

Sustainable Building Coalition

P.O. Box 49381
Austin, TX 78767-9381

Next Meeting:
Wednesday
May 28, 2003
7:00 pm
Casa de Luz
1701 Toomey Road



May 2003

<http://www.greenbuilder.com/sbc>

Volume 10, Issue 3

In This Issue:

- May 28 Member Meeting
- Guest Article: AAC
- 2003 Austin Environmental Directory
- Local & National News

Announcements:

* Deadline for articles and events for the next newsletter is June 15. Email to Chris at cdgaines@yahoo.com

* Local straw bales will be available Soon. Ken Richter in Taylor will be harvesting and baling straw in mid May. There should be around 10,000 bales. Call Ken for details at 365-7708.

* Check out the calendar on the website for upcoming workshops and events!!

Upcoming Workshops:

- Northern California Community Based Natural Builders Gathering
- Timber Framing and Light Clay Walls Workshop

Website Resources:

www.greenbuilder.com/sbc
www.environmentaldirectory.info
www.austinfarmersmarket.org
<http://www.tececo.com>
<http://www.geopolymer.org>
<http://www.ecocreto.com>
<http://www.dolomatrix.com>

Next Meeting: "Natural Alternatives to Portland Cement, Structural Steel Reinforcement and Force Grown Southern Yellow Pine"

By George Swanson

The Challenge: design/build an 108 acre, 43 building "Smart Growth" type holistic health center and residential development project using little or no conventional Portland Cement, steel reinforcement and non-sustainably grown wood products.

The Solutions: MgO based "Breathing" pervious natural cement floors, MgO bonded cedar chip "Adobe" block walls w/ structural Kenaf rebar and structural insulative bundled Kenaf roof panels w/ Mgo roof tiles.

To find out more about these new "ancient" building technologies come to the May 28th SBC meeting at Casa de Luz at 7:00pm. George Swanson, a long-time SBC member, will present his latest product prototypes designed for "Villa Verde" and the Center for Advanced Health soon to start construction in South Austin. For more information on George Swanson check out: <http://www.geoswan.com/>. For more in depth info on some of the unique material to be presented check out these websites and the ones listed in the website resources to the left:

A few good research websites on MgO:

<http://www.anl.gov/> (search under "Ceramicrete")

<http://www.bindancorp.com/> MgO products licensed w /ArgoneLabs)

<http://www.premierchemicals.com/> (search under "Library"section,then "Magnesia Cement")

*Please join George to learn more about these natural alternatives for green building. SBC meets the 4th Wednesday of every other month (next meeting will be May 28th) at 7 pm at Casa de Luz (<http://www.casadeluz.org/>), 1701 Toomey Road in the Cielo Room. You're also welcome to join us at Casa de Luz for a wonderful holistic meal beginning at 6 pm. **

Guest article: Autoclaved Aerated Concrete

By Mark Kohlhaas

Autoclaved aerated concrete is a lightweight concrete material typically composed of 4% Portland cement, 2% lime, 14% silica and 80% air. This product has been used in Europe for over 70 yrs. but has been introduced in the U.S. relatively recently. It was imported in the early 1990s and has been manufactured here since 1996.

When aluminum oxide is added to the mixture of cement, lime and silica, air bubbles are created throughout the mixture. It is then cured in an autoclave resulting in a material similar in texture to pumice. Some companies are substituting mine tailings or fly ash for a portion of the silica content and one company is using a chemical curing process instead of the autoclave all of which help to reduce the embodied energy.

[Continued on page 2]

Guest Article: [Continued]

Due to the large percentage of air, this material is much lighter than standard concrete and is able to act as the insulation as well as the structure of the building. The insulation value is about R 1.2 per inch of thickness (steady state R-value). One company (E-crete) claims that the steady state R-value is boosted by a factor of 2 or more due to the thermal mass of the blocks. However, this is for southwestern climates with plenty of sunshine and high day/night temperature swings.

The R 1.2 per inch gives an 8 in. thick block an R-value of 9.6. This is lower than the R13 required by the City of Austin. To satisfy the inspectors on this point, you would need a letter from an architect or engineer. Although this R-value seems low, the wall insulation in our climate accounts for less than 10% of the heating and cooling load of a building.

The blocks are manufactured in 8", 10" and 12" widths for load-bearing walls. A 4" thick block is available for interior non load-bearing walls. The AAC material is also manufactured in panel form for use in floors, roofs and walls.

The AAC house, which we built through out Casa Verde Builders program at American Youthworks, was completed in early 2002 and is located in east Austin. The structure is a simple rectangle measuring 26' x 46' supported by a concrete slab foundation. In addition to the AAC blocks, many other green building features were employed in this house including stained concrete floors, compressed straw interior walls, on-demand water heater, ductwork within the conditioned space, 3 ft. eaves and zero-VOC interior paint. These features, in addition to many others, helped us achieve our first 5-star rating from the City of Austin's Green Building Program.

Overall, I found the AAC blocks very easy to work with. Casa Verde Builders is a construction-training program and our students typically come in with no construction experience at all. I came into this project with very little block laying experience myself. However, the entire crew quickly took to it. The walls went up straight, plumb and level in a fairly short amount of time. Although the blocks are more expensive than some other wall systems, the low material cost for the stucco really brings the cost down. I would definitely recommend this material, especially to an owner/builder. *

Local Happenings: 2003 Austin Environmental Directory

The 5th annual edition of the Austin Environmental Directory has been released. The Directory is one of the country's most comprehensive local sourcebooks for environmental information. It includes environmental issues, products, services, and organizations.

The theme article is about creating jobs from environmental technologies and strategies in the wake of Austin's High-Tech layoffs. It includes an analysis of Austin's computer industry including how much it contributes to the city's economy, and a history of how it began in the late 1940s. The Directory has quantified the amount of money that has been paid by taxpayers to subsidize this industry, which is something no other Austin publication has ever done. It has also quantified military contracts to High Tech companies in Austin, and red-carpet recruitment efforts by Austin's Chamber of Commerce to get these industries to locate here.

Collectively, Austin has received over \$1.4 billion in taxpayer subsidies at the local, state, and federal level to support High-Tech. It is ironic that Austin, with its commitment to the environment, has not considered the same thing for environmental business.

The Directory goes on to discuss 19 separate environmental technologies and strategies that can create jobs in the region. It also discusses specific policies to bolster environmental businesses that go beyond the conventional incentives given to Austin's High-Tech industry. These include sources of capital (such as a bank that makes loans to environmental business), green purchasing by major employers, and green taxes that remove subsidies given to environmentally damaging products.

The new Directory also includes large sections on: local and state parks; green and energy-efficient apartments complexes; energy and water conservation programs; green building products and techniques; used oil collection facilities; composting; a comprehensive list of the region's environmental groups.

It can be accessed online at <http://www.environmentaldirectory.info/>. *

Local News

Please check out the SBC website (www.greenbuilder.com/sbc/events) for additional information and a full calendar of events. On the calendar, you will find descriptions for the following workshops, volunteer opportunities, and other events.

- Timber Framing and Light Clay Walls Workshop ~ Last week of May ~ Santa Fe, NM
- Northern California Community Based Natural Gathering ~ June 13-20 ~ Black Bear Ranch, CA

Keep Austin Beautiful Cleanup

Keep Austin Beautiful's next big cleanup will be held on Saturday, June 14. The cleanup effort will include 9 parks surrounding Lake Travis, including: Pace Bend, Sandy Creek, Arkansas Bend, Cypress Creek, Bob Wentz @ Wendy Point, Hippie Hollow, Mansfield Dam, Mansfield Dam Overlook and Low Water Crossing. Volunteers interested in this event are asked to meet at the Travis County Satellite 2 Community Room by 8:00 a.m. Saturday, June 14 for registration. Satellite 2 is located east of FM 620 near Mansfield Dam. After receiving cleanup supplies and a T-shirt volunteers will be sent to their assigned park.

The cleanup will be from 9 a.m. to 12. Following the cleanup, volunteers will be served lunch and be given a chance to win door prizes, including a kayak! *

Texas Solar Energy Society SunRun

TXSES will kick-off the American Solar Energy Society conference on June 21 in Austin with a SUN RUN and Summer Solstice celebration. Feel Austin's unique energy and learn about the potential of renewable energy. For volunteering and sponsorship opportunities, please call Melanie Fitzpatrick (The Moving Experience) at 512-440-0686. Watch for on-line race registration later this spring.

Events for the whole family will include: chip-timed 5K race; fun, high energy festival with live music powered by the sun; special "Wind Sprints" and other kid activities; technology demonstrations; educational displays; and artistic explorations of sun and shade. *

The NEW Austin Farmers' Market

The Sustainable Food Center will launch a weekly downtown farmers' market starting Saturday, May 3, at Republic Square (4th and Guadalupe). Go to www.austinfarmersmarket.org and sign up for their e-letter and learn about ways you can help launch the market. The current issue features profiles of local farmers and chefs and a quirky history of Republic Square. *

National News

PORTLAND REPORTS ON ITS GREEN BUILDING PROGRESS

Excerpted from Randy Gragg of The Oregonian, Mar. 2, 2003

In early March, the Green Building Division of Portland, Oregon's Office of Sustainable Development reported to the Portland City Council on the program's progress. The program came into being in 1999 courtesy of some bureaucratic reorganization and about 25 cents added to every household's monthly garbage collection bill. The program provides technical assistance, small grants and training on green building practices to developers, builders, homeowners and design professionals. According to the Green Building Division's 32-page report, "Strategic Investment in Green Building," the program has exceeded all of its goals. As of February, green building design and construction practices have been implemented in 41 commercial and mixed-use buildings, totaling 3.1 million square feet, and in 1,314 housing units. The program has provided technical assistance on more than 300 projects. The Green Building Division's new five-year strategic action plan, which was presented at the City Council meeting, focuses on several key areas, including: making the permit process for green buildings easier, extending programs to the greater Portland-metropolitan area, establishing a high performance business center and establishing an ecological urban design studio. To download the report, click the "Newsworthy" link at <http://www.green-rated.org>. *

The Back Page: DUES!!

Please remember to pay your dues! In order to continue offering workshops, meetings, newsletters, and the other services that the coordinators of SBC provide for you, we have started collecting dues again. We appreciate your continued support! Checks made out to Sustainable Building Coalition may be mailed to P.O. Box 49381, Austin, Texas, 78767-9381 (please write "dues" in the subject line). We will also be collecting them at the member meeting on Wednesday, March 26.

If you would like to further support the organization, please feel free to do so through direct donation to the organization. When we obtain the non-profit status we are seeking from the IRS, these donations will be tax-deductible. We will let you know as more information becomes available on this topic.

- \$15 Regular membership (includes email newsletter)
- \$25 Regular membership (includes paper / mailed newsletter)
- \$35 Business membership (advertising, recognition, networking, and more)

Coordinators:

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If you would like to contact anyone of us by email, visit the contact form on the Greenbuilder website at:

<http://www.greenbuilder.com/sbc/contact/>

SUSTAINABLE BUILDING COALITION

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