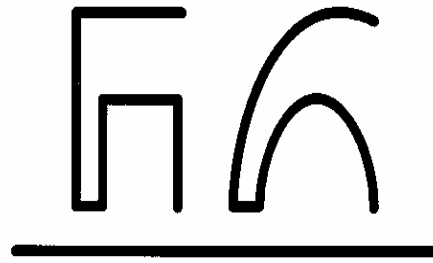
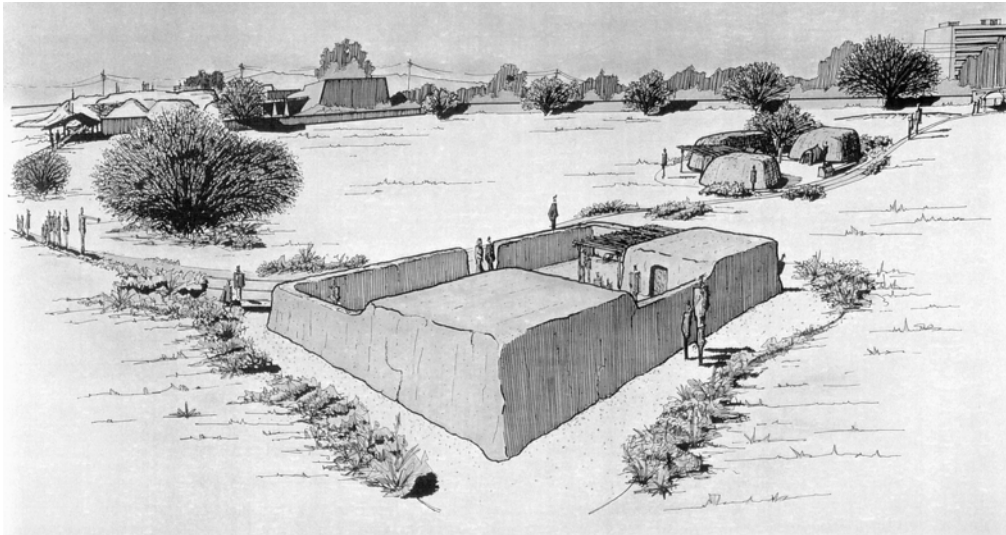


Pueblo Grande Museum & Archaeological Park



D O O R W A Y S T O T H E P A S T

hohokam houses



Abell & Associates Architects, Ltd.

Resource Packet For The
Doorways to the Past:
Hohokam Houses Exhibit



Introduction

Many exciting changes are in the works at Pueblo Grande Museum and Archaeological Park. Visitors to Pueblo Grande Museum will now be able to get a more complete picture of the Hohokam environment as they walk the Ruin Trail. With the addition of the Hohokam Interpretive Garden, a planned enhancement of the riparian environment along the existing crosscut canal and our new *Doorways to the Past: Hohokam Houses* exhibit, visitors will see a new aspect of Hohokam culture.

This resource packet was prepared for the museum by Susan L. Shaffer Nahmias, Ph.D. and is a guide for Pueblo Grande Museum volunteers. It contains background information about the two types of Hohokam house replicas along the Ruin Trail. Much of the information may be familiar from past training and outside reading, but the purpose of this packet is to assemble and summarize specific information on the topic for your convenience.

A second purpose of this packet is to highlight some important topics or points to include in your student tours. Some strategies and tips for touring are offered and possible interactive activities are suggested. As a handbook for Pueblo Grande Museum Interpreters, it is a starting point for touring a wonderful new addition to the Pueblo Grande Hohokam experience. It will surely grow and change as you incorporate your own ideas, experiences, and feedback from students and teachers.

Contents

Background

- What is a Pithouse?

- Hohokam "Neighborhoods" 1: The Pithouse Cluster

- Adobe Houses: How did they differ from Pithouses?

- Hohokam "Neighborhoods" 2: Adobe Compounds

- Hohokam Domestic Architecture: Center of Everyday Living

- The Pueblo Grande Community

Pueblo Grande Chronology

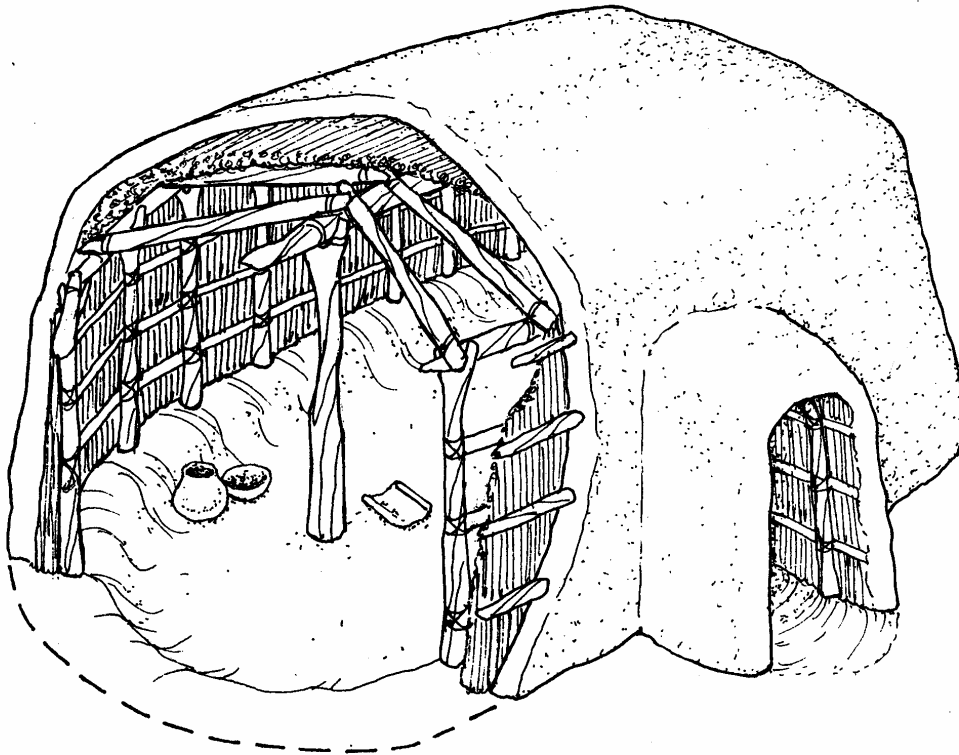
Reading List



What is a Pithouse?

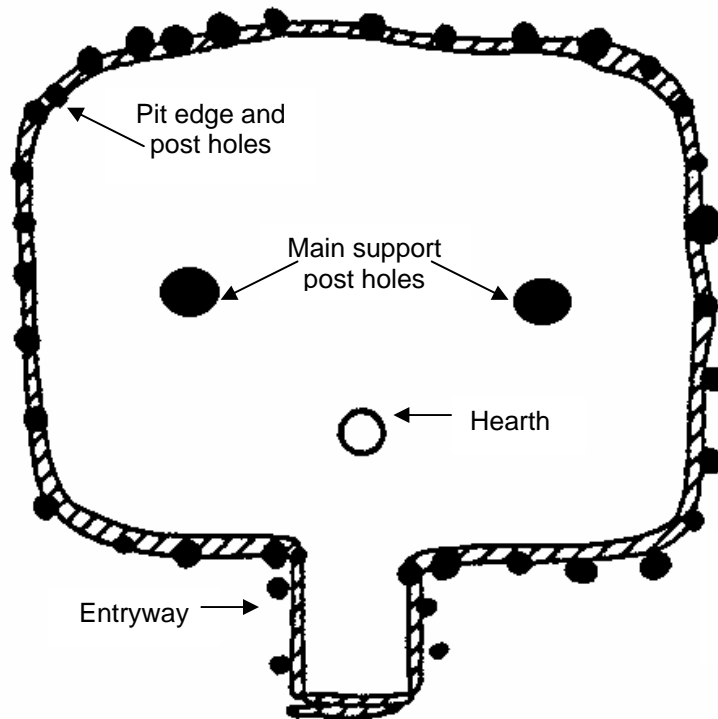
- ❖ **Pithouse** is a term that refers to a building constructed within a depression dug in the ground. The Hohokam built their houses in a shallow pit --- about one and one-half feet (one-half meter) deep.

Other prehistoric Southwestern cultures also constructed pithouses. However, Anasazi and Mogollon pithouses were placed much deeper into the ground --- three feet deep or more. The pits are so much deeper, in fact, that archaeologists describe these Anasazi and Mogollon pithouses as *semi-subterranean*.



- ❖ The **shape** of a pithouse was oval, square or rectangular with rounded corners. A short entryway was usually located midway along one side. The entryway floor sloped gently upward towards the ground surface or sometimes had a step.
- ❖ The pithouse **superstructure** was constructed within or on the sides of the pit. A framework of wooden beams was erected to support the upper portion of the building. These beams were made with large Sonoran Desert trees such as mesquite or cottonwood. Small branches, saguaro and cholla cactus skeletons were attached to the beams, becoming the building's skeleton. Grass or reeds covered the framework. Oftentimes the walls of the house were built on the outside of the pit and the pit walls were exposed creating a type of earthen bench (see illustration above). Adobe was applied over the surface of the superstructure. The layer of plant material covered with earth served as insulation. This helped the building to retain warmth in the winter and stay cooler in the hot, desert summer.

- ❖ Pithouses were mostly **one-room dwellings**. People entered and exited through the small protruding doorway along the side. Archaeologists have not found any evidence of either windows or smoke holes in the roofs of these structures. However, several kinds of **interior features** have been identified. These include small depressions referred to as **hearths**, **storage pits**, and in some cases, raised areas that may have been used as **sleeping platforms**.
- ❖ When archaeologists excavate a pithouse, the floor is one of the main features that they study. Features that they observe, in addition to those noted above, include postholes where the frame was placed. Sometimes a posthole will even contain the remains of a wooden post. Archaeologists can tell when they have reached the floor of the pithouse, because the surface is packed hard and smooth. Some floors were plastered with caliche, while others were simply beaten earth. Some pithouse wall surfaces have been found that were finished with a layer of thin, adobe plaster.



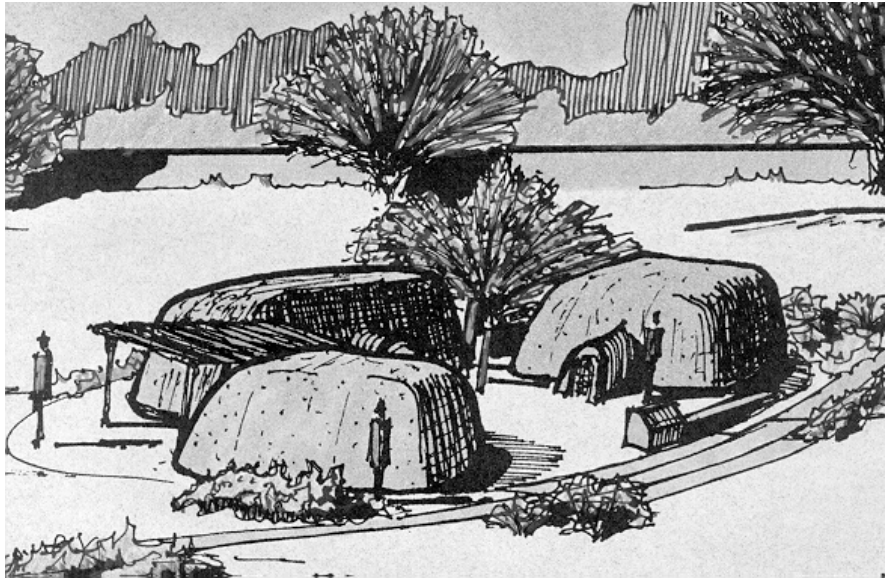
Example of floor pattern of pithouses found at Pueblo Grande

- ❖ Hohokam “plaster” was made of **caliche**, which the people dug out of the ground. Caliche is the white “hardpan” familiar to many people in south-central Arizona. It is a mixture of clay, sand and calcium. Caliche is a useful additive to mud that makes the resulting product hard and durable. At Pueblo Grande, archaeologists have found pits where caliche was dug and prepared for use in construction.
- ❖ Since some pithouses were destroyed by fire, portions of the superstructure can sometimes be found because it collapsed to the floor as the wood and grass burned. Imprints of these materials are occasionally preserved in chunks of baked clay--the remnants of a pithouse's mud-daubed exterior.



Hohokam Neighborhoods 1: The Pithouse Cluster

- ❖ Archaeologists have observed that pithouses were regularly arranged in groups around an open central courtyard area. They call this arrangement a **pithouse cluster**.

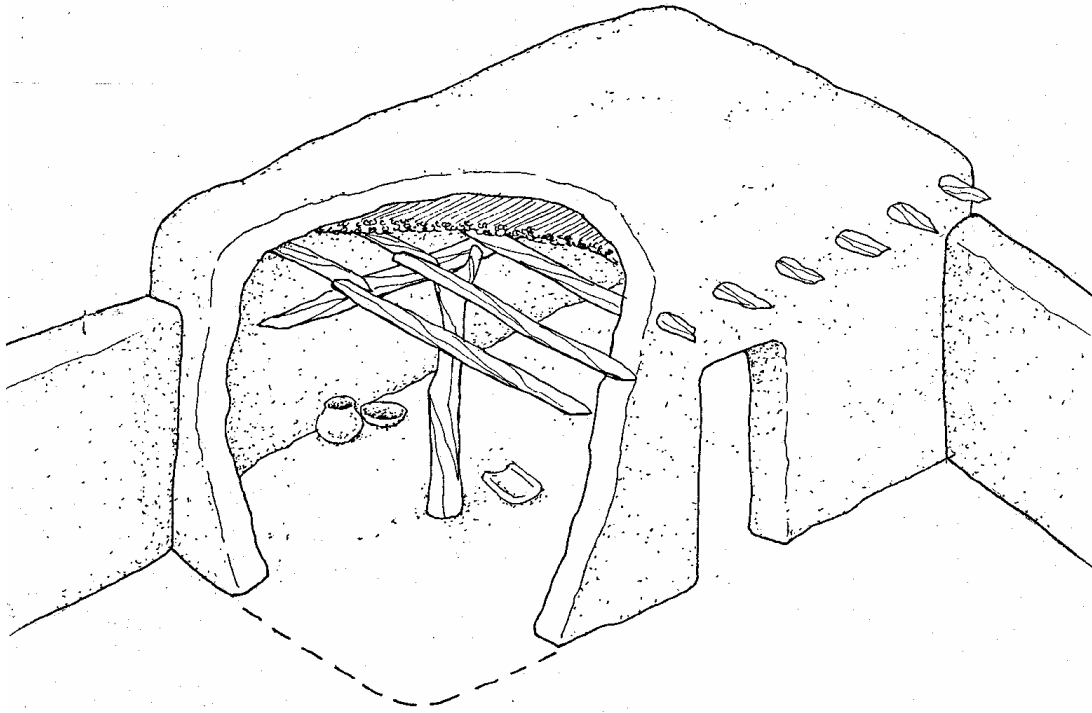


- ❖ The doorways of the structures in a pithouse cluster tended to face inwards toward the common activity area, called a **courtyard**. Individual pithouses provided storage and shelter, but were probably not used heavily during most days. People engaged in most activities outside.
- ❖ Some of the larger pithouses may have served as “council houses” where meetings were held.
- ❖ **Other structures** were present in and around pithouse clusters. **Ramadas** --- shade structures --- gave protection from the sun during the day when people were active outside. It is possible that brush-covered **windbreaks** were also used, as they are known to have been used in historic times. **Roasting pits** and **hornos** (semi-subterranean ovens) were probably used by more than one family.
- ❖ Residents of a pithouse cluster are thought to have been related to one another and may have been both nuclear and extended families. Members of these kin groups presumably cooperated together to achieve their daily tasks.
- ❖ A large Hohokam community such as Pueblo Grande would have had a number of pithouse clusters at any given time, housing dozens of different family groups.



Adobe Houses: How did they differ from pithouses?

- ❖ Throughout their history the Hohokam always used pithouses, but during the **Classic period** (see chronology), **coursed adobe houses** became more common. These houses had square corners and were rectangular or square in shape. Adobe houses were built on the surface of the ground, not within the traditional pit foundation.

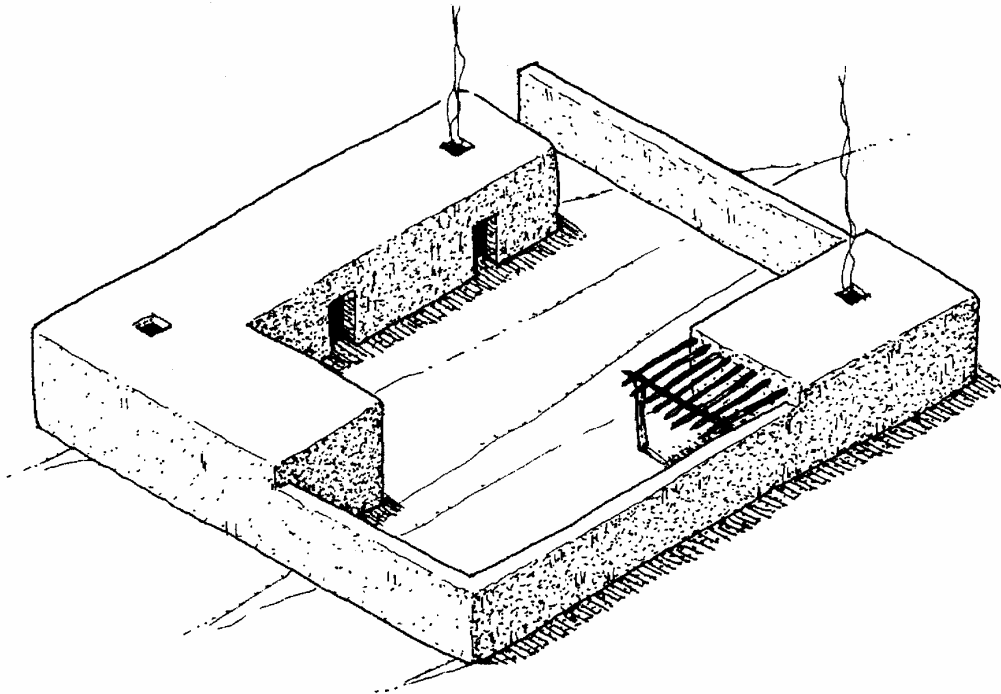


- ❖ **Coursed adobe** houses were constructed in layers of mud. The word “course” refers to a horizontal layer, as seen with modern brick or concrete block construction. Wet, caliche-rich adobe was piled up and allowed to dry in repeated construction episodes until the desired wall height was reached. Occasionally, the layers of mud would be placed on a **stone foundation** or in a trench to give the walls greater stability.
- ❖ Adobe house construction was similar to that of pithouses. In some of these buildings, upright wooden posts were used to support a **central ridgepole**. Wooden beams ran from the ridgepole to the tops of the adobe walls. Saguaro ribs, reeds, grasses or similar materials were laced together to make the ceiling. Mud plaster coated the surface, making a flat roof. A small number of adobe houses had more than one story, so the roof of a lower level became the floor of the one above. Like the pithouses, adobe houses had a doorway opening but probably no windows or smoke holes.



Hohokam Neighborhoods 2: Adobe Compounds

- ❖ Each adobe building contained one large room. Often, several rooms were built side-by-side. An important feature of Classic period Hohokam dwellings is that they usually were arranged within walled **compounds**. A thick adobe wall enclosed an area in which one or more rooms were built. This defined an outdoor space more precisely than did the courtyards of the pithouse clusters. Adobe compounds were like small apartment complexes.



- ❖ The rooms within an adobe compound were places where people slept and kept their possessions. Some rooms may have served solely as storage areas for surplus goods. Like with the pithouses, small hearths were located in the floor and used for heat and light. Cooking was done outside in roasting pits or in **hornos**.
- ❖ Pueblo Grande compounds contained up to 17 rooms each. These “apartments” may have been home to as many as 35 people. Up to 1,000 people may have once called the village of Pueblo Grande their home.
- ❖ Adobe compound architecture became common among the Hohokam during the Classic period (A.D. 1150-1450). At Pueblo Grande, most of the compounds are located north and east of the platform mound. More than 20 compounds have been found, and several more probably existed.



Hohokam Domestic Architecture: Center of Everyday Living

- ❖ Archaeologists use the term **domestic architecture** to identify the buildings that were constructed for people to live in. This is often different from other parts of the “built environment”, such as **public architecture** where people may assemble for community activities and **religious architecture** where public and private activities are centered on rituals and religious practices. Archaeologists consider an area of domestic architecture as a “habitation area.”
- ❖ **How do we know what went on in a pithouse cluster or adobe compound?** Archaeologists gather information in many different ways. They recover whole and broken artifacts during the course of excavation. They may find evidence of the raw materials that were used to make different objects, or even food remains. They take note of **where** material evidence is found in a site and the **physical or spatial relationships** between objects.
- ❖ Archaeologists also consider **ethnographic analogies**; they study the life ways of more recent cultures and use the knowledge they gain to help them explain ancient patterns of behavior. Archaeologists in the Sonoran Desert have found it useful to draw analogies to the historic O’odham (Pima & Papago) culture and others as they have worked to explain how the Hohokam lived.
- ❖ Many of the familiar, basic activities of daily life took place in the vicinity of a family’s home, whether it was a pithouse or an adobe room. Since we think that it was extended family groups that were living in these houses facing onto a central courtyard or enclosed within a wall, we assume that the members of the family cooperated with one another to achieve needed objectives. Food preparation, cooking, tool making, weaving and childcare may have been some of the shared activities. Children could play safely within eyesight or earshot of older family members.
- ❖ Some specific activities can be determined by tools that are found within a pithouse cluster or adobe compound. There are many examples. **Manos** (hand stones used for grinding) and **metates** (the stone basins that contained the substance to be ground) suggest food preparation like the grinding of corn or wild seeds. Sometimes there may be a residue of these plant products on the artifacts. Dry clay may have been ground into fine powder or small pieces for use in pottery making. Lumps of unused clay, wrapped and ready to use, may tell us that a potter lived in the house. Different kinds of **pottery** - plain or decorated, closed or open -- may have been used to hold water, prepare and cook food or serve it. Flat, **stone knives** are likely to have been used to cut and scrape agave leaves.

- ❖ A **Ramada** would have been an important staging area. Shaded and cooled by breezes, it would have been a comfortable setting for many tasks. Ethnographic reports of historic O'odham life provide more recent analogs: babies were rocked in cradles suspended within ramadas, women gathered to work and talk together, and often, a large olla contained drinking water to be dipped out by thirsty people.
- ❖ Hohokam sites often contain large roasting pits, called **hornos**. They were located near houses where they would have been convenient for several families to use. Hornos were cone-shaped holes in the ground where food was insulated and baked. Hornos were used to cook a variety of foods, but agave hearts and cholla buds may have been favorites.
- ❖ Two other feature types are commonly located in the vicinity of domestic architecture, though they are not architecture themselves. Nevertheless, they can contain significant evidence of the daily life of community members. **Trash mounds** accumulate the refuse of daily life. It is common for people to designate particular places in their living area to use for waste. Trash mounds start out small, but tend to grow over the years as the garbage piles up. The Hohokam seem to have occasionally burned the upper surface of a trash mound, and covered it with clean soil--perhaps to reduce odors and infestation. Three large trash mounds and many small ones were deposited at Pueblo Grande. For archaeologists, trash mounds are a rich source of information about the substance of daily life.
- ❖ **Cemeteries** were sometimes located adjacent to pithouse clusters. Their importance to the community may be implied by the fact that they were located nearby the dwellings of the living, and not some distance away. Excavation of prehistoric cemeteries and other locations where the dead repose entails many sensitive issues, and is carefully managed in conjunction with representatives of contemporary Native American representatives of tribes that are culturally affiliated to prehistoric peoples. Pueblo Grande Museum and Archaeological Park maintains a close relationship with members of the Salt River Pima-Maricopa Indian Community and other tribes to ensure cultural sensitivity.



The Pueblo Grande Community

- ❖ For years, visitors to Pueblo Grande have walked around, through, up and over the distinctive **platform mound**. The mound was surely a focal point for the people who lived here. The new Hohokam Houses exhibit will help visitors understand a little more about the everyday community life of this **large** (grande) **town** (pueblo) of the Salt River Valley Hohokam. It can be misleading to encounter only one building remaining out of a thriving community.
- ❖ The people of Pueblo Grande built many other structures. There were two, or maybe three **ball courts**. There were several large irrigation **canals**. At one time, there was a multistory adobe **Big House**, similar to the big house at Casa Grande Ruins National Monument near Coolidge, Arizona. Domestic architecture included clusters of pithouses and adobe compounds for residential use.
- ❖ Pueblo Grande was first settled around A.D. 450, some 1500 years ago. Archaeologists think that a small hamlet of farmers gathered near irrigation canals at the site, north of the Salt River. The community grew for several centuries, and Pueblo Grande benefited from its influential location at the headwaters of a major canal system. **People lived in pithouses**; often the houses were oriented so that doorways faced towards one another as they clustered around the central courtyards.
- ❖ Near the growing village, agricultural fields were concentrated to the west where they were irrigated by water from the network of canals that began south of the site and traveled in a northwest direction. Cultivated crops included maize, beans, squash and cotton. **Workers were needed to tend the fields**, as well as undertake the laborious task of hand-digging the canals and moving the fill that was excavated.
- ❖ About 950 A.D., Pueblo Grande's northwest **ballcourt** was constructed. It was an oval-shaped, banked structure with an opening at each end. Ballcourts are thought to have been the site of public gatherings which were focused on the game played within. They may have had both social and ideological functions for the members of the community. The northwest ballcourt seems to have been used until about 1200 A.D., when it became a trash dump. We have little information about Pueblo Grande's other ballcourts, such as the time of construction or other details, since they have not been excavated.
- ❖ During the Classic period (A.D. 1150-1450), platform mounds were significant features of Hohokam villages. **Pueblo Grande's platform mound** began as two separate structures that merged into one about 1200 A.D. The platform mound was a large compound itself, surrounded by its own thick adobe wall. Rooms topped the mounds, and clustered around its base. Details about the mound can be acquired during a tour; but it's important to recognize that it was an imposing edifice in the Pueblo Grande community.

Residents of the surrounding residential compounds would have been conscious of the mound and the importance of the activities that took place there.

- ❖ Another imposing landmark within the village of Pueblo Grande would have been the **Big House**. It no longer exists, but its ruins were described in the late 1800s. The big house was located about one-half mile north of the platform mound. It may have been four stories high, with several rooms per story. Its presence at Pueblo Grande gives credence to archaeologists' belief that Pueblo Grande was one of a few very important communities in the Salt River Valley.
- ❖ Imagine daily life in this large desert community. **Despite the many buildings constructed at Pueblo Grande, most activities took place outside.** There was a lot to do to make sure that life went on as smoothly as possible. A growing population means a constant stream of mouths to feed and children to nurture. The people worked hard to construct and maintain the irrigation system that sustained their farms. Crops need attention from planting through harvest time. Seasonal gathering of wild plant foods and hunting of animals also had to be scheduled. Tools, equipment, and garments had to be made by someone, and every product required the collection and preparation of raw materials. Organization and management of such a busy place falls to some citizens, and community members' hopes and prayers are generally facilitated by religious specialists. **Pueblo Grande must have been a very lively place!**



Pueblo Grande Chronology

Adapted from Desert Farmers at the River's Edge

YEAR	PERIOD	VILLAGE CHARACTERISTICS
1350-1450	CLASSIC (1150-1450)	Decline of Pueblo Grande, evidenced by changes in architecture. Abandonment follows.
1300-1350		Pueblo Grande Big House built.
1200-1300		Abandonment of N.W. ball court Merging of two smaller platform mounds into one large one.
1150-1200		Pueblo Grande citizens construct above-ground adobe compounds to live in. There are about 1000 people living here. Two small platform mounds are built. There are formal cemeteries.
1120-1150	SEIDENTARY (900-1150)	A small, caliche-capped mound built at Pueblo Grande
950		Northwest ball court is constructed
875		COLONIAL (750-900)
700	Pueblo Grande is a small pithouse village.	
450-500	PIONEER (1-750)	Appearance of first pithouses at Pueblo Grande - it is a small hamlet (<i>a pueblito? The pueblo pequeno?</i>)



Reading List

Andrews, John P. and Todd W. Bostwick

2000 *Desert Farmers at the River's Edge: The Hohokam and Pueblo Grande*. Pueblo Grande Museum and Archaeological Park, Phoenix.

Bartlett, Michael H., Thomas M. Kolaz and David A. Gregory

1986 *Archaeology in the City*. The University of Arizona Press, Tucson.

City of Phoenix

1986 *Squaw Peak Parkway Archaeology*. Pueblo Grande Museum, Phoenix.

Doyel, David, ed.

1987 *The Hohokam Village: Site Structure and Organization*, American Association for the Advancement of Science, Glenwood Springs, Co.

Haury, Emil W.

1976 *The Hohokam: Desert Farmers and Craftsmen*. University of Arizona Press, Tucson.

Henderson, Kathy, Toby Taylor, and Johna Hutira

1995 *Layers of History: The Archaeology of Heritage Square*. Pueblo Grande Museum & Northland Research, Inc., Phoenix.

Houk, Rose

1992 *Hohokam*. Southwest Parks and Monuments Association, Tucson.

Houk, Rose

1987 *Casa Grande Ruins National Monument*. Southwest Parks and Monuments Association, Tucson.

Hulen, Thomas G.

1997 *The Desert House*. Desert Botanical Garden, Phoenix.

Jensen, Karolyn J., Shereen Lerner, and Susan Shaffer Nahmias

1997 *Our People Our Places: Cultural Resources of the Salt River Pima-Maricopa Indian Community*. Archaeological Consulting Services, Ltd.

Nabokov, Peter and Robert Easton

1989 *Native American Architecture*. Oxford University Press, New York.

Noble, David Grant, ed.

1991 *The Hohokam: Ancient People of the Desert*. School of American Research Press, Santa Fe.

Noble, David Grant

1998 *101 questions about Ancient Indians of the Southwest*. Southwest Parks and Monuments Association, Tucson.