

The America Solar Energy Society presents

2006 National

Solar Tour

Saturday, October 21, 10:00AM-4:00PM

FREE tour

Tour in ANY order

Self Guided



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NOTE: home #1-3 and #7 only open from **10:00AM-1:00PM** and
#4-5 only open from **1:00PM-4:00PM** Dome #6 open **10:00AM -4:00PM**

Local tour presented by the Sedona/Verde Valley chapter of Arizona Solar Energy Assoc.

Tour contact and for info on speaker series call

Bill Buckner 928-203-1018 or Ron Mohny 282-9146

BillBuckner@sedonarealestatesolutions.com

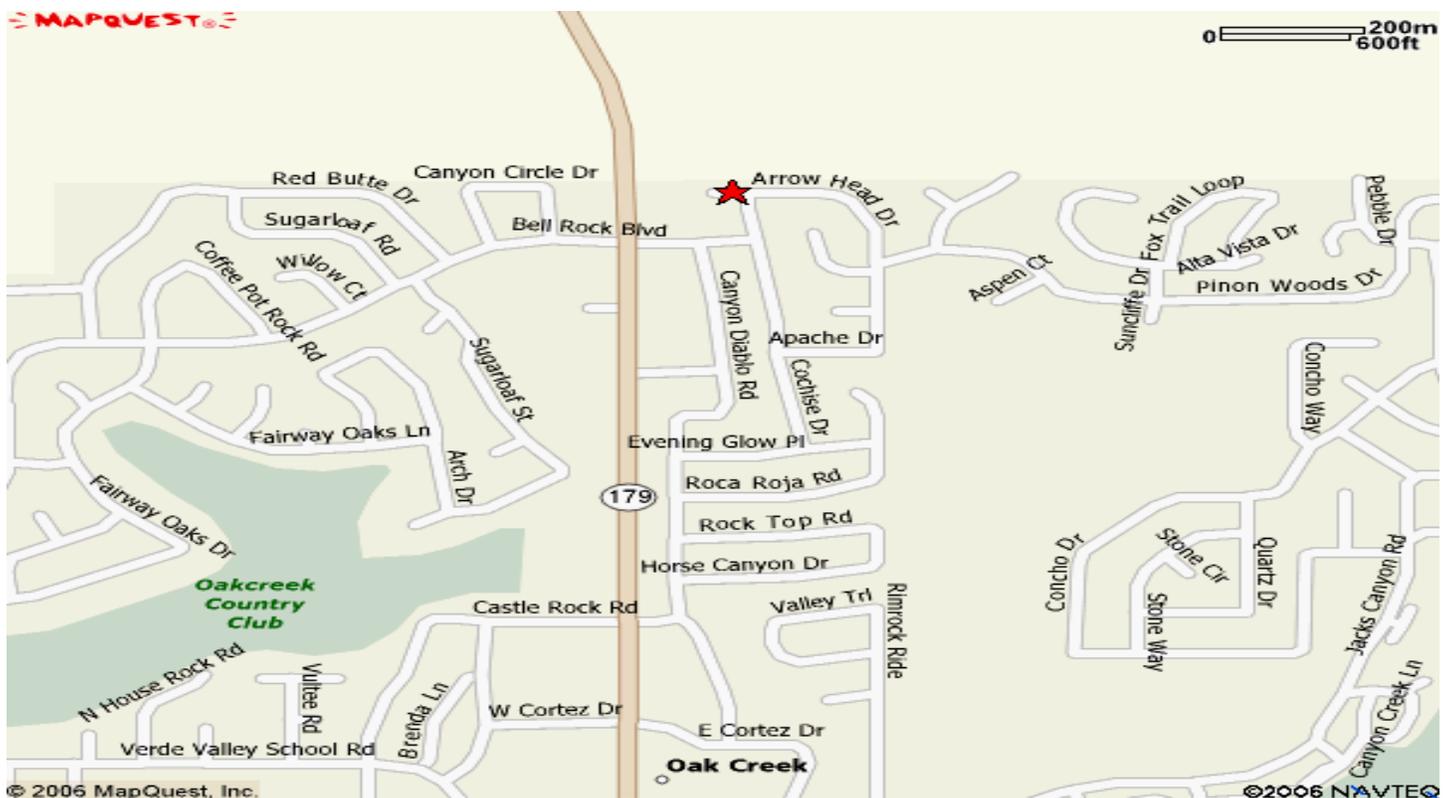
OTHER TOURS: Phoenix 10/22 and Tuscon 10/28 and 10/29

Info at www.azsolarcenter.com

People can stop by and see slides and gather information about solar, wind turbines, green design and construction and water catchment. Compact design provides space needed but minimizes overall size of house. This is green sustainable design. It saves energy to heat and cool and saved energy and materials due to smaller size. All plywood construction in house and cabinet construction. This helps reduce VOC's (volatile organic compounds) and chemical off-gassing such as formaldehyde. All hard surface floors reduce dust, bacteria, mold, mites, chemicals and other environmental chemicals in the house. Sealed fireplace unit with circulating heat and remote control, prevents contaminants from entering the house. Finished garage with R25 insulation in walls, R30 in ceiling and durable finished floor Central vacuum system, which exhausts contaminants to the outside, with special kick base in the kitchen for easy cleaning. Operable clerestory windows provides draft cooling effect and makes use of loft space for additional living area. Light and airy design with passive solar clerestory windows and large stone Trombe wall, along with stone countertops, concrete and clay tile floors used to provide mass. Upgraded heating and cooling system with HEPA and UV light filtration unit, wall detector and separate control for humidification, and electronic filter. All features which provide better Indoor Air Quality and better human comfort and health. Upgraded attic ventilation with radiant heat reflective foil on entire roof, R35 roof construction helps save energy and keep house comfortable. Low E value insulated windows on south wall helps reduce heat gain. Low or no chemical construction used throughout the home. Alternatives such as environmentally friendly boric acid sill plate treatment were used instead. Interior walls insulated for sound deadening and also to add additional mass to the home and energy savings. Eco-aquatic balanced waterfall and pond minimizes water usage while providing pleasant human experience. Cement stucco exterior for low maintenance with aluminum clad thermo-insulated windows for low maintenance and energy savings. Through wall flashing used to help eliminate moisture collection in exterior wall and prevent wood deterioration, mold, bacteria and other moisture problems. Dry wall helps insulate and save energy. Active 2.4 kilowatt photovoltaic grid tied solar system, provides electricity for the house, opportunity to sell excess electric power to APS.

Directions to home of Carl Ramsey
245 Arrowhead Drive, Village of Oak Creek, AZ

From Sedona Proceed south on Hwy 179 about 6 miles to V.O.C. At circle K, when you first enter town, turn left (east) on Bell Rock Blvd. Left on Cochise, then left on Arrowhead, to the end.

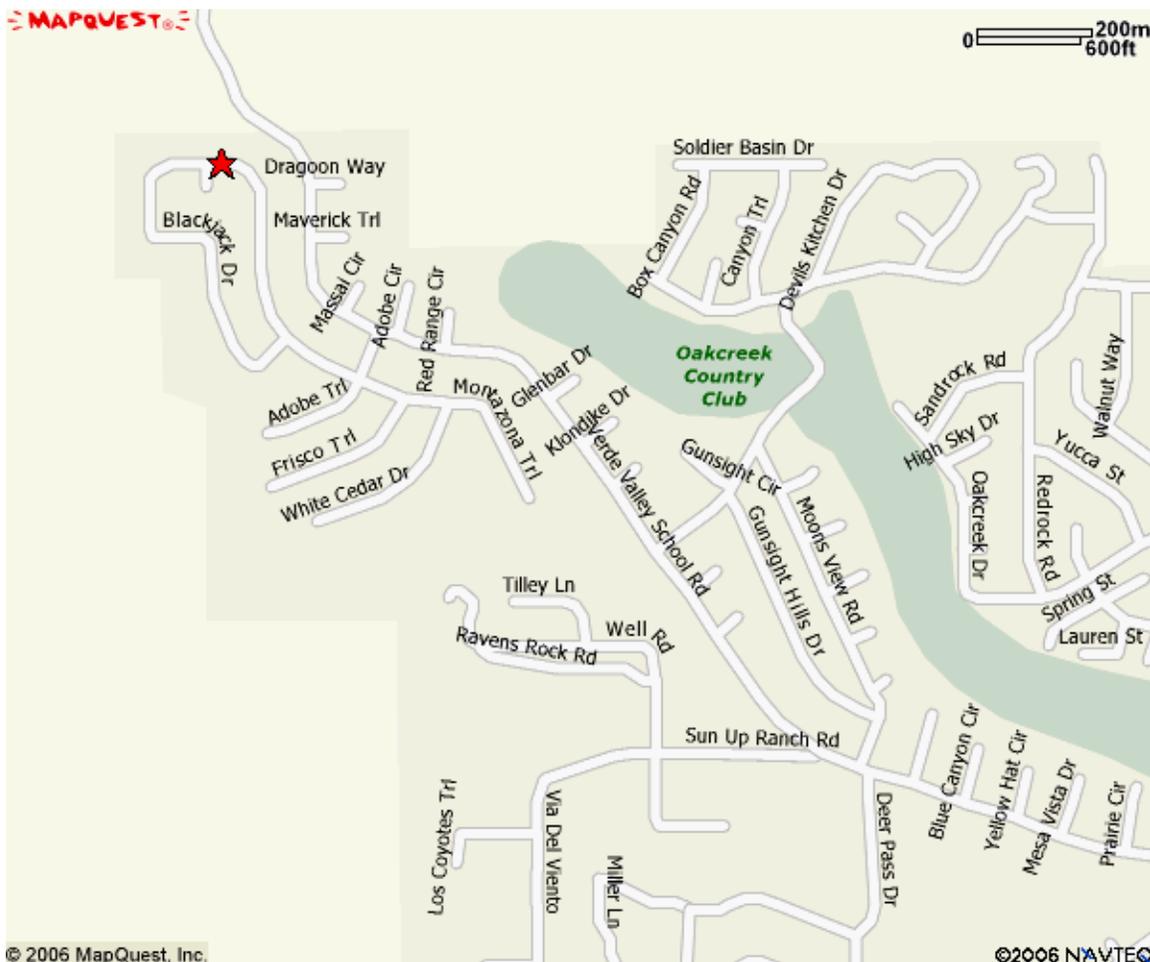


Arni's Poured Earth Residence

Also on tour this year is a 2600 sq. foot home that is best described as "poured earth" construction. The walls are 20 inches thick and consist of 30% each of earth, red ash and sand and an additional 10% of Portland cement. Within the outer walls is 4 inches of foam that serves as a thermal break between the inner and outer walls. The floors are stained concrete, and combined with the walls, provide a total of 150 tons of thermal mass. The south walls is almost all glass and together with the high clerestory windows, supply abundant heat on sunny, cool, winter days. The home also features a solar hot water system and in the future, will be adding solar photovoltaics. All windows are double-paned and have insulated shades inside. Almost all of the lighting is florescent.

Directions to the home of Tom and Judy Arni
425 Montazona Trail, Sedona(Village of Oak Creek)

From Sedona, proceed south on 179, about 6 miles. (if you just came from AEA demonstration home, go south about a mile). At Verde Valley School Rd. turn right(west). Go approximately 2 miles to Adobe Trail on your left. (not Adobe Circle on your right). Left on Adobe Trail, and almost immediately, go right on Montazona Trail. Follow Montazona Trail, bending to the left, home will be on your left, at the cul-d-sac.

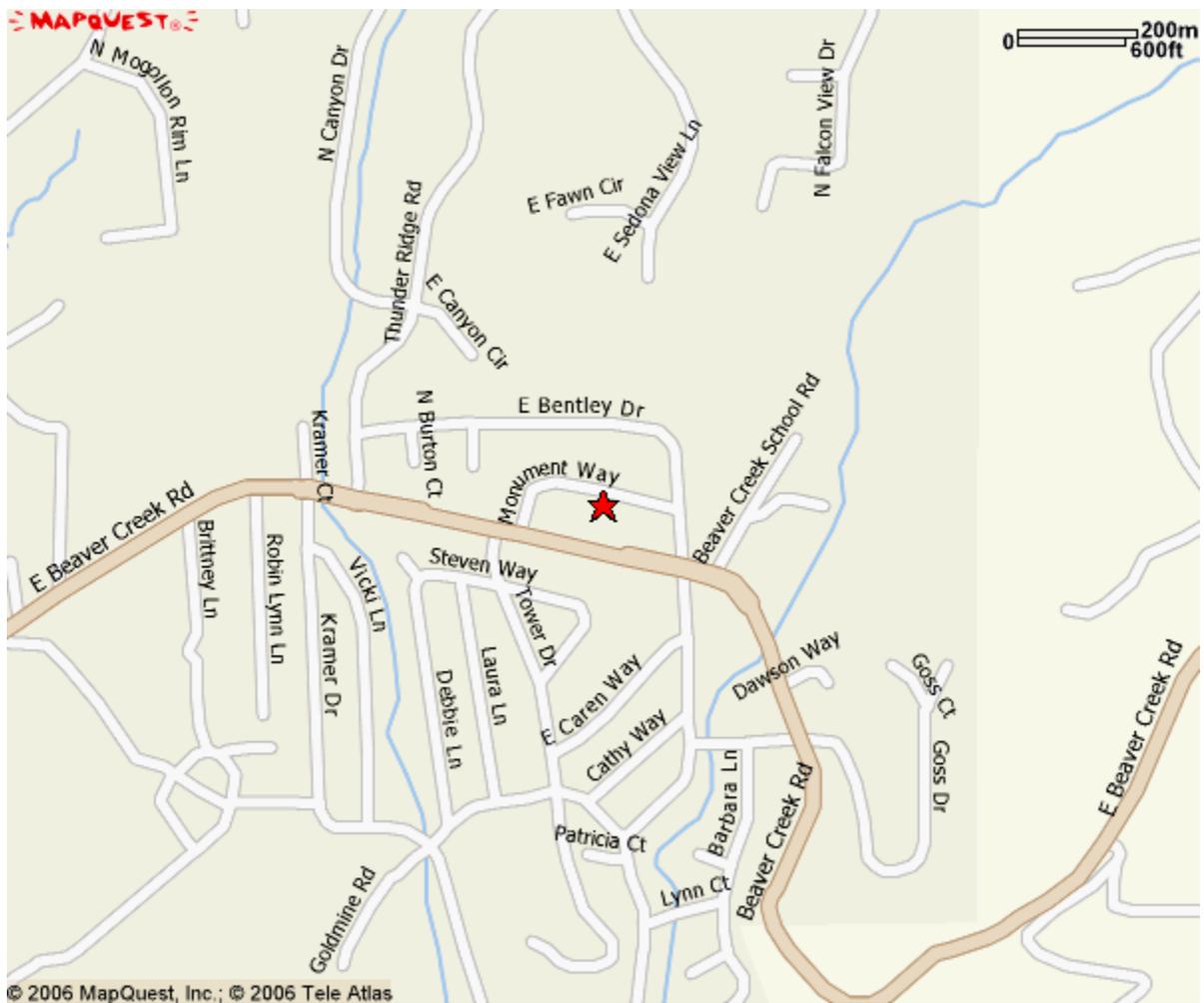


Description of Home

“Casa Bonita” takes the minimalist approach to saving money on energy and preserving our natural resources. This modestly sized home was built using 3-D or Tridi-panel system (EPS Core with Wire Mesh Faces), with a 1.5" concrete gunite finish on each side. The panel was used for the roof also. This is a 1-bedroom cottage with evaporative cooler; earthquake and fireproof...snug as a bug!

Directions to Home of Dawn Lorenzo
4604 Monument Way, Rimrock, AZ

From Village of Oak Creek, take 179 south to interstate 17. South on 17 to exit 293. Loop under 17 to Beaver Creek Rd. Head north-east on Beaver Creek past Post Office, bend left toward Thunder Ridge (3 miles). Left on Bentley, left on Monument Way.



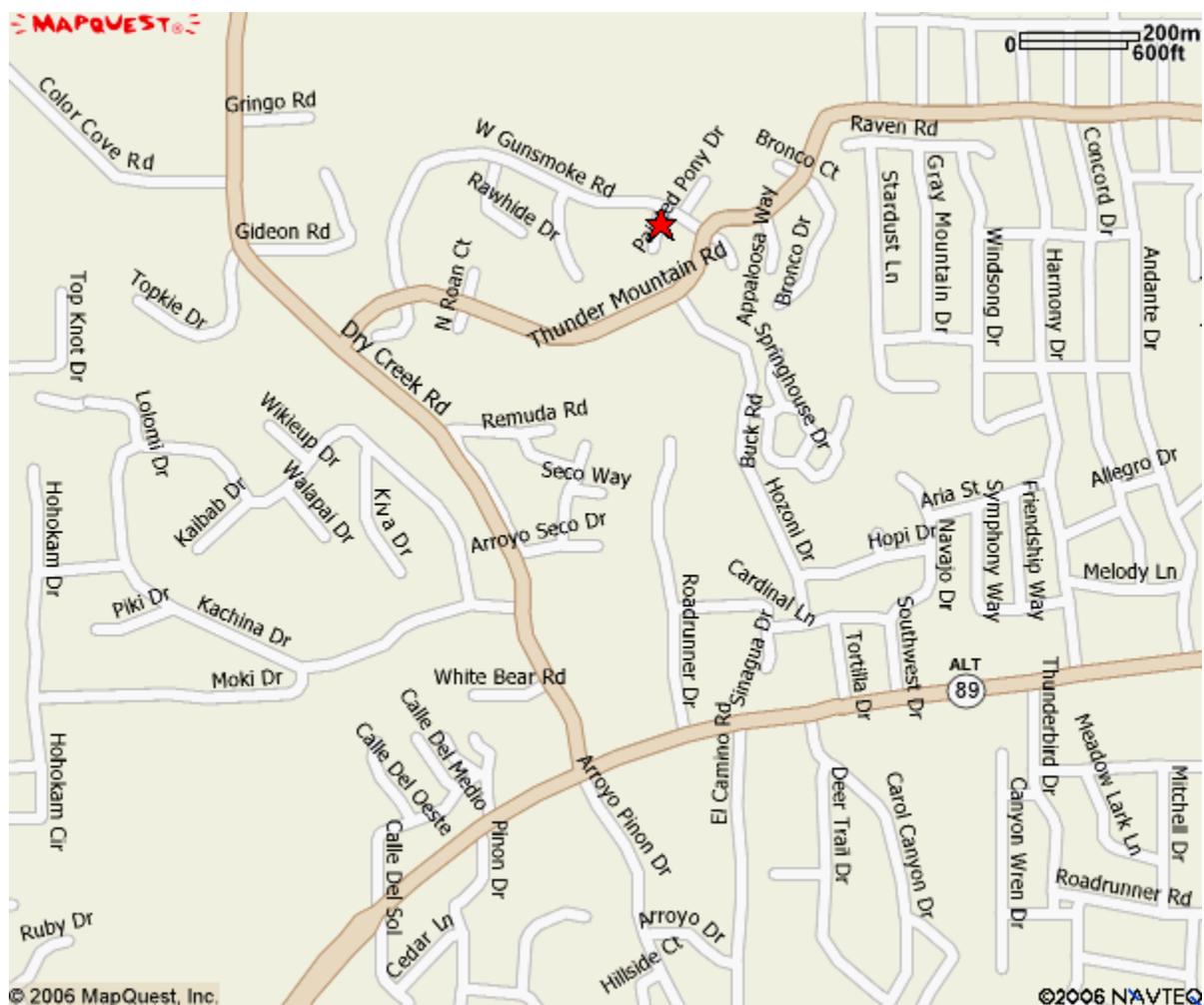
There will be staff from Architectural and Environmental Associates to explain the systems and provide some visual aids since some of the system is covered by roof. The home is expected to be a net zero energy house. The residence is under construction so foot traffic to some elements of the system may be a challenge. The home has a fully integrated system with solar hot water (Dawn Solar) preheat under the metal roof and photovoltaics laminated to the surface of the same roof (Uni-solar). Exterior walls, floor, and roof (entire envelope) are structural insulated panels (SIPS): floor-8", walls-6", roof-10". Like living in a Styrofoam cooler. Other mechanicals: Heat recovery ventilator (HRV-Broan). Radiant in-floor heat (solar). High efficiency AC. Windows: Energy Star, Marvin Integrity, low-E. Water Management: Dual flush toilets (Caroma), rain-water capture for irrigation (1500 gal.). Appliances and lighting: Energy Star appliances, compact fluorescent lighting. The *Power House* is an "owner/builder" project. The design is by Paul Overman.

Directions to Home of Larry Bean

120 Painted Pony, Sedona (gate will be open for tour)

From Village of Oak Creek

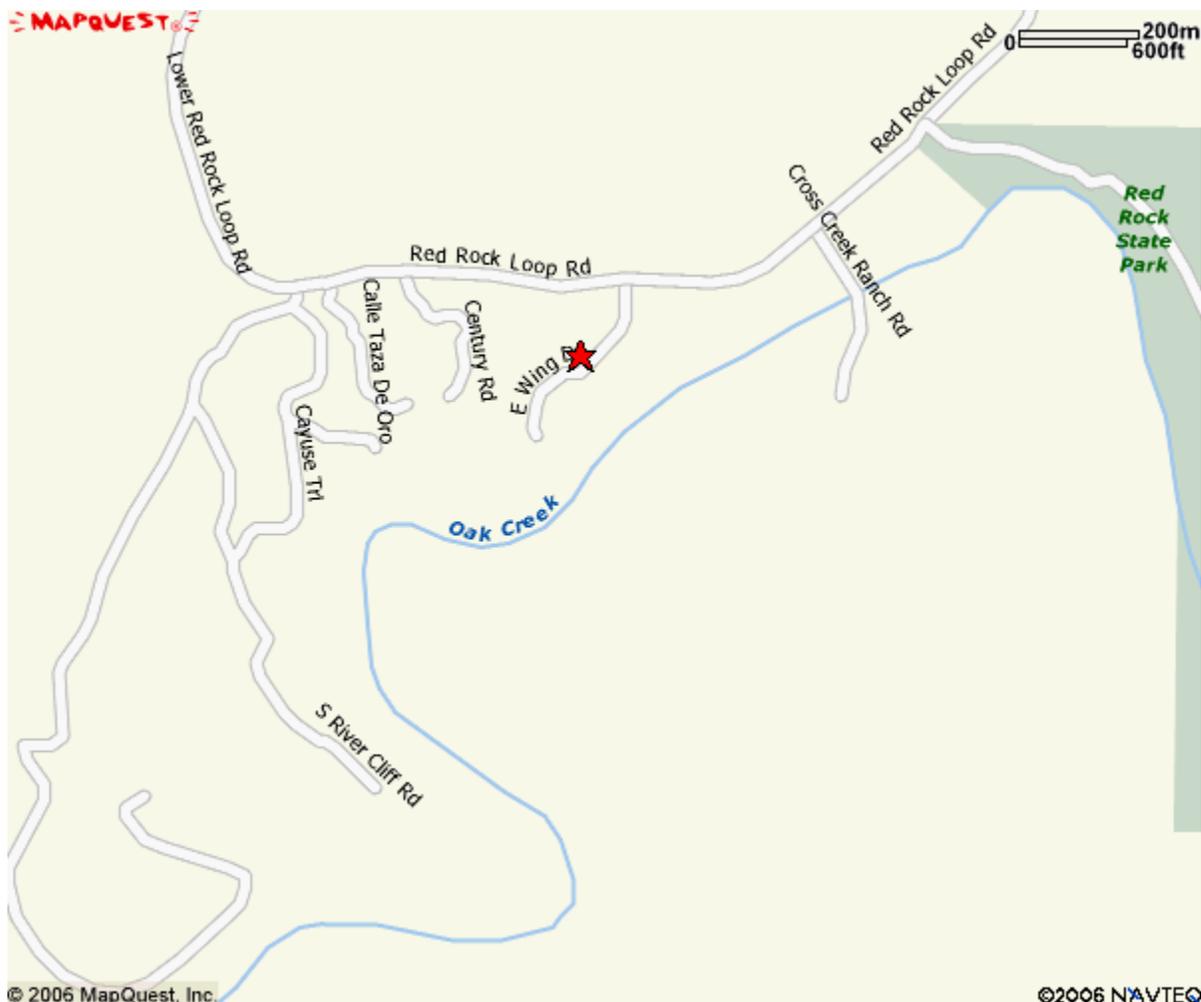
Hwy 179 north to 89a (the "Y"). Turn left on 89a, through town to Dry Creek Road. Right turn on Dry Creek, north to Thunder Mountain Rd.(about a mile). Turn right on Thunder Mountain Rd., and follow along to the second Gunsmoke Rd. and turn left. (OK, you could have taken the first Gunsmoke Rd.) Short distance to Painted Pony, turn right. (gate will be open for tour)



Debating on the tour this year is a newly built home featuring the latest technologies in green, sustainable construction. Though it is tied to the grid, its 7.8 KW photovoltaic system is large enough to live a modern lifestyle without *any* electricity from APS. The system consists of 60 solar panels. The sun's energy is converted into electricity that is stored in 56 batteries to power the home after the sun has set. The walls are constructed of highly insulated SIPS panels and Rastra block. The high "R" value from these innovative walls means less power to heat and cool the home, saving money and the environment. The home captures gray water for reuse and irrigating the landscaping. The floors are bamboo, a new arrival on the sustainable scene. The wood grows quickly on farms for use in construction, eliminating the old practice of clear-cutting forests for our wood. The PET carpets are made from recycled plastic, the FSC doors come from managed forests, and the home is illuminated by extensive natural lighting and compact fluorescent bulbs.

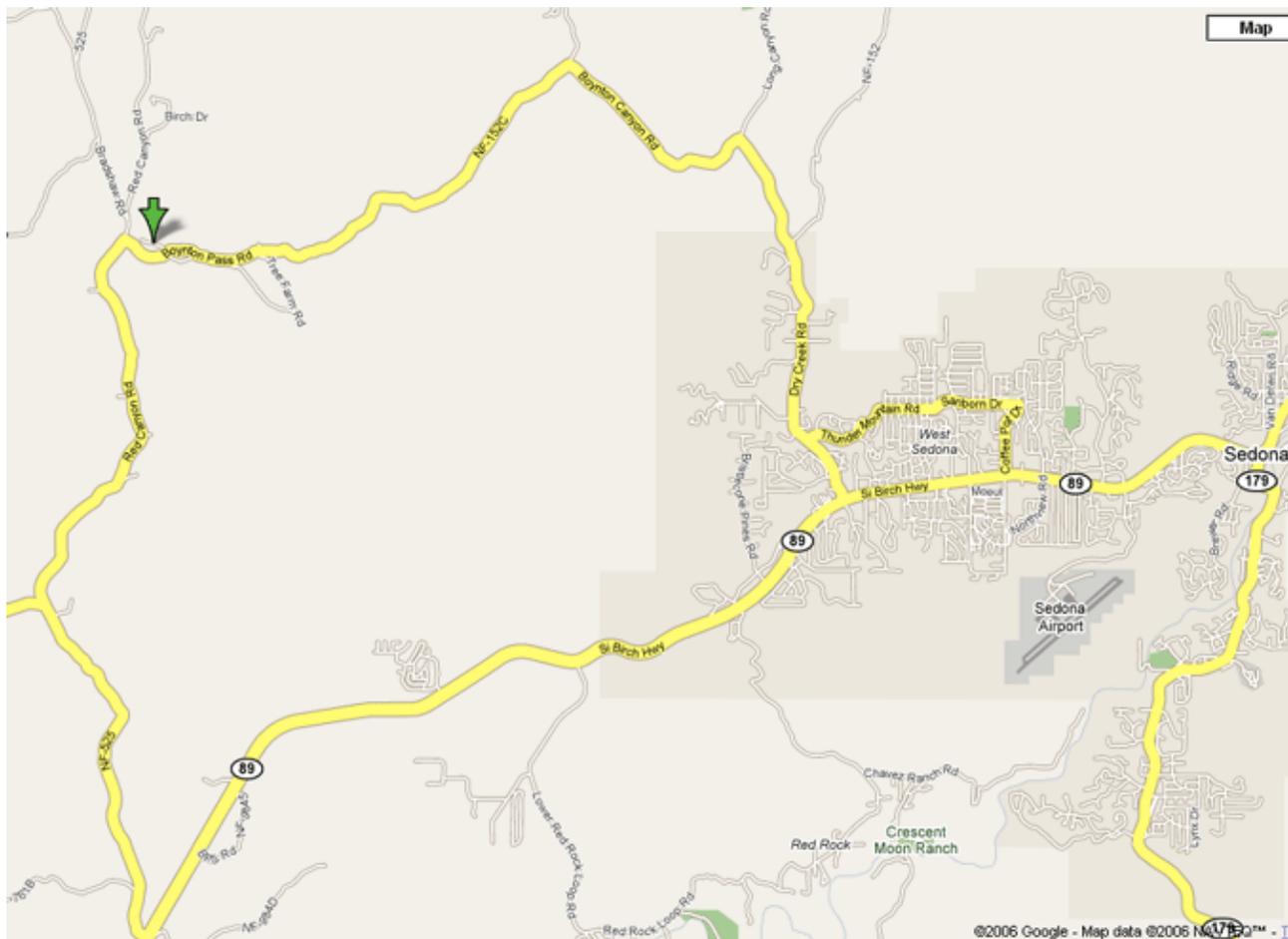
Directions to Home of Ron Mohny:

From 89A in Sedona, head out of town toward Cottonwood(west) turn onto *Lower* Red Rock Loop Road(not the Upper Loop at the High School) a left turn if coming from Sedona. Proceed 2.5 miles to East Wing Drive (the power lines cross the highway at this point). Turn right and drive 2/10 mile to the end of East Wing Drive.



A long time fixture on the Sedona "green" scene is Mason's off-grid dome home. The dome was built in the 80's near Boynton Pass when there were no utilities available. "This is the ultimate passive design," he said. "You don't need air conditioning, even here in Arizona. If they would build this way, they wouldn't need the air conditioning that's 50 percent of the energy consumption in this country." A wholistic approach to living in an earth friendly structure which is fireproof, waterproof, windproof, solar and wind powered and highly resistant to earthquakes. The concrete dome requires only \$15 a year for heating and cooling. A shot-crete dome like his is made by spraying a concrete foam material over a giant inflated balloon. It is quick to build and relatively inexpensive and can be made in three days for about \$30 per foot. "It's like a pool, only upside down," say Mason.

Directions to the Dome: Turn north on Dry Creek Road, and go 2.8 miles to a "T" intersection. Go left at the "T". Again you will arrive at a "T" intersection. Go left onto the dirt road. They are preparing this for paving, and it is *smooth* sailing now. Proceed 2.8 miles to Bear Mountain Rd and turn right. Cross the cattle guard and follow the signs to the right for the Dome Tour.



Description of Home

A modified post and beam straw bale home that is now under construction. This is a great opportunity to see the straw-bale process in action. The home is only partially plastered, revealing the techniques in this type of building. There will be no workshop today, just a tour of the home.

Workshop next weekend

You are invited to learn how to make and apply *earthen plasters* to a modified post and beam straw bale home in Cornville! We are creating this educational opportunity to teach others, create a fun work experience for all, and complete this time/labor intensive project before winter gets here! Our educational workdays are Oct 28, and 29. Our days start at 8am and end with the sunset, but you can come as your schedule permits. If you would like to come any other days please contact us. November dates will be announced later because it all depends on how far we get in October. We will be focusing on all layers of plaster; scratch coat, brown coat, and finish coat (lime for us). We will teach you about the various plasters ingredients, how to mix plasters, and application techniques. Please bring gloves, water, and a lunch. Dress to get messy. Snacks will be provided. Children welcome. Please call 928.301.5861 if you have questions or if you intend to join us.

Directions to 735 Western Dr. Cornville, home of Allison, Craig, and Troen Martinsen.

Access Cornville Rd. from Beaver Creek Rd if coming from #3, or from 89a if from Sedona or Cottonwood. Go North on North Aspaas Rd (just west of Page Springs Rd) which turns into Cottonwood Way. Turn right on Baxter, and then left on Western Dr. to the home.

