

At HOME with QMA

SUMMER 2007

Photo: By James F. Wilson/The New American Home

The New "Green" American Home

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The deck of the third floor balcony is a layered drainage system connected to an underground cistern.

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Plain Jane to **WOW!**

QMA transformed this dull 1970's house into a beautiful Southern Colonial style dream home that gave our clients the extra room they wanted while also reflecting their eclectic tastes. To add more living space, we enlarged the second floor and added a beautiful master suite. We also pushed out the back of the home for a sunroom and several private porches providing great space for entertaining guests no matter what the weather. In front, Southern-style porches are perfect for enjoying rocking chairs and cool drinks on warm summer evenings. The kitchen was given a complete makeover



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Also on page 4: *Don't Let Time Run Out*



2006 Master Design AWARDS

The New "Green" American Home

There's a lot of talk in the news today about "green building." Tremendous advances in building science and technology mean you no longer have to construct your project using strawbales or used tires in order for it to be green.

This fact was aptly demonstrated by The New American Home 2007 (TNAH), built for the International Builders' Show in Orlando. Such elements as energy efficiency, indoor air quality and sustainability were included in the design and construction. TNAH shows how housing performance can be incorporated into the most simple or most complex homes today.

In order for a house to be energy efficient, it is important to have a tight envelope and high performance insulation. There are



different ways to accomplish this goal. In the case of TNAH, the exterior was constructed with pre-cast, insulated concrete sandwich walls, which gives an equivalent thermal performance to R-26 wood-framed walls.

Three strategically placed high-performance HVAC systems condition the air, providing healthy indoor air quality. All the windows and patio doors have a low-emissivity coating—limiting solar heat gain. A 4-foot roof overhang, which includes a layer of vegetation, provides further protection against heat.

TNAH uses natural-gas-fueled tankless water heaters that heat water on demand. In addition, a solar thermal hot water system preheats the incoming water, further adding to efficiency.

A 2.4-kW photovoltaic system on the roof lightens the home's electric energy load by 10-kilowatt hours per day on average. Energy Star® qualified appliances were selected for the kitchen and laundry. Further energy savings are gained by the use of fluorescent lighting, and interior windows that allow natural light to flow throughout the home.

The one part of TNAH that is still experimental at this point is the "green roof." The idea consists of placing indigenous



Rooftop solar panels boost the home's overall energy savings by 16 percent.



Natural outside light floods the second floor through a pair of interior single-bung windows, as well as through a glass bridge connecting the balcony.

plants, pipes, filters and pumps on the roof to collect as much rainwater as possible and redirect it to a cistern under the garage where it is stored and used for irrigation. This reduces runoff into the city's stormwater system, while cutting down on the use of costly drinking water for irrigation.

TNAH suggests a lot of possibilities, but don't be discouraged if you can't do it all in your home. Smaller steps—such as installing Energy Star qualified appliances, and water-saving toilets—can easily be accomplished by anyone. And don't forget that throughout 2007 you can take advantage of the tax incentives provided in the Energy Policy Act. As increasing numbers of homeowners work to save energy and protect our natural resources, their combined efforts can make a dramatic difference.

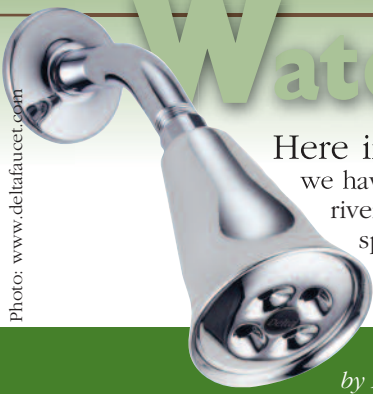
Sealing the

The most basic factor contributing to the energy efficiency of a home is its exterior walls—how airtight they are and how well insulated. Fiberglass batts and loose-fill cellulose insulation are gradually losing ground to newer, cutting-edge methods and materials.

One material gaining favor for use in stick-built homes, whether renovation or new construction, is foam sprayed insulation. The foam fills and seals all gaps, performing as both insulation and air-barrier at the same time. To ensure indoor air quality, the foam and blowing agent should not release harmful gases after installation or drying.

Water Sense

Photo: www.deltafaucet.com



Here in the United States, we have been blessed with abundant rivers, lakes, and wide-open spaces. In the past, unlike most other countries, we rarely have had to restrain our

The Water-Efficient Showerhead by Delta uses up to 36% less water than standard showerheads. It creates a more drenching shower experience by oscillating the water droplets.

water consumption. However, recent drought conditions and a growing population are forcing municipalities in many parts of the country to institute mandatory restrictions and to raise water rates. Happily, there are ways you can reduce your water bill and also do your part to help conserve water.

According to a 1999 study*, a typical US family of four uses 26.7% of their water flushing toilets, 21.7% washing clothes, 16.8% showering, 15.7% using faucets, 13.7% on leaks, 1.7% taking baths, 1.4% washing dishes, and 2.3% on other uses. With this in mind, one of the most important actions you can take is periodically check for leaks in your faucets, toilets and pipes and get them repaired. A faucet drip or invisible leak in the toilet will add up to 15 gallons of water a day, or 105 gallons a week, which adds up to 5,475 gallons of wasted water a year.

The other most important thing you can do is to select water-friendly fixtures and appliances for your home. The EPA has launched the WaterSense program, which will begin this year to label water efficient products, much as the Energy Star program identifies energy efficient products. Here are some of the terrific water-saving products already available:



The Pascal Culinary Faucet by Brizo is activated either by "tapping" almost anywhere on the faucet or using the hands-free option. Pascal's high-arc pull-down spout also automatically activates and deactivates water flow.

*Mayer et al., American Water Works Association (AWWA), Denver, CO, 1999.

Whirlpool's ultra-efficient Duet Sport Washer uses up to 66% less water and 67% less energy over traditional top-load washers, yet has a 3.8 cu.ft. capacity—enough to wash up to 16 pairs of jeans in a single load.



Photo: www.whirlpool.com

The Toto Soirée High Efficiency Toilet (HET) consumes 20 percent less water than the traditional 1.6 gpf. For a family of four, this equals up to 7,000 gallons of water saved per year.



Photo: www.totousa.com

Envelope



Building with SIPs generally costs about the same as wood frame construction, because of the shorter construction time and less job-site waste.

The New American Home 2007 was constructed of precast, insulated concrete sandwich walls. A second building technique involves the use of insulating concrete forms (ICFs). Polystyrene forms are used to construct a hollow wall. Steel reinforcements are added, and then concrete is pumped into the cavity, creating a solid structural wall with insulation on both sides. The system provides a combination of strength and energy efficiency.

Structural insulated panels (SIPs), another emerging product, can be used for exterior walls, floors, ceilings and roofs. Each panel is made using expanded polystyrene rigid foam insulation sandwiched between two layers of oriented strand board (OSB). The result is a building system that is very strong, energy efficient, and sustainable.

These are just a sampling of the many energy efficient construction methods currently available. With energy costs spiraling upward, it just makes good sense to investigate the alternatives.

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Design+Build

Designed for Living, Built for Life

Architecture, Design+Build Custom Homes and Remodeling

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with custom cabinets and modern appliances that make preparing a summer feast or small snack a breeze.

In addition, the selection and use of energy efficient, low maintenance windows and other building products help the homeowners save on energy and maintenance costs over the life of the home. That way they can spend more time doing the things they love most and less time worrying about their home.



Before - Back

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Don't Let Time Run Out for You

A typical vacation home remodeling project takes 2-4 months to design and plan, and another 4-9 months to build. So...to enjoy the 2008 Memorial Day holiday in your newly remodeled home, you should start construction just after Labor Day 2007. To begin construction by

then, you need to start designing your project now. So don't wait! Design and production schedules fill up quickly this time of the year. Visit our website, then call us today to make sure your project is ready for you to enjoy next summer.

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