



Adobe 101

Although usually associated with the cities of Santa Fe, Taos and other locations in New Mexico and Arizona, adobe construction has been used successfully in West Texas as well. Unfamiliar with the building technique, William Curry Holden, through his wife Olive's tutelage, became a vocal advocate for using adobe. Holden believed in the advantages of adobe building so much that he built his own house out of the stuff, and continued to build structures on his Lubbock property and elsewhere into the mid-1970s.

The sun-dried mixture of soil, grass and water is one of the oldest building techniques known. The Spanish, who had their own adobe techniques, blended those with the rich Native American use of the material in places such as Acoma and other Indian pueblos of New Mexico. In Texas, many of the earliest buildings, including missions, forts and residences, were made using adobe.

Formed in wooden molds and left in the sun to dry, adobe bricks can only bear limited weight, so most structures made of the material are only one story tall, with walls tapered so that the portion nearest the ground is much thicker than that near the roof line. Some buildings, which are two stories tall, are buttressed at the ground to give added strength to the walls. Because of their relative thickness, adobe buildings provide excellent insulation and are particularly appropriate in the desert Southwest

with its extreme temperatures, as well as on the Llano Estacado, which receives more rainfall but is still an arid or semi-arid environment.

In 1930, after moving to Lubbock the previous year, William Curry Holden and his first wife, Olive, purchased two lots in the 3100 block of 21st Street in Lubbock. With no other structures north or south, and only a few structures to the east, Holden's only neighboring structure one block to the west was a farmhouse, just outside the city limits. Holden's lots



lay in a subdivision known at the time as University Place Addition, future home of students, professors and university employees. Long before the area was called Tech Terrace, cotton fields predominated. In time, the house and later buildings the Holdens built on the lots became known as "Adobe Row."

Part of only a few residences in Lubbock singled out for designation in the National Historic Register of Places, the property attracted and continues

to attract many onlookers. During construction and after its completion in 1931, the adobe house witnessed a trail of cars streaming past, all trying to get a look at this unusual house. Many wandered up to the construction site to gawk through the windows.

"Casa Grande," as it was called, was the brainchild of Olive Holden who greatly influenced her husband with her knowledge of and curiosity about Native Americans, including their methods of house building. During the summer of 1927, Curry Holden and his new wife went to the University of Chicago, where Holden attended classes and Olive made copious notes in the library using the Schoolcraft books on American Indians. During their prior honeymoon trip to New Mexico, Olive, was already well grounded in Pueblo Native American culture with two courses taught by George Engerrand and a paper she wrote focused on the Pueblo while attending classes at the University of Texas, where the couple met. Olive quickly "indoctrinated" Holden, who had never heard of Pueblo Indians, much less witnessed their culture by touring ruins in Navajo country on a camping trip in the middle of July. Thereafter, the young professor was thoroughly taken with the studies of ethnography and archaeology.

Olive also saw to the design of the house. She hired James Atcheson, a senior architecture student at Texas Tech to help with drawings of the house. The Holdens took Atcheson to Santa Fe and drove him along the old city's curving streets, pointing out design motifs they wanted incorporated into their own home. Atcheson dutifully sketched the designs and returned to Lubbock with a full sketchbook. Olive then used Pueblo building techniques with a wide base of two feet for the walls, narrowing to 10 inches at the parapets. The result was a rounded, terraced effect with irregular, handmade walls.

With \$5,000 from Olive's grandmother's estate, the Holdens hired a brick maker from Lubbock's Hispanic part of town, along with a crew of four, and paid them \$45 per thousand adobe bricks. Mixing topsoil and caliche in equal amounts, the crew added water, puddled the mixture with their feet, and added prairie hay to the mixture as a binder. The 2-foot by 12-foot bricks were molded four at a time, laid to dry for three days, and then turned on their 4-inch edges to dry for two more weeks

before they were stacked and ready to place in the walls of the house. All of this process was completed between September 1930 and Thanksgiving of the same year.

Between Thanksgiving and March 1931, Holden scavenged steel pipe, rods, cables and front axles from Model T Fords to use as reinforcement in the foundation. Holden and his cousin poured the foundation in March. In the meantime, Holden had embarked on excavation of an Indian Ruin at Glorieta Pass in New Mexico. Right across the road were many felled trees and others that had been struck by lightning. After consulting with the local Forest Ranger, Holden began cutting logs which would eventually find their way to Lubbock and become the vigas, or supporting roof beams for construction on the two lots. Dragging the logs into camp, Holden and his students periodically peeled the bark away using machetes. The cost of the logs was \$11.02. When a copper mine near Pecos was selling out, the Holdens bought timber to be used as lintels.

Actual construction of the walls and interior, door frames, window frames and a table for eight was supervised by Olive and by Curry's father who had a background in carpentry, and by James Atcheson's father, a master craftsman, whom the Holdens paid \$5 a day in the midst of the Great Depression. On June 28, 1931 the house was completed, and the Holdens moved into their new quarters in July. Upon completion of the house, the *Avalanche-Journal* ran a story entitled, "Indian Lore of Southwest Given Exemplification in Home Being Erected by Dr. W. C. Holden." The house continued to be a topic of discussion by local residents. Many of them approached Holden at the house requesting that he build them a similar structure.

Casa Grande held not only appeal for local residents wishing to effect the same Santa Fe architecture into their own homes. It served as a focal point for countless students over the years who accompanied Holden on his many archaeological field schools. It was also the jumping off place for the much heralded Yaqui Expedition to Sonora, Mexico, in 1934. The Holdens hosted some of the nation's leading scholars, as well as a multitude of students and faculty from Tech. The home became an extension of Holden's work, a casual, relaxed place to socialize and discuss many of the topics important to Holden's growing group of acolytes—in history, anthropology, and archaeology. Olive seemed to have a real empathy for people, and maintained social contacts across the community and campus where she was considered bright and was highly respected.

Unfortunately, Olive was admitted to the hospital for some six weeks with severe peritonitis before she died on June 2, 1937, just a few short years after the completion of Casa Grande. Her funeral was held in the front room of the house that she had so painstakingly designed. Curry never lived in the house again.

Instead, Holden erected a second house, La Casita, in 1937. Two years later, he built Casa del Gallo y Sirena and an attached apartment called El Chico, with his second wife, Frances Mayhugh Holden. The complex of adobe structures became known as Adobe Row. Very few additional adobe structures existed anywhere in Lubbock.



In 1944, with plenty of experience using adobe, Holden published a Tech Research Bulletin, "Why Use Dobe" where he championed the material over wood frame construction because it was plentiful and cheap, as opposed to lumber, and its insulation properties were far superior. Totally sold on the old-fashioned Mexican way of mixing adobe, Holden, nonetheless, experimented, using a cement mixer to make adobes for an apartment and garage for his mother, and a planetarium behind the West Texas Museum on the Tech campus when the university couldn't raise funds for the structure. Holden also built out of adobe a kiln for Tech students to fire their ceramics projects. As late as 1975, Holden was demonstrating the versatility of adobe when he constructed an adobe oven at the Lubbock Lake Site capable of cooking enough meals for 45 workers at the dig site. ■

