

# THE CASBA JOURNAL

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the California Straw Building Association

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## Success In the Code World

David Eisenberg

I want share some great news. On August 16<sup>th</sup> in Chicago, Martin Hammer's "comment"/proposal to include the strawbale code he's been working on over the past few years in California into the new International Green Construction Code (IgCC) was approved by a committee vote of 8 to 6! The IgCC is the new US code for commercial (and high-rise residential) buildings that will become part of the family of 2012 International Codes (I-codes). It will go through a full code development cycle with the rest of the 2012 I-codes next year and there is work that will need to be done still to make sure it doesn't get rejected in that process, but getting it into the second public draft of the code now is a very big step forward.

I served on the drafting committee for this code from last summer through the spring of this year. For more information about the IgCC and to download the whole IgCC first public draft and the comments – including Martin's proposals for strawbale and earthen building and the EcoNest comment in support of straw clay go here:

<http://www.iccsafe.org/cs/IGCC/Pages/default.aspx>

<http://www.iccsafe.org/CS/IGCC/Pages/Comments0810.aspx>

“Take a straw  
and throw it  
up into the air,  
you may see by that  
which way the wind is”

*John Selden*

You'll find these listed as comments 5-134, 5-135 and 5-136.

I was the only proponent speaking in favor of it here, and there were others who spoke in opposition. The initial motion was to disapprove but it failed 5 votes to 9 after considerable and very mixed discussion – which surprised me because of the nature of some of the comments – that it was still not ready and needed some technical fixes.

The failure of the motion to disapprove required a new motion and Chris Mathis, an old building science friend from North Carolina, offered a motion for approval. That was followed by more discussion, with more concerns expressed that it wasn't ready. Then, just before the second vote, Chris pressed the committee to push the envelope. He said they should approve it and get it in, and rather than just having the few people who are very knowledgeable about it work on improving the things that still need to be done, "Let thousands of people look at it and help improve it through the next round of the code development process!" He said it was time to start pushing these things through. Then they voted - and it passed 8 to 6! I was amazed and delighted! So it is going into the second public draft!

There were two other similar proposals (they're called "comments") that were heard right before the strawbale comment. The first, from Paula Baker Laport and Robert Laport proposed including the straw clay guidelines from New Mexico. Next was the other submitted by Martin, that one in support of earthen construction based on the new ASTM standard for earthen wall systems that I had initiated almost 10 years ago and Bruce King has spearheaded over the past few years. I spoke in support of both, but they were disapproved, though both received encouraging suggestions to bring them forward again after addressing non-mandatory/permissive language and other issues.

Because they were heard one after the other, and I was the only proponent for them, I got to speak first for each one and so I had a total of 6 minutes

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(2 minutes each) to frame them all in terms of the big issues I've been speaking to for all these years, including the coming challenges of ever-more limited and expensive energy, the low-impact, low-tech, climate beneficial, local/regional benefits, the industrial/proprietary bias and difficulty in funding research, testing and development for public domain, non-proprietary materials and systems. I started off by talking about the fact that I had been in buildings in Europe built with materials like straw clay and earth that are twice as old as this country! And to say that these are durable and safe ways of building when done properly. And when talking about the ASTM earthen standard, I said that if they looked at it they might think that it was too low tech to be reasonable compared to the standards that they're used to for concrete and other industrial materials. But, I said, it was intentionally low tech. That I was involved in initiating that standard almost ten years ago and it was both to enable the use of those materials here and to reverse the outlawing of earthen building in developing countries through the adoption of modern industrial codes. That it was designed to enable people to build safe, durable, healthy, and affordable buildings anywhere in the world—including the in United States. I mentioned that the committee that developed that standard included the leading experts on earthen building and engineering from around the world and was based on reviewing and incorporating the best from international codes and standards for earthen building.

After the first two went down, I was quite convinced because of the comments that the S.B. proposal would share the same fate and, thankfully, I was wrong!

So hats off to Martin, Bruce, Matts, and many others who have worked so long and hard to develop these codes and to Chris Mathis for his leadership and visionary action on the committee.

## CASBA Summer Workshops Update

### "Introduction to Straw Building"

C.J. Cavet

We have completed the Bale Raising workshop and although the group of attendees was small we finished installing the bales during the course of the weekend, as well as slip coated about 80% of the building inside and out. The structure though larger than past workshop buildings was manageable and the bales went in quickly as we were just stacking between the trusses. The only challenges were at the gable ends and its windows, where a running bond was used and custom bales created to fit the space.

The workshop this year has two hosts, the Freeman Family (home owners) and the Concow Phoenix Rising group. The group is assisting the homeowners with labor and some materials as they rebuild after loosing their home in the 2008 fire. The Phoenix Rising group also wants this building to prove to their community the feasibility of this type of construction. They also coordinated and prepared meals during the workshop, arranged for free camping nearby and generally been a great partner to work with. Thank You Caleb for all the carpentry and Rebekah, Sarah and Helena for all the other work. To learn more about their efforts visit <http://concowphoenix.org/index.html>

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# NOTES FROM CASBA CENTRAL

Joy & Maurice Bennett – Angels Camp

It has been an interesting spring and summer for CASBA membership – we have had a lot of 2009 members who did not renew their membership BUT we have also had a steady trickle of totally new members – so while our membership continues to have a solid core of professionals, owner builders and curious individuals there are still many people out there who are just now learning about building with straw and opting to join CASBA for more information. Our membership is down from 2-3 years ago when we had over 225 members to a pretty steady 130-140 – which is OK – our message is still resonating.



day – so mark your calendars for one of the best GREEN Building shows around. AND of course CASBA will have a booth – the organizers always give us a nice price break.

So thanks to each of you for supporting CASBA – we value and need your support, input and volunteer help. One particular note – we desperately need a second

hand to help with the web site – Our tireless worker, C J Cavet, not only manages our workshop program but she has also been our “Accidental Web Master” – someone to help her actively manage our web site would be SUPER – we want the site to be current, interesting and informational – one person can’t do it all.

To recap:

- (1) West Coast Green late September/early October
- (2) Spring conference April 2011
- (3) Assistance for the Web Site

Jim Reiland, Joy Rogalla and Celine Pinet with help from many others, including John Swearingen have been diligently working on the revised Detail Book – we cannot express how much CASBA appreciates their hours of volunteer time to keep this project alive.

Joy, Kathy Gregor and Lesley Christiana are coordinating a “new” T-shirt design. They plan to include a women’s version as well as the standard “one suits all” shirt. The plan is to have the new shirts for West Coast Green.

We have reserved Walker Creek Ranch for the 2011 Spring conference – April 1, 2 and 3 (so start thinking about your personal contribution to a good April Fools joke for Friday night). Registration and schedule details will be posted on the web site shortly. Every member brings a new member to the conference.

Please do not forget West Coast Green at Fort Mason in San Francisco Sept 30, Oct 1 and 2 – Thursday through Saturday. Since there was such enthusiasms for the show last year they added a third

Now I want to get personal and prideful – Joy and I celebrated our 50th Wedding Anniversary August 6, renewing our vows with our family and a few friends in the same chapel that we visited 50 years ago. It has been a journey – with a couple of bumps – but a journey of learning, coping, adjusting and respecting. I would not be half the person I am without Joy’s help, support, cajoling but what a remarkable journey – we recommend it for everyone.



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The building is an infill strawbale system but instead of post and beam frame work; whole house trusses were used. This was designed by Bob Theis, an architect and long time CASBA member and engineered by Butte County engineer, Paul Krohn. As per Bob Theis, "The building is designed to be 48' long and 17' wide and is part of an effort to develop easy to build straw bale structures that are also easy to permit. This prototype utilizes "whole house trusses", in which individual trusses that define both the walls and roof are built flat on the deck and tilted up. Walls are then enclosed by stacking the bales between the trusses. One of the advantages of the design is that it can be built in modules or added on in modules.

Because the property is mostly decomposed granite with no sign of clay deposits, the original plan was to apply a lime plaster. After reconsideration from the ease of working with clay during the slip coat process, the homeowner decided he preferred an earth plaster, prompting the Phoenix Rising group to look for a local source of clay so that earth plaster will be applied to the structure. The instructors for the plaster workshops, Kathy Gregor (an owner/builder with lots of experience and artistic skills) & Yoshi Makino (an expert plasterer who has worked with Tracy Thierot), combined their experience to conduct Part 3 of the project, a Plaster Workshop which was conducted Friday September 10<sup>th</sup> through Sunday September 12<sup>th</sup>.

## **San Diego County: Bales about Town**

Leslie Christiana

Hubbell and Hubbell Architects report the completion of two straw bale residences in 2009, one in Escondido, and another, with bale builder Mark Tighe, in Borrego Springs.

Near the Mexican border town of Tecate, consultants Simple Construct (Rebecca Tasker, Mike Long, Jim Plaster & Adam Shepherd) assisted owner/builders in building a 650 SF studio. The post & beam project has a reused foundation, interior and exterior clay plaster, and incorporates a greywater system and rainwater catchment. Audrey Ruland of Ruland Design Group designed the structure and Bob Bolles

was the bale consultant.

In Jamul another Hubbell and Hubbell project reached the plastering stage in March. The owner-built, 2,150 SF, 3 bedroom fire rebuild (with 550 SF attached garage) features high clearstory windows for natural lighting and ventilation, solar hot water, and passive solar orientation. Nestled into existing boulders, it includes a large covered patio for additional living space.

To the east, near the historic town of Julian, the Girl Scouts are now enjoying a new 550 SF reception building and 650 SF environmental classroom at Camp Winaka. The straw bale buildings, designed by Audrey Ruland, were part of a fire rebuild project. They feature post & beam construction with recycled denim insulation, PV, interior and exterior clay plaster, and a native plant garden. This was the first exterior clay plaster permit issued by the county of San Diego for a commercial building. Todd Anderson was the general contractor while Simple Construct led the straw bale & natural plastering.

The first straw bale building in the Poway area was raised this spring with Mark Tighe leading the bale work. Hubbell and Hubbell Project Architect Juergen Zierler made use of the existing fire-left foundation in designing the Tropical Modern home, as well as planning for rainwater catchment in the slope and sweep of the roof. A graywater system and PV are also planned.

In North County, Josie and James Pettitt of Vista are in the final stages of finishing their 1750 SF (ID) dream home. The post & beam, steel-framed project has recycled denim insulation, a greywater system, rainwater catchment, PV, and clay plaster inside and out. It is the first exterior clay plaster permit issued by the City of Vista. Audrey Ruland worked with the owners on the design and Bob Bolles consulted on bales. Simple Construct oversaw the straw & plaster.

Finally, in the hills of Escondido, determined owner-builders David Granum and his wife began work on their off-grid straw bale home in July after five years of planning and infrastructure. Friends, family, and volunteers made up the workforce due to the current lending freeze. Bob Bolles consulted on bales and the engineer was Tim Rudolph of Pinyon Engineering.

On the Boards: in Fallbrook, CA, a 2,750 sq ft residence designed by Lisa Swan of Design Forward, contracted by Alan Schmidt of Distinctive Builders, with straw bale and natural plasters by Simple Construct.

## **New additions to the San Diego Scene**



*Escondido Residence*



*Owner-builder project in Vista*



*The Girl Scouts' environmental classroom in Julian*



*Tropical Modern in Poway*

*Photos courtesy of Juergen Zierler (#1 & 5), Rebecca Tasker (#3 & 4), and Jim Christiana (#2)*

## CASBA at EarthFaire San Diego

Rebecca Tasker

The CASBA booth at the 2010 EarthFair in San Diego was a great success. The EarthFair, held in San Diego's beautiful Balboa Park, hosts upwards of 60,000 people every year. This year CASBA snagged a prime corner spot. Volunteers Lesley Christiana, Juergen Zierler, Mike Long, Rebecca Tasker, Adam Shepherd and our newest San Diego member Trevor Stine, amply staffed the booth. Jim Plaster stopped by regularly while attending his duties as an EarthFair volunteer. In addition to the many books and photos displayed every year, this year we showcased business cards from local members and a scale-model straw bale wall section.



## CASBA's Sister Organizations

Danielle Alvarez

The California Straw Building Association is a nonprofit organization whose main focus is straw building and construction. This is further expanded through the communication of practical experience, research and testing, and basic information. They are committed to making their work and information available to the professional and public people. Your involvement in CASBA is valuable for its success. Please contact the organization if you would like to contribute your input or skills.

The Ontario Straw Building Coalition's purpose is to provide public information to straw bale builders and straw bale homebuyers. The organization provides general information, training, and testing data for building designers and inspectors. In addition, the organization further expands the knowledge of straw bale building through support efforts. Promoting communication among builders and owners is also important. To provide a more responsible stance towards the environment, OSBBC uses materials that contain low embodied energy and toxicity as well as lower fossil fuel usage. OSBBC also believes it possible to build with environmentally responsible materials that cost as much as regular building materials. Their main goal is to help builders and owners embrace straw bale building in the industry.

The Australian Straw Bale Building Association takes much pride in straw bale building and construction. The association consists of industry professionals, building owners, researchers, and fascinated, public people all sharing experiences and information in the straw bale industry.

The Colorado Straw Building Association is a nonprofit organization dedicated to using sustainable and natural building materials. Not only that, but the organization donates one hundred percent of its financial funds to networking and education. Its goal is to educate the public about straw bale building and sustainable materials. Good, quality building and resource providing are also equally important to COSBA.

In the European Straw Bale Building Association, there are straw bale enthusiasts, great builders, and hardworking professionals that ensure the distribution of straw bale technology and knowledge.

For further reference visit any of the following websites:

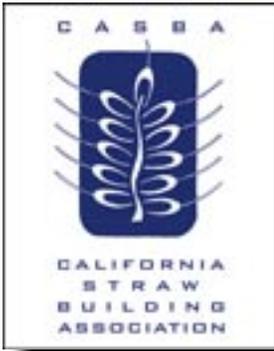
CASBA: [www.strawbuilding.org](http://www.strawbuilding.org)

OSBBC: [www.osbbc.ca](http://www.osbbc.ca)

Ausbale: [ausbale.org](http://ausbale.org)

COSBA: [www.coloradostrawbale.org](http://www.coloradostrawbale.org)

EUSBA: [eusbba.ning.com](http://eusbba.ning.com)



## What Would I Do Differently

By Joy Bennett

For all you thinking of building a straw home-I would chat with folks who live in one or have lived in one, I would visit every straw home possible and ask, "What would you do differently?" I would try and work with professionals who have lived in a straw home or do (or certainly who have spent much time in one).

I would ask questions like do we need a whole house fan? If so, which one? I would think twice about radiant heat in the entire home. Do I need it? What about a radiant barrier in the attic? Will it help? What material should I use outside? I don't want to reflect more heat into our home if in a hot climate. I would salvage all I could for my home. I would think twice about what material to use for windows. Personally, we think wood casement windows go great with straw bale homes. Some wise architects told us if we could put our money into anything, "Do doors and windows well."

Many of you have heard all this before. Building with straw is wonderful, fun, exciting, but take the time to ask all the right questions before you build. Research, read and view videos on straw homes. There is much information out there for you. Also, remember to live on your site before you build. Get very familiar with the orientation.

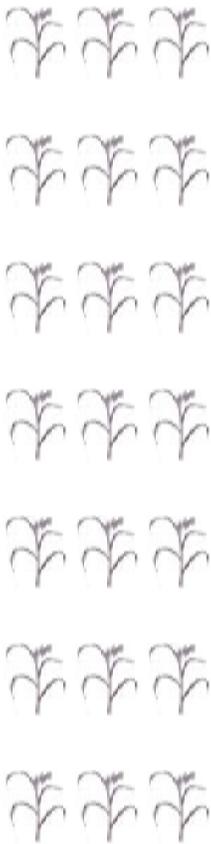
Cheers and happy building!  
Joy

PS-This column is for all to send comments to. Please join in!!!!

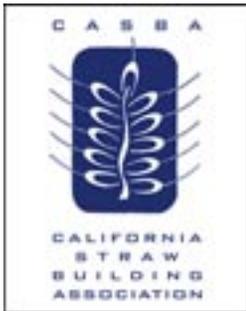
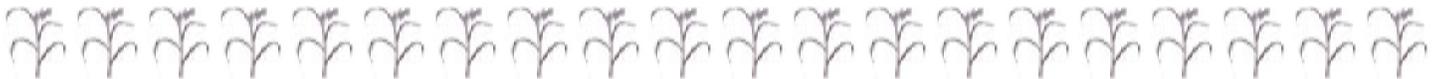
As onto the bow is to the cord, so unto man is woman.  
Though she bends him, she obeys him, though she draws him, yet she follows,  
useless each without the other. - Longfellow

**For all you thinking of building a straw home-I would chat with folks who live in one or have lived in one, I would visit every straw home possible and ask, "What would you do differently?"**





Jean Okuye strawbale house during last April's Merced County Green Tour. 52 people dropped by to see it's features, including the xeriscape landscaping. This home, built in 2008, is "the only strawbale home in Merced County".



A non-profit project of the Tides Center

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