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HISTORIC ARCHEOLOGICAL STUDY

*FORT DES MOINES III
DES MOINES, POLK COUNTY, IOWA*

DACA45-90-C-0129

Prepared by

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20.. Five building components elsewhere on the site are recommended for Phase II historical and archeological evaluation.

STUDY AREA RECOMMENDATIONS (50-51)

Building 57 (50)

Building 120 (50)

Building 30 (141) (50)

Buildings T318 and T3419 (51)

REFERENCES (52-53)

APPENDICES (54-159)

A. *Contracts, Correspondence (54-87)*

B. *Artifacts Inventory (88-109)*

C. *Field Notes (110-157)*

D. *Iowa Site Form (158-159)*

ABSTRACT

The historic archeological study of Fort Des Moines III in Des Moines, Polk County, Iowa was conducted to locate and evaluate archeological resources within a specified area of this National Historic Landmark. The entire project area was surveyed for its historic archeological cultural resource potential at the Phase I level. Virtually all of the 78 razed building sites (termed components of the fort site in this report) were located. Where a US Army Reserve Center is planned was tested at the Phase II level. No further work at the planned Reserve Center site is recommended. Five building components elsewhere on the site are recommended for Phase II historical and archeological evaluation.

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FIGURES

1. *Map illustrating location of Fort Des Moines III. (5)*
2. *Historic archeological study area. (6)*
3. *Fort Des Moines III, 1904 site plan. (After HABS, 1987). (18)*
4. *Fort Des Moines III, 1917 site plan. (After HABS, 1987). (19)*
5. *Fort Des Moines III, 1943 site plan, part 1. (After HABS, 1987). (20)*
6. *Fort Des Moines III, 1943 site plan, part 2. (After HABS, 1987). (21)*
7. *Fort Des Moines III, 1987 site plan. (After HABS, 1987). (22)*
8. *Fort Des Moines III, area east of Chaffee Road, intensive testing. (48)*
9. *Fort Des Moines III, area east of Chaffee Road, showing location of proposed US Army Reserve Center. (49)*

PLATES, APPENDIX B

1. *Cal. 30 round, expended, 1912, Frankfurt arsenal. (102)*
2. *Cast brass object, perhaps a window prop. (103)*
3. *Threaded brass cap, octagonal. (104)*
4. *Blank practice round, M-16, 1983, Lake City Arsenal. (105)*
5. *Metal, probably zinc, object, not identified. (106)*
6. *Plastic model airplane part, lower engine nacelle, wing mounted. (107)*
7. *Iron item, broken, not identified. (108)*
8. *Token, non-metal composition. Raised letters spell RECEIPT. (109)*

INTRODUCTION

INTRODUCTION

In the spring and summer of 1991, Four Mile Research Company (Contractor) conducted for the US Army Corps of Engineers (sponsor) an historical archeological investigations at Fort Des Moines National Historic Landmark, located adjacent to the city of Des Moines, Iowa (Figure 1). The purpose of the work was to locate and evaluate any archeological remains from the historic period that may remain in the section of Fort Des Moines which the Department of the Army manages. The work was performed in partial fulfillment of the terms of U.S. Army Corps of Engineers Contract # DACA45-90-C-0129 and amendments (Appendix A). The contract also called for preparation of a building maintenance plan for Fort Des Moines, and a draft of this plan (Long 1991) has been submitted to the Omaha Office of the U.S. Army Corps of Engineers.

As noted above, the original contract called for location and evaluation of any archeological remains from the historic period that may still remain in the portion of Fort Des Moines managed by the Department of the Army (Figure 2). Methods employed included an intensive literature and records search followed by subsurface corroborative investigations employing appropriate procedures. The procedures employed were checked with and approved by representatives of the Corps of Engineers Omaha Office (Edward Brodnicki) and the Iowa Bureau of Historic Preservation (Kathy Gourley) as the project proceeded.

The investigations have been enhanced by the Government's predilection for detail and record-keeping combined with the attention due a National Historic Landmark. Our principal resource was the HABS (Historic American Buildings Survey) maps on file at the Iowa Bureau of Historic Preservation, Des Moines. The HABS report reproduced historic maps that showed in considerable detail the placement of particular buildings on the site. It was against these maps dated 1904, 1917, 1943 and 1987 that other maps, reports, literature and oral data were checked. This report leans heavily on those excellent maps (Figures 3-7) and accompanying report (Historic American Buildings Survey 1987). Because of the nature of the site and the quality of these maps, they have been used in place of USGS quadrangle sheets.

The project has been complicated, yet enhanced, by contract modifications. The planned construction of a new United States Army Reserve Center in the area east of Chaffee Road, north of Mendker Street, west of Brown Street and south of Building 46 (Figure 9) required additional intensive investigations. These consisted of literature and records searches, geomorphological investigations, and subsurface testing employing several accepted

techniques. The area to be affected by this planned construction has been subjected to very intensive investigation.

The intensive level investigations called for in the contract modifications (Appendix A) involved testing over approximately two acres. Thus, a large part of the area to be investigated according to the terms of our original contract was in fact subjected to very intensive scrutiny, using backhoe, soil sampling tube, five meter squares, shovel tests, probed grids and, finally, with a self-propelled paddlewheel bellypan scraper.

The remaining area, roughly west of Chaffee Road, south of Gruber Street, east of Butner Street and along a line approximately 600 feet south and parallel to Rogers Road (Figure 2), was tested using appropriate methods following the literature and records search. The primary tool employed for these subsurface tests was a simple steel probe. This tool can be fast, efficient and--in the hands of a competent person--can be used to determine the kind of remains being encountered, even at a two to three foot depth.

This contract and the modifications have required the integration of historic documentation, records search and oral history with subsurface investigations. All forms of documentation were brought to bear in locating the remains of buildings and structures which have been removed in the past, resulting in the location of portions of nearly all that were even minimally documented. Our best resource was without doubt the HABS maps and documentation (Historic American Buildings Survey 1987); we found no references to historic components not illustrated or discussed therein.

In a few instances, it was impossible to penetrate the concrete, bitumen or gravel surfaces that had been laid over building foundations illustrated on the HABS maps. But if it was possible to penetrate the soil with the probe, it was also almost always possible to find some subsurface evidence of foundation walls, floors or pillars. At this time, we believe it is possible to find some evidence for every building constructed since 1903 at Fort Des Moines III, even if one must remove a cement slab and resort to the archeologist's shovel and trowel.

Recommendations Summary

The purpose of our archeological investigations was to locate and evaluate the historical archeological remains and to search for evidence of prehistoric occupations at Fort Des Moines National Historic Landmark (Appendix A). The original contract was almost immediately modified to include very intensive investigations in that portion of the site to be affected by construction of the new Army Reserve Center. This work was conducted to test against the HABS documents and to be certain that we knew precisely the nature of any cultural resources which might be affected by that construc-

tion. We found no evidence here for either prehistoric or historic activities other than those documented for Fort Des Moines III. Everything found in the intensive subsurface investigations could be related directly to Fort activities. The original contract required literature and records search of historic cultural resources coupled with a physical search for subsurface remains of structures which are no longer extant. The literature and records search revealed no evidence for historic activities within the project area other than limited agricultural use and those relating to Fort Des Moines III.

Usage at Fort Des Moines dating from 1903 to the present is well documented by HABS (1987). The archeological field investigations were designed to check against the HABS maps. We found that, although many buildings in the project area have been razed, the topography of Fort Des Moines III has been altered very little, thus leaving a good archeological record of building presence. Our conclusion is that within the project area there is probably some evidence below the surface for every structure that once stood as part of Fort Des Moines III. This evidence can be obtained by archeological investigation.

Phase II level investigations have been carried out by intensive investigations in the area to be affected by construction of a new U.S. Army Reserve Center east of Chaffee Road. The results of this work led to the conclusion that no National Register-eligible historic archeological resources will be negatively affected by the planned construction project.

Phase II investigations are recommended for the following sites located west of Chaffee Road:

1. Building 57, enlisted men's Barracks burned in 1930.
2. Building 120, Blacksmith shop.
3. Building 30: 1904-1917, Building 141: 1943, Bakery.
4. Building T318 Service Club (white).
5. Building T319 Service Club (black).

Curation

The few diagnostic artifacts unearthed are curated in the Luther College Archeological Research Center, Luther College, Decorah, Iowa. No original records or other data were generated other than the text, maps, figures, and plates included in this report.

Report Organization

As outlined in the Table of Contents, this report is organized in the following manner. After this Introduction is a chapter entitled Research Orientation and Methodology which also includes a section on constraints to the investigation. Next is a chapter

entitled The Archeological Evolution of Fort Des Moines III which includes sections on an overview of the area, the regional location and environment, and previous work. There are two inventory chapters, Archeological Investigations West of Chaffee Road and Archeological Investigations East of Chaffee Road. Information provided in the inventory chapters is consistent with that of an historic archeological study.

It should be noted that the "site" is Fort Des Moines III, and each building location discussed in the inventories is a component of that single site. The Study Area Recommendations chapter is the final chapter in the report and it is followed by a list of references. There are four Appendices: contracts and related correspondence, artifacts inventory and plates, field notes, and an Iowa Site Form for Fort Des Moines III. It was mutually agreed that protection of locational data was inappropriate in this case and the site form is therefore not bound separately from the report.

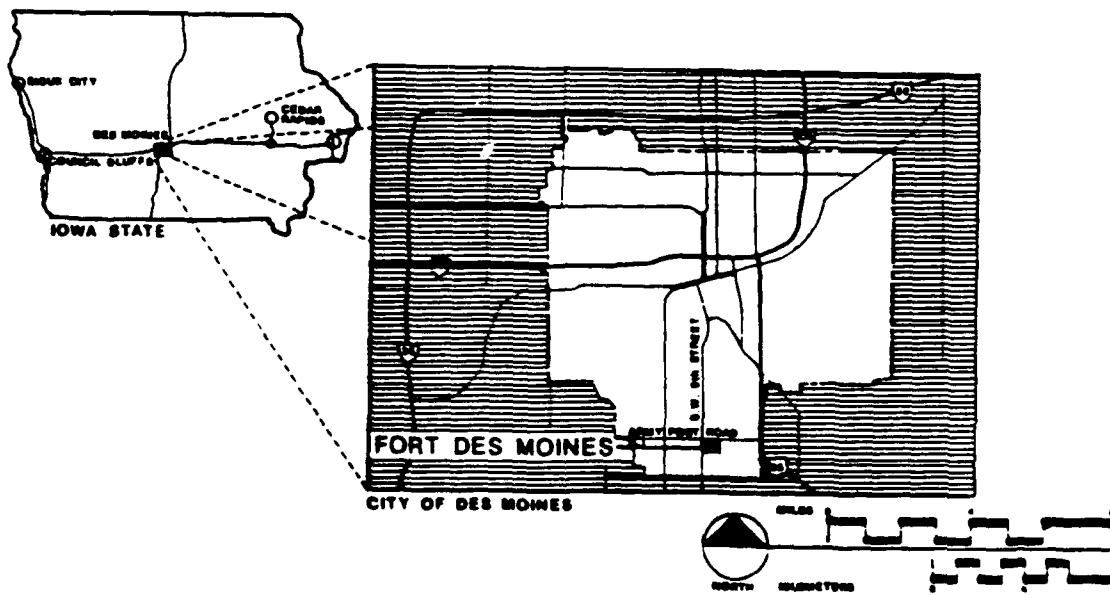


Figure 1. Map illustrating location of Fort Des Moines III.

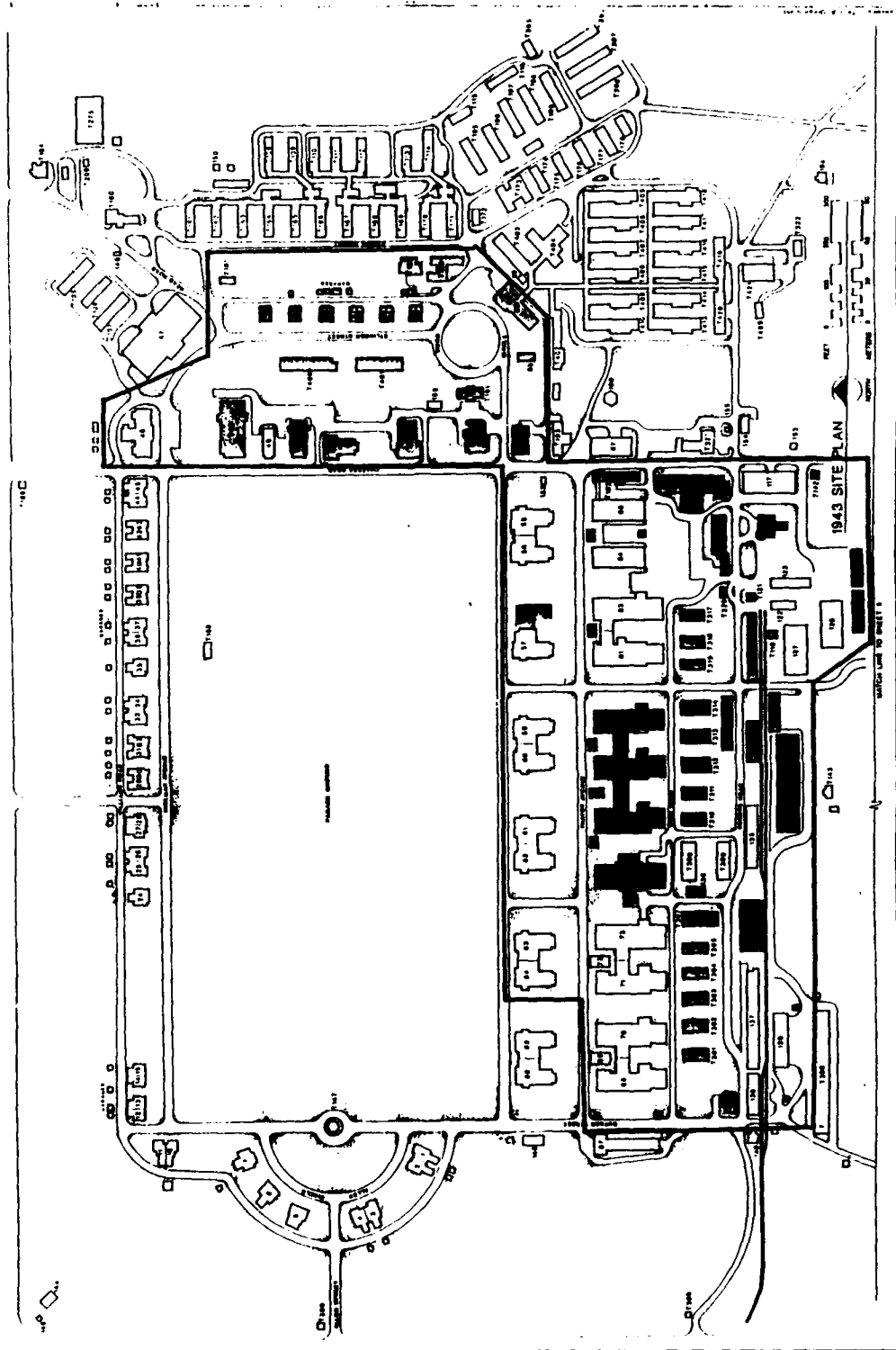


Figure 2. *Historic archeological study area. Shaded areas show razed building sites.*

RESEARCH ORIENTATION

AND

METHODS EMPLOYED

RESEARCH ORIENTATION AND METHODS EMPLOYED

Any good archeological investigation is methodologically grounded in some contemporary theoretical approach. Theory guides the methods employed to satisfy the questions being asked of the site and the data it affords the investigator. In the following we offer the theoretical orientation which has guided the investigations, then offer the methods we employed in satisfaction of our research aims.

Methodology

Most archeological investigations that are conducted by members of this research team are strongly influenced by Julian Steward (1955). The general theoretical orientation employed is both cultural evolutionary and ecological. The basic assumptions of this approach are: 1) that human activities can be traced through time by study of the remnants of material culture associated with prehistoric and historic activities and by investigation of the historic record and 2) that human activity is directly affected by the environment. In our perception, the environment is regarded as twofold, with cultural and natural dimensions.

At Fort Des Moines III, the effects on activities by the natural environment are far less evident than upon prehistoric inhabitants of the region. Climate change was dealt with technologically. Thus, our research endeavors are concentrated on the historic record and the importance of Fort Des Moines III in a rapidly evolving, modern American civilization.

Nonetheless, given responsibility for possible prehistoric as well as historic information, our approach was to collect all possible data leading toward interpretation of prehistoric occupations on the site should such evidence be encountered. No prehistoric remains were encountered in the course of our field investigations, leading us to concentrate on the guidance afforded by historic documentation.

For purposes of this report, we consider the Fort Des Moines III National Historic Landmark as defined as the site. Each feature which comprises a recognizable part of that site, such as a building, is referred to as a "component" of that site. In order to consistently evaluate all components tested, we established the following criteria for recommending a component for further testing.

Criteria for Significance

To be recommended for Phase II archeological testing, any historic component that is part of the Fort Des Moines III National Landmark site must offer the potential for satisfying the following criteria:

- (1) be likely to yield information important in the military history of Fort Des Moines III,
- (2) date from between 1903, when Fort Des Moines III was established, and 1945, the end of World War II,
- (3) be likely to yield new and largely undocumented information related to the important contexts associated with Fort Des Moines III,
- (4) be strongly and directly related to the contexts of the development and use of the calvary post, black officer training during World War I, or the WAAC during World War II, or potentially contribute information about the fort's history,
- (5) offer a "sealed" repository or be sufficiently unaltered that significant data is recoverable.

Any prehistoric site which might have been encountered in the course of investigations at Fort Des Moines III would have been recommended for Phase II investigations if one or more of the following criteria were met:

- (1) likely to yield hitherto unknown or "new" data for the region,
- (2) offer excellent preservation of remains, including artifacts, floral or faunal materials which might shed light on past lifeways,
- (3) offer data not previously available about past climatic events that relate to human occupations.

If the component met none of the above designated criteria for significance, no further work was recommended.

Field Methods Employed

The investigations west of Chaffee Road took place after those east of Chaffee Road. The timing proved to be valuable. Because a backhoe was used to speed our intensive work east of Chaffee, we gained visual access to the results of building demolition and could understand better what was (or was not) encountered with the steel probe. We had the backhoe open up several corners and

sections of wall foundation and thereby noted demolition practices. We saw that some large sections of wall foundation were broken off and pushed onto the basement floor while other sections were left standing erect at ground level or only slightly below. Thus, we knew that, should we fail to encounter a continuous foundation wall with the probe, it had probably been pushed away by heavy equipment and we therefore searched on, guided by the dimensions offered by the HABS maps. The backhoe also served as a check against the identification of surfaces the steel probe encountered, allowing differentiation between cement, brick, mortar and bitumen.

Backhoe trenches prepared for geomorphological investigations east of Chaffee Road were similarly applicable to the entire project. The trenches allowed a full view of the normal soil profile, which should be consistent over the entire area studied. Thus, a soil sample could be taken with the 2" soil sampling tube and one could confidently see evidence for deviations away from that normal soil profile and determine whether or not past disturbance had occurred. The intensive testing called for by contract modification proved very beneficial to our understanding of the general conditions pertinent to subsurface investigations at Fort Des Moines III.

The artifacts recovered were all washed and sorted. If an artifact was deemed potentially important to future interpretations of activities at Fort Des Moines III, could be used to determine with some precision the activities in a specific location (such as coins at the service club), or possibly served a function that could not be determined by the investigators, it was retained and submitted for curation. Artifacts not meeting these categories for retention (such as slag and fragments of mortar, clay tile and limestone) were identified, described in Appendix B, and then discarded. Some items other than those listed in parentheses above were also discarded. For instance, in Square 17, level 1, we found a plastic bow (child's), a plastic red cup handle fragment and a fluted bowl or lamp globe fragment that could easily have been retained. However, both the bow and the plastic cup handle fragment were not afforded maker's or patent marks and were very small pieces. The fluted glass fragment also lacked identifying marks and was a very small piece. These items were deemed of no value to future research efforts other than the identifications we made and were discarded.

Constraints to the Project

It should be noted that our recommendations were made in 1992. Fort Des Moines III, while uniquely rich in military history, is a comparatively recent site. Potentially significant themes relating to the 1930s Depression and to World War II are within vivid living memory of many today. We are not able to enjoy the application of a degree of historic perspective to these events. Thus, we note that, given a decade or more of time before action pertinent to

this evaluative report is taken, other important historical and archeological data which lie in Fort Des Moines' past may be recognized to be of lasting importance. The Phase II recommendations of this report should be taken in the context of time; a few decades from now, they should be closely re-evaluated in terms of cultural resource significance at that time.

Another complicating factor is the nature of modern military installations (after World War I) and related management practices. An active military post is typically characterized by a concern for order and tidiness. One searches in vain for middens, trash heaps, messy attics and basements. The installation of modern plumbing systems even eliminates outhouses as a potential source of archeological data. If there were such repositories on a military post, they would have been created *sub rosa*, their existence undocumented. Our recent historic archeological study unearthed no such treasure troves. In short, a properly run military base stands an excellent chance of being an archeological disappointment.

THE ARCHEOLOGICAL EVOLUTION OF FORT DES MOINES III

THE ARCHEOLOGICAL EVOLUTION OF FORT DES MOINES III

Overview

The evolution of Fort Des Moines III is well documented in the Historic American Building Survey, Fort Des Moines Historic Complex (1987). According to this summary document, Fort Des Moines was declared a National Register Historic Landmark site because of its significance as the site of the first army training camp for black officers during World War I. Also, important innovations were made in the field of orthopedics research conducted there after World War I. Further, it attained significance as the home of the first WAAC Training Center during World War II, where more than 72,000 women completed their military training.

Prior to the coming of the military, the area in township 78 north, range 24 west, sections 33 and 34 that constitutes the fort was farmed. A rare, deteriorated county map (McVicker 1872) shows T.W. Parker as the owner of the northeast quarter of section 33 and M. Robertson as the owner of the southeast quarter of that section. These portions of section 33 roughly formed the west half of the calvary post at the turn of the century. No dwellings or other buildings are depicted on the map, but an 1880 county map (Union History 1880) shows a school across the road at the north end of the section where a north-south road intersected. There is no evidence that the area was other than a series of typical central Iowa farms. An 1895 map of Polk County (Iowa Engraving Company 1895) shows that by 1895 J. Denny had purchased the 160 acre tract in the northeast quarter of section 33. Records in the Polk County Auditor's office reveal that James Denny sold this land to the United States government, and the transaction was filed on January 25, 1901 using a legal instrument dated December 29, 1900.

In 1908 the government acquired additional portions in the southeast quarter of section 33. John W. Burgett and his wife sold 40 acres, the NW 1/4 SE 1/4 (except 1/4 acre); Thomas Robertson and his wife sold the 1/4 acre in question; and Mary Burgett and her husband sold another 40 acre parcel, the NE 1/4 SE 1/4, according to deeds filed with the county on November 24, 1908. A map published in 1902 shows Mary Robertson as owning the northeast quarter, and she may have married Burgett by 1908.

Land transactions are similarly straightforward for the eastern portion of the army post, in the west half of section 34. In 1872 H.M. Brisco (probably R.M. Brisco) owned the northwest quarter of the section (and also across the road). The 1872 map uses small drawings of houses to show their arrangement on the landscape, and the Brisco house was placed along the road (present Army Post Road) near the west edge of section 34. The farmhouse must have been the

"Victorian farmhouse" and red barn referred to in the HABS report (p. 36) as housing the noncommissioned officers and related stable. The barn was still standing in 1908 (HABS report, footnote, page 36). The farmhouse is shown unlabelled on the 1917 site plan (Figure 4) (but is absent from the 1904 site plan). The 1943 site plan for the fort (Figures 5 and 6) shows Building T104 in what appears to be the same location as the 1917 unnamed building, at the end of Read Road. It is called "Farm House (NCO quarters)." According to Bob Lose, the wood frame farmhouse was razed around 1959-60. A comparison of the HABS maps for 1943 and 1987 suggests that Building 100, the U.S. Army Reserve Command Building, occupies the Brisco farmstead. (The farmstead is located outside the historic archeological study area for this project.)

By 1895 Robertson M. Brisco owned a 240 acre tract in the northwest portion of section 33. Like other landowners in the area, he sold the government his farm early in the 1900s. Warranty deeds were recorded on January 25, 1901 and June 22, 1901 for the NW 1/4 and also the N 1/2 of the SW 1/4 of the section.

The basic outline of the army post designed for cavalry use was completed by 1908. In 1905 John Fullerton sold a 33 foot strip of land on the west side of the S 1/2 SW 1/4 to the government, and on November 24, 1908, the deed was recorded for the rest of the S 1/2 SW 1/4 in the section. There appear to have been no standing structures on the Fullerton property, and none are shown on the 1872 map.

These series of transactions between 1900 and 1908 formed the core of Fort Des Moines III, creating an ell-shaped, approximately 640 acre parcel running along an old farm road on the south end of Des Moines. A 1902 county atlas shows land ownership patterns in Polk County around Des Moines: a patchwork of rural parcels ranging in size between 10 and 160 acres. Many of the smaller tracts between the fort site and Des Moines were mined for coal. Nearer the fort site the average size of the parcels increased in size, a reflection of the essentially rural nature of the place, despite its location three miles from the south side of Des Moines.

Over the decades the buildings that comprised the fort established in the early 1900s grew sporadically and in response to changing needs, which were often related to times of war. In particular, there were two periods of intense change at Fort Des Moines, before and during each of the World Wars.

Although the fort's key historic associations are related to blacks and women in the military, the facility was initially established for use by cavalry. The importance and imprint of the cavalry still remains an important physical characteristic. The 1904 map (Figure 3) illustrates the extent of the fort prior to World War I, when the cavalry was present in force. It is notable that the space between Winn and Rogers Roads (south of the horse stables)

served as corrals. While the post was utilized for the training of black infantry officers during World War I, there were few changes in the initial layout and buildings dating from the calvary years.

Immediately following the armistice, Fort Des Moines was entirely converted for medical purposes. It was initially a department base hospital but was soon upgraded to general hospital status. As part of this medical role, the barracks intended for the cavalry were converted into hospital wards. (The HABS report states that the calvary stables were "similarly transformed," (p. 20), but there is no evidence that there were significant changes made to the buildings. The individual building descriptions in the HABS report make no mention of changes to stables during this period immediately following World War I.) Some buildings were added for use by the Red Cross, YMCA and Knights of Columbus, recreational or educational facilities for the patients.

At its peak late in 1918, the Fort Des Moines general hospital employed 77 officers, 662 enlisted men, and 111 nurses to serve 1,829 patients. Many were amputees there to be fitted with the "Fort Des Moines leg," a prosthetic limb that was considered "inexpensive, durable, easy to fit, and quicker to produce" (HABS report, p. 22) than other devices. Following the brief but intense period of medical use which ended in the fall of 1919, there was a short period of quietude. Then the fort returned to its original use with occupation by the 14th Cavalry and reestablishment as a cavalry post in 1920.

Fort Des Moines served public and military needs during the period between two world wars with cavalry, field artillery, Citizens Military Training Camp (CMTC) and Civilian Conservation Corps (CCC) uses. The Army had its headquarters for the Iowa district of the CCC at the fort, and the facility functioned as the training and supply center for CCC activities throughout the state between 1933 and 1942 (McKay 1990). Some new temporary quarters were constructed to house CCC members between 1933 and 1939 as well as a clothing warehouse (present building 139). The temporary quarters were salvaged and dismantled after World War II (Henning 1981).

It was with the advent of World War II that Fort Des Moines grew to its greatest capacity. Its moniker of "Boomtown" was apt, for there were ambitious plans to recondition much of the existing Fort as well as to add 173 "semi-permanent" buildings (temporary buildings noted on maps, Figures 5 and 6). From 1942 through 1945 Fort Des Moines III saw its most active period of use. To house the thousands of WAACs who received training at Fort Des Moines, every conceivable building was converted to dormitory use. The most prominent examples were the stables. With the addition of showers and toilets at the rear, the stables were transformed into living quarters.

After World War II, most of the temporary buildings became surplus property and served for a time as apartments and veterans' housing. Between 1956 and 1967 a number of the post's buildings were demolished, including most of the original officers' quarters on the north and west sides of the parade ground. In 1971, the Iowa Realty Company acquired title to acreage comprising part of the parade ground. The company built twelve apartment units on the tract late in the decade and followed this with commercial construction along Army Post Road. In 1983, the process of demolition and construction on the Iowa Realty tract was nearly completed. The Iowa Realty property is located north and west of the project area of the historic archeological study.

Within the project area (Figure 2) there are now 35 standing structures. The dominant property types are barracks, horse stables, and warehouses built along the electric interurban tracks. Seven of the 35 buildings have been joined together and now function visually as one unit. However, they were either built as separate buildings (stables) or have been considered by the Army as separate units (barracks) and are therefore treated individually in considering the evolution of the fort.

According to the 1904 plan prepared by the Army (Figure 3), 44 buildings were completed by that date within the project area. Another eight buildings were shown as future construction and were indeed constructed within a few years. Two projected buildings shown on the 1904 plan were not built. The 44 buildings within the project area formed the basic foundation of the fort complex, which was thus put in place in the 1900s.

By 1917 22 more buildings had been built within the project area. These included a mounted guard shelter (present building 152) and the chapel (present building 49). The 1917 map (Figure 4) illustrates the appearance of the fort on the eve of World War I. The 1943 map (Figures 5, 6) graphically depicts changes to the site related to Depression-era work projects as well as the nation's preparations for World War II. By 1943 47 more buildings had been squeezed into the space of the project area. Among them were 19 temporary buildings built in the former corrals space directly behind the horse stables. Many of the 47 buildings were intended to be temporary, although buildings 308 and 309 are still in use in 1991. One major building within the project area, barracks 57, was demolished in 1930 after a fire.

The evolution of the site has been one of accretion in response to changing needs and uses. Buildings have been added in the available space but the original cavalry buildings have remained as well. Since many of the buildings were intended to be temporary expedients (even tents were used in large parts of the fort complex outside the project area), it is not surprising that few examples of these temporary buildings remain.

Regional Location and Environment

Past and present land uses are discussed in the overview section of this chapter.

Description of the physical features, terrain, vegetation and fauna, and weather patterns for the study area are summarized in the Soil Survey of Polk County, Iowa by R.J. McCracken (1960: 1-2). The following discussion is derived principally from McCracken's summary, supplemented with data gathered in our own geomorphological analyses. Our discussion of the natural environment is oriented to historic Fort Des Moines III landuse patterns rather than projections pertinent to prehistoric use because we found no prehistoric components in our survey.

Fort Des Moines III is located near the southern margin of Des Moines, in the southeastern quarter of Polk County, Iowa. Polk County is located in the south-central part of Iowa at an elevation of about 800 feet above sea level.

The topography of Polk County was formed principally by glacial activity. The most recent glacial activity here took place between 12,000 and 13,500 years ago with the advance of the Cary substage of the Wisconsin glacier. This glacier deposited calcareous, loamy material 30 to 60 feet thick over the northern four-fifths of the county. Our study area is located just at the tip of the southernmost extension of the Cary substage advance, often referred to as the Des Moines lobe. Two other glaciers, the Kansan and the Nebraskan, covered all of Polk County and extended well to the south much earlier in the Pleistocene. Till deposited by these glaciers is exposed in the southern part of Polk County, but was not exposed by our work at Fort Des Moines III. The uplands were covered by a thick mantle of loess ranging from five to over 20 feet in depth during and following the Wisconsin glacial advance.

The entire county is underlain by a shale formation of the Pennsylvanian system. This shale bedrock contains some thin seams of coal and some interbedded limestone or sandstone. Most of the bedrock is buried beneath several feet of glacial till, loess, or stream-deposited material.

The native vegetation of Polk County was prairie grasses and hardwoods. Hardwood forests grew along the major streams and constituted one of the attractions for early white settlement in the Des Moines area. Our geomorphological tests at Fort Des Moines III revealed soil typed as Downs silt loam, a thick, aeolian soil formed of loess. Depending upon where our geomorphological test trenches (see Geomorphological Investigations section in Inventory - East of Chaffee Road) were placed, we found either prairie or woodland soil-forming factors, suggesting that at the contact period (c. 1800), the site can be characterized as savannah with

dominant cover of little bluestem (Andropogon scoparius) and associated species with some trees interspersed.

Climatically, the study area has been characterized by a midcontinental subhumid climate for the past 5,000 years (Ruhe 1969). The winters are cold and dry and the summers generally hot and humid although they may be marked by occasional cool spells. The average winter temperature is 25.5 degrees Fahrenheit (F), the average daily minimum temperature is 16 degrees F with a range from -21 degrees F to 69 degrees F. Summer temperatures average at 74.4 degrees F with a range from 38 to 105 degrees F. Total precipitation in the project area averages 31 inches per year; the range is from 17 (1956) to 57 (1881) inches per year.

Climatic conditions encountered during our spring, 1991 subsurface testing program were varied (see Inventory - Archeological Investigations East of Chaffee Road), ranging from cold, rainy, sleeting, to warm (65 degrees) and sunny from March 23-29, 1991. The early June investigations of properties west of Chaffee Road (see Inventory - West of Chaffee Road) were conducted under the best of conditions; it was sunny, breezy and the temperature ranged from the mid-60's to the lower 80's. The mechanical stripping was conducted August 14-15, 1991, again under near-perfect climatic conditions. It was sunny, slightly humid and the temperature ranged from the mid-70's to mid-80's.

Previous Work

The following cultural resource investigations relate to Fort Des Moines III:

79 47 70221. No author. Expansion of the US Army Reserve Center, 225 E. Army Post Road, Ft. Des Moines, Iowa. 1980.

87 09 77071. No author. Proposed replacement/repair of roof of Building 47. 1987.

90 05 77022. No author. Proposed renovation of Building 135. 1990.

91 03 77029. No author. Proposed repair of Motor Pool Building 87. 1991.

These projects involved no archeological investigations and were not useful or applicable to this project.

The following studies have been conducted on former Fort Des Moines III grounds:

80 37 770081. Dale R. Henning. A Cultural Resources Survey (Phase I) of a Portion (27.9 Acres) of Fort Des Moines, Iowa. Luther College, Decorah, Iowa. 1981.

91 04 77063. Leah Rogers. Phase I survey of 49 acre parcel adjacent to Fort Des Moines III. 1991.

These studies were not located within the present boundaries of the National Historic Landmark, Fort Des Moines III. In both cases a finding of no adverse effect was found. The Henning study was useful in identifying useful sources and defining past military uses of what is now a golf course just south of Fort Des Moines III. The Rogers survey had not been completed during the research phase of this project.

The extensive HABS report (1987) is another example of previous work in the area and, as mentioned in this report, was a valuable resource for this project. (See References.)

The following two sites have been recorded with the Office of State Archaeologist and relate to the Fort Des Moines III vicinity:

Site 13PK493. Portion of the former US Army cemetery. Although officially abandoned in 1968, human remains may still be present. The cemetery site is not located within the boundaries of this project.

Site 13PK510. An historic habitation site in an area bordering the present Army Reserve grounds. The site is not located within the boundaries of this project.

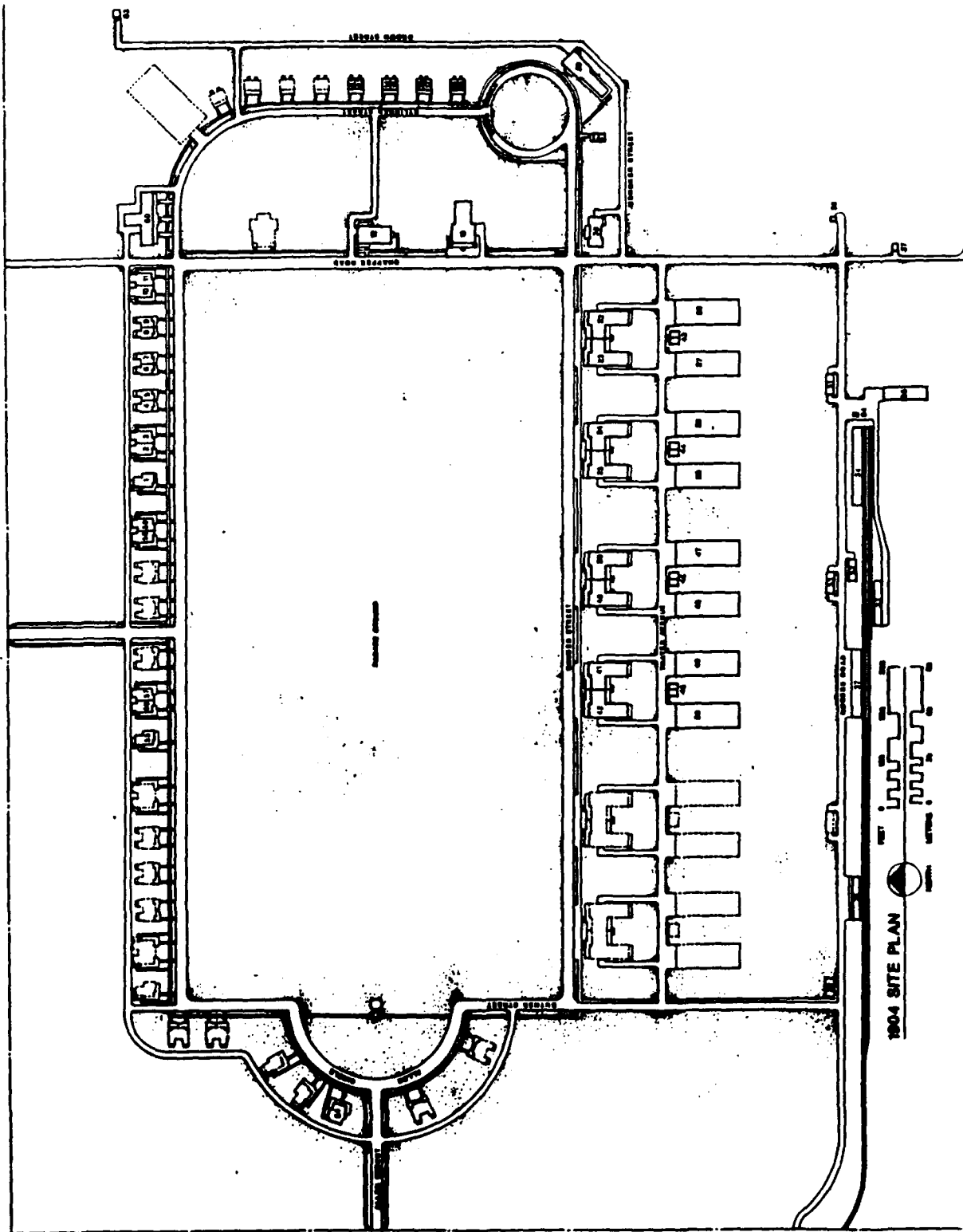


Figure 3. Fort Des Moines III, 1904 site plan. (After HABS, 1987).

LEGEND

BUILDING NUMBER	BUILDING FUNCTION
1 1217	FIELD OFFICERS' QUARTERS
278 026/27	DOUBLE OFFICERS' QUARTERS
478 026/28	DOUBLE OFFICERS' QUARTERS
577 026/29	DOUBLE OFFICERS' QUARTERS
578 026/30	DOUBLE OFFICERS' QUARTERS
1216 044/43	MARRIED OFFICERS' QUARTERS
12 023	ADMINISTRATION BUILDING
13 023	GUARD HOUSE
1478 077/28	DOUBLE NCO QUARTERS
1577 026/24	DOUBLE NCO QUARTERS
1578 026/25	DOUBLE NCO QUARTERS
20 1001	HOSPITAL
21 1001	HOSPITAL STEWARD'S QUARTERS
22/23 026/26	DOUBLE BARRACKS
24/25 027/26	DOUBLE BARRACKS
26 026	CAVALRY STABLE
27 026	CAVALRY STABLE
28 026	CAVALRY STABLE
29 026	CAVALRY STABLE
30 026	BAKERY
31 027	QUARTERMASTER AND COMMISSARY STORE HOUSE
32 026	FORAGE STORE HOUSE
33 026	COAL SHED
34 026	PAV SHED
35 026	QUARTERMASTER STABLE
36 026	BLACKSMITH
37 026	OL HOUSE
38 026	SHED QUARTERS
39/40 026/26	DOUBLE BARRACKS
41/42 026/26	DOUBLE BARRACKS
43 026	STABLE GUARD
44 026	STABLE GUARD
45 026	STABLE GUARD
46 026	STABLE GUARD
47 026	CAVALRY STABLE
48 026	CAVALRY STABLE
49 026	CAVALRY STABLE
50 026	CAVALRY STABLE
51 026	BLACKSMITH SHOP
52 026	QUARTERMASTER SHOP
53 026	BLACKSMITH SHOP
54 026	COMMANDING OFFICERS' QUARTERS
55 026	FIELD OFFICERS' QUARTERS
56/57 026/26	DOUBLE FIELD OFFICERS' QUARTERS
58/59 026/26	DOUBLE OFFICERS' QUARTERS
60 026	BACHELOR OFFICERS' QUARTERS
61/62 026/26	DOUBLE NCO QUARTERS
63 026	TRANSFORMER SUBSTATION
64	SCALE HOUSE

Legend, Figure 3

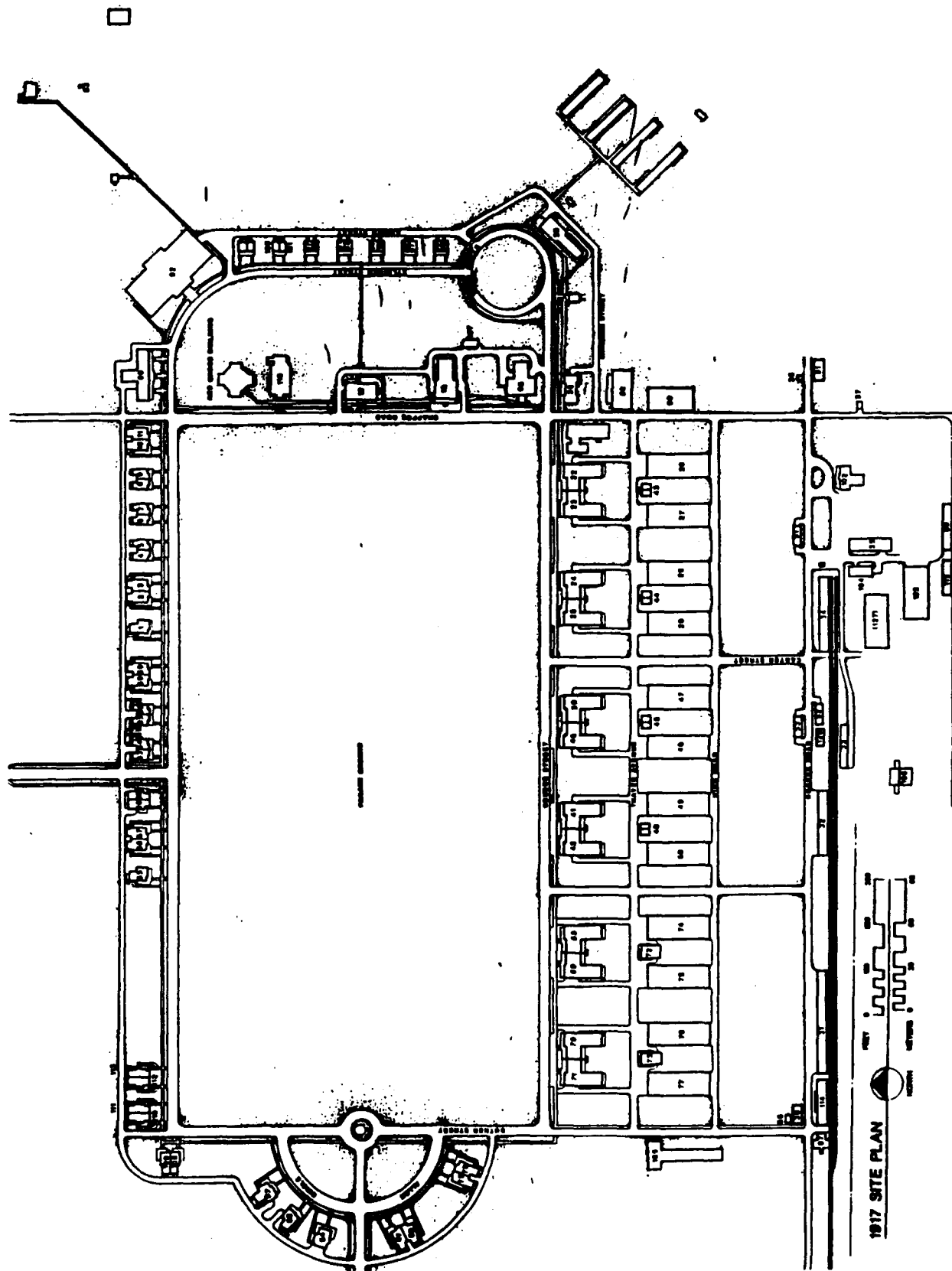


Figure 4. Fort Des Moines III, 1917 site plan. (After HABS, 1987).

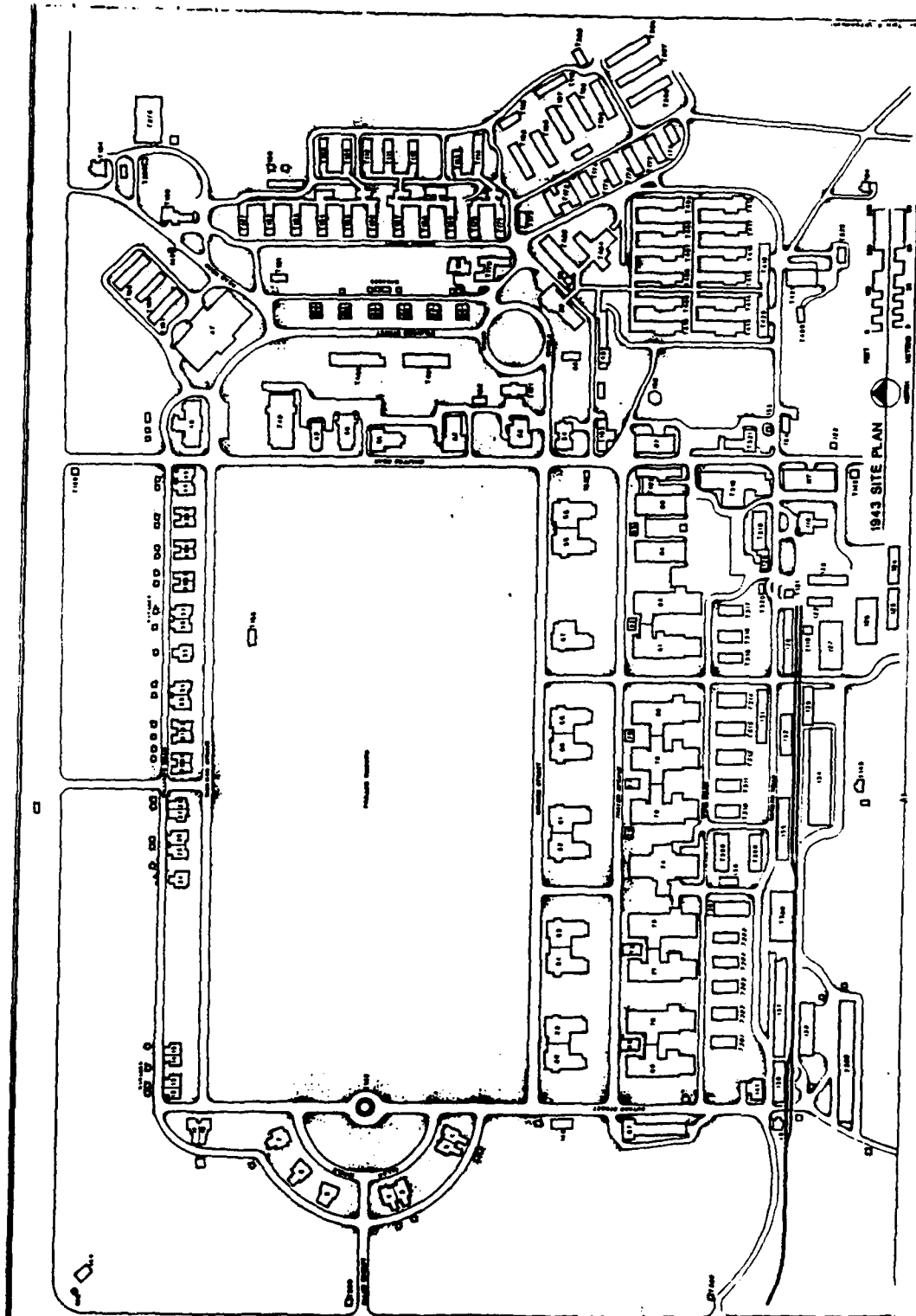


Figure 5. Fort Des Moines III, 1943 site plan, part 1. (After HABS, 1987).

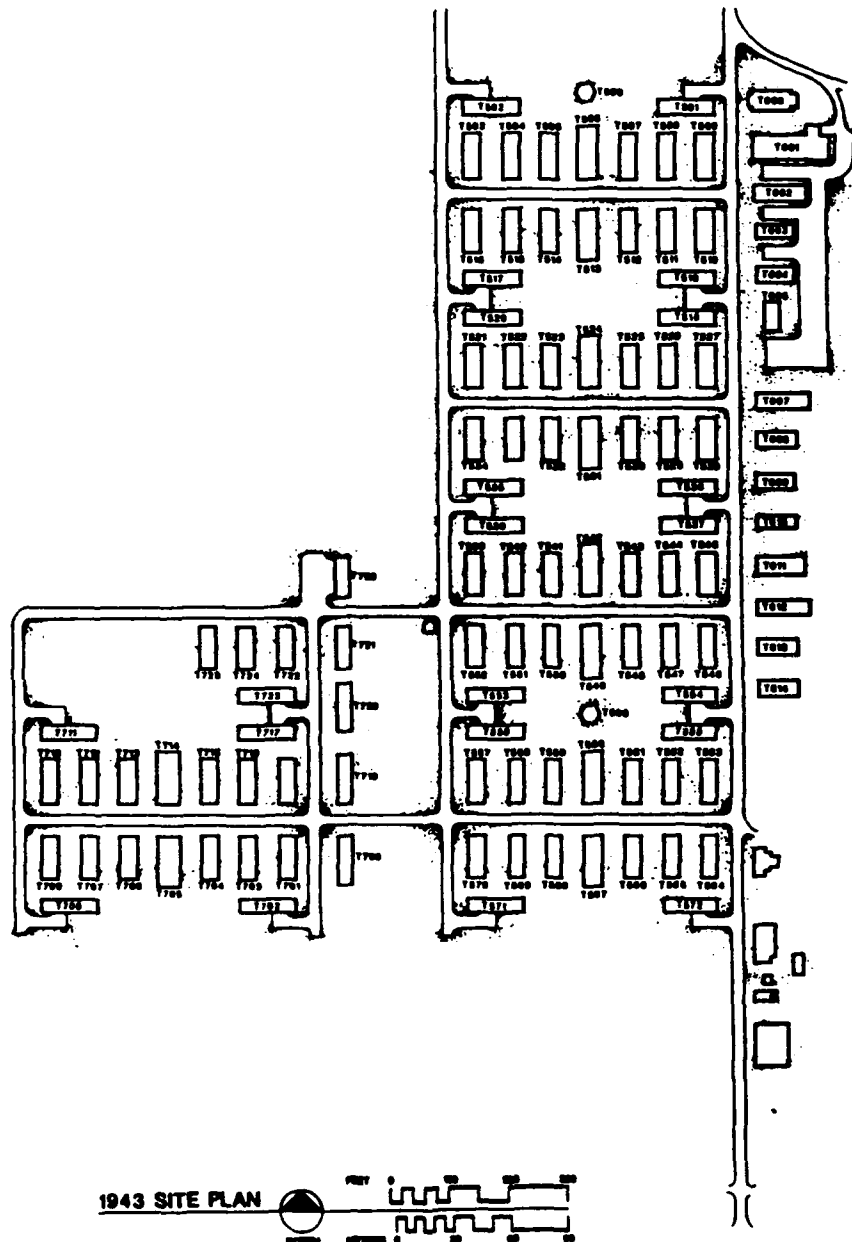


Figure 6. Fort Des Moines III, 1943 site plan, part 2. (After HABS, 1987).

INVENTORY

ARCHEOLOGICAL INVESTIGATIONS WEST OF CHAFFEE ROAD

INVENTORY - WEST OF CHAFFEE ROAD

Subsurface Investigations

In the discussion of subsurface investigations that follows, the most recently applied building numbers will be used. Generally, the 1943 plan map (Figures 5, 6) offers imprints of all buildings constructed in this portion of Fort Des Moines. While in the field, the 1943 site plan map was used as the principal reference to what had been constructed on site, and the 1987 map was used to corroborate the locations of extant structures. The 1943 numbers are usually retained on the 1987 map. Site components within the Inventory are grouped in three sections. Buildings identified only by a number are listed first, in numerical order. Buildings identified as "T" buildings are grouped together, in numerical order. Two unnumbered buildings (motor oil [repository?] and tin shop) are placed at the end of list.

Testing for foundations and evaluation of the archeological remains in the area west of Chaffee Road was conducted early in June, 1991, by Dale R. Henning, assisted by Barbara Long. The investigations were guided by Long's historic documentation and the HABS maps and accompanying documentation (Historic American Buildings Survey, 1987). Mr. Robert Lose (interview with Barbara Long, March 29, 1991) offered the approximate dates of building razing. This information is included where it was made available.

Some changes have occurred that are not specifically documented by HABS, but are very pertinent to any archeological investigations that might be planned for the future. First, one should note that Winn Road was, prior to 1943, located immediately south of buildings 26-29, 47-50 and 74-77 (1917 HABS site plan) (Figure 4). Following modifications to those buildings during their conversion from stables to WAAC dormitories (1943 HABS site plan) (Figure 5), Winn Road was moved, as one might expect, immediately south of the additions that provided shower and toilet facilities.

The steel probe was used to locate portions of the old (northerly) Winn Road which are covered by an inch or two of sod. Old Winn Road was most clearly encountered with the probe between Butner Street and the southwest corner of Building 77 illustrated in the 1917 HABS site plan (Figure 4).

"Footprint" changes north of Winn Road are also potentially confusing. Building 28 of 1904 (Figure 3) (now Building 86 of 1987 (Figure 7) is the only one which retains its original dimensions. It was still identified as a stable in 1987. Also original stables, Buildings 74-77 illustrated on the 1917 map (Figure 4) are

today joined in pairs (76 and 77 of 1917 are now 68 and 70 ; 74 and 75 of 1917 are now 71 and 73). These originally separate stables have had three additions: covered connecting walkway (1935), furnace room and chimney on the east, and shower/toilet facilities to the south, both constructed in 1942.

Buildings 28 and 29 of 1904 and 1917 (now buildings 81 and 83) currently offer an imprint comparable to buildings 68 and 70, 71 and 73. Buildings 47-49 of 1904-17 were to be linked, according to the plans drawn up in 1943 (Figure 5) with three additions like those described above. The plans for 1943 also suggest that Building 50 of 1904-1917 was to stand alone with additions to both the west and east walls as well as to the south and to be numbered 74. That building (74) was intended to function as a consolidated mess hall. Buildings 76, 78 and 80 have been demolished, but much rubble is readily available immediately beneath the sod. Most of the remains of Building 74 are covered with a crushed limestone parking area.

There are many subsurface building foundations in the area west of Chaffee Road (compare the buildings indicated in Figures 3-6 with those illustrated in Figure 7, the 1987 HABS map). The most efficient means for locating those foundations was to employ the simple steel probe, supplemented by occasional resort to the soil sampling tube. The procedure involved use of the HABS maps dating from 1904 through 1943, then comparing the building "footprints" illustrated on those maps with extant buildings and those illustrated on the HABS map, 1987. The HABS maps proved to be very accurate. Distances could be measured from either extant buildings or from foundations of razed buildings that had been located. Probing for evidence of each "footprint" was usually very successful. If the expected foundation was "lost," a soil sample was taken with the soil sampling tube to determine whether or not the soil was disturbed. It should be noted that some temporary buildings were put on cement pillars, which would leave the soil beneath the building relatively undisturbed.

Five building sites are recommended for Phase II investigations (see Study Area Recommendations. Each of the sites recommended may yield information of historical significance. To evaluate the significance of these properties, further research is required.

Discussion, Tests West of Chaffee Road

The subsurface tests in this portion of our investigative domain were conducted using the HABS maps, related HABS documentation and supplementary data gathered by Long, including notes from her conversations with Robert Lose. The principal archeological tool employed in search of the buried building foundations was a simple steel probe.

This is a unique site for archeological investigation, if only because a number of the building types are still standing. Thus, it is often possible to see, standing only a few feet away, a duplicate of the building site being sought with the steel probe. This visual accessibility combined with the excellence of the HABS maps has made this investigation a unique and interesting experience.

Phase II investigations are recommended for Building sites 57, 120, 30 (later, 141), T318 and T319. Rationale for these recommendations are offered in the chapter entitled Study Area Recommendations.

Building 57

Building 57, located along the south side of Gruber Street opposite the Parade Ground, was numbered 58 on the 1943 site plan map (Figure 5), but 58 is applied to the extant building (which adjoined 57) in the 1987 map (Figure 7). Thus, it is referred to as Building 57 in this document. Buildings 57 and 58 burned in 1930; the present building 58 was salvaged and still stands.

The steel probe was used to locate the wall foundations which were also indicated by some linear depressed areas and some color/texture variations in the grass. It is possible to trace the entire outline of the building. The interior feels rubble filled; it is assumed that building rubble was pushed into the basement. Excavation of the basement of the Building 57 site would offer a sealed deposit reflecting building activities on the post between 1904 and 1930. As such, it may be eligible for the National Register, and Phase II testing is recommended. The component meets the designated criteria of significance as defined in the methodology chapter of this report.

Comments, Buildings 68-73. While seeking evidence of old Winn Road, the "courtyards" between Buildings 68-70 and 71-73 were intensively probed with the discovery that much of those spaces has been either graveled or treated to a hard layer of bitumen or cement. This was probably done to thwart the development of mud during times of rain and to make the areas easier to maintain.

Building 74

Building 74 was located along Thayer Avenue, between but not joined to Buildings 73 and 76. First functioning as a Cavalry Stable (HABS maps 1904 and 1917) (Figures 3, 4), it was converted to a Mess Hall during WWII (HABS map 1943) (Figures 5, 6). The entire area beneath which the razed (early 1960's) remains of Building 74 repose has been covered by a layer of crushed lime rock. Individual rocks are between 2 and 4 inches in size. Thus, it was impossible to employ the steel probe to locate the wall foundations. It is likely that the wall foundations and poured slabs

added in the early 1940's which comprise the remains of Building 74 remain preserved beneath that parking lot. However, these elements of the component do not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter, and no further work is recommended.

Building 76

Building 76 was located immediately south of Thayer Avenue and was joined to Buildings 78 and 80. It was razed in the early 1960's. The HABS map of 1943 (Figures 5, 6) identified it as a Gun Shed, but it previously functioned as a cavalry stable (comparable to Buildings 78 and 80 and others along Thayer Avenue) and, according to the HABS map of 1943, was renovated as a barracks in the same manner as these buildings. Thus, it appears likely that Building 76 functioned first as a cavalry stable and then as a barracks and that the HABS map index identification is incorrect. Building 77 is shown on the map, located northerly and between Buildings 76 and 78 (Figure 5), but is not listed on the directory (Figure 6). Building 77, which was quite small, was far better suited to function as a gun shed than Building 76. Mr. Lose states that Building 76 served as a cavalry stable shortly before it was razed. The study proceeds under the assumption that Building 76 initially functioned as a barracks, was converted to a WAAC barracks early during WWII, then served briefly as a stable in the 1960's.

Portions of the north, west and south wall foundations were located and traced with the steel probe. The south wall was intermittent and found at quite variable depths. A small portion of the east wall was found, but most of this feature is overlain with crushed limestone, making a precise tracing impossible. The wall foundations of this building could be traced but it does not seem that such an activity would yield new and important information. The component meets none of the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter, and no further work is recommended.

Building 77

Building 77, located between Buildings 76 and 78 and immediately south of Thayer Avenue, might have functioned as a Gun Shed (see discussion above, Building 76), but Mr. Lose states that it functioned as a fire station, of which the entry is still visible in a break in the curb. It was razed in the early 1960's. Evidence for this building was sought with the steel probe, but an almost continuous layer of brick and rock rubble was encountered, which did not allow for location of the wall foundations. This building was probably constructed sometime between 1917 and 1943 and, judging from its "footprint", was not precisely similar in outline to any other on Thayer Avenue. If it was built to conform to the appearance of nearby buildings, a dressed limestone foundation would have been used. However, it cannot be assumed

that every structure placed on this portion of Thayer Avenue resembled in all respects the others located there. Given the removal of the surface layer of brick and rock rubble, the foundations of Building 77 could be identified archeologically. The component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter, and no further work is recommended.

Building 79

Building 79 is identified as a Stable Guard house. It was located between the northerly corners of Buildings 78 and 80 and immediately south of Thayer Avenue and was razed in the early 1960's. The entire area between Buildings 78 and 80 was subjected to intensive steel probe testing, revealing an almost solid layer, at one foot surface depth or less, of brick rubble. This rubble is probably derived from the razing of Buildings 78, 80 and 79. Building 79 was constructed to the same specifications as extant Building 75, using a very heavy dressed limestone foundation. Thus, it can be expected that the foundation of this building will be encountered beneath the brick rubble. The component meets none of the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter, and no further work is recommended.

Buildings 78, 80

Building 80 was originally designed as a cavalry stable and built sometime after 1917. Early in World War II it was converted to a barracks. The building was located south of Thayer Avenue and was joined to Building 78 (which was connected to Building 76). According to Mr. Lose, the buildings functioned as a stables before being razed in the late 1960's.

All foundation perimeter walls were easily located and traced. The south wall of Building 80 was deep, encountered at about 3 feet; the other walls are at about one foot depth. The building perimeter, including the foundation and lowest level of could be located; it likely that much of the rubble remaining after the building was razed would be encountered if additional testing were done. However, the component meets none of the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter, and no further work is recommended.

Comments, Buildings 76, 78, 80. It should be noted that the two "courtyards" enclosed by the southern halves of Buildings 76, 78 and 80 have had a thin cement pad poured over most of the bare ground. These two pads are visible on the surface, offering a fairly precise indicator of where the building margins were. Obviously, such construction would have facilitated coal deliveries, trash removal and cleanup, and have prevented the growth of unsightly grass and weeds.

Building 82

Building 82 is identified as a Stable Guard building in 1943. It was located on the north side of and between Buildings 81 and 83 and immediately south of Thayer Avenue. It was razed in the late 1960's. With the steel probe, foundation walls were encountered at one to three feet surface depth. The foundation and floor of this building could easily be located and excavated. However, the component meets none of the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter, and no further work is recommended.

Building 84

Building 84 was located south of Thayer Avenue. Originally designed to function as a cavalry stable (1904 HABS map) (Figure 3), it was converted to motor pool use in 1943 (Figure 5). Building 84 is still clearly marked by a slab of concrete which extends farther to the south than the building imprint indicated in 1943. Entry ramps have been added to ease building access via both Thayer Avenue and Winn Road. The cement slab clearly identifies the building outlines; the slab would hamper archeological investigation but might preserve a sealed deposit laid down by stable activities before its conversion (early 1940's?) for motor pool use. Despite the possibility for a sealed deposit, the component does not meet the other four designated criteria for significance for Fort Des Moines III as defined in the methodology chapter, and no further work is recommended.

Building 85

Building 85, located between Buildings 84 and 86 and parallel to the south side of Thayer Avenue, functioned as a Stable Guard Mess Office (1943 HABS plan map) (Figure 5). This small building was razed in the late 1960's, leaving few indications of a straight wall foundation, but much solid rubble at between one and three feet depth. Obviously, portions of the building remain beneath the surface, but the foundation walls seem to have been partially removed and pushed onto the subfloor. The component meets none of the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter, and no further work is recommended.

Building 118

This building was located south of Rogers Road and west of Building 117. It is illustrated on the HABS 1943 site plan as a Quartermaster Barracks (Figures 5, 6). A similarly-shaped, but smaller, building is indicated in the same location (HABS 1917 site plan) (Figure 4), identified as Teamsters Quarters. The building site is now enclosed within a fenced and locked motor pool parking area and covered with a thick layer of crushed limestone. The probe was

plied, but found useless for gaining access to the subsurface. It seems likely that the substructure for the building(s?) lies safely beneath the graveled parking area, as has been the case with other components on the site. However, no further work is recommended because the component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter.

Building 120

Building 120 was located (HABS site plan 1943) (Figure 5) along the southeast corner of T319, parallel to the north side of Rogers Road. It is consistently (1904, 1917, 1943) identified as a brick Blacksmith Shop which once housed four forges (Map, Reservation, Fort Des Moines, Iowa, n.d.). It was razed sometime between 1943 and 1987. The entire perimeter of this small (ca. 25 x 30 feet) building was located with the steel probe; foundation material, probably limestone rock, was encountered consistently at one to three feet below the surface. The steel probe was also employed to determine the kind of floor used in the building. It was not cement or rock; the materials encountered in the soil sampling tube included brick fragments, slag and ash at between eight inches and one foot, then the normal soil profile was encountered. These tests suggest that a dirt floor was used here, and that an accumulation of debris had built up over the 30 decades of intermittent use, possibly for the single purpose of cavalry maintenance.

Depending upon building use during its final years and when it was razed, an excavation of this structure with known use might yield new and largely undocumented information regarding the development and use of the fort as one of the last cavalry posts in the country. Additional testing could reveal new data about cavalry maintenance practices during the final decades of its use by the U.S. Army. The component is recommended for Phase II testing because it meets the criteria of significance for Fort Des Moines III outlined in this report.

Trafficway North of Buildings 120 and T319

The evidence of past landscaping efforts done in order to prepare a flat trafficway immediately north of Buildings 120 and T319 is still visible. This wide area, illustrated on the HABS 1943 site plan (Figure 5), is well over 30 feet wide at some points. The entire surface has been leveled and a drainage system (gutter?) is still visible on the surface parallel to and about 20 feet north of Building T319. Portions of a hard (perhaps, bitumen) surface were encountered with the probe just below the surface. It is not illustrated on the 1987 HABS map and is overgrown with grass.

Building 124

Building 124 was located immediately east of Building 125 and was a Wagon Shed of equal size according to the HABS 1943 site plan (Figures 5, 6). This building is also depicted as Building 89, Wagon Shed, on the HABS 1917 site plan (Figure 4). It was razed some time between 1943 and 1987. The same hard-packed layer of gravel and slag that we encountered over Building 125 was found here, making use of the probe nearly impossible. It is expected, however, that some structural evidence of this old wagon shed might be found but no further work is recommended because the component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter.

Building 125

Building 125 was located south of extant Building 126 and is identified as a Wagon Shed (HABS 1943 site plan) (Figures 5, 6). It is also identified as a Wagon Shed (Number 115) on the HABS 1917 site plan (Figure 4). It was gone in 1987. There is a hard-packed layer of slag and gravel on the surface over this building site. It was possible to punch through this layer (ca. 6 inches thick) to encounter solid materials, but no definite wall foundation was located. If this building site were excavated, heavy equipment would need to be used to remove the slag and gravel, and the remaining substructure could probably be revealed. However, no further work is recommended because the component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter.

Building 128

Building 128 was located parallel to and between the railroad spur and Rogers Road and functioned as a Lumber Shed (HABS 1943 site plan) (Figures 5, 6). It had formerly functioned as a Hay Shed, from at least 1904 through 1917 (HABS 1904 and 1917 site plans), when it was numbered Building 34. This was a sheet metal building, according to Robert Lose (Personal communication with Barbara Long, Spring, 1991) and was razed sometime after the close of WWII. No evidence of this building could be located with the steel probe; the site surface was comprised of hardpacked slag and crushed limestone. The component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter, and no further work is recommended.

Building 129

Building 129 was located just off the northeast corner of Structure 134 and parallel to the railroad spur (Figure 5). It is identified (HABS 1943 site plan) (Figure 6) as a Hay Shed and was once a sheet metal building (Robert Lose personal communication with Barbara Long, March, 1991). It was razed between 1943 and 1987. The probe

was used and encountered a solid layer of gravel and cinders, apparently another grassed-over parking area. The remains of Building 129 could likely be located but no further work is recommended because the component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter.

Building 131

Building 131 was half brick and half wood (Lose, 1991) and was located north of Rogers Road and south of Buildings T313 and T314. It was razed between 1943 and 1987. It is identified as an Engineer Office (Figure 6) and was easily located by the extant concrete pad which is on the surface. Archeological investigations here are not recommended because the component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter.

Building 132

Building 132 was located east of Building 135 (extant, see Figure 5), parallel to and between Rogers Road and the railroad spur. During WWII, it apparently served as a Carpenters Shop. It was an original structure at Fort Des Moines III, built of wood and brick and designed initially as a Forage Storehouse (as Building 32, HABS 1904 site plan) (Figure 3). According to HABS 1917 site plan, still as Building 32 it was identified as a Granary (Figure 4). It was razed before 1987. Once again, the steel probe was used and encountered a solid concrete (?) pad immediately beneath a packed layer of slag 2-8 inches thick. If this building site should be studied archeologically, the recommended procedure would be to remove the packed slag surface with heavy equipment, then test with hand tools. However, no further work is recommended because the component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter.

Structure 134

This building was located immediately south of and parallel to the railroad spur. It does not appear to have been a building as suggested in the HABS 1943 site plan (Figure 5) and labeled (Figure 6) a Coal Shed. It is extant but not illustrated on the 1987 HABS site plan. This structure now consists of a cement floor about six feet below the railroad grade measuring about 250 by 50 feet. It appears to have functioned as a coal dock; the coal was probably dumped directly into it from the rail spur. A brief inspection of the north wall suggests that no roof had ever been erected over it. Judging from data from the HABS 1904 and 1917 site plans, this structure replaced a much smaller coal shed. The structure currently houses a burned out semi trailer and other large junked items. Any archeology to be done here can be performed with a

measuring tape and notebook; nothing, unfortunately, has been buried here.

Building 136

Building 136 was located parallel to a small north-south road that links Winn and Rogers Roads and just west of T308, which is extant. This building functioned as an Oil House according to HABS 1943 site plan (Figure 6) and most recently for storage of golf course machinery (Lose 1991). Probing revealed evidence for the east wall, but other construction (a drive/parking area between buildings T308 and T309) and demolition have made our "view from the surface" difficult. The building perimeters could probably be located but no further work is recommended because the component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter.

Building 141

This building, a Bakery, was apparently constructed around 1904 (Building 30 on the 1904 and 1917 HABS maps) (Figures 3, 4) and continue to serve as a bakery through WWII. It was made of brick with a small wood addition at the back. In 1917 a small building to the north (Building 60) is identified as a Wood House. This was either incorporated into building 141 or was replaced by an addition early during WWII (Figure 5). The building was razed sometime after WWII. Using the steel probe, all four wall foundations of the original rectangular structure could be located at between one and two feet below the surface. A great deal of rubble was encountered in the interior. The small extension to the north (Building 60 incorporated or replaced?) could not be located with the probe.

It should be noted here that a Root Cellar, Building 140, was located across the intersection of Rogers Road and Butner Street to the southwest of Building 141 by 1917 (Figure 4). That site is no longer US Army property, the building has been razed and the terrain landscaped.

Building 141, the Bakery, is one of few single-purpose buildings that we can identify archeologically at Fort Des Moines III. It functioned as a bakery from at least 1904 until after WWII, undergoing some structural and functional changes. Phase II additional testing is recommended because the component may meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter. It may yield information important to the military history of the post, that is, how military personnel were fed and how bakery practices may have evolved over the years.

Building T119

Building T119 was a concrete block structure located between Building 127 (extant) and the railroad spur. It is identified (HABS 1943 site plan) (Figures 5, 6), as a Fire Station and was razed sometime between 1943 and 1987. The remains of this structure are easily visible on the surface, appearing as a square cement pad measuring about 20 feet on the side. Excavation would be difficult and is not recommended because the component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter.

Building T121

Building T121 is not listed in the index of the HABS 1943 plan map (Figure 6), but is illustrated on that map (Figure 5) immediately south of Rogers Road and east of Building 128, listed as a Lumber Shed (Hay Shed) (Figure 6). Judging from its location at the end of the rail spur and in the locale of the post support facilities, the current assumption is that it is actually Building 121, listed in the index (Figure 6) as a Scale House. Mr. Lose identifies T121 as a scale house, but did not give an approximate date at which it was razed. The building floor shows clearly on the surface as a square cement pad with a light poured foundation. There seems no reason to consider archeological investigations of a cement pad.

Building T142

This small building was located south of Building 117 and along Chaffee Road (HABS 1943 site plan) (Figures 5, 6) and is identified as a Wood Shed (WPA Time Shack). It was razed after WWII. The steel probe was once again employed in an attempt to locate subsurface remains of this building. A portion of the foundation may have been encountered--if there ever was one--but we could not be certain. A great deal of modification has been done in this locale, apparently since 1943; it is doubtful that any remains of this building would be encountered even by the most skilled of historic archeologists. The component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter, and no further work is recommended.

Building T192

Building T192, located at the corner of Thayer Avenue and Chaffee Road, is listed (Figure 5) as an induction center. It was razed after WWII. The steel probe was carefully used, but it was not possible to locate a cement or brick foundation wall. Thus, it must be assumed that this temporary building was constructed on a series of cement or brick pillars. A "hard spot," probably cement, was located at about midway, east side; this may have supported the heating system. Segments of a walkway or sidewalk were located on the west side of the building; perhaps this once served as an entry. The pilings which supported the building, the entries and heating system could likely be located, but the exercise would be

unlikely to yield information important in the military history of Fort Des Moines III. The component meets none of the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter, and no further work is recommended.

Building T301

Building T301 was located immediately west of Building T302 between Rogers and Winn Roads. Buildings 301-305 were razed sometime after WWII. This building is the most westerly of a series of classrooms (Buildings T301-T305), all of which were difficult to locate with the steel probe.

The site of Building T301 was intensively tested with the steel probe, yielding portions of the east wall foundation. The tests were complicated by at least two grass-covered east-west walkways (bitumen?) which probably linked T301 with T302. The other wall foundations could not be located, but much trash, both inside and outside the mapped "footprint", was encountered. Excavations would probably produce evidence for building perimeters, but are not recommended because the component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter.

Building T302

Building T302, another WWII Classroom, was located between Buildings T301 and T303, facing both Rogers and Winn Roads (Figure 5). The west wall foundation was easily located with the steel probe, but the north, south and east walls could not be traced for any appreciable distance. Excavating in search of additional information about Building T302 might produce perimeter data, but no further work is recommended because the component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter.

Building T303

Building T303, another WWII Classroom, was located between Buildings T302 and T304, facing both Rogers and Winn Roads (Figure 5). Much trash and disturbed soil was encountered within its "footprint", but no certain foundations could be located. Excavating in search of additional information about Building T303 might produce perimeter data, but no further work is recommended because the component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter.

Building T304

Building T304, another WWII Classroom, was located between Buildings T303 and T305, facing both Rogers and Winn Roads (Figure

5). Intensive probing within its "footprint" produced evidence for a great deal of trash from the surface to about two feet, but no consistent evidence for wall foundations remains. Excavating in search of additional information about Building T304 might produce perimeter data, but no further work is recommended because the component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter.

Building T305

Building T305 faced both Rogers and Winn Roads and was located between Buildings T304 and T307 (Figure 5). Building T307 is extant and numbered 307, its temporary status removed. It was also a classroom. Testing with the steel probe suggested that a solid pad (probably concrete) which we encountered at about one foot depth was the floor of this building. However, it extended to the south well beyond the "footprint" offered on the 1943 site plan map, suggesting archeologically that 1) a driveway or parking area had been constructed to the south or 2) that the classroom building had been converted to some other use during or immediately after WWII. Again, it would be a comparatively simple matter to excavate the remains, but no further work is recommended because the component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter.

Building T306

Building T306 was located between the extant Buildings 137 and 135, between Rogers Road and the railroad spur. It functioned during WWII as a cold storage building. This building had walls constructed of tile, low portions of which still remain in place. The floor area was extensively tested with the steel probe, revealing a "gravelly" feel eight inches to two feet below the surface. At two feet, a very solid floor surface was encountered. The component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter, and no further work is recommended.

Building T307

Building T307 was located between Winn and Rogers Roads and east of T305. It was a Mess Hall, according to HABS 1943 site plan (Figures 5, 6). It was still shown on the HABS 1987 site plan as Building 307, still a Mess Hall. However, it has been removed very recently; evidence of razing still litters the surface. It was not possible to locate any evidence of a concrete slab or evidence of foundation; these materials must have been removed. Judging from the lack of evidence for this building other than surface litter of glass, sewer tile, brick, mortar and fragments of cement, it seems doubtful that archeological investigations could contribute significantly to our knowledge of building function. The component does not meet the designated criteria for significance for Fort Des

Moines III as defined in the methodology chapter, and no further work is recommended.

Building T310

According to Mr. Lose (personal communication with Barbara Long, March, 1991), Buildings T310-T317 were all of wood frame construction and were razed sometime after WWII. Building T310 was located on the south side of Winn Road immediately west of T311 (Figure 5). It was a Classroom (Figure 6) during WWII. Portions of the north and east wall foundations were encountered with the steel probe, precisely where the HABS 1943 site plan locates it. The component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter, and no further work is recommended.

Building T311

Building T311 was located on the south side of Winn Road immediately west of T312 (Figure 5). It functioned as a Classroom (Figure 6) during WWII. With the steel probe, portions of the north and west wall foundations were located, but the east and south foundation walls were not found. The interior surface offered little trash other than an occasional fragment of cement or brick. The component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter, and no further work is recommended.

Building T312

Building T312 was located on the south side of Winn Road immediately west of T313. It served as a Recreation Building during WWII. The steel probe was employed to locate portions of the north and west wall foundations. Again, trash litters the upper levels, making the probe investigations difficult at best. However, given the accuracy of the HABS maps, the building dimensions and identity of extant materials remaining after salvage could be determined. However, no further work is recommended, because the component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter.

Building T313

Building T313 was located on the south side of Winn Road between Buildings T312 and T314. It served as a Recreation Building. There was much trash near the surface of this location; only the southwest corner wall foundation was encountered with the probe. The component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter, and no further work is recommended.

Building T314

Building T314 was located on the south side of Winn Road east of Building T313 and north of Building 131 (Figure 5). It served (HABS site plan map, 1943) (Figure 6) as a Recreation Building. Plying the steel probe intensively revealed no evidence of wall foundations, but much trash, mostly near the surface, was encountered. The upper level was sufficiently "trashy" that the soil sampling tube could not be used. Subsurface testing with shovel and trowel could probably reveal the building outlines and evidence of function. However, no further work is recommended because the component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter.

Building T315

Building T315 was located immediately west of Building T316 on the south side of Winn Road. It is listed (Figure 6) as a Classroom. This building was difficult to locate with the steel probe because of an abundance of solid rubble both in and outside the building perimeters. Some (bitumen?) sidewalk surfaces were also encountered which appeared to link T315 and T315. We did locate portions of a light (narrow) foundation wall along the north side; it seemed to be, in part, broken and pushed into the building interior. Again, there is some uncertainty about whether or not a basement was constructed; the interior seemed filled with trash up to at least a three foot depth. The component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter, and no further work is recommended.

Building T316

Building T316 was located south of Winn Road between Buildings T315 and T317 (HABS site plan, 1943) (Figure 5) and is identified as a Classroom (Figure 6). The north foundation was located and traced using the steel probe. The northeast corner and part of the east wall foundation were also found, but the south and west wall foundations could not be located. Surface trash (rock rubble, brick, cinders) seemed to litter the upper level both inside and outside the mapped building imprint, confusing the issue. The building perimeter as well as trash left following salvage could likely be located, but no further work is recommended. The component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter.

Building T317

Building T317 was located at the east end of Winn Road on the south side. It functioned as a Tailor Shop. The steel probe was used to locate the west wall foundation; the other walls were elusive. The interior of this building seemed trash-filled from one to three

feet depth. The depth of the trash suggests that it may have had a basement, but we could not be certain at this level of investigation. Archeological investigations could reveal a sealed deposit suggestive of short-term use, but it does not appear that further investigation would yield notable information important to the military history of Fort Des Moines III, especially since the building was probably used in several ways after WWII. The component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter, and no further work is recommended.

Building T318

Building T318, the Service Club for whites (HABS site plan, 1943) (Figure 5), was located at the corner of Chaffee and Rogers Roads. The building burned in 1956, killing four people. This temporary building was large and amorphous. Portions of the east wall foundation paralleling Chaffee Road were located with the steel probe at a depth of about three feet. The interior surface probings suggested some trash, rock and brick, all regarded as evidence that when the building was razed, the foundation was pushed toward the interior along with other building trash and refuse. The building's wall foundations and the interior support system could probably be traced. Building activities could prove interesting when revealed archeologically and compared with those of Building T319. Gary Bianchi, Post Maintenance Supervisor, tells us that one ritual practiced here was to toss coins behind the bar.

Buildings T318 and T319 are recommended for Phase II testing because Service Clubs constitute an important aspect of military life on a post, an aspect linked directly to the contexts important to understanding Fort Des Moines III. In particular, a comparison of these two segregated facilities may be revealing of institutional attitudes and practices as well as daily life at Fort Des Moines III, aspects which are poorly documented in the archival record.

Building T319

Building T319 was located immediately to the west of T318, near and parallel to Rogers Road and, according to the 1943 HABS site plan, was attached to Building 120, the Blacksmith Shop. Building T319 functioned as the Black Service Club and was razed sometime after WWII. Building T319 foundations were sought diligently with the steel probe, but could not be located. Mr. Lose stated that this was a tile building (tile walls). It must have had no basement; tests with the soil sampling tube in several places within its "footprint" revealed a normal, undisturbed soil profile. Probing revealed a hard surface between T319 and 120, possibly a bitumen walkway that connected the two buildings. The support system for Building T319 could likely be located if further testing were undertaken.

Buildings T318 and T319 are recommended for Phase II testing because Service Clubs constitute an important aspect of military life on a post, an aspect linked directly to the contexts important to understanding Fort Des Moines III. In particular, a comparison of these two segregated facilities may be revealing of institutional attitudes and practices as well as daily life at Fort Des Moines III, aspects which are poorly documented in the archival record.

Building T320

Building T320 was located along the north side of Rogers Road and west of Building 120, the Blacksmith Shop. It functioned as the Post Exchange Gas Station (HABS 1943 site plan) (Figures 5, 6) and was razed sometime before 1987. Foundations for this building were sought using the steel probe. The south wall foundation, southeast corner and east wall foundations were located, but the north and west wall foundations could not be found. The curved driveway was partially traced, both visually and with the probe. One wonders whether there are buried gasoline tanks near the station site. The component does not meet the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter, and no further work is recommended.

Motor Oil (Repository?)

The small square outline located between Buildings 84 and 86 (HABS map, 1943) (Figure 5) and parallel to their south walls was identified as a "Motor Oil" building by Robert Lose (personal conversation with Barbara Long, March 1991). Here, a bitumen level (driveway?) was located along the south end of the building location. There was also a great deal of fairly solid trash and rubble encountered with the probe over the entire location, but no foundations could be located. The building was razed between 1943 and 1987. The component meets none of the designated criteria for significance for Fort Des Moines III as defined in the methodology chapter, and no further work is recommended.

Tin Building

A small (not numbered) building was illustrated on the 1943 HABS plan map (Figure 5) at the corner of Winn Road and Butner Street. According to Robert Lose (personal communication, Barbara Long, March, 1991), this was a tin building use to store mowers.

The steel probe was plied vigorously in search of subsurface evidence of this building, but all that was encountered was a flat, hard and wide (10-15 feet) surface that was later identified as the original Winn Road.

INVENTORY

ARCHEOLOGICAL INVESTIGATIONS EAST OF CHAFFEE ROAD

INVENTORY - EAST OF CHAFFEE ROAD

Subsurface Investigation

Intensive archeological investigations were conducted at Fort Des Moines National Historic Landmark in the portion located east of Chaffee Road late in March, 1991. This work, following modification #1 of contract #DACA-90-C-0129, dated March 20, 1991 (see Appendix A) was concentrated where construction of a new United States Army Reserve Center (USARC) is planned: east of Chaffee Road, north of Mendker Street, west of Brown Street and south of Building 46 (Figure 8). As the work proceeded, some changes to the original modification of contract were made following discussion among Barbara Long, Project Historian and Principal Investigator, Dale Henning, Project Archeologist, Edward Brodnicki, Corps of Engineers representative, Omaha Office, and Kathy Gourley, archeologist, Bureau of Historic Preservation, Iowa. These changes, effected to improve the quality of data recovery and to hasten the process, are discussed below.

All subsurface investigations were completed on March 29, 1991. No significant cultural resources that were not known through the historic record were located. However, it was recommended that further subsurface investigations employing earthmoving equipment be performed to ensure that our negative conclusions are correct and to avoid any possibility of delay once construction has begun (see modification of contract, 7-09-91, Appendix A). Mechanical stripping of portions of this area which will be directly affected by planned construction was conducted on August 14 and 15, 1991. The results of the mechanical stripping are also summarized in this chapter.

Field investigations began Saturday, March 23, 1991, a wet, windy, cold morning. Present were Barbara Long, Dale Henning, Curt Hudak, Edward Brodnicki, Ed Allen, Peter Olson and Robert Hawley. Long had conducted historic research pertinent to the precise location and function of mapped buildings and other historic cultural resources. Her work functioned as a guide to the subsurface investigations supervised by Henning. Henning assumed responsibility for all subsurface investigations, directing the location of backhoe trenches for geomorphological investigations (following consultation with Curt Hudak), use of the backhoe for locating building corners and foundations and in the search for other evidence of past site use. Dr. Hudak, consultant to the project, performed the geomorphological investigations. The backhoe work was done by Ed Allen of Allen Excavating, Des Moines. Robert Hawley and Peter Olson, both sophomores at Luther College, dug the numerous test excavations, sifted soil, carried heavy loads and probed for eight grueling days. Those eight days ranged climati-

cally across all conditions that March can afford in the Des Moines area.

We felt fortunate to have both Brodnicki and Hudak on the site as the work began. It was imperative that geomorphological investigations be performed before the archeological tests were begun. We had to know what the normal, undisturbed soil profile looks like, what natural inclusions can be expected in the soil and to become aware of any possible buried soil profiles where past occupations might have occurred. Hudak is an excellent instructor in these matters; his work made the archeological investigations which followed easier to interpret.

It is often important that a representative of the contracting agency be on site as a project unfolds. It seemed especially important that Brodnicki be on hand when locations for geomorphological trenches were positioned and when backhoe tests along some of the buildings were conducted.

Several other persons visited the project in their official capacity during the eight days of intensive subsurface investigations. Kathy Gourley, Archeologist, Review and Compliance Program, Iowa Bureau of Historic Preservation, reviewed our contractual agreements, discussed the ongoing subsurface investigations and participated in discussions which resulted in some procedural changes. Robert Lose, retired Facilities Engineer who worked at Fort Des Moines for 40 years, discussed the location and function of a number of building sites which might be affected by the projected Reserve Center. While Mr. Lose was on site, Long visited with him about changes that had taken place at Fort Des Moines. Lou Erbstein, Senior Civilian at the current USARC, offered his knowledge of past construction, building removal and backfilling and expressed concern for locating and removal of pipelines and cables, particularly telephone, which lace portions of the project area. Mr. Erbstein's concern for site appearance following our subsurface testing program was manifest; we were careful to backfill and replace sod over each unit if at all possible. Gary Bianchi, Facilities Engineer, also toured the project area during Mr. Lose's visit, placed copies of utilities maps in our hands and assisted our endeavors in a number of ways.

All subsurface investigations were guided by the historic record. The Historic American Buildings documents (Historic American Buildings Survey 1987), including maps dated 1904, 1917, 1943 and 1987 (Figures 3-7) have proven to be an invaluable resource for this work. The maps are very accurate; it is possible to locate some evidence for every building indicated on them if careful measurements are taken. We were also concerned for evidence of historic activities before 1902; no historic sites dating prior to the beginnings of fort construction have been located within this intensive study area.

There is no evidence for prehistoric (Native American) occupation in the study area. The location is well away from flowing water and afforded little tree cover, making it a poor camping and hunting place for prehistoric people.

Discussion, Subsurface Tests East of Chaffee Road

The military records and the efforts of those who summarized those records in the HABS maps and reports are to be credited for the few surprises we were offered through our intensive subsurface investigations. We found only one feature that was not recorded; a lightly-constructed sidewalk from Building 50 to Wood Circle. In the course of the excavations, we were constantly reminded of the values of "police call" in retrieving any surface litter on a military post. Judging from the lack of materials we recovered from the upper levels of our excavations, these enforced cleanup sessions must have been effective indeed in these heavily populated locales.

The subsurface tests offered no evidence for significant cultural remains that were not documented. The conclusion is that no further such evidence will be encountered. We recommend that no additional work be undertaken.

Geomorphological Investigations

The geomorphological investigations employed five backhoe trenches, each at least five feet deep and over 12 feet long. Dr. Hudak inspected and then wrote up the profiles for each of these (Appendix C). Following discussion among Henning, Brodnicki and Hudak, the trenches were established in locations (Figure 8) that were expected to offer undisturbed profiles. Three trenches (#'s 1, 2, 5) were dug into undisturbed soil. The other two, one located in Wood Circle (Trench 3), the other in the proposed settling basin in the south central part of the project area (Trench 4), had been disturbed in the upper 10 inches. Mr. Lose told us that there had been a flower garden there near the center of Wood Circle. He also said there had probably been a garden west of the Nurses Quarters (Building 88, 1943) (Figures 5, 6) which might account for the disturbance noted in Trench 4.

All of the geomorphological test trenches were dug into Downs silt loam (McCracken 1990), a thick, windblown soil formed of loess. Hudak stated that in the test trenches there was evidence for formation under either prairie or savannah woodland conditions, depending upon which trench was being investigated. The soil is quite young by pedological standards, apparently having formed over the past several thousand years as additional loess was added to this upland site. This process must have been fairly steady. There were no buried soil profiles, but we were faced with the possibility that evidence of prehistoric occupations here might be

found well below the surface. There was no evidence in any of the trenches that such occupations had taken place in this uplands location.

It should be noted again that the area under investigation has been subjected to very little cultivation. This is an erosive soil; had it been cultivated employing modern agricultural methods, it would have been severely eroded with loss of much or all of the A horizon. Downs silt loam is a loess-derived soil. Any rocks or other materials that could not have been transported by wind would indicate some activity by man.

Backhoe Tests, Archeological Investigations

By mutual agreement between Brodnicki and Henning, the backhoe tests were done in lieu of the five (5) test pits which were to be dug using a power auger. Following excavation and inspection of all trenches, the backhoe was employed in final backfilling of all tests and was used to smooth over the disturbed surfaces.

Backhoe Test 1

Backhoe Test 1 was conducted at the south corner of the Hospital, Building 89 (Figures 5, 6). The Hospital was oriented so that the corners were at the cardinal points. A portion of the foundation was visible at the surface and was traced with the backhoe along the southeast wall to the corner, which was located about two feet below the surface. The dressed limestone foundation was plastered. Both the interior and exterior fill was littered with trash, including steel fence posts and barbed wire. No further work is recommended.

Backhoe Test 2

Backhoe Test 2 was conducted on the site of the Hospital Stewards' Quarters (Building 21, 1917; Building 88, 1943). Judging from the difference in the size of the "footprints" for this building when one compares the 1917 and 1943 HABS maps (Figures 4, 5), it appears that the building was either added to or replaced by 1943. Our tests encountered a poured footing 18 inches wide, suggesting that we had located a foundation dating around the WWII construction period. We also found part of a sewer line (about 12" diameter) parallel to this foundation. No further work is recommended.

Backhoe Test 3

Backhoe Test 3 was conducted at the site of Building 54, the Band Barracks (1943), also identified in 1904 and 1917 as Building 38, Band Quarters. This building should have been easy to find; undoubtedly, as an original construction for Fort Des Moines, it had a dressed limestone foundation. However, our tests encountered

shielded telephone cable about a foot below the surface in several places, and we were forced to abandon the search rather than risk interrupting telephone service across an undetermined part of south Des Moines. No further work is recommended.

Backhoe Test 4

Backhoe Test 4 was conducted at the site of Building T191, located southeast of extant Building 152. T191 is identified as a Library (1943 HABS site plan) (Figure 6). We were disappointed to encounter shielded telephone cable in several locations at this site as well and again forced to abandon the backhoe search for foundations here. The steel probe revealed that there is building refuse and trash in this location; the foundation system can be located using the HABS maps and standard excavation techniques or, given the removal of the telephone cables, with the backhoe. No further work is recommended.

Backhoe Test 5

Backhoe Test 5 was performed in two locations of Building T48, the Red Cross Building. We dug to over six feet depth along the southeast corner, revealing the upper surface of the footer. The footer and wall are of poured concrete; the wall was poured into a steel economy form. The foundation walls were over 15" thick; this was a substantial building. Much of the east wall was traced with the backhoe; portions of this foundation had been pushed into the basement when the building was razed. We also tested for the west wall, but encountered only building refuse; again, where our test was conducted the foundation had probably been pushed into the basement. No further work is recommended.

Backhoe Test 6

Backhoe Test 6 consisted of several short trenches dug to explore the site of Building T400, Nurses Quarters. This temporary building had been very lightly constructed, but portions of the exterior wall foundation were located. No further work is recommended.

Backhoe Test 7

Backhoe Test 7 was conducted on the site of T401, Nurses Quarters. A single trench was dug through the location of both the east and west walls, producing no evidence of a perimeter foundation, but we found a cement pier where it had been pushed over along the west wall. The soil profile beneath where the building had stood was undisturbed. After the first pier had been located, we were able to discern where others had stood. There were depressions with "different" grass texture arranged in several rows conforming to the dimensions of the buildings. Some of the piers probably lie immediately beneath the surface. No further work is recommended.

Shovel Tests

Following discussion among Brodnicki, Henning, Long and Gourley, the statistical sampling design initially called for was dispensed with in favor of a series of linear tests in locations slated for maximum disturbance (where the new building will be and where related construction is to take place) (Figures 8, 9), followed by three "probe strips" each fifty meters long and 10 meters wide.

The test squares we excavated were 50 x 50 cm on the side and dug to a depth of at least 60 cm, where the upper B horizon was encountered. The tests were excavated in 10 cm levels and all materials recovered were retained by level. Most of the shovel tests revealed a small number of pieces of brick, mortar, bitumen, slag and coal in the uppermost level (upper 10 cm). Artifacts recovered were retained, washed, numbered and are discussed by square number and level (Appendix B), along with information taken from the field notes (field notes are copied and included as Appendix C).

The test squares produced no surprises. We located no new, unrecorded building foundations nor anything that was not to be expected on an abandoned military installation. Fragments of brick and tile, chunks of mortar and concrete, bits of glass, an expended cal. 30 casing, one .243 cal.(M-16) blank practice round, a limestone marble, a few buttons, an enameled plate and some metal fragments were recovered. Precise provenience data are in Appendix B.

Probe Grids

Three probe grids were established in locations where construction will be concentrated for the new Reserve Center and in places where no known buildings were constructed (Figure 7). In these tests, the steel probe was inserted into the ground at precise meter intervals; 550 individual probe units were implemented per grid. The probe was inserted to a depth of one to two feet; generally, the upper level (1st 10 cm) was "gravelly".

We found only one unexpected feature, a sidewalk which linked Building 50, the War Department Theater, and Wood Circle (Figure 8). This sidewalk was made of poured concrete. It had been broken up, covered with a thin layer of soil or sodded over. It was followed with the steel probe to determine its orientation. Once located, it was possible to "see" the sidewalk from the surface because of the difference in grass texture and color.

Meter Square Tests

The contract called for the excavation of five 1 x 1 meter tests a meter in depth "in order to better evaluate the cultural material

that is observed in the shovel test pits." (Appendix A) These tests were made after the shovel tests and probe grids were completed in order to test against what had been encountered with the probe. Very few unexplained phenomena had been located using either the shovel tests or the probe grids. However, we made six tests in locations that had piqued our curiosity.

Meter Square 1

Meter square 1 was established to expand test square 5, which had produced a concentration of building debris, a limestone marble and trash. More building material and another marble were recovered, but nothing other than that was found. A normal soil profile was encountered in levels five and six (40 to 60cm below the surface).

Meter Square 2

Meter square 2 was located in the south center of probe grid 3 because of the amount of material encountered with the steel probe in this locale. The square produced evidence of disturbed soil to a depth of 40 cm along with some artifacts (Appendix B), then undisturbed soil beneath that level.

Meter Square 3

Meter square 3 was located along the southeast edge of probe strip 2, where a solid surface had been encountered at 10 cm depth. The square revealed the sidewalk surface.

Meter Square 4

Meter square 4 was located south of probe strip 2. It produced a normal soil profile beneath the 20 cm level. The upper levels offered a few materials derived from coal firing and building razing.

Meter Square 5

Meter square 5 was purposefully placed in the central part of the imprint of Building T401. A normal soil profile was found here, corroborating our belief that the building had been constructed on piers and there had been no basement.

Meter Square 6

Meter square 6 was dug into the basement of the NCO quarters (Buildings 98-99). The excavators encountered much building rubble, some round nails, a little window glass and one piece of bright blue Fiesta ware. At 1.5 m below the current surface, the cement basement floor was encountered.

Machine stripping

Site stripping east of Chaffee Road was conducted on August 14 and 15, 1991, following the terms of Contract Modification #2 (Appendix A). Mr. Ed Allen was contracted with to run a small (c. 12 yard capacity) self-propelled, paddlewheel bellypan scraper over the areas to be affected by construction of the planned new Army Reserve Center. The machine was perfect for our project. Under Mr. Allen's skilled guidance, it was possible to remove 1-3 inches of soil, leaving a clean horizontal profile which easily revealed any evidence for past soil disturbance. Five long strips were removed with the machine to a depth of c. 12 inches (Figure 8); the stripping operation was closely followed by Henning, who noted any subsurface features revealed and collected datable artifacts. In the course of the entire stripping operation, nothing was revealed which could not have been predicted using knowledge of historic events pertinent to Fort Des Moines use. We were searching for new data; none was revealed to us.

Perhaps of greatest interest were the wood conduits which linked electrical service for buildings T400 (Nurses Quarters) and the NCO Quarters (Bldgs 100-101). These conduits were constructed of wood in eight foot sections, 4 1/2" square and drilled from end to end with a 1 1/2 (approximate) inch hole. The wood has been little affected by soil and is probably cedar. Inside these conduits (several segments were found) were strung two shielded cables which (now) carried no electrical power. The eight foot wooden conduit sections were set end to end and were encountered at one to two feet below the surface.

We also encountered trenches which contained sewer and clean water lines; these were related to known buildings. Two filled vertical access shafts 24 inches in diameter were revealed; these were tested and were regarded as sewer access points (manholes), both apparently tied to Building T400.

The foundation of Building T400 was revealed by machine scraping, but the intensive scraping was not done on that site because it is a known entity. Tests to c. 12 inches were conducted both east and west of T400 in search of unknown data; none was found.

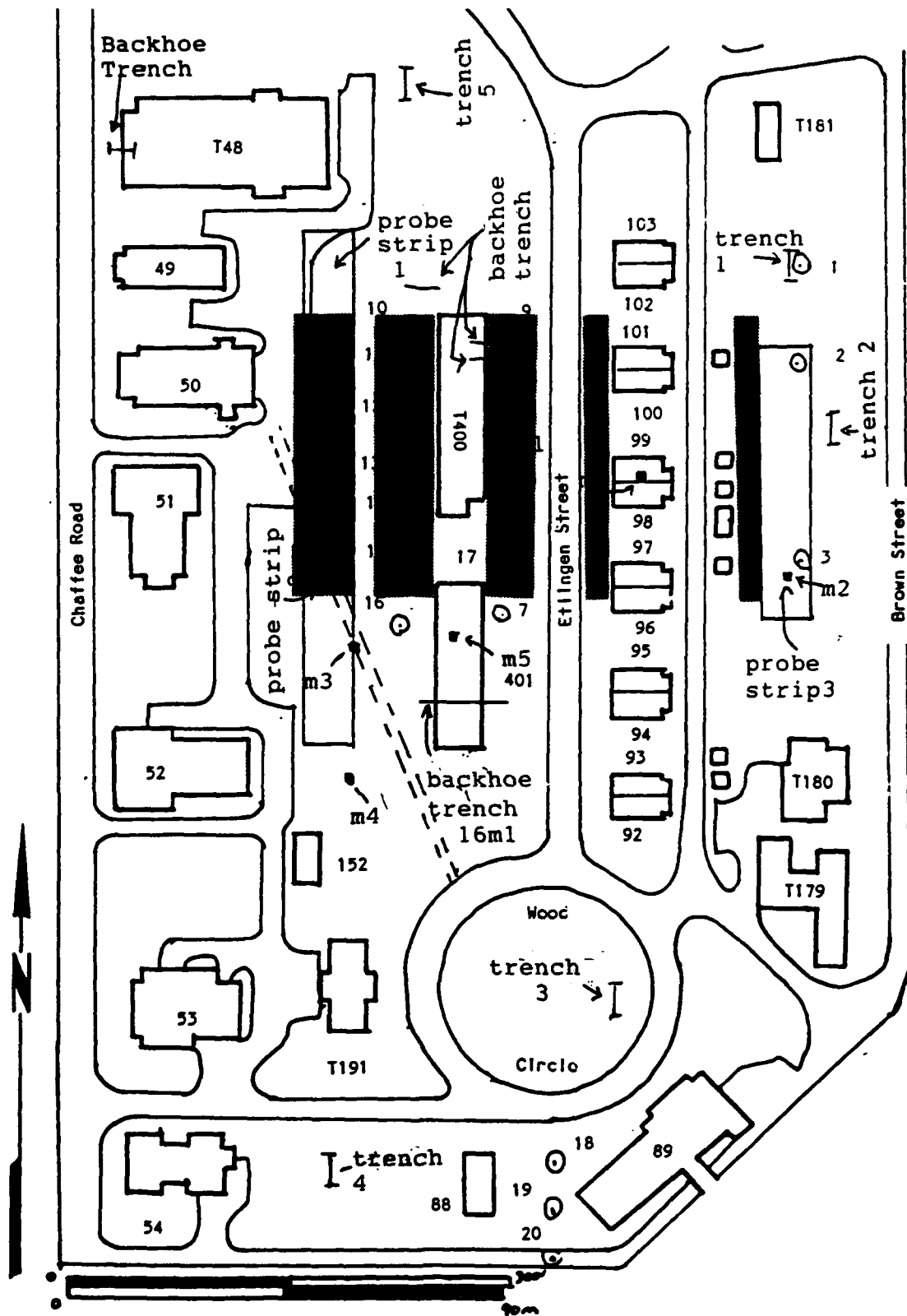
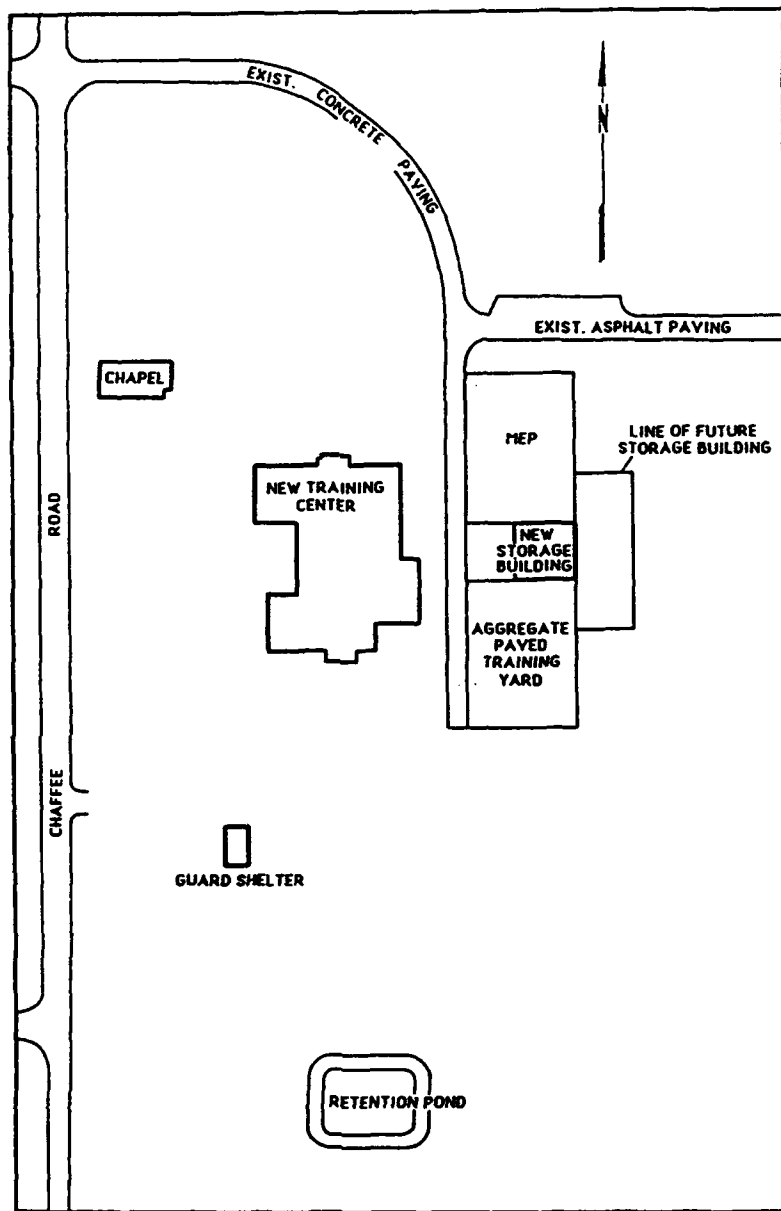


Figure 8. Fort Des Moines III, area east of Chaffee Road, intensive testing. Shaded areas depict heavy equipment scrapes 1-5 (west-east).

LEGEND

Building Number	Building Function
T48*	Red Cross Building
49	Post Chapel
50	War Dept. Theater
51	Administration Bldg.
52	Guard House
53	Post Exchange
54	Band Barracks
88	Nurses Quarters
89	Hospital
92-103	NCO Quarters
152	Mounted Guard Shelter
T179	CCC Officer Quarters (Tailor Shop)
T180	CCC Headquarters (Beauty Shop)
T181	Dry Cleaning Shop
T191	Library
T400-T401	Nurses Quarters
**T	Indicates Temporary Building
**	Alternate Uses Are In Parentheses
50cm. Test - ⊙	
Meter Test = m1-6	
Old Sidewalk - = = =	

Legend. Figure 8



SITE ARCHITECTURAL PLAN

0 100 200 FEET

Figure 9. Fort Des Moines III, area east of Chaffee Road, showing location of proposed US Army Reserve Center.

STUDY AREA RECOMMENDATIONS

STUDY AREA RECOMMENDATIONS

Intensive investigations to the Phase II level have been conducted in the locale east of Chaffee Road where the new U.S. Army Reserve Building is to be constructed. No further work is recommended here because the components did not meet the criteria for significance outlined in this document and no National Register-eligible historic archeological resources would be negatively affected by the planned construction project.

Five building sites located in the investigative area west of Chaffee Road are recommended for testing at the Phase II level.

Building 57

One of the most intriguing structure sites (components) is Building 57 which burned in 1930 and was razed shortly thereafter. This barracks building had a deep basement into which much of the rubble was pushed, then leveled. It may constitute a sealed deposit containing data about military life (enlisted men, not officers) between the early 1900s and 1930. It may be the only site of its kind at Fort Des Moines III. Investigations at the Phase II level would involve testing for the depth and quality of deposits to determine whether Phase III investigations were warranted.

Building 120

The Blacksmith Shop is one of few building sites which, according to the HABS records, served a single purpose from 1904 through WWII. In addition, the site relates directly to the original cavalry purpose of the post. Further historical investigation about building use followed by archeological tests to determine the depth and quality of floor deposits is recommended.

Building 30 (141)

The Bakery (Building 30: 1904-1917, Building 141: 1943) was also a single-purpose structure. Further documentary and oral investigations pertinent to building use are recommended to ascertain changing baking practices in the military. (A nearby facility, Camp Dodge, received considerable attention in military circles regarding the high quality of its bakery.) Problems of sanitation and consistently delivering freshly baked loaves of bread are themes to study. The historic work should be followed by archeological testing at the Phase II level to determine depth and quality of any floor deposits which may remain. It is possible that data pertinent to the evolution of military baking from the

early 1900's until the mid-1940's can be recovered by investigation of this structure.

Buildings T318 and T319

The Service Clubs (Buildings T318 and T319) constitute an important aspect of military life. In particular, a comparison of these two segregated facilities before the armed services were integrated after WWII may be revealing about institutional attitudes and practices in the military. These two buildings and their respective histories constitute part of the record of a segregated military. A comparison of building size, placement, capacity, and uses the military expected for these segregated facilities should be included to provide a degree of context. These more general findings should be applied to how each facility actually was used at Fort Des Moines III. Phase II historical investigations should include documentary and archival research, oral history and thorough documentation of any use other than for Service Club programs that each structure might have served. The potential for comparative archeological investigations should be investigated at the Phase II level, especially depths and quality of deposits.

REFERENCES

REFERENCES

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1991 Building Maintenance Plan. Fort Des Moines No. 3. Des Moines, Polk County, Iowa.
- McCracken, R.J.**
1990 Soil Survey of Polk County, Iowa. Soil Survey Series 53, No. 9. United States Department of Agriculture, Soil Conservation Service, Iowa Agricultural Experiment Station: Ames.
- McKay, Joyce**
1990 Civilian Conservation Corps Properties in Iowa State Parks: 1933-42. National Register multiple property documentation form. On file, Iowa Bureau of Historic Preservation.
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Union Historical Company

1880 *History of Polk County, Iowa*. Union Historical Company, Des Moines.

APPENDICES

APPENDIX A. CONTRACTS, CORRESPONDENCE

APPENDIX A

1. Scope of work
2. Letter, Buse to Long, February 6, 1991
3. Letter, Gourley to Brodnicki, March 12, 1991
4. Letter, Long to Brodnicki, April 15, 1991
5. Letter, Henning to Brodnicki, April 16, 1991
6. Letter, Cooper to Long, undated, [early summer 1991]
7. Letter, Long to Cooper, June 10, 1991
8. Letter, Long to Bianchi, September 9, 1991
9. Letter, Gorton to Long, December 31, 1991.
10. Letter, Long to Brodnicki, January 15, 1992.
11. Letter, Gorton to Long, March 10, 1992.

PART I - SECTION C

SCOPE OF WORK
FOR
HISTORICAL ARCHEOLOGICAL INVESTIGATIONS
AND
PREPARATION OF A BUILDING MAINTENANCE PLAN AT
FORT DES MOINES, IOWA

I. PURPOSE AND SCOPE

A. The work to be accomplished by the Contractor shall consist of historic archeological investigations and preparation of a building maintenance plan at Fort Des Moines. Fort Des Moines is a National Historic Landmark located within the city of Des Moines, Iowa. Documentation on the Fort has been submitted to the Historic American Building Survey (HABS), including a report and photographs (Historic American Building Survey - Fort Des Moines Historic Complex, HABS No. IA-121).

B. The intent of the historical archeological work is to locate and evaluate any archeological remains from the historic period that may still remain in the section of Fort Des Moines managed by the Department of the Army. These remains may include features associated with the civilian settlement of the area, such as farmhouses and others, associated with the agricultural usage of the area. The remains may also include those associated with the military occupations, such as privies, foundations for abandoned structures, etc. The area for the historic archeological investigations is roughly enclosed by Gruber Street to the north, Chaffee Road to the east, Butner Road to the west and a line approximately 600 feet south of Rogers Road (see map).

The intent of the building maintenance plan is to provide guidance for the cyclical maintenance of the following 29 structures. These structures include building numbers 46, 48, 55, 58, 59, 60, 61-62, 63, 64, 68, 70, 71, 73, 75, 81, 83, 84, 86, 117, 135, 137, 138, 139, 152, 307, 308 and 309.

C. The work shall be accomplished in accordance with applicable Federal legislation, implementing regulations and guidelines: (1) Public Law 74-292, the Historic Sites Act of 1935; (2) Public Law 86-523, the Reservoir Salvage Act of 1960 as amended by P.L. 93-291, the Archaeological and Historical Preservation Act of 1974; (3) Public Law 89-665, the National Historic Preservation Act of 1966 as amended; (4) Public Law 91-190, the National Environmental Policy Act of 1966 as amended; (5) Executive Order 11593, "Protection and Enhancement of the Cultural Environment" (13 May 1971, 36 CFR 8921); (6) 36 CFR Part 60, National Register of Historic Places; (7) 36 CFR Part 63, Determination of Eligibility for Inclusion in the National Register of Historic Places; (8) 36 CFR Part 800, Protection of Historic and Cultural Properties; (9) 32 CFR Part 229, Archaeological Resources Protection Act of 1979 (Federal Register, 6 January 1984); (10) National Park Service's "Archeology and Historic Preservation;" Secretary of the Interior's "Standards and Guidelines" (48 Federal Register 1986:4716-44742); (11) Headquarters, Department of the Army's Technical Manual 5-801-1, "Historic Preservation Administrative Procedures;" (12) Headquarters, Department of the Army's Technical Manual 5-801-2, "Historic Preservation Maintenance Procedures." A copy of these laws and regulations will be furnished upon request.

D. The work shall be limited to the Fort Des Moines area shown on the enclosed

CONTRACTOR'S COPY

map. This land is located within the city of Des Moines, Iowa. The purpose of the historic archeological investigations is to locate and evaluate historic properties that may be impacted if the property is sold. The purpose of the building maintenance plan is to provide detailed information that can be used to maintain the remaining structures at Fort Des Moines that will be retained by the Army.

E. The work shall be accomplished as follows: The historic archeological investigation shall consist of (1) an exhaustive search and comprehensive review of existing literature and records in order to locate any features associated with the civilian and military occupation of the area; (2) a thorough field examination of the project area in order to locate and verify the location of any features that may have been identified during the record search and to provide general knowledge on cultural resources that date to the historic period in the project area; (3) data analysis of the findings; (4) report of the findings; (5) journal article; and (6) public education program. The building maintenance plan for the structures will include the following elements: (1) brief history of the buildings; (2) evaluation of the resources; (3) treatment plan for maintenance; (4) safety concerns; and (5) supplies and sources.

1. Historic Archeological Study

a. Literature and Records Search. Information and data for the literature search shall be obtained from, but not limited to, the following sources: (1) any pertinent information on file at the Archeology and Historic Preservation Division of the State Historical Society of Iowa, in Des Moines; (2) published and unpublished reports and documents such as books, journals, these(s), dissertations, and manuscripts; (3) statewide township and range survey records and notes at Des Moines; (4) primary historical documents including county records, deeds and wills, county and state atlases, U.S. census documents, and other records pertaining to land use and ownership; (5) local historical societies, and knowledgeable local informants; and (6) consultations with any other qualified professionals known by the Contractor to have knowledge about the history of the area.

All records, documents, and publications consulted shall be listed in a standard, professional bibliographic style at the end of the report. References to unpublished sources shall include sufficient information to allow location of the document by future researchers.

b. Field Examinations. The Contractor shall conduct a thorough on-the-ground investigation of all selected project land as described above. The intent of the field investigation is to verify feature locations that were found during the literature search and to provide a general survey of the area focused on cultural resources that date to the historic period. The investigation shall be of sufficient detail and intensity to clearly establish the existence, location, and approximate spatial boundaries of cultural resources that were identified during the records search.

(1) All aspects of the field examination shall be conducted by or under the direct supervision of a qualified archeologist. In addition, all historical or potential historic site areas shall be examined in the field by

standing historical structures (foundations, ruins) visible, they shall be examined by a qualified architectural historian.

(2) Historic sites shall be identified as to builder(s), occupants, or series of occupants, numbers of structures, and date of abandonment. If the above information cannot be obtained, it shall be so stated in the report and a list shall be included of all records repositories consulted (e.g., registry of deeds, early maps, Government Land Office, etc.) All boundary definitions, mapping, soil coring, or recommendations for future investigations of historic archeological sites shall also be the responsibility of the qualified historical archeologist.

(3) Subsurface testing shall be confined to shovel testing and small diameter soil coring. Its use shall be confined to the verification of presence or absence of cultural resources and to establish boundaries for cultural resource sites. Small diameter soil coring shall be utilized at the supervisory archeologist's discretion. It shall normally be utilized to confirm the presence or absence of cultural bearing stratum or features and to aid in the delineation of site boundaries. All shovel test areas shall be backfilled.

(4) The Contractor shall pick up and retain only those surface artifacts necessary to the Contractor to determine the cultural component(s) in a particular site or which the Contractor feels may be of use in interpretive displays. All cultural material recovered from subsurface testing will be retained. All artifacts retained shall be carefully washed, catalogued, recorded, and stored during the field investigation.

(5) The field examination shall be conducted in close coordination with the Fort Des Moines U.S. Army Reserve Center, the Corps and Fort McCoy. Field crews shall be subject to periodic onsite inspection by Department of the Army representatives without prior notice. The Contractor shall not enter upon private property without the prior knowledge of the contract administrator. All vehicular traffic within the project area shall be restricted to existing roads.

(6) The Contractor shall keep clear, legible, standard field records available and current for periodic review by the Technical Officer. These records shall include, but shall not necessarily be limited to: field notebooks, official Iowa site survey forms, field maps, and photographs. One copy of each of the above field records shall be included in the cultural resources report as an appendix.

✓ (7) Sites located in the field shall be delineated on the government furnished USGS quadrangle sheets. Professional quality site maps will be made for each site located under this contract. All site maps will be scaled drawings utilizing adequate land surveying techniques. This will minimally require use of a survey compass and metric tape or transit and metric rod. All survey datums will be tied into a permanent survey marker where possible; otherwise, the datum will be tied into some well-defined permanent feature. Rough sketch maps not drawn to scale are not acceptable. Facsimiles of acceptable site maps are available in the Omaha District Office. The Contractor will submit a

copy of a site map with its study outline that will be used as an example for potential future work.

c. Analysis. Analysis shall be conducted of all data collected as a result of the literature search and field investigation. Analysis of data shall be geared toward the identification of site components and site boundaries. In addition, recommendations for future testing needs for sites shall be developed during this phase.

(1) The testing recommendations developed shall specifically address what information is required for a determination of eligibility to the National Register of Historic Places and which was not able to be procured by the field examination undertaken by this contract.

(2) Analysis of artifacts and data shall be conducted by or under the direct supervision of a qualified professional of the appropriate discipline (prehistoric archeologist for prehistoric artifacts and historical archeologist for historical artifacts). All diagnostic artifacts shall be documented with good quality black and white photographs which include a size scale or technical scaled line drawings.

(3) All artifacts shall be permanently stored at a repository located within the boundaries of Iowa mutually agreed to by the contractor and the Government. The Contractor is responsible for shipping all collected artifacts and records. If the artifacts are stored with the Iowa State Historical Society, the Contractor must complete all work involved with accessioning before the material is turned in. The archeological data and records must be made accessible to future researchers. All artifacts and data will be stored in containers clearly marked "Property of the Department of the Army."

d. Comprehensive Investigation Report. The Contractor shall prepare a comprehensive investigation report which details the work done, the study rationale, the investigation results, recommendations for additional work, and management recommendations. The report shall include, but shall not be limited to, the following sections:

(1) Report Documentation Page, DD Form 1473. Complete all but sections 2 and 3.

(2) Title Page. The study type, location (project name and counties), report date, name of Contractor, author/Principal Investigator, and Corps of Engineers contract number.

(3) Abstract. A brief synopsis of the work conducted, number and types of cultural resources identified and overall significance, and an overview of the management recommendations, which shall not exceed 150 words.

(4) Introduction. Identify the sponsor and Contractor, the purpose for the investigation, discuss the type of investigation performed and location, indicate the disposition of the artifacts, and original records or other data. Discuss the report organization.

(5) **Regional Location and Environment.** A detailed description of the reconnaissance area including physical features and terrain, past and present vegetation and fauna, field conditions, past and present land uses, weather conditions during field work and weather patterns for the study area in general. The study area must be discussed within the larger framework of Iowa history and prehistory.

(6) **Previous Work.** An enumeration and description of all previous cultural resources investigation conducted within the reconnaissance area, names of principal investigators, dates of the studies, study results, and an overview of the general adequacy and deficiencies of the past work.

(7) **Overview.** A detailed overview of the history and prehistory of the CAAP area, as revealed by the literature and records search. The relationship of the cultural history and prehistory of the reconnaissance area to the regional cultural history and prehistory of the study area shall be presented.

(8) **Research Orientation.** Develop and present theoretical and/or substantive goals and the methodology to be used in achieving them. Address problems and testable hypotheses that are realistic for this level of study.

(9) **Methodology.** Present the procedures used to accomplish the research design. Discuss how the field work was organized, scheduled, and undertaken. Detail the laboratory procedures and the methods used to analyze artifacts and other data recovered from the field.

(10) **Inventory.** Address all cultural resources or potential cultural resources identified by the literature search and/or the field investigation.

(a) Sites identified during the literature and records search which could not be relocated during the field investigation shall be addressed and the following information shall be provided: [a] site name; [b] reported location(s); [c] site description(s); [d] reference sources; [e] probable reason for not being able to locate it in the field (inundation, erosion, construction, agriculture, ephemeral nature of the resource, discrepancies in location, etc.), and recommendations.

(b) The information provided in this section for cultural resources or potential cultural resources located or relocated during the course of the field investigation shall include, but shall not be limited to: site name (if any); site number; county; state; site type (lithic scatter, farmstead, mound, etc.); component(s) or probable component(s); elevation; property owner(s) and address(es); tenant and address; a verbal description of the topographic position of the site; site size (or presumed size); strata and depth (if known); present vegetation; ground surface visibility at time of field investigation (in percent); nearest water (name and distance and pool elevation); condition (address current, projected or past known impacts); if surface collections have been made, by whom and when; a review of artifacts collected; a description of any previous investigations at the site, location, and artifacts collected; a description of any previous investigations at the site, location of artifacts,

other material reported by owner, recommendations, and site specific recommendations, and remarks. The site specific recommendations shall include, but shall not be limited to, any recommendations for testing for National Register eligibility, if needed. The exact meaning of the recommended testing shall be indicated; e.g., to determine a site's aerial extent or depth, to verify or determine components present, to assess research potential, and/or to determine site integrity. The recommendations section shall also include any interim measures which can be taken to preserve the resource until it can be tested for National Register significance (stop cultivation, fence, etc.). If the Contractor determines that sufficient information was gathered during the course of this investigation to allow a determination of eligibility for inclusion in the National Register of Historic Places, then the Contractor shall complete a draft of the National Register nomination forms.

(11) Study Area Recommendations. Synopses of the recommendations offered for individual resources and of adverse effects to cultural resource within the study area, their frequency of occurrence, and the impacts.

(12) References. Use the American Antiquity format for every publication, work, or interview cited in the report.

(13) Appendices. Official Iowa site forms and field notes, maps, photographs, and a list of all artifacts collected. All locational data shall be restricted to state site forms which will be bound separately.

e. Article. The Contractor shall submit a suitable article for submission to Plains Anthropologist, American Antiquity, other professional or popular journal on the results of the reconnaissance survey. This article shall include the following information in the abstract; name of sponsor, contract number, and brief description of the nature of the contract. The draft of the article shall be submitted no later than 30 calendar days after the draft copy of the report is sent for review. The article may focus on any facet of the research, but shall include all the above information. The purpose of the article is to ensure a wider dissemination of the information derived from the study.

The Contractor is encouraged to communicate with the local people to inform them of the purpose of the investigation specifically and archeology in general.

f. Public Education. The Contractor shall prepare and submit either a slide program with script or an edited video program, not to exceed 20 minutes in presentation, describing in terms understandable to the general public, the methodology, purpose or results of the reconnaissance survey. A draft of the program shall be submitted no later than 30 days after the draft copy of the report is sent for review.

2. Building Maintenance Plan

a. Brief History of Buildings. A history of the buildings should be prepared. The intent of the history is to present material that will be relevant in the discussion. This section should be brief and should not duplicate work already present in the HABS documentation.

b. Evaluation of the Resources. This section will contain a discussion of the current condition of the buildings. The emphasis of this section is to identify problem areas that could result in a loss of integrity to the structures.

c. Treatment Plan. The treatment plan will discuss in detail what measures are necessary to maintain the structures in conditions that will meet the needs of the occupants.

(1) Exterior Maintenance Plan. A plan will be developed that presents information on what measures are necessary to maintain the integrity of the exterior of the structures in weatherproof condition. The plan must be appropriate to the current and potential future use of the structures. This should include an explanation of each task, methods and materials necessary to complete it, and current cost.

(2) Interior Maintenance. A plan will be developed that presents information on what measures are necessary to maintain the integrity of the interior of the structures. The plan must be appropriate to the current potential future use of the structures. This should include an explanation of each task, methods and materials necessary to complete it, and current cost.

(3) Maintenance Schedule. This element of the maintenance plan must list all routine and preventative maintenance tasks on the exterior and interior of the structures. This element of the plan must show a schedule for the expected completion of each task identified in the exterior and interior maintenance.

(4) Maintenance Inspection Check List. This section identifies, in a programmatic form, evaluation and testing criteria to assess and evaluate problems that can result in a loss of integrity to the structures. These criteria must be developed specifically for the structures in the study from data collected during the building evaluation.

d. Safety Concerns. Special safety conditions pertinent to the buildings must be presented. The Occupational Safety and Health Standards in CFR 29, Parts 1910 and 1926 must be adhered to.

e. Supplies and Sources. A list of appropriate supplies needed for maintenance identified in earlier sections of the plan will be developed for these structures. A source list will also be developed for these supplies.

II. QUALIFICATIONS

A. The minimum professional qualifications for the Principal Investigator, pre-historic and historical archeologists, and key consultants (e.g., architectural historian) are those given in 36 CFR Part 61, Appendix A - Professional Qualifications. For example, the qualifications for architectural historian are a graduate degree in architectural history, art history, historic preservation, or closely-related field, plus one of the following: (1) at least 2 years of full-time experience in research, writing or teaching in American architectural history or restoration architecture with an academic institution, historical

organization or agency, museum, or other professional institution; or (2) substantial contracting through research and publication to the body of scholarly knowledge in the field of American architectural history.

Consultants and supervisory personnel not covered in this regulation who are hired or subcontracted for their special knowledge and expertise must carry academic and experiential qualifications in their own fields of competence. The guidelines in paragraph (b) of this regulation will apply. Such qualifications are to be documented by means of vitae or resume attachments submitted with the study outline or at a later time if the consultant has not been retained at the time of study outline.

B. Any change in personnel after the award of contract must be approved by the Contracting Officer. A person replacing a vacated position must have a comparable background and knowledge of the study area to maintain the same level of expertise and quality of performance. Failure to make an acceptable replacement could result in cancellation of the contract.

C. The Contractor must provide or demonstrate access to the following capabilities:

1. Adequate permanent field and laboratory equipment necessary to conduct operations defined in the scope of work. However, this qualification may be waived under circumstances of extreme need through negotiation.

2. Adequate laboratory and office space and facilities for proper treatment, analysis, and storage of specimens and records likely to be obtained from the project. This does not necessarily include such specialized facilities but does include facilities sufficient to properly preserve or sterilize specimens for any subsequent specialized analysis.

D. Persons working under this contract are considered to be carrying out official agency duties under the Federal land manager's direction, associated with the management of archeological resources and therefore are exempt from obtaining an Antiquities Permit per Section 5(c) of 32 CFR Part 229 - Protection of Archaeological Resources Uniform Regulations. The District shall ensure that Sections 5 and 8 are met through qualifications submitted in the study outline and contract documents, respectively. Section 7 is not applicable; Indian sites and religious sites will not be harmed or destroyed under this contract.

Sources:

Chambers, J. Henry
1976 Cyclical Maintenance for Historic Buildings. National Park Service, Washington, D.C.

Simonson, Kaye Ellen
1990 Maintaining Historic Buildings: An Annotated Bibliography. National Park Service, Washington, D.C.

U.S. Department of the Interior
1987 Guidelines for Rehabilitating Historic Structures.

V. REPORT SPECIFICATIONS

A. Eight (8) copies of the completed reconnaissance survey report, in draft form, shall be submitted to the Omaha District Office. The draft will be edited for major spelling and grammatical errors prior to submittal for review and comment or it will be returned for correction. The draft report will be submitted 160 calendar days after the Contractor is notified to proceed. The Government shall have a maximum of 45 calendar days to review and comment. The Contractor shall have 45 calendar days to include the review comments into the final report and submit the final original report with all negatives, photographs, maps, charts, tables, and standard drawings to the Government. The final edited text shall be prepared on 8-1/2 x 11-inch bond paper, single spaced, and be "camera ready." The Government will reproduce the final report for distribution to appropriate State and Federal agencies per ER 1105-2-50 and interested parties. The Contractor will receive 25 copies for personal use.

B. Neither the Contractor nor his representatives will release or publish any sketch, photograph, report, or other material of any nature obtained or prepared under this contract without specific written approval of the Contracting Officer's Representative.

SECTION E
INSPECTION AND ACCEPTANCE

E.1 52.246-0004

INSPECTION OF SERVICES--FIXED-PRICE (APR 1984)

(a) Definitions. "Services," as used in this clause, includes services performed, workmanship, and material furnished or utilized in the performance of services.

(b) The Contractor shall provide and maintain an inspection system acceptable to the Government covering the services under this contract. Complete records of all inspection work performed by the Contractor shall be maintained and made available to the Government during contract performance and for as long afterwards as the contract requires.

(c) The Government has the right to inspect and test all services called for by the contract, to the extent practicable at all times and places during the term of the contract. The Government shall perform inspections and tests in a manner that will not unduly delay the work.

(d) If any of the services do not conform with contract requirements, the Government may require the Contractor to perform the services or in its conformity with contract requirements, at no increase in contract price. When the defects in services cannot be corrected by reperformance, the Government may (1) require the Contractor to take necessary action to ensure that future performance conforms to contract requirements and (2) reduce the contract price to reflect the reduced value of the services performed.

(e) If the Contractor fails to promptly perform the services again or to take the necessary action to ensure future performance in conformity with contract requirements, the Government may (1) by contract or otherwise, perform the services and charge to the Contractor any cost incurred by the Government that is directly related to the performance of such service or (2) terminate the contract for default.

(End of clause)

(R 7-1902.4 1971 NOV)

E.2

Several coordination meetings with the Contractor and the Technical Officer shall be scheduled as necessary. At least one meeting shall take place with representatives from the Iowa State Historic Preservation Office. These meetings will not require additional travel by the Contractor.



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
215 NORTH 17TH STREET
OMAHA, NEBRASKA 68102-4978



February 6, 1991

REPLY TO
ATTENTION OF

Planning Division

Ms. Barbara Long
Four Mile Research
315 North Elm Street
Cresco, Iowa 52136

Dear Ms. Long:

We propose a modification to contract DACA45-90-C-0129 for historical archeological investigation at Fort Des Moines. A copy of the requested modification is enclosed.

Please provide your proposal to do the work and your cost estimate to the Omaha District, ATTN: CEMRO-CT-C, by February 22, 1991. You are not to proceed with any work beyond the scope of work of the existing contract until your proposal has been received and you are notified to proceed.

Sincerely,

Richard L. Buse
Chief, Plan Formulation Branch
Planning Division

Enclosure



State Historical Society of Iowa

The Historical Division of the Department of Cultural Affairs

March 12, 1991

In reply refer to:
R&C#: 010177009

Mr. Ed Brodnicki
Department of the Army
U. S. Army Engineer District
Corps of Engineers
P. O. Box 5
Omaha, NE 68101-0005

RE: COE - POLK COUNTY - FORT DES MOINES - NEW RESERVE TRAINING CENTER AND
STORAGE BLDG. - #3

Dear Ed:

As I told you informally last week, I have reviewed the changes for the proposed archeological investigation of the new Reserve Center at Fort Des Moines #3. Dr. Dale Henning discussed the changes with me, and Ms. Barbara Long subsequently sent a written copy of the proposal. I recommend approval of the proposal.

I understand that field work is scheduled for the week of March 18th. I am sorry to report that I will be out of the State that week, and so will not be able to visit the site. I look forward to hearing of the results of the investigation.

Sincerely,

Kathy Gourley
Archeologist, Review and Compliance Program
Bureau of Historic Preservation

/kh

cc: Barbara Beving Long

66

402 Iowa Avenue
Iowa City, Iowa 52240
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Capitol Complex
Des Moines, Iowa 50319
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Montauk
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Clermont, Iowa 52135
(319) 423-7173

FOUR MILE RESEARCH COMPANY

Barbara Beving Long
315 North Elm Street, Cresco, Iowa 52136
319/547-4344
Architectural & Historical Research, Surveys, Reports

April 15, 1991

Edward Brodnicki
Staff Archeologist
U.S. Army Corps of Engineers
215 North 17th Street
Omaha, NE 68102-4978

Re: 1. Contract Modification: DACA45-90-C-0129
2. Interim report on intensive archeological investigations
3. Sample of preservation plan survey of building condition

Dear Ed:

Enclosed are a number of documents related to the several facets of our work at Fort Des Moines III.

Contract Modification: DACA45-90-C-0129. There is the signed Contract Modification for the intensive level historic archeological work conducted where the new Reserve Center is planned. Please note that the changes we all discussed in the field were followed.

Interim Report. The interim report and cover letter by Dale Henning summarize the completed field work in the new Reserve Center area and outline the changes which, as you know, are different from those originally called for in the Contract Modification.

We recommend using heavy equipment to remove top soil in order to be certain that there will be no archeological surprises that would delay construction schedules.

Historic Archeological Study. The literature and records search appears to be complete. Historic maps have been assembled and were of considerable use for the intensive level work associated with the new Reserve Center. In addition, previous surveys at Fort Des Moines III and knowledgeable local informants have been consulted, with good results.

We expect to conduct field examinations in June.

Preservation Plan. As we discussed during your visit in the field, I have put together a sample of the forms to be used for the preservation plan, using Building 61/62 to show how the forms are

to be used. The first two pages of the building maintenance plan has a discussion of the individual building's history briefly as it relates to the state of preservation, then a description and characterization of its current condition.

The stabilization and maintenance guide provides abbreviated data in checklist form on the condition of the building (as of March 1991) and also gives schedules for inspecting and maintaining the building. These matters will be discussed in more detail and as they relate specifically to the building in question on a second page. The form entitled Field Notes - Stabilization & Maintenance Guide is the checklist to be used by future surveyors checking the condition of the buildings at Fort Des Moines.

I have not included a sample of the general preservation statements I intend to make part of the preservation plan, for these are very much in the draft stage. You will recall the example I showed you concerning slate roofing. It covered the distinctive characteristics of the material, stabilization procedures, preservation principles and practices, and general recommendations. Salient points were put in bold face to enable the reader to quickly find key points.

Progress with Preservation Plan. I have made two visits to the facility and have completed the field survey on the current condition of buildings at Fort Des Moines. Much of the data has been entered into the computer.

Request for Payment. Now that the field work has been completed for the intensive investigations at the new Reserve Center site, I request payment of one-third of the amount awarded for Contract Modification: DACA45-90-C-0129 (\$5,000).

Now that the field work has been completed for the building maintenance plan and literature and records search for the historical archeological investigations has been completed for contract DACA45-90-C-0129, I request payment for one-quarter of the amount awarded (\$5,000).

That's it. You will of course let me know if you have questions or comments. We haven't nailed down when we will return for the remaining archeological field work--we'll keep you informed. I also enclose a copy of the newspaper article I mentioned about proposed development adjacent to Fort Des Moines.

Regards,


Barbara Beving Long

REQUESTED MODIFICATION TO CONTRACT # DACA-90-C-0129

1. The work covered under these modifications shall be restricted to the area where construction of the new United States Army Reserve Center (USARC) is planned. The area is roughly located east of Chaffee Road, north of Mendker Street, west of Brown Street, and south of Building 46 and the former cavalry drill hill now transferred to Navy responsibility. The attached map is the ultimate authority for the description of the site.

2. The contractor will perform additional investigations in the historic archeological study of Fort Des Moines for the area described above. This study will include the elements described in the scope of work for contract DACA45-90-C-0129 and will also include the following elements:

A. The contractor shall perform a literature and records search for the USARC area as described on page 2 of the existing scope of work. In particular, the contractor shall consult with individuals who are knowledgeable about Fort Des Moines, especially Robert Loes.

3. The contractor will perform additional field investigations.

A. Geomorphological investigations shall be subcontracted for with a qualified geomorphologist, in order to define the normal strata here. This work will serve as a guide throughout manual field testing. A backhoe will be used to excavate short trenches at least five feet deep in locations deemed undisturbed based on historical investigations. The locations of all geomorphological tests will be coordinated between the contractor and the technical officer. At least five separate trenches will be excavated for this purpose. Should unexpected subsurface features be encountered during the backhoe work, these features will be identified, using hand tools.

B. In order to verify locations of buildings and other features identified through historical research, at least twenty (20) shovel test pits (30 x 30 cm) will be excavated in locations which will not be altered significantly by the proposed construction. Building foundations or corners will be exposed and photographed. Soil removed from these tests will be screened through 1/2 inch screen. If soil conditions and the presence of small artifacts warrant, 1/4 inch screen will be employed. Documented building dimensions will be verified using either shovel test pits or probe. The probe used in subsurface investigations will usually be a simple steel rod; a soil sampling tube will be employed where geomorphological correlation is needed.

C. To expedite subsurface testing, a backhoe will be employed in the construction zones. Backhoe tests will not be deep and will be employed in testing for buildings and features noted in the historic record. As building foundations are encountered, they will be manually prepared for record keeping and photography.

Should artifact-bearing soil be encountered, it will be screened using the appropriate (1/4 or 1/2 inch) mesh. Building dimensions will be checked against the historic record using the most appropriate and expeditious method, either with additional backhoe tests, shovel testing or by probing. Methods employed and results will be recorded and reported. All excavations will be backfilled promptly.

D. The contractor will excavate five (5) 1 X 1 meter units that are 1 meter in depth in order to better evaluate cultural material that is observed in the shovel test pits or for other purposes. The placement of these units will be determined following coordination between the contractor and technical officer.

E. Where no evidence for historic resources has been located by documentary research, the contractor will establish a one (1) meter grid which will be probed in search of subsurface anomalies. Anomalies, such as rock or brick concentrations, will be mapped and recorded. All probed grid units will be identified on suitable site maps.

F. Should a series of anomalies be recorded in a probe grid unit, the use of an earth-moving machine (road patrol or similar piece of equipment) might be employed to quickly and cheaply remove the overburden and determine their origins and possible interrelationships. This procedure is suggested as a contingency which might be adopted following consultation and agreement between the contractor, the technical officer and the designated representative of the Iowa State Historic Preservation Officer.

G. If climatic conditions allow, the contractor will perform all field testing during March 16-23, 1991. It is expected that the technical officer can arrange to meet with the contractor on the site during this period.

F. The contractor shall perform this work in accordance with the standards established in the scope of work for DACA45-90-C-0129.

G. A draft report of findings will be provided by the contractor no later than June 1, 1991. This accelerated schedule applies only to the area described in the first paragraph above.

DALE R. HENNING
315 North Elm Street
Cresco, Iowa 52136
319/547-4344

April 16, 1991

Mr. Edward Brodnicki
Staff Archeologist
U.S. Army Corps of Engineers
215 North 17th Street
Omaha, Nebraska 68102-4978

RE: Contract Modification: DACA45-90-C-0129

Dear Ed;

Enclosed please find an interim report which summarizes the completed field work in the project area. Please note that the further modifications we discussed in the field were followed. Most notably, we replaced the employment of probe grid units for the twenty shovel tests to be located using a random stratified non-aligned sampling design. Further, again following discussions in the field, I am recommending most strongly the employment of a large earth-moving device to strip away the topsoil in order to be absolutely certain that no cultural resources "surprises" await the unwary during construction of the new Reserve facility.

I am very pleased with our progress on this project to date and hope that you are as well.

Sincerely,

Dale R. Henning
Dale R. Henning
Subcontractor, Archeology



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
215 NORTH 17TH STREET
OMAHA, NEBRASKA 68102-4978

REPLY TO
ATTENTION OF

Planning Division

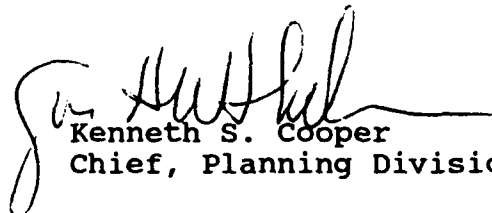
Ms. Barbara Long
Fourmile Research Company
315 North Elm
Cresco, Iowa 52136

Dear Ms. Long:

We would like to modify the existing contract (DACA45-91-C-0129) for archeological and architectural work at Fort Des Moines. We request that you perform additional testing at Fort Des Moines, which you have discussed with Edward Brodnicki of the Omaha District and is described in the enclosed scope of work.

Please contact Loreen Blume at (402) 221-3189 and provide a proposal for this work. The proposal shall include a description of services and their cost.

Sincerely,


Kenneth S. Cooper
Chief, Planning Division

Enclosure

FOUR MILE RESEARCH COMPANY

Barbara Beving Long
315 North Elm Street, Cresco, Iowa 52136
319/547-4344
Architectural & Historical Research, Surveys, Reports

June 10, 1991

Kenneth S. Cooper
Chief, Planning Division
c/o Loreen Blume
Department of the Army
Corps of Engineers
215 N. 17th Street
Omaha, NE 68102-4978

Dear Mr. Cooper:

After talking with Edward Brodnicki, we believe the scope of work for Modification #2 to Contract # DACA45-91-C-0129 should read as outlined below. (Changes are underlined.) Modifications follow:

SCOPE OF WORK FOR MODIFICATION TO
CONTRACT DACA45-91-C-0129

Mechanical removal or stripping of the upper 6" to 12" of soil that occupies the areas that will be disturbed by construction of the new U.S. Army Reserve Center is required. Machinery can include a road grader, bellypan earth mover, bulldozer, or front end loader. During and following stripping of the topsoil, the resulting surface will be carefully examined by a qualified professional archeologist in order to locate and evaluate any cultural resources that are exposed. The results will be analyzed and presented in the narrative report that is already required for the archeological study of Fort Des Moines.

We understand that Brodnicki has spoken with officials of the Army Reserve unit, and that they are aware of the visual effect of the work to be performed. Irrespective of how carefully the stripped areas are backfilled and smoothed, they will undoubtedly grow up in weeds and be difficult to mow and maintain throughout the remainder of the summer months. This fact should be clearly understood by all parties. The areas to be stripped and investigated are marked on the enclosed map.

Should evidence for cultural resources that are not documented historically or are otherwise deemed of significance be revealed by

stripping, the stripped areas or portions thereof will remain open until a suitable process for mitigation can be arrived at through discussion among the contracting archeologist, the contracting historian, the representative of the Corps of Engineers and a representative of the Iowa Office of Historic Preservation. If no significant data is revealed by stripping, the disturbed areas will be backfilled immediately if Cost Statement A (with backfilling) (attached) is selected.

Sincerely,


Barbara Beving Long

FOUR MILE RESEARCH COMPANY

Barbara Beving Long
315 North Elm Street, Cresco, Iowa 52136
319/547-4344
Architectural & Historical Research, Surveys, Reports

September 9, 1991

Gary Bianchi
Fort Des Moines
Des Moines, IA

Dear Gary:

I write regarding the recent archeological work we completed at Fort Des Moines on August 14 and 15, 1991. Upon returning to Cresco on August 29, a message from Ed Brodnicki, archeologist with the Corps of Engineers, noted that some sort of leak had occurred in the vicinity of the archeological work which had required the use of an earth moving machine. Brodnicki requested that we contact you, and Dale Henning called you that same day.

You stated that the cause of the leak was probably a piece of the underground water system, a stop box, that is not as deeply buried as the rest of the system. You and Henning agreed that we would look into the matter and that it was probably not a major problem.

Naturally, we wanted to take care of the situation as quickly and easily as possible. We contacted a plumber who specializes in such leaks and who is familiar with federal contracting work. He assured us he would take care of the problem the first week of September and contact us only if the matter was more serious than we all thought. As we have heard nothing from him or from you, we assume the matter has been resolved to your satisfaction. We certainly have appreciated your cooperative attitude.

Sincerely,

Barbara Beving Long
Barbara Beving Long

cc: Ed Brodnicki

FOUR MILE RESEARCH COMPANY

Barbara Beving Long
315 North Elm Street, Cresco, Iowa 52136
319/547-4344
Architectural & Historical Research, Surveys, Reports

September 18, 1991

Ed Brodnicki
Army Corps of Engineers
215 North 17th Street
Omaha, NE 68102-4978

Dear Ed:

Enclosed are the required number of draft copies of the Historic Archeological Study of Fort Des Moines III in Des Moines, Polk County, Iowa (DACA45-90-C-0129). Please note that these draft copies do not contain the field notes. They will appear in Appendix C of the final report.

Sincerely,


Barbara Beving Long



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
215 NORTH 17TH STREET
OMAHA, NEBRASKA 68102-4978
December 31, 1991



REPLY TO
ATTENTION OF

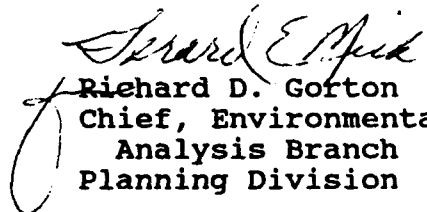
Planning Division

Ms. Barbara Beving Long
Four Mile Research Company
315 North Elm Street
Cresco, Iowa 52136

Dear Ms. Long:

Enclosed find the comments on the draft reported entitled
"HISTORIC ARCHEOLOGICAL STUDY: FORT DES MOINES III, DES MOINES,
POLK COUNTY, IOWA" prepared by your firm. If you have any
questions, please contact Edward Brodnicki at (402) 221-4888.

Sincerely,


Richard D. Gorton
Chief, Environmental
Analysis Branch
Planning Division

Enclosure

"HISTORIC ARCHEOLOGICAL STUDY

FORT DES MOINES III
DES MOINES, POLK COUNTY, IOWA"

Prepared by Dale R. Henning and Barbara Beving Long
Four Mile Research Company
315 North Elm Street
Cresco, Iowa 52136

GENERAL COMMENTS

1. The current organization of the report is confusing and difficult to understand in its present form. For example, the discussion of the methodology and the recommendations are presented for each architectural unit that was archeologically tested. It would be more economical and clearer to present the methodology in a single section, and the recommendations should also be summarized in a separate single section. Consequently, the existing report should be rewritten and reorganized in accordance with the outline specified in section I.E.1.d. (pages 4 and 5) of the scope of work, specified below:

d. Comprehensive Investigation Report. The Contractor shall prepare a comprehensive investigation report which details the work done, the study rationale, the investigation results, recommendations for additional work, and management recommendations. The report shall include, but shall not be limited to, the following sections:

(1) Report Documentation Page, DD Form 1473.
Complete all but sections 2 and 3.

(2) Title Page. The study type, location (project name and counties), report date, name of Contractor, author/Principal Investigator, and Corps of Engineers contract number.

(3) Abstract. A brief synopsis of the work conducted, number and types of cultural resources identified and overall significance, and an overview of the management recommendations, which shall not exceed 150 words.

(4) Introduction. Identify the sponsor and Contractor, the purpose for the investigation, discuss the type of investigation performed and location, indicate the disposition of the artifacts, and original records or other data. Discuss the report organization.

(5) Regional Location and Environment. A detailed description of the reconnaissance area including physical features and terrain, past and present vegetation and fauna, field conditions, past and present land uses, weather conditions during field work and weather patterns for the study area in general. The study area must be discussed within the larger framework of Iowa history.

(6) Previous Work. An enumeration and description of all previous cultural resources investigations conducted within the reconnaissance area, names of principal investigators, dates of the studies, study results, and an overview of the general adequacy and deficiencies of the past work.

(7) Overview. A detailed overview of the history and of the project area, as revealed by the literature and records search. The relationship of the cultural history and prehistory of the reconnaissance area to the regional cultural history and prehistory of the study area shall be presented.

(8) Research Orientation. Develop and present theoretical and/or substantive goals and the methodology to be used in achieving them. Address problems and testable hypotheses that are realistic for this level of study.

(9) Methodology. Present the procedures used to accomplish the research design. Discuss how the field work was organized, scheduled, and undertaken. Detail the laboratory procedures and the methods used to analyze artifacts and other data recovered from the field.

(10) Inventory. Address all cultural resources or potential cultural resources identified by the literature search and/or the field investigation.

(a) Sites identified during the literature and records search which could not be relocated during the field investigation shall be addressed and the following information shall be provided: (1) site name; (2) reported location(s); (3) site description(s); (4) reference sources; (5) probable reason for not being able to locate it in the field (inundation, erosion, construction, agriculture, ephemeral nature of the resource, discrepancies in location, etc.), and recommendations.

(b) The information provided in this section for cultural resources or potential cultural resources located or relocated during the course of the field investigation shall include, but shall not be limited to: site name (if any); site number; County; State; site type (lithic scatter, farmstead, mound, etc.); component(s) or probable component(s); elevation; property owner(s) and address(es); tenant and address; a verbal description of the topographic position of the site; site size (or presumed size); strata and depth (if known); present vegetation; ground surface visibility at time of field investigation (in percent); nearest water (name and distance and pool elevation); condition (address current, projected, or past known impacts); if surface collections have been made, by whom and when; a review of artifacts collected; a description of any previous investigations at the site, location, and artifacts collected; a description of any previous investigations at the site, location of artifacts, other material reported by owner, recommendations, and site specific recommendations, and remarks. The site specific recommendations shall include, but shall not be limited to, any recommendations for testing for National Register eligibility, if needed. The exact meaning of the recommended

testing shall be indicated; e.g., to determine a site's aerial extent or depth, to verify or determine components present, to assess research potential, and/or to determine site integrity. The recommendations section shall also include any interim measures which can be taken to preserve the resource until it can be tested for National Register significance (stop cultivation, fence, etc.). If the Contractor determines that sufficient information was gathered during the course of this investigation to allow a determination of eligibility for inclusion in the National Register of Historic Places, then the Contractor shall complete a draft of the National Register nomination forms.

(c) The maps shall include an overall site map of all sites in the project and individual site maps. The relationship of the sites on the site map shall be clearly established in relationship to legal and topographic features of the area. The maps shall be clear, professional quality maps that can be used to easily relocate the sites and site features. The submission of sketch maps is not acceptable for use in the report.

(11) Study Area Recommendations. Synopses of the recommendations offered for individual resources and of adverse effects to cultural resource within the study area, their frequency of occurrence, and the impacts.

(12) References. Use the American Antiquity format for every publication, work, or interview cited in the report.

(13) Appendices. Official Iowa site forms and field notes, maps, photographs, and a list of all artifacts collected. All locational data shall be restricted to state site forms which will be bound separately.

2. The writing style of the current report is anecdotal in style, which is not appropriate for a professional report. For example, sentences such as "Once again, the trusty steel probe was brought in action" on page III.13, seem appropriate for field notes, but not in a professional report. This style is used throughout the report and should be rewritten to make it consistent with accepted guidelines for professional reports.

3. One recurrent problem that was noted in the discussion of the testing of each building site is lack of sufficient justification for the recommendations. For example, in the discussion of Building T305 on page III.13, the statement is made "Again, it would be a comparatively simple matter to excavate the remains, but it seems hardly worthwhile at this time." Why it is not worthwhile? Why not at this time, What conditions at a later time would make it worthwhile? Each recommendation must include a clearly reasoned and reasonable justification that is clearly associated with a set of research goals that have been stated earlier in the report.

4. The use of photographs would increase the clarity and the informative quality of the report. In particular, historic photographs that present views of the historic structures that have been destroyed would be helpful.

5. The report should be paginated in a routine manner. This means that all pages should have a page number, including those in the appendices and plates. These pages should be referenced in the table of contents.

SPECIFIC COMMENTS

Appendix B-1 Square 17, Level 1. Why were these artifacts discarded?

Appendix B-1 Square 18, Level 2. Why were these artifacts discarded?

Appendix B-16. This object is thought to be part of window hardware used to prop open a top-hung window.

FOUR MILE RESEARCH COMPANY

Barbara Beving Long
315 North Elm Street, Cresco, Iowa 52136
319/547-4344
Architectural & Historical Research, Surveys, Reports

January 15, 1992

Ed Brodnicki
Army Corps of Engineers
215 North 17th Street
Omaha, NE 68102-4978

Dear Ed:

On January 6, 1992 we received comments on the draft of the historic archeological study of Fort Des Moines III. We were very sorry that you did not feel comfortable about discussing any of these matters on the telephone but now perhaps we understand why you failed to return any of our calls.

We will recast the report to more strictly follow section I.E.1.d. in the scope of work. Section I.E.1.d. appears to us to be generic and wholly related to prehistoric, not historic, archeology projects. The wording seemed to have been taken from another scope of work not designed to cope with problems specific to Fort Des Moines III.

We would like to outline the reasons behind our decision to deviate from those outlined in I.E.1.d. and assure you we made the changes without the intention of causing the reader dismay and irritation. Because of the generic nature of many of the items, we felt that by adjusting the items to meet the particular needs of this project, the results would be improved.

The entire section I.E.1.d., items (1) through (13) has been repeated in the comments we recently received. This suggests that we failed to include any of items (1) through (13) in the draft report, which is, of course, incorrect.

Regarding item (1), we were not supplied with DD Form 1473 and now formally request two (2) copies of this form. Items (2) Title Page and (3) Abstract are complete. Item (4) Introduction is complete except for a discussion of report organization and disposition of artifacts. Item (11) Study Area Recommendations is found in our Chapter V. Recommendations. Item (12) References is complete.

Item (13) Appendices is complete except for an Iowa site form for Fort Des Moines III. The scope of work states that "All locational data shall be restricted to state site forms which will be bound

separately." We believe separate binding is unnecessary because all summary information on the Fort Des Moines III site can be placed on one official site form. Unless we hear to the contrary from you, we to include an official Office of the State Archeologist (OSA) site form locating and describing the site of Fort Des Moines III in the Appendices. If an existing site form contains the requisite data, we will reprint that form for this report. If we find that an existing official site form on Fort Des Moines III does not contain the data you listed, we will prepare a new site form and submit it to the OSA for approval and include it in our Appendices.

The boundaries as specified in the scope of work are the "site" of or Fort Des Moines III; we regard the building locations as "elements" of that single site. Each of these elements is located on the maps submitted in the manuscript.

Items (5) Regional Location and Environment and (7) Overview are found in Chapter II., the archeological evolution of the site. These will be re-organized with more headings which parallel those of section I.E.1.d. Item (6) Previous Work will be added.

Discussion of item (8) Research Orientation and (9) Methodology will be placed in a single section. Unless we hear otherwise from you, we will assume that you prefer to define "methodology" as the series of techniques employed in our work rather than the more current definition of "a study of method" or the body of theory which guides selection of techniques employed. We feel that some discussion of the body of theory should also be included and plan to do so.

Item (10) Inventory is found in Chapters III. and IV. of the report. As you know, the course of the project became much more challenging as we sought to respond to the several changes in the contract. We feel strongly that this division into two sections or chapters is by far the best way to handle the discussion of the cultural resources identified by the literature search and/or the field investigation. We plan to label these chapters as Item (10) Inventory and to divide the text into two sections.

We are sorry that you regard the writing style as inappropriate for a professional report and will strive to remove the offending language.

General Comment 3. dealt with the lack of sufficient justification for recommendations regarding specific building locations. We intend to address the justification in some detail in item (9) Methodology, then include a summary statement relating to that system of justifications with each building location discussion. This was a problem that we wrestled mightily with and felt that it had been brought to solution. Greater care in presentation will be taken in preparation of the final report.

General Comment 4. discussed the use of photographs. We believe that the addition of historic views, while interesting, is well beyond the scope of this project.

We agree that the pages should be numbered in a "routine manner," as are 90 percent of them in the draft. Are we correct that you would like us to add page numbers to the correspondence and contracts which came from your agency and which are not numbered? Unless we hear differently from you, we will add page numbers to the correspondence and contracts which came from your agency and are not numbered in our draft.

Regarding the three brief specific comments, we will address the question of why artifacts were discarded. We appreciate the comment about the artifact shown on Appendix B-16.

Since no reference was made in your comments regarding the content of the report and the recommendations we made, we assume that our findings are acceptable and accepted. We will seek to make the revisions outlined above and have the final copy in your hands as soon as possible.

Please contact us as soon as possible if you have comments about items discussed in this letter because we plan to begin the necessary changes immediately. If there are any differences, these can surely be worked out over the phone, followed by a written "summary of conversation" if necessary. As you know, we enjoyed doing this project a great deal and want you to be fully satisfied with the results of these investigations.

Sincerely,


Barbara Beving Long



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
215 NORTH 17TH STREET
OMAHA, NEBRASKA 68102-4978



REPLY TO
ATTENTION OF

March 10, 1992

Rec'd 3/21/92

Planning Division

Ms. Barbara Long
315 North Elm Street
Cresco, Iowa 52136

Dear Ms. Long:

This letter is in response to your letter of January 15, 1992, regarding the draft report entitled "HISTORIC ARCHEOLOGICAL STUDY; FORT DES MOINES III; DES MOINES, POLK COUNTY, IOWA" prepared by Dale R. Henning and Barbara Beving Long. We would like to emphasize at this point that we had few substantive comments to make about the draft report in our January 6, 1992 letter; for example all the recommendations seem reasonable. We do believe that the draft report was, in general, acceptable.

In your letter you say that our comments of January 6, 1992, suggest that your draft report failed to include any of the work items detailed in the scope of work. We certainly did not suggest or imply that you failed to do the proper work, only that the draft deviated substantially in style and format from the scope of work, not in content. Our comments were largely restricted to the style and format of the draft report, and we only had minor questions that related to the content.

Our scopes of work contain elements that are designed to provide information in conformity with Iowa, general federal and specific Department of Army guidelines. The format specified in the scope of work for this project meets those standards.

Four Mile Research Company has prepared two previous reports for this office; one on Camp Dodge and another on the architectural resources on Fort Des Moines. Both reports were excellent and did not deviate from the specified format and used a professionally acceptable writing style. Responses to your comments are provided below:

General Comment No.1. You state in your letter of January 15, 1992, that you will recast the report to more strictly follow the format specified in section of I.E.1.d. of the scope of work. This effort will result in an amended report that is more nearly in compliance with the scope of work.

We will supply two copies of DD 1473 as requested to comply with item 1 in section I.E.1.d. in the scope of work, which specifies the format of the report. We do agree items 2 (Title or Page) and 3 (Abstract) of the format are satisfied in the draft report. Item 4 (Introduction) is complete, with the exception of the discussion of report organization and disposition of artifacts. Please provide this discussion in the amended draft.

Item 5 (Regional Location and Environment) was covered in Chapter II, on the archeological evolution of the site. You mention that item 6 (Previous Work) will be added in the amended draft. You also note that item 7 (Overview) was found in Chapter II and will be reorganized to comply with the scope of work I.E.1.d.

You mention that item 8 (Research Orientation) and item 9 (Methodology) will be placed within a single section; that is acceptable if it is correctly labeled. We concur with your definition of methodology and agree some discussion of theory is appropriate in this case.

We agree that the division of the section in the draft report covered under item 10 (Inventory) can be divided into two sections that are geographically separated.

Item 11 (Study Area Recommendations) are covered in Chapter V in the draft report. Item 12 (References) is complete in the reference section of the report.

Item 13 (Appendices) are complete, with the exception of the Fort Des Moines III site form. We do agree that protecting the locational data is inappropriate in this case and your measures to provide a copy of the site form or prepare a new one are acceptable.

General Comment 2. We did not regard the language in the draft report as offensive, only not suitable for a professional report.

General Comment 3. We accept your solution to providing more detail on the justifications for the recommendations.

General Comment 4. The inclusion of historic photographs in the report is outside the scope.

General Comment 5. All pages, including correspondence and contracts should be numbered.

Specific Comments. We note that you will address the issue of the reason for discarding artifacts in Square 17, Level 1 and Square 18, level 2 on page B-1 .

Four Mile Research has a history of performing quality work for this office and it was not our intent to impugn your reputation. We do require that all work performed for our office conform to the scope of work and generally acceptable professional standards. If you have any questions, please contact Edward Brodnicki at (402)221-4888.

Sincerely,



Richard D. Gorton
Chief, Environmental Analysis
Branch
Planning Division

APPENDIX B. ARTIFACT INVENTORY

APPENDIX B. INVENTORY OF ARTIFACTS EXCAVATED, SUBSURFACE TESTS EAST OF CHAFFEE ROAD

Most items recovered were easily identified by the historic archeologist in charge of the project. Some items, however, were puzzling or some corroboration of identification was desired. Thus, five items were sent to G. Joseph Hudak, Senior Associate, Malcolm Pirnie Environmental Engineers, Minneapolis, for his inspection. He took these questionable items to Charles Dieson, Conservator, Historic Fort Snelling Conservation Laboratory, Fort Snelling, Twin Cities, Minnesota, for detailed identification and description. The project is indebted to these two gentlemen. The items they worked with are discussed in detail in the appropriate context below.

Our instructions (Appendix A) were to leave other than diagnostic artifacts encountered in the locations where they were found. Considering that many of the items recovered were foundation stone or cinder block, bricks, large chunks of sidewalk, etc., this was an easy order to follow. In the case of excavations conducted on the 50 cm and meter test squares, the context of small objects (we described large objects and left them) was important to our interpretations; thus, those items which did not pass through 1/2 inch screen were retained until they could be washed and subjected to laboratory analysis. Artifacts encountered in backhoe trenches and in the final site grading were retained only if they appeared to have some diagnostic value.

Some explanation of the following is in order. The mortar fragments inventoried are generally of lime mortar. Tile fragments abound; they can be of sewer tile or building tile fragments. When possible, the kind of tile is identified; otherwise, they are identified simply as tile fragments. River pebbles and limestone fragments may seem beneath one's dignity to record. However, in the soil that we are working in, if an absolutely undisturbed profile is encountered, there will be no stone; this is an aeolian soil. River pebbles were brought into Fort Des Moines, probably in part as river gravel for temporary walks and driveways. Limestone fragments may be the result of foundation stone dressing or may have been introduced as crushed limestone, again for temporary driveways, sidewalks and parking areas. The readily available slag and cinders from the many coal-fired furnaces at the fort also served as cover for driveway and parking areas.

50 Cm Test Squares

The contract called for the excavation of 20 test squares at least 30 cm on the side and to a depth of at least two feet, with all

matrix to be passed through 1/4 inch screen. Some field modifications were made; our squares were made 50 cm. on the side, which made the excavations easier; each unit was excavated in 10 cm levels to 40 cm or to sterile soil if materials were found below that level; and 1/2 inch screen was deemed quite adequate under the weather and soils conditions we encountered. All features were excavated by Hawley and Olson supervised by Henning. All excavations were backfilled carefully and the sod replaced. In some instances, no artifacts were recovered in a 10 cm level; these levels with no recovered data (artifacts) are not discussed and may be "skipped."

The screening process was simple. Anything which would not pass through the 1/2 inch screen was retained, with the exception of bricks and large segments of limestone foundation in locations on or near known structure sites. These were expected at the locations being tested and would not contribute to the conclusions of our investigations. Most of the test squares were placed away from known structures in order to test for the unknown. The lack of quantities of artifacts is a tribute to military cleanliness and penchant for order.

All materials recovered in the subsurface tests were washed and subjected to laboratory analysis by Dale Henning. Most items were counted and discarded; they would be of no value to future investigators and constitute a storage problem. The retained items were regarded as valuable to our investigations and, perhaps, in the future. Discarded and retained items are listed separated below.

Square 1

Level 1 (0-10 cm)

Discarded	
Slag/Clinker	34
Limestone fragments	5
6d round head nail	1

Level 2 (10-20 cm)

Discarded	
Slag/Clinker	6
Limestone fragments	3

Level 3 (20-30 cm)

Discarded	
Limestone fragment	1
Mortar fragment	1

Square 2

Level 1 (0-10 cm)

Discarded

Stone, burned	3
Slate, roofing, fragment	1
Level 2 (10-20 cm)	
Discarded	
Building tile fragments (burned)	14
Limestone	2
Level 3 (20-30 cm)	
Discarded	
Tile or brick fragments	3
River pebbles	3

Square 3

Level 1 (0-10 cm)	
Discarded	
Slag/clinker	6
Limestone fragments	1
Retained	
Scissors, midsection, rusted	1
Level 2 (10-20 cm)	
Retained (nothing discarded)	
Scissors handle fragment, rusted	1
Cal. 30 expended round: 30-06 or .30 Army. Frankfort arsenal. Brass casing, some nickel plating remains. Perhaps used for guard duty.	1

Square 4

Level 1 (0-10 cm)	
Discarded	
Slag/clinker	1
River pebbles	3
Mortar fragment	1
Nail, round, 10d	1
Level 2 (10-20 cm)	
Discarded	
Clay tile fragment	1
Mortar fragment	1
Metal fragment	1

Square 5

Level 1 (0-10 cm)	
Discarded	
Slag/clinker	2
Tile fragments	3
Mortar fragments	1

Nail fragment	1
Level 2 (10-20 cm)	
Discarded	
Slag/clinker	15
Tile fragments	4
River pebble	1
Concrete fragments	+100
Mortar fragments	12
Retained	
Brass object, fragment, cast; could not be identified.	1
(Perhaps window hardware used to prop open a top-hung window	
Level 3 (20-30 cm)	
Discarded	
Coal/clinker	2
Sewer tile fragments	6
Brick, complete (commercial made)	2
Concrete (cinder block) fragments	+500
Rock fragments (limestone)	11
Nail, 6d, round	1
Wire (iron) fragments	8
Retained	
Marble, limestone, c 1" diameter	1
Level 4 (30-40 cm)	
Discarded	
Building tile fragment	1
River pebbles	6
Mortar fragments	3
Level 5 (40-50 cm)	
Discarded	
Building tile fragments	2
Concrete (cinder block) fragments	+100
River pebbles	9
Mortar fragments	8
Square 6	
Level 1 (0-10 cm)	
Discarded	
Clinker/slag	8
Level 5 (40-50 cm)	
Discarded	
Clinker/slag	2
Limestone fragments	2

Window glass	1
Square 7	
Level 1 (0-10 cm)	
Discarded	
Clinker/slag	8
Mortar fragments	3
Level 2 (10-20 cm)	
Discarded	
Clinker/slag	1
Limestone pebble	1
Square 8	
Level 1 (0-10 cm)	
Discarded	
Tile fragments	1
Limestone fragment	1
Level 2 (10-20 cm)	
Discarded	
Clinker/slag	7
Brick fragments	2
River pebbles	2
Mortar fragment	1
Level 3 (20-30 cm)	
Discarded	
Clinker/slag	1
Building tile fragment	1
Mortar fragment	1
Roofing nail, 1"	1
Level 4 (30-40 cm)	
Discarded	
Clinker/slag	2
Tile fragment	1
Mortar fragment	1
Level 5 (40-50 cm)	
Discarded	
River pebble	1
Square 9	
Level 1 (0-10 cm)	
Discarded	
Clinker/coal	31
Glass bottle fragment, thin, melted	1
Retained	

Threaded brass cap, octagonal
 Top: 14 mm across
 Circular screw cap: 11 mm exterior
 " " " : 8 mm interior
 " " " : 5 mm depth
 Height: 7 mm
 Cap function not determined. Consultants
 Hudak and Dieson agreed that it might have
 functioned as a tooth paste or powder
 container (can or tube) cap. There is a
 curvilinear motif embossed on the cap top
 which could not be identified 1

Level 2 (10-20 cm)
 Discarded
 Clinker/slag/coal +100
 River pebble 1
 Melted glass fragments 2
 Thin bottle fragment, clear glass 1

Level 3 (20-30 cm)
 Discarded
 Clinker/slag/coal +100

Square 10

Level 1 (0-10 cm)
 Discarded
 Clinker/slag 3
 Mortar fragment 1
 Sandstone, burned 1

Level 2 (10-20 cm)
 Discarded
 Fired earth fragment 1

Level 3 (20-30 cm)
 Retained
 .243 cal. blank practice round (M-16)
 1983 Lake City Arsenal 1

Square 11

Level 1 (0-10 cm)
 Discarded
 Clinker/slag 17
 River pebbles 2
 Mortar fragment 1

Level 2 (10-20 cm)
 Discarded
 Clinker/slag 25

Mortar fragments	6
River pebbles	3

Level 5 (40-50 cm)
Discarded
Clinker/slag 6

Square 12

Level 1 (0-10 cm)
Discarded
Clinker/slag 1
River pebble 1
Concrete fragments 2

Level 2 (10-20 cm)
Discarded
River pebble 7

Square 13

Level 1 (0-10 cm)
Discarded
Clinker/slag 7
Limestone fragments 5
River pebble 1
Concrete fragment 1
Bone (mammal, probably domesticated) fragment 1

Square 14

Level 1 (0-10 cm)
Discarded
Clinker/slag 1
Limestone pebble 1
Window glass fragments 6

Level 2 (10-20 cm)
Discarded
Clinker/slag 4
Window glass fragments 1

Level 4 (30-40 cm)
Discarded
Clinker/slag 2
Brick (1/4) 1

Square 15

No artifacts were recovered from the excavations in square 15.

Square 16

Level 1 (0-10 cm)

Discarded

Building tile fragments 2

Level 2 (10-20 cm)

Discarded

River pebble 1

Square 17

Level 1 (0-10 cm)

Discarded

Clinker/slag 3

River pebbles 2

Plastic bow (child's) 1

Plastic red cup handle fragment 1

Glass, clear, bottle fragment 1

Glass, translucent bowl or lamp globe
fragment, fluted 1

Level 2 (10-20 cm)

Discarded

Clinker/slag 1

Limestone fragment 1

Level 3 (20-30 cm)

Discarded

Clinker/slag 1

Mortar fragment 1

Level 4 (30-40 cm)

Discarded

Clinker/slag 1

Burned limestone fragment 1

Mortar fragment 1

Square 18

Level 1 (0-10 cm)

Discarded

Building tile fragment 1

River pebbles 3

Bitumen fragments, burned 4

Glass (clear) bottle fragments 2

Nail, 10d, round 1

Level 2 (10-20 cm)

Discarded

Clinker/slag 6

Building tile 9

River pebbles	4
Bitumen chunks	3
Roofing slate fragment	1
Nail, 10d, round	1
Plate glass fragments	3

Square 19

Level 1 (0-10 cm)

Discarded

Building tile fragment	1
Nail, 8d, round	1
Heavy iron wire fragment	1
Glass, amber (beer?) bottle fragment	1
Glass, clear, brick or tile fragment	1

Level 2 (10-20 cm)

Discarded

Sewer tile fragment	1
Burned sandstone	1
Roofing slate fragment	1
White glass, thick, opaque, fragment	1
Wood charcoal fragment	1

Square 20

Level 1 (0-10 cm)

Discarded

Carbonized coal fragments	22
Tile fragments	3
Limestone fragments	1
River pebbles	3

Retained

Glass, clear, round bottle side at base: ...TLERS, INC. in relief on lower side	1
Metal (probably zinc) object, circular, 'T'-shape in profile, with hole bisecting the 'T' profile. Overall height: 8 mm; Diameter, top of 'T': 13 mm; Diameter, leg of 'T': 6 mm; Diameter of hole: 4 mm. Item may be part of plumbing system.	1

Level 2 (10-20 cm)

Discarded

Slag/coal	7
Limestone fragments	3
River pebbles	2
Bone (bird) sliver	1

One meter test squares

The contract required that five one by one meter squares one meter deep (a cubic meter) would be excavated using recovery methods comparable to those used on the 50 cm squares. The placement of these meter tests (Figure 8) was agreed upon following discussion between Henning and Brodnicki. One additional meter square (m 6, Figure 8) was excavated to determine the depth of the basement in the Double NCO Quarters and to gain some insight to the method employed in razing those buildings and the amount of building refuse which might be encountered.

Meter Square 1

Level 1 (0-10 cm)

Discarded

Slag/clinker	2
Tile fragments	6
Cinder block fragments, large	16
Asphalt roofing fragments	2
River pebbles	3
Glass bottle (jar) fragments	2
Window glass fragment	1
Nails, round, 6d	2
" " , 8d	2
" " , roofing	1

Retained

Opaque glass marble	1
---------------------------	---

Level 3 (20-30 cm)

Discarded

Mortar fragments	18
River pebbles	2

Meter Square 2

Level 1 (0-10 cm)

Discarded

Slag/coal	67
Tile fragments	2
Limestone fragments	7
Concrete fragments	2
Nails, 6d	4
Can(?) fragments	4
Metal fragments, very thin, rusted	4
Wood fragments	22
Leather fragments	3

Retained

Token. About the size of a quarter, this coin-like object is made of a porous substance, probably a metal

substitute. Broken and badly deteriorated, the word RECEIPT can be discerned on one surface paralleling the edge. 1
 Phonograph record fragment, probably 78 RPM 1
 Glass, clear, bottle fragment, probably base. Fits to fragment from Level 2, same square. Form on glued fragments suggests a chubby, smiling human face. 1

Level 2 (10-20 cm)

Discarded

Limestone pebble 1
 Glass, clear, rectangular bottle side 1
 Window glass 1
 Nail, round, 4d 1
 " " , 6d 1

Retained

Glass, clear, bottle fragment, probably base. Fits to fragment from Level 1, same square (see Level 1, Test Square 2, above). 1
 Glass, amber, caster base (probably bed) broken 1

Meter Square 3

Level 1 (0-10 cm)

Discarded

Slag +100

Level 2 (10-20 cm)

Discarded

Slag/coal +100

Level 3 (20-30 cm)

Discarded

Slag/coal 25

Meter Square 4

This test square was established on undisturbed soil; nothing was recovered in the screen.

Meter Square 5

Level 1 (0-10 cm)

Discarded

Slag/fired coal +100
 Limestone pebbles 5
 Nail, round, 10d 1

Window glass fragments	2
Clear glass bottle fragment	1

Level 2 (10-20 cm)

Discarded

Slag	+25
Mortar, cement	1
Nail, 10d, round	1
Cup fragment, white restaurant ware	1

Meter Square 6

This meter square was dug into the site of the double NCO quarters (Buildings 98-99), which had been razed after WWII. The decision to save only unexpected items which might prove of diagnostic value was made in the field. Much building refuse was encountered including cement slabs, brick, limestone, roofing slate and sewer tile fragments. Round nails, some window glass and one piece of bright blue Fiesta ware (common dinner ware) were encountered, but not saved for laboratory analysis.

Artifacts retained, surface

Two objects were retained for analysis. A small brass military (US stamped on one side) lock (cylinder, for use with a key) was found on the surface 1 m east of 50 cm square 11. It had been cut with a bolt-cutter. It has been retained in the collection taken from the site.

A medium-sized, deep, white enamelware plate (9.5 inches diameter, c. 1.25 inch depth), was found in a backhoe trench dug across Building T400. It is probably a pie plate. Although not treated well by the instrument used to locate it, it was retained for measurement and description, then discarded.

Artifacts retained, grading

The directive pertinent to artifact removal (Appendix A) was strictly adhered to during the grading which was conducted in mid-August. We retained only objects which would be of assistance to our interpretations. Materials that could be expected in the contexts (near or away from known building sites) we worked in were left on the ground, in place as much as possible. Of course, we saw many bricks, cinder blocks and fragments thereof, roof slates and glass, etc.; these items were not collected because they lacked diagnostic value. The locations which were stripped are referred to as "scrapes". Each "scrape" was initially faced with sod removal, which was necessarily a bit rough, but following removal of the sod root system, a smooth horizontal profile was revealed. Each scrape removed the soil to a depth of about 12", at which level any evidence for underground disturbance was quite clearly evident.

Artifacts retained from each scrape are inventoried below.

Scrape 1

Scrape 1 was conducted on a rectangular area about 200 feet long just east of Buildings 50 and 51, the War Department Theater and Administration Buildings, respectively (Figures 4, 7). While well away from building sites, our scrape might reveal activities emanating out of these and other nearby buildings. Administration functioned during both conflicts as did the chapel located to the northeast of the scrape.

Artifacts retained for analysis

Wood rasp, plano-convex, 13" length, rusted, but little evidence for wear. Item discarded after analysis.

Nail, round, 16d. Item discarded after analysis.

Bone, beef foreleg, cut with butcher's saw. Discarded.

Plastic model airplane part, lower engine nacelle, one of two or more that fit under the lower leading edge of the wing. Color: yellow, length: 47 mm, maximum width: 13 mm. A child's toy, not part of a flying model.

United States coin, 25 cents, 1941, worn, no mint mark.

Scrape 2

Scrape 2 was located just east of the T400 Building site, a WWII Nurses Quarters. Here, we expected to locate, in addition to building refuse, items indicative of intensive use during WWII. Several contiguous sections of wood conduit were located and photographed, but not retained. Nothing was retained for laboratory analysis.

Scrape 3

Scrape 3 was located just west of T400. We expected to locate materials indicative of intensive use during WWII. We encountered a great deal of building refuse on the surface, some plumbing pipe and glass along with broken cinder block and mortar. Wood conduit was also found.

Artifact retained for analysis

United States coin, 10 cents, 1906, worn, mint mark S.

Scrape 4

Scrape 4 was located between Etlingen Street and NCO Double Quarters # 98,99,100,101. Expected materials here could comprehend both the WWI and WWII periods. Much building refuse and quantities of burned coal and slag were encountered in the upper levels, but no artifacts deemed necessary for further analysis were found.

Scrape 5

Scrape 5 was located immediately east of a row of garages which served the NCO Double Quarters. Here, one might expect items of both WWI and WWII vintage. The upper levels contained a great deal of coal slag and some crushed bottles.

Artifacts retained for analysis

Hammered iron item, broken. "T"-shaped with short leg and long (both broken) "arms". The "leg" is complete, tapers from T juncture to rounded base. There is a roughly rectangular hole in the lower center of the leg; the lower edge of the hole is 12 mm from the base. Length (arms): 19.5 cm, "leg" length: 6.5 cm, maximum thickness: 11 mm, maximum width, "leg": 17 mm, minimum width, "leg": 8 mm, minimum thickness, "leg": 5 mm, hole length: 8 mm, hole width: 5 mm.



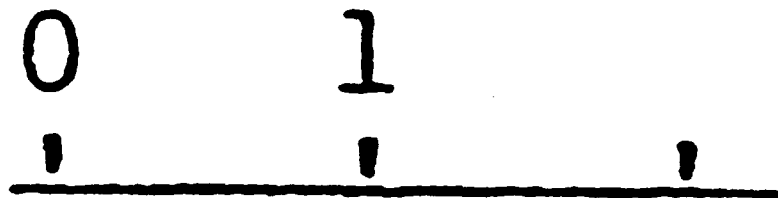
SCALE IN CM.

Plate 1. Cal. 30 round, expended, 1912, Frankfurt arsenal. (50 cm sq #3, L#2, 10-20 cm)



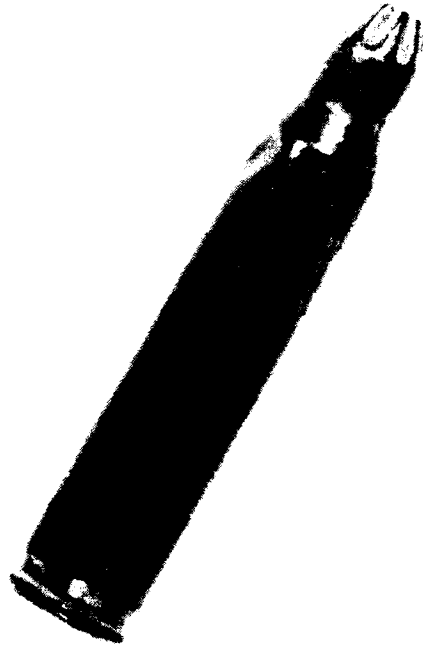
SCALE IN CM.

Plate 2. Cast brass object, not identified. (50 cm sq #5, L#2, 10-20 cm)



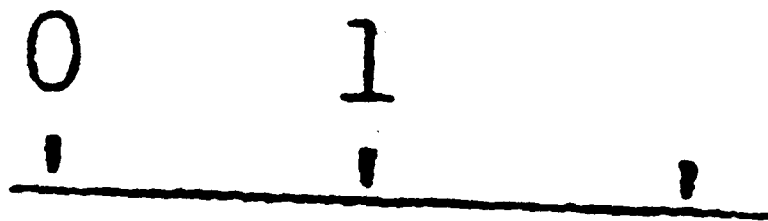
SCALE

Plate 3. Threaded brass cap, octagonal. (50 cm sq #9, L#1, 0-10 cm)



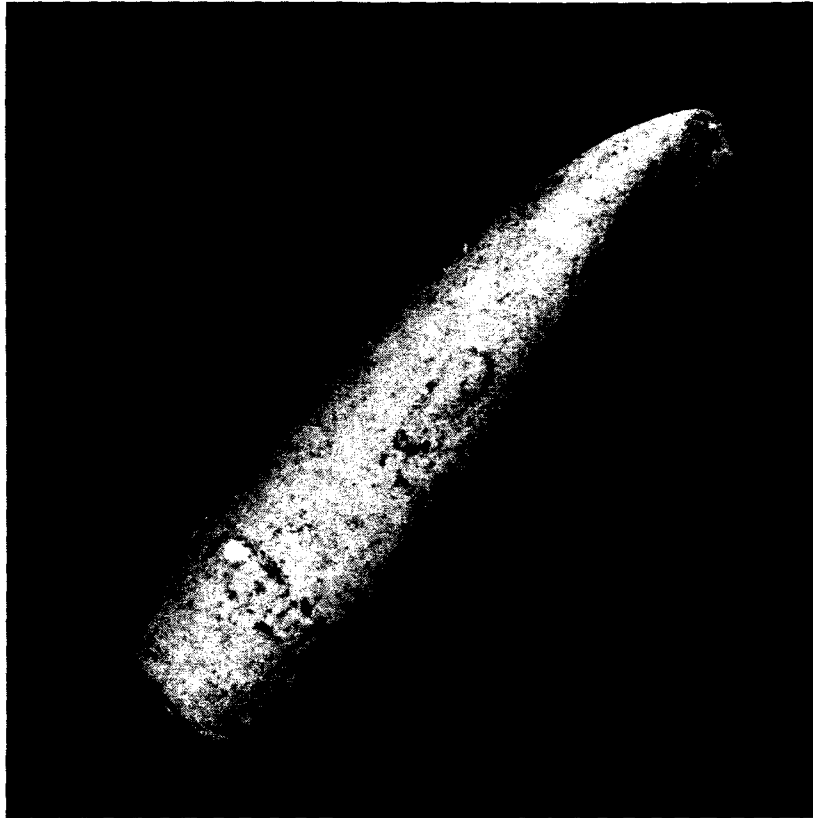
SCALE IN CM.

Plate 4. Blank practice round, M-16, 1983, Lake City Arsenal. (50 cm sq #10, L#3, 20-30 cm)



SCALE

Plate 5. Metal, probably zinc, object, not identified. (50 cm sq #20, L#1, 0-10 cm)



SCALE IN CM.

Plate 6. Plastic model airplane part, lower engine nacelle, wing mounted. (Scrape 1)

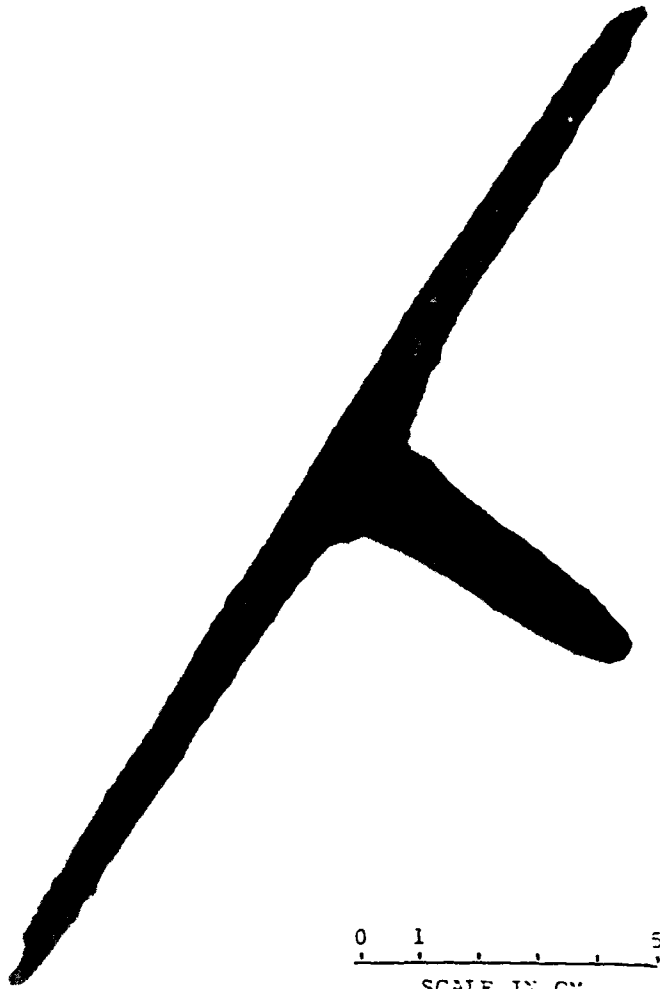


Plate 7. Iron item, broken, not identified. (Scrape 5)



SCALE IN CM

Plate 8. Token, non-metal composition. Raised letters spell RECEIPT. (Meter square #2, L# 1, 0-10 cm)

APPENDIX C. FIELD NOTES

FIELD NOTES, HENNING, HAWLEY, OLSEN, MARCH 1991

Fort Des Moines, area east of Chaffee Road, subsurface tests

Field notes, Henning, Hawley, Olson, Ward, '71

Font Des Moines, area east of Chappie
Road, subsurface tests

F.V. DM III

Sunday
3/24/91

Test 1: corner of hospital: located SW corner w/ backhoe: lucky! ~~did~~ saw foundation on surface.

Heated to corner: limestone foundation w/ plastered walls. Did not go to base footings or basement floor -
Mud: trash: barbed wire, steel fence posts, etc. -

2 Test, corner Steward's quarters: exposed & photod NE corner: poured footing, c. 18" \leftarrow , sewer pipe parallel (c 12" \otimes) to North wall of structure

3 Test: for band building: found telephone cable: E-W & quiet

4 Test for T 191 (50:9 152): another telephone cable, so quiet here, too

m Test 5, 6
Test square into basement of NCO quarters
Test square c. 1m. on the side dug into basement floor of NCO QTRS 98-99:
much building rubble, some round nails
a little glass, ~~some~~ ^{one} bright blue flecks were
ca. 1.5 m. surface - basement floor

3/24/91

Bldg. T 48, SE Corner: corner stood out on surface: dug w/ backhoe to footer poured concrete, full basement, 30cm across top

5 Wall depth: surface to footer = 1.95 m
Footer: 18 cm extended from base of foundation wall.
Wall is poured concrete in into form steel economy form used

Test square 2: 50 cm on the side, 60 cm deep excavated: trowel/shovel, 1/2" screen in 10 cm. levels.
fragments of brick, slate, rock found to 30 cm.
no rock in anything to 60 cm.
normal soil profile here

Test squares laid out on N-S line:
line cut: 20 m. E. from No. side of 2nd driveway from north.
Test sq. 2 @ 20 m. N. of point 20 m E. of drive
Test sq. 1 @ 40 m. N. " " " "
Test sq. 3 @ 20 m. So. " " " "

114
5
Backhoe Trenches

3/24/90

Two short trenches made through ~~wall~~ of foundation of T400, just below surface, encountered concrete block, light, foundation w/ mortar nearly all decomposed. - 2nd trench was made to test against (it = same construction?, really a foundation? Yes. - Corner was probed for, but not distinct

A short: 2-3 m. test trench was cut w/ backhoe to NW of T400: produced a normal soil profile: Dig to c. 1 meter, where B horizon showed clearly

3/23/90: backhoe trenches cut out around T48: SW corner exposed, photos + notes made
another test trench cut ~~into~~ through west foundation of T48 = not located

3/24/90 backhoe trench cut through E+W foundation areas of T401: located no foundation evidence on E wall, but some block + a pier on west wall ... ? no basement + no pound footings,

3/25/91

50 cm squares

Three tests were required @ 30x30 cm, 2' deep:
Easier excavating @ 50x50 cm, 60 cm. deep.
Taken down in arbitrary 10 cm. leads,
Soil under natural conditions has very
deep A horizon; we encounter the upper
B horizon @ 60 cm. any rock, etc.,
is probably introduced culturally, so any
objects are logically retained

Square #1 normal profile, a few
stones encountered, but 2 levels: 0-20 cm.

Square #2 normal profile, a few
stones, etc. encountered

Square #3 normal profile, some
stone, etc., encountered; rifle casing?
cal. 30?

Sq. #4 normal profile, some rock, plaster
fragments in upper levels (0-20 cm) - below...
no inclusions

Sq #5: not normal profile: plaster, bricks,
a stone marble in upper 30 cm. Square is
just east of T 400. There is also a cast brass
item in I.D. will be... interesting
WWII; Horngate @ Nebraska?

3/25/91

Test squares: 50 cm

Sq. 6 normal profile

Sq. 7 normal profile

Sq. 8 Filled levels to c. 20 cm; some
brick + mortar fragments. From
20 cm, normal profile.

Sq. 9 Filled levels to c. 20 cm. - much
coal, clinker, bits of asphalt sidewalk,
a button or snap (with insignia)
on it.

remainder of square: 20-60 cm, is
normal profile

3/27/91 Dale: laid out remainder of 50 cm test
squares, mapped in same

Now have a series (3) in area of the storage building
and #'s 4-17 in area of projected Army Reserve bldg.

Have set three (19-20) in area projected
for retention pond, immediately south of
Wood circle

Sq. 10 disturbed profile to not below 20 cm (surface)
In upper 20 cm, an ~~suspended~~ cal. 30 round.
no other artifacts.

3/27/91

Test square #11 (50cm)

disturbance 0-30 cm w/ some rock fragments, etc.; normal profile to 60 cm.

Probe strip

Established probe strip #1 ^{quilt circle} 10 x 50 m.

this is located 125 m. No. ↑, then ~~125~~ 40-50 m.

west @ 90° of road (Ettingen Street)

The probe strip parallels 50 cm test squares 10-13 & is c. 10 m. west of those tests
probe tests will be made in meter units.

Test square #17 (Peter Olson)

material found in four levels; most in top (0-6 cm) level; normal profile to 60 cm.

Test square #16 (R. Hawley)

A few stones in level 1, remainder is normal soil profile.

Test square ~~#14~~ #15 (Hawley)

a small segment of brick and some glass fragments in upper levels ... normal soil profile to 60 cm.

3/27/91

Test square #14

a bit of brick, rock, mortar in 1st & 2nd levels: normal profile below

Test square #15

Disturbed soil to bottom of level 4:
normal below

Test square #16

normal soil profile top to bottom

Test square #17

disturbed w/ a few inclusions to ext. L. #3:
normal profile below

Test square #18: disturbed to bottom = building refuse:
brick fragments, charcoal, plaster, all small fragments
in dark soil.

Test square #19: cultivated zone (probably not plowed)
to 10cm. (garden?), 'A' horizon is less deep here:
partly removed: no trash of any size in upper levels.

Test square #20: very near hospital corner: very near
to roadway: but, normal profile, very little trash
in upper levels.

Ft. DM III

3/27/91

Meter square #1: set in w/ 50cm. x 50cm. #5:
 #5 square in SW 1/4. Because of concentration of
 building debris, rubble, etc. More building debris
 encountered in upper levels. Another rubble;
 normal profile encountered in lower levels
 (5+6)

3/28/91

$$\begin{array}{r} 35 \\ 36 \\ \hline 210 \\ 25 \\ \hline 1260 \end{array}$$

$$\begin{array}{r} 32.5 \\ 39 \overline{)1260} \\ \underline{117} \\ 90 \\ \underline{78} \\ 120 \end{array}$$

$$\begin{array}{r} 31.5 \\ 40 \overline{)1260} \\ \underline{120} \\ 60 \\ \underline{48} \\ 250 \end{array}$$

35' = 31.5 m.

$$\begin{array}{r} 39 \\ 32 \end{array}$$

$$\begin{array}{r} 120 \\ 110 \\ \hline 3 \end{array}$$

Meter square #2: set in 31.5 m. south of SE corner,
 probe grid #1: square established with
 NE corner a 31.5 m. So. of SE corner probe grid 1

Reason: to test ~~and~~ an apparent anomaly
 found w/ probe: anomalously crossed (E-W) ~~grid~~
 probe grid #2. Taken to 60cm depth.

~~Some disturbance throughout square
 from surface into L#4 30.40cm:
 rust in upper levels. 2 one between A +
 B horizons of large pits: platy A¹¹⁸
 horizon. Smith, glass is taken (fibre?)
 and some marks in upper 3 levels~~

3/28/91

meter square #2

located So. center of probe grid #3
disturbed soil to 40 cm. - at B
horizon, no more disturbance
between A & B: very blocky ped:
platy A horizon. Glass (windows)
& small bottles) coal, bricks,
mortar, some nails and a
compaction taken...

meter square #3

located 36 m. south of SE corner
of probe strip 1: 36 + 37 m. on
East side ... encountered solid
surface @ c. 10 cm. in this location
? sidewalk?

meter square #5 - placed under T401

20-21 m. due East of tent no. 3? quading on N. wall of
m. tent 3

meter square #4:

~~See~~ See p. 1 for m. sq. 6

Test square #5

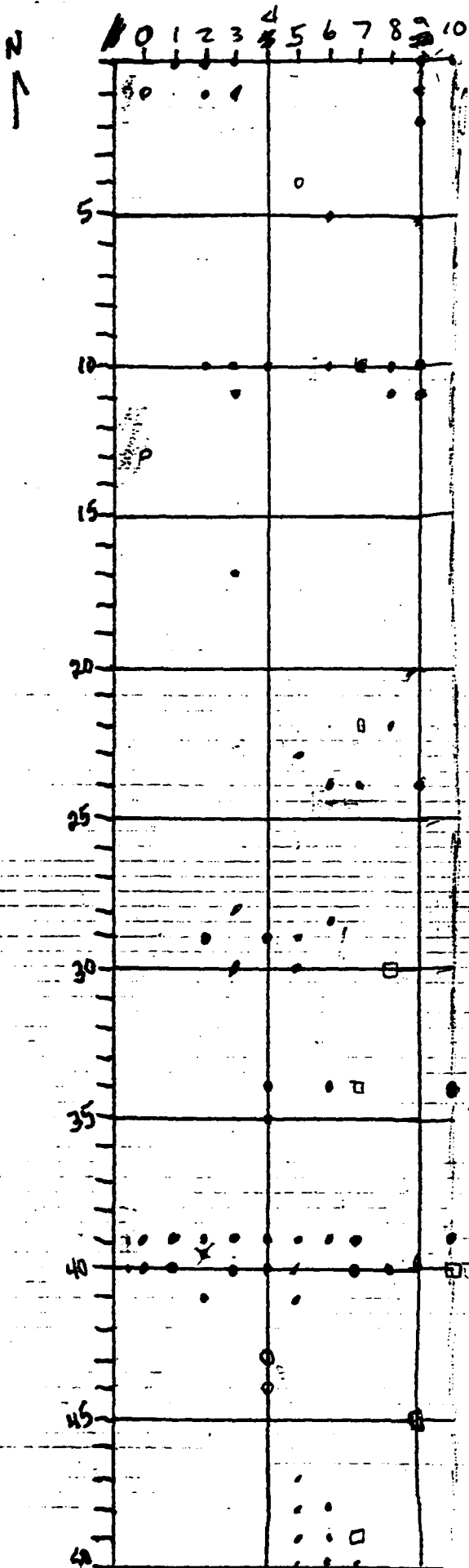
Level 1: → base (10cm) a layer of
burned - partly burned coal; material
found Tap 3 levels ... Normal profile
to level 6.

Test square #3

Level 1: → 10cm: a lot of coal/coal
slag ... and artifacts through 3 levels:
normal profile to base

Test square #4

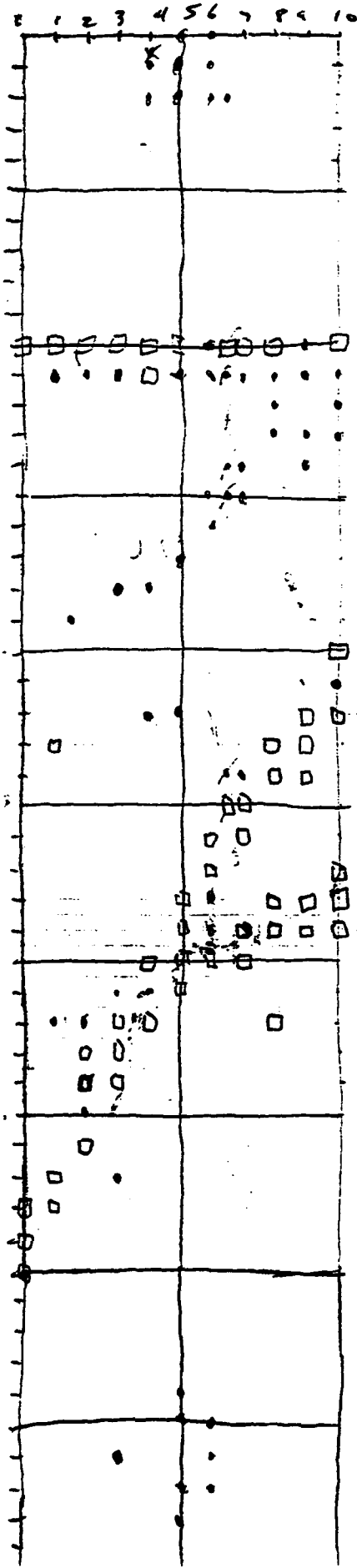
Subwall encountered here ... seems
to be oriented NW-SE, appears to have
been broken up purposefully, covered w/
thin layer of soil



Probe test grid # 1
 Steel probe inserted @
 meter intervals

- no mark = smooth surface
- = gravel-like near surface
- = solid feel: brick, concrete
- = other (describe)

0, 1 - small object; perhaps
 concrete brick
 0, 13 - small brick or concrete
 at 5m
 4, 43 - small brick (5m)
 4, 44 - small brick
 5, 4 - large 5; road hard
 but? 35m



↑ N

this graph
directly
south
of
graph
on
opposite
page

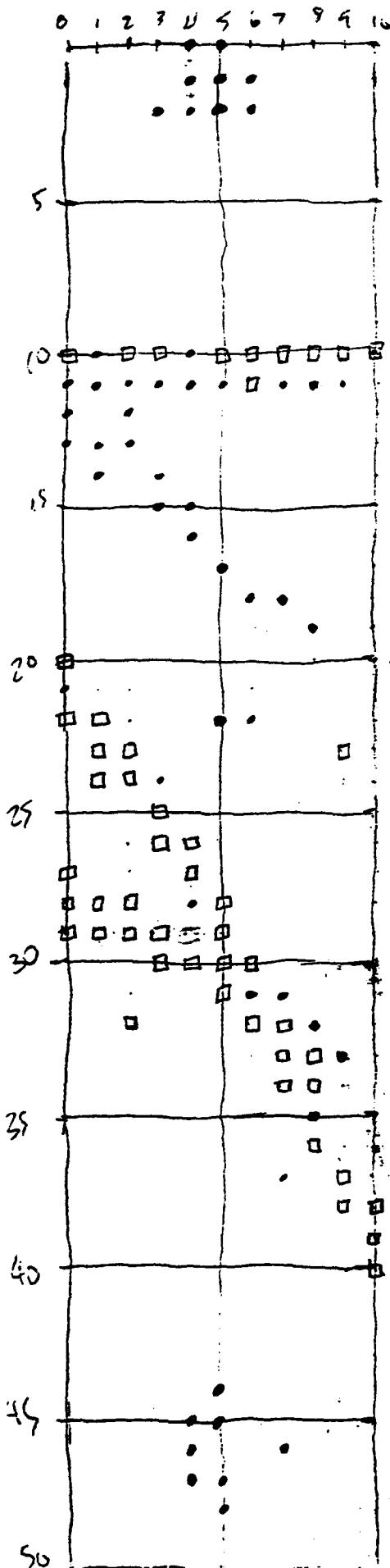
no mark = smooth entry
• = gravel-like near surface

□ = solid fuel: brick
concrete

○ other (describe)

probe grid #2

MIRROR IMAGE



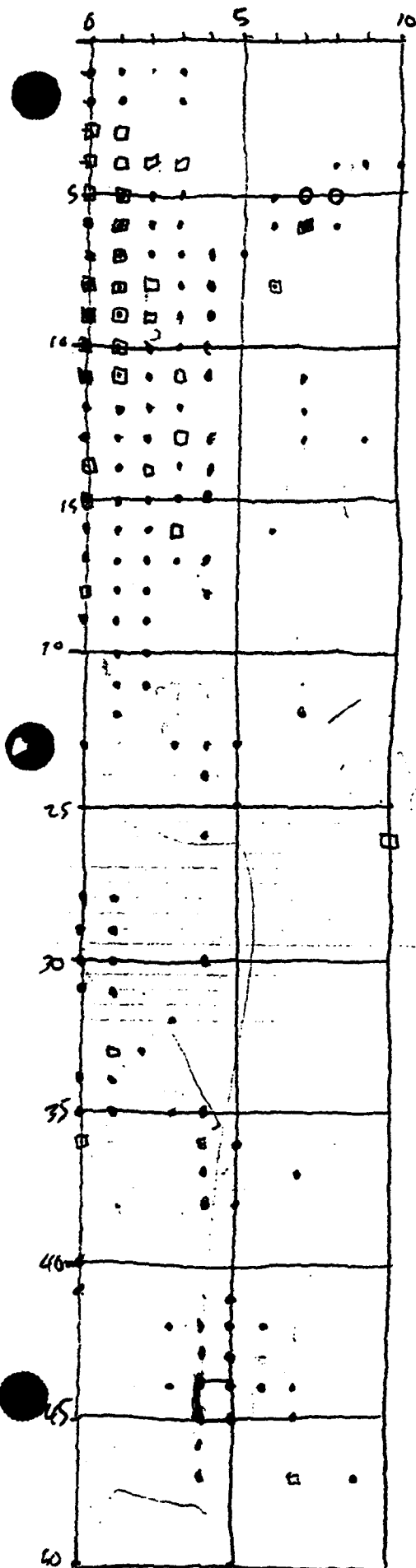
- no mark = smooth entry
- = gravel like near surface
- ◻ = solid sq brick, concrete
- = other (described)

↑
N

probe
grid

2
(corrected)

this grid
is positioned
directly
south
of
probe
grid
1



1 N
 probe grid
 # 1N

no mark = smooth entry

• = gravel-like near surface

□ = solid ;
 brick, concrete, etc

○ = other (describe)

7.5 - wooden plank
 containing
 a ~~...~~ - 200g paper

FIELD NOTES, CURT HUDAK, FORT DES MOINES III, MARCH 1991

Foth & Van Dyke

Client: Four Mile Scope I.D.: 91F15
Project: Ft. Des Moines Geomorphology Page: 1/1
Prepared by: CMH Date: 3/26/91
Checked by: _____ Date: _____

Dale -

Here are the soil notes. Let me know if you require deciphering. Important items are (1) relatively undisturbed soil profiles, (2) Cambic^(Bw) soil profiles ~~is~~ are unusual for soils developed in supposedly late Wisconsin-aged loess; typically argillic^(Bt) soil profiles occur in loess on "uplands" and "high" terraces, (3) soil structures have developed across lower plow zone boundaries.

I've roughly calculated out expenses and labor. Total costs come to approximately \$1515.⁰⁰. Invoice will follow shortly.

Thanks for inviting me^(+ Sasha!) to work with you and Barbara. I look forward to the next time.

Curt

PEDOLOGIC/GEOLOGIC PROFILES

CORE/PROFILE #: FDm-1 LOCATION: _____ COUNTY: _____ TOPOGRAPHIC MAP: _____
 ELEVATION: _____ SLOPE: 0-2% VEGETATION: Grass/Lawn PARENT MATERIAL: loess DATE: 7/22/91

REMARKS: Ch. 0 F.T. 1.0.5 bl. no. 5 - Soil appears young for a loess-type soil in south-central Iowa. Well developed A₂ B not as well developed as others in region.

HORIZONS

DEPTH (cm)	HORIZON or ZONE	COLOR	TEXTURE	MOTTLES (color/freq/size/distinct)	STRUCTURE (grade/size/type)	COATINGS (type/color/thick./contin.)	CONSISTENCY	EFFERVESCENCE	LOWER BOUNDARY (distinctness/slope)	ADDITIONAL COMMENTS (e.g., roots, concretions, krolivins, etc.)
0-11	A	2/1	SIL	—	2/f/gr	—	fr.	∅	cl	
11-35	A ₂ E	2/1-3/1	SIL	—	1/m/p 2/f/a.b.	—	fr.	∅	gr	faint remnants of E(?) - horizon (steeped at times?)
35-65	BA	3/1	SIL	—	2/f/a.b.	—	fr.	∅	gr	
65-110	Bw	4/3-5/3	SIL	2/1/c/f/dis 5/8/c/f./dis	1-2/f/a.b. c 1/13/thin/dis	—	fr.	∅	gr	not well developed B-horizon compared to nearby plands
110-165	BC	5/3	SIL	10/2/m/m/d/ava 5/8/m/m/d/s	0-1/R/s.o.	—	fr.	∅	gr diffuse	peds disappear gradually downward

PEDOLOGIC/GEOLOGIC PROFILES

REPROFILE #:	FDM-2	LOCATION:	COUNTY:	TOPOGRAPHIC MAP:
VEGETATION:	SLOPE: 0-2%	VEGETATION: Lām Gm's	PARENT MATERIAL: Læs S	DATE: 3/23/51

MARKS: Old Ft. Des Moines

HORIZONS

PTH. HORIZON or ZONE	COLOR	TEXTURE	MOTTLES (color/freq/size/distinct)	STRUCTURE (grade/size/type)	CONTINGS (type/color/thick./contin.)	CONSISTENCY, EFFERESCENCE	LOWER BOUNDARY (discontinuity/shape)	ADDITIONAL COMMENTS (e.g., roots, concretions, tabulars, etc.)
0-31 Ap	2/1	SiL	—	2/f/gr	—	v.fr. φ	abrupt-wavy	Soil horizon over "coke" lag or stone line with ^{with} small ^{small} shale clasts
0-31 A	2/1	SiL	5/22.5/2/c/c/font.	2/m/pl	—	fr. φ	clear wavy	Plates caused by compaction possible "old" road-toy or path
1-31 AB	3/1	SiL	5/3/c/c/f/point	2/f/s.a.	—	fr. φ	diffuse	
7-76 Bw	5/3	SiL	2/4/f/f/dis	0-1/f/s.a.	—	fr. φ	diffuse	weak B-horizon for ^{above} soil ^{soil} to regional soils
0-101 C	5/3-6/3	SiL	5/9/c/c/f/dis 0/2/f/r/room	—	—	fr. φ	unknown	

PEDOLOGIC/GEOLOGIC PROFILES

CORE PROFILE #:		3 FDM-3		LOCATION:		COUNTY:		TOPOGRAPHIC MAP:		DATE:	
ELEVATION:		SLOPE:		VEGETATION:		PARENT MATERIAL:					
REMARKS: Center of Circle											
HORIZONS											
DEPTH	HORIZON	COLOR	TEXTURE	MOTTLES	STRUCTURE	CONTINGS	CONSISTENCY	EFFECTIVENESS	LOWER BOUNDARY	ADDITIONAL COMMENTS	
(cm)	or ZONE			(color/freq/size/distinct)	(grade/size/type)	(type/color/thick/contin.)			(distinctness/slope)	(e.g., roots, concretions, brownness, etc.)	
0-17	Ap	2/1	SIL	—	1-2/f/a.b.	—	v.f.	∅	ab	Plow zone	
28	Ap2	2/1	SIL	—	0-1/m/s.a.	—	fr.	∅	wavy	More firm than above	
28-19	AB	2/1	SIL	—	1/m/pl 2/m/a.b.	—	fr.	∅	clear discontinuous	Plow zone Platiness due to compaction?	
19-70	AB2	3/1 to 3/2	SIL	—	1-2/f/s.a.	—	fr.	∅	clear irregular		
70-111	Bw	4/3-5/3	SIL	3/1/E/E/perm	1-2/f/s.a.	—	fr.	∅	gradual wavy		
111-160	C/ma	5/3-5/4	SIL	5/8/c/c/perm 6/2/o/c/perm	—	—	fr.	∅	unk.	Krotzmas - 2/1-3/1 and root fillings.	

PEDOLOGIC/GEOMORPHIC PROFILES

CORE PROFILE #: F00-4	LOCATION:	COUNTY:	TOPOGRAPHIC MAP:
ELEVATION:	SLOPE: 0-2%	PARENT MATERIAL: Löss	DATE: 7/23/91
VEGETATION: Lawn			

REMARKS:

HORIZONS

DEPTH (cm)	HORIZON or ZONE	COLOR	TEXTURE	MOTTLES (color/freq/size/distinct)	STRUCTURE (grade/size/type)	CONTINGS (type/color/thick./contin.)	CONSISTENCY, EFFERESCENCE	LOWER BOUNDARY (discontinuity/shape)	ADDITIONAL COMMENTS (e.g., roots, concretions, krolivinas, etc.)
0-17	Ap ₁	2/1	5/2	—	2/f/gr	—	v.f.	ab. smooth	Plow zone
17-41	Ap ₂	2/1	5/2	6/4/f/c/dist.	1-2/m/p/1	—	f.	ab / smooth	Abundant color fragments large tile / fossils
41-69	AB	3/1	5/1	6/4/f/c/dist.	1/f/oa	—	f	gr / smooth	
69-147	Bu	5/4-4/4	5/2	5/6/f/c/oa	oa / massive	—	f	gr / smooth	
147-155	C/mo	5/1	5/1	6/4/f/c/dist.	massive	—	f	unk	dry / re-firmed nodules

PEDOLOGIC/GEOLOGIC PROFILES

CORE/PROFILE #:	F DM-5	LOCATION:			COUNTY:	TOPOGRAPHIC MAP:
ELEVATION:	SLOPE: 0-2%	VEGETATION: Lawn - grass	PARENT MATERIAL: loess	DATE: 3/23/91		

REMARKS: NE of Chapel.

HORIZONS

DEPTH or ZONE (cm)	COLOR	TEXTURE	MOTTLES (color/freq/size/distrib)	STRUCTURE (grade/size/type)	CONTINGS (type/color/thick./comin.)	CONSISTENCY	EFFERESCENCE	LOWER BOUNDARY (discontinuity/shape)	ADDITIONAL COMMENTS (e.g., roots, concretions, kravonnas, etc.)
0-									
15: AP	2/1	SIL	5/4/c/m/prom	2/m/gr	—	v.fr.	∅	ab-very	Cracks long at bottom other rock fragments
15: AB	2/1	SIL	—	1/m/pl 1-2/f/ab.	—	fr.	∅	cl-irreg.	Compaction caused plasticity
40: BA	3/3 1/2	SIL	5/4/f/c/pr.	1-2/f/ab.	—	fr.	∅	gr-planar	
85-90: CB	5/4	SIL	7.5/4.5/6/f/f/faint	0-1/f/ab.	—	fr.	∅	gr-planar	
117: CA	5/4	SIL	2.1/f/c/pr.	—	—	af	∅	unk.	
155: CD			0.2/c/e/pr	—	—				

FIELD NOTES, JUNE 1991

*Typed notes prepared by Long for field use to guide tests
and
interpret results while in field*

Fort Des Moines III

6-5-91

Bldg. 57
1930

Began work on building's foundation verification/ location in form. - Start work on Bldg 57, barracks building which burned: 1/2 of structure in ... using Tell probe: grass color / texture indicates part presence of structure north wall foundation is solid to c. 2' depth at ~~joint~~ NW junction of the two buildings. Building foundation remains at one to three feet below surface around building perimeter. It is possible to trace all of building's exterior foundation. ~~with~~ The interior 'feels' rubble filled; leading to the assumption that the burned remains were pushed into the basement and excess brick, burned materials, etc., hauled away. Should one want, for reasons not fathomed in June 1991, wish to excavate the basement, it can be assumed to represent archaeological remains of post use prior to building burning & an subsequent salvage and backfilling.

Building 87 (1943) = 90 (1957) = ~~to~~ yes!
87 + 86 = standing
T192 : no

trace outlining building foundation
? very gravelly - slag-filled. Could
oil have been dumped here?
Was this open, roofed over?

Building 84: cavalry stable - to motor pool
building clearly marked by slab of concrete
appears to have had ramps added both
north + south ends for access. slab is
longer than building 84 illustrated on
1943 map

Building 82 Stable Guard
Encountered traceable foundation
at 1-3' depth, solid + right
in place re. map. Very solid
foundation feel.

Bldg. 80: entrance ramp onto Thayer Ave.
This building faces out very well.
portions of all four outside foundations
probed: South wall is deep - c. 3',
the E-W-N walls are about 1' below
surface: $\$$

133

Bldg. 79: entire space between Bldg 80 and
78, where #79 or 8 has brick fill - not possible

6-5-91

Ft. De Munnis III

● #79 to locate foundation

Probe tested ~~across~~ across around location of Bldg 76, (gun shed?), this entire area is blanketed with large: 2-4" pieces of & crushed limestone I don't understand this... later use? Impossible to probe. Expect foundations covered with this stuff. ? shovel test?

shovel test

low foundation? #77

Rubble encountered across,

● #76: located & probed north and west walls. South wall seems broken and intermittent. North & west walls between 1 + 2' depths. A portion of east foundation located, but is overlain w/ crushed limestone, making probe work difficult to impossible.

#78 crushed limestone over all; could not find foundation.

#74 Messhall has been messed up with a fine layer of road gravel (crushed limestone).

● #'s 73, 72, 71 intact
70, 69, 68 intact

6-6-91.

Ft. Des Moines III

Small unnumbered building indicated on 1943 map: not now present. Notes (ours) on map say it was tent ... to stone masons building located along Butner Street, just north of corner of Butner and Winn Road

Probed for evidence of this tent building: found none, but located a wide hard surface from Butner to c. 10-15' of uncut building: the surface narrows at this point to c. 4' wide, goes to edge of building. The entry by Butner is visible along the ~~side~~ curb. Could this precede addition to So. of Bldg 68?

The south end of buildings 68, 70, 71 is a more recent addition w/ poured foundation and newer brick composition roof. added pre-1943

Has Winn Road been moved south to accommodate these additions?

I checked this hypothesis by probing between south additions, ~~to~~ bldgs 70 + 71. Gravel/crushed rock area between bldgs ¹³⁵ is wide: to south seems to cover building to building. North of the southern additions laid added furnace room, narrow to gravel & hard-surface walk

6-6-91

Census: bldgs 68 + 71: maps show an indentation ~~at~~ along mid-east wall (where buildings 68-70, 71-73 were joined. This does not appear to ever have existed: The old building portions look like the 1904 maps

Probed again between buildings 71 & 73: mostly gravel, some hard, solid (sidewalk?) just below the surface. Roads must have been altered

A check across back of buildings 68-73 suggests that the indentation at beginning the ~~road~~ addition to south is not to scale... it is less than 8" less distance E-W than the original structure to north

along so. end of Chaffee Rd., T 318
Service club. NW corner of Raper

Probed portions of a deep (3' foundation. It must have been fairly substantial. Awfully anomalous shape. Probably could be revealed (foundations) with backhoe tests

6-6-91

Fort Des Moines III

Located the blacksmith shop foundations about 25 x 30: some confusion w/ small roadway on west end... seems to be a solid foundation? rock, located at between one and three feet depth probe in the center: brack, rock, fresh at various levels (not below 1'). also took two soil samples w/ Boston sampling tube... encountered compact zone 1' w/ brack + some coal slag @ 8" - 1', then normal soil profile no pavement here... compact dirt floor or wood floor over dirt here. - Depending on where it was leveled + uses beyond blacksmithing it might prove valuable to excavation

Note: there is an E-W ridge to north of T 319 + 120: There was a roadway to north of this landscaped feature, but no record of building out it. The edge of this 'Terrace' @ c. 120' from Rogers Road. The un named roadway to north of T 319 can be seen: ¹³⁷ there is a drainage gutter paralleling its south edge, which curves (see 1943 map) to Rogers Road

6-6-91

F & D's Mains II

T 121: shows clearly as a square cement pad
w/ light poured foundation ... visible
on surface

#123 stands

122 stands

Remmit? 118: is fenced off

127: stands

126: stands

✓ all: 128 after lunch

Loes: 310-317: wood frame construction

T 317: So. of SW corner, Bldg. 83, across road

(end of Denn Rd. T 317 was a tailor shop
found west foundation: inside of building
is trash-filled: 1-3' depth. - Basement
in this building?

T 316: found north foundation: solid:

much trash both 'inside' & 'outside'

located N further & chased long E further -

but didn't find it consistently - seemed

to have all been broken in

unable locate E or W wall but there's trash
throughout

138

T 315 - have found a part of the N-Sd further
& it seems to be broken - probably done when
it was pushed in

- appears Winn Rd moved S when c.1941 WAc address made to rear of stables

T314 measured up 30' from #131 concrete pad + found some inconclusive trash

T313 located S + W footings ~ 28 1/2' from #131 (or at least the SW cor)

T310 located N + E footings.

T311 located prof N + W walls

T312 " " " " "

¹
T31 located concrete pad

T306: tile: ~~cast~~ cold storage bldg
tested with probe across (N-S) floor:
solid 'feel' across entire floor. much
'gravelly' feel from surface to 8"-2':
'floor' ~~is~~ is deeper along
south ledge. Some remains of the
building are still in place

136: Oil house: just west of bldgs T308-T309
located east wall, but is confused to south
with other construction? a pad between T308-9?

6-7-91

Font Des Moines III

T. 307 ~~west~~ ^{new Hall} appears to have been razed recently. Probed about, but could locate no 'wall' foundations: surface littered w/ fragments of concrete blocks, & tile, etc. over area blocked by 'imprint' of bldg.

141: Bakery: entry is on north side to immediate north (where entry was in WWII, was a wood house (1917)

Just west of 138 (across ~~the~~ Butler St.) was a root cellar (1917, 1943) (Bldg. 140) Bldg. 140 is ~~now~~ now city property; has been razed and the terrain landscaped

Bldg 141: located portions of all four foundation perimeters of the building. a lot of rubble is in the interior. ~~Walls~~ ^{tech} Foundations between 1-2' depth

Bldg T301: Tough to locate. Pretty good line of east wall foundation complicated by E-W sidewalks (entries?) ¹⁴⁰ poked diligently for north & east walls much trash, but nothing certain. measured off to west wall (c. 41') of T30102

T302: good line on west wall - again.

6-7-91

F.V. Des Mounds III

lots of trash 'inside' building, but not certain of the east wall measured out for T304, T303

T303: not certainly located

T304 Measuring of foundations of this bldg does not seem to work: find solid blocks, perhaps even portions of foundation, but nothing continuous

T305 Seems to be a solid pad beneath where this bldg. ought to be, and extending beyond map 'foot print' discouraging. A lot of trash 'felt' with the probe: top of 'pad' seems generally to be at 1 foot surface depth

Bldg 132: Carpenter's Shop (143) may offer foundation, but it covered with slag and a very solid pad. Probably has some foundation pieces, but cannot be certain. The area would have to be scraped with a machine to be sure and in the map/historical records are adequate for this structure.

6-7-91

Front Des Mines T6

#134 : a coal dock set c 6' below
surface of old rail bed. It is not
a building, but a holding area

T 119 Five stations : appears as a concrete
pad on surface

129: a rectangular sheet metal
building, could not locate area
& covered w/ gravel & centers for
? more parking ? !
~~Engineer office~~ Hay shed

~~#132~~ ~~Quartermaster Shop (carpenter)~~
~~see previous page~~

125 - Wagon shed
slog & gravel over entire area
punched beneath this, found some
solid mtl, no 'wall'

124 Wagon shed
same conditions as 125

128 Lumber shed (Hay shed) : sheet metal

T 320: Gas Station (PX) : found ¹⁴² so wall
foundation + SE corner - E wall

6-7-91

FT. Belvoir III

118. Quartersmaster Barracks
is locked inside motor pool fence: entire
surface is hard-packed gravel: could
not locate foundation.

T 142 Wood Shed: (WPA time
shack) We may have found
a portion of a foundation, but cannot
be sure of a lot of modification
~~to~~ has gone on here: wood, etc,
near the site is a sump,
made of bricks + etc up ladder
down side
just not certain re. T 142

Winn Road has been repositioned to south
about 40 feet to accommodate
additions to WAC 68-83 barracks
done before 1943

1954 ± 1

Series of corrals south of cavalry stables
to Rogers Road. Bldgs 26-7, 28-9
47-48, 49-50, 74-75, 76-77

TIMELINE

Quartermaster General guidelines in force. 1899-1902; update 1902-09. Construction at Ft. DM to occur sequentially by squadron of cavalry.

19th c. Victorian farmhouse, red barn - used for NCO qtrs & stable

1903-10 major construction of post

1904-05 bulk of the major construction occur

1903 4 sets married by lt. '04 1 cmdg ofcr qtr
officers' qtrs 2 field ofcr qtr
1 dble ofcr. atrs 5 dbl ofcr qtr
1 dble barracks 1 BOQ
1 dble NCO qtrs 1 mar. ofcr qtr
1 cavalry stable 1 admin bldg
1 qtr mstr & 1 guard hse
subsistence storehse 1 band barracks
1 bakery 3 dbl cvlry barr
1 coal shed 3 dbl NCO
1 flagstaff 1 hosp
1 hosp steward's
qtrs
7 stable barns
4 stable guard hse
2 blksm shops
1 granary
1 elec transfrmr
substn
qrtrmster shops
1 wood shed
2 magazines
1 oil hse
1 hay shed
1 lumber shed

SEE 1904 HABS SITE PLAN

- 1905 17 more
 2 fld ofcr qrtrs
 3 "sets" dbl NCO qrtrs
 2 dbl cvlry barr
 1 dble NCO qrtrs
 4 cvrly stables
 2 stable gd hses
 1 ordnance office & wrhse
 1 root hse
 1 sewage disposal plant¹
 gym p.38
- 1906 bandstand
 by March: ready recv 1st squadron - 1st time complete
 regiment in garrison - p.38
- 1907 1 fld ofcr qrtrs
 1 dbl ofcr qrtrs
 1 dble NCO qrtrs
 1 cvlry drill hall
 1 civilian empl qrtrs
 1 vet. stable/medicine storhse
- p.39 - undergrnd phone sys. installed in Dec. - 59 phones
 report need for subsistence storehouse addition - p.38 -
 is this the recvg stn?; expect next year
- 1908 rcvg stn for qrtrmstr storhs
 cramatory
 mounted guard shelter
 wagon shed
- apparently street car line completed - p. 38
- 1909 4 sets dbl ofcrs qrtrs [p.39 ground broken for 3 of these
 sets, ready by early 1909 ??]
- p.11 Sept 20-25 *gt. army tournament - Pres. Taft*
 1910 chapel [blt 09-10]
 sev "lesser" bldgs, incl:
 carpnter shop
 dead hse [mortuary - added to hosp. complex]
 coal shed
- after 1910 little bldg, esp when most of garrison to Mex. border
 p.39

¹vitrified sewer pipe w/ radiating pipes to carry sewage to trunk line, thence to a septic reservoir. Separate storm sewers.

WWI = new constr. - p.40

1917 fall, the following authorized and apparently built:

6 bathhses
6 mess halls
6 kitchens [attached to messes????]
latrines

put flooring in stables to convert to barracks

also, following, which incomplete until May 1918:

2 temporary psychiatric wards
2 temp isolation wards - all for adj. to hosp.
strhse converted to rcvg ward
exchange/gym converted to dispensry & eye, etc. bldg

1918 Dec. begin work on KC Hall - compl. Jan 1919 - included
aud/gym, lounge, chapel, library

occupied OR blt bldgs nr hosp: Red Cross, YMCA

Red Cross & YMCA at SE cor of the parade - see p.40 unclear
KC Hall nearer the NE cor, next to chapel

p.21 says ST & aud. completed early 1919
other WWI-related constr. - probably 1918:

2 lg water tanks (one atop a tower)
conversion Ward I (now #66) to "re-educ. facility" -
woodwkg, machine shps, clsrms

1919 new elec substn

1920s

7th Arm. Leg

p.41

Citizens Military Training Camps CMTTC:

--temporary bldgs

1921

Trust + subscribers plan for p. 22

1922

swim pool

1923-4

16 kitchen/mess hall units for CMTTC

5 bath hses & toilets

1928

Dec. - fire gut 1 side of dble barr. (present #55) and
heavily damage other side (#56)

1929

#55/56 repaired

1929

hosp renovated

1930

Dec 18 - fire consume dble barr. & one unit "salvaged" -
present #58

ely 30s

more CMTTC
2 lavatories

1932 theatre
oil house
2 ordnance mag.

1933? p.42, Civil Wks Admin work:
repainting many qtrs & overhaul plumbing; roads recond.

1934 & 35 for CCC, all on S edge of the reservatn:
mess hall
recreation hall
ofcrs qtrs
gar & rpr shop
camp hdqtrs bldg

p. 43: newsp descrptn of the post

1935-6 CCC warehse
repairs to barr dur this per too

1937 34 bldgs get automatic stoking htg sys - replace hand-fired systems

1938 fire, 1t Nov, destroy stable wh converted to garage

1939 ano. water tower
bakery addition

1930s lg no garages thruout garrison, most prbly blt B4 & after WWI - p. 42

By '40 p.44 - sev mr stbles converted to garages - enlg entrance and install steel doors

1941 medical induction bldg
finance bldg
mess hall
new sewage pump house
bakery again enlgd

Few futher addtns to Ft.DM B4 WW II

early 1941 p.26

*Reg 2-25-42
7-16-42*

*new facilities + conversions → 1000-man army
induction center planned - cavalry out*

WWII era

May 1942 prelim plans for WAAC principal training center - p. 44:

173 semi-perm bldgs

"recondition" 11 barr & convert 9 stable/gar, all for living qrtrs

frame and brick and tile new bldgs planned: barr, clssrms, mess halls, recr hall, chapel - all to be just S of the post

planned new hosp SE of orig fort bldgs

plan convert cvlry drill hall to winter drill hall for women

1942 news descr - p. 45 - see text:

11 cvlr barr. renovated

9 new frame classrm bldgs compl

nearly done: convert 9 stables into barr (hold 150 women each) - hay doors remain

constr begun on 63 new barr. in new cantonment area - S of old post bldgs on 20 acres, grading new streets now -

also well under constr - 12 new hosp ward bldgs - 2 rows of 6 each - connected by covered walk & linked w/ old reg post hosp too

also, 2 new recr halls under constr

nearly complete: BOQ and ofcrs mess hall for regular army bachelor officers (i.e. men?) - in NW cor of camp exact opposite of WAAC cantonment area - p. 46

1943 2 lge wooden water tanks

1946 Ft. DM closed. "Boomtown" and others post bldgs = surplus proerty - used as housing - 1956-57: these clay tile units demolished

1957-9. \$400,000 spent rehab brick barr. S sid parade & maintenance

Notes from interview Barbara Long conducted with Bob Loes, March 25, 1991. (RR 1, Cumming, IA 50061)

Buildings

Razed in late 1960s: #s 50, 51, 52, 53, 54 - 76, 77, 78 - 80, 82, 85

Razed c. 1957-58: Boomtown - tile - last street went 1959-60

Razed c. 1962: NCO quarters (#92-103). Their garages were long gone before then

Razed sometime after WW2 T401, T400

55 --kitchen in south end so there was a brick floor; there was a day room in the basement. Kitchen was used before they had the consolidated mess halls. [unclear: kitchen space may have been like this in other barracks too]

58 (or 57) --steel trusses used after the fire

72 & 69 --are a little longer because had a blacksmith shop at the back

73 --in interior can see a plank with some guys' names on it, lts. and sgts.

74 --stable burned in maybe 1938 or 1939, so a consolidated mess was built, #74 (?). It had a kitchen in the center, mess halls at the ends.

77 --fire station - the curb is still visible

76, 78, 80 --stables in late 60's (?)

87 --kept polo ponies there c. 1940 - later a P.O. and fire station

T104 --the old farmhouse - razed maybe 1959-60 - wood - Army added screened porches. There was a barn. Also at T104 is [apparently shown on the map] what was a garage for the house

117 --built for CCC in 1947* to be vehicle maintenance garage, of tile with steel structural, cost just \$35,000!

T119 --concrete block

120 --brick

T121 --scale house - wood

126 --wood

128 --sheet metal
129 --sheet metal
131 --half brick and half wood -- additions
132 --half brick and half wood -- additions
133 --gas meter and pressure regulators for city gas, also motor oil storage here; it was built c. 1960. (Near #84 - see the 1943 map)
134 --coal dock - not a building - concrete
136 --stored golf course machinery in it [presumably later]
139 --built for CCC in 1937 to be clothing warehouse
141 --brick with wood part at the back
T200 --commissary
T275 --concrete dance floor
log cabin - it had a _____ ~ sold for \$25 and moved by Waterworks
T300 --wood with composition brick [side?]
T307, -3-8, -309 --mess halls for WAACs
T318 --burned in 1956, four people died. A Service Club in WW2.
T319 --Service Club for blacks - tile
T310 - T317 --wood frame
T317 --used for tailoring alterations
T315 & 316 --classrooms
T313 & 314 --theaters; they had double eaves
T306 --coal storage plane - tile

FIELD NOTES, HENNING, AUGUST 1991

*Taken during heavy equipment scraping of area to be affected by
US Army Reserve Center*

SITE NUMBER: F4 DM T

Name D. Kenning

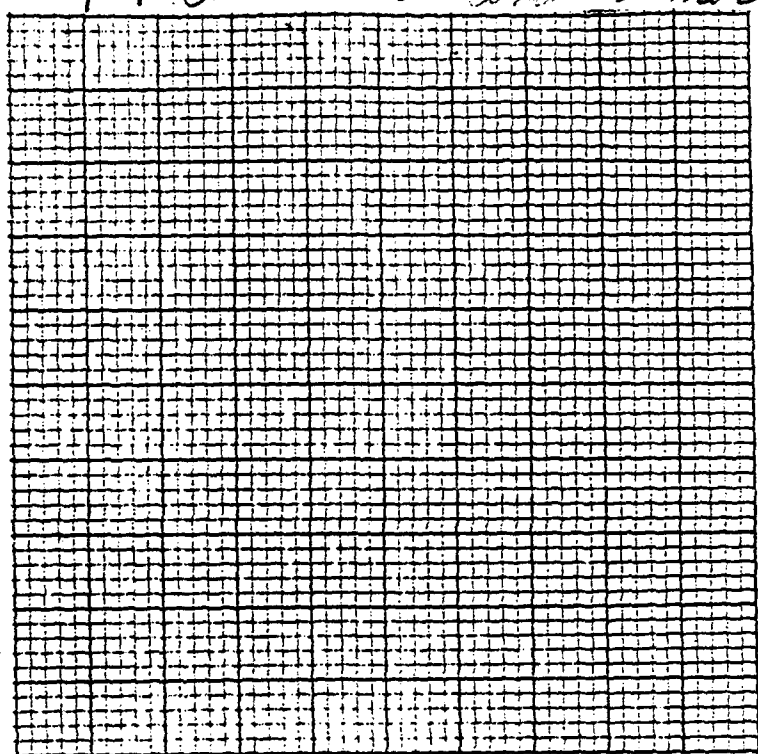
Date 8/14/91

Square Number _____

Feature No. _____

Depth or level 12" = 24" SB

Wooden pipe w/ electrical conduit (2) in center in drilled hole.



pipe made of cedar, 8' long section 4.5" square one goes from old T400 to manhole. Lined of pipe found also a NCO dbl quarters and between T400 and Ellinger Dr.

Scale: 1cm. = _____

Recorded Artifact Inventory:

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____
- 6. _____

- 7. _____
- 8. _____
- 9. _____
- 10. _____
- 11. _____
- 12. _____

(use reverse side if necessary)

Notes & Comments:

8-15-91

East of Ettinger Street, we removed two
three strips west of the NCO double
quarters. Much trash, a lot of coal slag,
etc in 1st / ~~2nd~~ 2nd scope, then less

No features. Notable were the state

(roof) fragments (not ~~not~~ seen on

west side of Ettinger St.), many

bricks (always well formed), some
window glass.

also found wooden 'conduit' here, probably
to serve dbl NCO quarters

Graded away just east of garages (between
Ettinger / Brown streets unnamed street
More roofing file, tobacco can fragments (not
retained), a ~~rust~~ metal (? tool handle) here
and another section of wood '~~conduit~~'
'conduit' Sloped edge nearest 'garages'
had center surface on upper level
Trashy overall.

8/15/91

a few notes/observations -

our scraping west of Etlinger was done on both sides (east & west) of T400. - T400 foundation (cement blocks) ~~is~~ bricks, cement slab on south side was not continuous, but could be seen clearly. We went across the building site to clarify its location, but did not dig into it. We could see the lower B horizon soil that had been ~~thrown out~~ thrown out when footings were dug: bright yellow - buff along cinder block foundation.

Ran onto more electric wood conduit which served T400. Took photos, measured (8' long, 4.5" square), collected a wood sample. Could also see trenches for utilities that served this building between it and Etlinger. Materials (a few) found around this building (T400) were all WWII trash or later. Some animal (food refuse) bone found, also some glass (plate, common window found, discarded. Some marked battle found... no diagnostics found.

Cleanup was very ~~thorough~~ thorough on part of the military

8/15/91

Tested circular feature uncovered by soil stripping.
c. 24" diameter, marked by cracked limestone
which stood out clearly in dark A horizon.
The entire hole was excavated to 3' depth
(about 4' below sod surface): whole was filled
with concrete block fragments, ~~chunks~~
chunks of sidewalk, one limestone slab.
No brick, glass, slate, tile, etc ... not
even any coal slag. I did not dig to
the bottom. It is undoubtedly a ~~an~~
utilities hole, probably filled when T400
was rased. & was no more than 1' above
the bottom, which was muddy (stal
probe through openings in the rubble
fill) No sense digging further in.
Backfilling of scraped areas continues... should
be completed by noon. Seems pretty smooth
all things considered (machine size, etc),
but may be a bit lumpy when we
quit.

8-15-91

Relevant distances / directions

chapel corner to northernmost scotch pine 50.50°
 " " to telephone line (in line) 120'
 " " w/ northernmost scotch pine 13:
 telephone line to No-S.

northernmost pine tree to next tree 50, 35° E
 57'

⁴⁵/₁₃₅ from next (2nd) tree to 3rd tree 50 30° E
 33'

¹⁹/₅₇

APPENDIX D. IOWA SITE FORM

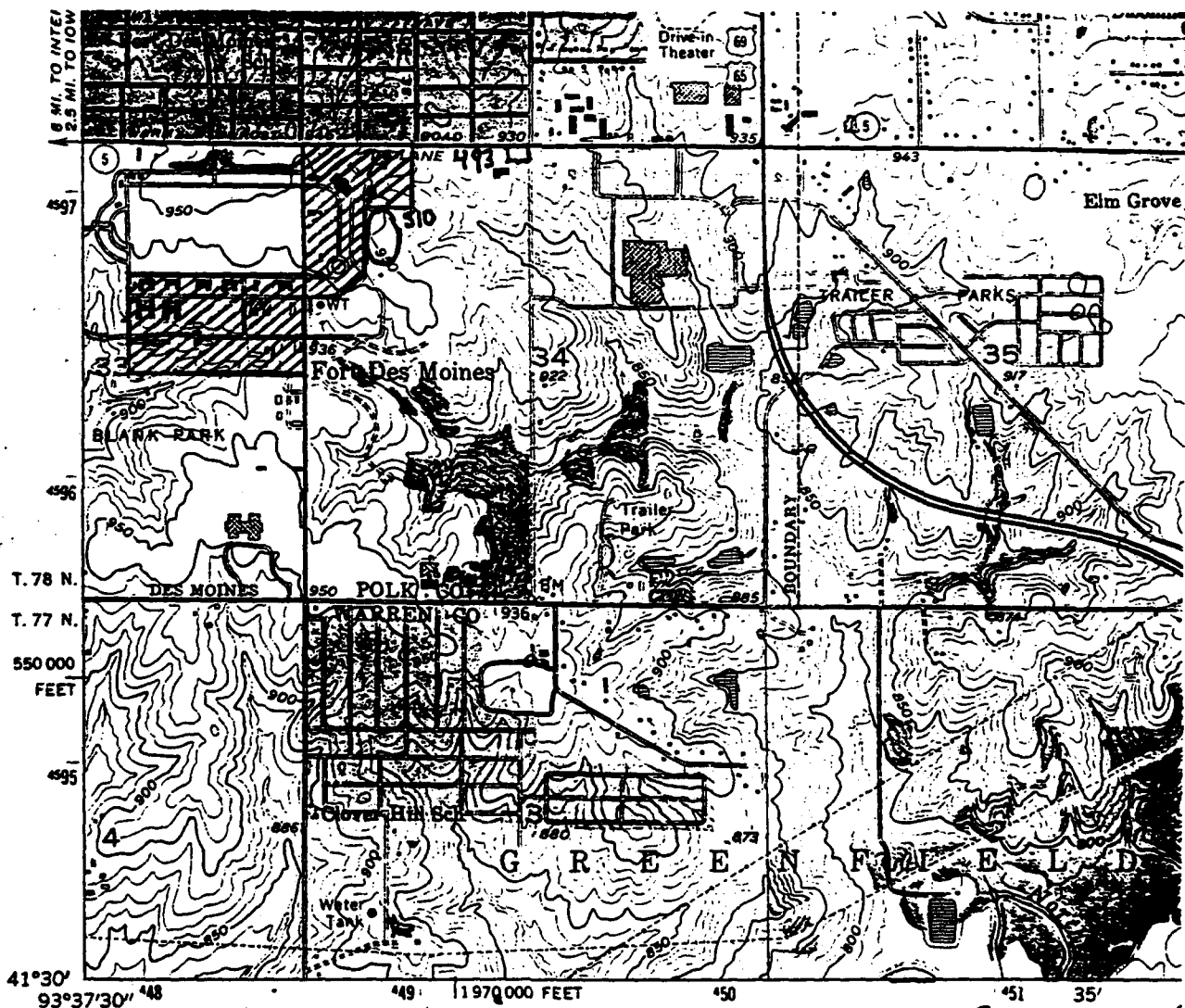
Map of Location

Range 24 W

Township 78 N

Portions
Section 33 & 34

Please paste a photocopy of the quad map showing the site location here.
If a photocopy is not available, sketch the site location indicating major
topographic features such as streams, roads, houses and elevations.



WALK
NW

Mapped, edited, and published by the Geological Survey
in cooperation with Polk County and City of Des Moines

Des Moines, SE Quad

Remarks: