



The 1,700-square-foot "active" solar house.

Solar development growing

Santa Fe's first solar development is underway five miles south of town between the Old Santa Fe Trail and the Old Las Vegas Highway.

First Village will consist of four houses, each on five acres of land.

Developer Wayne Nichols plans both active and passive solar systems for the houses. He has already developed plans for the first two houses, and has tentative plans for the second two.

Nichols, and his wife Susan,

own Communico, a small local firm specializing in solar houses. This is Communico's first major undertaking.

Nichols said he has applied to the U.S. Department of Housing and Urban Development (HUD) for grants under the 1974 Solar Demonstration Program. If forthcoming, the grants should pay for a portion of the solar-related costs, he said.

Approximately 70 to 85 per cent of the total heating at First Village should be provided by the sun, Nichols said.

Nichols described his preliminary plans as follows:

—A 2,450-square-foot (exterior dimensions) house, heated by a passive solar system. Plans call for a large greenhouse, facing south, that is separated from the living areas by a 14-inch-thick adobe wall. Sun from the greenhouse shines onto the adobe wall during the day, and radiates out into the living areas at night. The system is designed to provide between 70 and 80 per cent of the total heating, with an

electric heating system used as a back-up. This house, in the \$90,000 range, will be started this winter.

—Also to be started this winter is a 1,700-square-foot house, which is designed to be expandable. The heating unit, an "active" system, consists of roof-mounted solar collectors. Air is blown by fans through the collectors, where it picks up heat from the sun. The air is then blown through two rock storage bins, containing approximately 60 tons of two- to three-inch round river rocks. The heat is stored in the rock during the day, and taken out—by reversing the air flow—to heat the house at night or on sunless days. The system also allows hot air to be blown directly from the collectors to the living areas to heat the house on sunny, but cool, days. This system is expected to provide 75 to 85 per cent of the total heating, with an electrical unit used as a back-up. The expected price is \$80,000.

—Plans remain tentative on the other two houses, but Nichols is considering a small passive house which can be expanded and sells in the \$75,000 range; and a large active house which sells in the \$90,000 range.

The four homes, Nichols said, will obtain water from a single 350-foot well. Water conservation steps are planned, including aerators on all faucets and garden and orchard areas designated in sewage leaching fields.

Deed restrictions, Nichols said, will prevent owners from building structures or planting trees which might obstruct the sun from other property owners.

First Village is a "total Santa Fe project," he said. Architecture and solar engineering is by Sun Mountain Design; the contractor is Walter Drew, Adobe Corporation; construction and permanent financing is by First Northern Savings and Loan; Capital Bank is providing equity financing; and much of the solar-related work will be by Santa Fe subcontractors.

"Santa Fe is ideal for solar heating," Nichols said. "We have the climate and we have all the skills and resources. Few people know that more solar homes are being built in Northern New Mexico right now than in any other portion of the country."

The Nichols live in a solar-heated home in Seton Village.