ROLL CALL
Around the Hill
News and personalities in the Capitol community

MONDAY, MAY 19, 2008

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This Straw House Is Sturdy

Tom Williams/Roll Call

Laura Bartels of the nonprofit Builders Without Borders works on the doorway to the straw bale house under construction on the grounds of the Botanic Garden.

Structure Is Part Of Sustainable Living Exhibit

By Torey Van Oot
ROLL CALL STAFF

There's something out of the ordinary about one of Capitol Hill's newest dwellings, and it's not just its location on the southeastern edge of the National Mall. Or its quick construction. Or its modest size (at 12 feet by 16 feet it would be a tight squeeze for most adults).

What truly sets this structure apart from others on the Hill is that it's made out of straw.

The home is being constructed by a team of environmentally focused builders as part of "One Planet — Ours!," a summer exhibit on sustainability opening May 24 at the Botanic Garden.

"The [Botanic] Garden's desire was to showcase solutions to sustainable living, and they were looking for

See STRAW BALE, page 19

Straw Bale Homes Conserve Energy, Reduce Costs

STRAW BALE, from page 18

some sort of eco-house," said Catherine Wanek, co-director of Builders Without Borders, the New Mexico-based network spearheading the project.

The structure is built out of 100 18-inch bales of straw covered with plaster and earthen walls. And in keeping with one of the main tenants of Builders Without Borders — enabling communities to tap into natural resources to promote sustainable growth — it is being made entirely from local materials.

Developers of straw bale homes say they offer a variety of environmental and economic benefits.

Wanek, who has been on a "straw bale soapbox" since she built her own straw bale greenhouse in the early 1990s, said straw has good insulation properties, lowering energy costs.

"It's like living inside a thermos bottle — it's easy to heat and cool," Wanek said.

Proponents also point out the low cost of building with straw bales. The cost of materials for the wood-frame, earthen and gypsum plaster house at the Botanic Garden was about $620.

The first straw bale homes in the United States were built by settlers in the lumber-starved Great Plains in the 1880s. When the railroads expanded at the turn of the century, lumber was more accessible and became the material of choice.

The building style has experienced a revival over the past 15 years, as the cost of energy and materials has risen and the sustainability movement has gathered steam. Now straw bale is used to construct everything from self-built cabins to $2 million mansions and large educational and industrial complexes.

"We're rediscovering for the modern era traditional building materials," Wanek said. "The house of the future was invented a century ago on the Nebraska Sand Hills."

Wanek said when she first became involved in the straw bale movement there were only about a dozen known straw bale homes in the United States. Now, Wanek and Laura Bartels, also of Builders Without Borders, estimate that there are thousands in the United States and 34 other countries.

Because straw is an agricultural waste product, it is an abundant resource — straw production in the United States could build more than 2 million 2,000-square-foot homes a year, Bartels said.

Bartels said she is excited to see more people open to exploring alternative building materials.

"The use of cement block housing is an example of an expensive, high embodied energy material, inappropriate for almost all climate conditions having spread to many countries," Bartels wrote in an e-mail. "Finally, we have a technology that is taking off with Americans of all socioeconomic status including the wealthy, and setting an example that we can be proud to have spread."

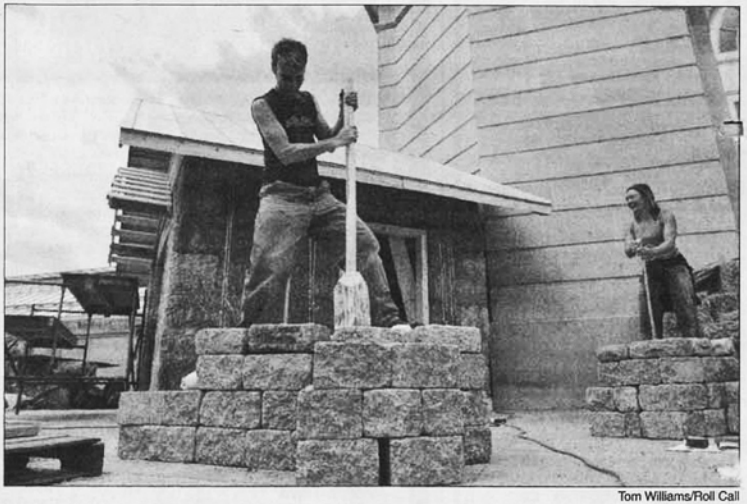
The primary goal of the exhibit is to introduce the public to modes of sustainable living and the ways in which building homes from local, environmentally friendly materials can empower communities.

The sustainable housing portion of the exhibit will also include demonstrations on adobe construction and solar cooking and will feature structures made of bamboo, cob and earthbags.

"Builders Without Borders is really focused on finding ways to provide housing for the underhoused and this is a wonderful way to do it," Bartels said. "What we're trying to do is build a whole system of sustainability."

The nonprofit group encourages communities to come together to build their own straw bale structures through wall-raising and bale-stacking parties.

"They're giant building blocks, and so it empowers the owners to build it themselves," Wanek said.



Tom Williams/Roll Call

Michael "Meka" Bunch and Massey Burke work on an earthen archway that will also be on display as part of the Botanic Garden's exhibit.

Bartels, who built her first straw bale home herself in the mid-1990s, agreed.

"It's really fun. [There are] so many faces that I remember seeing that "a-ha" moment where they go, 'I built that wall!'" she said.

The construction team at the Botanic Garden — nine builders and a Maryland-based roofing contractor — has been working since early May to finish the shelter by the exhibit's opening, and has received a variety of reactions from curious passersby.

"We've heard everything from, 'It'll never fly' ... to, 'This is fantastic. How can I build one?'" Wanek said.

And the response to those who raise concerns about the perilous end to the house built of straw in the "Three Little Pigs"?

"Any good building material can be used badly — so just don't let a pig build your house," Wanek said.