



THE CASBA JOURNAL

Newsletter of
the California Straw Building Association

CASBA: A Non-Profit Project of The Tides Center

Volume XIV, Number 2

EVENTS

For more information
on EVENTS contact
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CASBA EVENTS

2009 Summer Workshops
"Introduction to Straw Building"

Part 1: Bale Raising Workshop
Friday – Sunday; June 5 – 7

Part 2: Earth Plaster Workshop
Friday – Sunday; August 7 – 9

Glen Ellen, Sonoma County, CA
\$ 250 each or \$ 450 for both
www.solarenergy.com/workshops

7-Day Intensive
Straw Bale Construction Workshop
June 15th – 21st, Willow Creek, CA
<http://www.srawbaleworkshops.com>

LEED-NC v2.2
Exam Preparation Workshop
April 16th, San Francisco, CA
<http://www.usgbc.org/>

Celebrate Earth Day!
April 18th

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

The Year of the House—An Earth Plaster Base by Jim Reiland

We chose earth plaster for the base coats because we wanted something we were familiar with; CASBA and Canelo plastering workshops, and all the work parties we joined had prepared us to tackle this task. We also wanted to use local material, and we found good clay soil free for the hauling in nearby Medford.

Earth plastering turned out to be the most time-consuming aspect of our building project for a few reasons. It's labor intensive to prepare, mix and apply, and we decided on two base coats of $\frac{3}{4}$ " thick earth plaster, followed by a thinner finish plaster (see upcoming CASBA Journal articles on exterior lime plaster and interior clay plaster). Finally, we did much of the work ourselves during the winter and early spring, when days were shorter and weather uncooperative.

Getting the right mix was easy—we started with a typical clay, sand, straw ratio of 1:3:2, then we bracketed it with other mixes using more or less sand and straw. After the test patches dried we selected the original mix, as it was easy to apply and produced the fewest cracks. Our test wall—bales stacked four high—held up beautifully to bashing and water blasts, even remaining intact after a tractor accidentally dragged it ten feet!

First Coat

We hand mixed most of the first plaster coat in plastic mixing tubs because long straw plaster didn't mix well in our electric cement mixer (it tangled in the mixer tines). We used a shorter straw plaster around windows and doors because it passed through the metal mesh more easily. I worked weekday evenings to convert heaps of rocky clay soil into slip, three and four gallons at a time, stockpiled into tubs and barrels. When weekends arrived we'd combine most of the dry ingredients—sand and straw in the tubs—then add slip and hand mix until the batch was consistent.

After four or five tubs were ready we carried them to the scaffolding or rolled them on garden utility wagons to the waiting wall. Handful after handful, we pressed the earth plaster into the slipped straw bale wall, then flattened and smoothed it with a wood trowel. When the last tub was empty we returned to the mixing station to make more.

The first layer mostly brought the uneven straw bale wall out to a more-or-less flat plane. We used a "truth stick" to control plaster depth—a straight 2 x 4 as long as the wall was high. It had $\frac{1}{4}$ " notches in the top and bottom that registered in the plaster stops. For the first coat we set screws every 12" along the front of the stick to a 1" depth from the exterior finish plane ($\frac{3}{4}$ " second coat plus $\frac{1}{4}$ " finish coat). We checked plaster depth frequently, looking for screw head dimples to tell us there was too much plaster, or a deep gap to show where we needed more. This "fussing" with the first coat made the next coat go faster, with more consistent depths. When

Article... Continues on page 6

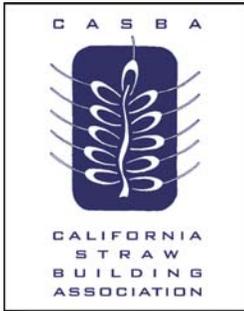
CASBA

THE CALIFORNIA STRAW BUILDING ASSOCIATION

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NEWSLETTER: Daniel Silvernail M.Arch, Executive Editor. Cathy Christian, Associate Editor. Published four times yearly by CASBA. Send letters, change of address, subscription inquiries to: CASBA Journal, P.O. Box 1293, Angels Camp, 95222. This newsletter is published on an iMac, Mac OS X 10.5.6 using Adobe InDesign 2.0.1.

CASBA is a non-profit organization whose members are architects, engineers, builders, and people interested in straw building. Our mission is to "...further the practice of straw building by exchanging current information and practical experience, promoting and conducting research and testing, and making that body of knowledge available to working professionals and the public at large."



Letters to the Editor

Letters to the CASBA Journal are welcomed and encouraged. Please limit your submission to 150 words or fewer. A letter published herein is entirely the opinion of its author, and does not represent the opinion of CASBA, its Board, members, and/or your humble Editor.

The Last Straw

The Last Straw needs your support! If you don't already subscribe to this incredible newsletter, please try it. Issues are available as a .pdf for \$ 6 each or a print copy is \$8. Issue #59 is now available as a .pdf, but no date has been set for a print-to-mail copy. Soon back issues will be on sale for just \$4 plus S&H. Joyce, the Editor, does such a wonderful job of getting our information distributed to so many people. It is the least we can do to give back to her. See <http://www.thelaststraw.com> for more details.

RENEW! RENEW! CASBA Needs You!

If you haven't already done so, it is certainly time to **RENEW your CASBA MEMBERSHIP for 2009!**

We truly appreciate your continued support.



EDITOR'S NOTE Daniel Silvernail – Santa Cruz

CASBA Spring Conference, Walker Ranch, CA

Today is the spring equinox. We've just had lunch, starting the first of an afternoon of presentations. The room is darkened. Variegated light from one of the PowerPoint presentations flashing onscreen illuminates our faces, 70–80 strong. Old, familiar faces, bright new ones, pencils in hand, scribbling notes.

We are here, our clan, some old friends and acquaintances with a long history together. Others are welcome newcomers here. The clarion-call that drew us here is our mutual connection to the technology of straw. We in this room represent a wealth of experience, and we came to share in our experience, to learn from each other, even after fifteen years of innovation.

There is in the air a feeling of humble acknowledgement, that we are the pioneers, cutting edge of a cutting edge of a gradual movement reaching itself 'round the globe, evidenced by updates of good works done in foreign lands here and abroad. Projects in exotic places - Pakistan, Malawi, and Nicaragua—flash onscreen. Between talks we buzz in swarms of twos and threes and fours, sharing notes, comparing stories, catching up.

There is a sense of community here. Scratch the skin of any bale head and they will tell you, that is what it is all about: community—bringing folks together for a communal barn-

raising in an age of separateness. Diverse lifestyles, diverse backgrounds, busy separate lives coming together to stack bales, raise walls, support neighbors by building shelter.

Sure, yes, of course it's understood that we are here to further the technological advancement of straw-building. That's one sensibility, but really it's that other sensibility, that unspoken gut-felt warmth of wholesome society, which pervades this room and everyone in it. Gathered here together, as a community in support of community in the very best barn-raising sense of that word, is why we are here, and what we are doing.

Dan Silvernail – March 21, 2009

NOTES FROM CASBA CENTRAL

Joy & Maurice Bennett – Angels Camp

The last few weeks have been busy ones. The four-day Natural Plaster Workshop with Tracy Thieriot and the Steens, immediately followed by the Spring Conference at Walker Creek, resulted in a busy but upbeat eight days.

It is essential to acknowledge the work that Jim Furness put into these events—juggling planning, organizing and hosting both events was a big job. I doubt that Jim had any idea what he had bitten off when he volunteered for these two jobs. Our thanks also to Jim’s wife, Jane Holland, for being a patient, forgiving and very gracious hostess to all of the participants.

The Spring Conference was a very good one, especially with a company named Strawjet there to demonstrate their new product—building quality cables from various straws—and the keynote talk by Bill Steen. As usual many topics were addressed, friendships renewed and information exchanged.

We especially appreciate the contingent from Southern California who made the journey up. Jim Plaster made both the workshop and the conference. We know it’s a drive and we are glad that SoCal was well represented. We had several first-time attendees who added new energy to the meeting.

Now we look forward to the future:

June 5th, 6th and 7th. There will be a bale raising workshop

held at a private estate in Glen Ellen, Sonoma Valley.

August 7th, 8th and 9th, a plaster workshop will be held at the same location.

See the CASBA web site for registration and details.

In early October, CASBA will once again be represented at West Coast Green, to be held in San Francisco this year at Fort Mason. This is a premier venue turning out thousands of attendees.



I hope that you have visited the new web site. A few areas may still need monitoring. We are thankful for the help of the Web Committee, especially CJ Cavet (who is also our workshop coordinator and cook extraordinaire for the Plaster Workshop).

As you visit various elements of the site please let us know about any problem areas or spots that need revisiting. Send your comments to CJ cjbwvp@sbcglobal.net and CASBA Central mbennjr@mac.com.

We are in the process of completing a “members-group” on Google. This will enable members to send and receive announcements and information.

Thank you for supporting CASBA. We look forward to a good 2009.

Traveling Straw Dog Award ►

Athena and Bill Steen (left) receive the 2009 Traveling Straw Dog Award from last year’s recipients Turko Semmes and Greg McMillan (right).

The award is given each year “In recognition of services above and beyond the call of duty in furthering straw building in California.”



Oak Lodge—Our Lady of the Oaks

Contributed by Judy July



▲ View of the dormitory wing under construction; two-story strawbale building.

PROJECT

Oak Lodge, Our Lady of the Oaks, Applegate, CA

ARCHITECT

Siegel & Strain Architects, Emeryville, CA

STRUCTURAL ENGINEER

Tipping + Mar Associates, Berkeley, CA

STRAWBALE CONTRACTOR

Vital Systems, Ukiah, CA



View of south side dormitory wing construction ▲



◀ View of north-side construction of dormitory wing.



◀ Close up of strawbale installation.



◀ South corridor looking toward the project center with dorms on left. The breezeway and meeting rooms are center and right.



Interior of the largest meeting room with view of the lake beyond. ▶



▲ Southwest view at dusk.

North exterior view: screened porch, breezeway and meeting room. ▶

Dormitories on the left and meeting rooms on right, as finished. ▼



The Year of the House... Continued from page 1

we were satisfied with the wall, and while it was still wet, we “keyed” it using a wood block studded with ½” hex head bolts.

Second Coat

At the CASBA Spring 2008 Conference Tracy Theriot agreed to come on board to help us with the finish plasters. She was going to design the plasters, and oversee our largely volunteer crews, which meant we had to be ready, or risk wasting a lot of people’s time! We set the dates, sent out the invites, and began to put up the second plaster coat. The schedule gave us just enough time—working evenings and weekends—to complete the interior second coat (which we didn’t key, leaving it smooth to receive the finish clay plaster). We then prepared for a “super” plaster work party where we ran two crews simultaneously over a long weekend—one for the exterior second coat crew, and one for the interior finish plaster work party (described in an upcoming article).

For the second plaster coats we used chopped straw, which made mixing much faster and more consistent because we could use the electric cement mixer. We added the dry ingredients, let them mix for a minute, then added the slip, plus a little water if the sand was dry, occasionally stopping the mixer to scrape the sides and bottom. The mixer saved us untold hours of time, and much wear and tear on hands and elbows. To chop our straw we fed it into our chipper-shredder. It was a messy, dusty operation, but an hour of work generated enough straw for several weekends of plastering.

The second coat needed to be flatter because the thinner finish

coats had to be applied at a consistent depth—much easier to do when the base surface is mostly flat. We used the same truth stick, this time turning the screws to a ¼” depth. After completing a wall section we registered the notched truth stick into the plaster stops to see if there were significant bulges or gaps, and reworked that section if needed.

In the weeks leading up to the big exterior plaster party we tried to imagine how we could make the best use of time. During the plaster party we divided into rotating teams; one mixing and running plaster, and the other putting it on the wall and finishing it. We used a tiling trowel to key the damp second exterior coat for the finish lime plaster—it left ¼” to ⅛” shallow furrows that made our buildings look like they were wrapped in chocolate corduroy. Now we were ready for the exterior finish plaster.

Most people say, “Wow, that sounds like a lot of work!” It was, just like a lot of things we all enjoy to do, and that are worth doing. It was a good trade-off for us. We reasoned that plaster was going to be a highly visible element of our buildings, tying them to each other, to the site, and to us and the many friends who helped us.

Owner-builders Jim Reiland and Joy Rogalla are mostly finished building in Jacksonville, Oregon. They gave themselves a year—their Year of the House—to build a post and beam straw bale house and workshop. They began construction in spring 2007 and moved into their home in the fall of 2008.

Things I Would Do Differently **by Joy Bennett**

These thoughts fit in well with my “Little House on the Prairie” mentality, but it’s my opinion we’d probably all be better off going back to basics, at least somewhat!

Proximity to Amenities

I personally feel it undoes the good of building with straw to live far from town. We have to depend on the car for almost all things. I suppose we should have our own livestock and chickens. If I built again, I’d be very aware of my distance to amenities. What if the price of gas goes up high again?

Storage for Supplies

I think having a large pantry is a very smart idea when you live in the country. Our pantry helps to save on trips to town. Thought we do not have one, a root cellar would be a novel thing to have. We have an excellent organic garden.

Heating and Cooling

Our eaves overhang 3’ on our south side. We created a trellis there, and we love the softer look it gives. We grow wisteria and grapes over the trellis. The grapes we grow are tasty too! Vines cool us in the summer and provide lots of light in the winter.

Brick, concrete and stone are reflective patio materials and using those could potentially direct heat into your home on a summer day. Where we live, we do not want that extra heat. Carefully consider the materials you use on the south side of your home.

Conversely, wooden decks outside your doors could be helpful if you wish to gain interior heat.

Think twice about radiant heat. Do we really need it? In every room?

We love our wood-casement windows and feel they lend themselves so well to a straw home. I would most definitely encourage this.

On the advice of Jim Furness and Greg McMillian, we recently installed a whisper fan. It helps to move heat from our wood fireplace in our living room to our back area. It seems to work really well and it’s quiet too! The reason we inquired about this is we didn’t want to continue to depend on the radiant heat in that back area.

Other Thoughts

Our fireplace wasn’t made specifically for cooking, but I think if I did things differently, I would have a fireplace for cooking inside the house. (continued next page, lower left corner) ►

2009 Summer Workshops

Introduction to Straw Building

Are you planning to build a straw bale home or structure? Straw Building Workshops are a great hands-on learning experience to prepare you for your own project and are an opportunity to connect with others in the strawbale community.

Part 1: Bale Raising Workshop

Friday–Sunday; June 5th–7th

Part 2: Earth Plaster Workshop

Friday–Sunday; August 7th–9th

Location: Glen Ellen, Sonoma County

The instructors for the workshops are; Bob Theis for the bale raising <http://www.bobtheis.net/> and Tracy Thieriot for the Earth plastering <http://www.tactileinc.com/>, both experts in their fields.

The building plan for the workshop has been modified and will be different from previous workshops. The structure is to be a post and beam structure with strawbale infill and Earthen plasters. The design is more typical of most permitted straw bale buildings in California. The building is now 20' x 28', uses peeled poles from the property as the posts and will eventually have a living roof and earthen floor.

Meals are included in the cost of the workshop and camping space is available at the site.

For Information and Registration

Check Upcoming Events: <http://strawbuilding.org/pages/main.php?pageid=13&pagecategory=4> or go to <http://www.strawbuilding.org>

Early Registration for both workshops SAVES you money.

I strongly recommend you stay on your property before building there. You should live with the land so you clearly understand the orientation of the sun. Trees should be planted early in your construction process, so that they provide enough shade around your home.

Think long and hard about how to make your living space functional and practical. Create hallways as wide as possible. Before building your straw home in the country, these are some important points to consider.

This column is not mine. It is set up so others will submit ideas on what they would do differently in building with straw. Keep your thoughts and ideas coming!

The Last Straw **Call for Submissions for an Ecotourism Issue**

In an upcoming issue of *The Last Straw* journal, we will focus on ecotourism. We'll feature the use of straw bale and other natural building materials and methods in places created for and used by the public, namely tourists.

We seek buildings that offer the public an opportunity to stay and enjoy structures designed sustainably and constructed from strawbale, cob, bamboo, light straw/clay, adobe, rammed earth, earthen plasters and earthen floors, as part of the world-wide ecotourism movement.

Construction may include features like: rainwater catchment, graywater, or other water conservation systems; composting toilets and other waste management systems; passive and active solar or other alternative energy systems; salvaged and indigenous materials.

It is important that the buildings are open to the public and relate to ecotourism, for example, nature centers, retreats, vacations spots, bed & breakfasts, motels and other tourist lodging.

Send your suggestions, text and photos, contact information or anything else that will help us assemble the content.

Joyce Coppinger, Managing Editor

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The Last Straw is the international journal of strawbale and natural building, published since 1993 as a reader-written record of the revival and development of strawbale and natural building. <http://www.thelaststraw.org>





CASBA Group Photo 2009

FRONT ROW John Cruickshank, Dillon Bell, Turko Semmes, Tracy Vogel Thieriot, Yoshi Makino, Bob Theis, Pete Gang, Darcy Donovan, Kelly Walter, Daniel Silvernail, unidentified, unidentified, Tim Javelos, Phil McGoohan, Martin Hammer, unidentified, Robert Arnet **SECOND ROW** Rita Bell, Dan Smith, Athena Steen, Bill Steen, Lesley Christiana, Kathleen Jones, C J Cavet, Kate Breckenridge, Kathy Gregor, Celline Pinet, Joy Rogalla, John Swearingen, Maurice Bennett, Joy Bennett, Deitmar Lorenz, Greg Vanmechelen, Dimitri Ozeryansky **BACK ROW** Bruce King, Jim Bell, unidentified, Tom Loomis, Mark Weir, Jim Christiana, unidentified, George Jones, unidentified, Dan Gallagher, unidentified, unidentified, unidentified, John Gregor, Bill Donovan, unidentified, unidentified, Jim Reiland, unidentified, unidentified, Jim Furness



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