

FORT HUACHUCA, CAVALRY STABLE  
(Building No. 30031)  
(Building No. 91)  
(Building No. 127)  
(Building No. 3040)  
Clarkson Road  
Sierra Vista vicinity  
Cochise County  
Arizona

HABS AZ-210-G  
AZ-210-G

HABS  
AZ-210-G

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN BUILDINGS SURVEY  
National Park Service  
U.S. Department of the Interior  
1849 C Street NW  
Washington, DC 20240-0001

## HISTORIC AMERICAN BUILDINGS SURVEY

FORT HUACHUCA, CAVALRY STABLE  
(FORT HUACHUCA, BUILDING 30031)  
(FORT HUACHUCA, BUILDING 91)  
(FORT HUACHUCA, BUILDING 127)  
(FORT HUACHUCA, BUILDING 3040)

HABS NO. AZ-210-G

**Location:** Building 30031 is located along the west side of Clarkson Road, north of the intersection with Hungerford Avenue. It is the northernmost of seven cavalry stables aligned in a row on the site. The complex is located at Fort Huachuca (Sierra Vista vicinity), Cochise County, Arizona. The building and its complex lie within the Quartermaster area (Figure G.1).

USGS Quadrangle, Fort Huachuca, Ariz., 7.5 minute series, 1958, photo-revised in 1983

This building is bounded by the following UTM coordinates:

Zone	Northing	Easting
NW	1122.25	559978.36
SW	1113.03	559975.04
NE	1100.51	560041.58
SE	1091.30	560038.28

**Date of Construction:** 1916.

**Designer:** Quartermaster Corps.

**Builder:** United States Army.

**Present Owner:** U.S. Department of the Army, Fort Huachuca.

**Present Use:** Office, dispatch, and tool cribs.

**Significance:** Building 30031 is a modified but integral component of Fort Huachuca's cavalry stable complex. The seven cavalry stables at Fort Huachuca were completed in 1916 utilizing a standardized Quartermaster Corps plan. The structures are eligible for listing on the National Register of Historic Places due to their association with the 10th Cavalry and the Punitive Expedition into Mexico in 1916-1917 (Criterion A) and because they represent the only known examples of stables constructed using the Quartermaster Corps plan no. 291 (Criterion C).

## LIST OF FIGURES

G.1.	SITE PLAN SHOWING BUILDING 30031 LOCATION.....	11
G.2.	U.S. ARMY QUARTERMASTER CORPS FORM, NO. 173A; INITIAL PROPERTY RECORD CARD, BUILDING 30031 .....	11
G.3.	FOUNDATION AT SOUTHWEST CORNER .....	12
G.4.	DETAIL OF THE STONE MASONRY WALL CONSTRUCTION, NORTHEAST CORNER OF BUILDING. THE MASONRY WORK IS TYPICAL OF THE WORKS PROGRESS ADMINISTRATION ERA AT FORT HUACHUCA .....	12
G.5.	ORIGINAL ROOF FRAMING TIED INTO A PERIMETER BEAM IN A TOOL CRIB .....	13
G.6.	VIEW TO WEST OF FULL-LENGTH, NORTH PORCH WITH FRAMED SHED ROOF ON STEEL PIPE COLUMNS. CONSTRUCTION DATE UNKNOWN.....	13
G.7.	TYPICAL FLUSH PANEL PERSONNEL DOOR, NORTH FAÇADE, INSTALLED IN 1954 .....	14
G.8.	CORRUGATED ALUMINUM SWING-UP DOORS, NORTH FAÇADE, INSTALLED IN 1954 .....	14
G.9.	DETAIL OF STEEL HOPPER WINDOW FOR LATRINES, SOUTH FAÇADE.....	15
G.10.	DISPATCH OFFICE WINDOW OF ANODIZED ALUMINUM AND STEEL CASEMENT .....	15
G.11.	TRANSLUCENT "CORRULUM" PANEL IN CORRUGATED METAL ROOFING IN THE TOOL CRIBS. INSTALLED IN 1954 .....	16
G.12.	MODIFIED RAFTER ENDS CUT SO THEY ARE PARALLEL TO THE GROUND .....	16
G.13.	GAS SPACE HEATER, SUSPENDED FROM ROOF STRUCTURE, IN TOOL CRIB .....	17
G-S.1.	QUARTERMASTER CORPS FORM NO. 117 FOR BUILDING 30031 .....	22
G-S.2.	REAL PROPERTY RECORD CARD, DA FORM 2877, BUILDING 30031 .....	23
G-S.3.	"MODIFY BUILDING T-3040 FOR ORDNANCE INSPECTION STATION", NOW BUILDING 30031 .....	24
G-S.4.	"TYPICAL BUILDINGS, CLOSED STABLE," A STANDARDIZED Q.M.C. PLAN VERY SIMILAR TO FORT HUACHUCA'S CAVALRY STABLES.....	25

## PART I. HISTORICAL INFORMATION

### A. Physical History

1. **Date of erection:** According to U.S. Army Quartermaster Corps Form No. 173a (1916), the initial property record card, this building and the other six cavalry stables were completed 5 January 1916 (Figure G.2; HABS No. AZ-210-G-5).

2. **Architect:** The Office of the Constructing Quartermaster Corps (O.C.Q.M.C.), provider of standardized plan no. 291, as indicated on Q.M.C. Form No. 173a. In 1916, this corps was one of five divisions of the Office of the Quartermaster General in Washington, D.C. (Chattey 1998:2).

3. **Original owner, occupants, uses:** The owner has been the U.S. Army. The known original occupant/user was the 10th Cavalry and its mounts. Very little information has been found about subsequent tenants, although the building's uses can be determined. The building still had horses in 1941 (Parkhurst and Thiel 2005). This building was still classified a stable in a 1951 inventory (U.S.A.C.E. 1951). This classification may not have been accurate because major wall modifications, probably undertaken shortly after 1941, the Works Progress Administration (W.P.A.) era, indicate a change of use. In 1954 this building was modified to an ordnance inspection station (Figure G-S.3). Today it serves as dispatch, offices, and tool cribs for the Directorate of Installation Services (DIS).

4. **Builder, contractor and suppliers:** Built by the U.S. Army. Information about the contractor or suppliers has not been located. The photograph on Q.M.C. Form No. 173a shows the building apparently still under construction with one laborer working on the entry door (Figure G.2). It was Quartermaster Corps policy for Army buildings to be erected and repaired by the troops (Chattey 1998:2).

5. **Original plans and construction:** Office of the Constructing Quartermaster Corps, standardized plan no. 291. This plan could not be found at the National Archives; thus, it is not known whether its application on this post followed the standard or was a local modification to accommodate topographic and climatic conditions at Fort Huachuca (Chattey 1998:3).

6. **Alterations and additions:** All cavalry stables in the complex, including Building 30031, have been modified to a greater or lesser extent. Building 30031 has undergone the most extensive exterior and interior modifications of all seven buildings. However, much of this work appears to have been done by 1954, and thus has its own historic significance.

It is possible that shortly after 1941 the building changed function. Its exterior was dramatically altered by the stone masonry work visible today and characteristic of W.P.A. projects undertaken at Ft. Huachuca during the 1930s and early 1940s (Parkhurst and Thiel 2005). Both gable ends were rebuilt of stone masonry, and frame side walls were replaced by regularly spaced stone piers. Original openings and storage rooms were removed, but interior posts and roof structure remained. (The structure currently is visible in the tool crib sections of the building.) The building's function at the time of this conversion is not known.

Plans issued by the Post Engineer Office in 1954 for Building 30031, titled "Modify Building T-3040 for Ordnance Inspection Station," called for adding concrete masonry unit walls to partition the building, an inspection pit, fiberglass skylights, security windows and large, swing-up, corrugated aluminum doors (Figure G-S.3; Post Engineer Office 1954). Most of this work is in place today. According to the real property record, further partitions were installed in 1961 for \$2,706.00. Additional office space rehabilitation occurred in 1973 (U.S. Army Form 2877). Post-1954 partitioning occurred in zones now used as offices. Some windows and interior doors appear to date from the 1961 or 1973 projects (HABS No. AZ-210-G-2).

## **B. Historical Context**

The United States Army completed the construction of seven cavalry stables at Fort Huachuca, Arizona, in January 1916. The stables housed horses and mules used by members of the 10th Cavalry popularly known as the Buffalo Soldiers. The mid-1910s saw a military buildup along the United States-Mexican border, as internal Mexican political problems escalated. As intense fighting took place in northern Sonora, Fort Huachuca personnel patrolled the border, protected local residents and sought to prevent smuggling activities. Members of the 10th Cavalry participated in the 1916-1917 Punitive Expedition, the last major use of cavalry forces by the United States Army.

The seven stables were likely one of the last cavalry stables complexes built in the United States. The Punitive Expedition saw the first use of motorized vehicles by the military and afterward the Army turned away from horse-mounted soldiers. The 10th Cavalry left Fort Huachuca in 1931; however, the stables remained in use until at least 1941. They were later used for other purposes including storage and office space (Parkhurst and Thiel 2005).

To reinforce the formality that was traditional at historic, American military forts, stables tended to be repetitious units arranged in an orderly pattern not far from the barracks of the troops. Such repetition could be assured by the use of a standardized plan. Fort Huachuca's seven cavalry stables were located in the expanded Quartermaster area. Aligned in a row along the railroad right-of-way, the buildings constituted a property of identical buildings, each having a simple gable-roofed form (minus monitor) generated from Quartermaster Corps plan no. 291. The stables were of the straight, double-loaded, central corridor type with identical, un-gated stalls lining the sides (Parkhurst and Thiel 2005).

## **PART II. ARCHITECTURAL INFORMATION**

### **A. General Statement**

Architectural character: Like the other six stables in this complex, greatly modified Building 30031 is distinctive for its simple morphology, a front-gabled form generated from an elongated, rectangular footprint that reflects its original function, the stabling of seventy-eight cavalry mounts. In addition, its partly visible, exposed structural system is an elegant, although rustic, integration of repetitious components. The exterior and interior have been extensively modified, but much of this work is historically significant in itself. Of particular worth is the W.P.A.-era stone masonry work (HABS No. AZ-210-G-1).

The prototypical 1916 cavalry stable was an elongated, gable-roofed building with concrete foundations and a frame bearing wall system with interior posts installed along a central aisle that supported repetitive, exposed roof framing. Exterior walls were board and batten, and roofing was corrugated metal. There were three door openings, one on each gable end and one on the north side wall to allow mounts access into the paddock. Ramps were provided where needed. Readable photographs of the main entry doors alone can be found, showing a pair of swinging, wood-panel doors with one light above. Fenestration included six-over-six double-hung windows for storage rooms near the east end and an array of square, six-light windows to illuminate individual stalls.

Inside, on either side of the central aisle at the east end, were a forage and grain room and a saddle room. These rooms had concrete floors plus vertical board siding along the aisle and horizontal wood sheathing inside. The end walls of each room, which formed one side of an adjacent stall, was reinforced by thicker, horizontal, board sheathing. Each room had two panel doors on the aisle and ceilings were board and batten.

The rest of the building was devoted to the stabling of horses and mules in repetitive, double-stall bays defined by the wood posts. Here the walls were unfinished with exposed framing. There was no ceiling other than the roof framing clad in corrugated metal. The floor was dirt. Stall rails were framed into the back of each post, and there were no gates at the aisle. Mangers were attached to walls where animals were tethered.

**2. Condition of fabric:** The overall structural condition of Building 30031 appears to be fair to good. The building is in full use and is relatively well-maintained. However, some wood walls and doors are weathered and need repair and paint.

## **B. Description of Exterior**

**1. Overall dimensions:** Building 30031 is 219 ft, 8 inches long by 30 ft, 3 ½ inches wide. The walls are approximately 10 ft, 8 inches high from the top of the stem wall to the bottom of rafter bearing. The gable roof peaks at approximately 18 ft.

**2. Foundations:** Foundations are hand-poured, board-formed concrete and comprise an 8-inch-thick stem wall. It is unlikely there is any steel reinforcing in this foundation. Due to the site slope and the 1954 installation of concrete aprons, the stem wall is not visible except at the west end of the building, where it shows a maximum of 1 ft, 3 inches above the asphalt paving. Its hand-poured quality is seen in occasional voids and seams from uneven board placement (Figure G.3).

As in Building 30023, each interior wood post probably bears on a small concrete pad, approximately 7 inches square in plan and installed level with the top of the original wall foundation.

**3. Walls:** None of the original board-and-batten clad, frame walls remain. Exterior walls vary and are built of stone masonry, wood frame, and concrete masonry units. Cladding on the frame walls varies from bay to bay. Except for stone elements, walls are painted a pink beige color. They are in various states of repair.

The east and west gable walls are built of stone masonry, minus openings. Stones are characteristic of the type found in this mineral-rich region, colored various shades of ochre, maroon, and gray. Mortar is thick, rustically applied to cover the stone edges and render a rounded appearance. This is characteristic of W.P.A. work (Figure G.4). Both large beams atop the structural posts inside protrude through the stonework. The north and south façades feature a regular rhythm of 1-ft, 4-inch by 2-ft, 0-inch stone perimeter piers that create bays. These piers align with the original posts inside. (On the north façade, there is one concrete masonry pier. It is the fourteenth pier from the east.)

On the north and south façades, walls (with or without openings) and corrugated aluminum doors fill in the bays between the stone piers. The walls are either installed close to the outer edge of the pier, or inset by as much as 2 ft and sheltered by the roof overhang. On the north façade, the fifth and sixth bays from the east end have painted concrete masonry walls inset 5 ft, 6 inches.

Except the previously mentioned concrete masonry walls, most walls are of wood frame construction. Cladding found on frame walls includes plywood sheets, horizontal, lapped 12-inch composition board and textured plywood (T-1-11). Some of the plywood and composition siding is damaged, weathered, and missing paint, especially on the south façade.

**4. Structural System:** Due to the extent of the modifications and the addition of suspended ceilings in office spaces, except for posts, it is difficult to observe the original structural system. In the multi-bay tool cribs, however, it remains exposed (HABS No. AZ-210-G-4).

The original structural system, a wood frame bearing wall system on continuous concrete foundations with two internal, longitudinally placed rows of regularly spaced posts along a central aisle, has been altered. Perimeter bearing walls have been replaced by structural piers and beams. (These beams, which span large door openings, can be observed in the tool cribs. It is not known whether other perimeter walls are structural.) The internal posts and roof framing structure remain.

Where visible, posts are braced and tied to the perimeter beams, the sloping roof rafters, and across the aisle by lateral, longitudinal, and diagonal members. Posts, roof framing members, and roofing nailing boards appear to be of redwood, whereas wall studs and exterior board siding are probably fir (Figure G.5).

The posts are 6" x 6" redwood timbers that extend from the concrete foundation pad to the bottom edge of a rafter. Except for the large 3" x 10" support header and the 3" x 6" tie beam at the top of the posts, framing members are 2" x 6"s. It can be observed that posts are tied, in typical fashion, longitudinally along the aisle at the top and at 9 ft, 7 inches above the floor, and there are flanking, diagonal, braces. This bracing gives a truss-like appearance. Each post is also connected to the top of the perimeter beam by a tie beam also attached to a rafter. Where visible in the tool cribs of Building 30031, most structural members are intact.

Roof rafters are 2" x 6"s that extend beyond the walls to form eaves with overhangs. They tie into a 3" x 8" ridge member. Above the rafters are 2" x 4" nailing boards to which corrugated metal roofing is attached. The 2" x 4"s extend beyond the gable walls to form rake overhangs.

**5. Porches and aprons:** Photographs on Q.M.C. forms No. 173a and 117 do not show any kind of grade-level apron at the principal, east entry up to 1941. There was a ramp to the north door (Figures G.2, G-S.1).

As there is no east door, the typical concrete apron found on the other buildings is missing for Building 30031. There is, instead, a gently sloped earth berm.

In 1954, 5-ft-wide, sloped concrete aprons (also called ramps on the plan) were installed along the north and south facades (Post Engineer Office 1954). Their primary purpose was to facilitate loading. The north ramp, which also functions as a sidewalk, runs the full length of the building. It is covered by a porch. There are three concrete ramps on the south facade. Two of them, three and six bays long respectively, serve the tool cribs from the rear.

Of unknown vintage, the north porch is a full-length appendage with a shed roof attached to the building by a ledger at the eave. The porch roof is supported on 3-inch-diameter steel pipes with saddle connectors on top that hold a 4" x 12" beam to which rafters and sheathing in plywood are attached. The pipes are installed 5 ft, 7 inches from the stone piers, in the asphalt pavement beyond the concrete apron. The porch roof is clad in roll roofing (Figure G.6).

**6. Chimneys:** There are numerous metal flues, vents, and ventilators on the roof of this building. The rotating ventilators are installed near the ridge. Some of them are missing tops.

**7. Openings:** No original opening remains today.

**a. Doorways and doors:** Building 30031 has two types of exterior door. One is an entry door for personnel, located mostly where there are office spaces inside. The other is a large, swing-up, metal type for loading the tool cribs. On the north facade there is one example of a metal personnel door built into a swing-up door.

Personnel doors are mostly single, flush panel types with casing. In the easternmost bay of the north facade is a pair of flush panel doors. Some doors have a single light. Casing is either  $\frac{3}{4}$ " x 3" straight-jointed wood or  $\frac{3}{4}$ " x 2" mitered wood. The doors with straight-jointed casing probably pertain to the 1954 work. Those with mitered casing may be later. There are 10 personnel doors on the north facade and two on the south facade. They are painted red-brown (Figure G.7).

Swing-up doors of corrugated aluminum fill an entire bay. Installed in 1954, they operate not by rolling up but by tilting up without bending and then engaging on a pair of horizontal steel tracks aligned along the inner face of the stone piers. Not all are operable today, and they function as metal walls. There are nine aluminum doors on the north facade and seven on the south facade (Figure G.8).

**b. Windows:** There are several non-original window types in this building. These include multi-light steel casement, multi-light steel fixed, steel hopper, and aluminum slider. Some have been adapted for evaporative cooler ducts on the south facade. Security windows are called out on the 1954 plans (Post Engineer Office 1954). They are multi-light, steel fixed windows with grills made of small steel rods. Several of these are installed on the south

façade. The latrines have small hoppers with obscure glass and steel rod security grills. Two aluminum sliding windows, a later installation, appear near the east end of the south façade. Some windows have straight-jointed casing, others have mitered casing, and some are without casing (Figure G.9).

The window for the dispatch office, in the third bay from the east on the north façade, is a composite including a central sliding window of anodized aluminum flanked by four-light steel casement windows. This assembly is 6 ft, 8 inches wide by 4 ft, 2 inches tall. The lower panes of the central window slide for mail. Below this window assembly is a wood shelf mounted on brackets that spans between the two stone piers of the bay. There is a bay-width, shed-roofed canopy above (Figure G.10). On the south façade, the second, third, and fourth bays have bay-width, metal-clad canopies above the aluminum windows.

## 8. Roof:

**a. Shape, covering:** The roof is a low-pitch gable. Its slope is approximately 27.4 degrees. Since the principal building entry was originally on the east gabled end, this is a front-gabled roof form. In 1954, the original corrugated metal roofing was either fully replaced or modified to allow for the installation of 2-ft by 7-ft "Corrulum" panels every other bay (Post Engineer Office 1954). These panels are a translucent, green, fiberglass-like material and function as a skylight (Figure G.11). The roof has been painted light gray on the exterior. The paint has flaked off in places. At the rakes the metal is bent to form a drip edge.

**b. Eaves:** Eaves comprise exposed 2" x 6" rafter ends that extend to form a 2-ft overhang. The corrugated metal roofing is exposed at the eaves. Rafters have been modified by a diagonal cut that renders the ends parallel to the ground (Figure G.12). The gable rakes are supported by nailing boards over which board sheathing has been added. The rake ends overhang approximately 1 ft. There is a cornice board at the rakes and eaves. Eaves are generally in fair condition, because framing members have been painted. There is weathering of rafter ends, some deformed or torn roofing, and paint peeling.

## C. Description of Interior

**1. Floor plan:** Like Building 30026, Building 30031 has been extensively modified inside. A current floor plan has not been found, but the 1954 plan can be used to explain the layout (Figure G-S.3; Post Engineering Office 1954). Since 1954, additional partitioning has occurred in office zones only. The plan shows the building divided into five basic zones from east to west. Pre-existing stone piers line the north and south perimeter walls. Interior posts remain, but the central corridor no longer functions because partitions prevent circulation between zones. Access from one zone to the next is undertaken outside.

The east zone is currently an office and storage zone. The former inspection pit room, at the far east end, is now a locked storage room with a separate north entry. The adjacent space, three bays in length, has been further partitioned to include a mail room, a dispatch office, and an office for Roads and Grounds. The main dispatch north entrance is in the second bay from the east. The next bay west is the mail room with the sliding window on a bracketed shelf described above. This zone can also be accessed from a door facing west in the alcove of the second zone.

The second zone from the east, built in 1954 of concrete block walls, includes storage rooms and latrines. The third zone, six bays in length, is the first tool crib. It is accessed by a door facing east in the alcove of the second zone. In addition, at one time, its banks of corrugated aluminum doors were operable. The fourth zone from the east, built of concrete masonry units in 1954, was later partitioned into two office spaces. Today the east one is the Environmental Office and the west one is the QC/Safety Office. The fifth zone, four bays in length, is a second, open-structure tool crib with bay-wide corrugated aluminum doors.

**2. Stairways:** In the largest tool crib, there is a sturdy, open-riser, wood stair unit that rises 7 ft, 11 ½ inches to a platform. Treads are 1 ¾" x 11" boards attached to cut stringers. Risers are 8 inches high. The unit is supported by 3" x 3" posts with 2" x 4" rails.

**3. Flooring:** In the offices and latrines, flooring is 12-inch-square beige vinyl tile over concrete. In the tool cribs, it is concrete slab.

**4. Wall and ceiling finish:** In the partitioned office zones, wall materials vary. Walls constructed of concrete masonry units are not finished except for white paint. Frame walls are clad in white-painted composition board, gypsum wallboard, and 12-inch-square acoustic tile. There is baseboard on office walls. In the dispatch zone, base is 3-inch-wood cove molding or 1" x 2 ½" straight board. In the Environmental and QC/Safety offices, there is brown vinyl base. Office ceilings are painted wallboard, 8 ft above the floor (HABS No. AZ-210-G-3).

Lateral (north-south) tool crib walls are painted concrete masonry units, whereas perimeter walls constitute the painted inner faces of stone piers and corrugated aluminum doors. Tool crib ceilings are exposed structure (HABS No. AZ-210-G-4).

#### **5. Openings:**

**a. Doorways and doors:** Interior doors vary. From the dispatch office to the locked storage room in the east end bay is a four-panel wood door with six lights and contemporary hardware. Between the dispatch office and Roads and Grounds is an older oak door with an operable one-over-one double-hung light and contemporary hardware. Other doors are of a flush panel type painted to match walls. Door casing varies from a simple, ¾" x 3" straight-joint type on concrete masonry walls to sculpted molding.

**b. Windows:** Noted elsewhere. Aluminum windows in the dispatch office zone have 1 ¼" x 1 ¼" corner molding used as casing. Windows in the zone four offices do not have casing.

**6. Decorative features:** None.

**7. Hardware:** No historic hardware was observed.

#### **8. Mechanical equipment:**

**a. Heating, air-conditioning, ventilation:** When first constructed, the building had no mechanical equipment. Ventilation, a necessity for a stable, was provided through operable windows. There are notations on the real property record for gas space heaters and evaporative coolers to be installed in the building. Since 1976, approximately \$21,000 has been

allotted for this purpose (U.S. Army Form 2877). Currently two large evaporative coolers are ducted from the south façade into the tool cribs (Figure G.13).

**b. Lighting:** The real property record notes a 200-amp, 240-volt with #4 wire electric connection for Building 30031. A 1974 notation calls for 12 double-tube, 4-ft fluorescent fixtures (U.S. Army Form 2877). This type is currently the norm for this building.

**c. Plumbing:** The building was initially fitted with sewer and water connections (U.S.A.Q.M.C. 1916). In 1941 a ¾-inch water connection and a 4-inch sewer were noted (U.S. War Dept. 1941). The latrines have vitreous china toilets and wall-mounted lavatories.

**9. Original furnishings:** None.

#### **D. Site**

**1. General setting and orientation:** Near the northwest corner of the intersection of Hungerford Avenue and Clarkson Road, Building 30031 is the northernmost unit of Fort Huachuca's historic cavalry stable complex in the former, expanded Quartermaster area east of Huachuca Creek. The building, although modified, is an integral component of a property of parallel, regularly arranged, matching units aligned along Clarkson Road and spaced approximately 70 ft apart, with former paddocks in between. These elongated, gable-roofed buildings are southeast-northwest trending. Given the spatial quality inherent in the regulated positioning of these buildings, the complex itself can be considered a single historic property.

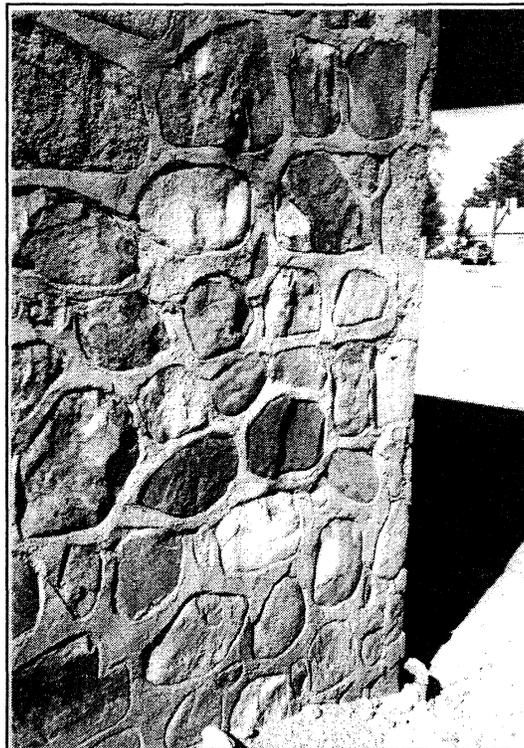
The site incorporates the stable complex and a surrounding area that includes the right-of-way of former railroad tracks to the east, Hungerford Avenue to the south, Huachuca Creek to the west, and part of the parking lot of Building 30031 to the north. The terrain slopes considerably to the northwest. Today's Clarkson Road, once an unnamed dirt access way, is asphalt paved. The historic railroad right-of-way, just east of Clarkson Road, is a level strip along a steep embankment. There is a stone-lined drainage ditch along the east edge of the railroad bed and several Depression-era mortared, stone masonry features, including stairs and a retaining wall, within view of the buildings. Large, historic cottonwood trees grow along the railroad bed and downslope to the west along Huachuca Creek, a dry watercourse for much of the year. (See Parkhurst and Thiel 2005.)

The microsite of Building 30031 consists of its former designated paddock area to the north, the adjacent paddock to the south (between this building and Building 30028), and a zone to the rear (west side) and in front (east side). On the east end of the building, once the main entrance before the building was modified, is a gently sloped earth berm. The former designated north paddock and a large zone to the west (rear) of the building are enclosed by chain-link fencing. The ground surface has been graded and completely clad in asphalt pavement. Here a large number of personal and utility vehicles are parked. Between Buildings 30031 and 30028, the former paddock for 30028, the surface is also asphalt pavement.

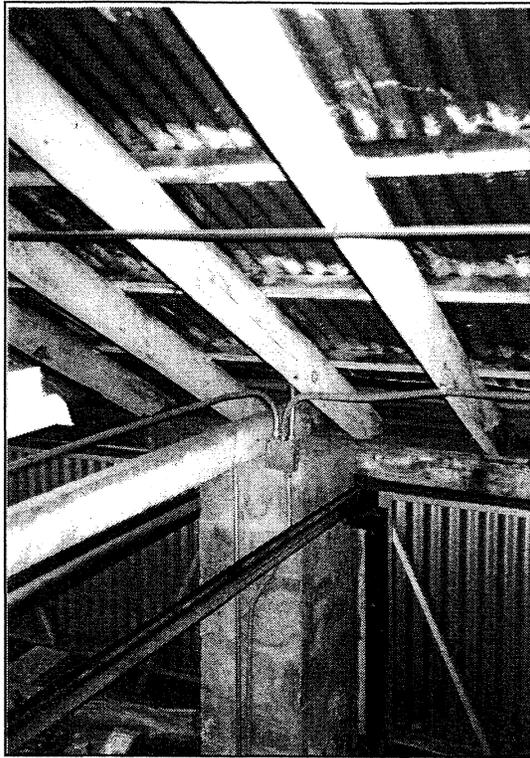




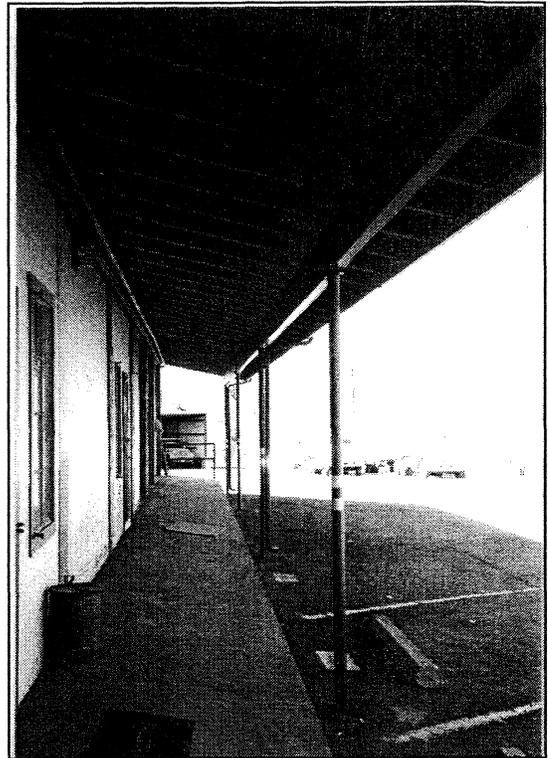
**FIGURE G.3.** FOUNDATION AT SOUTHWEST CORNER (PHOTOGRAPH BY JANET PARKHURST, JANUARY 2005).



**FIGURE G.4.** DETAIL OF THE STONE MASONRY WALL CONSTRUCTION, NORTHEAST CORNER OF BUILDING. THE MASONRY WORK IS TYPICAL OF THE WORKS PROGRESS ADMINISTRATION (W.P.A.) ERA AT FORT HUACHUCA (PHOTOGRAPH BY JANET PARKHURST, JANUARY 2005).



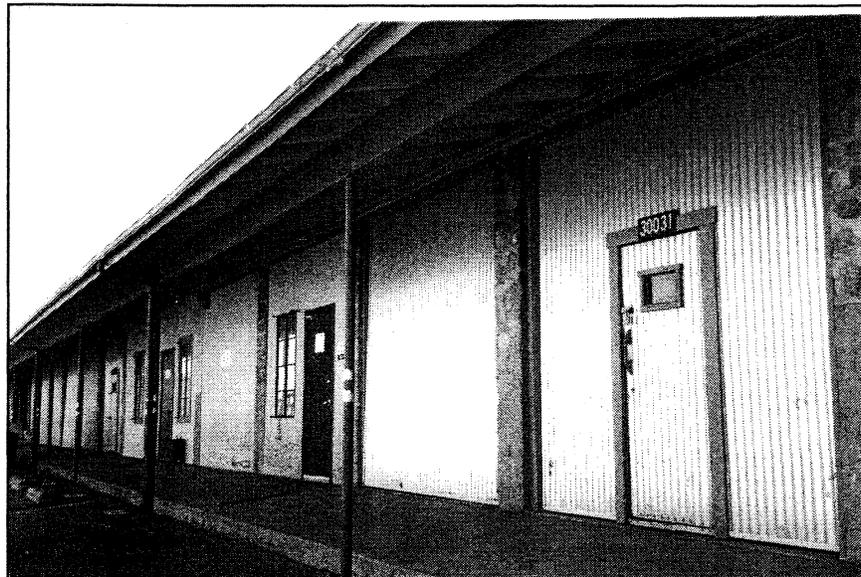
**FIGURE G.5.** ORIGINAL ROOF FRAMING TIED INTO A PERIMETER BEAM IN A TOOL CRIB (PHOTOGRAPH BY JANET PARKHURST, JANUARY 2005).



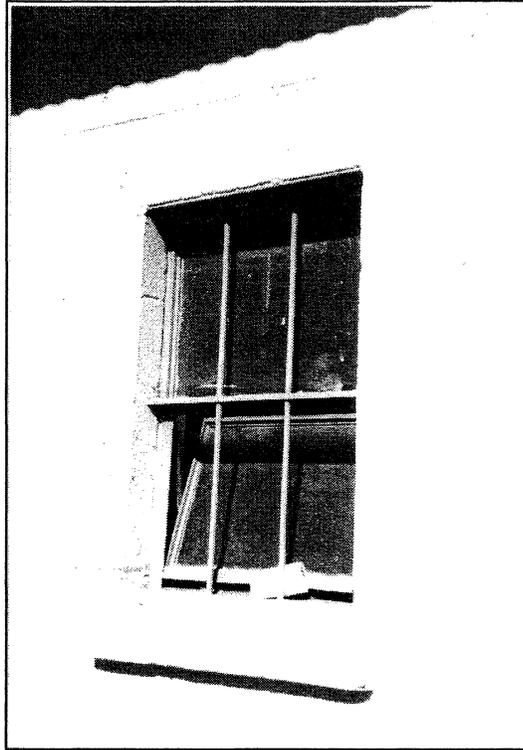
**FIGURE G.6.** VIEW TO WEST OF FULL-LENGTH, NORTH PORCH WITH FRAMED SHED ROOF ON STEEL PIPE COLUMNS. CONSTRUCTION DATE UNKNOWN (PHOTOGRAPH BY JANET PARKHURST, JANUARY 2005).



**FIGURE G.7.** TYPICAL FLUSH PANEL PERSONNEL DOOR, NORTH FAÇADE, INSTALLED IN 1954 (PHOTOGRAPH BY JANET PARKHURST, JANUARY 2005).



**FIGURE G.8.** CORRUGATED ALUMINUM SWING-UP DOORS, NORTH FAÇADE, INSTALLED IN 1954 (PHOTOGRAPH BY JANET PARKHURST, JANUARY 2005).



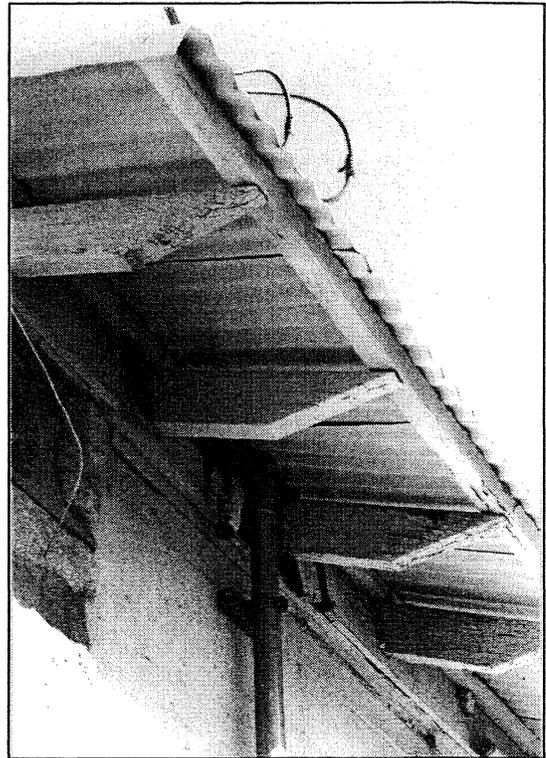
**FIGURE G.9.** DETAIL OF STEEL HOPPER WINDOW FOR LATRINES, SOUTH FAÇADE. (NOTE STEEL ROD SECURITY GRILL. INSTALLED IN 1954) (PHOTOGRAPH BY JANET PARKHURST, JANUARY 2005).



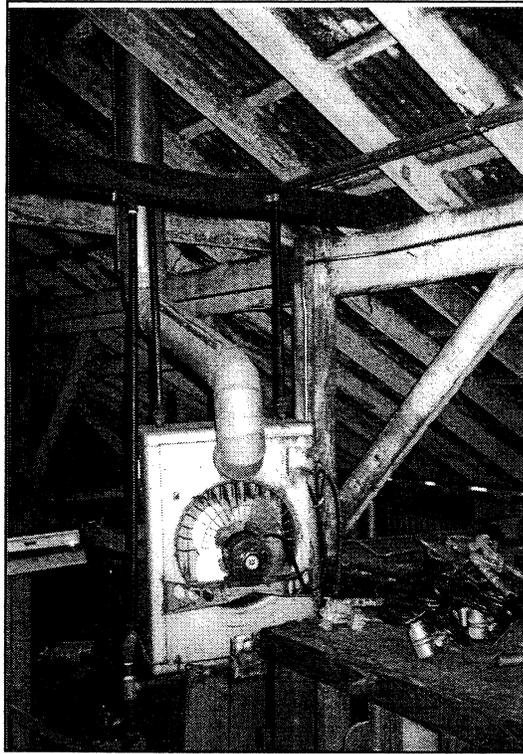
**FIGURE G.10.** DISPATCH OFFICE WINDOW OF ANODIZED ALUMINUM AND STEEL CASEMENT (PHOTOGRAPH BY JANET PARKHURST, JANUARY 2005).



**FIGURE G.11.** TRANSLUCENT "CORRULUM" PANEL IN CORRUGATED METAL ROOFING IN THE TOOL CRIBS. INSTALLED IN 1954 (PHOTOGRAPH BY JANET PARKHURST, JANUARY 2005).



**FIGURE G.12.** MODIFIED RAFTER ENDS CUT SO THEY ARE PARALLEL TO THE GROUND (PHOTOGRAPH BY JANET PARKHURST, JANUARY 2005).



**FIGURE G.13.** GAS SPACE HEATER, SUSPENDED FROM ROOF STRUCTURE, IN TOOL CRIB (PHOTOGRAPH BY JANET PARKHURST, JANUARY 2005).

### **PART III. SOURCES OF INFORMATION**

**A. Architectural Drawings:** This building was constructed from the Office of the Constructing Quartermaster Corps (O.C.Q.C.) standardized plan no. 291, as noted on the initial property record card (U.S.A.Q.M.C. 1916). The plans were not found at Fort Huachuca or other depositories of records. During the period when Fort Huachuca was deactivated and reactivated several times, from 1947 to 1954, drawings and records were removed from the post and apparently lost (Parkhurst and Thiel 2005).

The U.S. Army generated one early twentieth-century, standardized plan that is very similar to the Fort Huachuca cavalry stable plan (Construction Division of the Army 1919:Section C Plate 58). It has the same elongated layout, front-gabled form, framing system, and fenestration found in plan no. 291. This closed stable features a double-loaded, central-aisle, straight-stall plan with saddle and forage rooms at one end of the building. Mangers are mounted on the frame walls (Figure G-S.4).

**B. Early Views:** Early views of Building 30031 are found on the initial property record card, Q.M.C. Form No. 173a, and the 1941 card, Q.M.C. Form No. 117 (Figures G.2, G-S.3).

#### **C. Interviews, Consultations:**

Robert Arzola, Architect. Historic American Buildings Survey, National Park Service, Department of the Interior, Washington D.C. Mr. Arzola provided initial verbal guidance for architectural drawings. March 2004.

Tom Campbell, Mechanical Engineer. Engineering Services Branch, Engineering Plans and Services Division, Fort Huachuca, Arizona. Mr. Campbell researched and provided historic maps and building modification plans. January 2005.

Mike Berg, Branch Chief. Engineering Services Branch, Engineering Plans and Services Division, Fort Huachuca, Arizona. Mr. Berg provided a disk of scanned historic plans, including a modification for Building 30023. November 2004.

Jack Boucher, Photographer. Historic American Buildings Survey, National Park Service, Department of the Interior, Washington, D.C. Mr. Boucher provided initial verbal guidance for the large-scale photography. March 2004.

Paul W. Chattey, Historical Architect. Resources, Management and Science Department. Yosemite National Park. Mr. Chattey provided information about his work at Fort Huachuca, including his 1998 HABS documentation of four of the cavalry stables while working for the U.S. Army Corps of Engineers, Seattle District. March 2004, February 2005.

Thomas G. Cochran, Chief. Environmental and Natural Resources Division, Directorate of Public Works, Fort Huachuca, Arizona. Mr. Cochran provided administrative support for this HABS project. December 2003 to February 2005.

Paul Dolinsky, Chief. Historic American Buildings Survey, National Park Service, Department of the Interior, Washington, D.C. Mr. Dolinsky provided initial verbal guidance for documentation of a stable complex. March 2004.

Raymond L. Easton, Real Property Clerk. Real Property Division, Directorate of Public Works, Fort Huachuca, Arizona. Mr. Easton researched, interpreted, and provided property record cards for the seven stable buildings. In addition, he provided a very useful map and a 1951 building inventory. November 2004 through February 2005.

Bob Frankeberger, Architect. Arizona State Historic Preservation Office, Phoenix, Arizona. Mr. Frankeberger provided scope guidance, review, and coordination with Fort Huachuca and the National Park Service, Denver, Colorado. March and June 2004.

Steve Gregory, Museum Assistant. Fort Huachuca Historical Museum, Fort Huachuca, Arizona. Mr. Gregory provided research guidance and archival material including maps, photographs, and text about the evolution of the site and the stabling of mules and horses at Fort Huachuca. January, February 2005.

Tomas G. Keohan, Historical Architect. Heritage Partnership Program, National Park Service, Intermountain Regional Office, Denver, Colorado. Mr. Keohan provided guidance and review of CAD drawings of the site and Building 30023. October 2004 until April 2005.

Vince Moreau, Facility and Space Utilization Specialist, Real Property Division, Directorate of Public Works, Fort Huachuca, Arizona. Mr. Moreau secured access to the buildings for documentation purposes. December 2003 through January 2005.

Mary Padilla, HABS/HAER Coordinator. National Park Service, Santa Fe, New Mexico. Ms. Padilla assisted with initial procedure and provided original material from a 1996 submission for Building 30023. March 2004.

William T. Phillips, Museum Director, Fort Huachuca Historical Museum, Fort Huachuca, Arizona. Mr. Phillips provided archival property record cards, maps, early photographs, disks with scanned images, historic information, and research guidance plus arranged the venue for the photographer. November 2004 to January 2005.

Charles Slaymaker, Ph.D., Historic Properties Manager. Environmental and Natural Resources Division, Directorate of Public Works, Fort Huachuca, Arizona. Dr. Slaymaker was the historic property manager for this HABS project. He provided administrative support and documentary material on the buildings. He provided on-going research guidance and participated in valuable interviews. December 2003 to February 2005.

Joshua Swanson, ITAM GIS Analyst. Range Management, Fort Huachuca, Arizona. Mr. Swanson provided base contour and aerial plans, appropriately scaled and adjusted, to be used for the project site plan. In addition, he provided individual building UTM's. January 2005.

Lysa Wegman-French, Historian. Heritage Partnership Program, National Park Service, Intermountain Regional Office, Denver, Colorado. Ms. Wegman-French outlined the project scope. In addition, she provided on-going guidance of HABS procedures and review of submittals. March 2004 to April 2005.

## **D. Bibliography:**

### **Books and Reports:**

Chattey, Paul W. "Fort Huachuca, Building 30023 (Cavalry Stable), HABS No. AZ-XX-XX." Draft HABS outline form. Seattle: U.S. Army Corps of Engineers, Seattle District. Technical Center of Expertise for Preservation of Historic Buildings and Structures, 1998. (This report has general information that also applies to Building 30031.)

Construction Division of the Army. *Manual of the Construction Division of the Army*. Washington, D.C.: Consolidated Supply Co., 1919.

Parkhurst, Janet H., and J. Homer Thiel. "Historical Narrative," in *A Historic American Buildings Survey of the Fort Huachuca Cavalry Stables (HABS No. AZ-210-A through G), Cochise County, Arizona*, by Janet H. Parkhurst, J. Homer Thiel, Ralph Comey, and Susan D. Hall. Project Report No. 05-116. Tucson: Desert Archaeology, Inc., 2005.

### **U.S. Army Forms:**

U.S. Army. Real Property Record, DA Form 2877. Authorized for use on 1 November 1964. On file at the Fort Huachuca Real Property Division Office. Entries for Building 30031 go from 1951 to 2004.

U.S. Army Corps of Engineers (U.S.A.C.E.), Los Angeles District. DD Form 290 – Transfer of New Construction/Real Property – RE-C-292-51. An inventory of properties for re-activation of the fort. On file at the Fort Huachuca Real Property Division Office and at the Fort Huachuca Historical Museum, 25 April 1951.

U.S. Army Quartermaster Corps (U.S.A.Q.M.C.), Q.M.C. Form No. 173a, 1916. Property record card, authorized for use on 15 November 1913. Card is for Building No. 127. On file at the Fort Huachuca Historical Museum Annex, 1916.

U.S. Army War Department, Q.M.C. Form No. 117 (Old No. 173A), 1941. Property record card, revised 28 June 1939. Card is for Building No. 127. On file at the National Archives II, College Park, Maryland, Record Group 77, Ch. of Engineers, Entry 393, Historical Record of Buildings, Box 95, Folder 4.

### **Drawings:**

Post Engineer Office, Fort Huachuca, Arizona. General Site Plan Building Use Map. On file at the Fort Huachuca Historical Museum, 9 June 1955.

Post Engineer Office, Fort Huachuca, Arizona. "Modify Building T-3040 for Ordnance Inspection Station," 10 June 1954.

U.S. Army Corps of Engineers, Los Angeles District. D.O. Series 1124-6. Demobilization Study Layout Plan. On file at the Fort Huachuca Real Property Division Office, 1 November 1945, revised 1946.

**E. Likely Sources Not Yet Investigated:** The occupancy history of Building 30031 has not been completely documented. It would be useful to know whose horses were stabled in the building after the 10th Cavalry departed, as well as who used the building when it was a storehouse rather than a stable. An Army personnel record search for individuals who might have worked in the stables could prove useful.



1. FACILITY NO 30031		2. DESIGNATION Gen Storehouse		3. CATEGORY CODE 442 70		4. DESIGNED CAPACITY		5. TOTAL AREA <del>6,588</del> 7,537			
6. UNIT OF MEASURE Sq Ft			7. DRAWING NO.			8. MAP NO.			9. <input type="checkbox"/> LEASED <input checked="" type="checkbox"/> OWNED LEASE NO.		
10. AIR CONDITIONING				16. FIRE PROTECTION				18. TYPE OF CONSTRUCTION			
a. TYPE Evap cooler				a. NUMBER 3 fire extinguisher				PERM <input checked="" type="checkbox"/> SEMI-PERM <input type="checkbox"/> TEMP <input type="checkbox"/>			
b. CAPACITY 12,000				b. TYPE CO 2				19. BUILDING DIMENSIONS			
c. SQ YD AIR COND				17. MATERIALS				a. MAIN BLDG 219'x30'6"			
11. HEATING				a. FOUNDATION Concrete				b. OFFSETS			
a. SOURCE 5 space heaters				b. FLOOR Concrete				c. WINGS			
b. FUEL gas				c. WALLS Concrete blocks & al				d. BASEMENT			
12. HOT WATER FACILITIES				d. ROOF Corrugated iron open				e. ATTIC			
a. CAPACITY 20 well				e. SURFACE				20. TYPE OF CARD			
b. TEMPERATURE RISE 100 °				f. BASE				<input checked="" type="checkbox"/> BLDG <input type="checkbox"/> MISC STR			
13. NO. USABLE FLOORS 1			14. OTHER MEASUREMENTS			<input type="checkbox"/> UTIL DIST SYS <input type="checkbox"/> RAILROAD					
15. UTILITY CONNECTIONS						21. REMARKS					
		NUMBER	SIZE	CAPACITY							
a. WATER		1	1"								
b. SEWER		1	4"								
c. ELECTRICITY		1	240V #4 wire	30 phase 200 amp							
d. GAS		1	1 1/2"								
e. STEAM											
f. CONDENSATE											

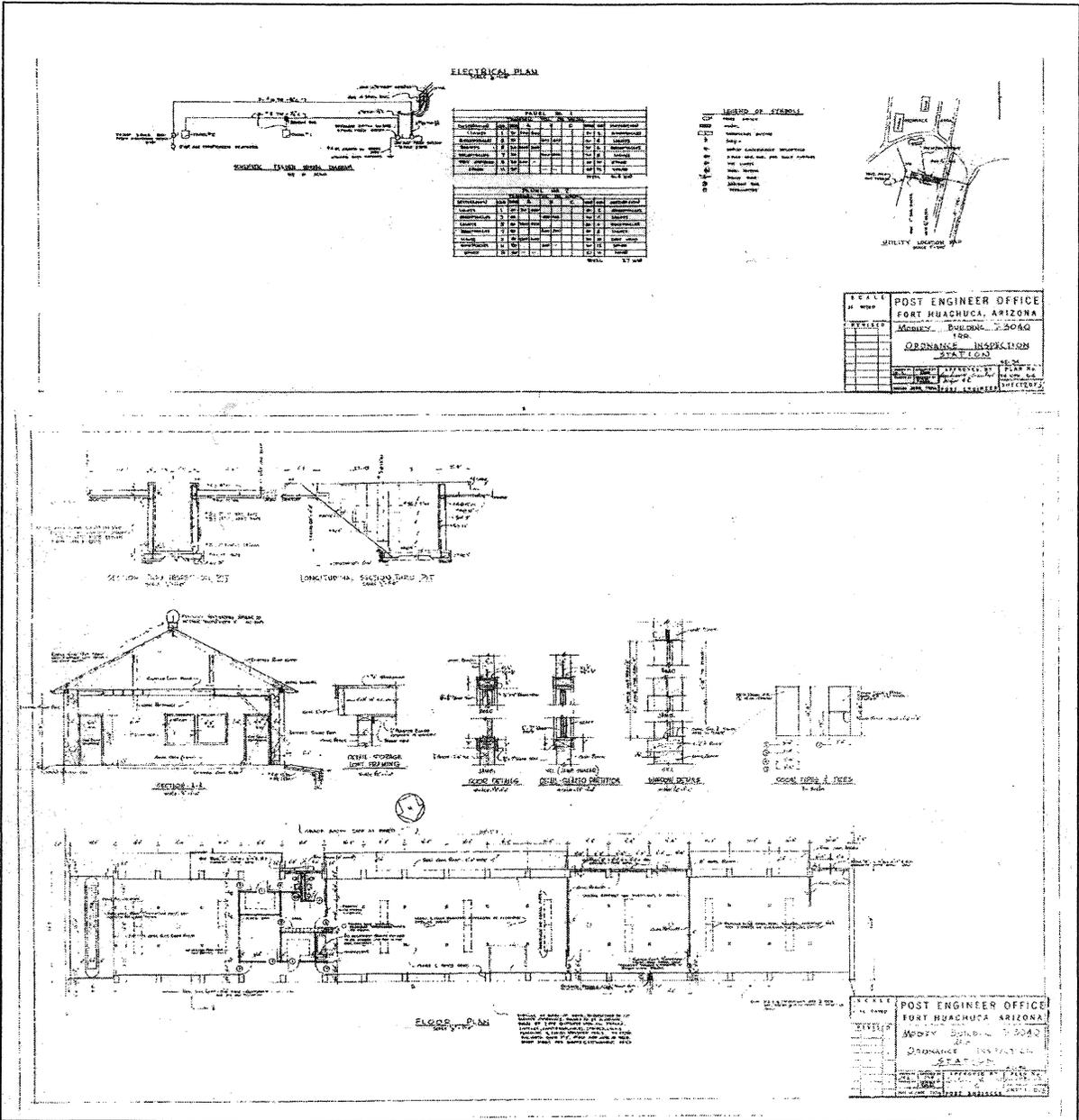
DA FORM 2877 1 NOV 54 \* GPO: 1965 O-759-629 REPLACES DA FORMS 8-46, 5-47, 5-48, 5-50, 5-51, AND 5-52, WHICH ARE OBSOLETE. REAL PROPERTY RECORD (AR 735-27)

CATEGORY CODE 219 10	DESIGNATION General Storehouse EX-1 HOUSING MNT FACILITIES ENGINEER FACILITY	FACILITY NO. P30031
-------------------------	---	------------------------

22. COST DATA				
VOUCHER NO	DATE COMPLETED	DESCRIPTION OF CHANGE	COST OF CHANGE	TOTAL COST
23-51	16 May 51			12,229.00
R16-76	11 Oct 61	install partitions	\$2,706.00	15,635.00
R-36-74	28 Aug 73	Rehab for office space, kitchen, change rm, break room	\$ 7,736.94	\$ 53,371.94
R-166-74	8 May 74	Install 12 Fluorescent fixtures 2'x4'	\$ 1,652.37	\$ 54,024.28
R-109-75	21 Nov 75	TV	6,153.20	60,477.48
R-12-77	25 Aug 76	INSTALL EVAP COOLERS	1,089. -	61,566.48
R 31-84	29 Dec 83	Install evap cooler & furnaces	18,416. -	79,982. -
R 70-85	6 Mar 85	Install evap cooler	609.06	80,591.06
R 156-97	4 Mar 97	INSTALL AVAILABLE COOLING IN TOOL CABINETS	1,828.42	82,479.88
R 160-04	7 Sep 04	EXCH RPL INV ADJ		

CATEGORY CODE 219 10	DESIGNATION General Storehouse EX-1 HOUSING MNT FACILITIES ENGINEER FACILITY	FACILITY NO. P30031
-------------------------	---	------------------------

FIGURE G-S.2. REAL PROPERTY RECORD CARD, DA FORM 2877, BUILDING 30031 (FORT HUACHUCA REAL PROPERTY DIVISION OFFICE).



**FIGURE G-S.3. "MODIFY BUILDING T-3040 FOR ORDNANCE INSPECTION STATION", NOW BUILDING 30031. (POST ENGINEER OFFICE, FORT HUACHUCA, 1954).**

SECTION C. PLATE 58

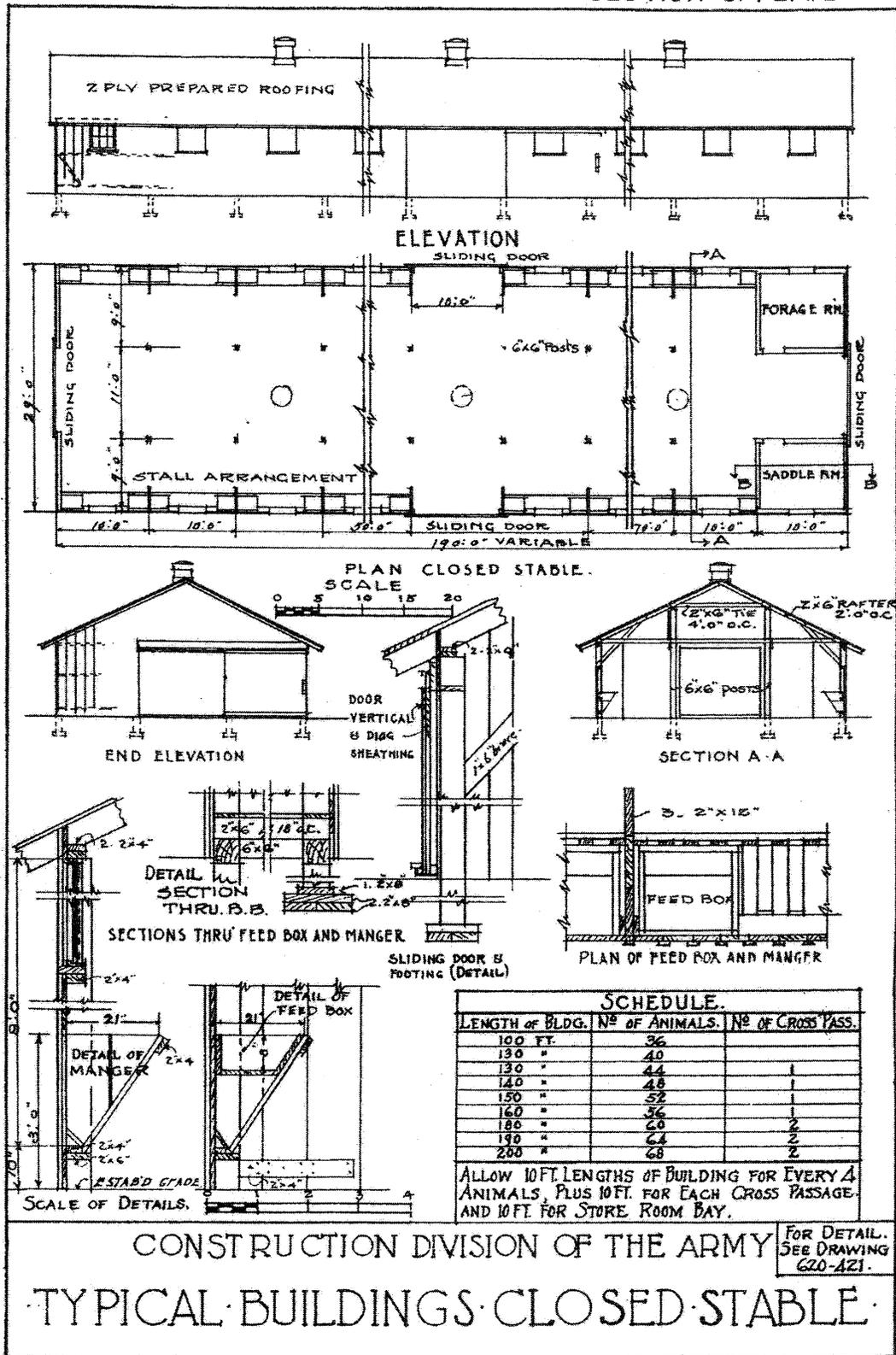


FIGURE G-S.4. "TYPICAL BUILDINGS, CLOSED STABLE." A 1919 STANDARDIZED Q.M.C. PLAN VERY SIMILAR TO FORT HUACHUCA'S CAVALRY STABLES (CONSTRUCTION DIVISION OF THE ARMY 1919:SECTION C PLATE 58).

#### **PART IV. PROJECT INFORMATION**

A number of individuals contributed to this project, working from December 2003 to March 2005. Architectural building documentation and historical research were completed by Tucson historic architects Janet H. Parkhurst, M.A., and Ralph Comey, M.A., AIA, of Ralph Comey Architects and Janet H. Strittmatter, Inc., Associated Architects. Historical research was also conducted by historical archaeologist J. Homer Thiel, M.A., of Desert Archaeology, Inc., at the National Archives and the Library of Congress in Washington, D.C.; the Arizona Historical Society and the University of Arizona Special Collections in Tucson, Arizona; and at the Fort Huachuca Historical Museum, Fort Huachuca, Arizona.

Peter L. Trexler, photographer, and Moira MacMahon, photography assistant, photographed the buildings and archival photographs at Fort Huachuca and prepared large-format photographs for inclusion in the report. Susan D. Hall, an archaeologist and former architect employed by Desert Archaeology, Inc., drafted the architectural drawings.