

SONOMA MISSION:
AN ARCHAEOLOGICAL RECONSTRUCTION OF THE
MISSION SAN FRANCISCO DE SOLANO QUADRANGLE (1)

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I. INTRODUCTION

Sonoma Mission (2) was founded in 1823, the same year that Spanish domination ended in Alta California. With the shift from Church guidance to secular rule following only eleven years later, no interest remained for any extension of Mission life in California, and no program of maintenance was provided for those Missions in existence. Vallejo, during the Mexican period, was secularly oriented, while the Church provided for the few spiritual needs of the families and soldiers serving under his paternalism. The Indians lived virtually in bondage, there being no concern whether they remained heathen or Christian. On the Sonoma coast the Russians of 1810 were developing their economic interests in the sea otter trade along with attempts at agriculture and boat building. This activity of the Muscovites posed a disturbing threat to the residents of Sonoma and San Francisco, for it raised questions of international politics and territorial expansion. In 1846, on the doorstep of the Mission San Francisco de Solano, California came of age with the Bear Flag Revolt. The coming of the Gold Rush brought to California people interested in making history, not recording it. With these events taking place it is not difficult to understand how a structure such as the Sonoma Mission, built as late as 1823, could slip into unrecorded oblivion in its structural details, yet remain and be enriched as an institution through the medium of local folklore. The latter, though interesting, is rarely factual and seldom pays archaeological dividends.

With the turn of the century the making of local history had slowed to a more nominal pace. California was becoming cognizant of the ruins marking the milestones of its historic past. At this point nature struck a devastating blow with the earthquake of 1906. For some years following, the Bay Area was rebuilding itself, not its historical landmarks.

Since the founding of the Mission, its grounds and buildings have served as church, winery, store, hay storage, and finally as a local refuse dump. In 1911, when partial restoration was attempted, the nature and number of problems were not fully realized. Almost every earlier stage of reoccupation resulted in some form of structural alteration of the original Mission features. Restoration in part has proceeded on the basis of oral tradition, sometimes of third generation vintage or older.

The primary purpose of the 1954 season's work was twofold. First, it represented a continuation of the work started the previous summer by James A. Bennyhoff and Albert B. Elsasser with the primary objective being further inquiry into some of the unsolved problems left by these earlier excavators. Second, should time permit within the limitations of our two weeks, we were to ascertain as nearly as possible the location and nature of any buildings which would define the extremities of the original Mission quadrangle. Though many problems still remain, as with most historical reconstructions, it is felt that the additional data gained now permit a much broader and more accurate view of what the original Mission grounds were like.

Any attempt at Mission reconstruction should retain the idea that Mission life necessitated the environment of a nearly self-sufficient socio-economic unit. This Mission, like others, probably followed the general practice of constructing such buildings as the church, chapel, dormitories, priests' house, in the form of a partially or completely enclosed quadrangle. Beyond the central area there must have existed adobe mixing pits, kilns for the firing of tile, wood and metalworking shops, tannery, stables and other auxiliary structures. With our current excavations we feel this original quadrangle is now known to us, but with the admission that most of the lesser structures are lost as far as any practical plan of recovery for visual display is concerned. One exception exists--this is in the little-built-on property to the east and north of the present State-owned property. We know Building C extends into this northern area and there are reports of lesser structures beyond this building.

It is highly commendable that the California State Division of Beaches and Parks has chosen to explore as fully as possible the potential resources within the area of State ownership and to express interest in the potentialities of the immediately adjacent areas. Foresight and acquisition in this case may preserve for the people of California an accurate picture of the Mission's history, which marked the end of the Mission system in California, spanned the later years of the colorful life of Mariano Vallejo, and witnessed the dawn of California statehood. It is with this idea of reconstruction and preservation of the Sonoma Mission that the present paper deals.

II. REVIEW OF EARLIER WORK

Prior to any landscaping within the present courtyard of Sonoma Mission, Aubrey Neasham, historian for the State Division of Beaches and Parks, thought it desirable to conduct some form of investigation to determine whether or not any sub-surface structures were present. In order that the investigation be done by trained personnel, the services of the Archaeological Survey of the University of California were called upon. The first season's excavations by James A. Bennyhoff and Albert B. Elsasser, published under the title "Sonoma Mission -- An Historical and Archaeological Study of Primary

Constructions, 1823 - 1913" revealed for the first time many new features of the Mission. Also realized were new problems, solutions of which were prevented mainly by a shortage of time. Any error of interpretation made by the 1953 authors is not due to lack of insight or technique but rather to a lack of data at the time when funds were exhausted. The 1954 excavation provided some answers to older problems and led to the discovery of new structures.

Of primary concern to Bennyhoff and Elsasser were: (1) How much of the existing structures actually represented primary Mission construction, and, if of primary origin, to what degree had they been altered in the various periods of post-Mission occupation and rehabilitation. (2) What was the relationship of newly-exposed architectural features to existing features. (3) To what degree could the existing and excavated features be identified with specific buildings as noted in reliable historic documents, early illustrations, and other published works.

Early in the preparation of their manuscript following excavations, Bennyhoff and Elsasser realized that any meaningful discussion of their findings was dependent upon a thorough knowledge of all the available primary historical sources. The often-cited secondary and verbal sources frequently proved more confusing than useful. Those interested in the documentary aspects of the Mission's history are referred to the 1953 report of excavations.

To comprehend fully the work completed by the two earlier excavators, reference should be made to their Map 1 which shows their achievements in detail. To establish continuity between the two seasons of excavation there is presented here, with slight modifications, a summary of the building sequences at Sonoma Mission as given by Bennyhoff and Elsasser (1954:16).

On July 4, 1823 Padre Jose Altimira blessed the site of the Mission San Francisco de Solano and there followed the erection of the original wooden Chapel, a temporary structure completed in 1824. It stood in approximately the same location as the later Adobe Chapel and was probably razed when the latter was built in 1840.

The first Adobe Church was begun in 1827 and finished in 1832. It stood just to the east of the Priests' House and was built by Indian laborers. The walls of the Adobe Church collapsed between 1834 and 1838, probably from the weakening effects of heavy rains which followed the supposed temporary removal of the roof in connection with remodeling. There is no satisfactory evidence that any later structure was erected on the site of this building, until decades after the American period began. The Adobe Chapel was built in 1840 on the site of the first wooden chapel, under the direction of Vallejo, to provide religious services for his troops and the increasing population of the town of Sonoma. The Chapel has survived, with modifications, to the present day. The Priests' House was probably erected in 1825 just east of the original wooden

chapel. From 1832 on, at least, the Priests' House can be identified with the modern structure which now functions as a museum. The Priests' House was joined to the newly constructed Chapel in 1840. The remaining history of Sonoma Mission is primarily one of decay until the restoration of the Chapel and the Priests' House after 1910. Shortly after 1874 the Chapel and the Priests' House were separated and a breezeway formed between the two buildings. A sacristy was built adjoining the east wall of the chapel. In 1903 ownership of the Mission passed to the State. The 1906 earthquake left much of the Priests' House in ruins and caused the collapse of the southwest corner of the Chapel. Restoration began in 1911 and was essentially completed in 1913.

The essential architectural features discovered and described by Bennyhoff and Elsasser (1954:21-45) are:

Building A. This building lies to the north of the present museum, and its foundations are continuous with those of the museum. Building A and the museum have been interpreted as jointly representing the original Priests' House. Map 1 of the 1953 excavations shows this building to terminate at the present gateway of the Mission. There is now evidence that both Building A and the museum foundations continue in an easterly direction, extending under the present east wall of the State property. The relationship between the Priests' House and the original Adobe Church is of interest and will be covered in detail in discussing the most recent excavations.

Building A was paralleled on its north side by a tile walk and drain eight feet wide. The walk probably was originally roofed over, as is the front of the present museum. The east end of the walk and drain have been considerably disturbed by drainage ditches; however, we were able to establish the eastern end of this walk as is shown in our Feature 19 (Fig. 1).

Building B. The foundation structure of this building is immediately east of the present Chapel. The exact function of this building has not been determined. Since its foundations are intrusive into the Chapel's walkway laid in 1840, it would at least post-date the tile walkway. An artist's sketch of 1889 shows a small wooden structure occupying about the same location as Building B, but no mention is made as to its use. Judging from the relationship of Building B to the present Chapel, Bennyhoff and Elsasser have tentatively selected the term sacristy to represent this structure. They emphasize the desirability of more information on this structure.

The Chapel. The present chapel, built in 1840 by Vallejo, underwent considerable alteration in subsequent years. These changes are discussed by Bennyhoff and Elsasser (1954:40) in some detail. Our work did not concern this building and it will not be treated in this paper.

The Well. No further work was done on the well first discovered in 1953. It has generally been concluded that the well represents a post-Mission feature. Possibly the well-shaft may date back to some period of Mission occupation but the wood structure built around the shaft is so out of character as to material and location with other Mission features that it would appear to be better associated with the late Mexican or early American period.

III. EXCAVATIONS OF 1954

A. Relationship Between the Priests' House and the Location of the Adobe Church

One of the major problems unsolved in the Bennyhoff and Elsasser reconstruction was the possible relationship between the existing gateway (breezeway) and both the Priests' House and the Adobe Church. This is discussed in some detail under Feature 17 (Bennyhoff and Elsasser, 1954:36), in which it was theorized that the Adobe Church was directly involved.

Largely because archaeological data were lacking at the time, it can now be shown that the very tentative reconstruction presented was in error at several places. Mainly, the Adobe Church does not seem to be involved at all at this particular point in the architectural groundplan. Originally Bennyhoff and Elsasser concluded, "The Priests' House was built in 1825 as a distinct building; the northeast corner of Building A corresponds to that of the original Priests' House. A roofed colonnade may or may not have existed along the east side, through the present gateway. When the foundations of the Adobe Church were laid in 1827, the Priests' House was extended eastward to join the Church without a gap." (Bennyhoff and Elsasser, 1954:37). Their conclusions were based upon the following: (1) that the Priests' House and the Adobe Church were not laid out together in 1827 was suggested by the thick east wall of Building A; (2) that at the northeast corner of Building A they could find no definite evidence that the foundation continued on in an easterly direction; hence they concluded they were dealing with the original northeast corner of the Priests' House; (2) Feature 17, which is contiguous with the foundation of the present gateway wall, was interpreted as constituting an exceptionally thick adobe wall; because of its thickness it must therefore represent the west side of the Adobe Church; (3) it was thought that the remnant of tile paving just east of the gateway drain (Bennyhoff and Elsasser, 1954:Map 1) would possibly represent a walkway along the west side of the Adobe Church.

What actually occurred is made clear by the 1954 excavations. Bennyhoff and Elsasser are probably quite right when they assume that the Adobe Church and the Priests' House were originally separate structures and that the northeast corner of Building A marked the original corner of the Priests' House. Very likely, also, a tile walk was present along the east side of this building. Our Feature

19 is the now fully-exposed remnant of tile paving earlier referred to, and it clearly shows the latter to be a continuation of the walk on the north side of the Priests' House. The tile pattern forms a definite corner and originally probably extended in a southerly direction along the east side of Building A now known as the Priests' House (Map 1, Map 2, Fig. 1). The tile bears no relationship to the Adobe Church as earlier suggested.

Apparently in 1827, when the Priests' House was extended so that it connected with the foundation of the nearly finished Adobe Church, two sets of additional rooms, i.e. four rooms of about equal size (see below), were added to the Priests' House through mere extension of the original foundations. This extension would have then destroyed that portion of the tile walk which, prior to alterations, ran along the east end of the Priests' House. Map 2 and Figure 1 clearly show the position of the two sets of added rooms and the nature of the foundation structure as related to existing features. What caused Bennyhoff and Elsasser to assume their thick section of wall in Feature 17 represented the wall of the Adobe Church is that they could not know at the time that they were viewing the extension of the foundation of the Priests' House. A cement walk on private property prevented them from excavating far enough to visualize the full extent of the construction. It was possible for us to gain a broader perspective by digging on the east side of the south end of the present gateway wall, where, in Test Pit 4 (Map 1), we could clearly observe the continuation of the foundation. Also, by extending the area of excavations on the north end of the gateway wall, we could again follow with no difficulty the partition foundation of the Priests' House to a point where it met the outside or north wall foundation, which then continues in an easterly direction, extending under the present east wall of the State property. This is clearly shown in Plate 4a and in Figure 1.

Of the four additional rooms discovered, the northwest room, for example, provides an inside measurement of 10' x 17'. A room of this size is not out of character with some of the priests' quarters at Carmel Mission. There was no way to determine the exact size of the two rooms to the east, since they are under the house on the property belonging to Mrs. Z. Tomasi. Also, in the reconstruction (Map 2) we only surmise that this latter set of rooms made contact with the Adobe Church. However, by noting the size of the northwest room (above) and assuming that the rooms east and southeast of it were the same size, we discovered that the hypothetical outside wall of these eastern rooms would, when projected in a northerly direction, line up perfectly with the wall foundation at the east end of the newly-discovered Building C. Thus one corner, the southeast corner of the Mission Quadrangle, was completed. This reconstruction may be seen in Map 2. Because of this apparent alignment it is felt that the Church location is fairly accurate. A small test pit was made in the driveway between the houses owned by Mrs. Z. Tomasi and Mrs. J. Tomasi and no foundation remains were noted to indicate the

possible location of the Church; however, there is no positive evidence to assure us that the front wall of the Adobe Church was flush with the face of the Priests' House, and our single test pit could easily have been north or south of any foundation features.

The negative evidence supports the idea that the Church was located at least as far east as the present east wall of the Mission Quadrangle (see Map 2). If this were not the case, our Test Pit 2, shown on Map 1, should have intersected any foundation traversing the area. Test Pit 2, however, produced nothing other than the usual mixed rubble of dump refuse. If the original dimensions given for the Adobe Church are correct and our placement is not too far off, then the northwest corner of the Church might be on State property in the vicinity of the present women's rest room.

B. Features

The term feature as used here will refer to specific points which are of unusual interest or points relating to construction where elaboration is desired. The numbers used are a continuation of the series started by Bennyhoff and Elsasser in their work of 1953.

1. Feature 18 (Pl. 1c). This feature consists of an eight pound cannon ball resting in the debris at the east end of the tile walk which formed the north side of the Priests' House. This was given a feature number since it represents one of the few artifacts recovered from the excavations which can be assigned with any certainty to the Vallejo period of occupation. No explanation is offered as to how the cannon ball came to occupy its present location.

2. Feature 19 (Pl. 1d; Fig. 1). This is a remnant marking the end of the tile walkway which formed the north side of the Priests' House. It is the fully exposed area which Bennyhoff and Elsasser thought might represent a walk along the west side of the Adobe Church.

Some detail is given here (Fig. 1) since the tile pattern may be of interest in future reconstructions. The outside corner is marked by a definite post hole which would have adequately taken care of a 6" by 6" post; however, no wood fragments now remain. Because of the size of the post no attempt was made to cut a tile to fit around the wood as in the case of the smaller inner post (Fig. 1) located midway between the foundation of the Priests' House and the corner of the tile walk. The inner post measured approximately 3-1/4" by 3-1/4" and was set in a circular hole in the tile. Judging by the abrasion marks on the tile, it is assumed that the hole, rather than representing a tile originally cast with a circular hole, had been chipped out and ground smooth. A similar situation was noted for two post holes in Building C.

In general the tiles which form the walk are inconsistent in their size, ranging from 9" x 9" to 13" x 13", with various combinations between these two extremes. Rarely do perfect squares occur. Bennyhoff and Elsasser suggest that the tiles might have been made in several different sized press molds. I would rather assume, on the basis of the varied dimensions and the irregularity of the surface on the underside of the tile, that they were made by compressing damp clay between two flat sticks, alternately forming the sides. The irregular upper surface thus formed became the nether surface when laid. Once sun-dried, the tiles probably were fired at a temperature under 1000° F., since all are soft and have the dark, "reduced" interior. As earlier noted the width of the walk is 8 feet. In the report of the 1953 excavation, Bennyhoff and Elsasser observed a small portion of our Feature 19 and correctly interpreted it as part of the walk along the north side of the Priests' House, with an alternate suggestion that it might possibly represent a fragment of walk on the west side of the Adobe Church. The point in question is more fully discussed in the present report under the section "Relationship Between the Priests' House and the Location of the Adobe Church" (p. 7).

C. Building C.

Building C, which extends well beyond the present northern limits of State property, represents one of the largest and best preserved of the sub-surface ruins so far unearthed at Sonoma Mission. The outside wall measurements are 93' x 27'; inside wall to wall measurements are 88' x 21'. Until complete excavation of the interior can be done we can only speculate as to the function of this building. Its location and size tentatively suggest that it may have served as a dormitory for resident Indian neophytes. The Annual report of the Mission for 1827 refers to the construction of new living quarters about 82' x 33'. No specific mention was made whether this house was to be occupied by padres or Indians. The position of this building with respect to the extremities of the Priests' House provides intriguing speculation as to the possible location of the Adobe Church, as can be observed in the reconstruction of the quadrangle in Map 2. Though only partially excavated, enough interesting structural features were exposed to indicate that Building C was of some significance in the total plan of the Mission Quadrangle (Fig. 2, a-d).

1. General Description. The building, a long narrow rectangle parallel to the Priests' House, forms the greater part of the northern border of the Mission court yard. Remnant adobe brick walls rest upon well-tamped rubble foundations; and the interior area, so far as exposed, is covered with a fired clay tile floor of excellent quality. Some sort of auxiliary structure is attached to the west end of the foundation (Map 1; Pl. 4, b, c).

2. Foundation (Pl. 1a; Pl. 2c-d; Pl. 3d). The foundation of this building is of the same construction as observed by us and Bennyhoff and Elsasser in the foot walls of the Priests' House (ibid., p. 22). The general practice was to provide as firm and level a base as possible upon which to erect the adobe walls and additional superstructure. To accomplish this, numerous small field stones, up to 5 inches in diameter, were puddled in a matrix of adobe mud. In this particular building the foundation, especially in the area which we interpreted as a door way, is characterized by the mixture of numerous pieces of broken roof tile with field stone. No such occurrence was noted in the Priests' House by Bennyhoff and Elsasser or by us. This may possibly mean that Building C is of somewhat later construction than the Priests' House and Adobe Church, the reject and broken roof tile from these two structures being used in Building C, perhaps because of a growing shortage of easily obtainable field stone. Any variation in the type of floor or roof tile which could be detected might in the future provide a partial key to the sequence of building construction or identify certain structures as belonging to the same period. Pottery differences serve this purpose in the analysis of Southwestern archaeology and in a similar way varied organic constituents in adobe bricks may be used for relative dating of early historic sites in the west.

Because of the irregularity of the field stones, the width of the foundation varied between 38" and 43" on the north, east, and south sides. The west wall foundation was only 24" wide. Although the west wall was an end wall, it functioned more as a partition, as one can observe in Figure 2a. The main north and south walls, carrying the bulk of the structural weight of the building extended on past the end of the west wall where they terminated without possessing any connecting wall between them at this point. This provided some manner of open-end auxiliary housing.

3. Adobe Walls (Pl. 2b; pl. 3a, b, d; Pl. 4b, c; Fig. 2b). Almost the entire south wall contained several courses of well-formed adobe bricks set firmly in brown bonding clay. The size of individual bricks remained fairly constant, being 22" to 23" long, 11" wide, and 3" thick. Any great variation in size was noted only where a broken brick was used. Though some attempt was made to determine the pattern of laying the brick (Fig. 2a; Pl. 3d) no consistent method could be detected other than that in any contiguous series of bricks two general practices were followed; (1) as in modern masonry, the technique of breaking vertical joints between courses and at corners was employed; (2) with walls being 36" to 40" thick, the internal joints of each course of brick were also broken to provide an added measure of strength.

Variations in the pattern were frequently brought about in internal wall structure by the use of broken bricks or as the result of filling an extra large gap with a mass of bonding clay and adobe rubble. The separation of these features is often difficult since, with time, old adobe walls tend to blend into an inseparable mass.

By shaving a wall with a shovel and using water to emphasize color and density, features occasionally can be sharpened sufficiently to record patterns photographically. If the feature is important enough, infrared film could be employed (Buettner-Janusch:84).

4. Interior Tile Floor (Pl. 1 a-b; Pl. 2 a-d; Pl. 4 b-c; Fig. 2c). Limited testing of the interior of this building suggests that with the exception of the southeast corner, which was disturbed during the construction of the rest rooms, most of the floor tile should still be present in fair to excellent condition. The best preservation was observed in that portion of the building which occupies State property and has for some time been protected by several feet of overburden resulting from an earlier dump around the large cactus thicket. (Pl. 2a; Pl. 4b-c). The larger portion of the building lies to the north of the State property and here the tile floor is covered with about 6 inches of top soil and has been subject to more erosional factors.

Though not inspected in minute detail, the tile here appears to be very similar to that forming the walk north of the Priests' House, differing mainly in that greater uniformity and better surfaced pieces appear more common than in the latter walk. Possibly more care was taken in the selection of interior tile. Individual tiles vary in dimensions from 10 to 13 inches on the sides and are about 2 inches thick. Because of the lack of consistency in tile sizes, cumulative errors developed at various intervals, this being most apparent in the corners. To solve this problem a simple adjustment was made, either by cutting a tile to size, or, if the gap was small, by using flat stones (Pl. 1b; Fig. 2c-d). For very small corrections, an excess of mortar was used between the tiles.

5. Doors (Pl. 3c; Fig. 2d). In most cases where adobe bricks have been removed and have left only the foundation, the latter provides little or no indication of the former presence of external apertures because it lies below any possible sill line. However, along the south wall we encountered a 7 foot break in the remnant of the adobe brick wall. The foundation beneath the break differed from the adjacent portions in that it contained an excess of smashed roof tile bordered on both sides by a row of uniformly selected cobbles. This debris was flush with the floor tile and may have served as the base for a threshold (Pl. 3c). Further exploration to the south on the outside of the wall would have been desirable but the presence of the large cactus halted operations at this point.

D. Test Pits (Map 1).

1. Test Pit 1. Test pit 1 was placed at the north end of the Chapel in anticipation of locating some indication of an extended foundation from the present Chapel. This location was selected because, in a recent repainting of the Chapel, there was clearly outlined on the north wall a large rectangular patch area. This was

no doubt brought about by change in paint color resulting from differential absorption by adobe brick of two different densities. Nothing was found in the test pit.

2. Test Pit 2. This was for the purpose of checking for any possible extension of foundation from the Priests' House. Also, we had hoped at this point to intersect a foundation or walkway of the Adobe Church. Negative results were obtained.

3. Test Pit 3. This was a re-examination of Feature 17 of Bennyhoff and Elsasser in order to determine if this was the wall of the Adobe Chapel as they had earlier suggested, or if it was just the extension of an inner partition of the Priests' House. An extended foundation indicated the latter to be the case.

4. Test Pit 4. This was placed at the end of the present gateway in order to determine if the foundation of the Priests' House continued in an easterly direction. Positive evidence of a foundation does indicate a continuation of this structure.

E. Bulldozed Areas.

In archaeology it is generally considered unorthodox to use mechanical equipment to unearth scientific specimens. Often it is the information around the specimen and the conditions under which it is found that are as revealing as the object itself. At Sonoma Mission, however, we were faced with limited time and relatively large areas to examine. Our problem was to explore as fully as possible the subsurface of the courtyard contained within the present limits of State ownership. For this purpose the bulldozer served as the ideal aid. Even though in most cases the sampled areas showed negative results, these nevertheless were part of the necessary information.

F. Whitewash.

Of interest here was the discovery of a large mass of what appeared to be calcined wood ash on the floor of Building C just within the area suggested as a doorway. Close examination of this material proved it to be burned sea shell, representing at least five different species of shell. The types of shell, mostly variants of mussel and clam, are characteristic of the composition of Indian shellmounds along the coast. It is probable that these shells, derived from Indian sites, were reduced by fire to a form of lime suitable for either mortar or whitewash for the buildings. A similar practice has already been documented for the Carmel Mission, where shell was specifically burned for the production of white wash (Harrington, 1945).

The location of the lime (shell) on the floor of Building C indicates that it post-dates the building, but does not preclude

the idea that such a practice could have been carried on at an earlier date at Sonoma Mission. At Sonoma the distance from the coast presented a considerable transportation problem. No local commercial lime was available until after 1850, well into the post-Mission period, and the sources of this lime, in the Tomales Bay area, were poor in production (Treganza, 1951).

G. Adobe Pits.

The bulldozed area in the northwest corner of the courtyard produced large irregular masses of almost pure adobe along with fragmentary nodules. Here also, several pieces of worked obsidian, of probable Indian origin, were uncovered. It is possible that this area when further explored will reveal some evidence of brick manufacture. With considerable demand for such an item, it is probable that sun dried bricks were made not too distant from the Mission.

H. Artifacts.

In the 1954 excavation only those artifacts which had some positive bearing on early Mission history were saved. This included a cannon ball, a fragment of obsidian arrow head, and several obsidian scrapers. Both in digging and in bulldozing numerous Caucasian artifacts were encountered in the form of broken glass, porcelain, and metal fragments. None of these occur in stratigraphic position, having earlier been dragged about through leveling activities. In any case Bennyhoff and Elsasser saved an adequate sample of the latter in 1953 and their specimens, along with what was recovered by us, are now on deposit in the University of California Museum of Anthropology.

IV. THE MISSION INDIAN CEMETERY AND VILLAGE

Two problems not fully understood at the termination of the 1953 explorations were the location of the village or villages from which the Indians were drawn into Mission life and the location of the Indian cemetery.

Though the field has not been fully explored, it is known to have been a general practice in establishing California Missions to select a site in near proximity to large Indian villages. This is clearly demonstrated at Carmel Mission, where numerous sites are located along the adjacent Carmel river and where part of the Mission garden encroaches upon a historic Indian site.

At Sonoma a general survey was made from the present Mission grounds back to the local Caucasian cemetery, along the lower border of the hills, and around areas which earlier were flowing springs, now capped and serving as pumping stations. No evidence of Indian occupation was detected in any of these localities. Approximately

one quarter mile west of the town plaza a large mound rises to an elevation of about five feet, having from a distance the appearance of an aboriginal village site. This mound was examined in 1954 and proved to be merely a natural rise which contains no evidence of previous Indian occupation. Judging by glass and porcelain fragments recovered, it might have served earlier as the site of some historic dwelling.

Mr. Fred Oltman of the State Division of Beaches and Parks called to our attention the presence of a mound of dark soil near a former spring behind the Vallejo barn on the Old Vallejo Home site. This proved to be an area of Indian occupation, and produced a large hopper-mortar stone. This specimen subsequently was placed in the Mission Museum collection.

The lack of Indian village sites in the near vicinity of the Mission suggests that the Indian population utilized at the Mission was probably drawn from the numerous villages scattered along the banks of Sonoma creek, but at some distance from the Mission.

Segregation at burial between Caucasian and Indian was apparently a Mission practice. This is well illustrated at Mission Santa Barbara, where rather extensive Chumash Indian cemeteries can be identified as being definitely distinct from the burial plots of the padres.

Until now the Indian cemetery at Sonoma has been unknown. It was reported to us that about a half-mile northwest of the Vallejo Home, on the property of Mrs. Mattie Parish, a number of Indian skeletons had been removed. Examination of this area produced none of the typical evidence of an aboriginal village or burial ground; however, Mrs. Parish informed me she had exhumed some 28 skeletons and all contained Caucasian artifacts, in the form of porcelain, metal, glass, and trade beads. She had disposed of all the material save one porcelain cup and some of the Indian trade beads typical of the Mission period. The location of this reported cemetery on the side of a hill in ground difficult to excavate is more characteristic of Caucasian burial practice than that of California Indians. This latter feature, along with the description of the graves, including the extended position of the body, strongly suggests that this may prove to be the site of the Indian cemetery associated with the Sonoma Mission. This being the case, some action should be taken to prevent further disturbance in this area as other graves may contain data pertinent to both the Mission and Vallejo periods of occupation.

V. CONCLUSIONS

As nearly as can be determined, all those conclusions reached by Bennyhoff and Elsasser as the result of their excavations in 1953 are essentially correct save in the details of the east end of the

Priests' House and the location of the Adobe Church. The Priests' House extends further to the east than they had realized, and the Adobe Church, though still not positively located, must also be farther to the east than earlier suggested.

Significant in the 1954 excavations was the discovery of Building C in such a state of preservation that an accurate dimensional ground plan could be obtained. It seems more than coincidence that a line projected along the east wall of Building C toward the Priests' House intersects lines projected east from the present foundations of the latter at right angles, at the very point where, if walls were present, would be the east walls of rooms of the exact size (10' x 17') as known and earlier described by us (see p. 6) for this east end of the Priests' House. These projected lines may be clearly observed in Map 2, in which a reconstruction of the Mission Quadrangle is presented. With this alignment of Building C and the Priests' House now known, it would seem to imply that the Adobe Church is in the near vicinity but still east of the north-south projected line. Only a small section of the fourth side of the quadrangle exists as a hypothetical projection. At the northeast corner of the present Chapel we found evidence of a foundation in line with the Chapel foundation (Map 1). It was reported by interested persons in Sonoma that earlier, during landscaping, outside the present west wall of the courtyard, there appeared the remains of a foundation which would be parallel to the one we observed. On the basis of our positive data and the report of a foundation we extended an imaginary line northward until it intersected a line projected west from Building C. It is of great interest that the 1854 groundplan of Sonoma Mission (Bennyhoff and Elsasser, 1954:Fig. 1a) is a near duplicate of our Map 2 presenting the reconstruction based upon archaeological evidence. The ruins marked on the earlier ground plan become our Building C in the reconstruction. To the author the evidence presented here is sufficiently strong to justify the extension of State-owned land to include the adjacent lands to the north and east. This would not only make possible the completion of the original Mission Quadrangle but would free the area for further explorations for auxiliary structures which were probably adjacent to the Mission proper.

Demonstrated here is the fact that through archaeological investigations both the real and potential resources of our State monuments may be brought to light for further development and preservation. It is most gratifying that the State Division of Beaches and Parks has offered its financial support to projects of this nature.

NOTES

- (1) This report is based on archaeological investigations at Sonoma Mission State Historical Monument from August 16 to September 1, 1954 carried out by the Department of Anthropology of the University of California, under a contract with the California State Department of Natural Resources, Division of Beaches and Parks. The author wishes to express his appreciation to Dr. Aubrey Neasham, whose persistent interest in the preservation and reconstruction of the historical landmarks of California has helped to make a project such as this possible. I am indebted to Mr. Robert S. Coon, Superintendent of State Park District 2, for providing adequate mechanical equipment, saving many man hours for the more specialized work of technical archaeology. The Museum staff of the Sonoma Mission was always willing to help, especially Mr. Fred Oltman, whose interests in our project far exceeded any demands of regular duty. From the Department of Anthropology of the University of California we received technical aid from Drs. R. F. Heizer and T. D. McCown and from Messrs. J. A. Bennyhoff and A. B. Elsassner. Dr. W. D. Hohenthal assisted in directing field work and I am indebted to the following students from San Francisco State College who performed the actual excavations: H. Kinsey, M. Heicksen, K. Green. Also aiding were K. Fromberg and C. Heathorn.
- (2) Sonoma Mission was originally blessed as Mission San Francisco de Solano.

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VII. EXPLANATION OF ILLUSTRATIONS

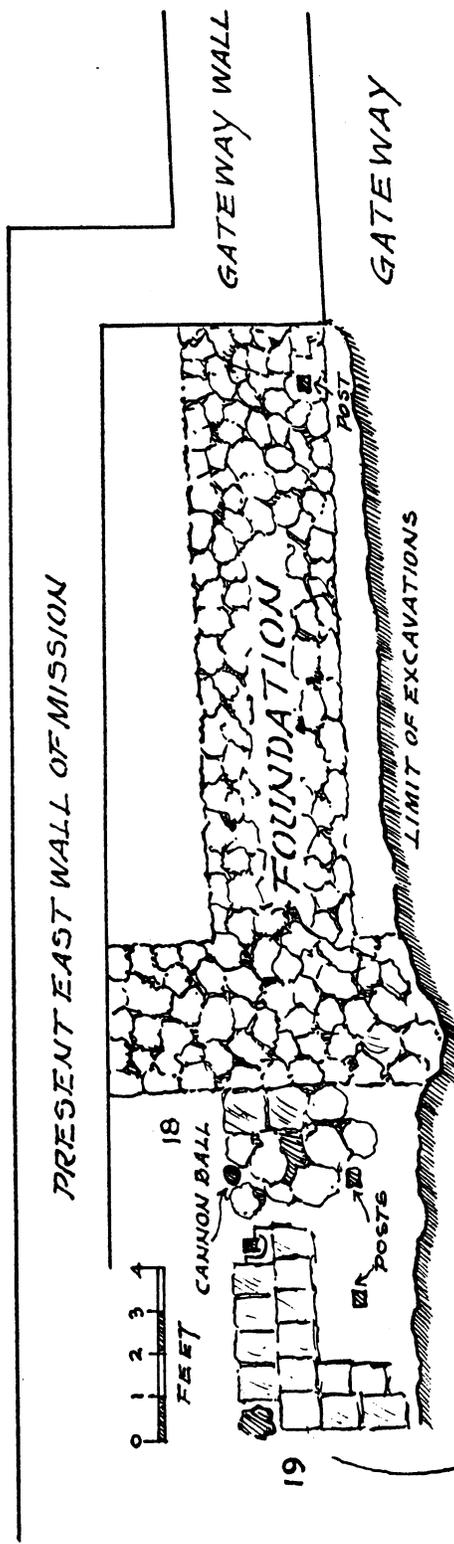
- Figure 1. Tile walk and foundation of Priests' House at southeast corner of Mission Quadrangle. Feature 19, detail of tile walk.
- Figure 2. a. Ground plan of Building C.
b. Adobe brick pattern.
c. Interior tile pattern.
d. Door detail.
- Plate 1. a. Northwest corner of Building C showing tile floor and foundation.
b. Detail of interior tile around door. Building C.
c. Feature 18 showing cannon ball.
d. Feature 19 showing corner of tile walk at the northeast corner of the Priests' House.
- Plate 2. a. Tile interior at southwest end of Building C.
b. Southwest corner of Building C showing interior tile, foundation, and remnant of adobe bricks.
c. Northeast corner of Building C showing interior tile and foundation.
d. Northwest corner of Building C showing interior tile and foundation.
- Plate 3. a. Adobe wall forming the south side of Building C.
b. Detail of adobe wall forming south side of Building C.
c. Detail of crushed roof tile forming the doorway threshold of Building C.
d. Detail of adobe brick on foundation along south wall of Building C.
- Plate 4. a. Foundation of Priests' House extending under present east wall of Mission.
b. Interior tile Building C. Looking west.

Plate 4. (continued)

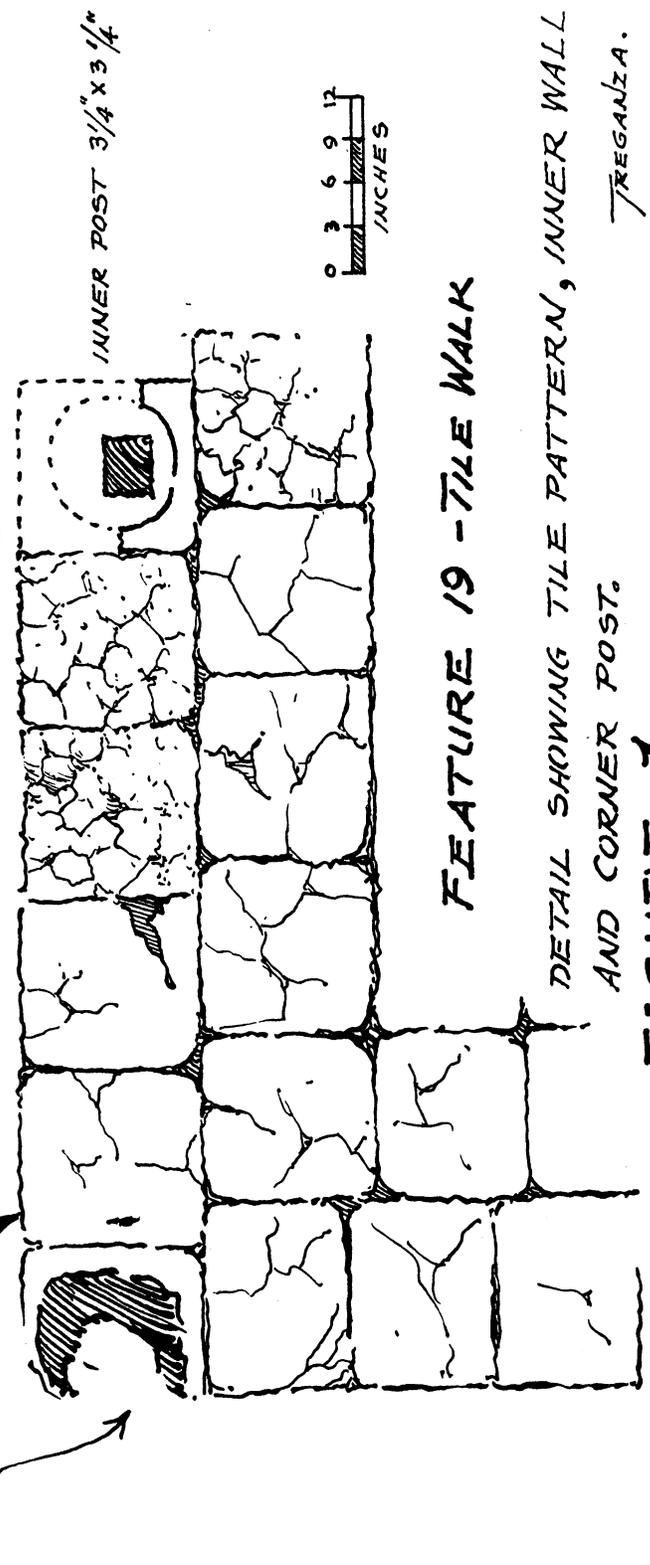
c. Interior tile Building C. Looking east.

Map 1. General plan of excavations made during the summers of 1953 and 1954.

Map 2. Reconstruction of the Mission San Francisco de Solano Quadrangle.



TILE WALK AND FOUNDATION OF PRIESTS' HOUSE
AT S.E. CORNER of MISSION

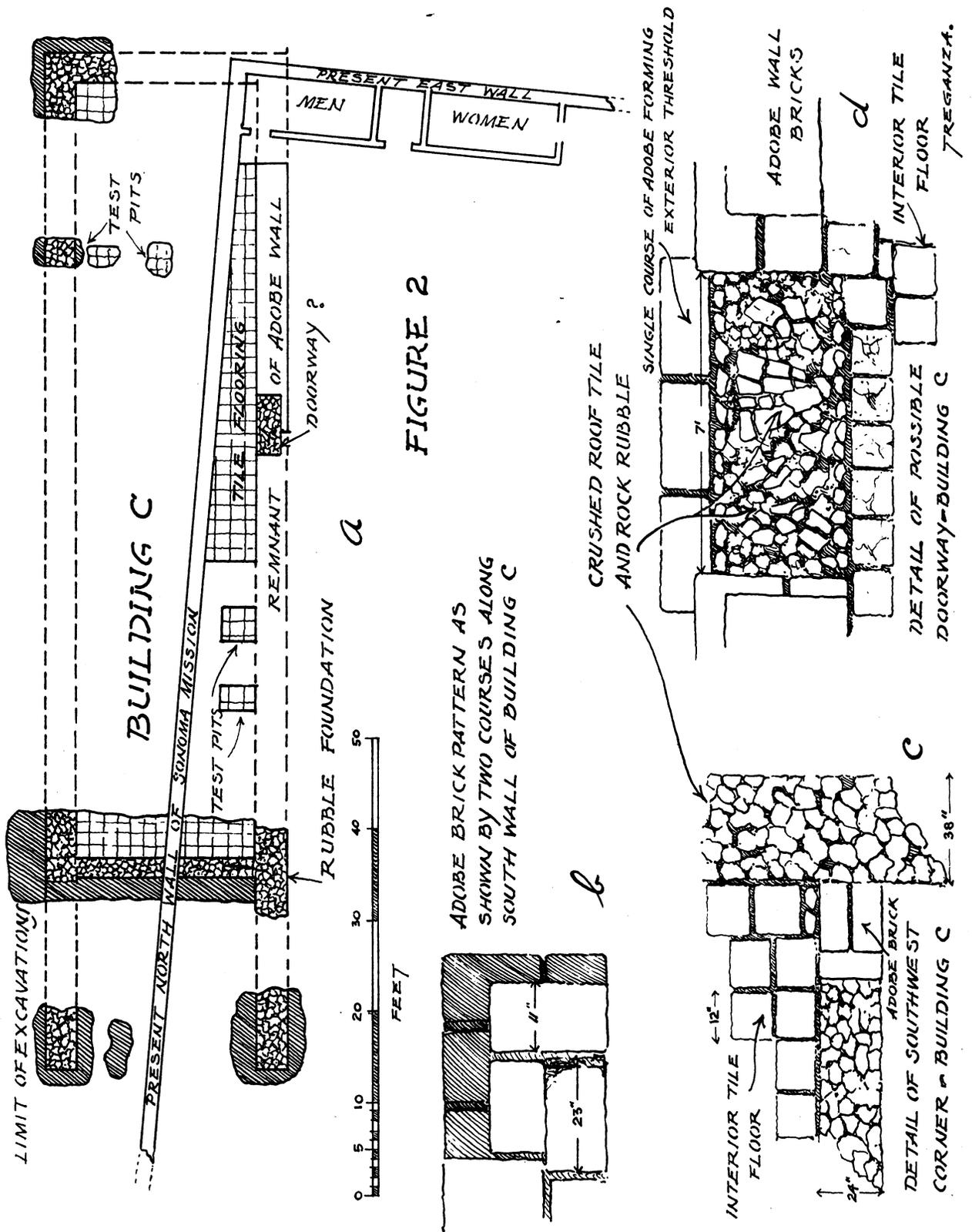


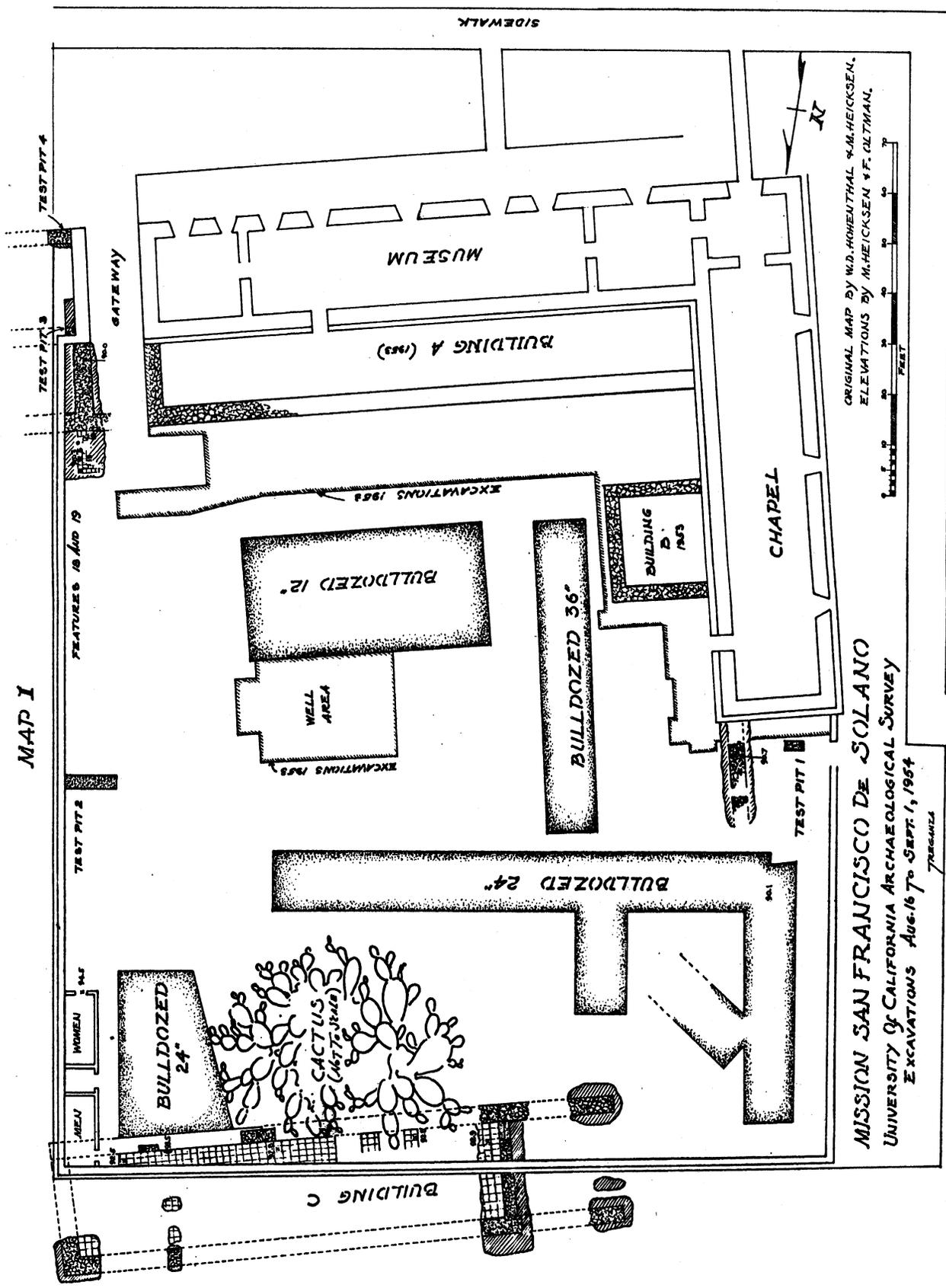
FEATURE 19 - TILE WALK

DETAIL SHOWING TILE PATTERN, INNER WALL POST AND CORNER POST.

TREGANZA.

FIGURE 1





MAP I

ORIGINAL MAP BY W.D. HOWENTHAL & M. HEICKSEN.
 ELEVATIONS BY M. HEICKSEN & F. ULTMAN.



MISSION SAN FRANCISCO DE SOLANO
 UNIVERSITY OF CALIFORNIA ARCHAEOLOGICAL SURVEY
 EXCAVATIONS AUG-16 TO SEPT-1, 1964
 786012

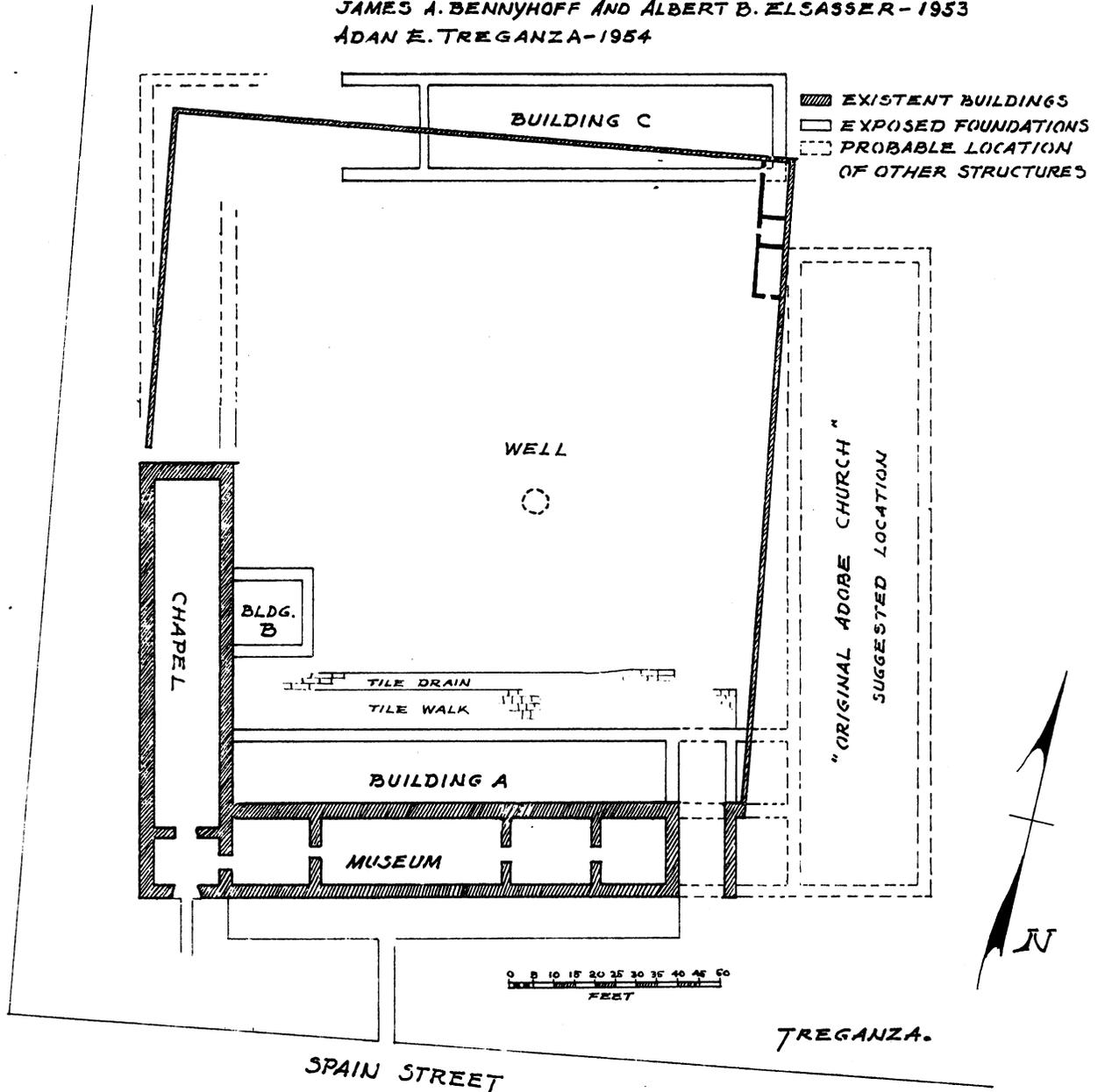
MAP 2

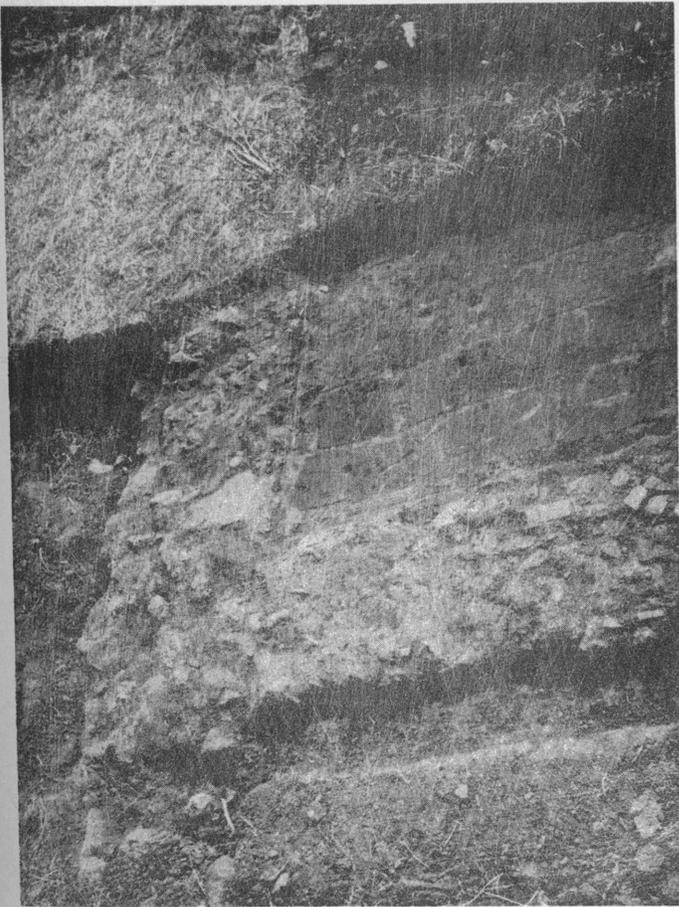
RECONSTRUCTION OF THE MISSION SAN FRANCISCO DE SOLANO QUADRANGLE

BASED UPON ARCHAEOLOGICAL EXCAVATIONS MADE BY:

JAMES A. BENNYHOFF AND ALBERT B. ELSASSER - 1953

ADAN E. TREGANZA - 1954

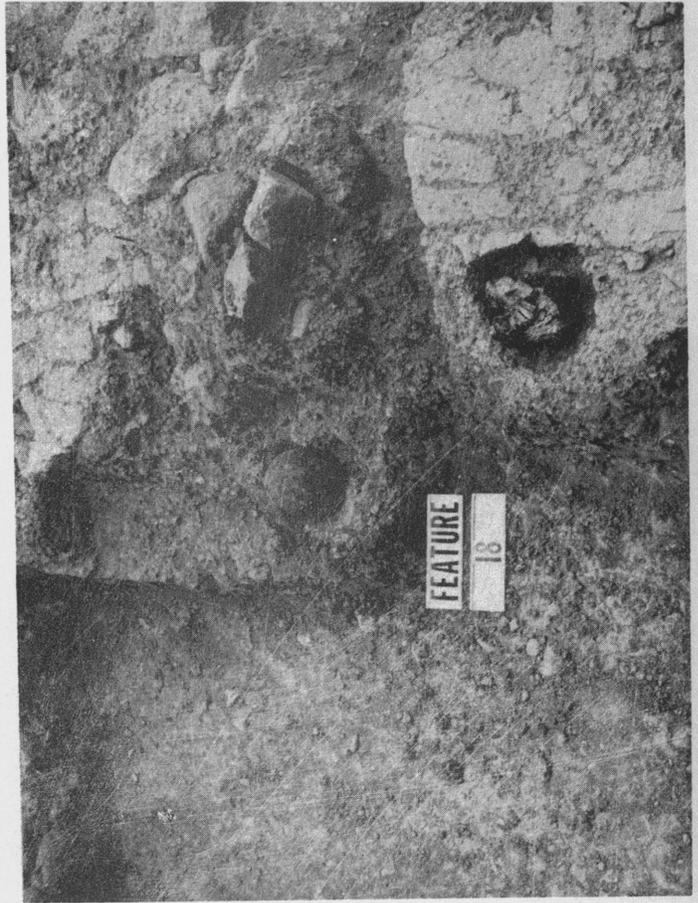




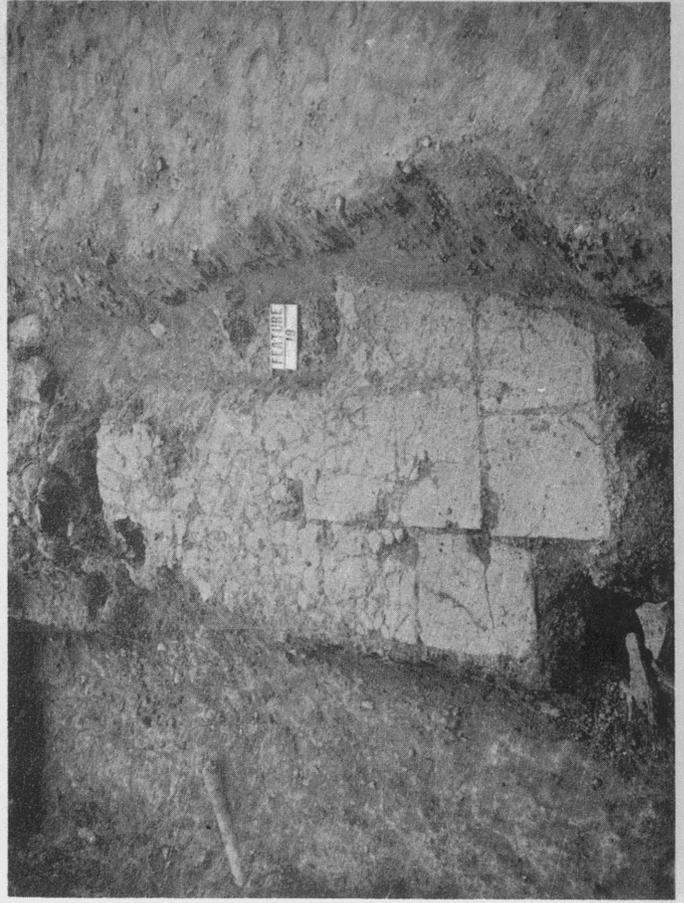
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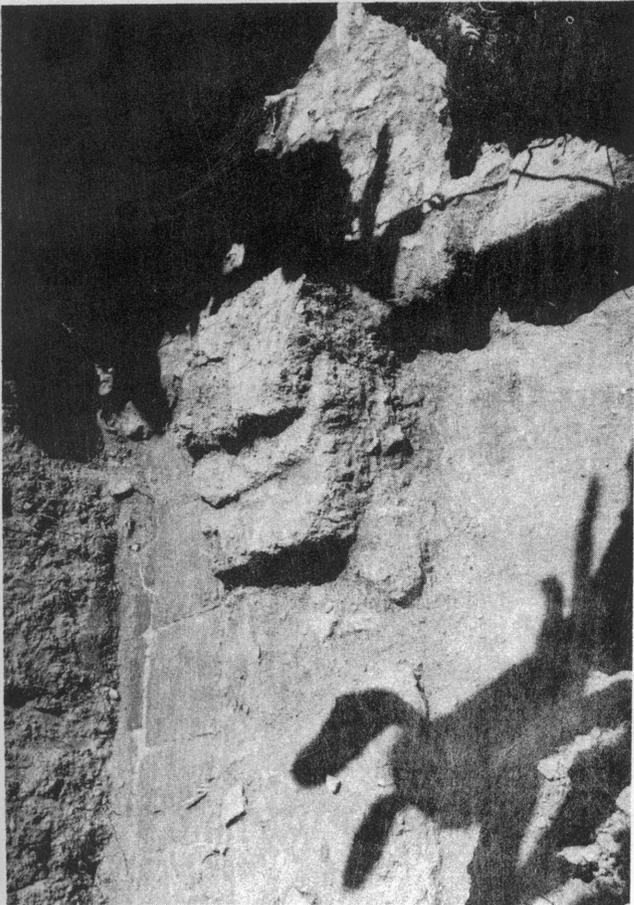
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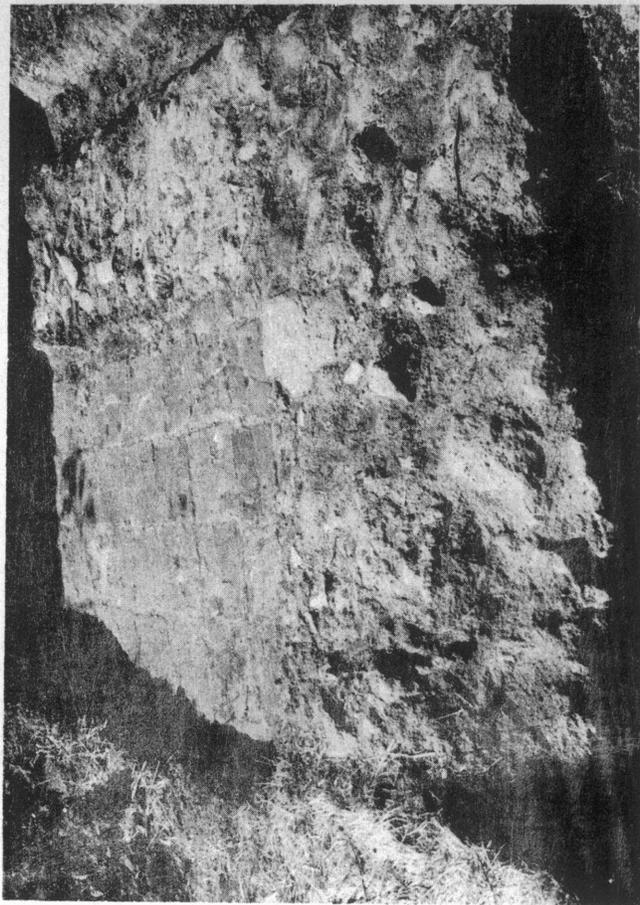
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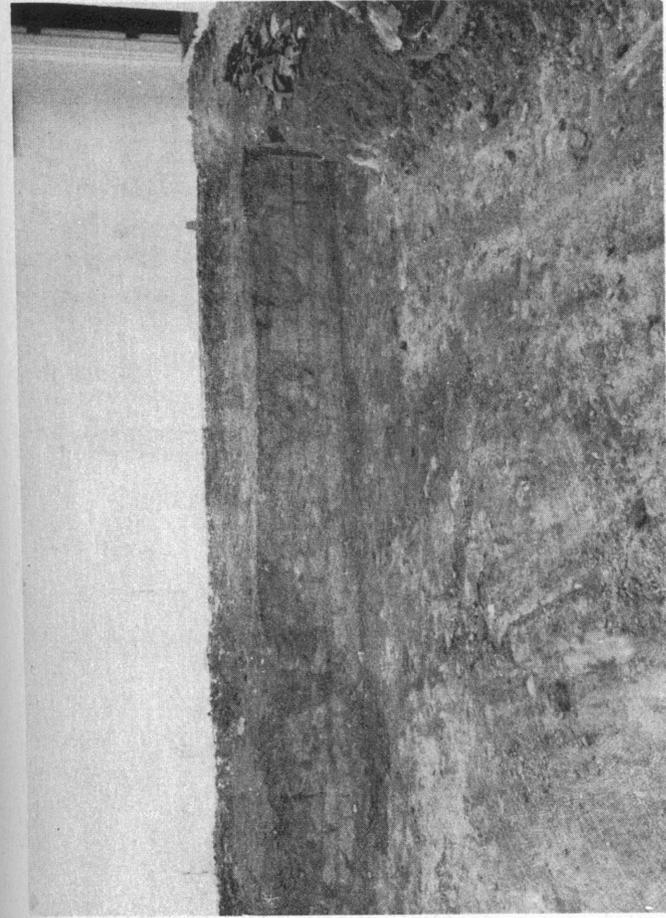
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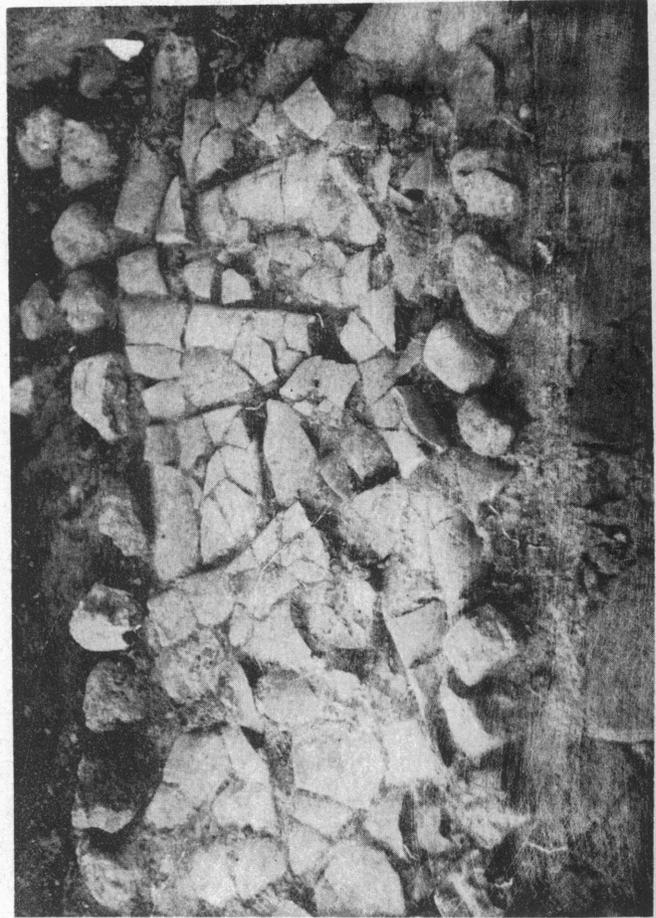
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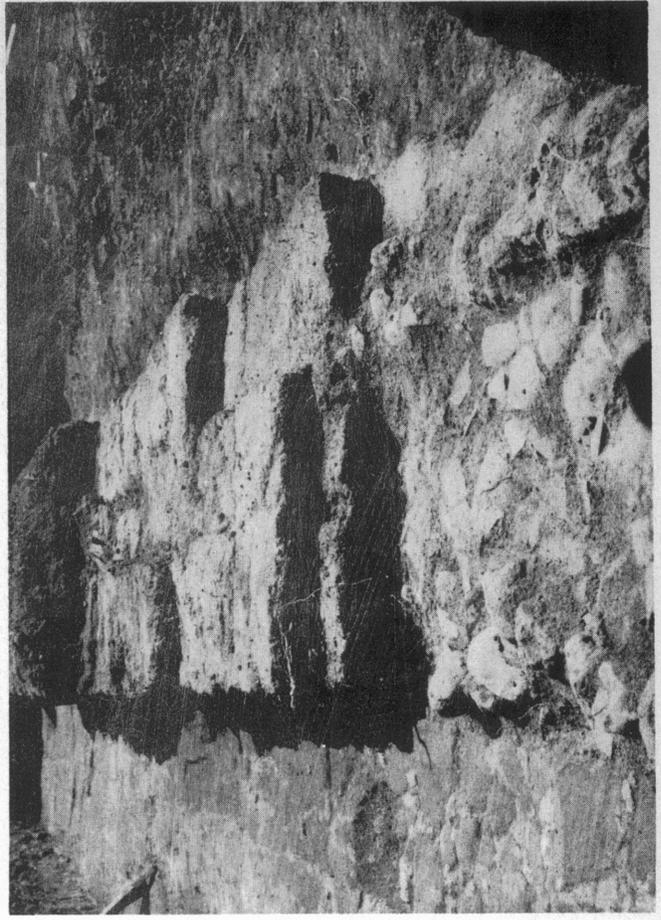
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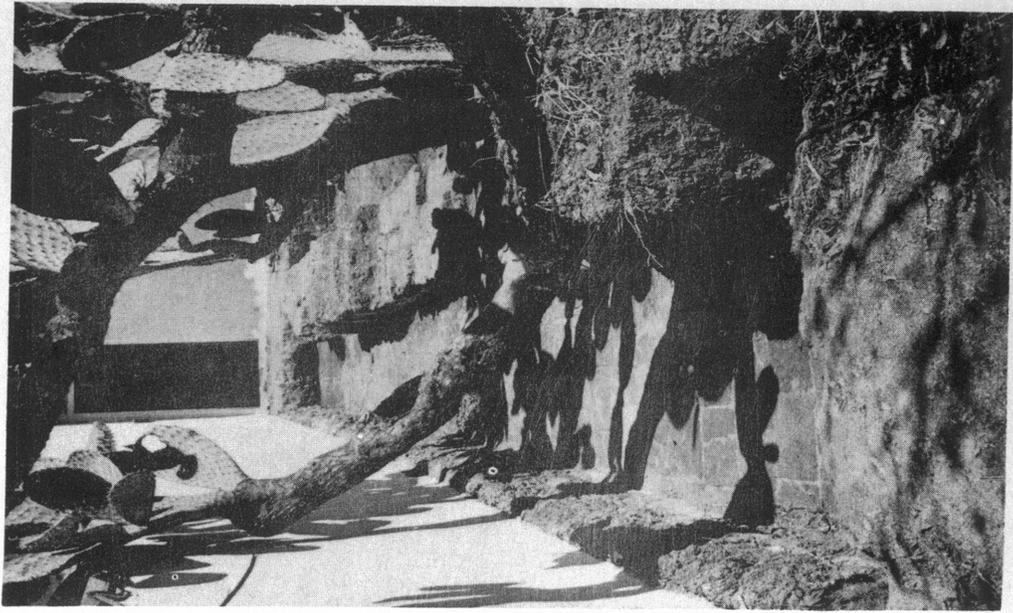
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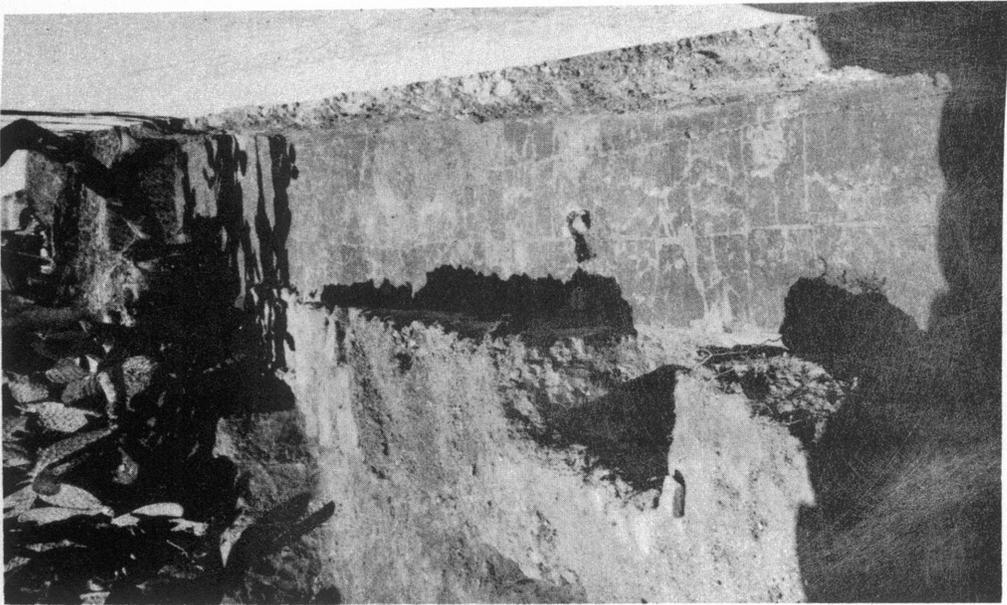
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