Energy Efficient Home Building

Cutting-edge Strategies and Policy

Presented by Builders Without Borders -- September 2008

As part of the U.S. Botanic Garden's exhibition "One Planet-Ours! Sustainability for the 22nd Century," Builders Without Borders created a display to demonstrate that traditional construction methods can be durable, energy efficient, and provide a healthful home environment. The BWB strawbale "Eco-house" was built mostly from "low-carbon" natural building materials – straw, earth, wood, stone, slate and bamboo – that are inexpensive and locally available.

Stepping inside the strawbale Eco-house one can experience the insulating power of straw bales, combined with the mass and safe moisture storage of beautiful clay-based plasters. On the exterior, the bale walls are protected by a traditional lime plaster and a long-lasting standing-seam metal roof. Nearby, a bamboo shade structure and an adobe arch reveal the elegant simplicity of building with natural materials.

The US Botanic Garden is located at **100 Maryland Ave, Washington, DC.** Visit **www.usbg.gov** or **www.builderswithoutborders.org** for more information on the exhibition and the BWB display. Before and after the presentations at the USBG, BWB members will be on-hand to interpret the exhibit and answer questions.

Sunday, September 21 -- 1:00 - 2:00 pm

Tour the Friends Community School – College Park, Maryland

This 27,000 square-foot elementary school incorporates passive solar design, day lighting, and energy-efficient straw-bale walls finished with lime plaster. Completed in 2007, this LEED-certified school also features a vegetated roof and rain gardens to control roof run-off and water in the landscape. The tour will be lead by Michael Furbish, of Furbish Company, the company that built and plastered the straw-bale walls and installed the green roof. See **www.friendscommunityschool.org** for directions and more information about this school.

Monday, September 22 -- 12:00 - 1:00 pm

Hybrid Houses, Energy-saving Building Strategies – U.S. Botanic Garden Classroom

The presentation showcases contemporary homes designed to reduce energy use and carbon emissions. Examples include an urban remodel in Takoma Park, MD, a solar-powered community in Arizona, a model for rebuilding in Louisiana, a wind and solar ranch in Kansas, a straw-bale "passive house" in the Swiss Alps, and an award-winning housing development in China. These innovative "hybrid" homes offer a vision of a sustainable future -- available today. Presenter Catherine Wanek is the author and photographer of *The New Strawbale Home*, and a BWB Co-director. See **www.usbg.gov/education/events/index.cfm** for more information.

Tuesday, September 23 -- 12:00 - 1:00 pm

Greening the Next Generation – U.S. Botanic Garden Classroom

Shifting North American consciousness towards energy-efficiency and sustainability requires teaching the designers and builders of tomorrow how to do more with less. Fleming College's unique approach offers immersion into the design/build process, instilling principles of ecological construction and providing hands-on opportunities. Students graduate with skills ready-made for a "green collar job." Presenter is Chris Magwood, lead instructor for Fleming College's Sustainable Building Design and Construction program and author of *More Straw Bale Building* and *Straw Bale Details*. See **www.usbg.gov/education/events/index.cfm** for more information.

Wednesday, September 24 -- 12:00 - 1:00 pm

Opportunities and Challenges Building Green in the Washington, D.C. Region – U.S. Botanic Garden Classroom

Maryland, Virginia, and D.C. building professionals, including contractor Michael Furbish, designer Sigi Koko and construction manager Bill Updike, talk about climate-appropriate materials and methods, code acceptance. See **www.usbg.gov/education/events/index.cfm** for more information.

Thursday, September 25 -- 11:00 am - 2:00 pm

Open House at the Straw-bale Eco-house – U.S. Botanic Garden

Tour the BWB exhibit, and see its construction (in a digital display). The BWB team will be on hand to answer questions about natural and ecological building. Also, learn about local resources for green-building supplies and services. See **www.usbg.gov/education/events/index.cfm** for more information.

Thursday, September 25 -- 7:00 pm

Hybrid Houses, Energy-saving Building Strategies – Amicus Green Building Center, Kensington, MD

The presentation will showcase contemporary homes designed to reduce energy use and carbon emissions. Examples will include an urban remodel in Takoma Park, MD, a solar-powered community in Arizona, a model for rebuilding in Louisiana, a wind and solar ranch in Kansas, a straw-bale "passive house" in the Swiss Alps, and an award-winning housing development in China. These innovative "hybrid" homes offer a vision of a sustainable future -- available today. Presenter Catherine Wanek is the author and photographer of *The New Strawbale Home*, and a BWB Co-director. For address and directions see **www.amicusgreen.com**.

Friday, September 26 -- 12:00 - 1:00 pm

Growing Green Building Policy – U.S. Botanic Garden Classroom

Through innovative legislation and financial incentives, the State of New Jersey is in the national forefront of energy and environmental policy. Learn about New Jersey's green evolution, including creating a state-wide Green House Gas Reduction and Energy Master Plan, establishing green building standards, and bolstering economic growth through "renewables." Presenter Darren Port is a Green Building Administrator for New Jersey's Division of Codes & Standards. See **www.usbg.gov/education/events/index.cfm** for more information.

Saturday, September 27 -- 10:30 am - 4:30 pm

Family Day – U.S. Botanic Garden

Tour the BWB Exhibit and see its construction (in a digital display). The BWB team will be on hand to interpret the exhibit, and answer questions about natural and ecological building. Plus, you can learn how to bake a cake in a solar oven! See **www.usbg.gov/education/events/index.cfm** for more information.

Saturday, September 27 -- 10:00 am – 1:00 pm

American Clay Plaster Workshop – Amicus Green Building Center, Kensington, MD ($25 workshop fee)

A hands-on workshop teaching the techniques, tricks and characteristics of American Clay – a natural, non-toxic, mold resistant, breathable plaster. It's easy to apply and fun to learn for do-it-yourselfers and pros alike. Bring a hawk and finishing trowel (not a drywall mud or scored trowel) or you can purchase a set on the day of the workshop. Wear "painting" clothes. Please call 301-571-8590 for more information and to reserve your spot.

Saturday, September 27 -- 1:00 - 2:00 pm

Growing Green Building Policy – Amicus Green Building Center, Kensington, MD

Through innovative legislation and outstanding financial incentives, the State of New Jersey is in the national forefront of energy and environmental policy. Learn about New Jersey's green evolution, including creating a state-wide Green House Gas Reduction and Energy Master Plan, establishing green building standards, and bolstering economic growth through "renewables." Presenter Darren Port is a Green Building Administrator for New Jersey's Division of Codes & Standards. For address and directions see **www.amicusgreen.com**.

Saturday, September 27 -- 2:00 - 3:30 pm

Introduction to Natural Building – Amicus Green Building Center, Kensington, MD

Learn about building with locally available, minimally-processed materials combined to create beautiful, energy-thrifty homes that are good for people and the planet. Presenter is Chris Magwood, lead instructor for Fleming College's Sustainable Building Design and Construction program and author of *More Straw Bale Building* and *Straw Bale Details*. For address and directions see **www.amicusgreen.com**.

Saturday, September 27 -- 3:30 - 5:00 pm

Hands-on Strawbale Workshop – Amicus Green Building Center, Kensington, MD

Experience how easy it is to stack bales into walls, and learn the basics of straw-bale building. Presenter is Chris Magwood, lead instructor for Fleming College's Sustainable Building Design and Construction program and author of *More Straw Bale Building* and *Straw Bale Details*. For address and directions see **www.amicusgreen.com**.

A donation to help defray costs for these workshops would be appreciated. Donations supporting Builders without Borders, a non-profit organization, are tax deductible.

www.BuildersWithoutBorders.org & www.usbg.gov