

available passive solar technology. In addition it will allow year round use of this courtyard which in the past has been closed during the winter. It is hoped that these buildings will be monitored, and that the results of these solar retrofits will be made available to the design community.

A second project is the proposed reworking of fourteen buildings to improve their energy consumption through improved control techniques and various other retrofit efforts including some solar. Here again it is hoped that sufficient monitoring will be done to determine the real effects of the modifications on energy consumption. This could be a great opportunity to verify DOE, and help substantiate BEPS.

#### Heat Pipe

One item which could be considered fallout from past development under the nuclear rocket program is the heat pipe. This device, which the author was instrumental in having applied in the building industry, is now beginning to see considerable use in heat recovery. The heat pipe, which could be thought of as a super-conductor, is incorporated in air to air heat exchangers, so that incoming fresh ventilation air can be either heated or cooled by the outgoing exhaust air.

#### Geothermal:

This field, as at Sandia, is of little immediate interest to the architect/engineer design profession. In

the future, however, it is expected that its importance will be great. Los Alamos is directing its effort at the hot dry rock energy source. This source, such as granite, is everywhere at some depth below the earth's surface. In this process water is forced down to the rock where it is heated then returned to the surface. The water can be heated to provide steam for electrical generation, or it can be heated to a temperature compatible with that of space heating. LASL developments are directed at both uses. In fact plans are underway to initiate space heating in some existing buildings using geothermal heat from sites near the Valle Grande. They have also done considerable work in development of drilling and logging techniques. Several test holes have been drilled and tests performed in the area west of the Valle Grande.

I have tried to present a broad picture of projects ongoing at both laboratories. It has not been within my scope in either time or space to give detailed information or tests results. We have two sources of very valuable information at these laboratories and we should use these sources. Hopefully readers will want to look deeper.

I wish to express appreciation to some of my sources of information. Robert Stromberg at Sandia Corporation, and David Friewald, Fred Schilling, Doug Balcomb, and Bruce Hunn, all of LASL. H.B.

## BOOK REVIEW

Lloyd C. and June-Marie F. Engelbrecht. *Henry C. Trost: Architect of the Southwest*. El Paso Public Library Association: El Paso, Texas, 1980, 150 pages, 87 illustrations, \$27.00.

Review by Spencer Wilson

On June 19, 1919 the Val Verde Hotel opened for business in Socorro, New Mexico. The little town had once been the center of a booming mining industry but by the end of World War I was already in decline as people and business moved to other, more lucrative places. Why, then, open a new hotel with appropriate ceremonies and honored guests—except that among the honored guests was Henry C. Trost?

The Val Verde Hotel was the result of a vision of Missouri investors and operators who recognized the need for a convenient and comfortable stopping place for the growing number of tourists to New Mexico. They came by rail and road—a couple of dozen cars and trucks a day passed through Socorro in 1920! Facilities were needed and the Val Verde was built to handle that traffic.

The hotel was designed by the firm of Trost and Trost and is, to-

day, a reminder of the considerable number of Trost designed commercial and residential buildings in the southwest. The Trost influence reached into Arizona, New Mexico, and Texas, and yet, today, little is known of their work and many of the buildings are gone.

Now, the Engelbrechts have gone a long way to put the Trosts into a well-deserved place among the architects of the United States. Lloyd and June-Marie spent the last fifteen years researching and writing about this family of architects. The Trost firm left an indelible mark on the southwest, as seen in the surviving buildings. This work is a must for anyone interested in the architectural history of the southwest from the 1880's through the early 1930's and for any collector of southwestern history.

Trost's work was influenced by Louis Sullivan and Frank Lloyd Wright and included the Mission

Revival, a California import to the "arid America" of the southwest. Unfortunately many of his best examples have fallen to the wrecking ball of the mis-guided work of urban renewal and the economic pressure of "progress". The Franciscan Hotel in Albuquerque, New Mexico is a classic case in point.

The works of Trost live on, however, even in the Val Verde—now a collection of offices and small shops. The research goes on too. The small mining and cattle town of Magdalena, New Mexico, was the sight of planned and constructed Trost buildings. It is unfortunate that the present book, excellent as it is, does not include a complete listing of Trost buildings. Apparently such an addition is possible from the records in the El Paso Public Library but lack of money prevented the authors from doing it.

The Englebrechts have put together a masterful study on a very important, and long neglected, architect. The book itself is handsome to behold with excellent reproductions. S.W.