COLUMN FOR DECEMBER 20, 2003.
HEADLINE; ICICLES ARE A BAD SIGN!

Q; *We live in an older home, about 60 years old and every year we get varying amount of icicles hanging off our roof. The past couple of years have been worse than previous years. What causes this and what can we do, if anything?*

A; In a single sentence as to what causes this, lack of ventilation and heat loss from inside your home. This is an all too common problem in older homes and some newer homes where the lack of attention to details is allowing air leakage to permeate the air/vapour barrier as installed. Older homes are tougher to control the heat loss and it is an ongoing battle for most homeowners. It is practically impossible to install a full plastic vapour barrier in homes constructed with a method other than platform framing, as we know it today. The simplest thing you can do is properly caulk and seal the home, try one of the "vapour barrier" paints on your ceilings below the attic, and don't forget the closets. Seal and insulate your hatch into the attic and make sure you have ample insulation in the attic its self. Depending upon the home, try to get a space between the roof boards, plywood or particleboard and the actual insulation as it meets this roof deck over the walls of the home. A common product to help create this space is called a baffle and they are a foam inset that looks like a wide "U" that separates the insulation and the roof deck. What you are attempting to do is create a channel that will allow the natural passive airflow to rise up thru the openings in the soffit area and exit thru the roof vents. If you do not have any openings in the soffit area, this will have to be corrected and proper roof vents installed near the ridge of the roof. Older homes with limited or no soffit area other than a decorative moulding at the eave edge are practically impossible to vent in this manner. This is where I like the use of turbine roof vents. They do work to create an air circulation where a passive installation as in a newer home is either not possible or practical. An attic is meant to deflect the climate and keep the insulation dry, in theory it should be the same temperature as the outside temperature.

One method I have used during my former home buildings days to remedy this problem is the installation of a continuous waterproof layer of metal over the eave area. The first thing you do is remove the asphalt shingles from the edge of the roof up past the walls a minimum of 12". Now once the decking is cleaned off, no nails or wood protruding, lay down a continuous roll of a product called ice and water barrier. This material is a rubber-like self-adhesive underlayment used by reputable roofers at valley's and along the edge of roofs. It is very sticky so make sure you get it aligned before you remove the backing. Carefully fit it under the last row of shingles. We sometimes found this hard to do so we fitted it to the edge of the last row. We then cut a narrow strip that overlaps 3-4" onto the strip at the shingle edge and then tucked it fully under the last row of shingles. Next we measured the width of metal flashing we needed and fitted it under the shingles and allowed it to overhang the edge of the roof about ½". If the customer was willing to pay the extra we had a metal shop make us fitted sections about 12-16 feet long, bent them at the measured edge and then had them form us a drip edge along the flashing. We then sealed each section with an even coat of tar sealer and overlapped the flashings about a foot. A few strategically placed shingle nails and a dab of tar under the shingles finished the job. While this is not as aseptically pleasing as a roof with shingles finished to the edge, there are a number of coloured roll flashings available today, the days of the bare shiny metal are gone.

The other method that is not as "up-front" expensive is to install heat cables. These high-resistance electrical cables are installed in a zigzag pattern along the edge of the roof. They come in prepared lengths and require some careful installation but if done properly they do work. One thing many people forget to do is make sure you run them along the evetrough and down the discharge pipes or downspouts as they are known. You are melting ice and it must have a clear path for the water to reach the ground. I view these as a short term or emergency method of correcting the problem. The negative to these is they require electricity to operate; it seems ever increasingly expensive electricity. The other factor that many people do not see for some years is the

premature wear factor. You are rapidly heating and cooling the surface of the shingles and they break down far sooner than the rest of the roof. Now you must replace the shingles along the edge of your roof before the rest of the roof needs to be reshingled.

The optimum answer is to properly ventilate your roof, install insulation in your attic and do the best you can contain the escaping warm air thru to the attic. If the ice condition is prevalent in a number of areas around your home, you may want to think of changing to a full metal roof when your shingles are worn out. While this tends to be 50-100% greater in cost than a shingled roof, most metal roof covering are warranted for 50 years. The ice dam problem, provided the metal roof is installed professionally with wooden strips over the old wood decking, should be eliminated.

Are you considering a new home? A home inspection done by a Registered Home Inspector as licensed by the Ontario Home Inspectors Act is a wise part of your home purchase plans. Go to www.oahi.com and click on the area you are moving too.

At this time of the year I wish to express my appreciation to my readership for their hundreds of calls or e-mails with questions, comments and constructive critique. In the nearly four years I have written this column I have enjoyed it immensely . On behalf of my wife Carmen and myself we wish everyone a safe and joyful Christmas and our wish for Peace on Earth and Goodwill to all in 2004.

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