

# SOUTHWESTERN MONUMENTS

## SPECIAL REPORT

NO. 1

MISSION

SAN JOSE DE TUMACACORI  
PICTORIAL RESTORATION



BY  
J. H. TOVREA

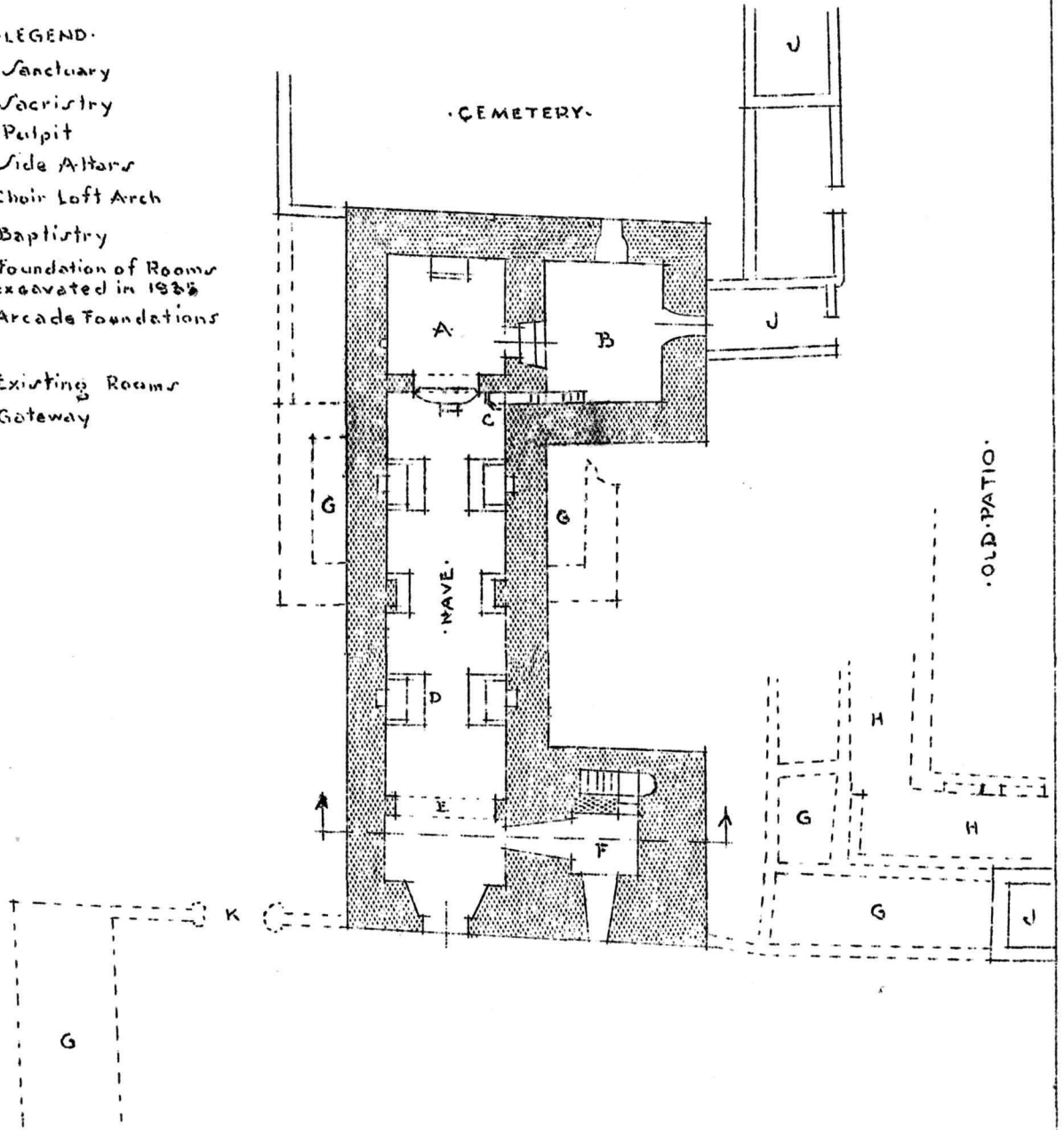
DEPARTMENT OF THE INTERIOR  
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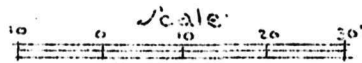
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d. H. Tovrea

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# REPORT ON MISSION SAN JOSE DE TUMACACORI

By J. H. Tovrea

When we pass through the great arched doorway of the old Mission San Jose de Tumacacori, it is usually only a matter of a few minutes before we start wondering what it was like before nature and vandalism destroyed so much of it. Even those who are not particularly interested in old missions cannot help wondering what the ruined altars were like years ago. Perhaps some carry away with them a mental picture of the unfinished bell tower and vaguely try to visualize what it might have been. Those of us who visit the structure often enough find that this wondering gets in the blood and becomes a sort of mild mania. If, eventually, we find ourselves staying awake nights pondering over little flakes of plaster which have different textures, or faded dabs of paint which once might have been parts of intricate and vivid designs, we will begin to find answers for some of the whats and whys.

Last fall the National Park Service decided that answers or clues to unravel some of Tumacacori's architectural problems might be found by a survey of the twenty-odd missions in Sonora, Mexico, which belonged to the same chain as our own Tumacacori. The thought brought action, for a party of six men was sent into Mexico to gather as much data and material as possible for museum exhibits, historical research, and architectural detail. The time was limited to three weeks, so the party had to work fast. A lot of the time was consumed in travel between the missions, as the roads were poor and there was a certain amount of official clearance to be obtained at each site. The party was composed of two architects and an archeologist-historian from San Francisco, a photographer from Washington, D. C., and a geologist and myself from Southwestern Monuments Headquarters. The party obtained some valuable data in the form of measured plans and sections of the better preserved missions, but the time was so limited that many of the details could not be measured though all were photographed. There is no doubt that a wealth of museum material was obtained and the expedition was, I believe, a successful one.

My interest in the trip was concentrated on what could be found that would relate to Tumacacori in the way of restoring in picture form some of her lost details.

Some eighteen years ago, Superintendent Frank Pinkley of the National Park Service started wondering about Tumacacori and set to work putting pieces of the puzzle together. His job was harder than ours because he had to start at the beginning. Now, with parts of the problem solved, it is easier for us to work out other parts. Some of the answers to various parts of Tumacacori's problem outlined in this report, are accompanied with substantial and logical proof. Others are

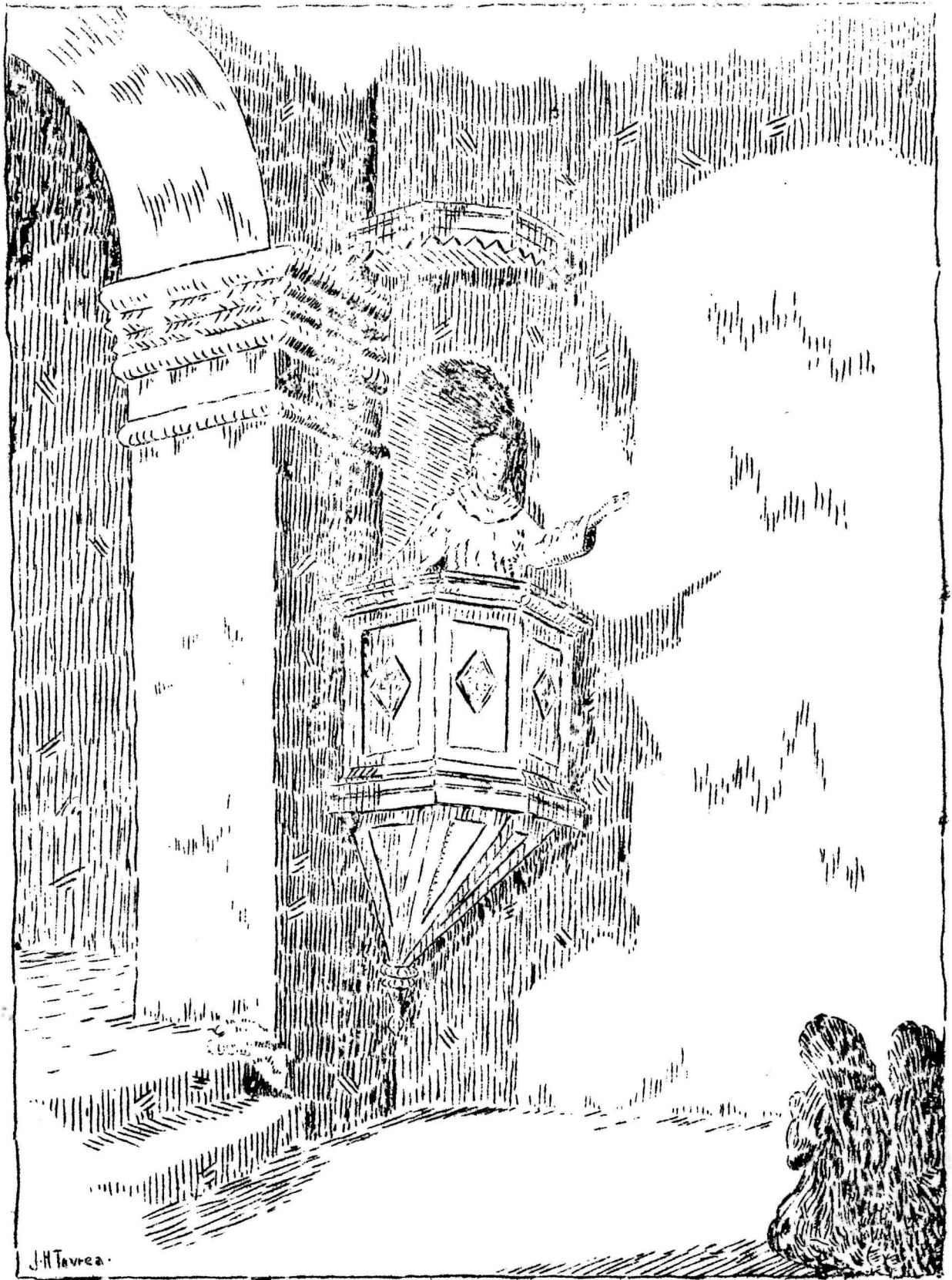
based on comparative observations of the other missions in the chain; and still others can be boiled down to the very best and latest guess.

I found that all the missions in the chain, that we visited, were quite radically different from one another with the exception of Caborca, which is practically a twin of the Mission San Xavier near Tucson, Arizona. If any of the missions is at all like Tumacacori, it is probably San Ignacio, and it was from it that I gathered data which helped conceive a restoration of Tumacacori's side altars, pulpit, choir loft rail and balustrade. It also gave me a mental picture of what Tumacacori's interior looked like when it was complete with choir loft and altars. It verified in my mind Superintendent Pinkley's idea that by restoring Tumacacori's choir loft, illusions of greater height and size of the nave would be created and the entire picture would be more in keeping with what the builders meant it to be. Without these illusions the nave is out of focus, and when we say to the visitor as he enters the door, "Look--this is the nave which the padres built over a hundred years ago," we are showing him a distorted picture. The padres would have had the visitor view the nave thru the arched opening that upheld the front end of the choir loft; for thru this archway the room would appear longer than it actually was, and, as he walked forward and looked up, his memory of the low ceiling of the balcony loft would make the ceiling of the nave seem higher by comparison.

The missions as a whole made me feel that since the buildings were designed to impart a feeling of mystery and sanctity, so should such a feeling be re-created in Tumacacori, as nearly as would be practicable. This could be done in part by restoring some of the altars complete to the image in the niche. When the visitor enters San Xavier he tiptoes and whispers and is doubly impressed by what he sees. At the present time, the interior of Tumacacori could be mistaken for the interior of an old banquet hall, a fortress or even a storage room. A little restoration here and there would make it impress the visitor that it was the interior of a place of worship and he would be getting a truer picture of the mission.

#### PULPIT RESTORATION

When I entered San Ignacio, the first detail to catch my eye was the pulpit. The eye is drawn to it immediately because it is a spot of color against the plain grey-white wall. In the dim, shadowy light of the nave the bright colors of this pulpit are softened so that they blend together and assume a velvet-like texture. Indians like bright colors and would no doubt concentrate their attention on this particular spot when the padre was addressing them. All that was left of the Tumacacori pulpit at the time it was decided to restore it, were a few marks on the plaster wall. These marks proved two things; 1. That the floor beams projected at right angles from the two walls behind the pulpit and, 2. That three and one-half feet below the floor level, in



·PLATE 2 - PULPIT RESTORATION·

the corner formed by the intersection of the two main walls, was a mark which indicated the presence of an ornament which might have terminated the point of an inverted pyramidal corbel that supported the floor of the pulpit. With this scanty evidence to work from a square pulpit floor was constructed with the corbel below. This construction was then plastered over. If a pulpit of this square shape were used the speaker could not have faced his listeners in a graceful manner unless he faced directly south where he would be looking along the line of the east wall, or directly west where he would be looking at a wall seventeen feet away and not at his listeners.

It would seem that the ideal horizontal section of a pulpit for this particular situation would be a quarter round, which would permit the speaker to face any direction in the space of ninety degrees. For the purpose of ornamentation, however, this section would not be very satisfactory, as well as being a difficult one to build out of wood. All of the pulpits which we studied in the other missions were some portion of an octagon, depending upon their position. This octagon shape gave the same effect as a circle, was easier to construct, and when ornamented was more pleasing to the eye. The one at San Ignacio looked so appropriate for Tumacacori, if modified a bit, that I made a rough water color of it. Using this as a model, I have made a restoration drawing of a pulpit for Tumacacori. (Plate 2). This pulpit would meet the requirements established by the marks left on the walls by the original pulpit and would, I believe, resemble the original very closely. The construction would be of wood and the colors similar to those of San Ignacio's pulpit. If this pulpit were restored, I believe it would create a pleasing contrast to the present drab interior.

#### ALTAR RESTORATION

Tumacacori had seven altars--three on each side of the nave and the high altar in the sanctuary. One can imagine how impressive the interior of this old mission must have been when all these altars stood complete, each one enshrining the image of a saint. Could not this picture be more clearly imagined by the visitor if one of these altars were completely restored? The possibilities of such a restoration are shown by the drawing in Plate 3. This particular altar is the first side altar on the left as we enter the building. All that remains of it now is the base, and the lower portion of the altar proper. The flat top has been restored. Existing evidence to support the accuracy of this restoration drawing is in the form of marks on the plaster wall showing the outline of the gabled moulding that frames the altar background, and the small remaining fragments of one of the columns, and one end of the lintel.

The ornamental designs on the column and lintel are painted and were suggested by the designs on other altars of the chain. At least two of the old carved wood images, which are now at San Xavier, belonged

at one time to Tumacacori. I would suggest that models of these images be made, full size, colored true to the originals and restored to the altar niches at Tumacacori. One of these image models in the niche of the restored side altar would make it a complete restoration.

#### CHOIR LOFT RESTORATION

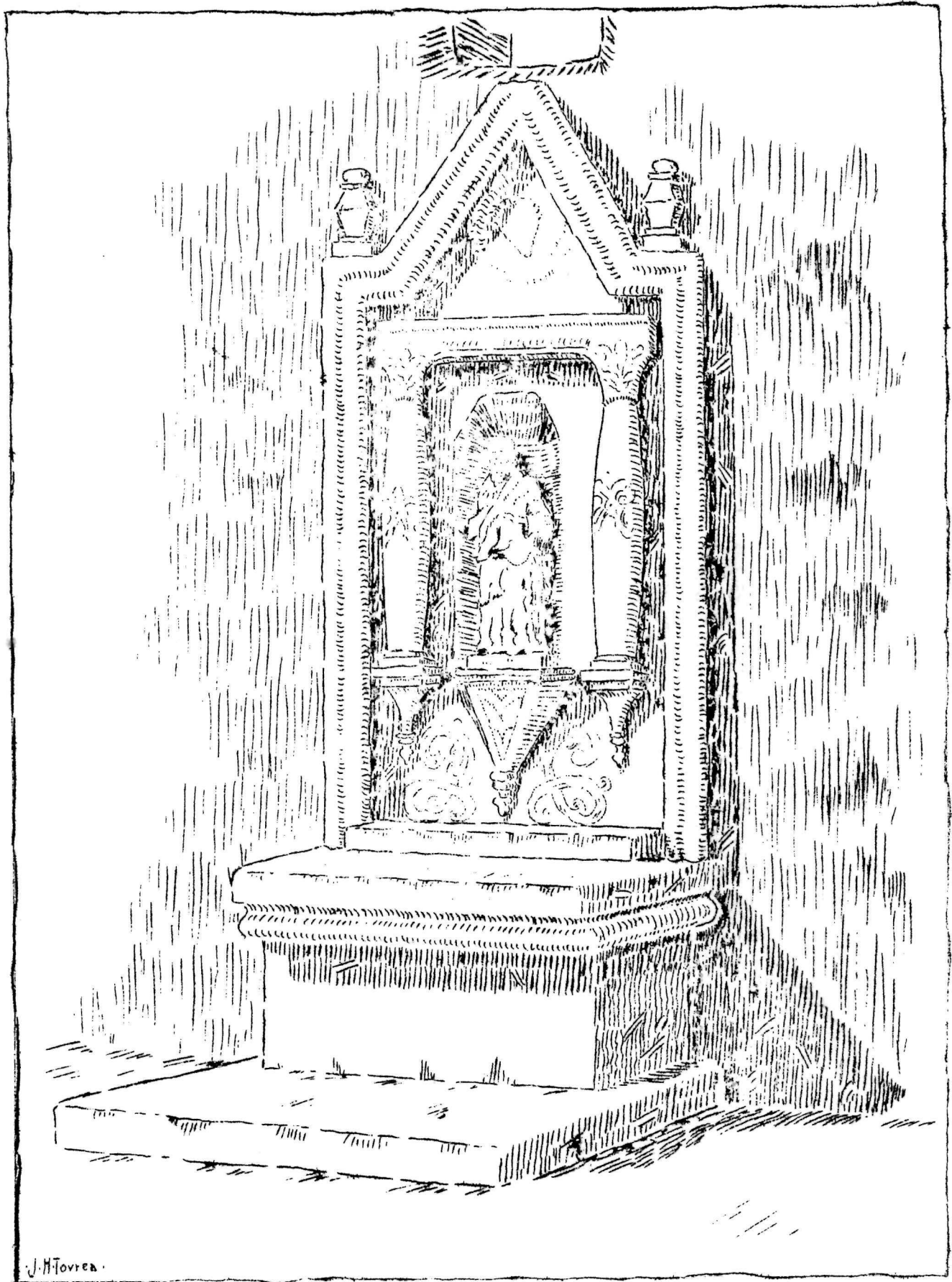
A complete restoration of the choir loft has been advocated for several good reasons--the primary one being that of improving the perspective view on entering the building. The arch support at the front of the loft can be easily and accurately restored from photographs of the original arch. The floor we must assume to be of burned brick, as are the loft floors of most of the other missions. The railing and balustrade must be copied also from existing ones in the other missions. Detailed drawings of these existing balustrades were made on the mission trip and are filed ready to use in the event this restoration is ever attempted.

#### A DISCUSSION OF THE ORIGINAL PLANS

Records show that three buildings were constructed at Tumacacori at different periods, for the purpose of holding religious services. Whether these three missions were three distinct buildings or two buildings, one of which was remodeled and enlarged to make the third, is a question for debate. Last winter, under the competent supervision of Mr. Paul Beaubien, Archeologist, the area east of the present mission was excavated and a number of foundation walls and floors were uncovered and mapped. One rectangular shaped set of foundations, in particular, could have been those of a small church, and is considered by some to be the foundation of the second church at Tumacacori. At one end of the rectangle the foundation walls seem to offset inward for a distance equal to the breadth of the foundation to form what might have been a sanctuary. However, the fact that at the point of offset the two walls are joined together by just the meeting of their respective corners, leads me to believe that they were the foundations of two different buildings constructed at different periods; and I do not think that these foundations represent those of a church, though it is possible.

On the other hand, there are several good arguments which would indicate that the present building has been remodeled and enlarged. Briefly, they are, the presence of plastered foundation walls on each side of the nave--which would indicate that at one time there was an altar alcove on each side of the nave. The opening into these alcoves is clearly outlined by the unbonded adobe brick. The average height of these cracks is eight feet. Excavation has shown also that there were foundation walls crossing the nave just in front of the sanctuary arch and behind what was the choir loft arch. This would indicate that the nave at one time might have been confined within these limits or, at least, was of a different plan, even though the length and width were





·PLATE ·3· SIDE ·ALTAR ·RESTORED·

the same. Let us assume, then, that the plan of the church was radically altered at one time. Now, how about the elevations of the side and end walls of the nave? No one has committed himself, to my knowledge, as to what change might have taken place here. I have always wondered about the two foot offset on the outside of the nave side walls. It has been a question in my mind for a long time whether this offset, caused by changing the wall thickness from approximately five feet to three feet, was in the original plans of the building; or if it indicated an addition which raised the height of the building; or was a change in plan after the offset point was reached.

#### VAULTED ROOF?

Referring to Plate 5, let us study the wall section. If this section were designed in the original plans of the building, a section of this shape could have been designed for only one purpose; namely, that of supporting a barrel vaulted roof. If the wall had been designed primarily to support a flat roof, the designer would surely have used a three-foot wall section all the way up. It is well to bear in mind that when the present roof was restored there was no evidence that a vaulted roof had covered the walls; but, at the same time, it might have been the intention of the designers to use the flat roof temporarily and eventually replace it with the highly favored barrel vault.\* It is a well known fact that the padres were clever architects and that when they built a vaulted roof it was well designed and did not fail through structural weakness. In fact, they had a tendency to over-design; that is, to construct their walls even a bit thicker than was necessary in order to be sure that their buildings would not fail. Churches in Mexico which they built four hundred years ago (some of which would hold a half dozen of the Kino missions), are still in use today and are structurally sound.

Referring again to Plate 5, let us actually determine whether this section would support a vaulted roof. Since the width of the nave is the same as that of the sacristy, it can be assumed that the proposed vault for the nave would have the same thickness as that of the one that now exists over the sacristy. The spring line of the intrados of the arch is a point fixed by the fact that the proposed vault could not be higher than the north wall supporting the dome over the sanctuary. The stress diagram shows a resultant thrust of 2140 pounds per lineal foot, acting at an angle of 38 degrees from the face of the vertical wall. The center of gravity of the wall section can be calculated to be 2.42 feet from the vertical face of the wall and the weight of the

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\* This change was actually made at San Ignacio but, due to lack of foresight in making the walls thick enough at the time of construction, great outside buttresses had to be built to brace the nave walls.

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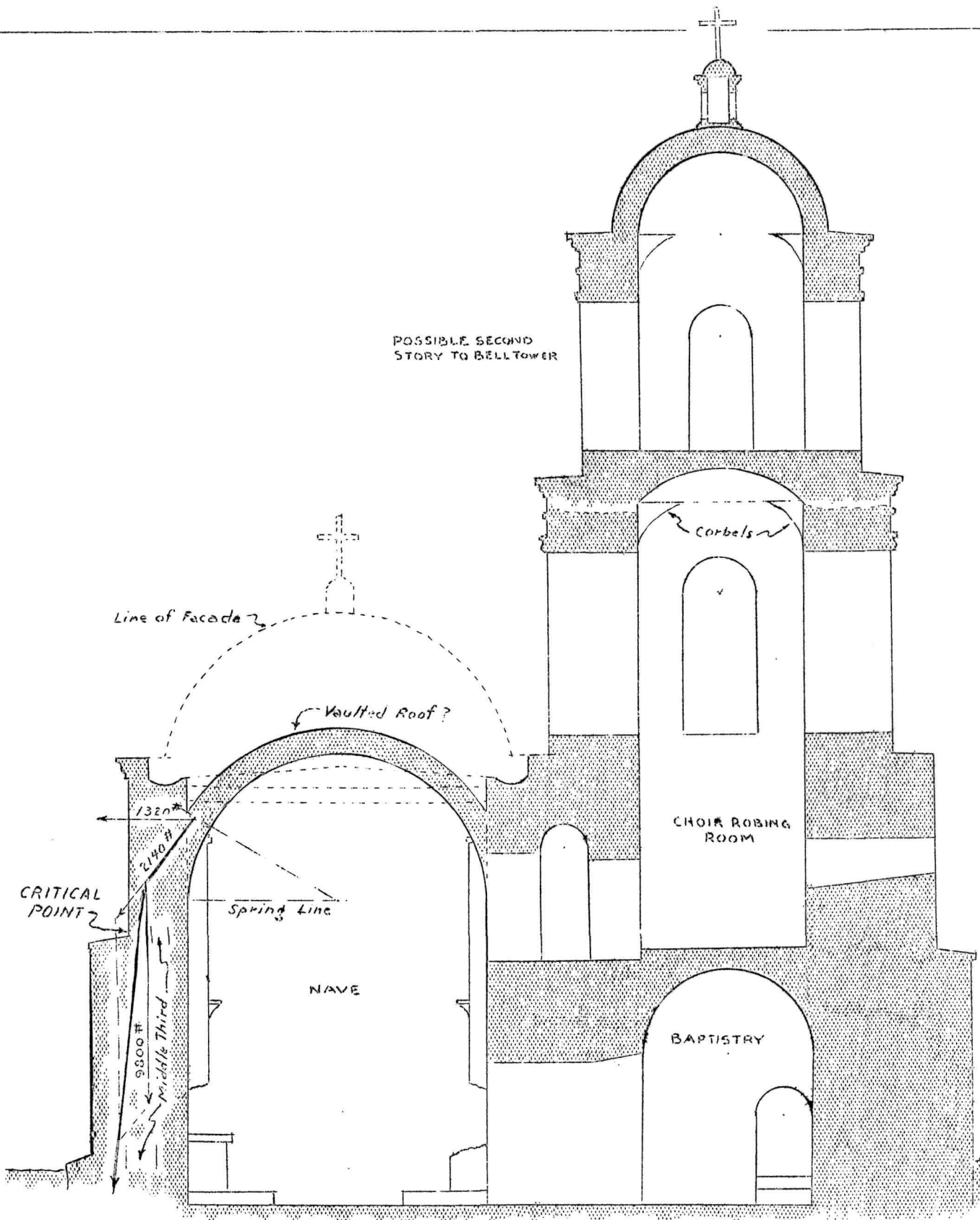
REPORT ON TUMACACORI (CONT.)

wall section creates a force downward of 9,800 pounds per lineal foot through the point of the center of gravity. The resultant force between the thrust of the arch and the weight of the wall section completes the line which the thrust of our proposed vault would travel. This line of pressure is the heavy line shown on the wall section. It will be noted that the wall section is divided into thirds at the base of each of the two different wall thicknesses. When a wall section is designed to carry an arch, it is so designed that the line of thrust always stays within the middle third of the wall section. If it runs outside of this middle third, the section is considered unsafe and apt to fail. It will be noted that the thrust line of our proposed arch runs considerably outside of the middle third, both at the offset point and at the base of the section--which are the two critical points. We know then that if a barrel vaulted roof were built there would be great danger of the side walls failing.\* Therefore, since the padres were efficient designers and even tended to over-design, I believe we can safely say that the two-foot offset was not a part of the original plans of the building. That eliminates one theory and leaves us two; namely, that the plans were changed when the offset point was reached, or, the portion of the building above the offset was an addition to the building. I believe that the five-foot section of wall was started with the idea of using the vaulted roof--otherwise a narrower wall section would have been used. I believe that it was intended to carry this thick wall up to the point where the spring line of the arch we figured starts. When the point was reached which is now the offset point of the walls, plans were changed. 1. There could be several periods when Tumacacori was abandoned by the padres due to Indian attacks at Tumacacori and other missions farther south. 2. It is possible also that since the Indian labor was not particularly skilled and was very slow, the padres decided to use a flat roof instead of a vaulted one, and so the wall was made narrower from the offset point on up. It will be noted that on each side of the main entrance there are buttress-like columns. (Plate 4). It seems logical to assume that they were used to support the back part of the choir loft. However, if this were true, they would be superfluous construction; as the choir loft beams would receive their proper support and bearing in the front wall of the building, and a beam under them would not be necessary. I puzzled over these peculiar columns for a long time before an apparently simple answer presented itself to account for them. When the plans

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\*This does not, however, rule out the possibility of the intention to use a lighter vaulted roof than the one figured here. It has been my theory that, for lack of funds, they could not erect a barrel vault at the time but designed the walls so the flat roof could later be removed and the barrel vault substituted with the least amount of trouble.

Mr. Tovrea however tells me a thinner section would probably be dangerous, due to the fact that the line of pressure could more easily fall outside of the middle third in a thinner section. - Frank Pinkley



· PLATE · 5 ·  
 · SECTION · THRU · MISSION ·  
 1/8" Scale

were changed and it was decided to use the flat roof which could be taken care of by a three-foot wall, the designer could easily take care of the offset on the side walls of the nave by putting it on the outside of the building where the break would make the elevation even more pleasing. But the front of the building, the main facade, would be practically ruined if the offset ran across it and divided it into two elements. So in this place he put the offset on the inside of the building where it could be nicely concealed by the choir loft floor. Any offset on the inside of the nave that could be seen would cut down the apparent height of the ceiling. There is nothing much harder to do than to make a radical change in a good set of plans and still keep them good. This is especially true when the building planned is half built. Though Tumacacori is hardly an architectural jewel, it is an interesting building with many pleasing features. The fact that the building is still quite presentable should reflect even more credit to the padre architects.

#### THE UNFINISHED BELL TOWER

The mystery of the unfinished bell tower will probably always keep us guessing, but the more we think about it and compare it with the bell towers of the other missions of the chain, the more accurate our guessing becomes. Why it wasn't finished has been boiled down to about three or four stock answers which can be found in almost any Mission book. It is the question what would the bell tower have looked like if it had been finished, that we will try to answer.

There are two schools of thought regarding this question. School No. 1 contends that if the tower had been finished it would have consisted of the present single story above the roof line of the nave, topped with a dome, lantern and cross. School No. 2 believes that it was intended to add another story to the present one, making the tower two stories above the roof line of the nave, and on top of the second story a dome, lantern and cross. The second story would be smaller both in height and outside measurement than the present first story. At one time I was a somewhat doubtful School No. 1 advocate, but after I had studied the problem for some time, I finally jumped down off the fence and organized School No. 2. I will try to be impartial and give both sides of the argument so that the reader may draw his own conclusions.

There are three drawings in the report which will be used to illustrate the discussion. Plate 8 shows a restoration with a one-story bell tower; and Plate 6 shows a restoration with two stories.

The arguments in favor of the one-story bell tower are:

1. The brick corbels in the corners at the top of the unfinished tower might indicate that the final dome had been started when work was stopped. It could, however, be a domed ceiling between the two stories

such as we find at Caborca and San Xavier.\*

2. The architectural balance would not be any too good with two stories. This is true; but it is also true that the balance is not any too good with one story either. So it might be a question of choosing the lesser of two evils.

3. The fact that they used broken brick to finish the north side of the present tower might show that they did not intend to build another story or they would have had more brick made and would not have had to use the broken pieces. This argument is not a very strong one because they could always make more brick and the use of the broken pieces might have been prompted by economy.

The arguments in favor of the two-story bell tower are:

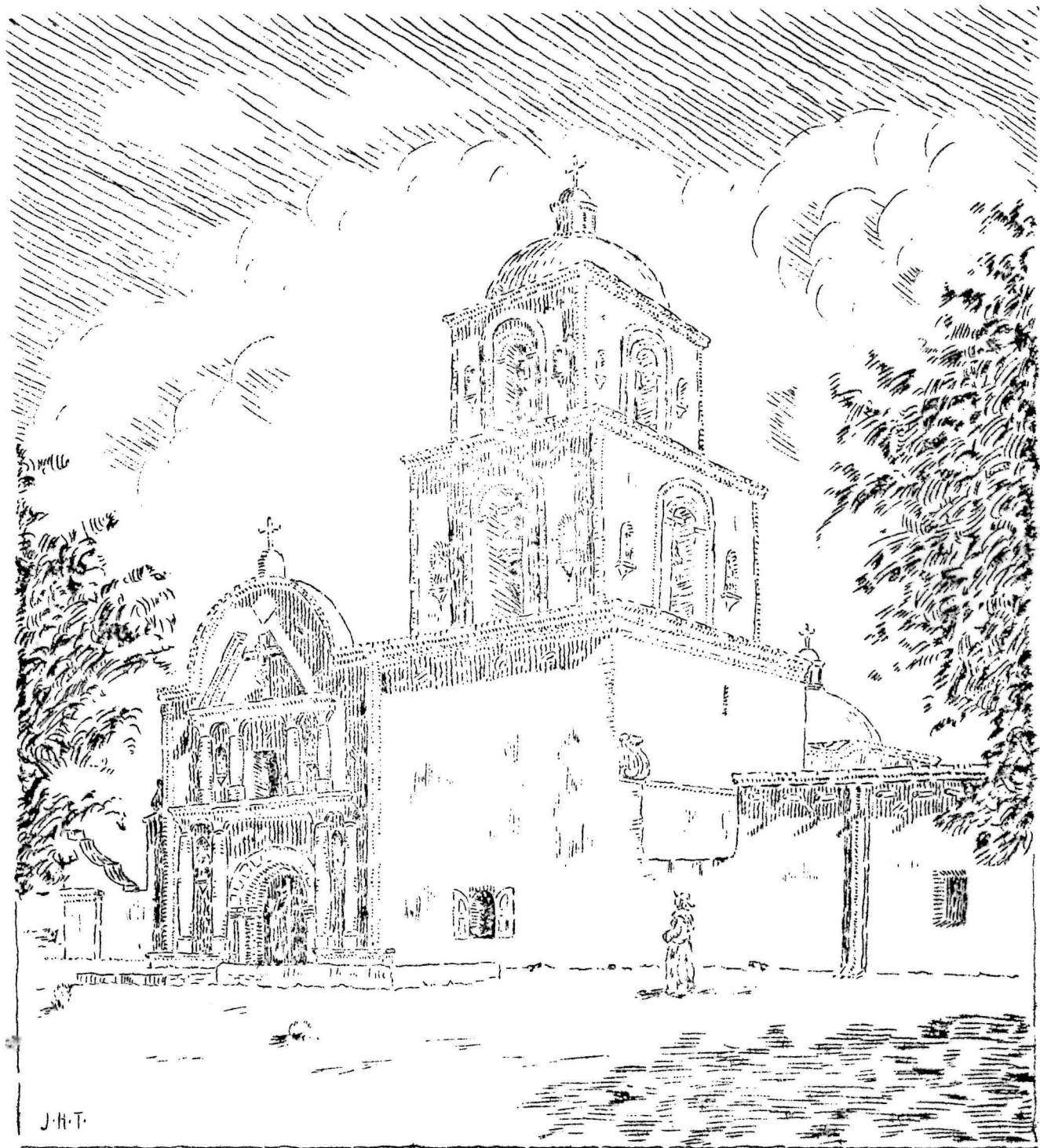
1. The baptistry side walls have the tremendous thickness of nine feet. This extra heavy wall must have been built for the purpose of supporting a heavy load.\*\* Going up to the choir robing room we find a wall thickness of seven feet six inches--which is two feet thicker than the lower side walls of the nave. Moving on up to the first and only existing story of the bell tower, we find a wall thickness of five feet three inches--which is two feet thicker than the upper walls of the nave. One can hardly believe that this extra two feet of wall thickness was laid just for the sport of laying brick; and it is well to remember that burned brick, which is quite a bit more difficult to manufacture than adobe, was used in the bell tower\*\*\*The fact that they used even the broken pieces indicated to me that they prized their burned brick highly and would not have wasted it on unnecessarily thick walls. According

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\*In which case we should find an outside stair on the existing arches as we do at Caborca and San Xavier. (San Ignacio has no stairway which might indicate that ladders were used in some cases.)

\*\*One fact which has been overlooked is the passageway inside the north, west and south walls of the tower in the first and second stories. These walls might, partly because of this passage and partly because they were to carry a much heavier load, be much thicker than the nave walls. It is true the factor of safety is much greater than necessary, but did the Padres know that?

\*\*\*The bell arches and piers are not built solidly of burned brick. A shell of burned brick is back-filled with a mixture of adobe mud and rock plums. You can see this in the south niche in the southwest pier where the brick shell is broken and the back-fill is visible. - Frank Pinkley.



· PLATE · 6 · TUMACACORI ·  
· RESTORED ·

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REPORT ON TUMACACORI (CONT.)

to the standards set forth in the building, it would seem that the minimum thickness of a bearing wall would be that of the upper wall of the nave--or three feet three inches. If we put a second story of this wall thickness on the existing story of the bell tower (as is shown in the section drawing in Plate 5), there would be an offset of two feet between the two outside wall surfaces of the two stories. This offset would correspond with the two offsets formed by the difference in the wall thickness below, giving the tower a pleasing pyramidal shape. Any question as to whether this second story wall thickness would carry the weight of a dome overhead is immediately settled by the fact that the same wall thickness carries the large dome over the sanctuary.

2. No other mission in the chain has less than a two-story bell tower. They are all two stores.\* This is not a conclusive argument, but it does indicate the trend or style of bell towers. The church of San Francisco at Guadalajara, Mexico, which was built in the sixteenth century, is a church which has very much the same architectural composition as Tumacacori. This church, like practically all the churches of Mexico, has a two-story bell tower.

3. The corbels in the existing story of the tower might have been put there for the purpose of supporting an octagon shaped second story similar to that of San Francisco. I believe that this shape would be more pleasing than the square one I have shown in Plate 6.

It is my hope that restoration drawings or paintings of the mission will be made by the government, and exhibited in the museum at Tumacacori. I believe the public would be very interested in seeing what the mission and its surrounding buildings looked like before they were destroyed, and in what certain unfinished portions might have looked like if they had been completed. Of course, we can never be positive about the unfinished bell tower; but we can follow the line of the most logical reasoning on the subject, whether it be for one story or for two.

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\*Cocospera is an exception to this statement.

All two-story towers in the Kino chain either: have an outside stair to get to the second story, as Caborca and San Xavier, or: have no floor between the stores.

The reason for this is that the arches were practical bell arches which were expected sooner or later to support bells. If there was to be no stairway to the supposed second story of bell arches at Tumacacori - - and certainly none was intended, - and there was to be a floor in the upper story carried on the corbels and dome started on the existing arches, how were the bells in the upper arches to be rung? (A ladder by Gum!!) F.P.



FACADE RESTORATION

When the Powell Expedition passed by Tumacacori in 1849, one of the members of the party took the time to make an excellent drawing of the facade of the mission together with a long line of buildings to the east of it. The drawing was made in pencil at a very small scale, so that it is quite hard to interpret some of the details. Though some portions of the walls and buildings were then partially in ruins, I have, by a careful study of the picture, been able to work out a complete restoration drawing of the facade together with the high adobe wall on the west and the buildings on the east.

Referring to the drawing (Plate 8), let us analyze the details and I will try to explain why each was restored as it is shown. In order to clearly show the details, it was necessary to make the drawing more or less a working perspective, showing each detail clearly and leaving nothing to the imagination. This did not help the artistic value of the drawing, so please consider it for its working value.

Beginning at the left of the drawing, let us analyze the large archway through the adobe wall. The Powell drawing shows just the beginning of this arch--perhaps two feet of it above the first column west of the mission. The irregular shape of the top of the fragment indicates that the upper portion of the arch was not a concentric circle. The design shown on my drawing is typical of gateways in old Mexico and California Missions, so it is safe to assume that this design is very close to the original. On the west wall of the nave at the point of offset are two scroll shaped buttresses--one at each end of the building. The Powell drawing vaguely shows these and Mr. Pinkley's memory of the marks left by the originals gave me a basis for the design. The Powell drawing clearly indicates that the four columns of the first story of the facade extended down from their present level and rested on bench-like foundations. I have shown the window above the arched doorway as being covered with bars. I doubt if this were true, as iron bars were hard to transport to this new country, and wooden shutters closing from the inside of the building would probably have served the purpose. I have shown a dome on top of the existing story of the bell tower to show what might have been planned for the unfinished tower. It is my belief, however, that a second story was planned for this tower; a discussion of which I have already given. The buildings east of the mission were rather sketchy on the Powell drawing, but a careful study and comparison with a plan of the foundations (Plate 4) excavated last year, made it possible to work out a restoration. The dome shown is a doubtful guess at what the Powell artist shows and it is too far to the east to check with the possible church foundation that was excavated.

I was able to work out graphically the probable location point of the artist when he drew his picture. This point was on a line



·PLATE 8-TUMACACORI-RESTORED·

extending from the northwest corner of the mission in a southerly direction, just missing the gate column farthest west from the front of the mission. I plotted the line on the map of the excavated foundations which showed this gateway. I then drew an imaginary picture plane across the southwest corner of the mission; next I moved a point on the known line to a position where the proportion between the distances shown on the Powell drawing for the north and west walls of the mission were the same on the picture plane of the plan. This theoretically fixed the position of the artist and the more accurate his drawing was, the closer he was to this position. In order to check the accuracy of his drawing and thereby check the accuracy of my theoretical point, I located it on the ground at Tumacacori and found that the Santa Rita mountains shown in the background were in almost perfect position in relation to his drawing and the mission also compared well for perspective. Therefore, I assumed my point to be very close to the position of the artist. Returning to the plan of the foundations (Plate 4), I projected lines from this point to various points on the east foundation walls. This gave me distances on my plan picture plane which I could check against the Powell drawing, and in this way I had a basis for making a check comparison of the drawing against the plan of the excavated foundations.

I believe this working study gives an accurate foundation for a more artistic presentation rendering of Tumacacori restored, with the exception of the single story bell tower. A rendering of this nature would be of great interest to the visitor.

#### RECORDS

Twenty years from now if someone asks the Ranger at Tumacacori detailed questions on what parts of the mission are original and what parts are restored, the Ranger is going to be embarrassed--because the chances are that he will not know. As a matter of fact, he might be embarrassed right now, if questioned closely, because there is no record of what is old and what is restored; which, of course, is not the Ranger's fault. I would respectfully suggest that the National Park Service make detailed measured drawings of the walls of the buildings, showing all restored portions. If this is not done soon this very necessary information will be lost forever.

Twenty years ago we could have made, probably, drawings in true color of almost all the designs on the interior and facade of the mission. Today, I would say that fifty percent of them have weathered away; but there is enough left to make it possible to work out what has been lost. Twenty years from now it is probable that even these traces will be gone. One man could record accurately this information in the form of detailed colored drawings in two weeks' time. This record would greatly assist in the working out of a restoration of the high altar in the sanctuary. I made a color study of the nave cornice

at Tubatama. This simple record will preserve forever this particular detail. Similar records of Tumacacori would preserve, as well as re-create the colored details.

#### SUMMARY

A brief study of the other missions of the Kino chain convinced me that some restoration was necessary at Tumacacori in order to present it truly to the public as a mission. I have tried to show that perspective, atmosphere, and interest would be improved by the restoration of the pulpit, side altar, and choir loft. The respective restorations are detailed and the methods of arriving at these details are outlined.

As a matter of historical interest I have tried to prove that the plans of the mission were changed when the offset point of the nave walls was reached. In this discussion I proved that the present building could not safely carry a vaulted roof, and explained the presence of the two buttress-like columns on each side of the entrance.

For the purpose of restoration drawings I have tried to prove that it was the intention of the architects to have a two-story bell tower above the roof of the nave. This discussion points out some interesting comparisons on various wall thicknesses.

I have explained how I arrived at the various details of the restoration drawing shown in Plate 8. This drawing not only shows the missions, but also some of the other buildings and walls which existed at one time.

On the matter of records I have tried to impress the necessity of immediately making detailed drawings, showing the location of all restored parts of the mission, and showing all existing painted designs. It is pointed out that a record of the existing designs will assist in working out a restoration of the high altar.

There is no doubt in my mind that the study of the other missions in the Kino chain will continue to bear fruit as I continue to work on the many problems which still remain at Tumacacori.

#### ADDENDA

##### The Proposed Museum

Needless to say, I am deeply interested in Tumacacori, and anything that relates to the mission. The proposed museum is so intimately connected with the mission that I feel justified in commenting on the plan which has been submitted. Any criticism which I make of the present plan

of the proposed building, is activated solely by my desire to preserve Tumacacori and present it to the public in the best possible manner.

If we could see the mission as it was a hundred years ago and compare it with the surrounding buildings which had low roof lines and severely plain walls, there is no doubt that the comparison would make the mission look quite magnificent and stately. It has always been the aim of the Catholic Church to construct their buildings of a magnitude that would make them the center of interest in comparison with surrounding buildings. If high roofed buildings had existed at the site of Tumacacori before it was constructed, the mission would have been built on a larger scale, probably. If the existing buildings had artistic wall ornamentation, then tumacacori would have been even more artistic and ornate. In other words, the church was always built to attract the eye, both by its height and by its ornamental facade.

Now suppose the present proposed museum is built at Tumacacori. It is a modern building with plastered walls and having a two-story effect when seen from the outside. Over the main entrance is a large colonaded loggia, to the right of which is a wall surface which has an ornamental niche. The cornice is also topped with ornaments. This modern building is fourteen feet longer than the mission, almost as wide, and is five feet higher than the top walls of the nave. Furthermore, the location of the building is such that the public must see it before they see the mission. Since the building is actually longer and taller than the mission, it is certain to dwarf the apparent size of the mission. The nice architectural balance of the proposed building will emphasize the crudeness of the mission. In a few words, it is my thought that the public will be admiring and studying the museum building instead of the mission--if the proposed structure is erected.

If we look at Plate 6, the drawing of the mission impresses us that Tumacacori is a rather nice looking church. Now compare it side by side with a drawing of a church like San Francisco. The result would make Tumacacori look smaller and cruder. Comparisons may either improve or injure the appearance of a building. Is there any sound reason why we should injure the appearance of Tumacacori when we can improve it by building the proper sort of building close to it?

My idea of a museum would be to make it as unobtrusive as possible, by keeping its roof line low and unbroken and its wall surfaces plain and simple. By doing this the mission would be seen by the public more as the padres who built it meant for it to be seen by their public.

If the proposed museum were planned to be a restoration of the long low building shown on the right of the mission in Plates 4, 6, and 8, and was built on the site of this original building, it is my belief that two objectives would be accomplished. One of the original buildings would be restored, and the mission, instead of suffering by contrast,

would have its appearance improved. Enough of this building could be restored to amply take care of all administrative needs. A colonade once existed on the north side of this building, facing the old patio east of the mission. This could be restored also as part of the museum building. The one possible objection to this plan is an administrative one. This objection would be that visitors might enter the mission without registering at the museum first. This objection could be overcome by building a low adobe wall in front of the mission in the form of an atrium or courtyard, the gate of which would be an exit only.

