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## SWSA's Seasonal Preview~



Smaller patio-style adobe fireplace by Mateo Pacheco.

Looking ahead to late summer and early fall, we have posted the **Count Rumford fireplace class** below for August 7 and 8 at Edgewood, NM and added it to our shopping cart. We look for the right venue to hold such a class and this has got to be it- an on-going solaradobe needing a corner Kiva-style fireplace. It's one thing you can add to a plan and not go wrong- if it's built right. A Rumford firebox puts out the radiant energy and burns wood more efficiently. With fireplace master Jim Buckley providing philosophy, physics and measurements, a mason can pick up some tricks. We've priced it right with a healthy discount if you register with your buddy or companion. Learn the code and how to build it. Today, people want a fireplace for charm, beauty, family togetherness and possibly, survival.

We will be offering a Hands-on Plaster class at Bosque this fall- we'll post it later here, but we can give you the dates-

Sept. 25 and 26. Practiced, along with mixes, stabilizers and other amendments, will be the history of *alisando y enjarrando* in New Mexico, straight mud plasters, emulsion-stabilized mud plasters, lime stuccos and Portland-based stuccos. We've got plenty of wall surfaces to practice on- rammed earth, adobe and compressed earth block. We will also practice a 'blast on', water-based, lime-stabilized plaster using a dry wall gun and air compressor and screened, colored native soils. Learn to make your own finely powdered slips from your locally gathered soils as an alternative to the expensive, marketed screened soils.



Jim Estes applies a native soil plaster to an adobe wall.

October will offer a Hands-on class and possibly a Planning Class. We don't have the dates yet, but locations will be Bosque and Albuquerque. check out this site in late July. If you have questions, do email us at adobebuilder@juno.com

Thanks for your interest in GREEN, Southwestern Style.

# 1. RUMFORD FIREPLACE WORKSHOP (with Compressed Earth Block Construction) August 7 and 8, 2010 (Sat-Sun)

Edgewood, NM (25 miles east of Albuquerque near I-40)

Summer is a good time for hands-on training and if you want to learn how to build a better fireplace, here's your chance. Master fireplace mason Jim Buckley will lead our class on Aug. 7 & 8 in building a 36" wide by 36" tall Count Rumford fireplace.

The location is at Edge wood, NM in a new solaradobe home of approximately 1800 square feet. Buckley is the leading historian about how Count Rumford built his fireplaces in New England back in Colonial days. He has done the much in getting the technology into the building codes (IBC). Because Rumford's designs for throat



aerodynamics tend to burn up most pollutants, Buckley's code work has allowed Rumford designs to pass several states clean air laws.

Our class project fireplace will be the popular "corner/kiva" design, placed in the NE corner of a living room. SWSA will provide sun and rain protection over the work place corner and students will learn to lay earth block around the fireplace anatomy.



Fireplace mason Jim Buckley (red shirt) building a Rumford firebox.

Weather in early August is warm, with occasional rainy afternoons.

Heat will not be a problem at the 6500' elevation of our site. Adequate motels and restaurants are close by in Edgewood and also Moriarty, a few miles further east along I-40.

SWSA will provide coffee both mornings, as well as water, cold drinks and chairs. All students will receive plan details for fireplace construction. Do bring a hat, gloves, eye protection (sun glasses), supportive footwear, sun screen and a camera. SWSA will provide clipboards for mobile note taking.

### Schedule

#### Saturday, August 7, 2010

**8:00 am -** Coffee and Handouts distributed, tour of site provided. Area of fireplace work reviewed in terms of safety, tool and material layout, explanation of Rumford components to be used, etc.

#### 8:30 am - 11:30 am - Firebox construction

Under Jim Buckley's supervision, students learn about Rumford firebox design, why the Rumford fire back is different, refractory mortar preparation, firebrick options, required vertical rebar, tying fireplace mass to running walls, use of dur-o-wal and other related topics. Firebox is constructed and rises in the typical trapezoidal shape. At this point we should be around three feet off the floor.

11:30 am - 12:45 pm - lunch break. Brown bag on site or drive to Edgewood (5 minute drive).

#### 12:45 pm - 2:45 pm - Fireplace mass rises and ties to earth block walls

As firebox rises from the firebox floor, earth blocks are fitted, laid and tied to the fireplace. Students use masonry tools and adobe mortar to cut, shape and fit earth block around firebox and rebar to form the fireplace overall shape. Typical adobe tools explained. Safety stressed.

#### 2:45 pm - 3:00 pm - Mid-afternoon break- 15 minutes

#### 3:00 pm - 4:30 pm - Placement of one piece Terra Cotta throat

The one piece throat was inspired by Rumford's likening of the fireplace throat to the 'rounded breast of a dove' for an aerodynamic air flow. Traditionally, red brick masons corbelled the brick to form the throat and smoke chamber and then had to parge the rough surface of the brick with mortar for a smooth air flow. To facilitate this aspect of the work, Buckley joined forces with Superior Clay Corp.to design the throat as a fired terra cotta piece that can sit on the firebox. Buckley and students will place this component and continue to fill in with fireplace masonry around the fireplace. At this point we should be around four feet off the floor. While conventional damper units can be placed in this area of the fireplace, SWSA suggests a chimney top damper as a better way. Chimney top damper unit on hand for inspection. Short break during this work session.

4:30 pm - 5:00 pm - clean up tools, Question and answer session.

5:00 pm - class over for day.

#### Sunday August 8, 2010



**8:30 am - 11:30 am** - Class begins. Jim Buckley reviews function of smoke chamber and it's characteristics. Students

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inspect the Superior Clay smoke chamber pieces and how they are installed to make the complete chamber. Use of masonry tools and Portland-based mortar mix. Proper lapping of rebar explained and done as fireplace rises and continues to tie into adjacent earth block walls. At this point we should be around six feet off the floor. If owner allows, we may form a nicho in fireplace front somewhere around smoke chamber height.

11:30 am - 1 pm - Lunch break. Brown bag on site or drive to

Edgewood.

### 1:00 pm- 3:00 pm - Discussion of code relating to structural aspect of surrounding walls

Using drawing easel, SWSA instructors and Jim Buckley review the code for adobe, compressed earth block and rammed earth in relation to fireplace construction. Of special focus is the area above the smoke chamber where the fireplace mass rises towards the chimney and ties into the bond beam. Bond beam variations explained and how to tie the fireplace into the bond beam so that the fireplace acts as an internal "buttress" for the overall structure. Short break during this period.

#### 3:00 pm - 4:30 pm - Fire Code in relation to a corner adobe fireplace

Any close-by juncture of a wood timber or frame wall to the fire is of concern to everyone. How should it be handled? What does the code say? SWSA will provide you with a few drawings showing solutions to the area where roof decking and timbers or vigas may come close to the fireplace.

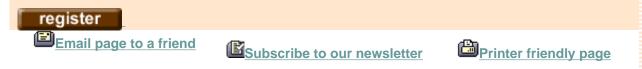
#### 4:30 pm - 5 pm - Last questions and answers.

Buckley awards certificates of completion signed by himself and SWSA. Class ends.

Note: the home owner will carry out finishing details of his fireplace after class including the top of the chimney. In this case, it is likely that the adjacent earth block walls will be exposed and the fireplace itself will be plastered smooth.

**Cost**: \$185 one person, \$389 for two registering together (web site adds state tax to these figures). **Class capacity:** 15 students

**Class Handouts:** How-to-find info about fireplace components. Various isometric and scaled drawings from SWSA showing fireplace construction. Copy of NM earthbuilding codes.



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