

SMART*Times*

SMART VENT®



Building Green in a Floodplain With SMART VENT® Foundation Flood Vents



One of the biggest trends in construction today is “Green Building”. We see references to it everywhere: in magazines, at conferences, in product literature, and on TV. We see it, hear it, and even embrace the concept, but it’s hard to define what it really is. The terms that are used are variable and sometimes confusing: Green, Sustainable, Recyclable, Environmentally Responsible, Energy Efficient, etc. There are also the design/construction rating systems we all hear about: NAHB’s Green Building Standard (www.nahbrc.org), USGBC’s LEED Program (www.usgbc.org). And those from international sources: GBI’s Green Globes (www.thegbi.org/greenglobes), and iiSBE’s SBTool07 (www.iisbe.org). They are all guidelines with rewards for compliance that lead to certification in the specific program at differing levels. For a great comparative of three of the above programs, view the AIA (May 2008) “Quantifying Sustainability: A Study of Three Sustainable Building Rating Systems and the AIA Position Statement” (www.aia.org/release_050808_greenrating).

At SMART VENT®, we have been faced with similar questions and concerns. We get inquiries asking if our products are green, if the vents can contribute to attaining points for differing green certifications, etc. When some architects, engineers, and/or builders have asked about trying to build green in a flood zone, they are told by some supposed “expert” in Green Building that they can’t. You can’t build green in a flood plain? Of course you can! But, this is the root of a lot of confusion in the industry about what a flood plain is (and isn’t) and what building “green” actually is. As a result, we have decided to explore these questions through a series of articles in SmartTimes covering different topics about Green Building. We think it’s worthwhile considering the trends in construction, both commercial and residential. In fact, a recently published poll from McGraw-Hill indicates that green building practices by residential contractors make them stand out from their competition, and in some cases, keep them viable in today’s sluggish market. For more information, see www.nbnnews.com/NBN/issues/2008-05-19.

In a later SmartTimes article, we will try to help explain more about “Green Building Products”. But for now, let us say that SMART VENT® Products have always been green products. They have always been manufactured from stainless steel (one of the most recycled products available), contribute very little to waste on site (recycled and recyclable product packaging), have a very small life-cycle cost as they are engineered to last for many years and require very little maintenance, and most of all are specifically designed and manufactured to contribute to the sustainability of a building when incorporated into the structure. Quite simply, a building that survives a flood with minimal damage is a sustainable structure. It lasts through flood events and does not require demolition and rebuild, and therefore requires less from the “environment” over its life span.



Green Building is...

Environmentally Sustainable Construction Methods and Product Choices

Site selection and building placement, site management (minimal site disruption, damage remediation and construction waste management), materials selection (recycled, reused, and/or replenishable).

Construction Methods that result in Energy Efficiency

“Zero Energy” is the goal, i.e. cost of powering the building costs \$0.00 per day when averaged over a year’s time. Although difficult to attain, \$1 a day (\$6 is average in US) has been attained through whole house systems integration and utilizing geothermal, solar, wind, and/or other site specific energy sources. Commonly today, industry methods for energy efficiency are attained from using Energy Star rated appliances, insulated windows, comprehensive HVAC engineering, and especially a properly insulated building envelope. The expense of such performance improvements can often be off-set by tax incentives and utility company incentives and rebate programs. See www.ornl.gov/btc



[CONTINUED FROM PAGE 1]

Building Green in a Floodplain With SMART VENT® Foundation Flood Vents

“Sustainable” is one of those “green” terms that gets bandied about regularly. Simply put, “sustainable” refers to longevity. “Sustainable Design” or “Sustainable Architecture” is a modern way of indicating that something is “built to last”. You might ask, “Isn’t everything constructed to last these days?” Yes and no. The basic frame of a structure may last decades, but does the designed architecture sustain through those years? Does the functionality of the building continue? Does the mechanical and structural engineering hold up for years? How about the aesthetics? The most sustainable architecture comes from the past – here in the U.S., those buildings from the 1700s and 1800s that we still use and enjoy today. They were built with long lasting products, engineered properly to stand strong and function for centuries. It is easily understood that a building that lasts for two



centuries is obviously more sustainable, and therefore less of a burden on the environment... more “green”.

Many of the above referenced rating systems make a stipulation about not building in a wetland, or may even use the term flood zone or flood plain. What they are meant to be protecting is UNDEVELOPED land; those environmentally fragile areas that should be avoided in deference to a building site already in a developed and serviced urban or suburban area. New Orleans is a superb example of an urban area that is predominantly made up of floodplain. To say that you cannot build green in New Orleans is absurd. The real question is how you plan, design, and build green there.

To build green requires that you plan properly before actually building, whether renovation or new construction. This prior proper planning will prevent poor performance - performance of the builder in attaining green goals, and performance of the building over the years to come. This prior planning must start at building site selection. This is especially important when dealing with a building site that is in, or adjacent to, a flood plain. Why adjacent to? Because today’s adjacent site will inevitably be IN the floodplain in the future. Continued development, paving of more and more parking areas, and truck loads of fill dirt all contribute to the increase in flood plains every year - not to mention the climatic shifts that are leading to an increased threat of flooding. What does that mean to those of you who want to build on a site that happens to be in a floodplain? One word... elevation (See SmartTimes Nov 2007 Issue), through green construction methods focusing on a crawlspace that suits the climate of the building site – whether it is ventilated, conditioned, or sealed. Not by mounding site soil or bringing in offsite soil. Changing the topography is not a green solution. Mounding and/or dumping offsite soil usually just contributes to environmental problems – drainage and erosion, possible soil pollutant contamination, and/or future structural issues from faulty compression preparation. In a future article we will talk about the variety of foundation systems that are considered green, and how SMART VENT® Foundation Flood Vents work very well within all those systems.

Along with elevation comes venting – air ventilation (or conditioning the space) and flood venting. Why? We are back to the concept of sustainability... a long lasting structure. You should plan and build with flood vents because they result in less damage in a flood event, are required by NFIP regulations and various Building Codes, and lower your flood insurance premiums; but also because they will help make your structure last longer by lowering the structural risk placed on your building’s foundation by flood waters. See this issue’s Floodplain Construction Code Quiz for references to how even a shallow flood can wreak havoc on your building. For a great explanation of how flood vents work, see our new animation on the home page of our website at www.smartvent.com and click on the green “start button”. You can build, rebuild, or renovate “green” in a floodplain, start with planning for the structural sustainability of the structure’s foundation by specifying the use of flood vents.

Floodplain Construction Code Quiz

How close to the ground do flood vents need to be?

By FEMA- NFIP regulations and by the ICC building code, regardless of changes in grade, placement of vents must be within 12 inches (1 foot) of the adjacent grade. The adjacent grade for each vent is the grade level closest to that specific vent – either inside the foundation wall, or outside. Why 12”? Because the American Society of Civil Engineers conducted research years ago that determined as little as 1 foot of flood water could compromise the structural integrity of a foundation wall. For more information, see American Society of Civil Engineers: ASCE 24-05 and ASCE 24-98 Flood Resistant Design and Construction.



Gulf States Sight to Behold

Have you seen this rig driving around down in the Gulf States? If so, you've seen authorized installer Ronnie Long on his way to protect another home and save that homeowner money on their flood insurance. Ronnie, based in Pensacola, Florida covers areas in Florida, Alabama, Georgia, Mississippi, and Louisiana. Recently, Ronnie worked with SMART VENT® and the Extreme Makeover crew to protect a New Orleans church and a Southern Louisiana residence from future flood damage by professionally installing SMART VENT® Foundation Flood Vents into the building's crawlspaces. To contact Ronnie, call him at (850) 485-4238 or e-mail him at rw17475@live.com.

If you need an authorized installer to protect your home and help you save money on your flood insurance, visit www.smartvent.com/findInstaller.php



Pensacola, Florida, Authorized Installer Ronnie Long



Extreme MAKEOVER HOME EDITION

Recently, SMART VENT® teamed up on Extreme Makeover Home Edition – New Orleans; working with Deltec Homes and the rest of the construction team to rebuild a New Orleans church and a new home for a multi-generational family in Southern Louisiana. The episode showcasing the effort aired May 18, 2008 as the season finale on ABC (see local listings for the rerun if you missed it). Deltec Homes, a Green Home Building specialty firm that headed up the makeovers, was very happy to be able to condition the Louisiana home's crawlspace while still complying with floodplain building codes. Steve Linton, Green Building Coordinator for Deltec Homes said: "We knew, going into this that we would be able to condition the crawlspace because of my research... when I found out about SMART VENT® Flood Vents." The end result, substantially reduced flood insurance AND substantially reduced energy costs – a win-win situation for any homeowner, especially one who wants to Build Green. For more information see www.extremeneworleans.com.

ON SMARTVENT.COM... See New Orleans ABC 26 WGNO story on how SMART VENT® worked with Extreme Makeover to save a New Orleans Church on their Flood Insurance. On the website front page, click on the ABC 26 logo. **ALSO...** See more about how SmartVent participated on two Extreme Makeovers in Louisiana. Click on the Extreme Makeover Home Edition logo



News from the National Flood Insurance Program

As of May 1, 2008, NFIP premiums increased by an average of 8% for new or renewed policies. Also effective on May 1, buildings that are currently receiving a CRS (community rating system) discount will lose this discount if the building has a first floor rating one foot or more below the base flood elevation (BFE).

Homeowners could see increases on their flood insurance premiums by more than 20% if they lose their CRS discounts. One way to prevent this increase and maintain your CRS discount is to retro-fit the building with complaint flood vents. If you have already lost your discount, contact your NFIP servicing agent to ask how you can gain it back. SMART VENT® code compliant flood vents might be the answer. To view the complete document please visit :<http://bsa.nfipstat.com/wyobull/w-08013.pdf>.

New at SMART VENT®

2008 Resource CDs are available – lots of information, links, documents, etc.; contact your technical rep or call 877.441.8368 to get a copy. ICC-ES Certificate ESR-2074 – encompasses ALL of the SMART VENT® models in the ICC Evaluation Report.

New on www.smartvent.com

See the new animation that shows how our vents work and how they compare to regular air vents. On the website home page, click on the PLAY button.

On The Road...

7/8/08 - Rutherford County Chapter of TBOA
7/31/08 - 8/2/08 - SEBC Show, Orange County Convention Center-Orlando, FL
8/21-23/08 - Florida Surveying and Mapping Conference, Marriott Tampa Waterside
8/22-24/08 - Charleston Home & Design Show, Charleston, SC
9/9-12/08 - Code Officials Association of Alabama, Perdido Beach Resort-Orange Beach, AL
9/11-12/08 - 21st Century Building Expo Charlotte Convention Center
9/13/08 - AIBD Florida Society Trade Show, Hilton Clearwater Beach Resort, FL
9/14-9/16/08 ICC Annual Conference, Minneapolis Convention Center, Minneapolis, MN
9/19/08 - AIA Louisiana Design Conference, Morial Convention Center-New Orleans
9/21-24/08 - ARFMA Conference, Hot Springs, AR
11/18-20/08 - Build Boston, Seaport World Trade Center



Save on Flood Insurance



I show every visitor to my home here in Indian Rocks Beach, Florida the installed Smart Vents. This is our 5th year of substantial savings. Our first year the insurance carrier wanted \$3,000.00 and after meeting the FEMA requirements and installing SMART VENTS® our first Flood Insurance premium was \$375.00. ... My total investment payback was less than 6 months. I am guessing that my situation was an extreme case and I am sure delighted with the product.



Mike Koch, CTO
CENTURY 21 Sunshine Realty
Florida
mkoch@c21sunshine.com
Cell (727) 686-3092
www.c21sunshine.com

Do you have a SMART VENT® story to tell? Saved some money? Used our product? Have a project or professional to brag about? Let us know at smarttimes@smartvent.com

www.SMARTVENT.com • (877) 441-8368



450 Andbro Drive, Suite 2B
Pitman, New Jersey 08071