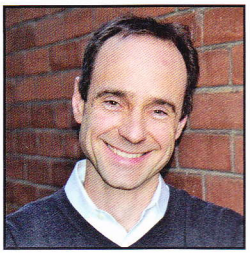

GREG LABBE

The Energy Pimp: Trick #1, The Bump-out

A QUARTERLY SERIES THAT WILL EXPLORE THE HOTTEST HOUSING TREND FEATURES AND WILL MASSAGE MORE EFFICIENCY- WITH LESS OIL - INTO THE DESIGN.

1: THE FIREPLACE BUMP-OUT HAS A JOG IN THE FOUNDATION WALL AND STEEL HOLDING UP THE BRICK ABOVE IT.

THE BUMP-OUT

The bump-out has become a pretty common sight on the construction site. They come in all shapes and sizes, some short for the kitchen sink window, some start the bump-out in the footing and fold the entire house wall all the way up to the roof. Some bump-outs are for gas inserts. See photo 1. The issue is they add a lot of details that make for a less efficient and often less comfortable house.

THE SITUATION

The objective of a bump-out is different for a fireplace than it is for a window, but their solutions are identical. Whereas the design aesthetic for the fireplace is to keep the floor plan rectangular with no bump-in for the hearth; nice, straight clean lines along the outside wall. But because of the depth of the fireplace's metal carcass, this necessitates a bump-out in the thermal envelope in this situation. All this for a faceplate that's flush with the wall. It would seem that the fireplace in this diminutive role wouldn't command the attention nor the clearance that once defined the traditional fireplace hearth. The fireplace in this bump-out case becomes a mere accessory, not a defining centre of attention in the room.

The objective of the window bump-out is to create a nook or deeper pocket. This depth around a window is special. The way it frames a window, it invites you into the smaller space for an intimate look outside. Some owners prefer to have a seating area with cushions under the window to offer a reading nook or a cozy seat for two. The window bump-out can be as small as a kitchen window above the sink, or span two floors. See photo 2.

2: TYPICAL BUMP-OUT WITH MINI ATTIC AND EXPOSED FLOOR.

THE DESIGN FLAW

In the above scenarios, the weakness comes with the increased number of corners, the increased exposed area, the complexity of framing and extra seams in the air barrier system; in short, too many places to bleed heat and comfort out of the home. In some bump-outs, if the thermal bridging at the outside corners wasn't enough, they added a heating supply duct running along the outside corner. See photo 3. The bump-out may have a short exposed floor section, or have a mini 'attic'. For fireplaces, the cavity usually means the poly wasn't clamped by drywall and that

3: INSIDE THE BUMP-OUT WITH A HEATING DUCT UP THE OUTSIDE CORNER.

means air leakage. If the outside cladding was brick, then some iron needs to hold the mass of the wall above the opening and that's another thermal bridge. Together, all these weaknesses add up to a comfort liability.

ADDING INSULT TO INJURY

If the house is clad in brick, the gas insert bump-outs may start in the footing, taking it on an expensive 2'x 4' jog which can be carried in the framing up to the top floor. All this, just so that the face of the insert stays flush with the rest of the main floor drywall? For windows, the irony is that in many cases, the bump-out window doesn't afford a better view as there are often no side lights and in the case of the window above the kitchen sink, reaching the window mechanism beyond the sink can be daunting. If you have to get a step ladder to operate the window every time you burn the toast, that's not a practical feature.

THE DESIRED EFFECT

In the fireplace bump-out, the desired effect is to give clean sight lines and allow the occupant maximum flexibility in furniture placement. In the window bump-out the desired effect is to draw a person in towards the window or special object placed on the deep drywall return or sill.

THE SOLUTION

Don't mess with the straight outside wall, but build inwards. With a nice straight wall, you can design built-in cabinets or shelves around the window for storage with the money you saved by not having to alter the shape of the wall. See Picture 4. The desired effect will be identical and you won't have to sacrifice on efficiency to do it. This method drastically simplifies wall assembly and will ensure both greater comfort and lower construction cost, especially if the wall is made of brick. As for the window above the kitchen sink, nothing beats a nice live edge piece of wood as the sill to show off that little trophy you won in grade 6.

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