

Earth-friendly Environment

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*M*ichael Frerking's west Prescott home is not only a light-filled, inspiring piece of architecture, it is the laboratory for his designs of energy-efficient, ecologically friendly dwellings.

Frerking and his wife, Joanne, who is part owner and administrator of an art gallery in Prescott, wanted to build work and studio space into their new home. The resulting design includes an artist's studio for Joanne and a pleasant office for Michael in 1,200 square feet downstairs, and 2,400 square feet of living quarters upstairs.

Paramount in Frerking's design standards is integrating a home into the existing landscape. He designed his home to seamlessly blend with the outdoors, placing it on a lovely boulder and native plant-filled lot with a sweeping view of Prescott. The house sits just below the ridge line, saving the beauty of the mountaintop for an outdoor living space that includes a brick patio and barbecue area. The roof is oxidizing steel, which weathers to a patina almost invisible to neighbors. The house also takes full advantage of abundant sun with strategically placed large windows and photovoltaic solar panels.

A reflective roof deck directs sunlight through clerestory windows onto the ceiling, providing bright light throughout the upper story. High-mass poured earth walls serve to keep the house warm in winter and cool in summer.

Laminated, curved wood beams accent the

The Frerkings' poured-earth home fits snugly into the landscape. At right, the kitchen and living areas feature laminated, curved wood beams.

home's living areas, drawing the eye to the expansive ceilings. Supporting columns are made of lodge pole pines harvested from a Flagstaff road-widening project. Many of the walls retain the earth tones and textures of their poured-earth origin.

A central wooden staircase with oxidized steel railings connects the two levels. Furnishings are comfortable leather and natural materials. Brightly colored glass art pieces serve to capture and accentuate the light that is part of the home's attraction, and Joanne has filled the walls with colorful paintings and multimedia artwork, many of them her own. The final impression is one of energizing light, color and interest, with a constant connection to the home's surroundings.

Perhaps one of the most appealing features of the Frerking home, and one that takes full advantage of the lot's spectacular views, is an additional 1,200 feet of virtually maintenance-free roof deck. Frerking spread a thin layer of sand on the deck and then paved with lightweight concrete cap blocks. Oxidized steel railings, deck furniture and planters complete the outdoor space.

Because of the challenges its boulder-filled lot presented, and the Frerkings' desire to build an environmentally sensitive dwelling, the home was nearly two years in the design process and took nine months to build. The Frerkings completed it in 2003.

Michael Frerking, who has lived in the Prescott area for 33 years, pioneered the poured earth technology from which he constructed the home. The technology



Bedroom walls retain the earth tones and textures of their poured-earth origin.

reduces the time, cost and backbreaking labor involved in building the adobe and rammed earth structures he used to design. He also uses as much of the existing renewable resources available where he designs clients' homes.

Frerking now works through his business to design ecologically friendly homes that are both beautiful and affordable for the average homeowner.

His poured earth mix is an adobe aggregate material that uses additives of lime and plasticizers to reduce the water necessary to make a pourable mix.

The resulting product that forms the 20-inch-thick walls in Frerking's home is many times the strength required to meet building codes. Thermal foam insulation forms the core of the walls, and is so energy efficient that the home uses only a third of the energy a similar

sized conventional home requires. The house has an efficient backup energy system, but solar panels produce 75 percent of the electricity.

As green technology continues to evolve, Michael incorporates what he can in his own home and designs it into the homes of his clients. While his house has an energy-efficient on-demand hot water system now, he plans to install a solar hot water system and two 5,000-gallon cisterns that will collect rainwater from the roof and store it for use in the landscape.

Michael Frerking's design philosophy is "If it's not art, it's not architecture." His elegant Prescott home may still be a work in progress, but it's also an ecologically friendly, comfortable space that meets his goal of being an inspiring place in which to live and work. "People love to be here. It's a calming environment," he said. ▼



RESOURCES

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Living Systems
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