

A Phase I Archeological Survey  
of a Proposed Sports Complex Area  
on the Fort Knox Military Reservation,  
Hardin County, Kentucky

Department of Army Project No. 41632

March 1994

Stephen T. Mocas  
Assistant Staff Archeologist

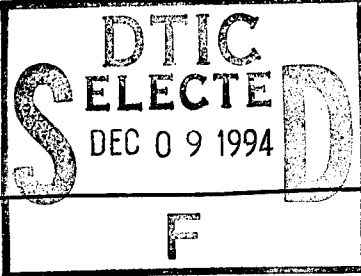
Pamela A. Schenian  
Staff Archeologist  
and Project Principal Investigator

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<p>In February 1994, the Fort Knox Assistant Staff Archeologist conducted a Phase I archeological survey of the area within and around a proposed sports complex, approximately 28.2 ha (69.7 acres) in size, on the Fort Knox Military Reservation, Hardin County, Kentucky. A literature review of the historic settlement in this area was completed prior to the fieldwork and was incorporated in the research plan. Field observation during the current study revealed that most of the area had been altered by military construction and earthmoving, and the undisturbed areas contained no historic or prehistoric cultural materials. The survey resulted in the discovery of no archeological materials or deposits. It is recommended that the sports complex area be developed as proposed.</p>				14.
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## ABSTRACT

In February 1994, the Fort Knox Assistant Staff Archeologist conducted a Phase I archeological survey of the area within and around a proposed sports complex, approximately 28.2 ha (69.7 acres) in size, on the Fort Knox Military Reservation, Hardin County, Kentucky. A literature review of the historic settlement in this area was completed prior to the fieldwork and was incorporated in the research plan. Field observation during the current study revealed that most of the area had been altered by military construction and earthmoving, and the undisturbed areas contained no historic or prehistoric cultural materials. The survey resulted in the discovery of no archeological materials or deposits. It is recommended that the sports complex area be developed as proposed.

## MANAGEMENT SUMMARY

In accordance with Executive Order 11593 and other applicable federal laws and regulations, a Phase I archeological study was conducted of a proposed sports complex and the surrounding area on the Fort Knox Military Reservation, Hardin County, Kentucky. A literature search revealed that the proposed sports complex area and the surrounding area had not been previously surveyed. Field observation during the current study indicated that most of the proposed sports complex area and surrounding area was completely disturbed with no likelihood of intact deposits. The portions of the proposed sports complex area that had not been previously disturbed were field inspected, with negative results. It is recommended that the sports complex area be developed as proposed.

TABLE OF CONTENTS

	<u>Page</u>
Abstract.....	i
Management Summary.....	ii
Table of Contents.....	iii
List of Figures.....	iii
I. Introduction.....	1
II. Previous Research.....	5
III. Survey Predictions.....	8
IV. Setting and Field Methods.....	11
V. Conclusions and Recommendations.....	12
References Cited.....	13
Appendix A. Resumes of Principal Investigator and Assistant Staff Archeologist .....	17

LIST OF FIGURES

	<u>Page</u>
Figure 1. Location of Proposed Sports Complex .....	2
Figure 2. Plan View of Proposed Sports Complex.....	3
Figure 3. Layout of Proposed Softball Diamonds.....	4
Figure 4. 1953 U.S. Army Map Showing Former Topography and Buildings of Project Area.....	9
Figure 5. Location of Structures on W.A. Miller Jr. Property.....	10

## I. INTRODUCTION

In January 1994, the Fort Knox Staff Archeologist was requested to perform a Phase I archeological survey of a proposed sports complex at Fort Knox, Hardin County, Kentucky (Figure 1). The project area is located in the cantonment area of the installation. The proposed sports complex consists of two circles of softball diamonds (Figure 2). Each circle is divided into quadrants and each quadrant is a softball diamond (Figure 3). The survey area comprised a rectangular plot of land, approximately 69.7 acres (28.2 ha) in size, which encompassed the sports complex and the potential secondary impact zone. The land between the two proposed circles of softball diamonds and the land around the periphery were surveyed to ascertain if intact cultural materials were present in the area that might be traversed by machinery involved in the construction of these facilities.

During July and August, 1993, the Fort Knox Staff Archeologist obtained all the documents necessary to perform Phase I literature searches for the installation. Copies of all of the state site forms for sites on the Fort Knox installation were acquired from the Office of State Archaeology (OSA), University of Kentucky, Lexington, and all reports of previous investigations on the installation or immediately adjacent to the installation from gathered from various sources. She also updated the site files by comparing the Fort Knox cultural resources quadrangle maps against the quadrangles on file at the OSA. All documents necessary to perform Phase I literature searches for the installation are present at the Cultural Resource Management Branch of the Directorate of Public Works, Fort Knox, therefore, no file check was made with the OSA and the Kentucky Heritage Council specifically for this project.

A literature search revealed that the project area had not been previously surveyed, therefore, during the present project the entire area was walked and shovel probed.

The proposed sports complex area is located in the Plain section of the Pennyrile cultural landscape, on the undulating surface of a karstic plain that is riddled with sinkholes. Elevations in the project area range from 710 to 760 feet. Soils are classified as Crider-Vertrees-Nicholson soil association (Arms et al. 1979: General Soil Map). Mill Creek is the closest stream, which begins 1.8 km to the east.

The archeological survey was conducted in preparation for the construction of two circles of four softball diamonds each. The archeological survey and literature review were required to comply with the National Environmental Protection Act, or NEPA, (Public Law 91-190), the Historic

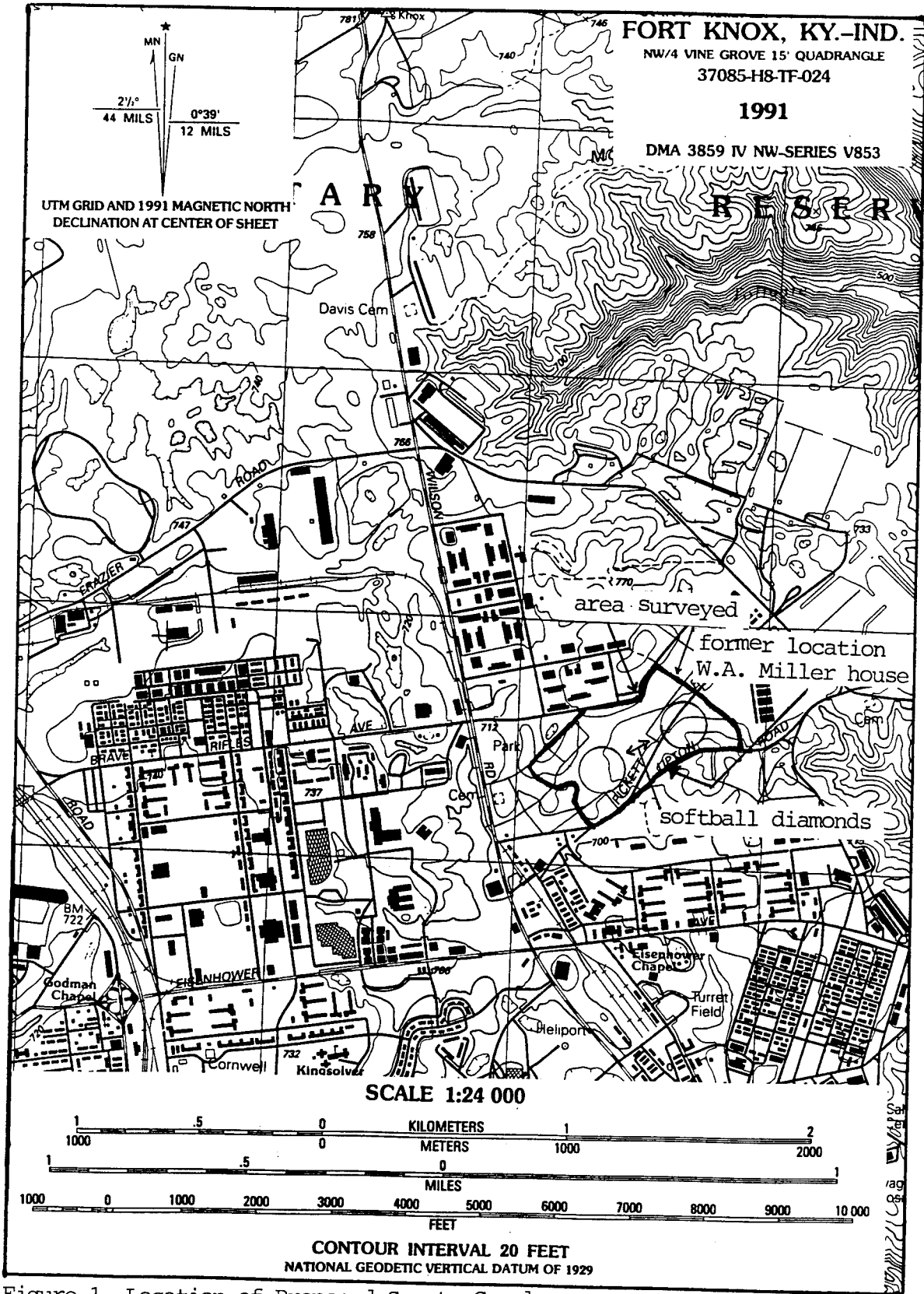


Figure 1. Location of Proposed Sports Complex.

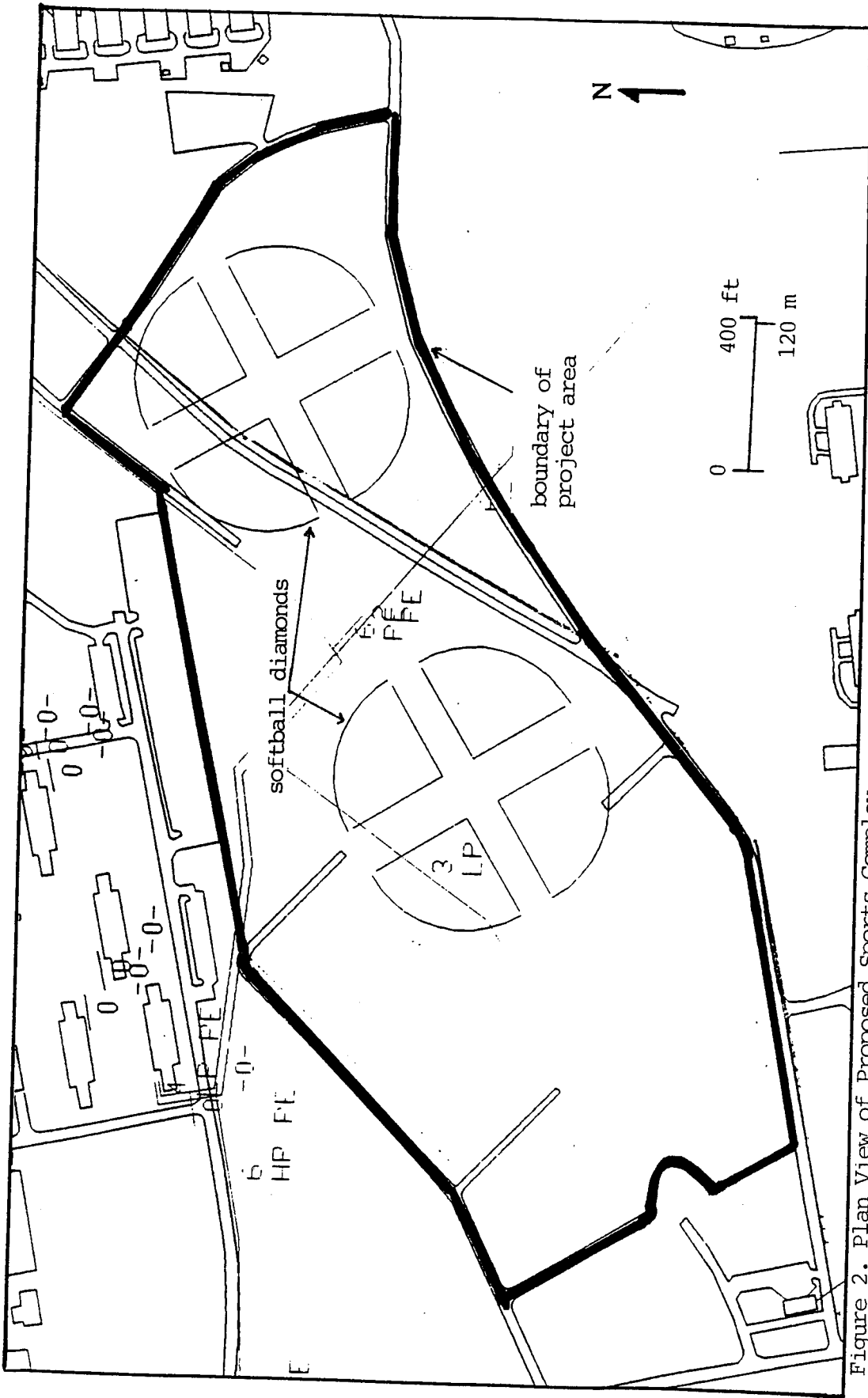


Figure 2. Plan View of Proposed Sports Complex.



Preservation Act of 1966, as amended (Public Law 89-665), the Archaeological Resources Protection Act of 1979 (Public Law 96-95), Presidential Executive Order 11593, and Army Regulation 420-40.

The project area was surveyed on February 17 and 23, 1994. A total of 10.5 person hours were spent in the survey of the proposed diamonds, the area between them and the periphery of the project area. No artifacts were observed or collected in this survey. Documentation of this project will be curated at the University of Louisville Program of Archaeology, on a "permanent loan" basis, under contract number DABT 23-93-C-0093, for curatorial and technical support (copy of contract on file, DPW, Fort Knox, Kentucky). Duplicate copies of the documentation will be stored at the Directorate of Public Works (DPW), U.S. Army Armor Center and Fort Knox, Fort Knox, Kentucky.

## II. PREVIOUS RESEARCH

A number of cultural resource management (CRM) projects have been conducted on the Fort Knox military reservation. Numerous projects also have been conducted in the portions of Bullitt, Meade, and Hardin Counties outside the military reservation, according to the state archeological bibliography and updates. O'Malley et al. (1980) provide an in-depth discussion of research in Bullitt, Hardin, and Meade counties through 1979, and Schenian (1991) and Schenian and Mocas (1992) provide a summary of the research which has taken place since the O'Malley et al. (1980) study was completed. This section will focus on the projects which have been conducted on the military reservation and within the vicinity of the current project area.

There are 112 Hunting Areas on the Fort Knox installation. O'Malley et al. (1980) surveyed approximately one-quarter of each of the 96 hunting areas which did not contain grenade ranges. O'Malley et al. (1980) recorded 415 sites (15Bu295 through 15Bu410, 15Hd109 through 15Hd294, and 15Md103 through 15Md242). Some of these sites were recorded outside the official survey areas, and were discovered while gaining access to the selected survey areas from the closest access road. Some of the sites are isolated finds. O'Malley et al. (1980) did not formally evaluate the National Register status of any of the sites inspected, although opinions are offered on many of the site forms. The purpose of the O'Malley et al. (1980) study was to provide a preliminary inventory of portions of the installation and to develop a database for the predictive modeling of site locations on the installation, and not to evaluate sites for a task-specific construction project. Holmberg (1991) prepared an archival study on the four mill sites (15Md164, 15Md176, 15Md185, and Grahamton) recorded by

O'Malley et al. (1980) in the Meade county section of the base. Holmberg's (1991) study includes an appendix (Ball 1991a) delimiting a scope of services for the testing of the mill sites. This testing has not yet been conducted.

A number of projects have been conducted in conjunction with proposed timber harvests. Bush et al. (1988) revisited 15Bu319 and recorded sites 15Hd438 through 15Hd446 and 15Bu485 through 15Bu491 in their survey of timber areas in Hunting Areas 41, 42, and 52. Myers (1990) surveyed 287 acres in Hunting Area 95, recording 15Bu495 through 15Bu502, and describing modern house and garbage dump sites. Mueller (1991) surveyed 270 acres in Hunting Area 1, revisiting 15Md11, 15Md152, and 15Md159, and recording 15Md322 through 15Md325, two historic cemeteries, five prehistoric isolated finds, and three modern structures. Schenian and Mocas (1992) surveyed 600 acres and attempted to relocate and flag previously recorded sites in an additional 300 acres. Their project areas consisted of 14 timber parcels located in Hunting Areas 13, 74, 76, 77, 78, 81 through 84, and 88 through 90. This survey resulted in the recording of sites 15Hd462, 15Hd463, 15Hd464, 15Md326, and one isolated find, and the revisiting of 15Hd140. Attempts were made to relocate 15Hd18, 15Hd113, and 15Hd139, but were unsuccessful. Ruple (1992b) revisited sites 15Md152, 15Md153, and 15Md322 in Hunting Area 1. Ruple (1992a) revisited sites 15Hd184, 15Hd186, and 15Hd249, and made an unsuccessful attempt to relocate 15Hd248, in order to flag avoidance boundaries around the sites in Hunting Area 90 in preparation for logging activities in conjunction with the clearing of the Highway 313 easement. Ruple (1993a) surveyed all 813 acres comprising Hunting Area 4 in preparation for timber harvests in scattered parcels within the Hunting Area.

The improvement of facilities on the Fort Knox installation has resulted in several CRM studies. Sorensen and Ison (1979) surveyed a proposed telephone building expansion site and access road in the cantonment area, recording no sites. Sussenbach (1990) surveyed three weather radar installation sites, in Hunting Area 23, discovering one prehistoric isolated find. Ruple (1993b) surveyed approximately 10 acres in the cantonment area for a shoreline maintenance project, encountering no sites. Mocas (1993) reported on the examination of approximately 165 acres in and around a proposed landfill and borrow area.

The development, expansion, or improvement of training areas has resulted in a number of CRM studies. Driskell and O'Malley (1979) surveyed the Wilcox Gunnery Range, recording sites 15Bu393 through 15Bu397. Schenian (1991) surveyed 116 acres in portions of Hunting Areas 17, 30, and 41, in conjunction with the Fort Dix realignment, re-examining 15Bu303, and recording 15Bu492, 15Hd459, and two prehistoric isolated finds. Hemberger (1991) also surveyed approximately 405 acres in seven construction sites in Hunting

Areas 17, 24, 31, 32, 34, and 54, in conjunction with the Fort Dix realignment. This study resulted in the recording of 15Hd461 and 15Bu504, the revisiting of 15Bu299 and 15Bu385, and the unsuccessful attempt to relocate previously recorded site 15Hd274. Hemberger (1991) surveyed a total of 126 acres in four proposed construction areas in the Yano Tank Range, in Hunting Area 93, recording 15Hd460, revisiting 15Hd178, 15Hd182, and 15Hd282, and unsuccessfully attempting to relocate previously recorded site 15Hd283. Hemberger (1992) surveyed a 7.5 acre borrow area in Hunting Area 24, proposed to be used for the consolidation and improvement of two training ranges, and encountered no sites.

In conjunction with land sales, Ball (1987) surveyed approximately 196 acres in the Bullitt County portion of Fort Knox, recording sites 15Bu479 through 15Bu481 and describing one post-1950, or modern, house foundation. Ball (1991b) also surveyed a 19 acre tract near Radcliff prior to disposal of the tract, recording two historic/modern trash dumps which were not assigned state site numbers. Hale (1981) surveyed the Otter Creek Park, recording 15Md243 through 15Md303. Portions of Otter Creek Park, now owned by the City of Louisville, were once part of the Fort Knox military installation, but were disposed of in the 1970's.

Road construction and improvements have resulted in a number of CRM projects on the military reservation. McGraw (1976) surveyed the proposed U.S. 60 bridge and approaches near Otter Creek park, encountering no sites in a 2.35 mile long corridor which passes through Hunting Areas 7 through 9 and 11 and 12. Fiegal (1982) surveyed the Radcliff Industrial Park access road, including land in Hunting Area 15 as well as off the installation. He recorded 15Hd403 and 15Hd404 off the installation, and revisited 15Hd215 and 15Hd272 on the installation. Webb and Brockington (1986) surveyed the 4.75 mile long Kentucky Highway 1638 realignment corridor, which included portions of Hunting Areas 5 and 7 through 10. They revisited sites 15Md176, and 15Md182 through 15Md185, and recorded 15Md306, 15Md307, and 15Md309. Sites 15Md176, 15Md182, 15Md183, and 15Md307 were all parts of the former town of Garnettsville. The latter three sites were tested (Wheaton 1982), but 15Md176 was not tested because it fell outside the 1638 realignment easement. DiBlasi (1986) surveyed 14 alternative alignments of the approximately 20 km (12.4 miles) long Kentucky Highway 313 corridor, which includes portions of Hunting Areas 80 through 83 and 90, as well as land outside the installation. A total of 27 sites (15Hd406-15Hd430 outside the installation, and 15Hd135, 15Hd184, 15Hd186, 15Hd248, 15Hd249, 15Hd253, 15Hd431, and 15Hd432 on the installation), some previously recorded, were located in the survey corridor. Hixon (1992) tested 15Hd423 and 15Hd426, and archeologists from Wilbur Smith Associates tested six sites on the instal-

lation, including 15Hd249 and 15Hd253 (Fenton 1993: personal communication to Schenian).

In addition to the CRM projects, several sites have been recorded on the military reservation in non-CRM contexts. Funkhouser and Webb (1932) published a catalog of archeological sites in the state, with the information gained primarily through correspondence with amateur archeologists, collectors, and local historians, and included the description of two sites now on the military reservation. These are 15Md10, a mound group on Indian Hill, and 15Md11, a mound near the mouth of Otter Creek (Funkhouser and Webb 1932: 281). Lee Hanson recorded 15Hd17 and 15Hd18, while attending ROTC training camp at Fort Knox in 1961 (Hanson 1961a, 1961b; Dr. R. Berle Clay 1991: personal communication). The wife of a soldier stationed at Fort Knox partially excavated 15Hd273, a mound in Hunting Area 6, in the early 1960's (Anonymous n.d.).

O'Malley et al. (1980) did not survey within the cantonment area, and the closest area they surveyed was approximately 1.5 km from the project area. No sites are recorded within a 1.0 km radius of the project area. No archeological sites or standing structures listed on or eligible for listing on the National Register of Historic Places are located in or immediately adjacent to the current project areas.

### III. SURVEY PREDICTIONS

Based on previous archeological research in the area, the history of settlement, and the environmental setting of the project area, the following results were expected:

- 1) U.S. Army topographic quadrangles and aerial photographs (1950, 1953) indicate the former presence of numerous military buildings to the northwest of Pickett Road (Figure 4). These maps also show the former presence of a drainage in the northeast portion of the project area. Because of this information it was expected that much of the project area would be heavily disturbed and little or no intact cultural material would be found.
- 2) The 1919 Camp Knox land acquisition map indicated a historical house and outbuildings along Upton Road (Figure 5).
- 3) The hill bisected by Upton Road, above several former drainages, is a topographic setting similar to ones in which sites were found by O'Malley et al. (1980).

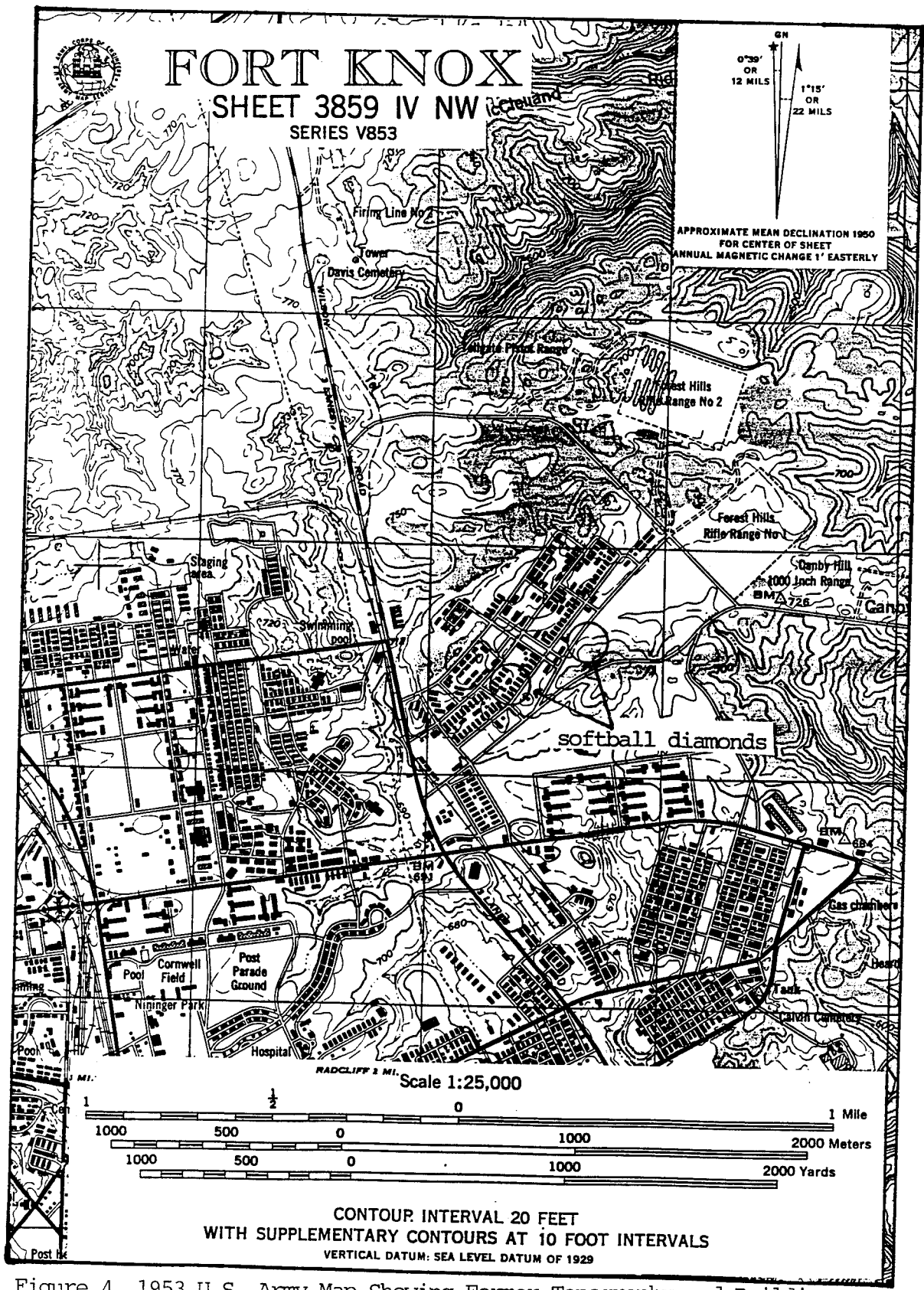


Figure 4. 1953 U.S. Army Map Showing Former Topography and Buildings of Project Area.

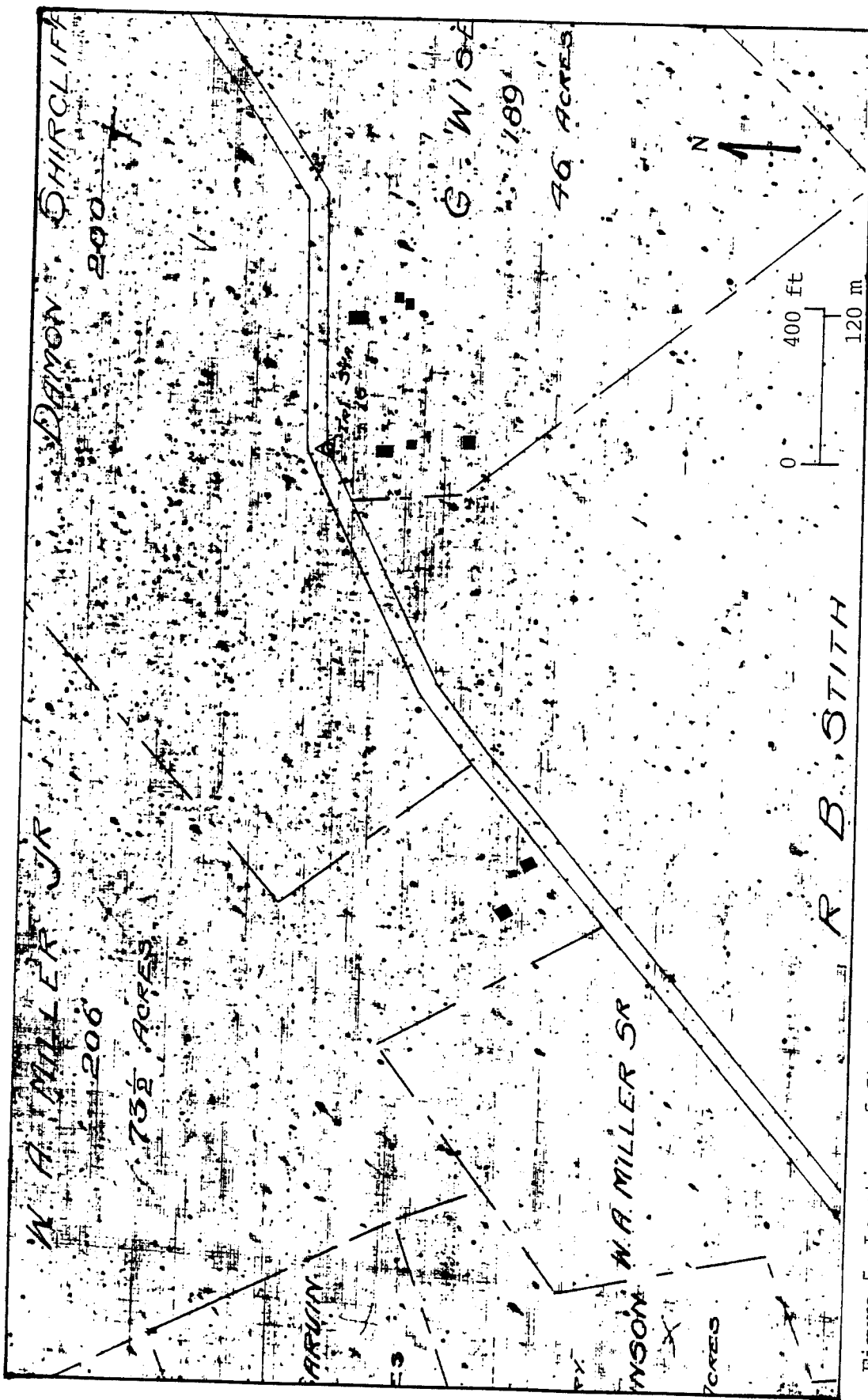


Figure 5. Location of Structures on W.A. Miller, Jr. Property (Camp Knox Real Estate Map, 1919).

## IV. SETTING AND FIELD METHODS

The proposed sports complex area is located in the Plain section of the Pennyrile cultural landscape. It lies in the Mississippian Plateau physiographic region of Kentucky (McGrain and Currens 1978:35) on the undulating surface of a karstic plain that is riddled with sinkholes and has little above ground drainage. Drainage in the project area is into tributaries of Mill Creek, which begins 1.8 km to the east. Elevations in the project area range from 710 to 760 feet. Soils are classified as Crider-Vertrees-Nicholson soil association (Arms et al. 1979: General Soil Map).

In general, the project area was systematically walked in transects at 10 m intervals. If the ground surface was obscured by vegetation for greater than 10 m within a transect, then a shovel probe was excavated and the fill trowel sorted. Most of the area north of Pickett Road had been used for vehicle driver training and had scrub vegetation or none at all. Visibility was very good, and subsoil or gravel was exposed in most areas. Though shovel probes were frequently excavated to ascertain the extent and method of disturbance, the only areas requiring extensive shovel probing were those between Upton and Pickett Roads. The leaf cover partially limited visibility in the wooded area, but the ground cover was easily raked aside prior to the shovel probes, allowing both surface and subsurface examination of the land. The grassy portions of the area between the roads received considerable shovel probing, but many of these probes were excavated to clarify the geomorphology and former topography and drainage patterns under these graded surfaces.

The western boundary of the project area (Figure 1) is formed by the former Amazon Road and the edge of a slight rise south of it. The northern boundary is the old Niagara Street roadbed, the southern perimeter is Upton Road and the western portion of Pickett Road, and the eastern boundary is Lawrence Street. The portion of the proposed sports complex area on the northwest side of Pickett Road (Figures 1 and 4), had been extensively graded and contained a large number of World War II era temporary structures prior to demolition of the buildings approximately ten years ago. The area was subsequently used as a training course for tank and wheeled vehicle student driver. Shovel probes indicated that no intact historic or prehistoric deposits were present.

The portion of the project area between Upton and Pickett Roads consists of a wooded hill with open grassy areas descending to the north and northeast. The open area at the juncture of Pickett Road and Lawrence Street was extensively shovel probed. This probing revealed that some of the slope was relatively undisturbed, but shallow drainages had been filled and leveled. The lower portion of the slope was

extremely waterlogged and composed of orange and gray clay. A series of shovel probes in the center of this area uncovered sand and river rolled pebbles and cobbles. The sand and cobbles were of minerals not found on the installation, possibly obtained from the Ohio River and used to fill the drainage that was indicated on older maps (Figure 4).

The grassy area in the center of the area between Pickett and Upton Roads was adjacent to an old dirt road that presently has a natural gas line following its course. Borrow and grading activities have altered the surface of this grassy area and much of the adjacent woods. The Camp Knox Real Estate Map of the 1919 land acquisitions for the installation (Figure 5) indicates a house and outbuildings, on the property of W.A. Miller, Jr., on the knoll directly west of the grassy area and the former road, which probably postdates the structures. The knoll subsequent to acquisition has been used for military activities and, despite extensive shovel probing, no evidence of this historic occupation remains.

#### V. CONCLUSIONS AND RECOMMENDATIONS

The Phase I literature search of a proposed sports complex area revealed that the project area had not been previously inspected. The entire project area was field inspected in the current study. The inspection of this area resulted in the discovery of no archeological materials or deposits. It is recommended that installation be permitted to develop the project area as proposed.

In the remote possibility that archeological materials are discovered during earthmoving activities all activity in the vicinity of the finds must cease and the State Historic Preservation Officer (502-564-6661) and the DPW Cultural Resource Management Branch (502-624-6581) should be contacted, so a representative of those agencies may evaluate the materials. Also, if human remains, regardless of age or cultural affiliation, are discovered, all activity in the vicinity of the remains must cease immediately, and the state medical examiner (502-564-4545) and the appropriate local law enforcement agency (Fort Knox Law Enforcement Command, 502-624-6852) must be contacted, as stipulated in KRS 72.020.

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APPENDIX A.  
RESUMES OF KEY PERSONNEL

Pamela A. Schenian  
Staff Archeologist and Project Principal Investigator

Office Address: Directorate of Public Works  
ATTN: ATZK-DPW (Schenian)  
U.S. Army Armor Center and Fort Knox  
Fort Knox, Kentucky 40121-5000  
Phone: (502) 624-6581

Date and Place of Birth: January 1, 1959; Waukesha, WI.

Present Position: J.M. Waller & Associates/Fort Knox Staff  
Archeologist and Cultural Resource Manager

Education:

A.B.D. in Anthropology, Northwestern University, 1984.  
M.A. in Anthropology, Northwestern University, 1982.  
A.B. in Anthropology, Bryn Mawr College, 1980.

Previous Employment:

Senior Staff Archeologist, Archeology Service Center,  
Department of Sociology, Anthropology, and Social Work, Mur-  
ray State University, Murray, KY, November 1991-June 1993;  
Staff Archeologist, November 1983-November 1991.

Southern Illinois University, Carbondale, IL: Field  
Technician, November-December 1985, September-October 1984.

Illinois State Museum Society, Springfield, IL: Field  
Assistant II (Supervisor), summer 1983; Field Technician,  
summer 1981.

Center for American Archeology, Kampsville, IL: Field  
Technician, summer 1982.

Department of Anthropology, Northwestern University,  
Evanston, IL: Teaching Assistant, 1981-82 academic year.

Great Lakes Archeological Research Center, Milwaukee,  
WI: Field Technician, summer 1979.

Field Research Experience:

Field experience on prehistoric and historic archeologi-  
cal projects in the states of Illinois, Indiana, Kentucky,  
New Jersey, South Dakota, Tennessee, and Wisconsin, 1979-  
present.

Professional Publications, Reports, Papers and Manuscripts:  
84 CRM contract reports on projects in Indiana, Kentucky,  
and Tennessee.

1 Homicide site excavation contract report prepared in lieu  
of court testimony in Illinois.

7 Papers presented at professional conferences.

5 Publications, 1 in press.

Doctoral candidacy qualifying paper: "A Theory of Individ-  
ual Style Variation for Archeological Studies".

Manuscript submitted in partial fulfillment of the M.A.  
requirements: "Models of Environmental-Cultural Relation-  
ships: Testing with Archeological Evidence".

Stephen T. Mocas  
Assistant Staff Archaeologist

Office Address: Directorate of Public Works  
ATTN: ATZK-DPW (Mocas)  
U.S. Army Armor Center and Fort Knox  
Fort Knox, Kentucky 40121-5000  
Phone: (502) 624-6581

Present Position: University of Louisville Program of  
Archaeology/Fort Knox Assistant Staff Archeologist

Education:

Completed one year of doctoral program, Southern Illinois University, Carbondale, Illinois, 1972.

B.A. in Anthropology, University of Louisville, 1971.

Previous Employment:

Indiana University, Bloomington, Indiana: Staff Archaeologist, September 1991-November 1993.

Murray State University, Murray Kentucky: Staff Archaeologist, November 1991-November 1993.

Jefferson Community College, Louisville, Kentucky.  
Anthropology Instructor, August 1981-December 1982.

Louisville School of Art, Louisville, Kentucky: Anthropology Instructor, January-May 1976.

University of Louisville Archaeological Survey, Louisville, Kentucky. Project Director, Field Supervisor, or Research Assistant on various projects, July 1969-January 1977.

State University of New York of Buffalo, Buffalo, New York. Senior Field Worker, June-August 1970.

Field Research Experience:

Field experience, Phase I-III, prehistoric and historic archeological projects in the states of Illinois, Indiana, Kentucky, New York, and Tennessee, 1969-present.

Research Grants:

Six grants for fieldwork and research.

Professional Publications, Reports, Papers and Manuscripts:

- 3 non-contract site reports on projects
- 11 CRM contract reports on projects
- 5 Chapters in additional site reports.
- 4 Publications, 1 in press.