

SHELTER-EXISTING



partners in crime

Rim Joists & Foundation Walls

by Alan Benoit, Assoc. AIA, Sustainable Design of VT

As you sit reading this article, two thieves are in your home stealing your hard-earned cash. The scary thing is that they're doing it right under your nose, & your feet, as a matter of fact. There they are, in your house, in plain sight, 24 hours a day & no one is stopping them. They conspire against you, working together to rob you of possibly hundreds of dollars every year. Their names are Rim Joists & Foundation Walls.

Not everyone is familiar with rim joists. As a gang, they go by the alias "box sill". They are the vertical lumber that surrounds & supports your floor. In a single story house, they conceal themselves between the foundation & the exterior walls. In a two story home, there is usually a second row of rim joists between the first & second floor walls. At a mere inch & a half thickness, they do only a modest job of protecting your home from the cold. So, they hide sheepishly behind your siding, sneaking their share of your money outside whenever the timing is right.

We are all more familiar with our "friends," the foundation walls. They look innocent enough, supporting your home, protecting you from soil's bag of tricks: frost, rot, & decay. They are thick & strong, often eight inches of solid concrete. How could such a benign, gentle creature be stealing from you? Trust me, they are holding up more than your home! Don't let their disguise fool you, even at eight inches thick; their insulating value is less than that of a single pane of glass. Since they encircle your entire house & usually have about a foot exposed height, their surface area can add up quickly. This combination of poor thermal protection & large area conspire to allow the foundation walls to transfer your funds rapidly into the ether.

These two thieves, along with air leakage & other energy bandits have one thing in mind—waste. They are parasites, leeching onto your wallet, draining it most when your heating (& cooling) bills are highest. Fortunately, there is someone out there who is willing to help stop these crooks dead in their tracks. This guardian is none other than our steadfast ally, insulation.

Insulation's main objective is to put a stop to heat transfer, therefore saving you money. It has become more than that pink itchy stuff you loathe to touch; it has evolved, diversified, & specialized. No longer only offered as rolled batts, insulation is now available in a variety of forms including boards, sprays, & even bales.

Rigid board is one of insulation's newer forms. In addition to increased insulating properties these products are easier to cut, handle, & install than batt

cont'd on p.15

LEAD PAINT RULE-APRIL '10

"The new lead paint rule which is set to go into effect in April 2010 could hurt contractors, which is why NAHB held a meeting at the National Housing Center last week to discuss concerns about the rule with representatives of several remodeling-related trade associations. In fact, few subcontractors associated with home building & remodeling (including insulation & HVAC installers & others) are even aware of the 'Lead Renovation Repair & Painting Rule' that will govern remodeling activities in homes & child-occupied facilities built before 1978: <http://www.epa.gov/lead/pubs/renovation.htm>.

Those who are aware of it may assume that it targets only professional remodelers, but this is not the case. In fact, it applies to any contractor who "disturbs" at least six square feet of painted surfaces on the inside of a home or 20 square feet on the outside. That means that contractors who install windows, insulation, home entertainment equipment or similar items in the target housing must become certified to do the work.

Another little-known fact: EPA estimates that 200,000 people will need to be certified by the April 22 deadline, yet the agency has so far approved only 97 firms to do the training. While the EPA has hired a public relations & marketing firm to create an awareness campaign for both industry professionals & the public, & the rule is set to take effect in five months, that campaign has not yet been initiated.

Meanwhile, NAHB Remodelers have indicated that EPA's cost estimates for compliance, at \$35 per job, don't come close to reality. One remodeler's budgeting worksheet estimates the training, materials, testing, cleanup & recordkeeping required under the rule adds up to \$1,200 or more per job, not including costs for subcontractors

to comply, & finally, one more unfortunate truth about the EPA's LRRP rule is that even as compliance training is underway, the EPA has released a proposed amendment to the rule that would add more requirements & costs to comply. Read more about the rule & these disturbing observations in "Nation's Building News Online" at: <http://www.nbnnews.com/NBN/issues/2009-11-16/Remodelers/2.html>.

the green mountain's GREEN builders
turtle creek builders ltd
p : 802.496.2206
4 mad river green p.o. box 780
waitsfield, vermont 05673
www.turtlecreekbuilders.com

'EXTREME MAKEOVER'

Catalyst for Action & Commitment!

Lyme, NH Project Offers Blueprint for Action

It's a safe bet that very few building firms begin an Extreme Makeover: Home Edition Project with any significant level of experience related to volunteer coordination. Certainly, few builders have attempted to coordinate the activities of thousands around a single Project & to conceptualize the schedule demands involved in creating a new six-bedroom, landscaped & furnished house, in a four day period is difficult at best. Trumbull-Nelson Construction Company, in its 92-years of serving northern New England building clients has certainly encountered difficult work. But little of its broad work experience could prepare the Company for the unique challenges, constraints & opportunities associated with an EMHE project. Like so much else in life, the Project success was the result of both sound management, & the generous efforts of a community of volunteers, prepared to offer mutual respect & the willingness to coalesce around a shared vision. It has been suggested that (television aside!) the Project is a 'blueprint for how to approach challenging projects in the future.'

To date, much has been written about the planning efforts, process & related challenges associated in building the Marshall family residence in Lyme, NH. I would encourage readers who would

like an insider's look at this local EMHE Project to go to the Trumbull-Nelson Website (HYPERLINK "http://www.t-n.com" www.t-n.com) & view the article written for Constructive Images magazine by Kim J. Gifford (Trades Come Together In Extreme Makeover:Home Edition, Fall 2009, pgs. 6-12). An aspect of this work receiving less coverage, but certainly of importance to readers of Green Energy Times & to the Marshall family are those building processes that helped ensure this home would be efficient, healthy & sustainable.

Utilizing an integrated process from design to finish, the building team helped assess the value & longer-term benefits associated with various materials & delivery methods. Products that met team criteria included such products as pre-fabricated, pre-insulated foundation walls which created no concrete waste product;



closed-cell foam insulation within walls & roof affording a thermal resistance value of R-30 & R-50 respectively; hi-performance, low e glass windows; CFL lights throughout the home, with each room on two light switches so either one-half or all lights could be turned on as needed; radiant floors throughout (to also help improve the indoor air quality); & a dedicated air filtration unit in one of the bedrooms. Of course, Trumbull-Nelson worked closely with COVER Home Repair, of White River Junction, VT to remove existing windows & fixtures, & with Waste Management's Lebanon, New Hampshire personnel to recycle building materials (including concrete).

There is no question that substantial benefits accrue to the new home building process when an owner is put in the "loop" early on as part of an integrative delivery system; especially when evaluating energy-saving options. The nature of the owner/builder partnership necessitates continual input & insight from each partner to always assure that project goals involving green features &

energy concerns are met. Without questions the all-volunteer building team & general framework of an EMHE building project introduces a set of constraints to the normal building process. In many ways, the end product was efficient, healthy & sustainable...and holistic in approach. The Upper Valley community came out in force to help build a house for a family in need. As individuals, we may never be the beneficiaries of the unique contributions of an army of such volunteers, but we certainly can volunteer to serve others. This, & the conscious effort to live green, may be the 'blueprint' we follow to assure a better community & environment in the future. Hey...if you can build a house in four days....

- by Steven A. Usle
Tom McNeill Photography (tommcneillphotography.com)



SustainableDesign
Taking the mystery out of energy efficient living.
of VT
efficient architectural design
renewable energy consultation
outdoor room design
garden design
802 362 4310
www.SustainableDesignofVT.com

Oakes & Integrity
from MARVIN
Windows and Doors
Wood-Ultrex Series
975 Route 5 Bradford Vermont Tel. 802-222-5280

SNOWDOG CONSTRUCTION, LTD.
Repairs
Remodeling
Renovations
Energy Efficient Retrofits
ENERGY STAR
NFI
P.O. Box 1337
Norwich, Vermont 05055
(802) 649-3605
michael@snowdogvermont.com
Snowdog Construction donates
1% of gross sales to Cover Home Repair

Green Makeover
Trumbull-Nelson
Helping People and Businesses to Reduce Energy Use
Building Efficient, Healthy and Sustainable Homes, Work Places and Communities
4 LEED Accredited Professionals on Staff • Energy Evaluations • Experience with Geothermal & Biomass Heating and Energy Star Building Certification
TN
Design/Build • Construction Management • Commercial • Residential • Institutional • Industrial
Trumbull-Nelson Construction Company, Inc
Hanover, NH 603.643.3658 www.t-n.com