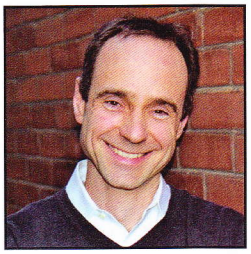

GREG LABBE

Trick #2:

THE IMPORTANCE OF AIR BARRIER DETAILING OR SAFE PROTECTION FOR THE HOME.

Your client needs protection and the leaks in a home are bad news. Air leakage causes unwanted drafts and the growth of mould. Resulting in great discomfort for you and your client. Best to protect with a form-fitting barrier that is durable and allows you and your client maximum comfort without health concerns. As high performance homes always include good third party air tightness testing, we want to ensure success at testing time and that means keeping it simple and making sure everyone respects the air barrier and knows where it is in the envelope.

KEEP THE AIR BARRIER OUTSIDE

Confusion abounds in the residential sector on which barrier needs to be air tight; the poly, or exterior panel type/flexible barrier? It's confusing because cold to warm side cross-overs where say Tyvek® gives way to a 6 mil poly are common as in the wall to attic transition. Where the air and the vapour barriers are THE SAME BARRIER, everyone on the job site needs to know where the air barrier is to keep it airtight. Everyone who punches a hole in it from the brick-layers, to the HVAC to plumbers; all need to know if they penetrate the air barrier, they have to seal around their pipe, wire or wood to the air barrier which in a ceiling is usually always a poly, but in a wall more often than not isn't poly.

JUST SAY NO TO POLY AIR BARRIERS!

A common sense trend with air barriers is to place them on the exterior of the building envelope. Most agree that it's easier to produce an airtight house if the exterior sheathing is taped at joints and becomes the air barrier. Otherwise if we use the poly as an air barrier in a wall assembly it has to stay warm and it has to be sealed really well; there are more holes to seal on the inside. Most builders use panel-type exterior sheathing and some add a flexible sheet material like house wrap or building paper. It goes without saying that sheet goods covered with roll membranes are redundant as there are great tapes/primers that can be applied to panels if they meet the specs in Tables A-9.25.1.2.A&B. These exterior cold-side air barrier systems should be the focus for an air tight "Air Barrier System" which in the end contribute most to the airtightness of new Ontario homes. Both Owens Corning and Building Products of Canada offer exterior panel type systems that include air and weather barriers. Blueskin VP is an exterior self stick air barrier that covers any sheathing to yield an air tight, water tight and weather tight shield.

PROPHYLACTICS 101

The building code's pretty concise when it comes to air and vapour barriers. Vapour barriers need "to prevent condensation" and "be installed to protect the entire surfaces". Whereas the Air Barrier "will provide a continuous barrier to air leakage... from the interior... and from the exterior... where... a panel type material, all joints shall be sealed to prevent air leakage... where... a flexible sheet material, all joints shall be sealed or lapped...100mm and clamped..." So when we do an air-tightness test on your house we're usually testing the air barrier system, not the drywall, trim and poly.

SIZE DOESN'T MATTER, PERFORMANCE DOES

With the recent changes to the OBC, a significantly greater portion of homes are being airtightness tested prior to occupancy permit. This is a good move as it will lead to both a change in building practices and greater comfort and saving for the homeowner. In my capacity as a professional airtightness tester, I see two main causes of weakness in the building of airtight homes, other than the speed at which they are built. The first being the size and shape of most new homes, the second is a need to educate trades on how to keep things tight. Any good education program informs trades of the why and the how, not just the what.

The trend today is to build large houses with complex shapes and it goes without saying that the bigger the skin surface

CONTINUED ON PAGE 21

Lori-Ann Tilley:

THE BIG SMILE OF BUILDING PRODUCTS OF CANADA

Lori-Ann is the Builder Architect Representative for Building Products of Canada, a wood fibre and shingles manufacturer based out of Montreal. Her role is to act as the company's liaison across the Province of Ontario, working closely with builders and architects to help them build better, greener homes.

With a background in sales and management, Lori-Ann is very active in the building and development industry by constantly attending events and volunteering for various committees. She feels at home in this industry and is very proud to be associated with sustainability and green building products.

Lori-Ann credits her passion for the industry to Ani Bogovic, who first took her under her wing as president of WINC (Women IN Construction). Working with WINC proved to be a very rewarding experience, as well as a confidence booster for Lori-Ann, who was extremely excited to work with Ani on her current house.

The home, which is located in Etobicoke and is nearing completion, features one of Lori-Ann's most sustainable products – the Excel.

Excel is a structural sheathing with a house wrap laminated on top. It is made from 98 per cent recycled materials and is and is VOC and formadehyde-free. It also contributes to quality for green building certification programs.

LORI-ANN TILLEY

Lori-Ann is currently working towards her Building Science Certificate at the University of Toronto and is always looking for new educational opportunities to further enhance her knowledge of building quality, affordable homes that satisfy both the homeowner and the environment.

You can catch her at an upcoming industry event. Just look for the girl with the big, bright smile!

LORI-ANN TILLEY IS THE BUILDER ARCHITECT REPRESENTATIVE FOR BUILDING PRODUCTS OF CANADA

CONTINUED FROM PAGE 20

area, the more seams you'll have to seal and the more complex the shape, the more difficult it gets to keep the seal continuous without tears or cuts under flashing, brick, siding and at each opening like a window or door.

However educating the trades on identifying the air barrier and respecting its integrity is key to keeping the air barrier effective. I show them by using the following analogy: If you picked up the home, turned it upside down and poured water into it like a bowl, the house should be able to hold water. If it does not, the water (moisture) will permeate the structure and cause damage. The key is someone taking ownership and directing the work with the air barrier. Some issues arise out of trades either cutting the ends of a flexible air barrier too short or not leaving enough to join the next piece. The trick in making a home airtight is a lot like making a movie. Each actor (trade) needs to know his or her lines in order to reduce the big holes. The big challenges with new homes are transitions where exposed floors or ceilings meet interior partition walls such as coffered ceilings. With town houses, party wall details require the script writing. The energy rater testing your home is a valuable resource to help identify common leaks and creates a process to ensure a more efficient air tight and durable home.

GREG LABBE IS A VETERAN ENERGY RATER AND A PRINCIPAL AT BLUEGREEN GROUP.