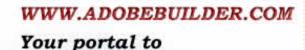
Your portal to building Adobe Homes, Rammed Earth, Green building, Adobe Houses, and Passive Solar Homes

Your portal to Adobe Homes, Rammed Earth, Green Building, Pressed Block, Adobe Houses, and Passive Solar Homes

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RAMMED EARTH PRESSED BLOCK SOLAR DESIGN and Green Building, Southwestern Style -

Welcome! You're here because of your interest in building and owning an earth-wall home. Your questions probably center around, "will it work in my climate?", "can I do it?", "how do I begin?" or "how much will it cost?" This site exists to answer these questions and to get you started. Here are the main considerations...

THE CODES...Adobe has defined standards in the three major building codes across the United States- it appears in the Uniform Building Code (UBC) under "unfired clay masonry". Find it in the Southern and Standard Building Codes under "adobe". It also is entered in the new International Building Code (IBC). Pressed Block, similar to adobe, is usually allowed under the above codes. Rammed Earth has its own new code, passed in New Mexico this year. A cousin to adobe, it is allowed locally in many areas.

So yes, you can do it, legally speaking. In areas without codes, you have more freedom, but you should still build to a recognized standard. If your building department has little experience with earth walls, they may require that your plans be



An Adobe home near Santa Fe, NM Mark Chalom, architect

stamped by a licensed engineer or architect. In many areas of the Southwest, prescribed codes allow you to build to a standard, without a professional stamp. This is the case in Arizona and New Mexico, and portions of Utah, and Colorado. At present, Texas has few restrictive codes, and California, the most restrictions.

CLIMATE Most of us visualize adobe in dry, desert-like climates. In the U.S., most

cont'd

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History of adobe construction and adobe home construction pre-planning. - page 2 of 5

Pre-planning for adobe home construction - page 2 of 5

earth-building does take place in the Southwest, where a combination of Native American and Hispanic influences have fortified these ancient, yet contemporary building arts. However, there is an earth wall precedent in the eastern U.S., dating back to pre-Revolutionary times. Rammed Earth has been practiced in wetter climates like England, France, and Germany since the Roman occupation. European immigrants to the American colonies built using the skills of their homelands, especially before the advent of sawmills. Such historic structures still serve in New York, Pennsylvania and South Carolina.

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In the Américas, we often see adobe in wet tropical climates, such as México, or Honduras, which can receive over 100 inches of rain a year. Today, stabilization techniques keep moisture from affecting the earth walls. Those who build in wetter climates often choose either rammed earth or pressed block, which require little curing time.

Adobe construction, in combination with good passive solar design, makes for an effective energy-saving solution in cold winter areas. The use of high-mass walls, insulation and a large south solar aperture, can cut energy use in January by 60% or more. High-mass earth walls also cut cooling costs in hot desert locales. Earth walls allow you to buy smaller heating and cooling units and run them for shorter periods of time- a big defense against today's escalating energy costs. The old adobe saying "cooler in summer and warmer in winter" has some basis in truth.

THE LEARNING CURVE The knowledge and skills don't happen overnight. You'll need to view, read, visit, practice, talk and draw. The more construction experience you have, the sooner you'll be ready. At Southwest Solaradobe School, we advise newcomers to start learning at least two



Adobe Home Interior, Tucson, Arizona Plan Design by Old Pueblo Adobe Co. Photo by Terrence Moore

years before they intend to break ground. What do you need to know? Here's a few topic areas to think about...

- site logistics
- identifying and preparing the soil, stabilization
- foundations and underfloor needs
- choice of wall system
- door & window bucks, attachments
- electrical systems bond beams & roofing systems





Below: Adobe Home under construction near Alpine, Texas -construction by Rainbow Adobe



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Contracting an adobe home and approximate costs of building an adobe home - page 3 of 5

Using an adobe contractor versus building yourself: costs of building an adobe home - page 3 of 5

You'll need to make decisions about:

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-floors (Saltillo tile, brick on sand, flagstone, stamped and dried concrete, carpet on slab, etc.) -wall finishes (exposed sealed adobe,

plastered adobe, and the type of plaster finish)

-ceiling choices (exposed vigas and latillas, coved ceiling, vaulted bovédas, ordinary sheet rock, etc). -plus, many, many other decisions...

All of these decisions lead to a set of working drawings. Will you draft them yourself, farm them out to an experienced draftsperson, or hire a contractor or architect?

Once you begin, how long will it take? An adobe contractor in Albuquerque or Tucson, can complete the average turn-key, custom adobe in four monthsbuilding one house in the spring, another in the fall, or two a year. The average owner-builder, working with fewer tools, a smaller crew, and less experience, will be lucky to finish in a year. All of these questions lead to the last question, "*what will it cost ?*"

YOUR COST PARAMETERS..adobe and rammed earth are do-it-yourself materials, very forgiving to the novice,

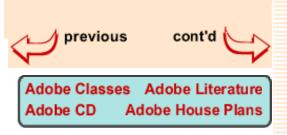
Above: Custom home by builder William Stoddard, Alameda, New Mexico

Below: Adobe interior by Gary Williams, Adobe Building Consultants Tucson, AZ and very green for the environment. We have codes, so we must build to a standard. And we have lifestyle expectations.

Most who want a nice adobe or rammed earth home have higher artistic expectations. That is, we love that ornate wrought iron light fixture from Guadalajara, the beautiful red-brown Saltillo tile floor, or the handsome round vigas, with herringbone latillas above. Not to mention the high-tech, energy-saving window units, the Mexican hand-carved entry door, or the adobe hand-shaped nichos or bancos. If your expectations are high, expect to pay more. If you can be happy with a smaller, economy adobe without all the bells and whistles, your cost can be lower- much lower. Owner builders typically cut costs by 50%.

Costs for owner-built projects start at an unbelievable \$30 per square foot, using salvaged and saved materials, a simple design and a few special (time consuming) touches . A more realistic figure would be \$45 to \$65





Contracting an adobe home and approximate costs of building an adobe home - page 3 of 5







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Making adobe bricks at an adobe brick yard. Resources to build your own adobe home - page 4 of 5

Adobe bricks at Rio Abajo adobe yard and students practicing rammed earth - page 4 of 5

per square foot. Contractors start around \$85 a square foot. As one adds desired peripherals, prices climb from \$90 to \$150 a square foot. Costs can be higher in areas like Santa Barbara, Scottsdale or Santa Fe. You must decide where within this range, your abilities, tools, friends and financing will place you.

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HOW WE CAN HELP- It's impossible to teach you all that you need here. We suggest three approaches (below).

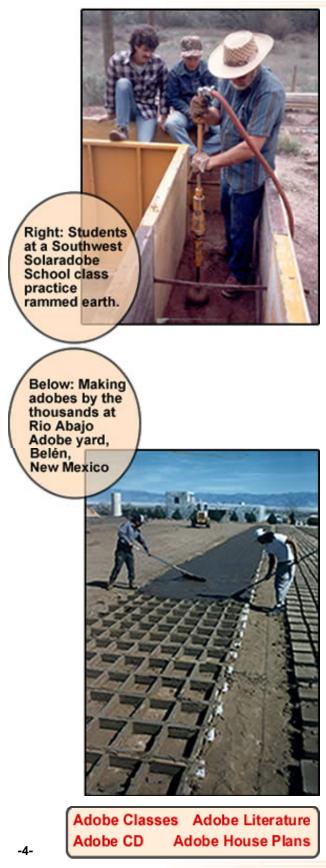
One is to absorb information from our print voice, **ADOBE BUILDER**. This large-format publication is loaded with photos, line drawings and articles, dating from 1996 to the present. Rather than sell you a subscription, with all the annoying problems, we sell back-book packages via priority mail. That way, you get a lot of info at once. And we let you know when new volumes are ready.

To check it out, and consider "back-pacs" click here. ✓

Obviously, you are computer-oriented. That leads to our new **CD-ROM electronic book**, 300 pages (81/2" x 11") if printed out. **Earthbuilders' Encyclopedia** is the title and it works with MAC or PC. This is your master alphabetical reference for the world of earthen construction. It started as a print book,1989-1996, serving as a backup in our classes. It has been updated and expanded and the readers love it. You can study it from your monitor, or print out the pages you need.

To find out more or to order, click here. ✓





Making adobe bricks at an adobe brick yard. Resources to build your own adobe home - page 4 of 5



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Intro to Southwest Solaradobe School with adobe fireplace and adobe wall drawings - page 5 of 5

Earth building encyclopedia - adobe fireplace and adobe wall drawings - page 5 of 5

Once along the learning curve, with a better idea of your design, it's time to attend a class. They are concentrated, 3-day weekend affairs, where you work with the materials and check your intentions with the pros. Southwest Solaradobe School has been doing the classes since 1978. They're geared to the owner-builder and the trades person. Currently, the selected places are Albuquerque, New Mexico, San Antonio, Texas and Tucson, Arizona.

To find out more about them and even sign up for one, click here.

There's a huge amount of info across the net, in many languages. Rather than trying to assimilate all of the material (it's an information glut out there), we suggest that you leapfrog to what the real adobe builders are doing now. Let a book-pac of ADOBE BUILDER acquaint you with what's current. You'll find plenty of access to professional builders and suppliers therein, web and e-mail addresses, but best of all, photos, drawings and articles that you can use right away or pass on to friends or family...

to adobebuilder.com !

previous

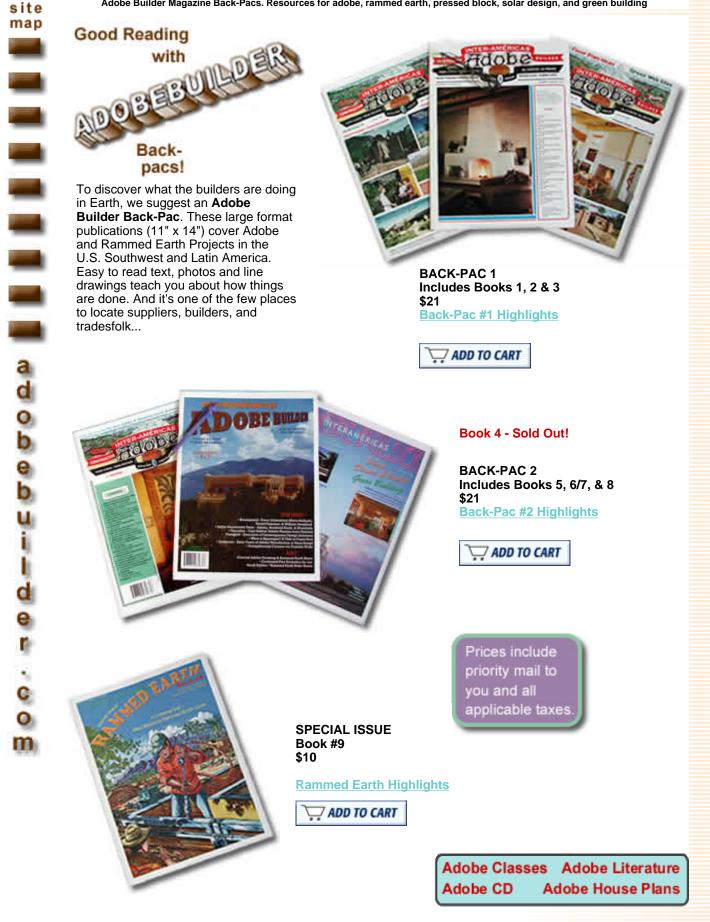
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Below: Typical line drawings from the Earthbuilder's Encyclopedia CD-ROM.



site map Adobe Builder Magazine Back-Pacs, resources for adobe construction, rammed earth, pressed block, solar design and green building

Adobe Builder Magazine Back-Pacs. Resources for adobe, rammed earth, pressed block, solar design, and green building



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Adobe Builder Back-Pac #1 Highlights-Articles on adobe construction, rammed earth, green building, and solar construction



ADOBE BUILDER Back-Pac #1 Highlights Issues 1, 2 & 3

Inter-ámericas ADOBE BUILDER measures 11" wide and 14 1/2" tall with color cover, and some interior color (on coated 80 lb. paper). The bulk of the magazine is printed on 50 lb. non-yellowing book paper, in black and white. Articles address Adobe, Rammed Earth, Green Building, and Solar Applications. Graphics are unusually "rich", with photos, line drawings & floor plans. Covers Southwestern U.S., Latin America and Caribbean. Readers appreciate advertising sources for Design, Service and Supply - as locating these elsewhere is difficult to impossible.

Issue 1 40 pages



Adobe Builder Back-Pac #1 Highlights-Articles on adobe construction, rammed earth, green building, and solar construction



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Adobe Builder Back-Pac #2 Highlights-Articles on adobe construction, rammed earth, green building, and solar construction



ADOBE BUILDER Back-Pac #2 Highlights Issues 5, 6/7, & 8

Inter-ámericas ADOBE BUILDER measures 11" wide and 14 1/2" tall with color cover, and some interior color (on coated 80 lb. paper). The bulk of the magazine is printed on 50 lb. non-yellowing book paper, in black and white. Articles address Adobe, Rammed Earth, Green Building, and Solar Applications. Graphics are unusually "rich", with photos, line drawings & floor plans. Covers Southwestern U.S., Latin America and Caribbean. Readers appreciate advertising sources for Design, Service and Supply - as locating these elsewhere is difficult to impossible.

Book 5 40 pages	Value of a Good Set of Plans
•	Cutting Earth Walls
•	Paul Chávez - Adobe Master
•	Todd Swanson, Contractor
•	Mayan Adobe
•	Clay Mine Adobe
•	Newspaper Pulp Insulation
•	Book Reviews
•	Adobe Vaults and Domes
•	Earthbuilding News from Germany
•	Training for Adobe at North NM Comm. College

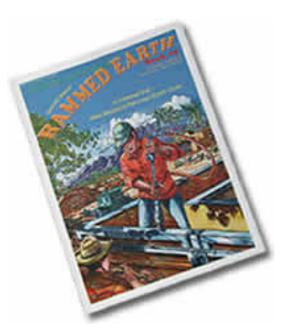
Adobe Builder Back-Pac #2 Highlights-Articles on adobe construction, rammed earth, green building, and solar construction



Book 8

Adobe Builder Back-Pac #2 Highlights-Articles on adobe construction, rammed earth, green building, and solar construction

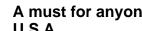
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Adobe Builder Back-Pac #3 Highlights (Rammed Earth - Special Edition)

Book 9

In 2001, New Mexico adopted the first building code specifically for rammed earth in U.S. History. It's in here, letter-by-letter, along with some history and photos. Good line drawings and explanations clarify the code.



A must for anyone planning a rammed earth project anywhere U.S.A.

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Interámerica's Adobe Builder: Earthbuilder's encyclopedia - CD reso...adobe, rammed earth, pressed block, solar design and green building

Resources for: Adobe Homes, Adobe Houses, Bond Beams, Clay, Cob, Count Rumford, Electrical, Fachwerk, Adobe Fireplaces, site Foundations for Adobe, Green Building, Grubka, Plasters, Plumbing, Pressed Block, Rammed Earth, Vigas map THE EARTHBUILDER'S ENCYCLOPEDIA The Master Alphabetical Reference for Adobe and Rammed Earth adobebuilder.co ON CD-ROM Expanded Entries: Bond Beams The orginal Earthbuilders Encyclopedia (EECD) was published in 1989. It has Clay been updated and expanded and the readers love it! From ADOBE to Cob ZOQUETTE, there's over 300 pages. Count Rumford This new Earthbuilders' Encyclopedia is on CD-ROM. It's bundled with a free Electrical copy of Adobe Acrobat Reader®. This slick program is the industry standard Fachwerk for presenting technical manuals and allows us to offer mucho más Fireplaces information! We've got color photos, new in-depth expanded Foundations Green Building Grubka Photovoltaics entries, along with those classic line Plasters drawings - all in an user-friendly Plumbing format. Pressed-Block How does it work? It's easy - click Rammed-Earth your way through a clear Soil Testing hierarchical index, or pan and zoom Solar Overhang through the pages. Jump around Solaradobe the Encyclopedia via convenient Vigas links and cross-references. If you Wood lintels need a hard copy, just print it out. and much more ... Plus, there's an access section so you can instantly email the best and Lats of brightest in the business. To inspire you even more, we've added a colors full-color gallery of the best adobe and rammed earth homes out there. line drawings and isometric isometric sketches! TO ORDER 🖵 ADD TO CART The Earthbuilder's Encyclopedia CD - \$41 Encyclopedia contents (Price includes priority mail to are organized via a you and all applicable taxes.) Or if you prefer: drop down menu that Make your check out to SWSA and send to: allows you to go to Adobe Builder **Questions?** each individual entry. P.O. Box 153 Contact us at: or you may scroll. Bosque, NM 87006 USA (505) 861-1255 or adobebuilder@juno.com Adobe Classes Adobe Literature Adobe CD Adobe House Plans

Interámerica's Adobe Builder: Earthbuilder's encyclopedia - CD reso...adobe, rammed earth, pressed block, solar design and green building



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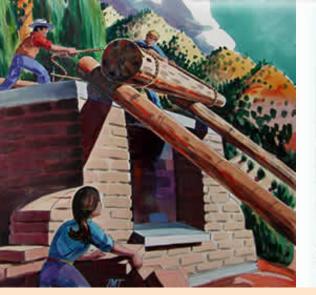
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Southwest Solar Adobe School - Learn how to build with adobe. Details on adobe construction, green building, rammed earth construction, site passive solar homes, solaradobe, and pressed block. Become an adobe home builder!

Hosting weekend classes that teach you HOW TO BUILD WITH ADOBE, PRESSED BLOCK and RAMMED EARTH.

ST SOLARADOBE SCHOOL





Adobe hands-on under way at an owner-built site in New Mexico.

HISTORY AND QUALIFICATIONS-History and what we do-

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Twenty-three years ago, Southwest Solaradobe (SWSA) classes in Adobe began. The first was held in Peralta, New Mexico in 1978. Since that time, SWSA has conducted classes around the Southwest and beyond. While classes in 2002 are held in three locations- San Antonio, Texas-Albuquerque, New Mexico- and Tucson, Arizona, we have delivered know-how to interested students at diverse locales in Arizona, California, Colorado, New Mexico and Texas. SWSA has also supported USAID with adobe building programs in rural areas of Honduras, and delivered Earthbuilding presentations at the University of Costa Rica in San José. SWSA has helped in developing Earthbuilding codes to protect the Industry and the right of contractors and owner-builders to permit and build. We are members of ASTM and work on adoption of new Building Codes. SWSA also publishes Adobe Builder, a magazine about Earthbuilding.

Concentrated classes, led by knowledgeable Earthbuilder/instructors, are necessary to remove misconceptions and clarify the building process. All classes are designed to be easily understood, requiring no extra preparation beyond your best attention, a good note pad and if possible, a camera. All offer hands-on periods, where every student is expected to mix mud, lay adobes, or ram walls.

Who attends-

SWSA weekend sessions appeal to a variety of people. Many are motivated by interests in

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site Southwest Solar Adobe School - Learn how to build with adobe. Details on adobe construction, green building, rammed earth construction, passive solar homes, solaradobe, and pressed block. Become an adobe home builder!

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energy self-reliance, a home that blends with the landscape, or by an appreciation of rare craftsmanship. Others see the value over time ~ a well-built earth home appreciates faster than other residential real estate in the Southwest.



All need to learn about the materials and the process- the nuts-and-bolts. This is true regardless of whether you plan to "build your own", or determine if that contractor or architect back home is really gualified to build for you.

How we teach-

We deploy slides, lecture, and on-the-spot sketches in the classroom. At hands-on, we stress safety, demonstrate the techniques and encourage you to get into the work. We want you to learn about your cost options, about the thermal aspect of mass walls, about seismic design and about the codes. We back up our lecture with handouts and reference material. Once you register, we send you reading assignments before the class to maximize your grasp of the material during class.

General plan and major topics-

The 3-day agenda is classroom all day on Friday, Hands-on most of the day on Saturday, followed by an early evening class. Sunday is almost all day in class, ending with a local tour during mid-afternoon. During the three days, we take you through the steps: Number one is site preparation, identifying suitable soils, stabilization, and necessary tools. Then it's foundations, stem and floor, and raising earth walls. Laying adobes or ramming walls are vital as are fireplaces, rough bucks, electrical, plumbing and bond beams. Threaded in with these sequences are tips on cost-saving, passive solar design and cooling in hot climates. We Lawrence Jetter of A.E.C.T. demonstrates this handy earth-block presser at the San Antonio classes.

stick to information relating to earth-wall structures, and avoid discussions about topics you can satisfy on your own after class.

Particulars-

Coffee is on hand each morning, and breaks are called each hour. There is a 1 1/4 hour lunch break. Students should bring gloves, hat, sunscreen, protective footwear and a pair of dark glasses to protect eyes during hands on (polarized preferred). Dress is casual- jeans, T-shirt and a jacket for cool nights or windy days. Bad weather is tolerated during hands-on, including wind, rain, heat and cold-just as you will experience on your own future site. However, if Saturday hands-on weather is truly poor, we will trade Saturday's schedule for Sunday's. We wish to remind students that kids and pets are not allowed in class, and especially not on hands-on sites.



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Solar adobe school-hands on learning: adobe construction, adobe building, adobe home builder, green building, rammed earth construction

Solar Adobe School - Learn about Adobe Construction, Adobe Home Building, Adobe Bricks, Green Building, Rammed Earth, Pressed Block Construction, Earthen Construction, Adobe Drafting.

Picking a class-

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The following three classes are offered Spring 2002. While many basics are the same, each is different in its scope. Read through to see which is best for you. If you can't decide, e-mail us at adobebuilder@juno.com for guidance.

May 3, 4, 5- (Fri.-Sat-Sun) Springtime class in Albuquerque, NM. Adobe and Rammed Earth construction with emphasis on traditions of NM and high mesa climates. Location: Taos Room, Crowne Plaza Pyramid Hotel near I-25 and Paseo del Norte, in North Albuquerque. The best all-around class for the planner or builder who wants an overall intro to standard Adobe, Rammed Earth and Pressed Block. Our Hands-on host is New Mexico Earth Adobe yard, located one mile from the hotel. Students will build with both adobe and Rammed Earth. 140 page reference and plans to visualize Adobe drafting. Students are taught the footings through roof sequence of Adobe home building with emphasis on unstabilized and semi-stabilized adobe using traditional Lime-based and Portland-based stuccos. Full stabilization using emulsions & Portland cement also explained for exposed work. Identification of Pueblo, Santa Fe, Territorial and Solar styles. Cost Options for both Spartan and hi-custom budgets. Seismic Design notes, including a presentation on the newer IBC/IRC codes. Instructors Richard Levine, NM Earth Adobe, Joe Tibbets of SWSA, Terry Taggart of Adobe Building Supply and local builders. Weather may be warm. Hat, sun screen, eye and foot protection advised. Local tours. \$323 single, or \$549 for two registering together. Local facilities, maps when you register. Class limit 35.

register

June 22 and 23 at Bosque, NM. Weekend specialty class. Adobe Vault and Dome construction workshop. Prerequisite: must have already attended any standard SWSA adobe/rammed earth workshop or be able to show experience in adobe or rammed earth construction. Only for the Safety conscious person who realizes that learning these ancient skills requires an apprenticeship over time. This class is your start along the learning curve. Building an adobe roof is serious business, so we go into finer points of stabilization of earth materials- emulsions, Portland cement and adobe quemado, along with understanding the forces at work within a vaulted structure. Students work on a burnt adobe bóveda and a Pendentive Dome. Mix mud, lay adobes, learn the centering pole. Location is in the country, approx. 35 miles south of Albuquerque. About half-time in class, and half time Hands-on. Weather may be warm. Hat, sun screen, eye and foot protection advised. Some caustic materials, such as Lime. You will be up on a scaffold for some of the work. All tools provided. Students usually opt to stay at a Belén, NM motel, about 7 miles north. \$100 book package on vault/dome construction included. \$274.50 single, or \$466.50 for two registering together. Local facilities, maps when you register. Class limit is 12.

register

June 29 and 30 at Bosque, NM. RusticWeekend Hands-on class. We decided to hold this class when students from regular classes asked us to. It's a two-days hands-on period for anyone needing to clock time and gain instruction on an adobe site at a discount price. Stress on safety and laying adobes to build walls. Some electrical circuits will be placed. However, weather may be warm to hot in afternoons at this time of year. Please read about June 22 and 23 class above for notes on site conditions. A chance to go through the regular routines of soils, stabilization, preparing a mud mortar, laying block, tying in door and window bucks and working around a Count Rumford firebox. Walls are 14" thick. Some straight runs of wall as well as walls with buttressing, passive solar windows and doors. Most hands-on activity in morning during cool hours (8-12 a.m.) Warm parts of afternoon for lunch break and lecture in shade (12 noon to 3 pm). End of afternoon (3-5 p.m.) for continued Hands-on. Clean up 5:00-5:30. Tools, supplies, cold drinks and water provided. Class limit is 18. \$175 single, \$297 for two registering together.

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Register for Southwest Solar Adobe School: Education in adobe c rammed earth construction	a, and passive solar homes.
followed by a map to the class, local information and y reading assignment sent approximately two weeks befor e-mail about your location, climate and building plar Please read our terms and conditions before registering	our first reading assignment. There will be a later ore class. We may ask you a few questions by mail ns. This helps us to best help you during class.
May 3	erque, NM -5, 2002 <u>escription</u>
1 person registration \$323	2 people registration \$549
(5.5625% NM gross receipts tax will be added to all NM held classes)	(5.5625% NM gross receipts tax will be added to all NM held classes)
ADD TO CART	CART
June 22	ue, NM -23, 2002 <u>escription</u>
1 person registration \$274.50	2 people registration \$466.50
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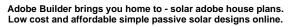
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New Passive Solar Adobe House Plans from Adobe Builder

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About Genera® Adobe House Plans

The current shortfall in the Earthbuilding trades is the availability of house plans, or working drawings to build from. At a time when custom drafting ranges in price from \$.75- \$3.50 per sq. ft. of drafted area, and when drafts folk who know Adobe or Rammed Earth are hard to locate, we will begin to offer Stock House Plans, based on about .06¢ per sq. ft. of drafted area. Our first house plan to be offered is <u>Solar Adobe House Plan 1560</u>. By Spring of 2002, we should have at least 3 plan sets available from this site.

Yes, the price is low, but keep in mind that stock house plans, by nature, are not custom-drafted just for you.

Stock house plans are purchased for three main reasons:

- The buyer happens to like the house plan and sees that few modifications are necessary.
- To learn how these homes are drafted (as an educational aide).

drafter would tell you, custom house plans get changed also.

• As a base to trace from or modify.

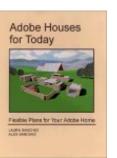
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Solar Adobe House Plan 1248

Solar Adobe House Plan 1560

Stock house plans save money, get you into the process and get you started, but often are changed. That has to do with human nature and local code requirements. But as any custom

We encourage those with questions about a particular house plan to email us at adobebuilder@juno.com. However, if we discern that you are trying to generate a mini-course by email, we will refer you to the BackPacs, CDROM (Earthbuilders' Encyclopedia) or weekend classes offered on this site. Even if you already have construction experience, you are on a learning curve when it comes to Earthbuilding. Do not wait until the last minute to submit plans for a permit. Start early in knowing the local codes, working with your subs and building inspection department about the plan. Evaluate time and materials. We often suggest to owner-builders that they start the plans/materials evaluation process two to three years before breaking ground.



Also, we'd like to suggest a new book that will greatly help you in the planning of your Adobe home, and that has expandable house plan sets available at low cost. The book is <u>Adobe</u> <u>Houses for Today- Flexible Plans for Your Adobe Home</u>, by Laura and Alex Sánchez. It is published by Sunstone Press, PO Box 2321, Santa Fe, NM 87504-2321. The ISBN is 0-86534-320-9. It retails in softcover for \$18.95 (available for only \$13.26 from <u>this link</u>). Laura Sánchez's excellent isometric drawings, rendered in her special auto-cad technique, accompany some of the best floor plans we've seen. This book is long overdue and is a boon to the owner-builder or small contractor.

We hope our house plans help to gap the shortfall and we encourage you to pursue your Earthbuilding goals!

Sincerely, SWSA

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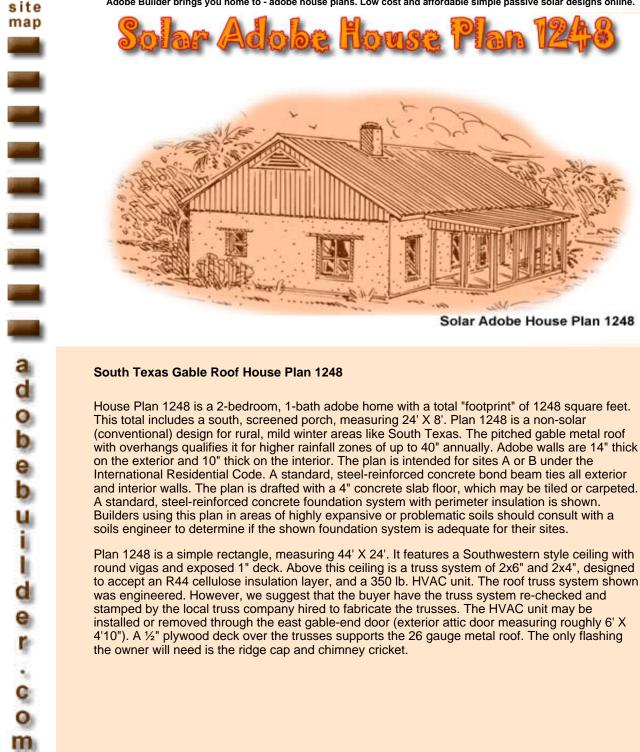
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2 bedroom adobe house plans - Solar Adobe House Plan 1248

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South Texas Gable Roof House Plan 1248

House Plan 1248 is a 2-bedroom, 1-bath adobe home with a total "footprint" of 1248 square feet. This total includes a south, screened porch, measuring 24' X 8'. Plan 1248 is a non-solar (conventional) design for rural, mild winter areas like South Texas. The pitched gable metal roof with overhangs qualifies it for higher rainfall zones of up to 40" annually. Adobe walls are 14" thick on the exterior and 10" thick on the interior. The plan is intended for sites A or B under the International Residential Code. A standard, steel-reinforced concrete bond beam ties all exterior and interior walls. The plan is drafted with a 4" concrete slab floor, which may be tiled or carpeted. A standard, steel-reinforced concrete foundation system with perimeter insulation is shown. Builders using this plan in areas of highly expansive or problematic soils should consult with a soils engineer to determine if the shown foundation system is adequate for their sites.

Plan 1248 is a simple rectangle, measuring 44' X 24'. It features a Southwestern style ceiling with round vigas and exposed 1" deck. Above this ceiling is a truss system of 2x6" and 2x4", designed to accept an R44 cellulose insulation layer, and a 350 lb. HVAC unit. The roof truss system shown was engineered. However, we suggest that the buyer have the truss system re-checked and stamped by the local truss company hired to fabricate the trusses. The HVAC unit may be installed or removed through the east gable-end door (exterior attic door measuring roughly 6' X 4'10"). A 1/2" plywood deck over the trusses supports the 26 gauge metal roof. The only flashing the owner will need is the ridge cap and chimney cricket.



Plan 1248 is suitable for a family of three, or a couple when the second bedroom is used as a study, studio or computer room. The master bedroom measures $10'4" \times 14'$ with a 7' x 4' 8" walk-in closet. The Bathroom contains 138 sq. ft. and features a 4' X 6' area for a custom tiled or manufactured shower/bath unit. The second bedroom measures 11' x 10'4", with a standard 30" X 7' closet. The kitchen measures 24' X 10'6", minus a closet section. The wash/dry area is located near the rear door, at the NE corner of the kitchen.

The value of any home is enhanced by a fireplace, and Plan 1248 features an adobe "kiva" or "beehive" style fireplace in the NW corner of the living room. The fact that the resulting chimney exits near the roof peak is not accidental. This reduces the resulting exposed chimney height and makes flashing much easier. The owner may also opt to not install a fireplace, or install an efficient wood-burning stove. An attractive 5' wide exposed adobe arch is a feature between the living room and the kitchen.

Additions to Plan 1248 might be shading devices, a garage or carport on the west to northwest side of the home, to block the summer sun. Plantings of fast-growing trees are another option. Cooling costs will be further reduced if shading is supplied on the east side as well. A choice of a light to medium stucco color and a light-colored metal roof will also aid in cooling. It is assumed that the builder will opt for low-e type glazing on all windows to reduce heat gain. A whole house ceiling fan is centered in the kitchen and exhausts upward through the attic.

Plan 1248 comes as a set of 9, 18" X 24" sheets in black on white. Sheets contain Floor Plan, Foundation Plan, Electrical Plan, Elevations, Roof Framing Plan, Wall, House and Fireplace Sections. Most scales are $\frac{1}{4}$ "=1'0" with some sections at $\frac{3}{4}$ "=1'0" and 1"= 1'0".

One set of Plan 1248, sent in a tube via priority mail is \$75, or three sets for \$89. Because the prints are B&W, you may duplicate additional sets at "blueprint" or reproduction shops at a nominal fee.



3 sets of plans \$97 🛛 ADD TO CART

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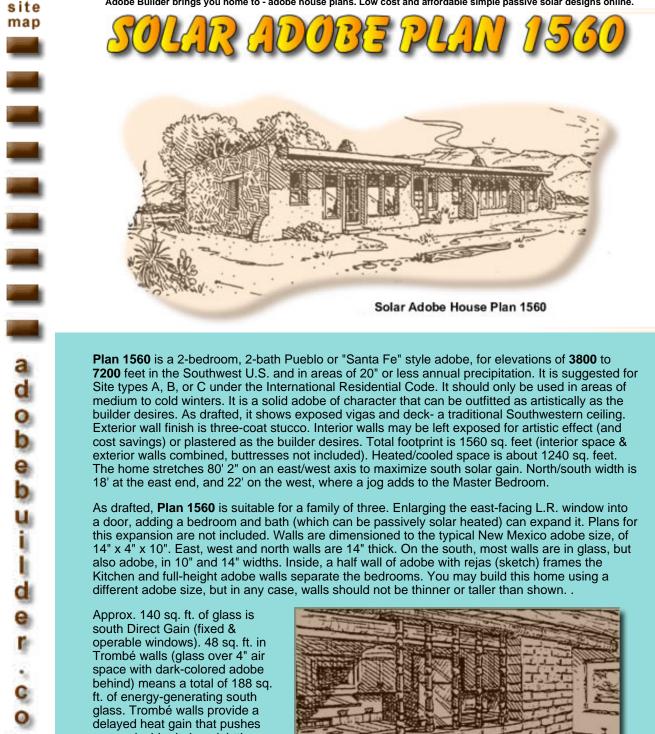




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Solar Adobe House Plan 1560

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cost savings) or plastered as the builder desires. Total footprint is 1560 sq. feet (interior space & exterior walls combined, buttresses not included). Heated/cooled space is about 1240 sq. feet. The home stretches 80'2" on an east/west axis to maximize south solar gain. North/south width is 18' at the east end, and 22' on the west, where a jog adds to the Master Bedroom.

As drafted, Plan 1560 is suitable for a family of three. Enlarging the east-facing L.R. window into a door, adding a bedroom and bath (which can be passively solar heated) can expand it. Plans for this expansion are not included. Walls are dimensioned to the typical New Mexico adobe size, of 14" x 4" x 10". East, west and north walls are 14" thick. On the south, most walls are in glass, but also adobe, in 10" and 14" widths. Inside, a half wall of adobe with rejas (sketch) frames the Kitchen and full-height adobe walls separate the bedrooms. You may build this home using a different adobe size, but in any case, walls should not be thinner or taller than shown. .

Approx. 140 sq. ft. of glass is south Direct Gain (fixed & operable windows). 48 sq. ft. in Trombé walls (glass over 4" air space with dark-colored adobe behind) means a total of 188 sq. ft. of energy-generating south glass. Trombé walls provide a delayed heat gain that pushes energy inside during nighttime hours. The 188 sq. ft. is about 15 % of the total heated area, within the passive solar range in Albuquerque/Prescott climate zones. In colder climates (Santa Fe, Taos, Pueblo, Flagstaff), the three doors on the south should

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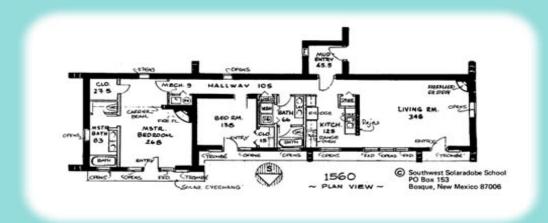


be one-light, (simple low e) doors. This increases gain by about 40 sq. ft. (18% vs. 15%). Night-insulating blinds or drapes are a must with all Direct Gain glass and should be figured into the materials cost.

The south overhang roof extension is mandatory for the solar system to work properly. It extends 2 feet beyond the house wall in an Albuquerque climate zone (4300 degree heating days). In colder areas, (Taos, Southern Colorado), this overhang extends no more than 18". In warmer climates (Las Cruces, Benson), it projects 30"-36". Depending on location, owner lifestyle, etc., **Plan 1560**'s passive solar gain provides 55-65% of the heating requirement in January in a Santa Fe climate, and 75-80% in a climate like Las Cruces, NM. Back-up heating will be required to

maintain comfort levels during the colder months. A utility closet provides space for boiler and zone valves for under floor radiant heating. A wood-burning stove shows in the Living room and an adobe fireplace in the Master Bedroom. These may be switched or deleted.

During summer months, evaporative cooling is assumed. It is ground-mounted on the north side with under floor ducting. Refrigeration is an option in warmer areas. You will be able to buy a smaller unit and run it for shorter lengths of time due to the thermal benefit of the adobe walls.



The Kitchen contains 12 feet of counter space and 12 feet of upper cabinets. The sink looks out through rejas into the Living Room. A pantry is located on the Kitchen north side. The Middle Bath (66 sq. ft.) adjoins a Wash/dry facility (16 sq. ft.). A Linen Closet is accessible from the Hall. The Middle Bedroom (138 sq. ft.) has a large closet (15 sq. ft.). Trombé walls in bedrooms add privacy and furniture space. A carrier beam in the Master Bedroom supports two sets of vigas, keeping them to 20' or less (a cost saver). The Master Bedroom is ample (268 sq. ft.) as is the Master Bath (83 sq. ft.) and Walk-in Closet (27 sq. ft.). Plumbing walls are 6" wood frame construction, with closet walls of both 6" and 4" frame. Steel framing could be substituted.

Parapets hide the roof pitch, except on the south, where the roof drains over the overhang. The exposed interior wood ceiling is level. The cavity between it and the final plywood deck contains R-38 insulation. Final cover is a single layer, thermoplastic membrane, available in white or adobe tan (45 mil, UV resistant). This type of cover is cooler in summer, and avoids the problems of "hot-mop" gravel covers (the latter may be substituted, but we do not recommend it.) House corners are fortified with adobe buttresses. They add character and seismic resistance. A steel-reinforced concrete bond beam with uplift anchors is specified.

Plan 1560 comes as a set of six, 24" x 36" sheets in black on white. Sheets contain Floor Plan, Foundation Plan, Electrical Plan, Elevations, Roof Framing Plan, Wall and House Sections, Fireplace Section and miscellaneous detail drawings. Most scales are $\frac{1}{4}$ " = 1'0", with some wall sections, etc. shown at $\frac{3}{4}$ " = 1'0".

One set of **Plan 1560** sent in a tube, priority mail is \$89, or three sets for \$97. Because the prints are B&W, you may duplicate them at most "blueprint" or reproduction shops for a nominal fee.



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