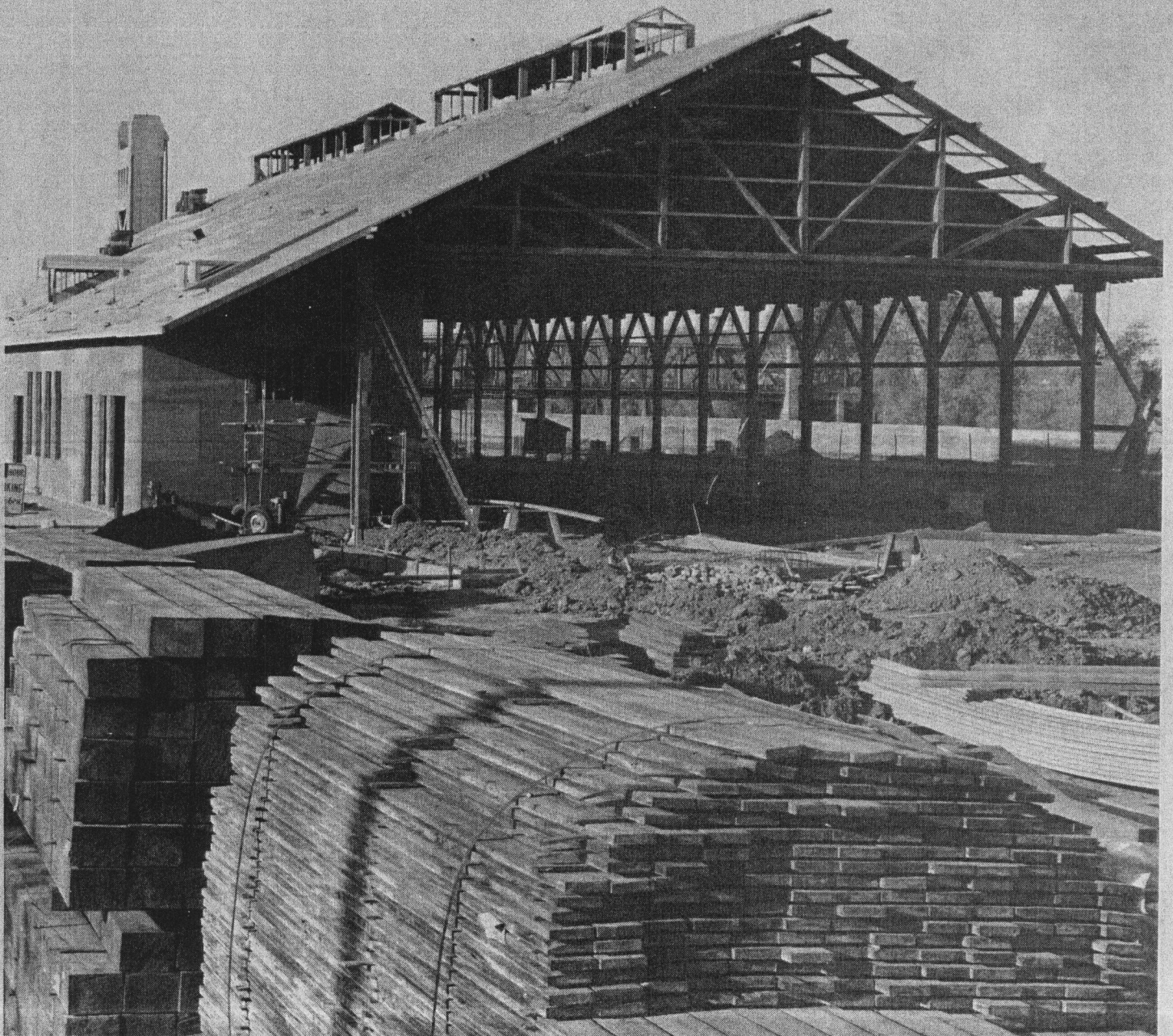


**The
Central Pacific
Railroad
Passenger Station**



Acknowledgments

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California Archeological Reports
No. 15

**The Central Pacific Railroad
Passenger Station,
Sacramento**

**Historic Sites Archeology at the Location of the
Western Terminus of the Transcontinental Railroad**

by
David L. Felton
State Park Archeologist I

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CULTURAL HERITAGE SECTION



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PLATE 1. RECONSTRUCTED CPRR PASSENGER DEPOT.



INTRODUCTION

As an important part of the reconstruction of Old Sacramento, the old Central Pacific Railroad Passenger Depot has been reconstructed. In conjunction with this project, archeological investigations were undertaken at the site of this Central Pacific Railroad Passenger Depot by the Cultural Resources Section of the California Department of Parks and Recreation during September of 1975. Although detailed architectural drawings of the proposed reconstruction had been prepared prior to the initiation of field work and reconstruction was slated to begin in October 1975, it was believed that archeological excavations might prove a useful input into reconstruction research. The specific objectives of the archeological phase of this research included (1) verification of the basic dimensions and precise location of the depot

(often erroneously called the "Arcade Station"), (2) recording information concerning structural attributes of that building, and (3) recovery of period artifacts. This paper reports the results of these exploratory excavations.

Although the primary objectives of the subsurface investigations were only partially realized, it is believed that this study will contribute to an understanding of the particular historic processes in operation on the site both prior and subsequent to the interpretive period, and will demonstrate the practical importance of this sort of understanding to the resolution of practical restoration and reconstruction problems. Recommendations concerning scheduling and organization of future historic sites research projects are offered.

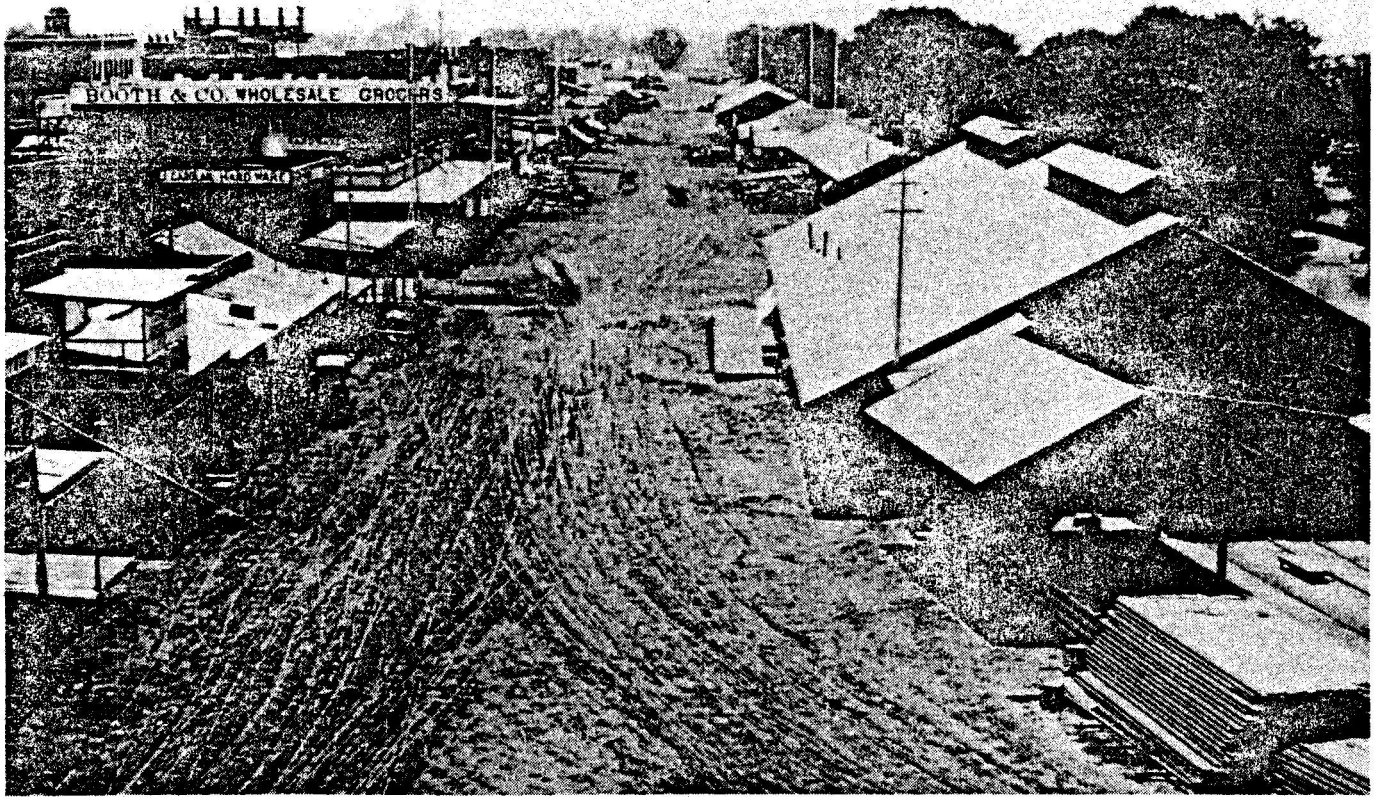


PLATE 2. VIEW SOUTH, PHOTO OF CPRR DEPOT.

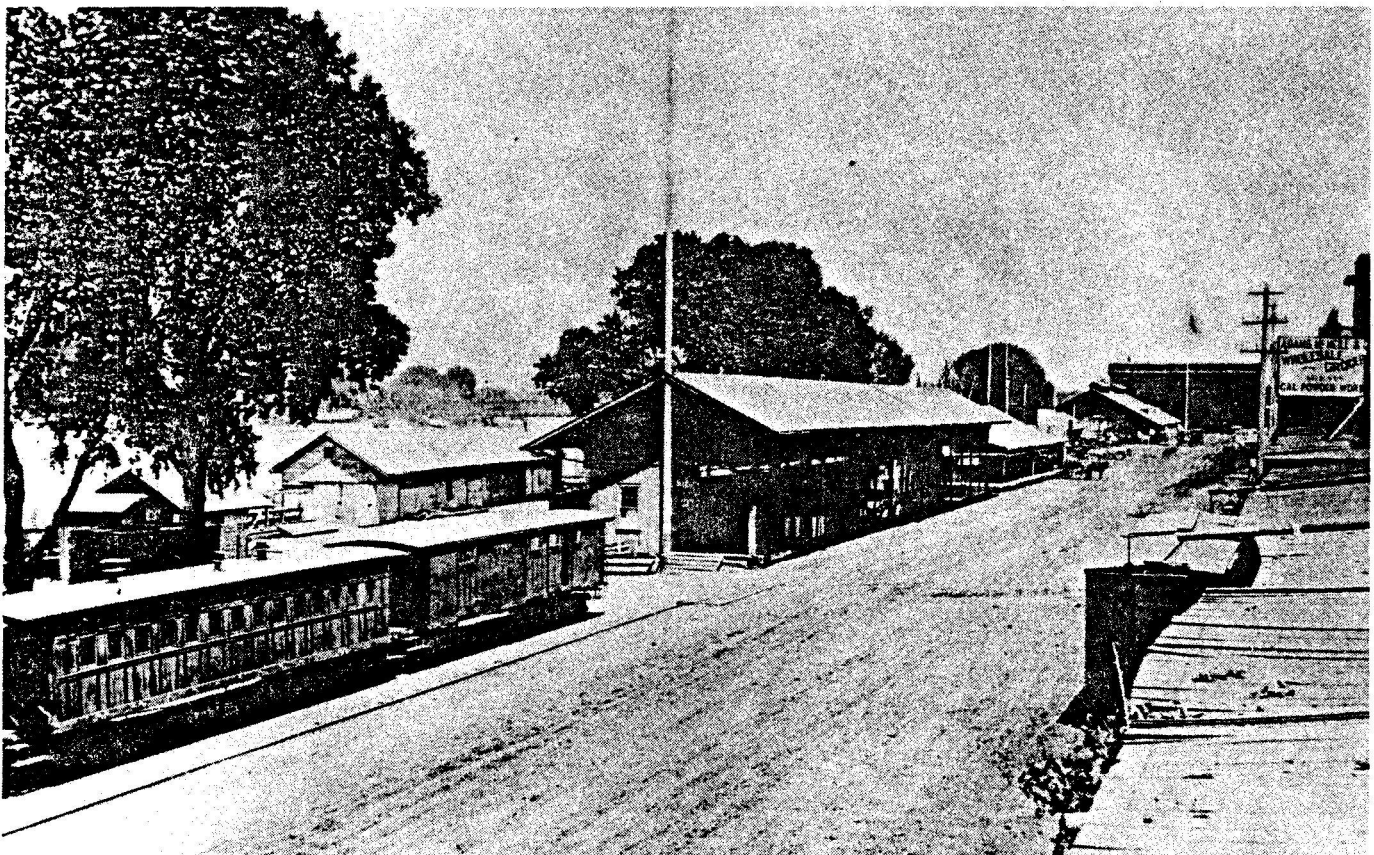


PLATE 3. EARLY PHOTO OF CPRR DEPOT LOOKING NORTH ON FRONT STREET.

PLATE 4. PAINTING OF SACRAMENTO RAILROAD STATION, 1874.



GENERAL HISTORY

On January 8, 1863, Governor Leland Stanford, one of the partners in the Central Pacific Railroad Company of California, participated in a groundbreaking ceremony on the Sacramento levee at the foot of K Street that marked the beginning of the eastward construction of the nation's first transcontinental railroad. The following six years witnessed the rise of California's "Big Four" financiers, the expenditure of massive federal funding to buy a railroad by the mile, the influx of thousands of Chinese laborers to the state to construct the railroad, and the engineering feats that their labor accomplished. This short time period witnessed the introduction of many innovations in railroad and engineering technology, including the use of dynamite (nitroglycerine) and the steam-powered rock drill which replaced black powder and hand-driven steel drilling for tunnel construction.

Sacramento was the western terminus of the Central Pacific-Union Pacific railroad system. In December of 1862, the city of Sacramento granted the Central Pacific Railroad the land along the embarcadero between I and K streets. It is with this area, specifically the section between I and J streets, that this project deals.

The first Central Pacific Railroad passenger depot was constructed in May 1864 (*Sacramento Union*, May 17, 1864). This was a modest structure

(18 x 37 feet) located on the levee south of the intersection of J and Front streets. Prior to this, several other structures had existed on the property, including a turntable at Front and I (*ibid.*, January 1, 1864) and an "unsightly shed" in the same area (*ibid.*, February 9, 1864). At approximately the same time as the construction of the first passenger depot, a freight depot was built on the levee near K Street (*ibid.*, May 4, 1864).

In August of 1867, Mark Hopkins was granted permission to erect a new CPRR passenger depot in Sacramento. This was to be "a one-story frame building, 75 feet wide by 200 feet long, on the west side of Front between I and J." (*Ibid.*, August 27, 1867). It is this structure, soon to be reconstructed, which constituted the specific objective of the archeological investigations that took place on the site in September of 1975.

The depot was of an "arcade" type construction as is evidenced by several photographs (Plates 2 and 3), a lithograph (*Bird's Eye View of the City of Sacramento*, A. Koch, 1870; Plate 5), and a painting (*Sacramento Railroad Station*), C.W. Hahn, 1874, De Young Museum; Plate 4). However, to refer to this structure as "The Arcade Station" is probably a misnomer, as the term applies only to its architectural style. The north and south ends, as well as possibly the west side,

were open, with a gable roof supported, in part, by three arches apparent at the north and south ends. A large arch, probably between 25 and 30 feet across, was situated between two narrower ones, each about 15 to 20 feet across. The area between the eastern side of the small eastern arch and Front Street contained a complex of enclosed areas, including a restaurant and storage rooms. These were probably situated on a platform inside the building which extended from the east side of the structure westward, at least through the eastern small arch (see painting by C. Hahn). The platform was later lowered and possibly extended (*Sacramento Union*, December 10, 1872). The central arched passageway seemed to have covered two track beds, while the narrower area under the arch to the west contained only one. The 1874 painting shows only one track through the center, although this does not compare favorably with photographic evidence.

Little is known of the east or west sides of the building, as available photographs show primarily the north and south ends. It is uncertain whether the covered area of the east side of the station was entirely enclosed, and whether there was a platform extending outside the building on either the south or east sides. No documentation is available regarding the specific techniques employed in the construction of the structure. There are references to the fact that it was a frame building with a shingled roof (*Sacramento Union*, August 27, 1867; August 1, 1879; Munoz, 1975.)

Documentation regarding improvements to the site include:

CPRR Voucher No. 963, to Sacramento Gas Company, \$40 for pipe and meter, month of October 1867, chargeable to Passenger Depot, Sacramento.

Sacramento Union, November 5, 1867: "New crosswalk — a new granite crosswalk is being laid across Front Street on the north line of J Street, to connect with the new Pacific Railroad depot."

Sacramento Union, October 2, 1868: "Workmen were engaged at the north end of the Pacific Railroad passenger depot yesterday putting in position a substantial platform upon which a large specimen of a Fairbanks scale is to rest."

Sacramento Union, February 15, 1870: "Workmen are engaged at the Central Pacific passenger depot in making an addition thereto and enclosing a small space, to be kept as a refreshment stand."

Sacramento Union, July 23, 1870: "At the Central Pacific Depot workmen were engaged in fitting up rooms north of the restaurant for offices. The old apartments at present occupied for that purpose are to be turned into a waiting room for ladies."

Sacramento Union, October 25, 1870: "We observed yesterday that the Central Pacific Company were having the crosswalk at the foot of J Street leading to the passenger depot, increased to double its former width, which will prove a great convenience during the winter season."

In 1879 a new passenger depot was constructed in the area of the CPRR shops. By June 10 of the following year the old station was being "rapidly demolished by a large number of workmen" (*Sacramento Union*, June 10, 1880) to make way for an extensive freight shed to be constructed on the site during July and August of that year. Newspaper accounts include several descriptions of the building and construction procedures involved:

Sacramento Union, June 29, 1880: "The building will be placed on the west line of the street and be 50 feet in width, extending from north of K Street to about 100 feet north of J Street . . . it will be necessary to change the grade of the two blocks between K and I Streets on the west side. We find that this can be accomplished without changing the grade on the east side to detriment to property."

Sacramento Union, July 19, 1880: "...Commencement of delivery of brick, lime and sand for the foundation . . ."

Sacramento Union, July 20, 1880: "The delivery of timber and lumber to be used in building was commenced yesterday . . ."

Sacramento Union, August 14, 1880:
“... being given its first coat of paint – a light drab, which looks very neat. The whole inside is receiving a coat, also, of ... whiting.”

Sacramento Union, August 31, 1880:
“The office, which is located upon the second floor immediately in front of J Street, is 35 by 47 feet, and 16 feet high.”

Sacramento Union, September 9, 1880:
“The remainder of the frame of the new

freight depot to the north line of K Street has been raised ...”

Sacramento Union, September 17, 1880:
“The laying of the roof was finished yesterday, and the floor is all down, the sides mostly enclosed and the work of hanging the sliding doors for stopping the entrance is being pushed forward.”

It was this 1880 freight shed complex that burned in 1972. The demolition of this structure was completed in order to pave the current parking lot in 1974.

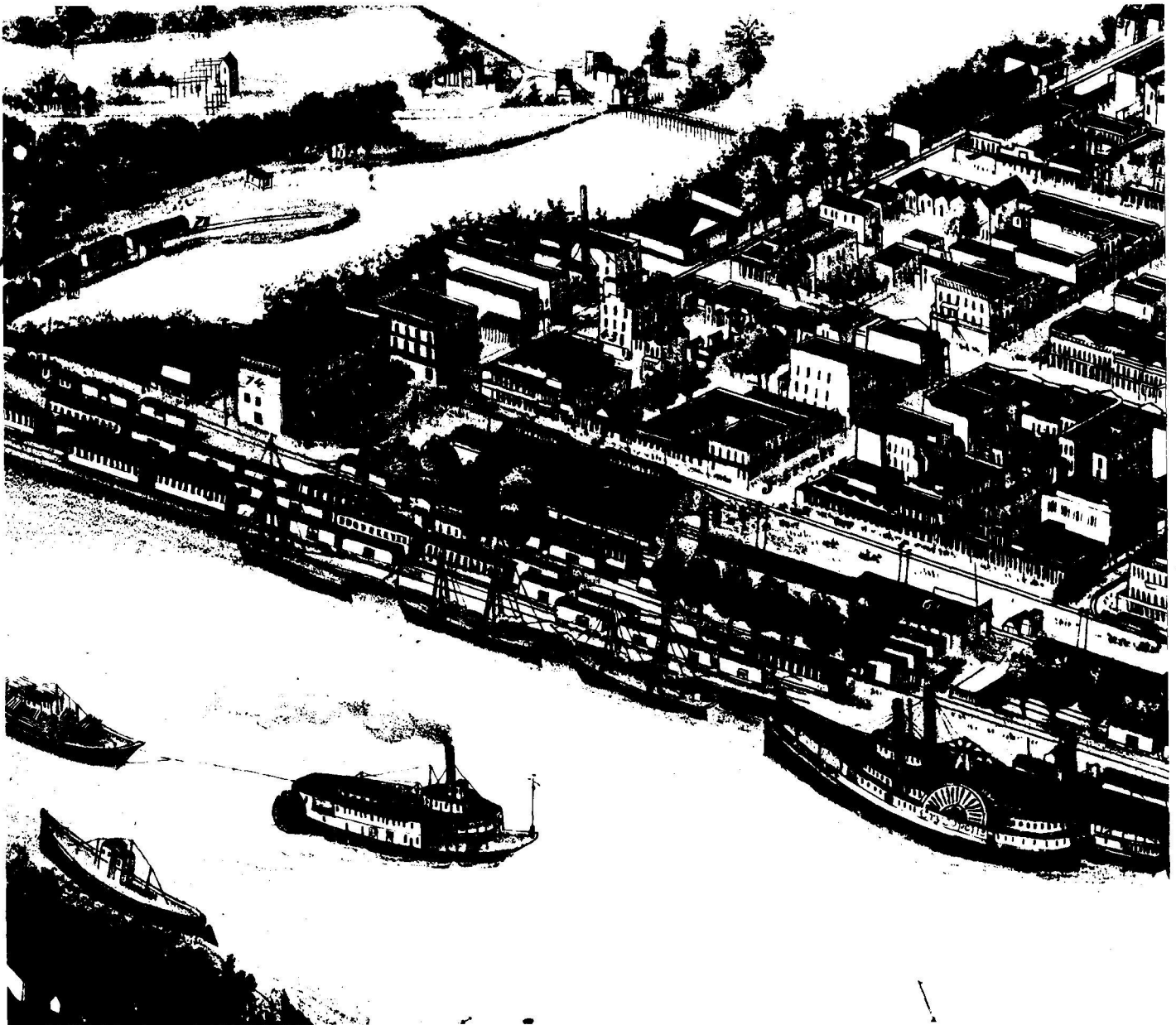


PLATE 5. BIRD'S EYE VIEW OF THE CITY OF SACRAMENTO, 1870 LITHOGRAPH.

ARCHEOLOGICAL METHODOLOGY AND LOGISTICS

Excavation Procedure

Considering the asphalt covering the site, the amount of fill believed to cover the 1867 levels, and the short time available in which to complete archeological investigations, it was decided to employ a backhoe for the initial stages of excavation. The total amount of backhoe time available was dispersed throughout the time period of the project. The strategy was to pose a specific question in reference to a particular area of the site; expose that area by backhoe; then attempt to resolve the question through examination of the features exposed and relevant documentary materials.

Pavement and fill was removed until a cultural feature was encountered. At this point, the machine operators (Ron Ketcherside and Chuck Gulley) were directed to another area while traditional archeological field techniques were used to uncover and define the partially exposed feature. Opened areas were given consecutive alphabetic unit designations, while features uncovered in these units were numbered consecutively in the order in which they were encountered. As features were exposed, their configuration and stratigraphic positions were recorded, artifacts associated with each feature collected, and the feature photographed with black and white and color slide film. The position of each was mapped on a base map of the site.

Work was begun at the southeastern area of the site in an attempt to find that corner of the structure and obtain the orientation of the south and the east sides of the building. Following this, excavation was to proceed across the south end of the building in hopes of locating the positions of the large uprights that supported the roof and the railroad track beds believed to have run through the structure.

Excavation Units

Unit A – This initial excavation revealed a mortared brick foundation running from north to south, parallel to Front Street and lying about 3½ feet below the surface. Several smaller brick footings were also uncovered in this unit. (See Fig. 1).

Unit B – This unit consisted of an east-west trench extending about 90 feet to the west from

Front Street. As documentary evidence for the south end of the building is sketchy at best, the placement of this unit was rather arbitrary. It was positioned to coincide with the extension of the south line of the sidewalk on the north side of J Street. Several additional brick footings were encountered here.

Unit C – This unit was a north-south trench running south from the west end of Unit B. This was placed in hopes of encountering the southwest corner of the 1867 passenger depot.

Unit D – As the brick features in Unit A were at about the stratigraphic position originally assumed for the 1867 depot, they were initially believed to relate to that structure. Unit D was placed to follow the north-south extension of these features from Unit A, and to clarify the distribution of the brick footings.

Unit E – This unit ran north from Unit B following a row of brick footings in an attempt to document their extension in that direction.

Units F and G – These units were placed in an area located along the west side of Front Street on the east side of the site, extending from about 200 to 225 feet north of the center line of J Street running through Unit B. This area revealed an extension of the brick foundation and footing configuration revealed in Units A, B, and D. By this stage in the excavation, serious suspicions had arisen that brick features pertained to the 1880 freight sheds built on this site following the demolition of the 1867 depot, rather than the 1867-1880 passenger depot itself. Although the south end of the 1867 structure was unknown, the overall extension of the north-south brick foundation from the north end of Unit G to the south end of Unit D exceeded by a considerable amount the range of estimates of the length of the 1867 building, suggesting the post-1880 temporal placement of this series of features.

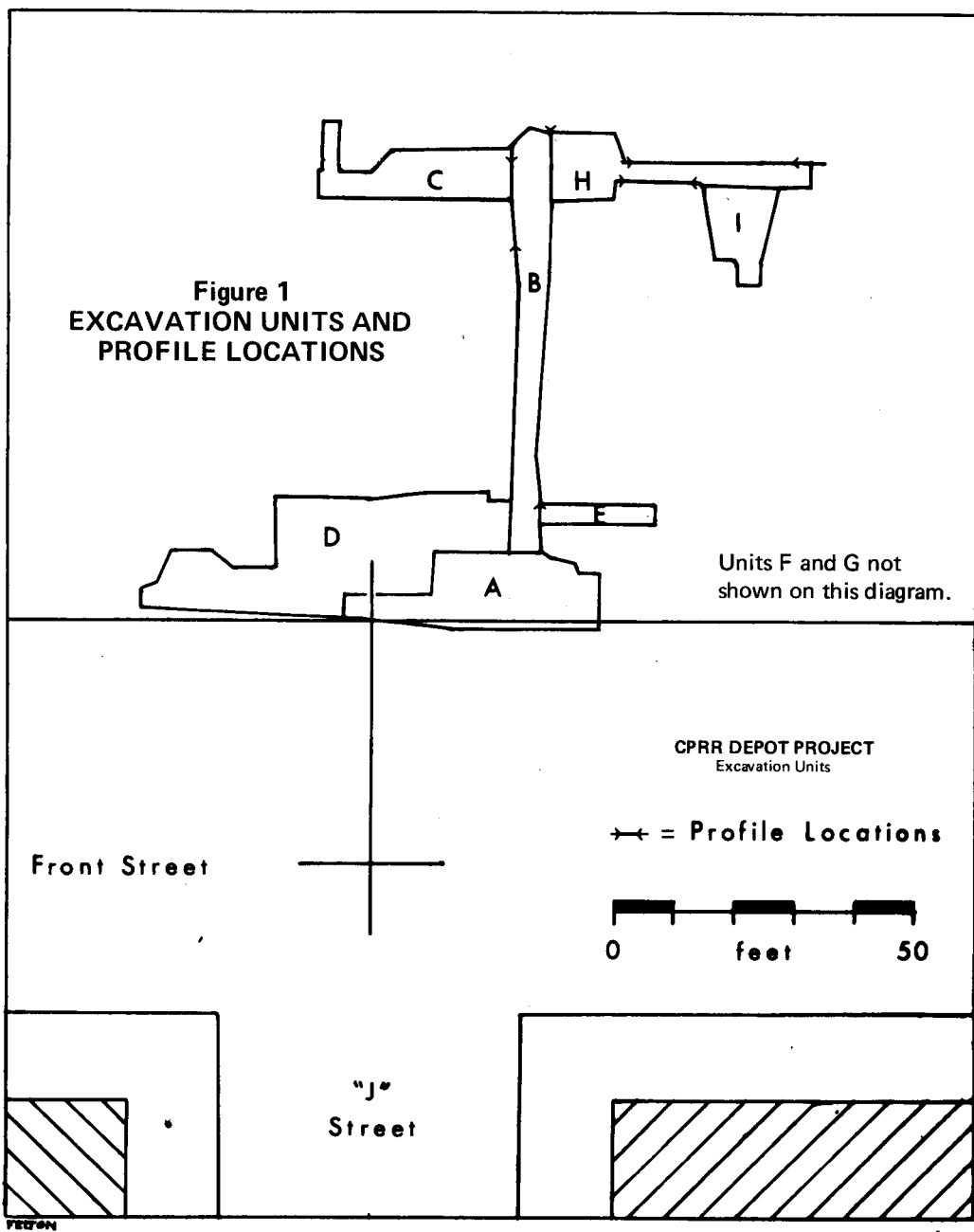
The construction of levees in this area has resulted in frequent grade level changes. As the sequence of levee-raising in this area is not accurately known, it was deemed necessary at this point to test the possibility that remnants of the structure might lie at a much greater depth than had been previously believed. Two areas in the western section of Unit B were excavated to approximately 11 and 14-foot depths, as no substantial structural features had been

encountered above these levels. One small area in the northern section of Unit A was also deepened to about 9 feet below surface. Although cultural material was encountered in the deeper areas of Unit B, nothing recovered appears in any way to relate to a railroad situation. Subsequent examination of an 1865 photograph taken from the west side of Front Street looking east down J Street, after the buildings on J Street had been raised to their present position, also suggests that the ground level could not possibly have been as

much as 8 to 14 feet lower at the time of construction of the passenger depot.

Units H and I – Unit H ran north from the west end of Unit B, including the area from approximately 65 to 75 feet west of the west side of Front Street. This locale was investigated in hopes of encountering some indication of the position of the west wall of the 1867 depot.

Unit I was a wide trench running east from the north end of Unit H within the assumed perimeter of the station.



STRATIGRAPHY

The following are brief descriptions of the major distinct stratigraphic levels encountered during the excavations of the Central Pacific old depot site in September 1975. They were numbered sequentially, with numerically smaller strata designations generally superimposed over and postdating levels bearing large numbers. These strata are referred to by these designations on the accompanying profiles (Figs. 2-6, inclusive).

There is a distinct difference in the stratigraphic sequence above stratum 11 in those areas of the site to the west and east of Feature 19, which probably marks the rear (west) wall of the freight shed built on the site in 1880. The significance of this variation will be discussed at greater length elsewhere in this paper.

A report on foundation investigations, including sediment borings, conducted by the California Department of Transportation on the site is available (Forsyth 1975). This deals chiefly with the architectural potentials of the area. Generalized stratigraphic profiles are presented, although they are not sufficiently detailed to be of great archeological value. It is noted, however, that the CALTRANS report mentions that

... Ground water samples taken from the site show the water to be highly corrosive... testing shows that in the groundwater environment... 16 gauge steel will have an estimated life of ten years. Due to frequent changes in groundwater level, wood piles are expected to deteriorate in approximately 25 years (*Ibid.*, p. 11).

This general condition is reflected in the poor preservation of archeological material occurring above the semi-saturated zone commencing about 8 feet below the present ground surface (see Stratum 12 below). Samples of the strata discussed below were collected by the Cultural Resources Section personnel. Neither time nor money was available to permit further analysis.

Stratum 1 – Asphalt paving of parking lot covering site. Site paved in 1974.

Stratum 2 – Disturbed fill immediately underlying the asphalt. The disturbance is the result of demolition of the freight shed that burned in 1972 and subsequent leveling of area for construction of parking lot.

Stratum 3 – Dark gravel deposit of varying thickness in western area of site, the top of which is approximately 1 foot below the asphalt surface. Feature 11 (a series of railroad track tie impressions) was situated at the interface of Stratum 3 and underlying Stratum 4. Stratum 3 gravel probably represents ballast from a track bed deposit.

Stratum 4 – Buff-colored, sandy, clayey, hardpan fill, 3 to 4 feet thick, occurring in both eastern and western areas of the site. Textural composition is comparable to that of Stratum 2. Stratum 4 underlies Stratum 2 to the east of Feature 19, but is separated from that stratum by Stratum 3 west of that point. Upon exposure and drying, this material becomes very hard and difficult to remove.

Stratum 5 – Dark gravel deposit occurring in the western area of the site beneath Stratum 4. The profile indicates that this material was deposited in several rather square-bottomed depressions which are intrusive into Stratum 10 below. Like Stratum 3, this is probably a track bed deposit.

Stratum 6 – Deposit of coal, wood fragments, and other cultural debris, occurring east of Feature 19, and varying in thickness from ½ inch to 1 foot. This level is superimposed over brick foundation footings believed to represent the 1880 freight shed construction, and appears to have been at least partially deposited or redeposited following the truncation of several of those footings. Most of the artifacts recovered during this excavation appear to be contemporaneous with Stratum 6 (originally referred to as Feature 6).

Stratum 7 – Deposit of light-colored (buff, tan) fine gravel and sand, lying immediately beneath Stratum 6 in central area of Unit B. This deposit runs east from Feature 19 to a point about 38½ feet west of the west line of Front Street. It is unclear whether this is a track bed deposit or the result of some other activity.

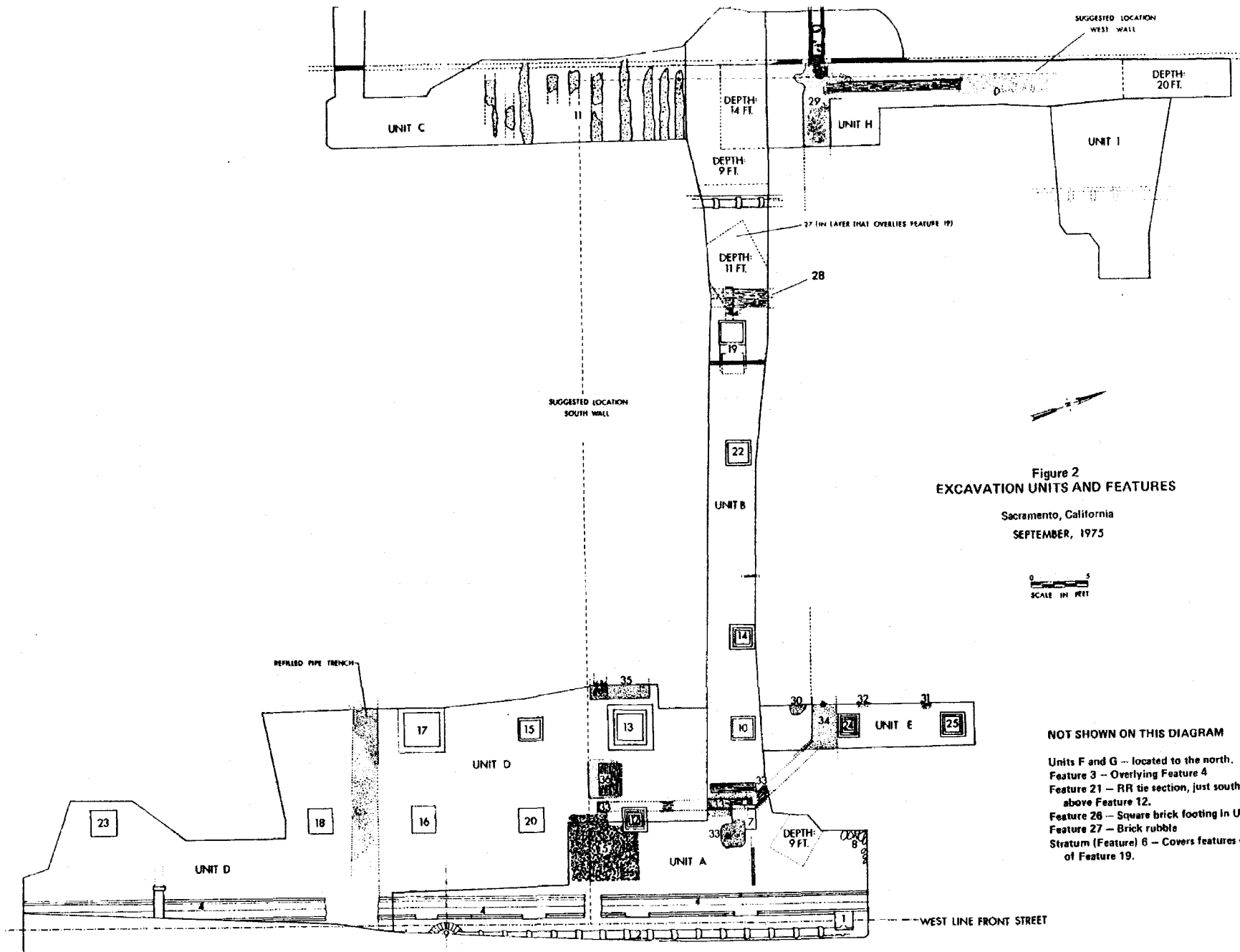


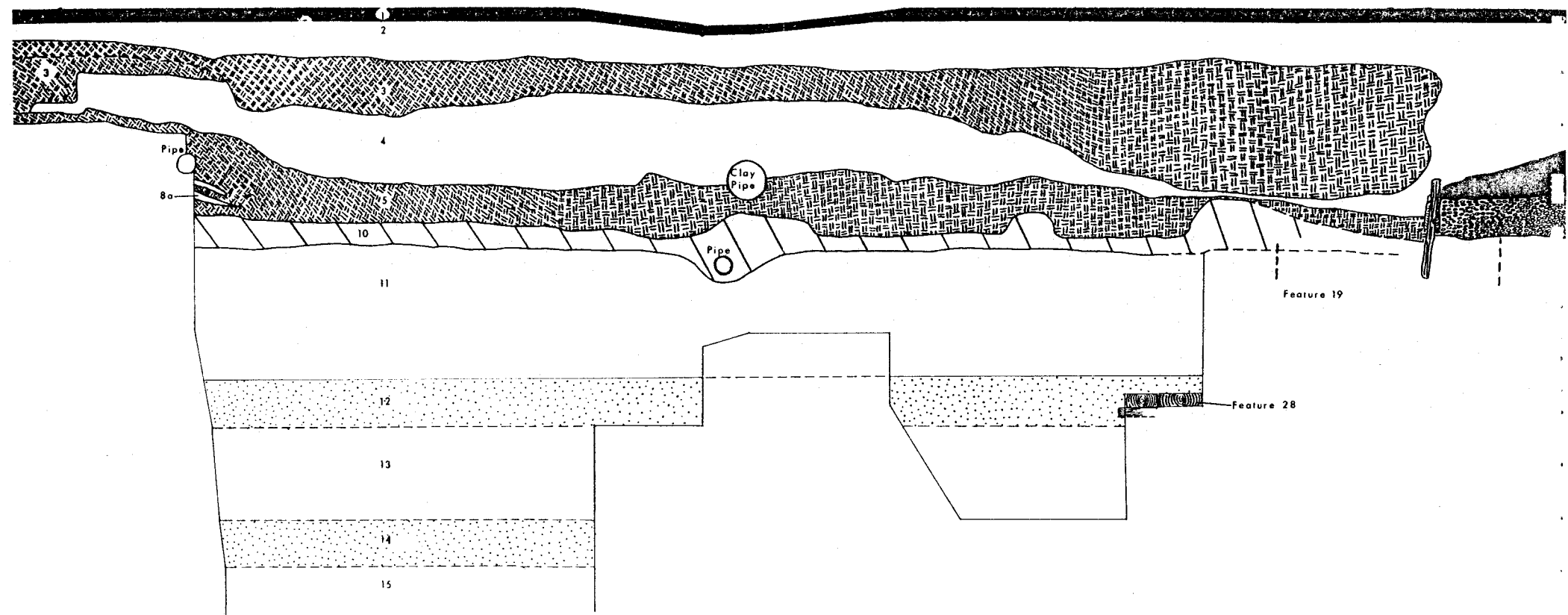
Figure 2
EXCAVATION UNITS AND FEATURES

Sacramento, California
SEPTEMBER, 1975

0 5
SCALE IN FEET

NOT SHOWN ON THIS DIAGRAM

Units F and G -- located to the north.
 Feature 3 -- Overlying Feature 4
 Feature 21 -- RR tie section, just south and above Feature 12.
 Feature 26 -- Square brick footing in Unit F.
 Feature 27 -- Brick rubble
 Stratum (Feature) 6 -- Covers features east of Feature 19.



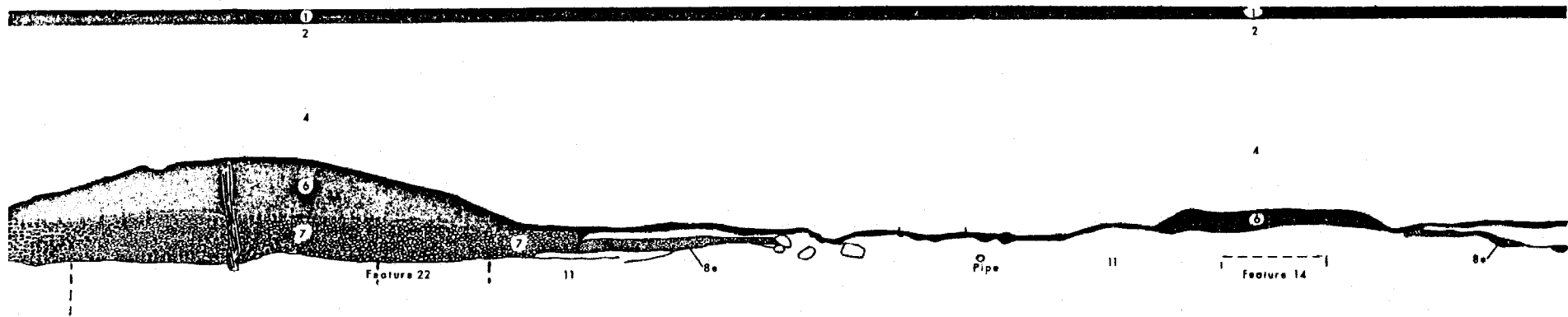


Figure 3
STRATIGRAPHIC PROFILE

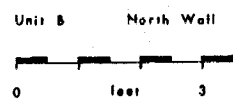
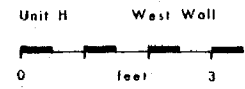
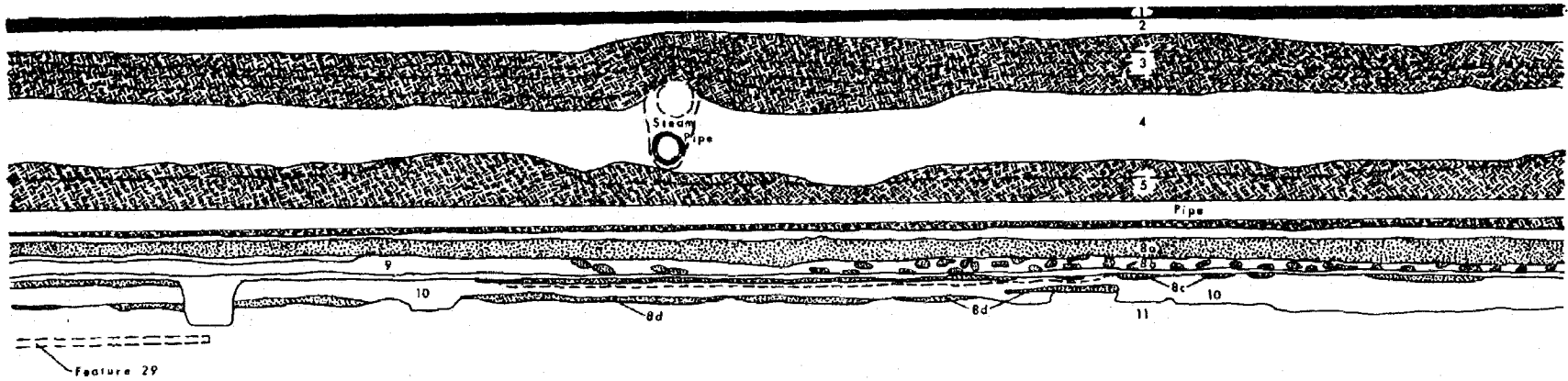
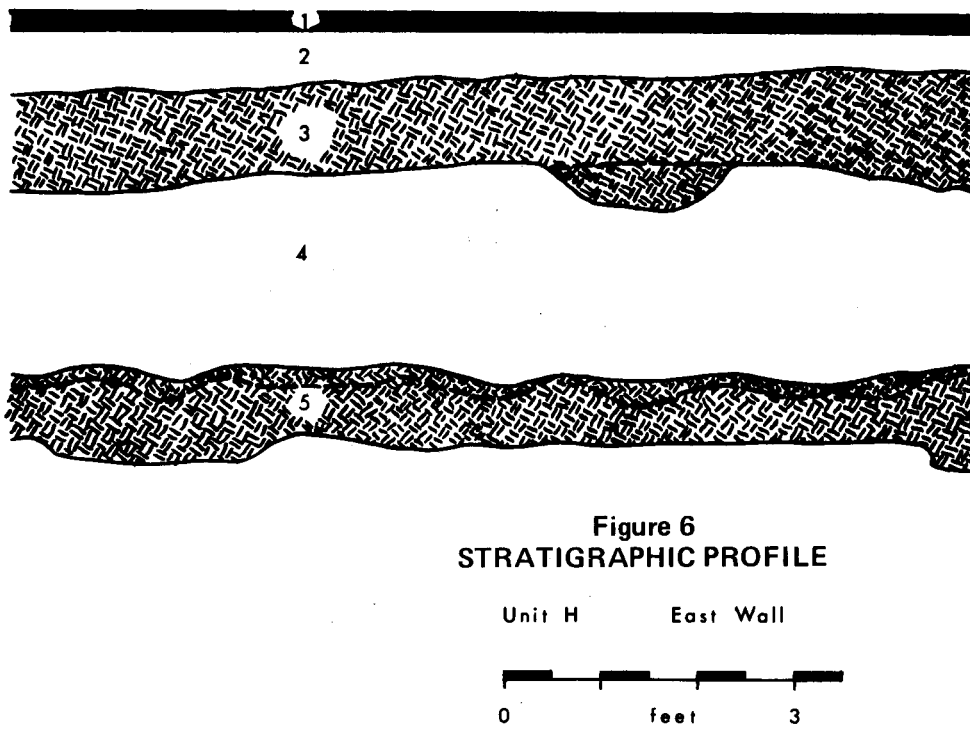
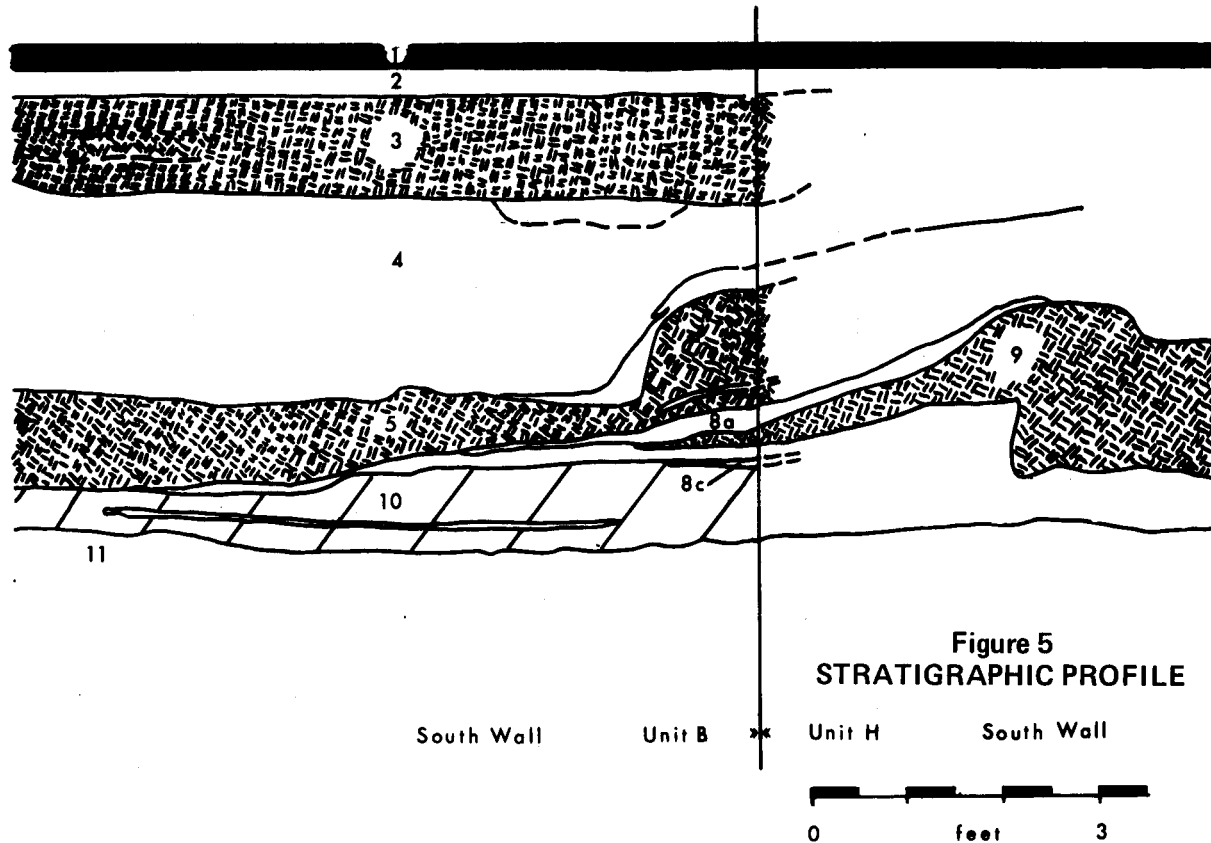


Figure 4
STRATIGRAPHIC PROFILE





Strata 8a-d – Four superimposed, relatively thin (¼ to 4 inches) strata of decomposed granite of differing colors, occurring in the extreme western portion of the site. They appear to represent a form of pavement underlying the dark gravel of Stratum 9 in this area. Although present in the west walls of Units C and H, no traces of these strata were located in the east walls of these units, some 3 to 4 feet to the east. Thus, they appear to have covered the ground surface in the area believed to lie just outside (to the west of) the west wall of the 1867 passenger depot, commencing about 75 feet west of the west line of Front Street. The uppermost of these “pavements,” Stratum 8-a, is a slightly rusty white and black layer about 4 inches thick, somewhat thicker than those beneath it. Stratum 8-b consists of fist-sized chunks of granite and is mixed with gravel that appears contiguous with Stratum 9 (see below). Separated from 8-d by a thin, dark layer is Stratum 8-c. This stratum is very thin and intermittent, and of a somewhat greenish hue. Stratum 8-d, the deepest of this series, is also intermittent, having been cut by intrusions from above. This lowest “pavement” is of a rusty to pinkish color.

Stratum 8-e – Another decomposed granite “pavement” occurring beneath Stratum 6 in Unit E, the east end of Unit B, and the northwest area of Unit D. This level is also intermittent, and has been cut by intrusive features in a number of locations. The material appears comparable to Strata 8-d in terms of color.

Stratum 9 – Deposit of loose sand and gravel occurs beneath Stratum 5 and 8-a in the extreme western area of the site. This probable track bed deposit rests in a square-bottomed depression comparable to that noted for Stratum 5. This stratum appears to be roughly contemporaneous with Stratum 8-b (see Fig. 5).

Stratum 10 – Deposit of light-colored, coarse sand and fine gravel present throughout the excavated area west of Feature 19. Feature 29 appears to lie within this stratum, as does an iron pipe about 6 inches in

diameter, which runs north-south a few feet west of the west line of Front Street. The relation of this stratum to those occurring east of Feature 19 is unclear.

Stratum 11 – Culturally sterile deposit of light, buff-colored sand and silt, 2 to 3 feet thick, commencing at depths of 4 to 5 feet below the surface. This stratum occurs in all areas of the site in which these depths were reached.

Stratum 12 – Moist, soft, grey, clayey silt, culture-bearing deposit present between 8 and 9 feet below surface. Stratum 12 was delimited from Stratum 13 on the basis of the presence of Feature 28 and associated cultural material, rather than textural or color variation. The upper surface of this deposit exhibited a minor lens of iron oxide, probably the result of variation in groundwater level. The grey color of this and underlying strata is probably due to the anaerobic environment created by its semi-saturated condition.*

Stratum 13 – The apparently sterile, moist, soft, grey clayey silt deposit separating Strata 12 and 14.

Stratum 14 – Moist, grey deposit containing cultural debris and occurring approximately 11 to 12 feet beneath asphalt surface.

This stratum was initially defined on the basis of the presence of cultural material, although it appears to contain somewhat coarser-textured material than the surrounding sediment.

Stratum 15 – Moist, soft, grey clayey silt deposit, continuing from about the bottom of Stratum 14 to the lower limit of the excavation (18 feet below surface). No cultural material is apparent at any point below about 12½ feet beneath the surface.

*Dr. Eugene Begg (Department of Soils and Plant Nutrition, U.C. Davis, CA), 1975: personal communication.

ARCHEOLOGICAL COMPONENTS

Introduction

The archeological information recovered from the old depot excavations is conceptualized and described in this report as a series of distinct archeological components. Each component consists of a body or group of interrelated features and artifacts. As used here, the concept does not necessarily represent a single point in time, nor a short period of time; but may include the material record of a series of changes occurring in a single structure or surface over an extended time span. The relationships between different features within a single component are coherent in spatial, compositional, or structural, but not necessarily temporal terms.

The major archeological components encountered during September 1975 are described below. The first, and apparently most recent, consists of a group of brick and concrete foundation footings and related railroad deposits that pertain to the construction, alterations to and eventual demolition of the Southern Pacific freight shed and yard present on the site between 1880 and 1972. The second component includes remnants of a number of seemingly contiguous wooden trough-like constructions and several intrusive features that may represent the old depot. The two remaining components are representative of unknown historic activities and periods of time, probably prior to 1864.

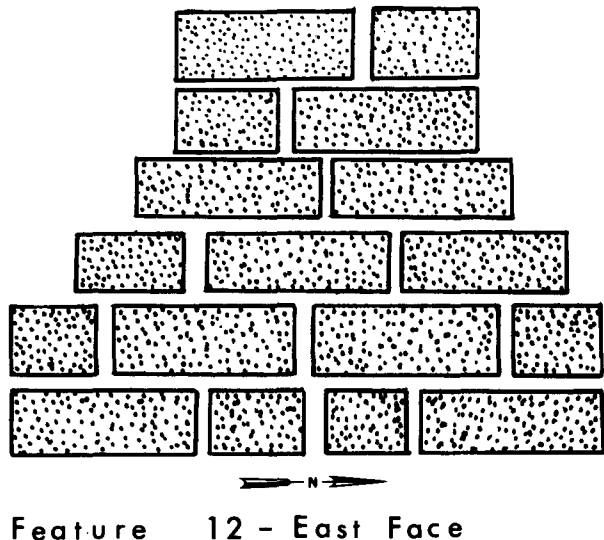
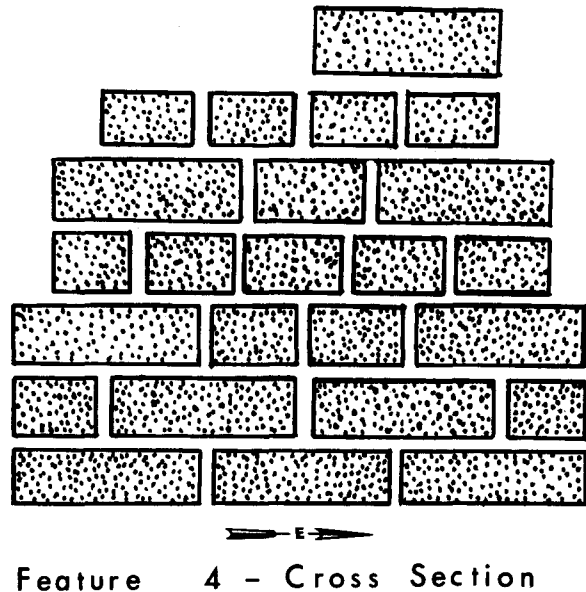
Component 1 -- Brick and Concrete Foundation Footings

The first structural features encountered in the 1975 excavations were a brick foundation (Feature 4), found running north-south on the west line of Front Street, and associated smaller brick and concrete footings.

Feature 4 is about two feet wide and composed of mortared brick originally at least 7 tiers high. It is widest at the bottom and raised in a step-like pattern.

The brick footings (Features 7, 10, 12, 14, 15, 18, 20, 22, 23, 24, 25, 26) are about 26 inches square, and, like Feature 4, have progressively higher tiers inset from those below (see

Figure 7
DIAGRAMS OF FEATURES
4 AND 12 (BRICK FOOTINGS)



accompanying diagrams of these architectural features). The small, square footings are uniformly spaced, about 9'-3" to 9'-6" apart, center to center, from east to west, and about 7'-10" to 8'-2" apart from north to south. This pattern is broken only by the absence of footings west of Feature 18 in Unit D and between Features 14 and 22 in Unit B. A pile of semi-articulated brick (Feature 27) was located in Unit B. This appears to be the remnant of one of the square brick footings. Feature 27, slightly to the west of Feature 19, rests on the top of an apparent extension of Stratum 5 (gravel roadbed deposit) which in turn partially overlies Feature 19, the westernmost double brick footing.

Feature 19 is also a brick footing, but is substantially different in character from the others. It consists of two typical square footings about 8 inches apart from east to west resting on a brick pad. The west edge of Feature 19 is approximately 52'-10" west of the east side of Feature 4. There are no brick footings, except the fragmentary Feature 27, west of this point.

Features 13 and 17 are concrete footings somewhat more massive than those of brick. They are, however, spaced at the same intervals as the others. These concrete objects were found to have forms still intact around their bases. All the forms were constructed with round wire nails. It was noted that No. 13 had been poured directly on top of a number of loose bricks.

Most of the small footings had been damaged at some time before the deposition of the thick layer of sandy clay (Stratum 4) which covered them. They appeared to have had their upper layers removed, with those furthest south having only two tiers of bricks remaining, while those to the north remain somewhat more intact. It appears that this damage may be the result of a leveling process during which the upper portions were removed. Mortar on the top of the truncated foundations does indicate that they, in fact, did support added tiers of brick.

The upper surfaces of Feature 4 (the long, north-south brick foundation) and 19 (westernmost double brick footing) have also been damaged, and show evidence of having had concrete poured on their upper surfaces. Feature 19 exhibits chunks of concrete adhering to its fragmented upper surface, and more concrete chunks were found in the fill immediately above it. Portions of a concrete form remain, also constructed with round nails. This appears to have consisted of 1-inch boards attached to either side

of a long stake. Feature 4 had numerous pieces of concrete resting on and conforming to its upper surface along its entire length. Portions of the uppermost tier of brick are missing in many areas. In the southern area of Unit D a large chunk of concrete with these bricks still attached was located during the removal of overburden.

Stratum 6 (originally designated as Feature 6) appears to date from during or immediately following the period in which the above brick foundation footings were in use. The numerous artifacts recovered from this level include glass bottles, a fragmentary ceramic bathroom fixture, coal, fragments of wood with white/cream paint or whitewash adhering, window glass, fruit pits, nut shells, sawed meat bones, small soft lead seals, a brass padlock stamped with the letters *S.P. Co.*, electrical hardware (including light bulb and ceramic insulator fragments and a number of badly deteriorated zinc electrodes of the type used in wet cell telegraph batteries), insect exoskeletons (probably cockroach), and other cultural debris (see Appendix for further discussion of the artifact assemblage).

Feature 11 is a group of impressions that apparently represent the former position of a series of railroad track ties that rested on or near the upper surface of Stratum 4. These shallow intrusions contained gravel and considerable quantities of iron oxide, possibly deposited by the presence of standing water under the ties. This feature apparently represents a track that ran from north to south on the west side of the post-1880 freight shed.

Feature 2 consists of a ceramic drain pipe running into a round manhole-like structure, Feature 9. It is uncertain how this construction relates to the freight shed, except that it lies just outside the east wall of that building along the west side of Front Street. The date of construction is unknown, though the bricks from which it is constructed were probably manufactured sometime after the late 1890s (see Appendix).

A number of other utility pipelines seemingly contemporaneous with the freight shed were encountered. A steel steam pipe running from east to west through Units H and I was originally housed inside a ceramic pipe packed with insulation. Another ceramic drain line extends from north to south through Unit B, about 33½ feet west of the west line of Front Street. This parallels an iron or steel drain about 76 feet west of Front Street which runs the length of Units C and H and rests within Stratum 5. In Unit D, a

ceramic drainpipe cuts across brick Feature 4 about 25 feet south of the center line of J Street. This line is probably quite recent, and may postdate the 1972-73 demolition of the freight shed. Feature 4 has also been cut in a number of other locations, probably for the placement of utility lines.

Feature 1 is a concrete square of unknown function. It may have been an element of the drain system which ran along the eastern side of the freight shed and is still visible between the eastern edge of the parking lot and Front Street to the north of Unit A.

Component 2 – Wooden “Troughs” and Related Features

A number of archeological features were located lying above the upper surface of the tan layer of silt and sand (Stratum 10), but beneath the brick foundation footings (initially believed to relate to the 1867 passenger depot, but later determined to be part of freight shed) and the lower dark gravel roadbed deposits in the western area of the site. These consisted of wooden trough-like structures (Feature 29, and portions of Features 33 and 34), a wooden beam (Feature 33), and refilled intrusive depressions (appearing in the side walls and floors of the excavation units as horizontal stratigraphic variations in Features 29, 33, 34, 35, and 36).

Feature 29 was uncovered in the process of excavating Unit H, a north-south trench on the west side of the excavated area. This feature consists of several elements including a 12-foot-long construction of boards in the form of an open trough about 3 inches deep, running north-south about 75 feet west of the west line of Front Street. The southern end of this trough-like object meets the eastern end of a similar feature running through a gravel deposit (Stratum 9) to the west of this location. This east-west trough appears to have been covered with short wooden boards lying across the top of its upright sides. This trough is considerably deeper (about 12 inches) than the adjoining north-south section. Another element of Feature 29 is an intrusive trench running toward the east from the point at which the two troughs meet. This re-filled excavation seems to align fairly well with a similar back-filled trench in Unit E (Feature 34). A shallow deposit of gravel and clods of clay extending to the north through the center of Unit H from the north end of the north-south plank construction was also noted in association with Feature 29.

Feature 33, located in the east end of Unit B, consists of a four-foot section of a 10” x 10” beam, oriented north-south, and associated trough-like configurations very similar to those of Feature 29. One of these runs toward the south and is 13’ 9” in total length, with portions running beneath Features 7 and 12 (brick footings). Another trough extends diagonally from the north end of the first toward the northwest and appears to adjoin the east-west intrusive trench known as Feature 34. The 10” x 10” member lies just to the west and inside the conjunction of these two covered, wooden trough-like elements (see Fig. 2). Also included in Feature 33 is a large filled intrusion about 2’ x 2½’, containing the mould of a 6” x 6” post.

An alignment of three small redwood stakes was located in the area to the east of Feature 33. These run in a diagonal line from southeast to northwest, roughly paralleling the orientation of the diagonal trough of Feature 33. In this area was also located, below Stratum 6, the impression of a narrow board running east to west.

In Unit E are located, in addition to the above, several intrusive features (30, 31, 32, 34) extending from just beneath Feature 6 into Stratum 11 below. These cut through a thin layer of reddish granite (Stratum 8e) which lies immediately below Feature 6, and contain this same material in their fill, as do the refilled trenches of Features 33 and 34. One of these intrusions (Feature 30) exhibits the filled mold of a post about 6 inches square.

Features 35 and 36 are pits intrusive into the underlying tan, sandy silt layer (Stratum 11). Both contain boards lying flat on the bottom of the respective pits with the grain oriented east-west. The fill overlying these boards consists of large quantities of coal, artifacts, and wooden debris, and appears to be identical to and continuous with Stratum 6. The artifacts recovered appear to be comparable or identical to items encountered throughout Stratum 6 in other areas of the site. Features 35 and 36 seem to be fairly well aligned with each other, on an east-west axis. The east side of Feature 35 lies about 8’ 10” to the west of the east side of Feature 36. Features 5 and 8 consist of beds of river gravel and cobbles. Feature 8 is a group of large cobbles at the north end of Unit A. Feature 6 overlies these strata designated as Features 5 and 8. Feature 5 is a pavement-like surface of smaller gravel in the area of the south end of the north-south trough of Feature 33, east of the east edge of Feature 36, and west of Feature 4 (brick foundation). In this instance, the

characteristic dark layer of Stratum 6 is mixed with the upper surface of the gravel feature. Apparently, the gravel surface was exposed at the time of the deposition of this layer of cultural debris. The gravel layer ends quite abruptly on the northeastern end and southwestern sides. Its extension to the northwest and south is not certain. The strata containing the archeological features discussed above contain relatively few artifacts. A bottle was recovered from beneath Feature 6 in the area believed to have constituted the fill of a trench in which Feature 33 had been placed; several brass cartridges (rim and center fire) were collected in the vicinity of Feature 29. All nails utilized in the construction of Features 29 and 33 were of the cut, square-sectioned variety.

Component 3 - Wooden Plank Construction and Artifact Concentration

Near the top of the moist, gray stratum, about 8'4" below the present surface, was encountered a configuration of wooden planks (Feature 28) and associated artifact concentration (Stratum 12). Feature 28 consists of two well-preserved planks (one 3" thick by 8" wide and the other 3" by 10") running from north to south and nailed with large cut nails to a largely decomposed east-west cross member beneath them. Badly decayed wood fragments suggest several other north-south trending planks to the east. The west side of this feature lies about 52 feet west of the west side of Front Street, and is below and slightly to the west of Feature 19, one of the brick footings. Preservation of wood and metal here is quite good. Artifacts recovered include a large number of nails, all of which are of the square, cut variety, a short copper nail, meat bones, wood fragments that might be from shingles or shakes or wood chips, a number of fruit pits, and small fragments of broken glass. This concentration of cultural material occurs in both areas of Unit B which were excavated to this depth.

Only small samples of the materials present in strata 12 and 14 were recovered, as consideration of safety factors precluded extensive work at these levels. Shoring would have been legally required in order to expand the investigation of this and underlying strata.

Component 4--Deepest Artifact Concentration

The deepest cultural manifestation encountered was in Unit B, stratum 14, 11 to 12 feet below the asphalt surface in the area 65 to 75 feet west of the western terminus of J Street. No structural features were encountered, although there was a thin layer of somewhat coarser material consisting of coal fragments and small gravel. Cultural material was distributed over a depth of 1 to 1½ feet. Preservation seems to be excellent at this depth, probably due to the non-oxidizing sedimentary environment. The few cut nails encountered were in much better condition than those in the upper drier levels. A readily identifiable pair of leather shoe soles are included in the artifact inventory, as well as one decorated ceramic fragment, and numerous small pieces of broken glass.

Summary

Four archeological components have been delineated for the site, by the 1975 excavations. Component 1 consists of materials that appear to relate to site history after the demise of the CPRR Passenger Station. Component 2 has been discussed in terms of its possibly consisting, at least in part, of remains of the passenger depot in question. Components 3 and 4 have been related as manifestations of a pre-1864 period. The following discussion will further elucidate the history of the site, as it can be interpreted from archeological manifestations and relevant documentary and oral evidence.

PLATE 6. CPRR EXCAVATION SITE.



INTERPRETATION OF ARCHEOLOGICAL DATA

Introduction

Interpretation of historic data derived from an archeological context rests heavily on the coordination of documentary and oral information with archeological features encountered. A body consisting of all available relevant information should be collected by or made available to the excavators well in advance of the initiation of field aspects of the project, in order that those involved may adequately address themselves to the problems at hand. A project such as this should be budgeted in terms of time and money to have at least one member of the crew available for documentary research as the need arises. All pertinent information cannot be gathered before initiation of field work, as new questions will be constantly generated during the course of excavation. Delay in addressing these questions will

result in misdirection of time and energy to the detriment of the resolution of the basic problems and questions to which the archeologist is addressing himself. In the present situation, the project leader had to attempt to coordinate the field work, record keeping, and cataloging and analysis of artifacts, as well as gather and coordinate documentary materials after the field session had begun. Due to budgetary inadequacies, some research leads had to be abandoned or only cursorily examined.

The following interpretation of the sequences of events occurring at the site during specific time intervals is presented not in strict chronological order, but rather in the order in which these series of events were abstracted from the archeological and documentary record as the project progressed. A summary chronology derived from this interpretation follows.

1880-1914

A crucial problem encountered in the course of this project was the lack of adequate information concerning the processes and stages of levee construction and grade changing occurring on the Sacramento embarcadero in the historic period. Hopefully this work will contribute to an understanding of these processes.

It was initially assumed that the CPRR depot, the primary objective of these investigations, would be located beneath 2 to 3 feet of fill. This assumption was based on an article in the *Sacramento Union*, June 8, 1880, concerning the changing of the grade of Front Street such that drainage was shifted from the west to the east side of that street. Upon encountering the series of brick foundation footings under about three feet of fill (Stratum 4), it was believed that the 1867 - 1880 cultural surface had been encountered. This configuration of features, at least initially, seemed to compare favorably with that anticipated for the 1867 structure on the basis of the limited data available concerning its construction.

Upon tracing the horizontal extension of these brick features to the north and south, however, it became apparent that they are too widely distributed to represent the old depot's maximum possible extension. On the basis of documentary material that had been accumulated while this work was in progress, it was realized that the archeological data corresponded quite well with available information concerning the dimensions of the freight shed present on the site after 1880. Initial artifact analysis conducted during this period also indicated that the assemblage associated with the masonry foundation elements was too new to represent the assumed 1867 - 1880 time interval (e.g., bottles bearing makers' marks in use between 1902 and 1924).

Thus, archeological evidence suggested that substantial grade raising represented by Stratum 4 had occurred on the site sometime after initial construction of the freight shed. Examination of the artifact assemblages in Stratum 6 and Stratum 4 indicated a temporal placement of this grade change between 1895 and 1925, rather than in 1880 prior to construction of the freight shed as previously assumed (see Appendix for further discussion of chronological significance of this assemblage).

Although no documentation of this event had been located, in conversations with Mr. Len Farrar

(Research Department, Southern Pacific Transportation Company, San Francisco) and Mr. Lyle Warren (retired Sacramento Southern Pacific Office Engineer) a grade change occurring sometime between 1907 and 1912 was mentioned. They suggested that this would imply the raising of the structure located on the site to this new level. This event was finally documented upon location by Stephen Helmich of a 1921 map of the waterfront of the city of Sacramento (Department of Engineering, September 1921) which contained a note stating, "All sheds from M Street north excepting the fruit shed extension raised to conform to the new City levee January - February 1914." This situation indicates the value of the techniques of oral history, as well as written history and archeology to historic sites research. With these questions resolved, it is possible to assign the brick archeological features to the 1880 building phase and the concrete features and layer of fill overlying this brick work to the 1914 raising of that structure. Mr. Lyle Warren commented that he remembered the freight shed which stood on the site until 1973 had a concrete perimeter foundation with a sand-filled floor topped by asphalt. If this change in the structure of the floor of that building occurred during the 1914 elevation of the structure, the square brick footings of an assumed 1880 origin would have been rendered useless as the floor joists that they had probably once supported would have been eliminated. It was probably during this 1914 work that the small brick footings were truncated. The possibility exists that the change in the assumed joists supported from below to the more solid, filled perimeter foundation floor construction was related to the use of heavier machinery during the 20th century to load, unload, and move cargo.

The presence and placement of two large concrete footings in place of footings of brick also requires explanation. The 1880 to 1973 freight shed included an "office which is located on the second floor immediately in front of J Street" (*Sacramento Union*, August 30, 1880). This two-story section of the building is also indicated on the 1921 map and an aerial photo (Sacramento City-County Museum). The two large concrete footings encountered are within the area encompassed by this two-story superstructure and probably constituted part of the foundation of this section after the building was elevated in 1914 to conform to the raised levee. This interpretation is feasible considering the presence of only round wire nails in the wooden forms still extant around

the bases of these features. This variety of nail, although manufactured much earlier, became the predominant form after about 1890 (Fontana 1962, p.55).

1914-1975

The concrete perimeter foundation to which Mr. Warren referred probably accounts for the fragments of concrete overlying Features 4 and 19. It has been reported that when the area was leveled for construction of the first parking lot in 1973, considerable amounts of concrete were removed. These activities probably explain the absence of substantial portions of the post-1914 concrete foundation, as well as the damaged nature of the upper surfaces of Features 4 and 19.

Feature 11 (a series of parallel depressions suggesting the former location of railroad track ties) and Stratum 5 (morphologically similar to the deposit containing Feature 11) probably constitute the remains of post-1914 railroad track beds that were positioned to the west of the existing freight shed. Although there was no obvious horizontal stratigraphic variation within Stratum 5, this deposit may represent the raising of a series of roadbeds occurring in different areas of the track yard during different time periods.

1849-1864

Reconstruction of the post-1880 sequence of events indicated that the 1867 passenger depot must lie at a lower level than that containing the brick - concrete features. At this point several areas of the site were excavated to greater depths to test the possibility that some vestiges of the sought-after structure might lie at considerably greater depths than previously believed. Further research, however, precluded this possibility. Stephen Helmich demonstrated that the streets had been raised to near their present level by 1864, well before the station was constructed, and that the grade in the area of the station was about level with that of Front and J streets as indicated by a photograph of the Central Pacific Locomotive "AA Sargent" taken in 1865 from near the area later occupied by the old depot (photo, Sacramento City-County Museum). Therefore, it became apparent that the next cultural level encountered, at about 8 feet below the surface, is too far below the present grade to represent the old depot. The artifacts salvaged from these two lower components also favor rejection of the thesis that

they represent the 1867 to 1880 level, for none of the typical railroad-related items found in upper levels such as rail spikes or roadbed gravels, were encountered. Thus, it would seem that this lower cultural component, separated from the upper railroad levels by several feet of sterile silty fill, predates 1865.

In attempts to reconstruct the sequence of levee raising in the area, a reference was located that mentioned grading activities along the proposed Central Pacific route prior to the beginning of actual railroad construction in February 1863.

For weeks earlier, Crocker had been preparing to tackle the major job: making the long fill needed to keep the river side track above water during flood season (Lewis 1938, p. 43).

It is suggested that the sterile layer of silty sand (between 5 and 8 feet below the present surface) represents this activity. The source of this material may have been the American River which had been filling with tailings from hydraulic mining operations upstream for some years (Sabin 1919, p. 103). This source was extensively utilized during later years in raising street grades in Sacramento (Francisco, 1959).

The culturally sterile layers between the 8 and 11-foot-deep archeological components may be the product of a number of man-caused and/or natural processes. It may represent deposits left by the floods of January 1850, March 1852, January 1853, March 1861, or the intense December 1861-January 1862 flood. Following the 1850 flood, a 3 to 5-foot-high levee was constructed. This might also explain the separation between these two lower levels, although this early levee was of rather limited extent, whereas the sterile stratum discussed was located in all areas of the site in which depths of this magnitude were reached.

The only possible structural feature encountered beneath the 8-foot level (top of the moist, gray, sand silt deposits, strata 12-15) was Feature 28, consisting of several planks nailed to a crosspiece. Examination of several illustrations of the area as it appeared prior to 1857 (*Sacramento City*, George V. Cooper, 1849; *The Great Flood*, Casselear and Bainbridge, 1850; *City of the Plain*, George H. Baker, 1857; Severson, 1973) indicated no major structures. Very little research was done on this time period, however. Feature 28 was not sufficiently explored to speculate as to its function.

Further research should be done on the limited quantity of artifacts recovered in these levels, in hopes of assigning these cultural manifestations to specific time periods.

1864-1879

Although no major structural features (foundations, footings, pilings, etc.) were encountered which were attributable to the 1867 construction of the old depot, it is believed that a number of the features located above Stratum 11 and beneath the brick foundation footings and track bed deposits that are assigned to the 1880-1972 freight shed complex probably relate to this time period. Of particular importance is the distribution of the 4 distinct layers of crushed granite (Strata 8 a-d) encountered on the west side of the site. These layers end abruptly on a north-south line roughly parallel to and about 75 feet to the west of Front Street. It was in this location that the west side of the depot was believed to have been located, as newspaper accounts give the east-west dimension of the building as 75 feet, and another source (Montague, 1869) lists this dimension as 216 by 70 feet. Thus, the eastern line of the extension of these granite layers is at about the proper distance from Front Street to represent the eastern edge of a form of pavement covering the surface west of the building.

The use of decomposed granite is documented in a number of accounts in the *Sacramento Union* of 1864:

May 13: Front Street – Pacific Railroad Company proposes to overlay the street as far as their jurisdiction extends with decomposed granite from their quarry in the foothills, which will make a smooth hard surface free from dust.

June 10: Decayed Granite – Several carloads of decayed granite were brought to the city yesterday over the Pacific Railroad to be deposited around the freight depot.

June 18: Decayed Granite – This material appears to be in great demand. The Pacific Railroad Company has deposited a considerable quantity on Front Street around their Depots to improve the surface for the street vehicles.

The four granite levels probably post-date 1864. It is assumed that the widespread layer of roadbed gravel (Stratum 5) overlying the upper granite layer was deposited sometime after 1880, as it extends unbroken to the west side of the brick

foundation (Feature 19) constructed in that year. Therefore, these granite deposits appear to represent the period between 1864 (first document demonstrating availability and use of decomposed granite) and 1880 (deposition of overlying Stratum 5).

A gravel deposit (Stratum 9) also lies to the west of the assumed position of the western wall of the 1867 depot and tapers out on the east side at about the same point as the thin granite layers (Strata 8a through d). This gravel deposit, possibly an early track bed, is immediately below the upper granite "pavement" (Stratum 8a) and seems to be contemporary with the second (Stratum 8b). The lower intermittent granite surfaces (Strata 8c and d) appear to predate Stratum 9. The material composing Stratum 8d is physically comparable to the granite deposit (Stratum 8e) occurring just below Stratum 6 (dark cultural deposit believed to represent the post-1880 period) in the area encompassed by the freight sheds. In both areas, intrusions, possibly related to the 1867 to 1880 depot, cut through the granite deposits (Strata 8d and 8e). It is suggested that the lowest pavement deposits (Stratum 8d on the east side of the site to Stratum 8e on the west side) may be remnants of the 1864 deposition of this material on railroad property and around railroad buildings, with the gravel deposit (Stratum 9) on the west side of the site underlying the upper granite layer (Stratum 8) representing a track bed occurring to the west of and contemporaneous with the old depot structure.

Also in a stratigraphic position which suggests that they may have been contemporary with the 1867 Central Pacific Depot are two iron pipes running from north to south. The first is a short section of 1-inch pipe in Unit B about 28 feet west of the west side of Feature 4. Several interpretations are possible, including a freshwater or gas line, the latter being installed about October of 1867 (Munoz, 1975). The other iron pipe is located about 64 feet west of the west line of Front Street with Stratum 10, beneath Stratum 5. Stratum 5 does not appear to have been disturbed, indicating that the pipe was placed prior to its probable deposition after 1880. The pipe itself is about 6 inches in diameter and may have been a drainpipe. Use of iron drainpipe had evidently begun at least as early as 1868, as a newspaper article (*Sacramento Union*, April 6, 1868) advocates replacing wooden pipes with iron to solve leakage problems. The date of initial use of iron pipe was not researched further due to time limitations.

It appears that Features 29, 33, and 34 may compose a network of wooden flumes or drains, possibly related to the drainage or distribution of rainwater runoff, water being supplied for steam engines, or sewage from inside the 1867 passenger depot. Central Pacific Railroad Voucher No. 342 mentions the purchase of wood for construction of "sewer on Front Street" (Munoz, 1975).

The possible functions of the backfilled trenches, including Feature 34 and the intrusion running east from the wooden troughs in Feature 29, is unclear. They do align fairly well with each other on an east-west axis and generally appear to be similar in construction. No obvious remnants of wooden trough constructions were located in the fill in these trenches, however, and due to shortage of time, it was not possible to trace out their extension between these two points. It is conceivable that wooden flumes could have been removed or that this was an open ditch, although this is difficult to reconcile with the assumed presence of at least two track beds believed to have transected the area during the 1867 to 1880 period. The covered trough draining west toward the river from Feature 29, however, does seem to run under a track bed deposit (Stratum 9).

A covered flume extending to the south from Feature 33 ends abruptly in a depression about 13½ feet north of the centerline of J Street, and in the vicinity of Feature 36 (footing pit) to the west and Feature 5 (gravel deposit) to the east. It is suggested that this area may represent the south end of the 1867 building and that this end of the proposed drainage system marks the point at which water either entered or exited from beneath that structure.

Features 35 and 36 are relatively square-sided, intrusive pits with wooden boards lying flat on the bottoms. Only the east edge of Feature 35 was exposed. Feature 36 was hurriedly exposed on the final day of excavation and found to contain two boards 12 inches wide and about 3 feet long, lying side-by-side. Leif W. Landberg mentions in "Preliminary Report of Archeological Excavations at Old Sacramento, California 1968" that wooden pads or sills were placed beneath the brick foundations in several of the buildings examined in that study. Although only one brick was encountered in the fill of Feature 35, it is suggested that these two features (35 and 36) may have at one time contained brick foundation footings related to the 1867 passenger depot which were later removed. Although the fill contained therein included artifacts and debris seemingly

identical to that present in Stratum 6 and believed to date to the early part of the 20th century (prior to building-raising in 1914), it is possible that this deposition occurred following the removal of the brick work hypothesized to have been there. The total absence of any substantial foundation features attributable to the 1867-1880 period suggests that a systematic removal of these elements may have occurred. The demolition of buildings and subsequent reuse of salvaged materials in other structures is documented in a number of newspaper articles published during this time period. (*Sacramento Union*, January 14, 1864; May 24, 1864).

A gravel deposit (Feature 5) is present to the east of Features 35 and 36 and to the south of Feature 33. Its function and stratigraphic relationship to Features 35 and the brick footing (Feature 12) which overlies the north-south trending covered drain of Feature 33 is unclear. The dark artifact-bearing layer termed Stratum 6 lies directly on top of and is somewhat mixed in with the uppermost surface of Feature 5, although it does seem that the major portion of the gravel deposit does pre-date the deposition of Stratum 6. The gravel ends abruptly about 1½ feet to the west of Feature 4, possibly as a result of the excavation of a builder's trench dug to receive the masonry of Feature 4. Its northern extension also forms a distinct line; to the west and south its maximum distribution is unclear, although generally it seems to be concentrated along an east-west axis between 11 and 17 feet north of the centerline of J Street. Perhaps this feature represents a paved walkway inside or to the south of the 1867-1880 depot.

Also present in the eastern area of the site and possibly pertaining in some unknown fashion to the 1867 structure is a series of post holes and casts. This includes Features 30, 31, 32, 34, and the large intrusion just to the east of the north-south trough structure of Feature 33. This latter large intrusion (about 2 x 2½ feet) and Feature 31 both show evidence of having contained posts which were about 6 inches square. Features 30 and 32 appear to have been about the size of post holes, but exhibit no visible wood fragments or post casts. Perhaps these posts supported part of the platform and partitions inside the 1867 depot.

Feature 8, a layer of large cobbles and gravel, occurs beneath Stratum 6 in the north section of Unit A and may be related to the 1867 structure, although its function in this context is unclear.

**Summary Chronology of Archeological Data
Correlated with Known Events**

<i>Date</i>	<i>Event</i>	<i>Presumed Archeological Evidence</i>
January 8, 1850	Flood	{ Stratum 15 { Component 4, Stratum 14 { Component 3, Stratum 13
March 1852	Levee Construction, Flood	
January 1853	Flood	
March 1861	Flood	
January 1862	Flood	
February 1863	Railroad embankment and track construction	Stratum 11
January 15, 1864	Raising of Steam Navigation Co. shed on levee on north line of J Street	
January 1864	Raising of Front Street between I and J Streets	
May 1864	Initial use of decomposed granite pavement	Strata 8-d, 8-e
May 24, 1864	Demolition of Steam Navigation Co. on north line J Street (material may have been salvaged for reuse)	
March 1865	C.P.R.R. track work to allow drainage of Front Street to river	
September 1867	Construction of C.P.R.R. Passenger Depot	Component 2
October 1867	Installation of gas pipe and meter, C.P.R.R. passenger depot	Pipe, Unit B
1867-1880	Paving, trackwork	Strata 7(?), 8-a, 8-b, 9
October 1868	Construction of scale platform, north end C.P.R.R. Passenger depot	
December 1868	Application to construct open shed (30 x 75 ft.) north end passenger depot	
February 1870	Addition to passenger depot and enclosing of space for refreshment stand	
December 1872	Lowering of passenger depot platform	Features 30, 31, 32, 33, 34
April 1873	Addition to north end passenger depot for baggage room	
June 1880	C.P.R.R. passenger depot demolished	
June 1880	Proposal to change grade, west side Front Street between I and K streets and construct cesspools and drains to river	

July-August 1880	Freight shed construction	Component 1 (Brick), Stratum 6
1880-ca. 1910	Railroad track work	Strata 6,5
ca. 1910	Change in levee grade	Stratum 4
January-February 1914	Freight sheds raised to new grade	Component 1 (Concrete), Stratum 4 (East of Feature 19)
1914-1974	Track work	Stratum 3, Feature 11
1972	Freight shed destroyed by fire	
1973	Freight shed demolition completed	Stratum 2
1974	Parking lot constructed	Stratum 1

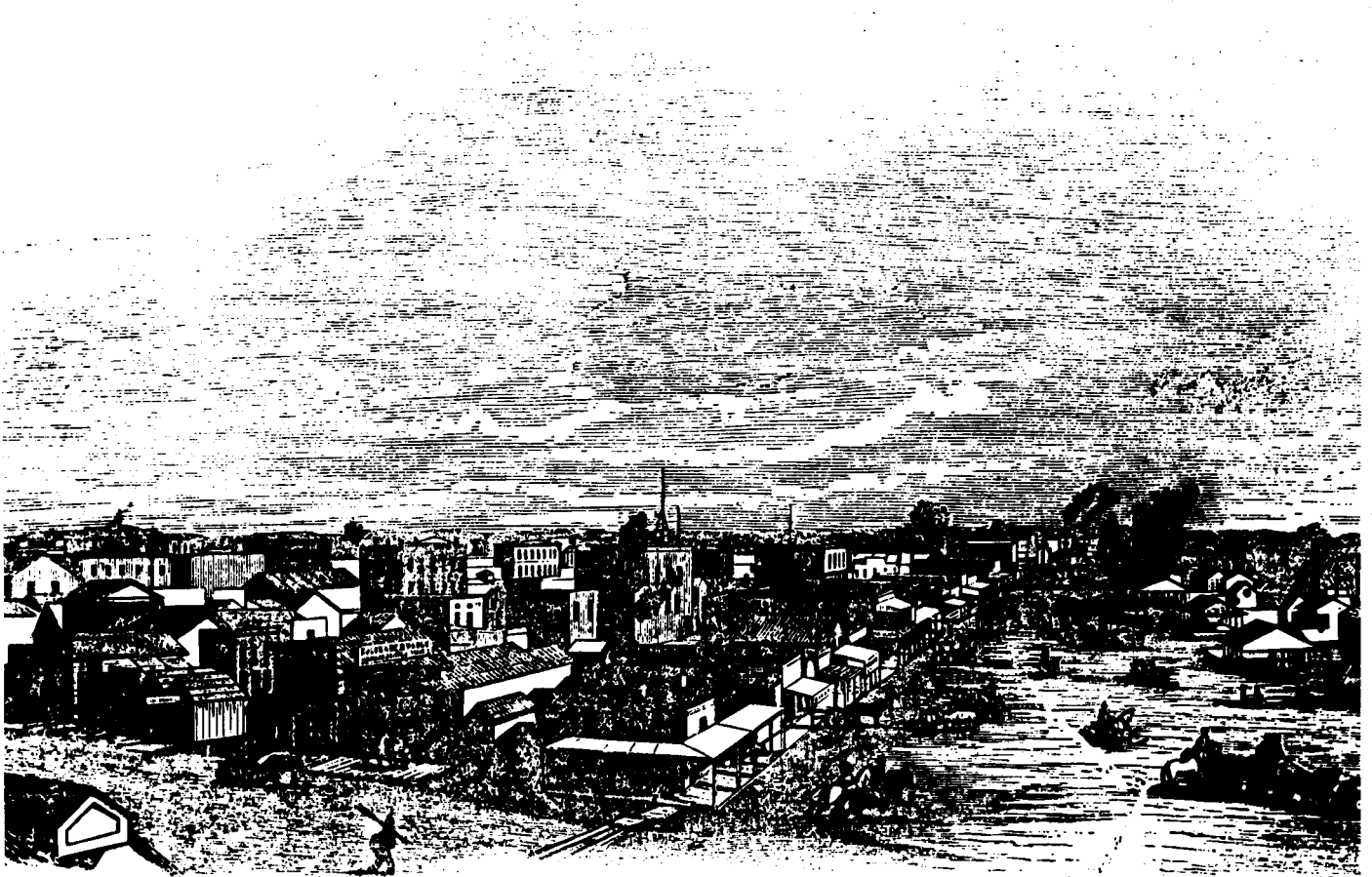


PLATE 7. VIEW OF SACRAMENTO AND LEVEE FROM WATER WORKS.

OBSERVATIONS ON CPRR PASSENGER DEPOT RECONSTRUCTION PLACEMENT

Although irrefutable structural evidence (i.e., foundations, pilings, etc.) for the location of the Central Pacific Railroad passenger depot constructed on the Sacramento embarcadero in 1867 between I and J streets was not recovered in the course of excavations undertaken during September of 1975, a number of lines of circumstantial evidence outlined elsewhere in this paper, coupled with examination of photographs, lithographs, and maps of the structure, do suggest a "most probable" location.

Koch's 1870 lithograph, *Bird's Eye View*, seems to show the south end of the depot extending to the south to a point between the north building line and the centerline of J Street. This is also indicated on a map representing the Central Pacific properties in 1869 (Joslyn, 1950). In relation to this location suggested by the Koch lithograph, the southern side of several features located during the 1975 excavations is believed to pertain to the south end of this structure (including Feature 5 – gravel pavement; Feature 33 – wooden trough-like constructions, and Features 35 and 36 – possible brick footing pits.) These archeological features terminate between 26 and 29 feet south of the western extension of the north building line of J Street. It is suggested that the south end of the passenger depot in question may have rested somewhere between these two locations.

Thus, all available evidence (documentary and archeological), as meager as it is, tends to point to a southern extension of the depot to well within the boundary of the intersection of J and Front streets. If the south end of the construction is offset slightly to the north or south of the position suggested by archeological evidence – a position either between 15 feet and 21 feet, or between 27 and 31 feet south of the east-west line formed by the north building line of J Street – archeological remains of both the south end of the 1867 structure and the brick foundation footings of the 1880 freight sheds would probably not be greatly affected.

Written and archeological evidence for the location of the western side of the depot also concur fairly well. The documented widths for the building are 70 feet (Montague, 1869) and 75 feet (*Sacramento Union*, August 27, 1867), presumably

from the west side of Front Street. The archeological data (Strata 8-a, 8b, 8-c, 9, and Feature 29) discussed earlier suggests a position for the west side of the 1867 depot of about 75 feet west of the west side of Front Street, a total distance from the east side of Front Street of about 155 feet.

Examination of the site development plan map for the Central Pacific Railroad passenger depot (Spencer, Lee, Busse, and Stypula; July 1, 1975) indicates that the position of the depot reconstruction as indicated conforms with the archeological and documentary information in that it does extend into the J Street intersection. The south end of the depot, as stipulated therein, falls about 15 feet south of the north building line of J Street. The west side lies some 5 feet further west than subsurface information suggests.

It is noted that the depot and platform reconstruction, as drawn, extends about 9 feet into the west side of Front Street and is about 89 feet in overall width from east to west. Although no archeological evidence pertaining to these overall east-west dimensions was recovered (i.e., no east wall of the 1867 structure was detected), it should be noted that these specifications do not seem to correlate with dimensions derived from the written record. It is not known, however, if these documented dimensions included external platforms, etc., or refer only to the size of the building proper.

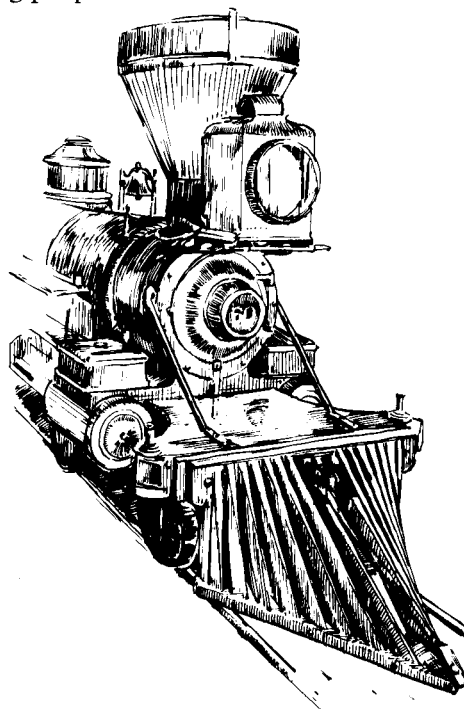
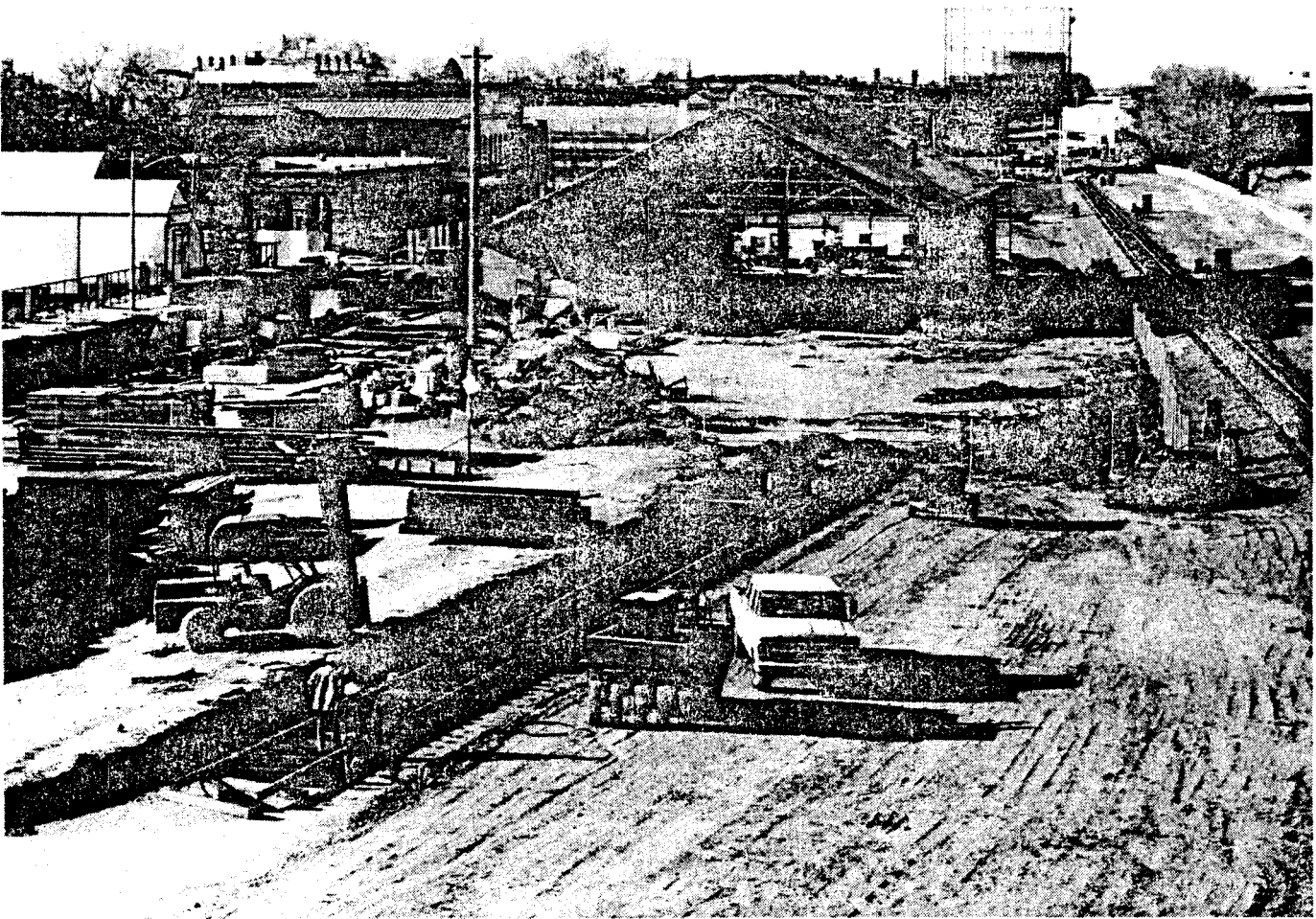


PLATE 8. CPRR DEPOT DURING RECONSTRUCTION.



CONCLUDING COMMENTS

The attempts to locate archeological evidence of the Central Pacific Railroad passenger depot for reconstruction purposes proved to be a difficult and rather complex task. This is, in part, attributable to a number of factors associated with the scheduling and conceptualization of the problems involved.

Scheduling

Some aspects of the scheduling needs of historic sites researches have been discussed elsewhere in this paper. These include the need for 1) budgeted research time prior to the beginning of excavation; 2) a field program of adequate duration, which is planned well in advance of actual construction; and 3) scheduling of a realistic analysis and report preparation period following completion of the field work.

If these needs are not met, the research conducted will fall short of professional standards and departmental expectations. In the present situation, some problems were precipitated by the rescheduling forward in time of the actual reconstruction program. Hopefully the resultant weaknesses in the archeological data base can be avoided in the future by more realistic scheduling.

Research needs dictate that sufficient time and funding be budgeted for the individual actually directing the field work to locate, collect, and assimilate all available documentary and photographic resources. Based on this information and the stated needs of the sponsoring agency, a general research design and statement of initial field research strategy should be prepared. Throughout the duration of field investigation, time and personnel must be available to pursue new lines of evidence as they arise. If such are not

immediately incorporated into the body of prior documentary knowledge and the unfolding understanding of the archeological data, serious misallocations of attention, time, and personnel will likely result. It would be desirable to allow adequate total elapsed time between the beginning and termination of the field session to permit temporary suspension of field work, if necessary, in order that these new leads and their implications may be integrated into the problem-solving process.

Funding allocated for the completion and reporting of the investigation following field work should allow for personnel to complete all aspects of initial laboratory work, including cleaning, cataloging, preliminary analysis, and storage of all recovered artifactual material. The project director must have adequate funding and staff to cover further documentary and archeological analysis, the actual writing of the report, and preparation of graphic materials. Consideration of delays inherent in report preparation (typing, transcription, proofreading) must be made in setting prompt, but realistic, due dates for the completed report.

Conceptualization

The primary objective of the excavation in Sacramento at Front and J streets was the location of the material remains of those points in space and time representing the passenger depot that stood on that site for a thirteen-year period. In the absence of the time necessary for the field director to conduct adequate preliminary research, a package of documents, including newspaper and CPRR voucher excerpts concerning this structure, was presented to the field workers after the inception of the field work. Initially, at least, these documents and the original statement of the problem seemed adequate evidence upon which to proceed.

As field work progressed, however, it became increasingly apparent that the approach of necessity had to shift from a search for specific spatial and temporal facts to a reconstruction of the sequence of historic processes and events occurring on the site through a much broader time range. Although the information requested

concerning the original construction of the depot in 1867 was very specific, it was found that these "facts" could not be abstracted from the general body of archeological data without acquiring a fairly detailed understanding of the industrial processes occurring in the area both prior to and following this event. For instance, only upon examination of oral, written, and archeological evidence for grade changes related to levee and railroad construction preceding and subsequent to the old depot period was it possible to delimit the stratigraphic and horizontal area representing the building in question. This research was a reciprocal information-gathering procedure in which uncovering of one type of information (i.e., archeological instituted a search for supporting data in another realm (i.e.,) written and/or verbal documentation). A case in point is the location of a map documenting the raising of a structure after this event had been suggested by oral and archeological data.

An understanding of the historic processes which occurred in a given area is essential not only for the initial location of the desired data, but also to adequately interpret that information once located and recovered. Increased familiarity with the details and sequences of procedures inherent in the construction, deposition, renovation, removal, reuse, and demolition of historic structures will lead to increased insight into the history of the remaining static objects encountered (or expected but not encountered) in the course of archeological investigation. The destructive, as well as constructive, processes in operation must be examined.

The writer believes that a processual viewpoint is essential to the interpretation of the general, as well as particular, contexts in which historic information of an archeological nature occurs. The artifacts, structural remains, and reconstructions will remain curios or relics in terms of their public educational value unless an adequately broad interpretation of their technological significance and socioeconomic ramifications within the ongoing general process of cultural adaptation is clearly defined in subsequent efforts to interpret these material, cultural resources.

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Appendix

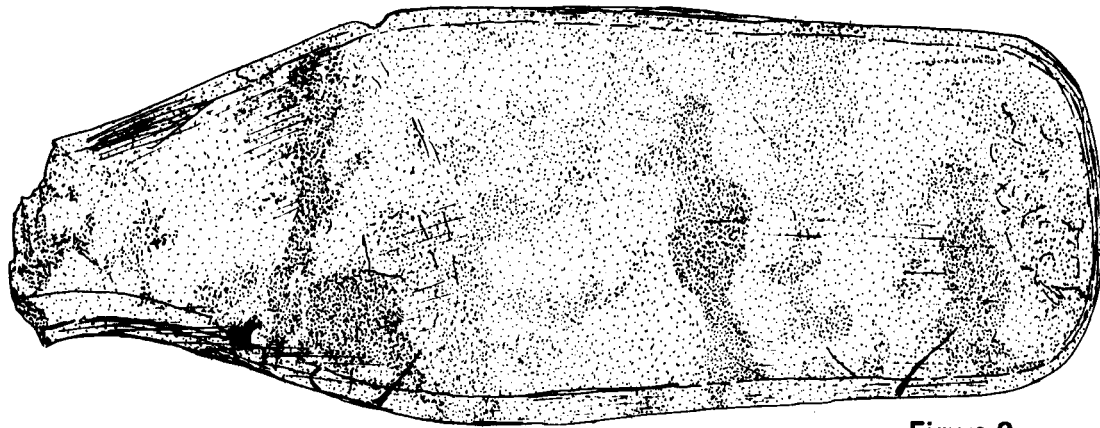
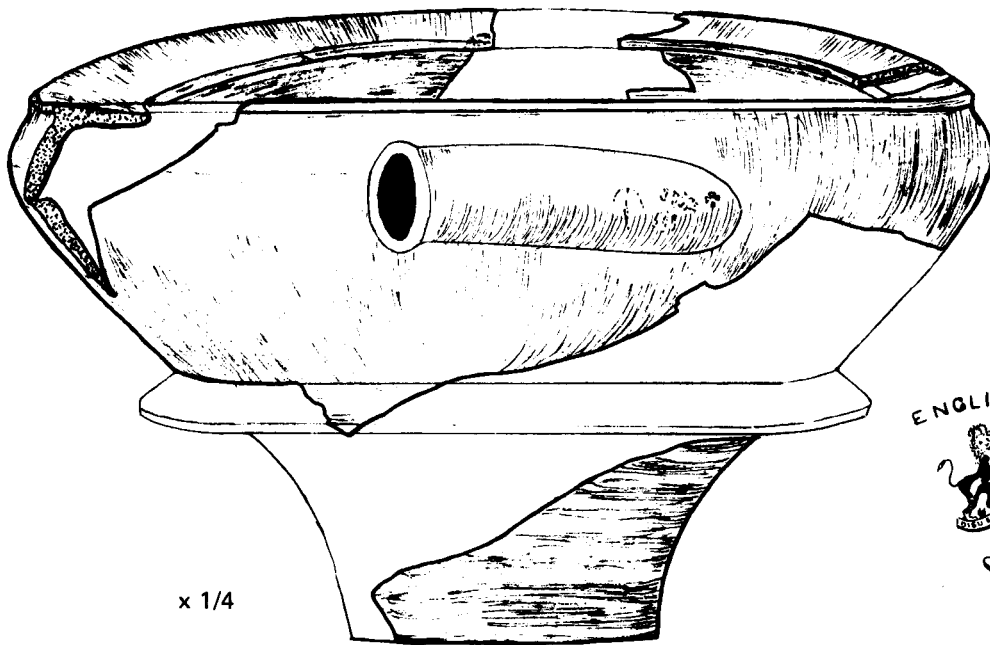


Figure 8.



x 1/4

ENGLISH WARE.

S. TWYFORD
CTURER
RD SHIRE.

Figure 9.

APPENDIX ARTIFACTS

Due to time limitations, only selected aspects of the artifact assemblage recovered from the excavations at the site of the Central Pacific Railroad passenger depot are examined here. Only those artifacts identifiable in functional and/or temporal terms are discussed below. No attempt was made to perform a quantitative analysis of the distributions of any artifact category, nor are the miscellaneous materials recovered from fill removed by the backhoe operations treated here. This latter assemblage includes primarily relatively recent railroad-related hardware. No further analysis is planned of the fairly large collection of square, cut, and round wire nails beyond the qualitative statements regarding their distributions included in the text of this report.

The artifacts discussed below have been divided into various analytic units based on their functions in specific cultural activities, procedures, and concerns. These categories include apparel, construction, containers, eating utensils, energy supply, recreation, and security. Numerous different or additional units might be conceived, but the above categorization seems adequate and coherent for the material at hand.

Artifacts are shown at approximately actual size unless otherwise noted.

These artifacts, as well as photographs, research and field notes are cataloged and stored at the Department of Parks and Recreation, Cultural Heritage Section, archeological laboratory in Sacramento.

Apparel

Although this category includes buttons and beads, a number of which were recovered during excavation, no attempt has been made to deal with these items here.

Figure 8A – Leather shoe sole fragments – Component 4. These are of the square-toed variety. There does not seem to be a right and left foot distinction made in the shape of the soles. “As late as 1860 most shoes were formed on straight lasts. This meant that the shape of the instep was not considered and no distinction was made between right and left feet.” (Anderson 1968, p. 59).

Construction

This category includes materials used in building construction and plumbing. These items include nails and other hardware, bricks, bathroom fixtures and sewage drainpipe.

Nails have been cursorily treated in the text of this paper. To summarize, cut nails exhibiting “square” (rectangular) cross sections occur exclusively in the two deepest artifact concentrations (archeological Components 3 and 4), as well as in the construction of Features 29 and 33 (Component 2). In Component 1, which contains material at least as recent as the early twentieth century, both cut and round wire nails were recovered. Although machines which produced wire nails automatically had been invented as early as 1855 in France, this round-bodied variety did not outnumber cut nails in the United States until about 1890 (Fontana 1962, p. 55). The archeological data presented here suggests that round wire nails were not in common usage in this site until at least 1880, but had become the predominant form by 1914.

A ceramic object, bearing an English maker’s mark was recovered from Unit A, Stratum 6. Although badly broken, it was possible to reconstruct enough of the vessel to discern its general form. (Figure 9). It appears to be a toilet bowl. The following information concerning the maker’s mark was located: “Thomas Twyford, Bath Street Works and Cliff; Vale Potteries (ca 1888+), Hanley; Staffordshire Potteries, 1860-98; Earthenwares. N.B. This firm made mainly sanitary wares. From 1898 the firm has been Twyford’s Ltd.” (Godden p. 629).

Brick samples were recovered from several features, including Features 4 and 9. All those from Feature 4 were of the sand mold variety, while bricks from Feature 9 were produced exclusively by a cutting, rather than molding technique. This latter, or "extruded," variety has much smoother sides than the former, which shows a sandy texture on four sides and the bottom, due to the use of sand to prevent the wet brick from sticking to the mold. A sample of ten bricks from each of Features 4 and 9 was measured (thickness, width and length) to observe variation within and between the sand mold and smooth-faced varieties. (Figure 10A). No meaningful difference is indicated between the thicknesses of the two varieties (average, smooth-sided - 2.46 inches; sand mold - 2.43 inches). The width of the smooth-sided brick is consistently greater than that of the sand mold type (average, extruded - 4.08 inches; sand mold - 3.82 inches). The range of variation in the widths of the two varieties, as well as the averages, appears to be consistently different, with sand mold bricks varying from 3 13/16 inches to 4 inches and smooth-sided bricks from 4 to 3/16 inches. The cut brick is generally longer than sand mold brick (average 8.61 inches compared with 8.25 inches) although the ranges of variation do overlap. The sand mold bricks exhibit a wider range of variation than the other variety.

One buff-colored brick, with the name "OWEN" impressed in the upper surface was recovered in the vicinity of Feature 7 (Fig. 10B). No information concerning this manufacturer has been located. Its color suggests that it may be heat resistant "fire brick."

Russell Schmitt, Vice President, and Larry Carnes, Superintendent of H.C. Muddox Company, brick and clay pipe manufacturers, visited the site during excavation. Information noted during those discussions is included below. No attempt has been made to document these general comments. All dates should be accepted as approximations only.

Brick encountered in excavations is probably of local origin.

Sand (cake pan) molds consisted of a single mold with compartments to produce six bricks. These were in use as late as 1960.

Smooth-faced bricks appear in the late 1890s or early 1900s.

Red color of most of the brick encountered is due to firing conditions and the use of a raw material with relatively low percentages of plastic clay.

Size has been somewhat standardized only in the last thirty years or so. Bricks about 4 inches wide are generally older than slightly wider (about 4.5 inches) bricks.

Prior to 1860, bricks manufactured in other parts of the nation or world were introduced as a result of their use as ballast in ships.

The local brick industry grew considerably between 1860 and 1880; by 1880 brick was quite cheap (\$5-\$8 per thousand compared with about \$100 per thousand now).

Older brick is generally softer than that of more recent manufacture. Mr. Schmitt was surprised that the 1880 brick of Feature 4 is as hard, and in as good condition as it is.

Chinese laborers sometimes manufactured brick on the construction site. These bricks are generally poorly fired and contain large proportions of organic matter (straw, manure, etc.).

Mr. Schmitt referred to a book on Sacramento area brick manufacturers written by a Dr. Dietrich about 1920.

A law requiring the use of cement in brick mortar was passed about 1922. Prior to that date, mortar often contained only sand and lime.

The Muddox Clay Sewer and Drain Pipe Company began producing clay pipe and brick about 1878.

Two feet was the standard length of each section of pipe from about 1880 until the 1940s. The present length of each section is 5 to 6 feet. Most of the sections of pipe encountered in these excavations were about 2 feet long.

Salt-glazed pipe was produced by throwing rock salt in the kiln during firing. The color of the resultant glaze is related to the position of the pipe in the kiln. Since the 1950s most pipe is unglazed.

Brick Dimensions

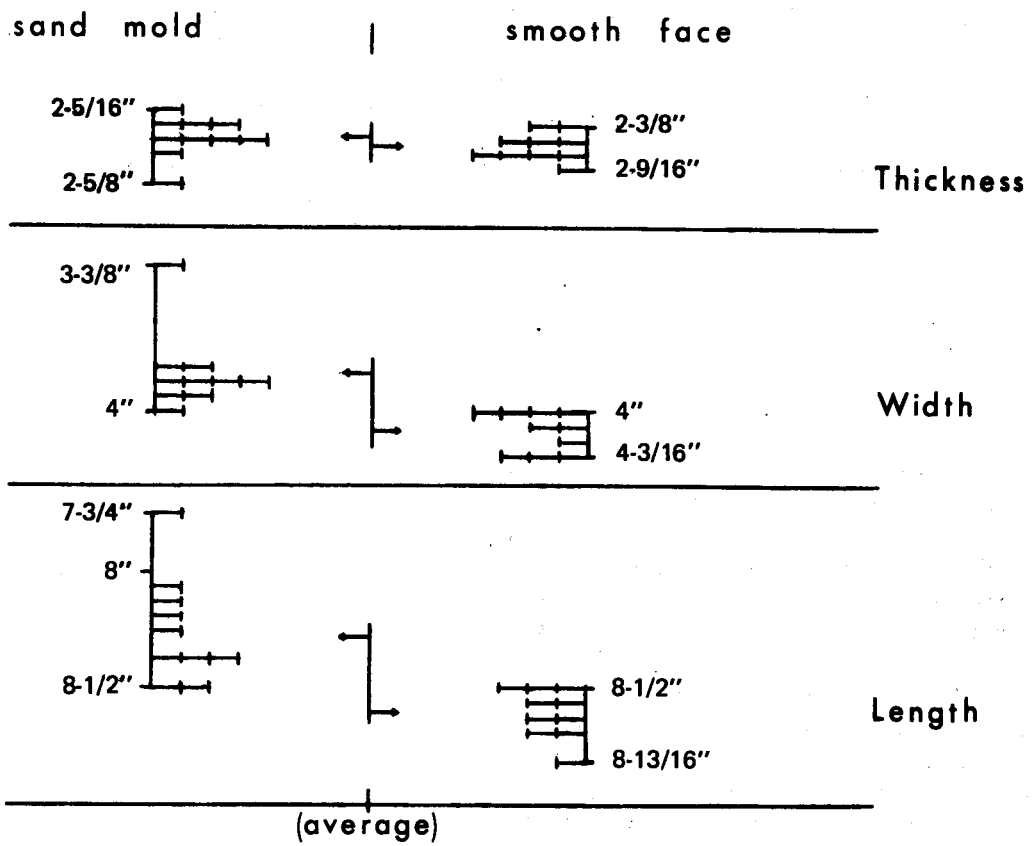


Figure 10A

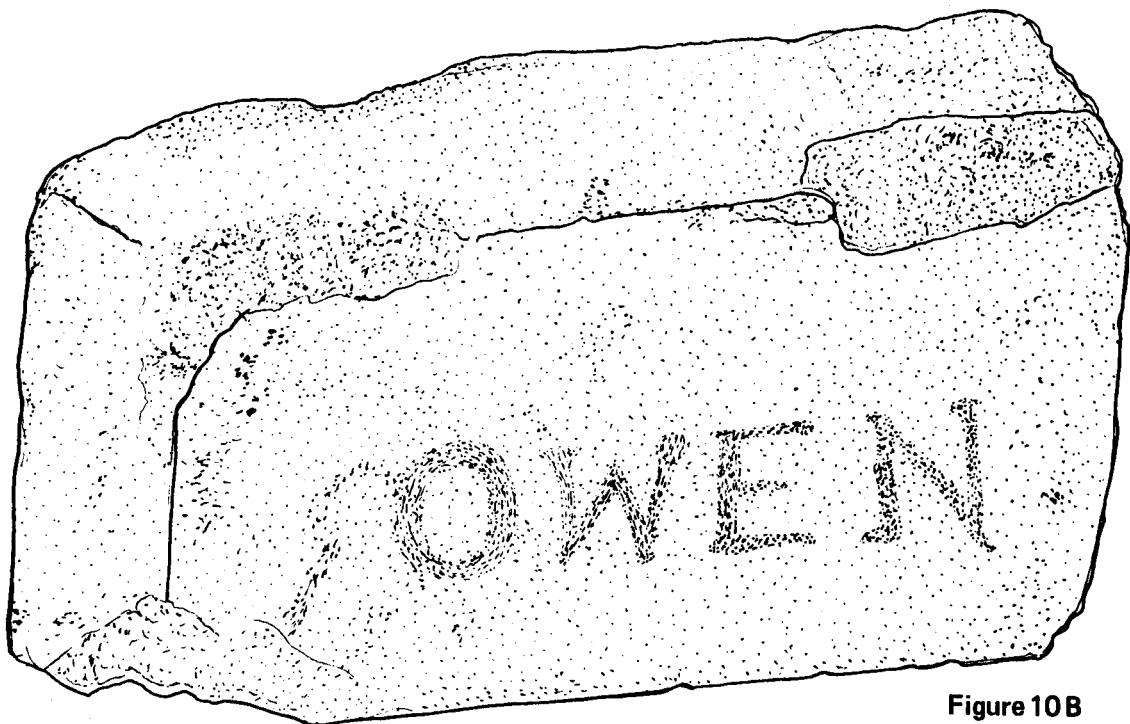


Figure 10B

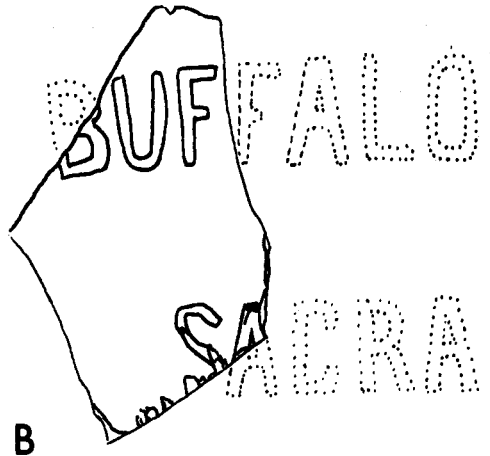
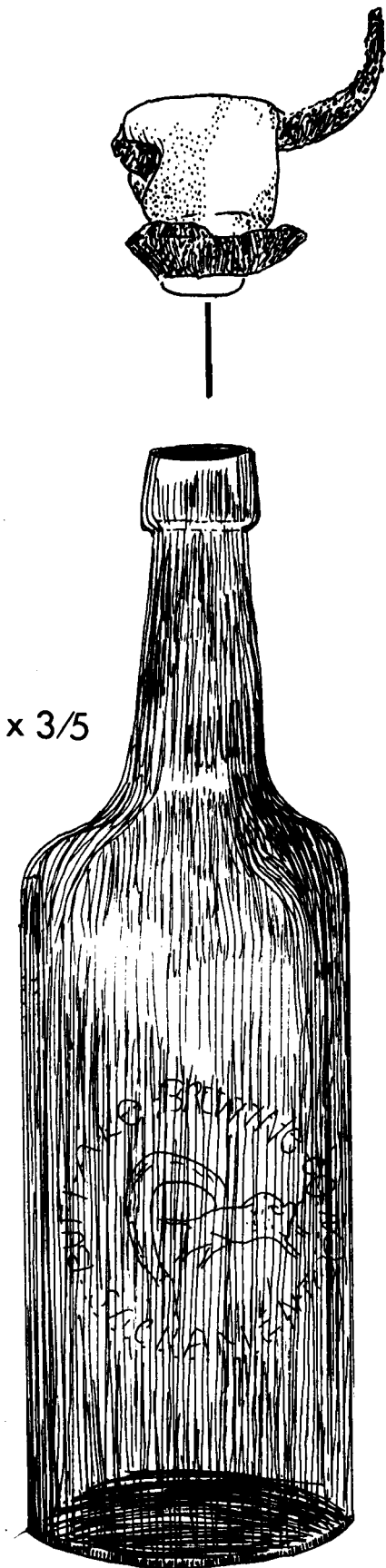
Containers

Although this category is theoretically much broader, in the collection under study it includes only glass bottles and stoppers. No attempt to study thoroughly the technical attributes of these containers has been made; mold seams and closure types will be described below. A further study of these aspects of the artifacts might prove them to

be useful temporal indicators (Newman 1970). Only the bottle makers' marks have been used here to derive date ranges for the containers in question (Toulouse 1971). Terminology used here is per Switzer (1974, p. 8). "Neck Finish Type" classifications indicate only general similarity to Switzer chart.

Figure 11A – Brown glass beer bottle, 11¼ inches high (Unit D, Component 1). Raised lettering and symbol on body – *BUFFALO BREWING CO. SACRAMENTO, CAL.* The letters *PCGW* appear in raised letters on the base. These initials were used by the Pacific Coast Glass Works, San Francisco, between 1902 and 1924 (Toulouse 1971, p. 416). The Buffalo Brewing Co. is first listed in the 1891 *Sacramento City Directory* and last appears in the 1929 edition. A white porcelain stopper with a leather washer and a wire fastener were found in situ. *PAT'DK. HUTTER, FEB 7, 1893* appears on the bottom of the stopper. The mold seams run vertically to within 1¾ inch of the lip. (Neck Finish Type 1).

Figure 11B – Brown bottle glass fragment (Unit B, Component 1). Portions of the words *Buffalo* and *Sacramento* in raised letters on exterior. Possibly this is a fragment of another Buffalo Beer bottle, exhibiting a variation of the logo appearing on the intact "Buffalo" bottle.



A

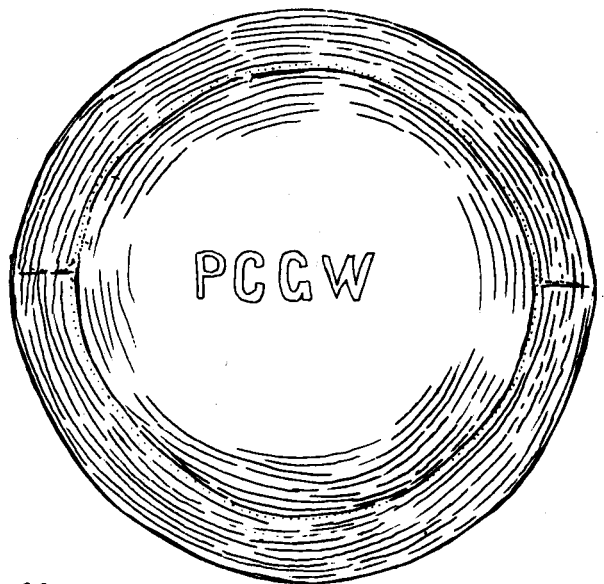


Figure 11

Figure 12A – Clear glass “pumpkin seed” flasks
(Stratum 6, Unit D, Component 1) 5-3/8–5½
inches high. Mold seams to within ¼ inch of
lip; seam spirals and disappears on neck (Neck
Finish Type 28).

Figure 12

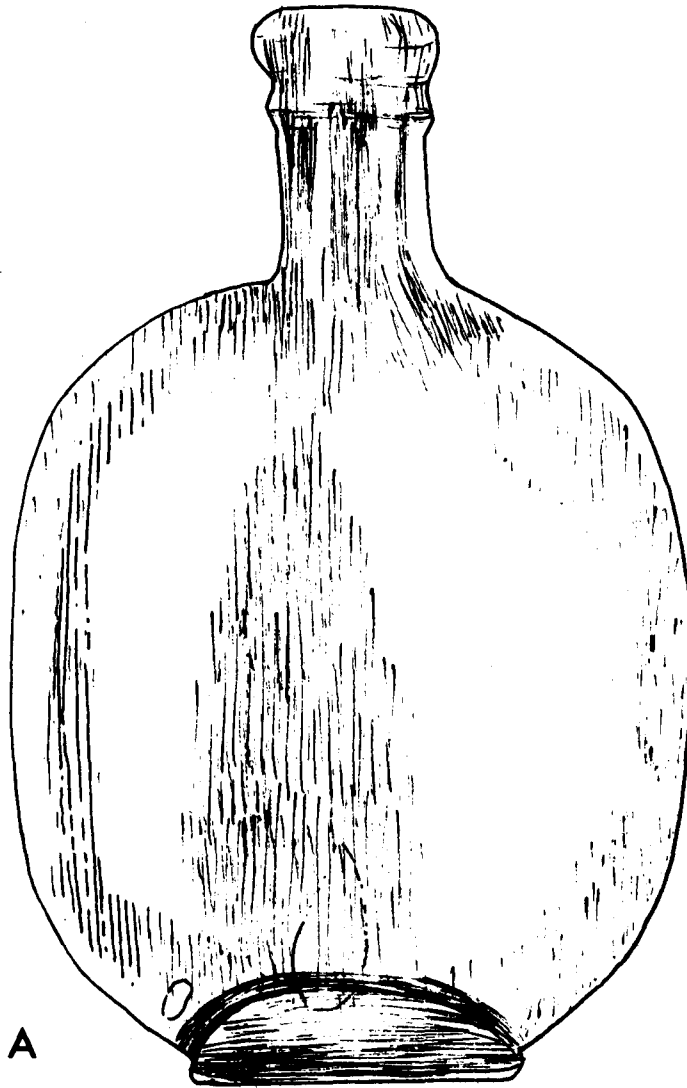


Figure 12B — Clear glass flask (Feature 35, Component 1) 6-1/8 inches high. Mold seam extends onto collar to within 1/2 inch of lip. This flask is designed for a screw type closure; the lip is heavily ground (Neck Finish Type 31).

Figure 12C — Clear glass flask (Feature 36, Component 1) 5 3/4 inches high. Very similar to bottle 12B, but has no neck; the collar sits directly on flask body. Indications of mold seam extend to lip. Collar is designed for screw type closure, but has more threads than bottle 12B. Lip is heavily ground (Neck Finish Type 31).

Figure 12

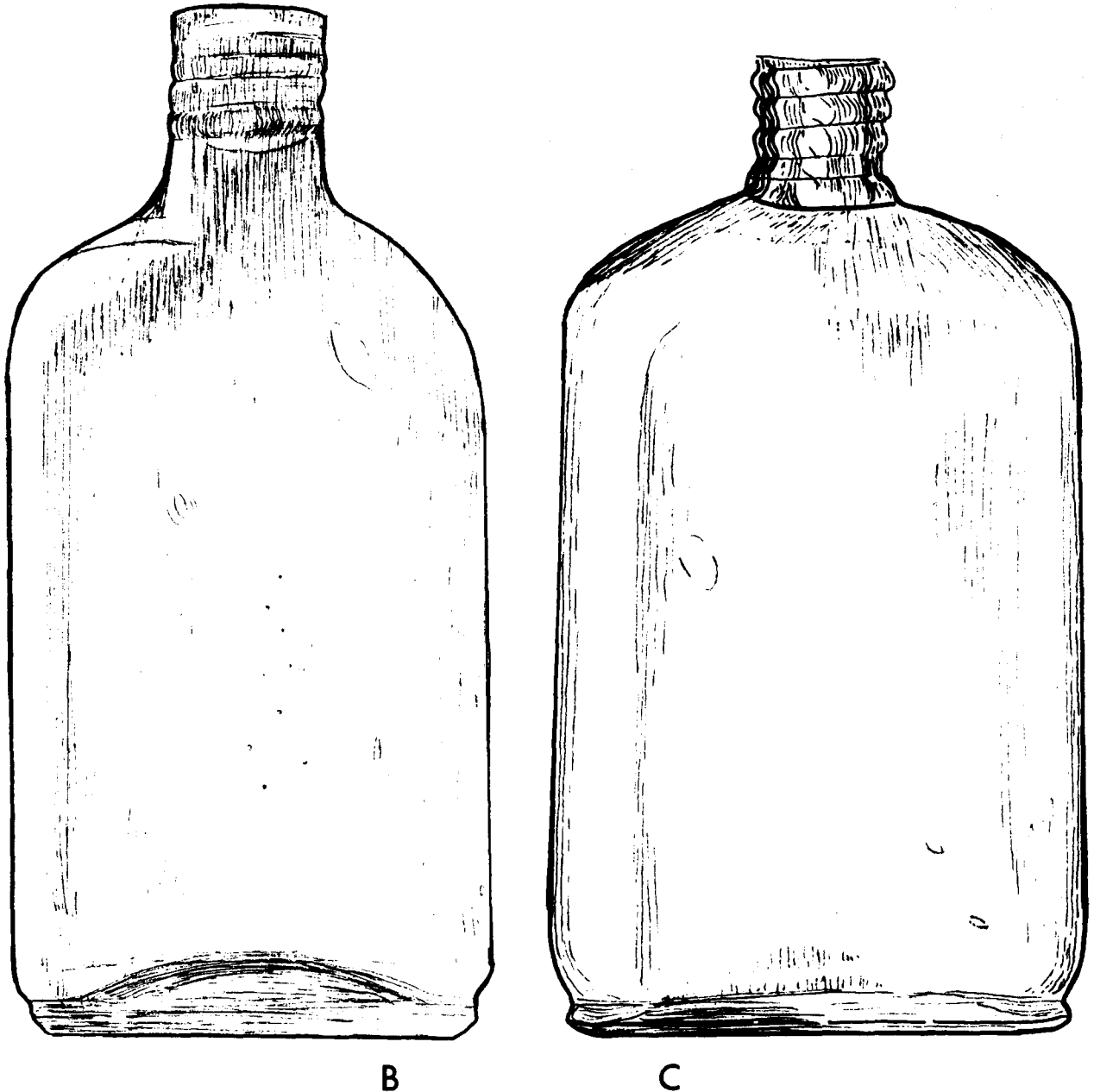
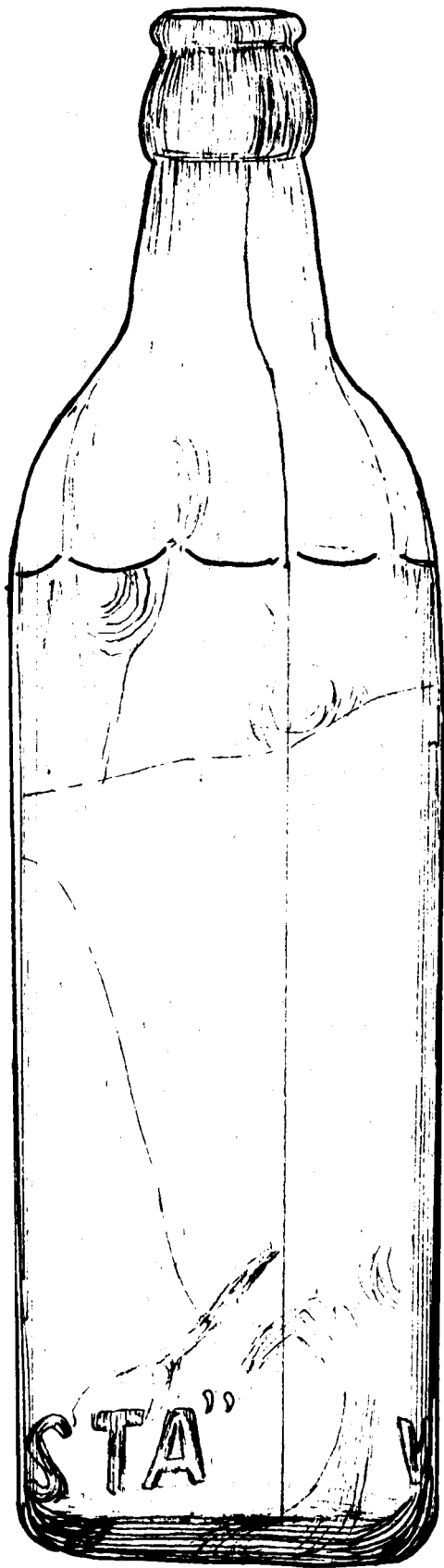


Figure 13A – Pale green bottle, possibly for soda, beer or water (Component 1) 9-5/8 inches high. *SB & G Co.* in raised letters on base. These initials were used by Streator Bottle and Glass Co., Streator, Ill., between 1881 and 1905. A white porcelain stopper was found with this bottle. Mold seams fade about 1½ inch from lip. (Neck Finish Type 1, 8).

Figure 13B – Clear to greyish water bottle (Stratum 6, Component 1) 8¾ inches high. “*SHASTA*” *WATER CO.* appears in raised letters around base. Mold seam extends to within 1 inch of lip, with horizontal striations above that point. “Pop bottle” (crown cap) type neck finish.

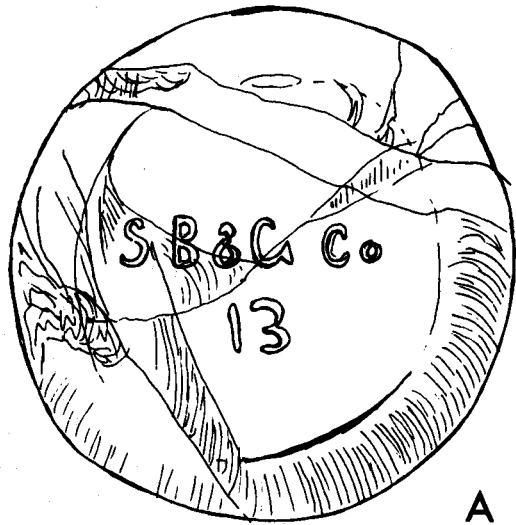
Figure 13C – Basal fragment, blue-green bottle or jar (Stratum 6, Unit A, Component 1). The phrase *PATENTED APRIL 13, 1875* appears in raised letters around the center of this object.



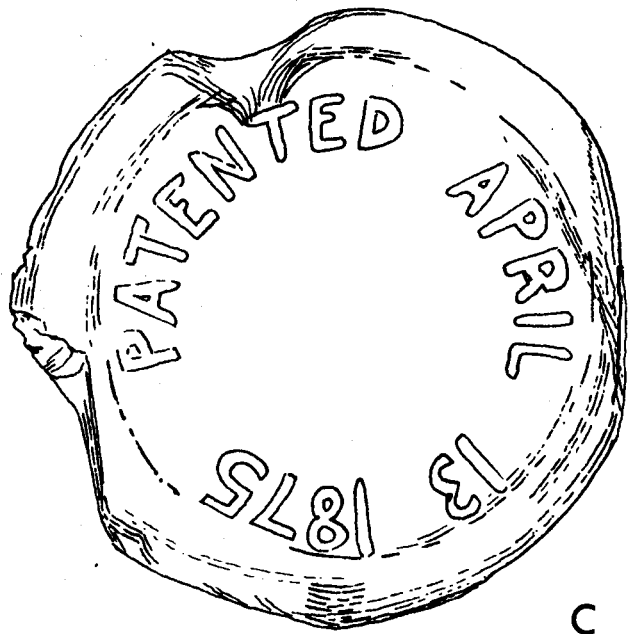
"SHASTA"

B

WATERCO.



A



C

Figure 13

Figure 14A – Clear glass patent medicine bottle (Feature 35, Component 1) 5-9/16 inches high. *SHILOH'S CONSUMPTION CURE* in raised letters on front panel; *S.C. WELLS & CO.* and *LEROY, N.Y.* on side panels. Mold seams extend to base of collar, about 3/4 inches below lip (Neck Finish Type 8).

Figure 14B – Blue-green patent medicine bottle (Feature 35, Component 1) 7 1/4 inches high. In raised letters on the front panel appears the following: *DR KILMER'S SWAMP ROOT KIDNEY LIVER AND BLADDER CURE BINGHAMPTON N Y U S A.* Mold seams extend onto neck to within 1 inch of lip, with faint horizontal striations above that point (Neck Finish Type 28).

Figure 14C – Dark blue patent medicine bottle fragment (Unit B, Component 1) about 3 3/4 inches high. The letters *BROMO SELTZER, EMERSON DRUG CO.* and *BALTIMORE* partially appear on the body of the bottle (Neck Finish Type 26).

The following were recovered but are not illustrated.

Brown glass alcohol bottle, about 11-1/8 inches high (Stratum 6, Unit D, Component 1). Part of a paper label is still present, although largely illegible. Mold seams run up the sides to within 5/8 inch of the lip. Horizontal striations cover the exterior of the collar (Neck Finish Type &, 33.)

Green glass wine or champagne bottle fragment (Feature 33, Component 2), about 10-7/8 inches (Incomplete; upper neck and collar missing). "Kick-up" bottom. No visible mold seams. External surface patinated and fairly rough.

Clear glass medicine bottle (Stratum 6, Unit D, Component 1) 9 inches high. Mold seams extend onto neck to within 1 inch of lip; above that point horizontal striations are apparent (Neck Finish Type 26).

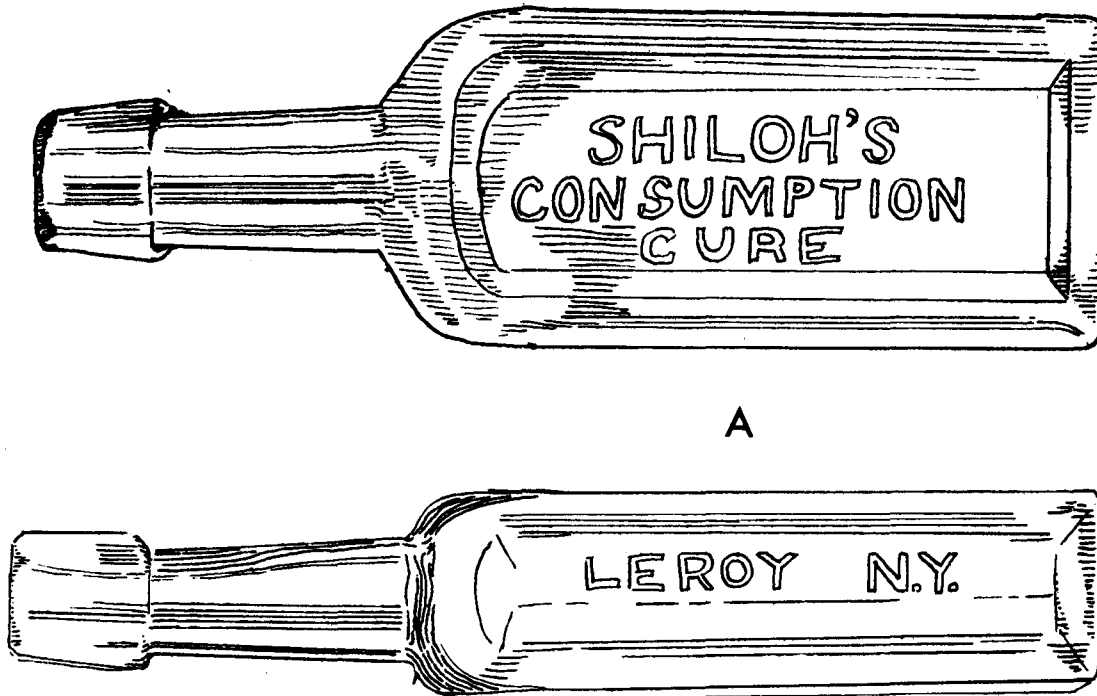
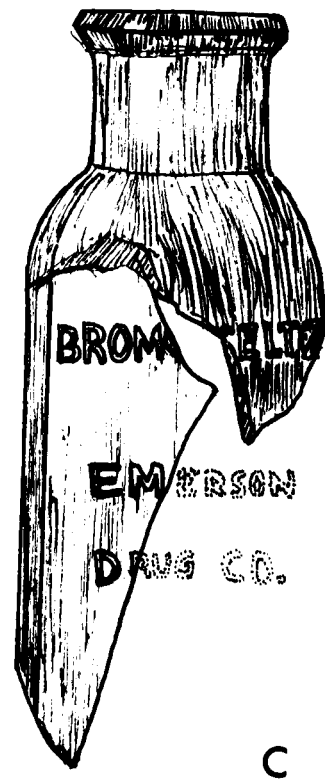
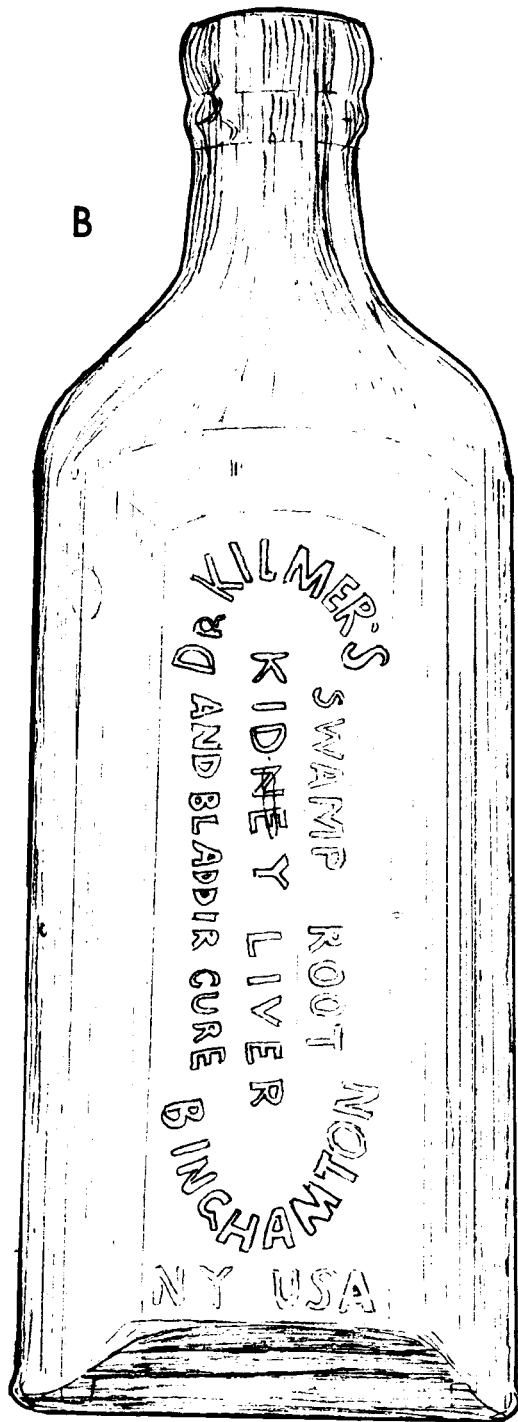


Figure 14

Figure 14



Eating Utensils

Figure 15A – Metal Spoon (Unit A, Component 1).

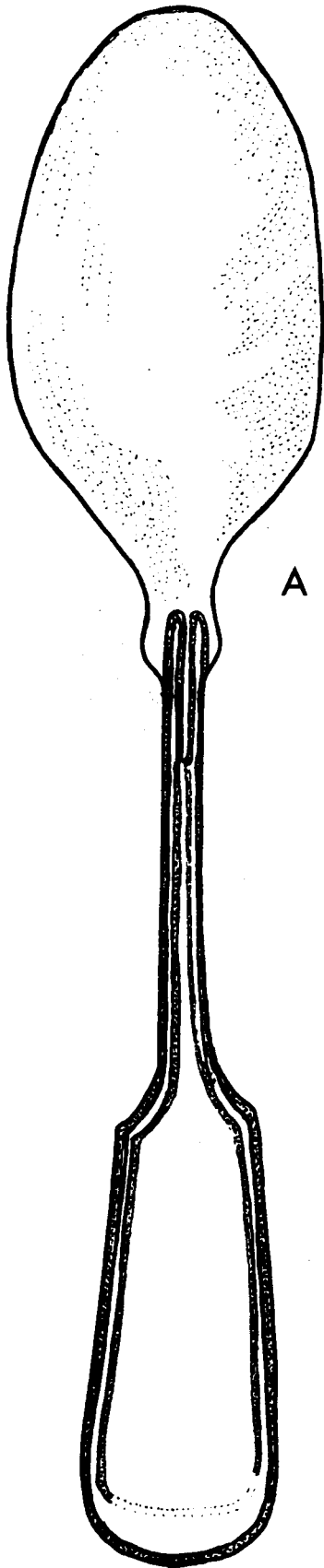


Figure 15B – Red-brown and white transfer print earthenware fragment (Component 4). Vessel form is indeterminable.

Figure 15

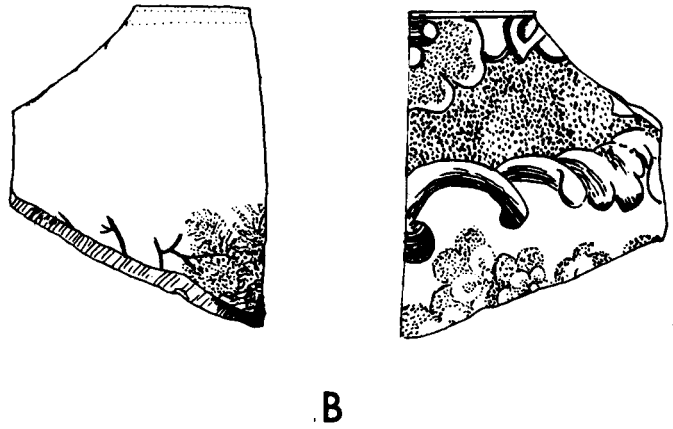


Figure 15C – Blue and white porcelain fragment (Feature 29, Component 2). It appears to have been part of shallow bowl or cup; probably of Chinese origin.

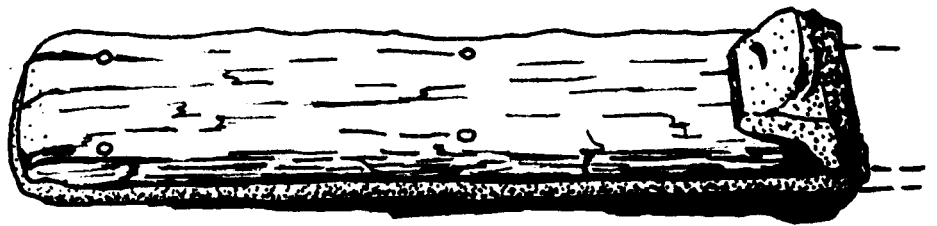
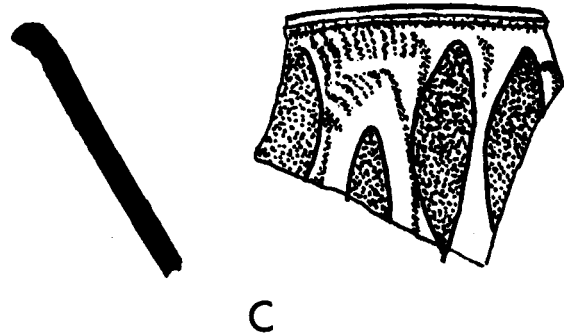


Figure 15D – Knife handle (Component 1). Handle is of wood held to iron or steel center with brass rivets. Babbitt metal or other alloy of lead encloses base of handle at point at which blade was attached. The following was recovered but is not illustrated. White enameled metal cup (Feature 36, Component 1).

Energy Supply

This artifact unit, as interpreted here, includes all electrical apparatus and kerosene lamp fixtures.

Figure 16 – Zinc electrode for wet cell gravity battery of type used for telegraph instruments (Sears, Roebuck & Co. 1902 Catalogue, p.

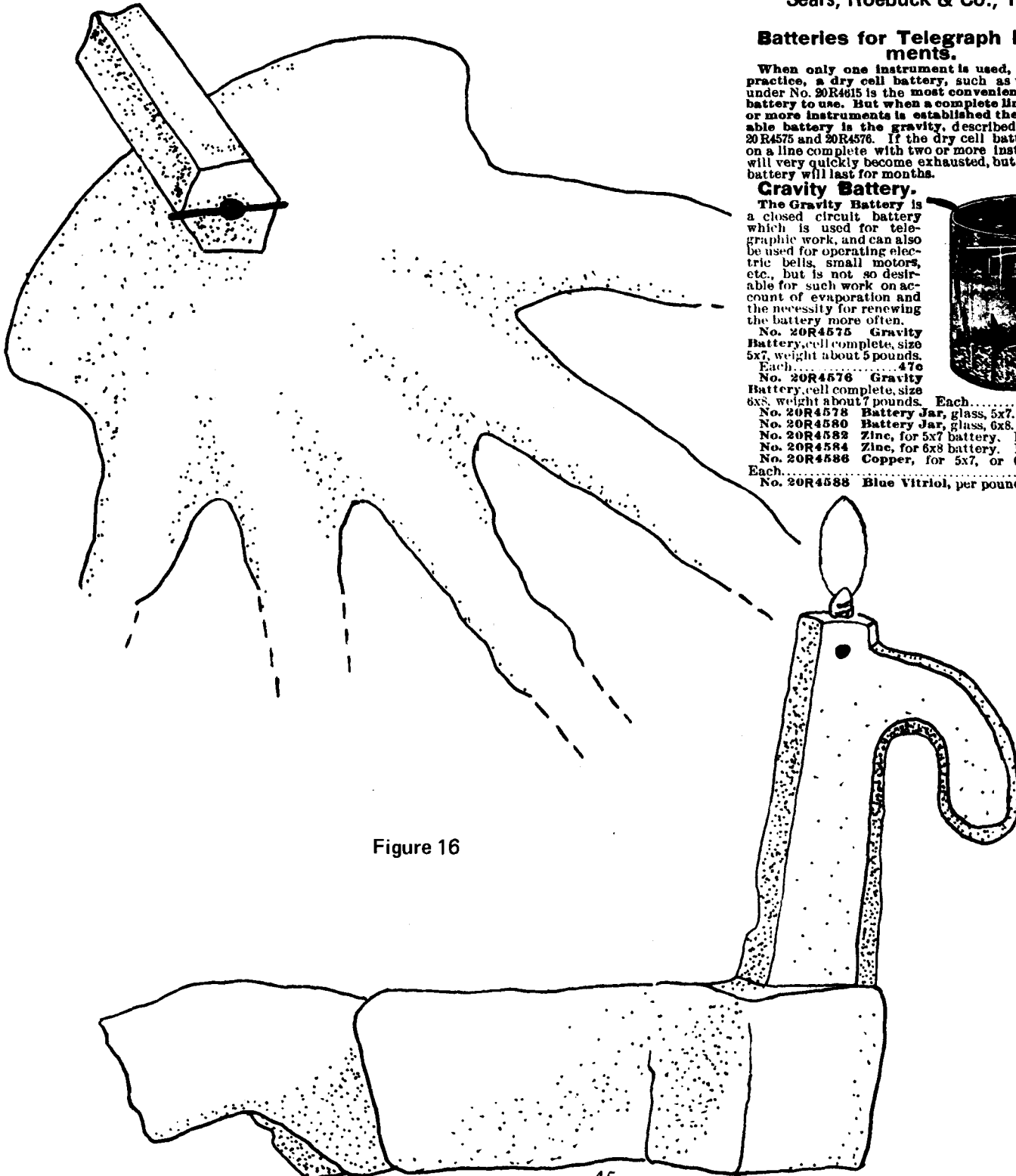


Figure 16

151). Seven of these objects were recovered in Stratum 6 and in fill of Feature 36. These are very corroded, but identifiable as they are almost identical to the illustration in the 1902 Sears Catalogue.

Sears, Roebuck & Co., 1902

Batteries for Telegraph Instruments.

When only one instrument is used, simply for practice, a dry cell battery, such as we describe under No. 20R4615 is the most convenient and best battery to use. But when a complete line with two or more instruments is established the only suitable battery is the gravity, described under Nos. 20R4575 and 20R4576. If the dry cell battery is used on a line complete with two or more instruments, it will very quickly become exhausted, but the gravity battery will last for months.

Gravity Battery.

The Gravity Battery is a closed circuit battery which is used for telegraphic work, and can also be used for operating electric bells, small motors, etc., but is not so desirable for such work on account of evaporation and the necessity for renewing the battery more often.

No. 20R4575 Gravity Battery, cell complete, size 5x7, weight about 5 pounds. Each..... 47c

No. 20R4576 Gravity Battery, cell complete, size 6x8, weight about 7 pounds. Each..... 55c

No. 20R4578 Battery Jar, glass, 5x7. Each.. 18c

No. 20R4580 Battery Jar, glass, 6x8. Each.. 20c

No. 20R4582 Zinc, for 5x7 battery. Each... 20c

No. 20R4584 Zinc, for 6x8 battery. Each... 26c

No. 20R4586 Copper, for 5x7, or 6x8 battery. Each..... 4c

No. 20R4588 Blue Vitriol, per pound..... 8c

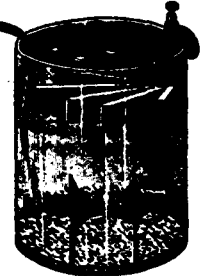


Figure 17 – Probable zinc electrode for wet cell battery. Four of these were recovered in the same archeological context as those shown in Figure 16. They appear to be of the same material as the one shown in Fig. 16, but are of a considerably different form. These zinc

electrodes are star-shaped, with a threaded shaft projecting from the center. Several are mounted on wooden supports with the threaded shaft engaged in a hole in the center of that support. No illustrations of this zinc variety have been located.

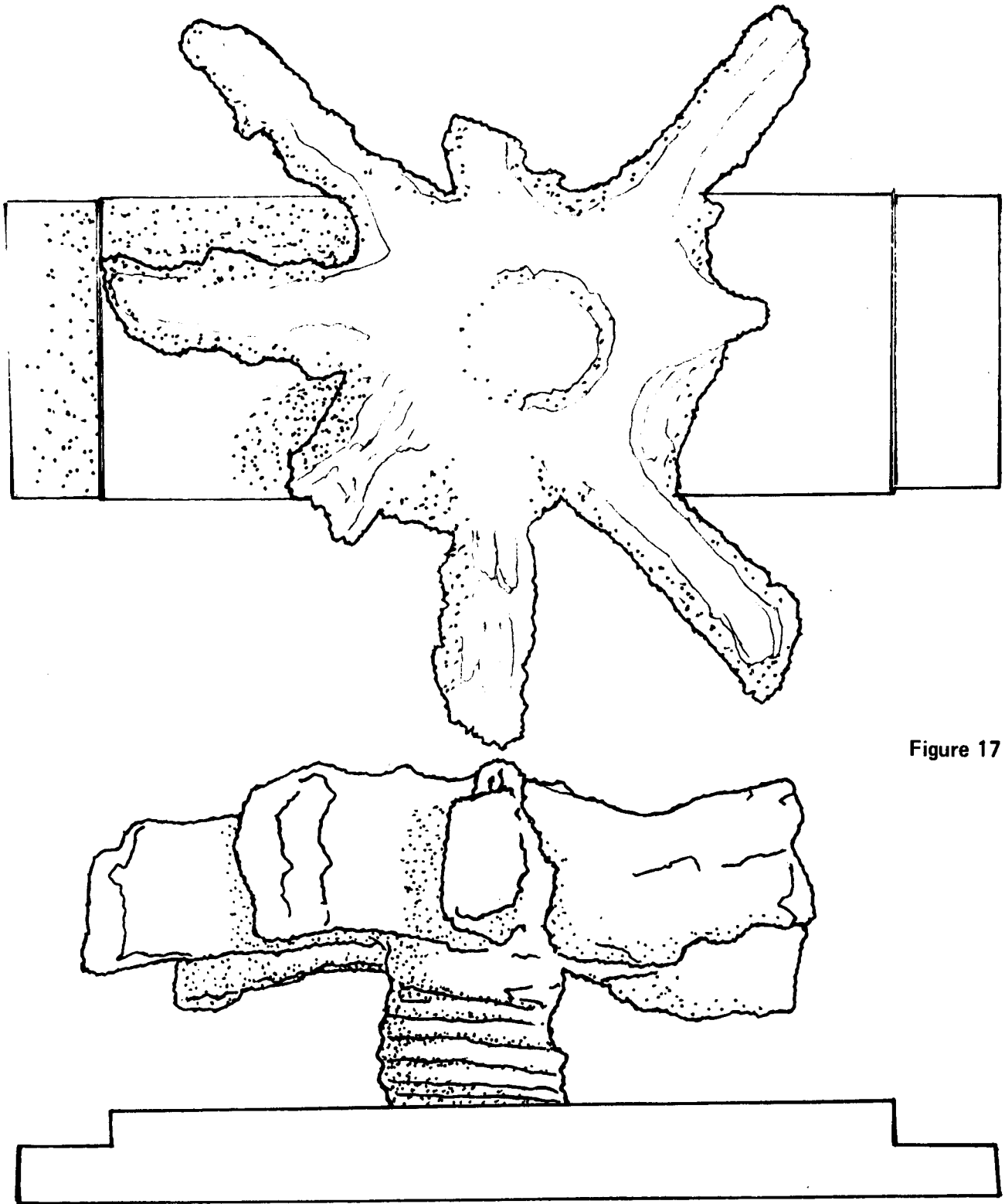


Figure 17

Figure 17

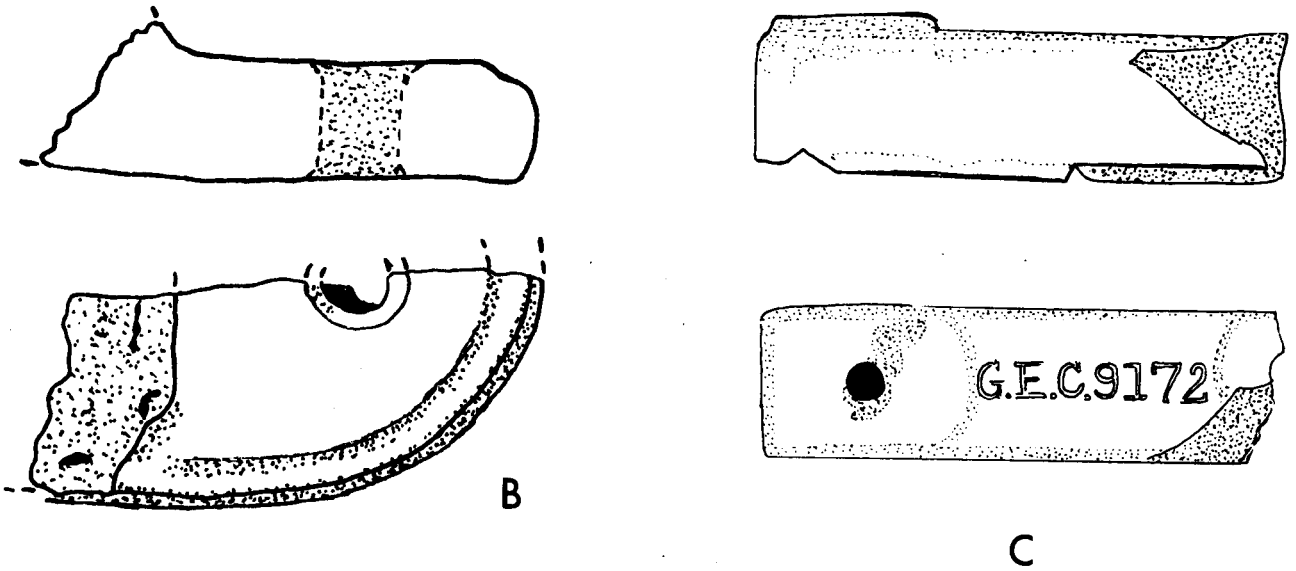


Figure 18A – Circular wooden object with two copper wires attached to small brass lug nuts. A small copper sleeve is fitted into the hold through the center of the wooden dish. The function of this object is unknown, although it is suggested that it may be a battery element.

Figure 18B – Fragment, ceramic electric insulator (Component 1).

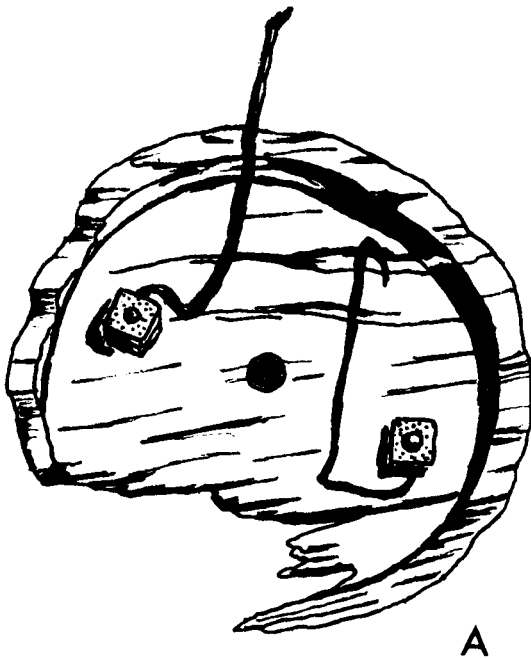


Figure 18C – Upper portion, 2-wire, porcelain electric “cleat” insulator (Component 1) bearing the figures *G.E.C. 9172*.

Figure 18D – Unidentified lead objects (Component 1) 15/16 inches long, 1/4 inch in diameter.

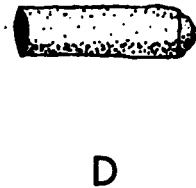
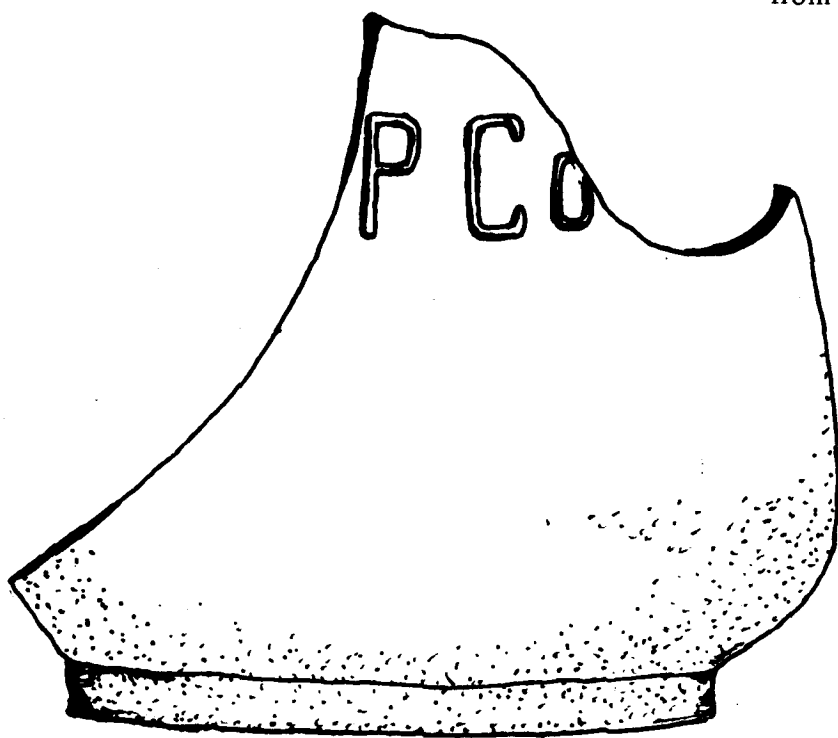


Figure 18

Figure 19A – Glass fragments, possibly portion of lamp chimney (Component 1). The letters ...P Co appear on the exterior; the basal opening has been well ground, precluding the possibility that this is a fragment of a jar or bottle.

Figure 19B – Oil lamp wick adjuster (Stratum 6, Component 1). See “Ratchet burner for railroad lanterns, will burn kerosene or sperm oil,” (Sears and Roebuck Catalogue, 1897, p. 137).

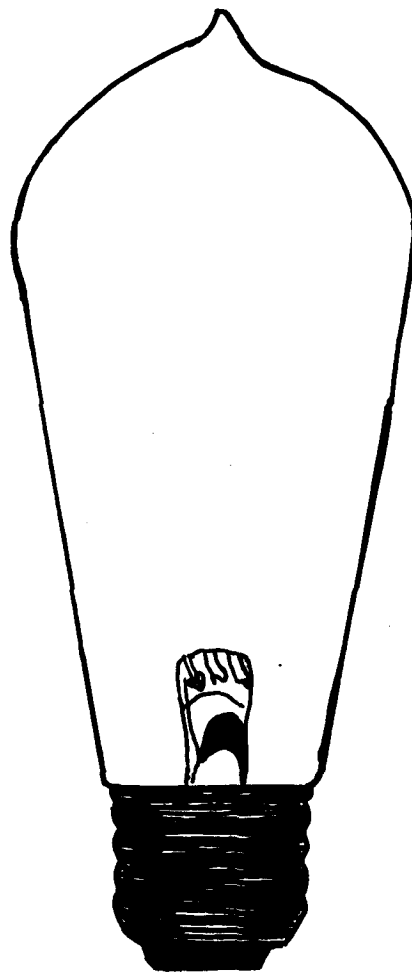
Figure 19C – Light bulb and several brass bulb bases (Unit A, Stratum 6, Component 1). Bulb was broken when recovered; Figure 19C is an artist’s reconstruction from fragments. The letters G.E., in several cases, were written on remaining glass portion of filament assemblage. These probably postdate 1895, the date that electric power from the generating plant at Folsom became available to the residents of Sacramento. Bulbs of this general form, however, were utilized for special applications as late as 1941 (see “carbon lamp,” Westinghouse 1941 catalog, p. 248). This bulb and the several bulb bases indicate a post-1895 origin for the Stratum 6 from which they were recovered.



A



B



C

Figure 19

Recreation

This category includes a glass marble and several fragments of kaolin pipes. Only the latter are illustrated (see Fig. 20).

Figure 20A – Clay pipe bowl, and stem fragment (Component 1). The stem has the letters *W. WHITE* impressed on one side and *GLASGOW* on the other. The bowl has the

letters *T D* impressed on the rear (proximal) side. This pipe was evidently made by the firm of William White and Sons of Glasgow (Humphrey 1969).

Figure 20B – Clay pipe stem fragments (Component 1). Broken pipe stem sections, reworked as mouthpieces.

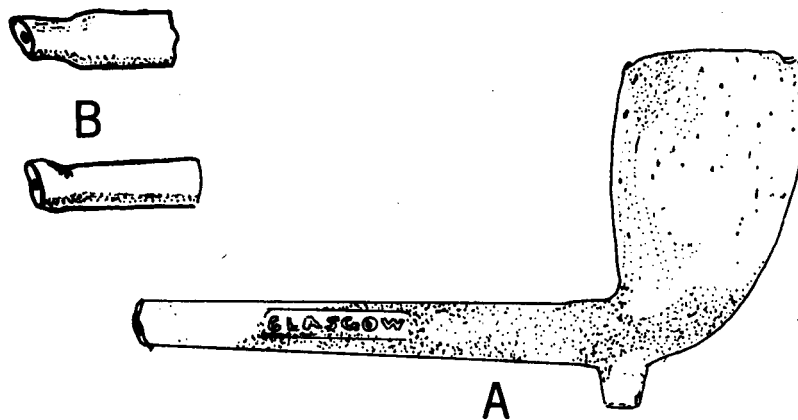


Figure 20

Security

In this category have been included locks, seals and firearm cartridges.

Figure 21 – Brass Padlock (Stratum 6, Unit A, Component 1). The letters *S.P. Co.* are stamped into one face of the body, probably referring to Southern Pacific Railroad Company. A very similar lock is pictured on page 546 of the Sears and Roebuck catalogue 1902.

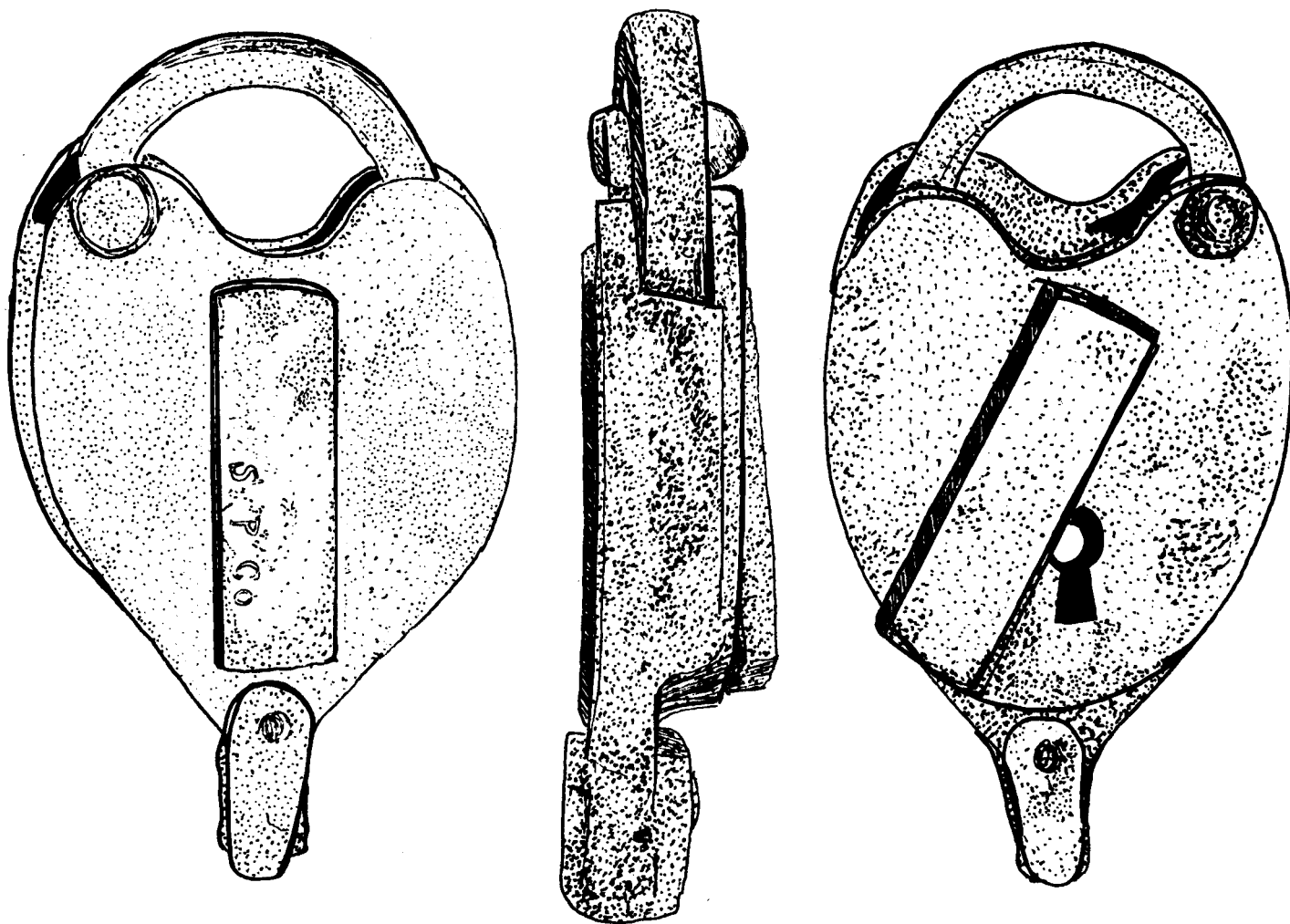


Figure 21

Figure 22 – Six soft lead seals of the type fastened by crimping to a loop of wire passed through the holes in the body of the seal, like those used to seal utilities meters, etc. (Stratum 6, Unit A, Component 1). They bear the raised letters *BUFFALO .S.&P.CO.* on one face and the numeral *NO 5* on the other. This does not appear to refer to the Buffalo Brewing Co.; possibly the initials represent the firm which manufactured the seals.

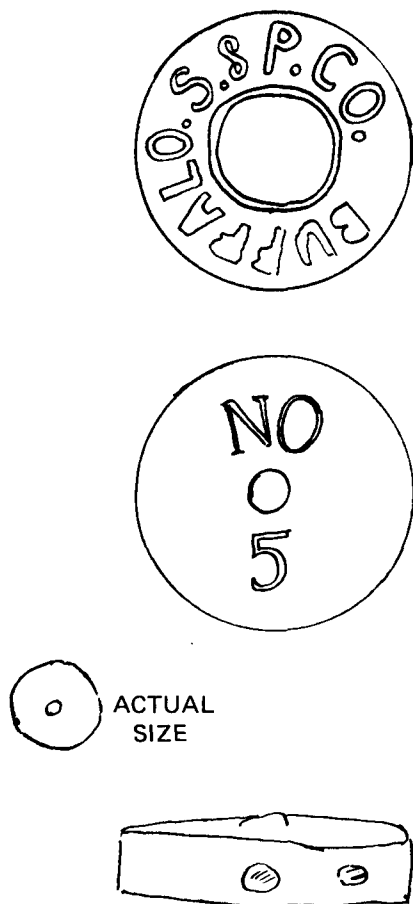


Figure 22

Figure 23A – Brass shell cartridge – (Feature 29, Component 2). .38 caliber short, center-fire, no markings apparent.

Figure 23B – Brass shell cartridge – .41 caliber rimfire. No markings apparent (Feature 29, Component 2).

Figure 23C – Brass shell cartridge – .38 caliber short, rimfire (in profile, Figure 4), beneath Stratum 8a. This cartridge is of potential importance for dating this stratum. Rimfire cartridges became common after about 1865, suggesting a date somewhat more recent for the deposition of that stratum.*

Figure 23D – Brass shell cartridge – .22 caliber short (Feature 14, Component 11). No markings apparent.

These cartridges (Figures 23A–D) were tentatively identified by Karl Gurke, using page 580, Sears and Roebuck 1897 catalogue as primary reference.

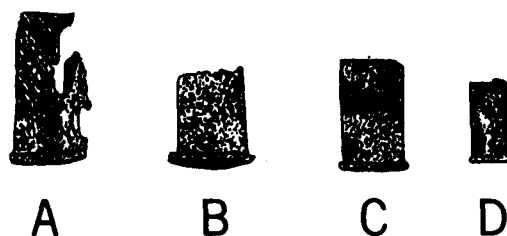


Figure 23

*Karl Gurke, 1975: personal communication.