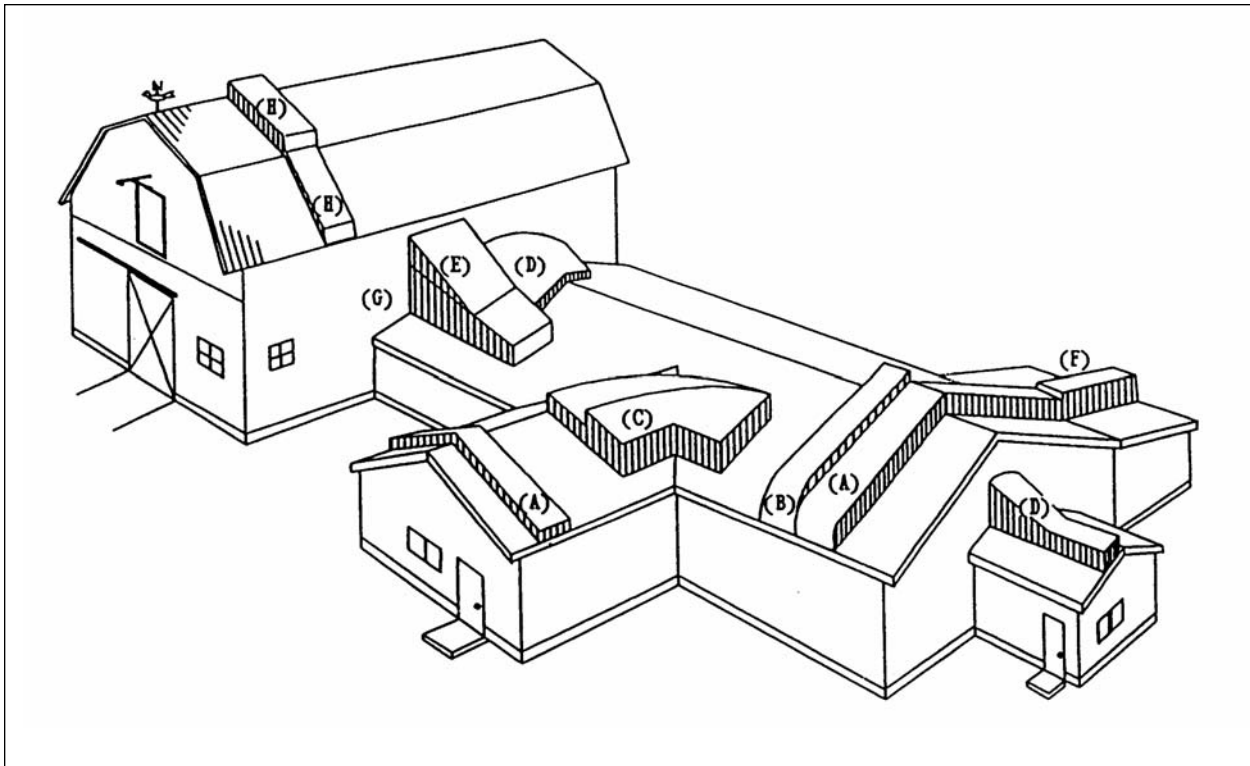
## Concerns with snow load/collapse

The following is a list of areas of concern where agricultural buildings with these problems should be inspected before snow load coverage is offered.

1. **CORROSION:** Corrosion of metal support brackets on wood trusses is a serious problem in open ceiling barns, which lack good ventilation. The accumulation of moisture and ammonia from livestock on the trusses can cause rust/corrosion of these metal brackets.
2. **WOOD FRAME QUONSET BUILDINGS.** These round roof buildings may have homemade wood laminated beams that do not meet code requirements. The experience with these roofs is that they develop "flat spots" where more than normal snow load accumulates and sagging occurs.
3. **ADDITIONS TO OLDER BARNs:** 1 storey lower additions to existing higher older barns should have additional trusses installed near the older existing building; since additional snow from the existing building can slide onto the addition creating excessive snow loading. These additions should be engineered/ designed to be joined to existing buildings with additional trusses installed. ( i.e. 1 foot on center spacing)
4. **HEAVY POST AND BEAM BARNs:** many older post and beam barns do not meet code with their joist/rafter sizing. Due to heavy decking installed as well as the large posts and beams, and steep design these buildings generally have stood the test of time for snow loading; HOWEVER they need to be inspected for their condition and maintenance.
5. **POORLY VENTILATED ATTICS:** Some older livestock buildings lack adequate ventilation in the blind space/attic areas. The insulation in these areas can accumulate moisture causing rotting of trusses and or framing as well as reducing the quality of the insulation. Some insulation in these areas may be wood shavings or straw which is a poor quality of insulation and if these materials become damp will speed up rotting of framing and or trusses.

\*In this bulletin the reader is provided with information about loss control issues. The bulletin is not a substitute for a thorough loss prevention assessment. In those situations where there is a concern about issues raised in this bulletin the reader should seek professional advice.

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### Typical Roof Snow Loads on Farm Structures

- (A) Balanced snow load
- (B) Unbalanced snow load on gable roof
- (C) Increased snow load in valleys
- (D) Increased snow load on lower roof
- (E) Added snow load from falling snow
- (F) Change of slope results in change in snow load
- (G) Sheltered condition
- (H) Snow load adjusted for slope - all except for (C)